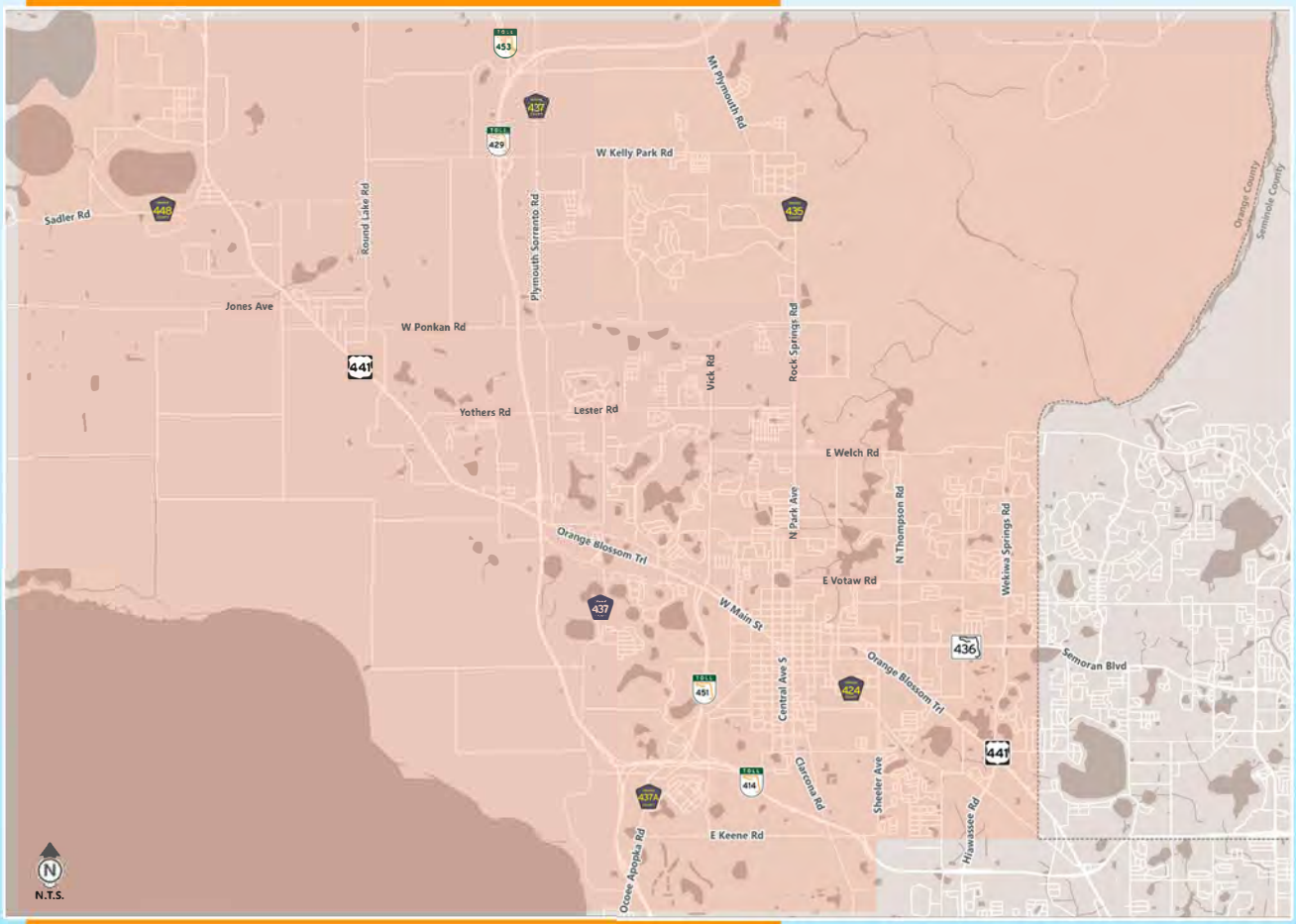
ORANGE COUNTY GOVERNMENT
FLORIDA

June 2025

North West Orange County Areawide Transportation Study (NOWOCATS)

Draft Environmental Report



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The purpose of this Existing Environmental Conditions Report is to document existing land uses, historical and/or archeological sites, cultural features, utilities, and identified any potentially hazardous sites completed for the North West Orange County Areawide Transportation Study (NOWOCATS) Area. The natural environment includes soils, hydraulic and natural features and threatened endangered species. Due to the large extent of the overall project area, the environmental review has been broken down into four (4) study area quadrants as depicted in Exhibit 6.1.0 to allow for more detailed mapping of individual resources.

6.1 LAND USE/DEVELOPMENT

6.1.1 Existing Zoning

The Orange County BCC and Planning 2025 GIS data and the City of Apopka's Existing Zoning data were utilized to identify zoning districts within the study area. **Tables 6.1.1 and 6.1.2** provide a breakdown of different zoning districts found within unincorporated Orange County and the City of Apopka, respectively.

The predominant zoning districts within the study area in unincorporated Orange County are the Citrus Rural District and the Farmland Rural District, followed by the Planned Development District. **Exhibit 6.1.1** illustrates the location of each zoning district of unincorporated Orange County within the study area boundary.

The predominant zoning district within the City of Apopka is Planned Development, followed by Transitional and Residential Single-Family Estate. **Exhibit 6.1.2** shows the location of each zoning district within the City of Apopka.

Table 6.1.1 - Zoning Districts in Unincorporated Orange County Within the Project Area			
Map Unit Symbol	**Map Unit Name**	**Acres**	**Precent of Study Area**
A-1	Citrus Rural District	22,800.00	32.50%
A-2	Farmland Rural District	18,628.91	26.55%
A-R	Agricultural-Residential District	259.89	0.37%
C-1	Retail Commerical District	114.37	0.16%
C-2	General Commerical District	62.64	0.09%
C-3	Wholesale Commerical District	52.95	0.08%
IND-1/IND-5	Industrial District (Light)	55.43	0.08%
IND-1A	Restricted Industrial District	12.90	0.02%
IND-2/IND-3	Industrial District General	277.13	0.39%
IND-4	Industrial District Heavy	282.86	0.40%
P-D	Planned Development District	4,211.10	6.00%
P-O	Professional Office District	4.86	0.01%
R-1	Single-Family Dwelling Districts	1,263.90	1.80%
R-1A	Single-Family Dwelling Districts	468.73	0.67%
R-1AA	Single-Family Dwelling Districts	844.41	1.20%
R-1AAA	Residential Urban District and Cluster District	1.85	0.00%
R-1AAAA	Residential Urban District and Cluster District	276.93	0.39%
R-1AAA-C	Residential Urban District and Cluster District	34.92	0.05%
R-2	Residential District	264.42	0.38%
R-3	Multiple-Family Dwelling District	374.03	0.53%
R-CE	County Estate District	2,645.85	3.77%
R-CE-2	Rural Residential District	272.72	0.39%
R-CE-5	Rural Country Estate Residential District	106.03	0.15%
R-CE-C	Rural Country Estate Cluster District	54.84	0.08%
Restricted A-1	Restricted Citrus Rural District	66.77	0.10%
Restricted P-O	Restricted Progessional	1.37	0.00%
Restricted R-2	Restricted General Commerical District	10.39	0.01%
Restricted R-3	Restricted Wholesale Commerical District	0.40	0.00%
R-L-D	Residential Low-Density District	16.01	0.02%
RSTD C-1	Restricted Retail Commerical District	30.15	0.04%
RSTD C-2	Restricted General Commerical District	15.82	0.02%
RTSD C-3	Restricted Wholesale Commerical District	15.12	0.02%
RSTD IND-1/IND-5	Restricted Industrial (Light)	1.51	0.00%
RSTD IND-2/IND-3	Restricted Industrial District (General)	8.29	0.01%
RSTD IND-4	Restricted Industrial District (Heavy)	19.23	0.03%
RSTD R-1	Restricted Single Family Dwelling District	104.86	0.15%
RSTD R-1A	Restricted Single Family Dwelling District	93.49	0.13%
RSTD R-1AA	Restricted Single Family Dwelling District	3.12	0.00%
RSTD R-1AAA	Restricted Residential Urban District	0.61	0.00%
RSTD R-1AAAA	Restricted Residential Urban District	1.82	0.00%
RSTD R-CE	Restricted Country Estate District	14.19	0.02%
RSTD R-T-1	Restricted Mobile Ome Subdivision District	2.02	0.00%
R-T	Mobile Home Park District	245.79	0.35%
R-T-1	Mobile Home Subdivision District	55.97	0.08%
R-T-2	Combination Mobile Home and Single-Family Dwelling District	116.47	0.17%
	Roads, Highways, and Water Bodies	15,967.77	22.76%
Totals for Area of Interest		**70,162.88**	**100.00%**

Table 6.1.2 - Zoning Districts in the City of Apopka			
Map Unit Symbol	**Map Unit Name**	**Acres**	**Precent of Study Area**
AG	Agriculture	1,607.02	7.35%
AIR	Orlando Apopka Airport	114.25	0.52%
C-C	Community Commerical	428.59	1.96%
C-COR	Corridor Commerical	3.99	0.02%
C-N	Neighborhood Commerical	9.20	0.04%
C-R	Regional Commerical	190.40	0.87%
I-H	Heavy Industrial	7.59	0.03%
I-L	Light Industrial	1,422.30	6.50%
INST	Institutional	2.38	0.01%
MHP	Moblie Home Park	97.30	0.44%
MU-D	Mixed-Use Downtown	933.37	4.27%
MU-ES-GT	Mixed-Use-East Shore-Gateway	1,090.82	4.99%
MU-INT	KPI - Interchange	11.18	0.05%
MU-MED	KPI- Med-Tech	50.92	0.23%
MU-N	KPI - Neighborhood	681.69	3.12%
MU-T	KPI-Transition	178.09	0.81%
MU-VC	KPI-Village Center	405.96	1.86%
O	Office	1,152.06	5.27%
PD	Planned Development	4,519.26	20.66%
PR	Parks and Recreation	1,075.90	4.92%
RCE	Residential Country Estate	119.50	0.55%
RMF	Residential Multi-Family	1,022.14	4.67%
RSF-1A	Residential Single-Family-Estate	2,055.15	9.40%
RSF-1B	Residential Single-Family District - Large Lot	3.56	0.02%
RSF-1B	Residential Single-Family-Large Lot	1,127.77	5.16%
RTF	Residential Two-Family	706.36	3.23%
T	Transitional	2,212.08	10.11%
	Roads, Highways, and Water Bodys	641.80	2.93%
Totals for Area of Interest		**21,870.67**	**100.00%**

Existing Zoning - Orange County

- A-1, Citrus Rural District
- A-2, Farmland Rural District
- A-R, Agricultural-Residential District
- C-1, Retail Commercial District
- C-2, General Commercial District
- C-3, Wholesale Commercial District
- CITY, City
- IND-1/IND-5, Industrial District (Light)
- IND-1A, Restricted Industrial District
- IND-2/IND-3, Industrial District General
- IND-4, Industrial District Heavy
- P-D, Planned Development District
- P-O, Professional Office District
- R-1, Single-Family Dwelling Districts
- R-1A, Single-Family Dwelling Districts
- R-1AA, Single-Family Dwelling Districts
- R-1AAA, Residential Urban District and Cluster Dstrict
- R-1AAA-C, Residential Urban District and Cluster Dstrict
- R-1AAAA, Residential Urban District and Cluster Dstrict
- R-2, Residential District
- R-3, Multiple-Family Dwelling District
- R-CE, Country Estate District
- R-CE-2, Rural Residential District
- R-CE-5, Rural Country Estate Residential District
- R-CE-C, Rural Country Estate Cluster District
- R-L-D, Residential Low-Density District
- R-T, Mobile Home Park District
- R-T-1, Mobile Home Subdivision District
- R-T-2, Combination Mobile Home and Single-Family Dwelling
- RSTD C-1, Restricted Retail Commercial District
- RSTD C-2, Restricted General Commercial District
- RSTD C-3, Restricted Wholesale Commercial District
- RSTD IND-1/IND-5, Restricted Industrial (Light)
- RSTD IND-2/IND-3, Restricted Industrial District (General)
- RSTD IND-4, Restricted Industrial District (Heavy)
- RSTD R-1, Restricted Single Family Dwelling District
- RSTD R-1A, Restricted Single Family Dwelling District
- RSTD R-1AA, Restricted Single Family Dwelling District
- RSTD R-1AAA, Restricted Residential Urban District
- RSTD R-1AAAA, Restricted Residential Urban District
- RSTD R-CE, Restricted Country Estate District
- RSTD R-CE-C, Restricted Country Estate District
- RSTD R-T-1, Restricted Mobile Home Subdivision District
- Restricted A-1, Restricted Citrus Rural District
- Restricted P-O, Restricted Professional Office District
- Restricted R-2, 'Restricted General Commercial District
- Restricted R-3, 'Restricted Wholesale Commercial District

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Study Area

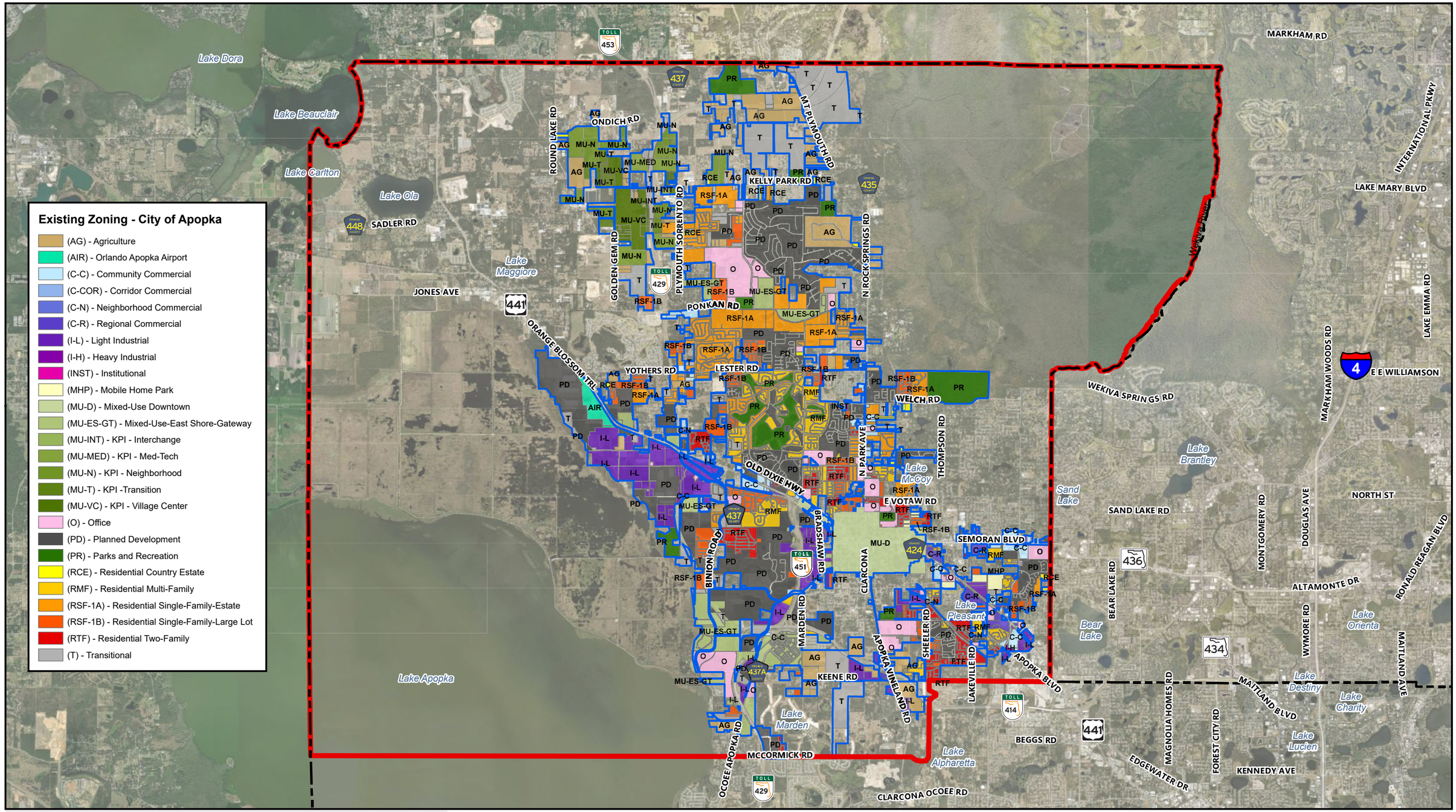
County Boundary

Note: Existing Zoning - Orange County Planning May2025

Exhibit 6.1.1

Existing Zoning Map - Orange County

North West Orange County
Areawide Transportation Study
(NOWOCATS)



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Study Area

County Boundary

City of Apopka Boundary

Note: Existing Zoning data - City of Apopka, April 2025

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Exhibit 6.1.2

Existing Zoning Map - City of Apopka

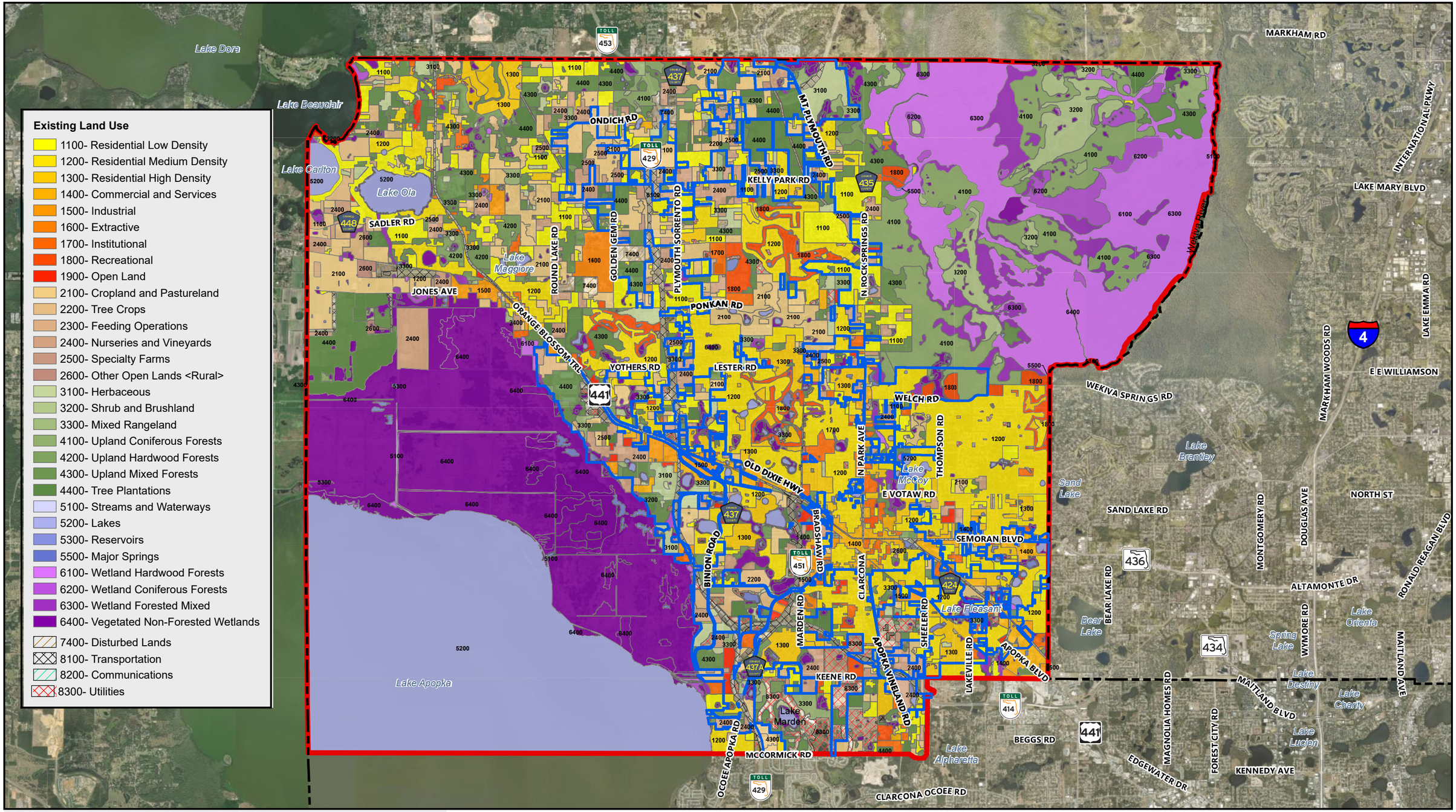
North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.1.2 Existing Land Use

The Florida Land Use Land Cover Classification System (FLUCCS) was used to identify existing land uses within the project study area. **Table 6.1.3** provides a summary of the different land use classifications found within the study area. Lakes and vegetated non-forested wetlands make up most of the existing land use, followed by Medium Density Residential. A map of the existing land use for the project area can be seen in **Exhibit 6.1.3**

Table 6.1.3 - Existing Land Use in the Project Area

Map Unit Symbol	Map Unit Name	Acres	Precent of Study Area
1100	Residential Low Density	6,108.81	6.64%
1200	Residential Medium Density	9,535.35	10.36%
1300	Residential High Density	2,433.92	2.64%
1400	Commerical and Services	1,505.97	1.64%
1500	Industrial	730.62	0.79%
1600	Extractive	361.03	0.39%
1700	Institutional	1,012.62	1.10%
1800	Recreational	1,416.75	1.54%
1900	Open Land	492.80	0.54%
2100	Cropland and Pastureland	5,409.18	5.88%
2200	Tree Crops	1,044.68	1.14%
2300	Feeding Operations	30.73	0.03%
2400	Nurseries and Vineyards	3,513.30	3.82%
2500	Specialty Farms	287.44	0.31%
2600	Other Open Lands (Rural)	94.36	0.10%
3100	Herbaceous	1,286.91	1.40%
3200	Shrub and Brushland	1,661.48	1.81%
3300	Mixed Rangleand	890.01	0.97%
4100	Upland Coniferous Forests	4,042.37	4.39%
4200	Upland Hardwood Forests	1,087.74	1.18%
4300	Upland Mixed Forests	4,685.91	5.09%
4400	Tree Plantations	3,509.70	3.81%
5100	Streams and Waterways	77.21	0.08%
5200	Lakes	13,763.10	14.95%
5300	Reservoirs	357.92	0.39%
5500	Major Springs	4.96	0.01%
6100	Wetland Hardwood Forests	7,215.58	7.84%
6200	Wetland Coniferous Forests	857.58	0.93%
6300	Wetland Forested Mixed	2,215.79	2.41%
6400	Vegetated Non-Forested Wetlands	12,678.76	13.78%
7400	Distrubed Lands	419.50	0.46%
8100	Transportation	1,559.82	1.69%
8200	Communications	25.11	0.03%
8300	Utilities	1,716.54	1.87%
Totals for Area of Interest		**92,033.55**	**100.00%**



Legend

- Study Area
- County Boundary
- City of Apopka Boundary

Note: Existing Land Use - FDEP/SJRWMD, Land Use Land Code FLUCCS, 2020-2025.

Exhibit 6.1.3

Existing Land Use Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.1.3 Future Land Use

The Orange County BCC and Planning 2025 Future Land Use GIS data and the City of Apopka Future Land Use Map were used to identify the future land use (FLU) for the project area. **Tables 6.1.4 and 6.1.5** summarize the FLUs located within the study area for Orange County and for the City of Apopka, respectively.

The most prominent FLU in unincorporated Orange County within the project study area is Rural, followed by Parks and Recreation and Low Density Residential. **Exhibit 6.1.4** illustrates the FLU for unincorporated Orange County within the project area.

Also shown in **Exhibit 6.1.4** are lands that have been recently annexed or are in the process of being annexed to the City of Apopka; these lands have not been assigned a FLU and were not included as part of the Orange County FLU analysis.

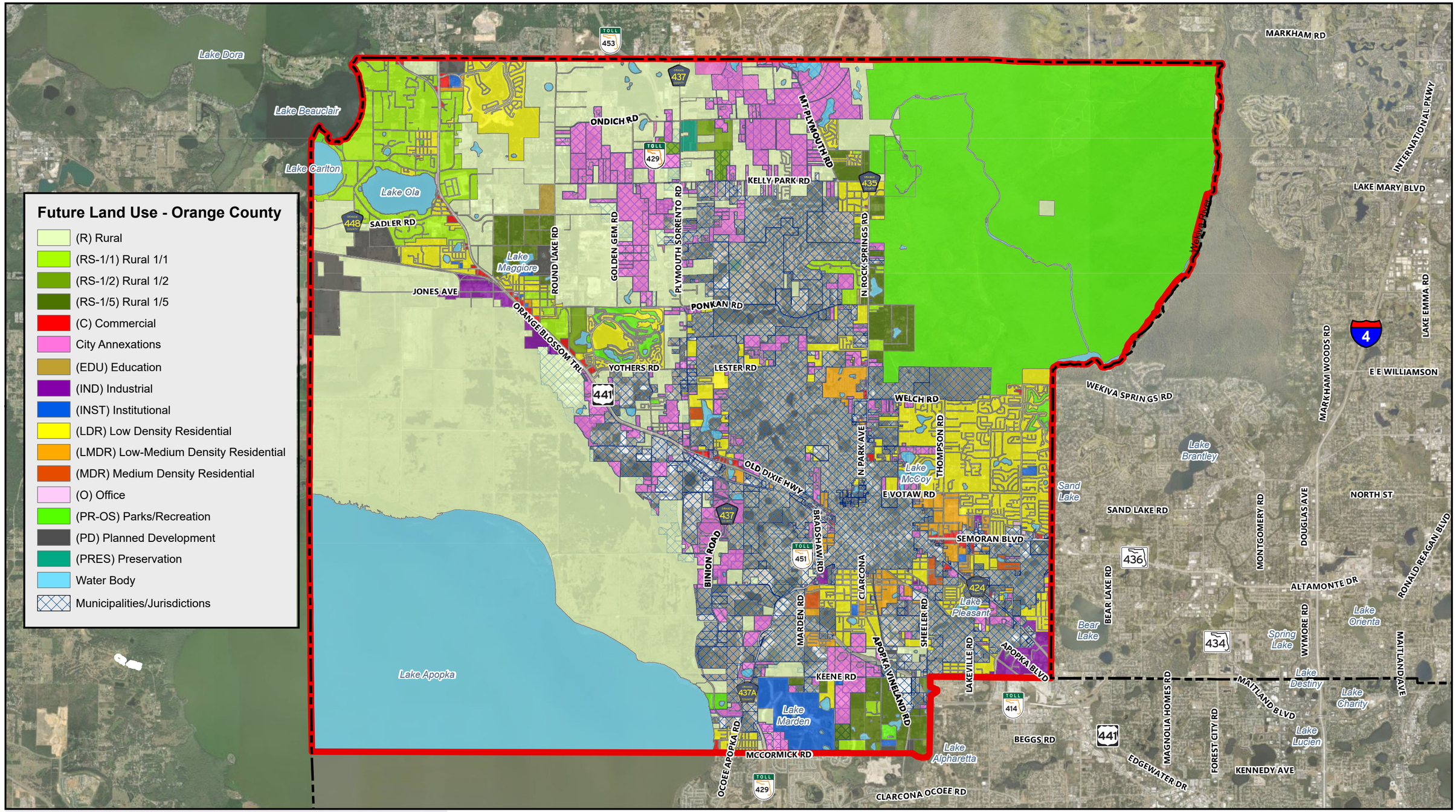
Table 6.1.4 - Future Land Use in Unincorporated Orange County Within the Project Area

Map Unit Symbol	Map Unit Name	Acres	Precent of Study Area
R	Rural	22,255.22	31.72%
RS 1/1	Rural 1/1	2,797.04	3.99%
RS 1/2	Rural 1/2	416.13	0.59%
RS 1/5	Rural 1/5	1,731.12	2.47%
C	Commercial	277.90	0.40%
EDU	Education	90.36	0.13%
IND	Industrial	634.67	0.90%
INST	Insitutional	795.93	1.13%
LDR	Low Density Residential	6,219.50	8.86%
LMDR	Low-Medium Density Residential	906.53	1.29%
MDR	Medium Density Residential	146.62	0.21%
O	Office	20.40	0.03%
PR-OS	Parks/Recreation	16,199.49	23.09%
PD	Planned Development	910.40	1.30%
PRES	Preservation	83.44	0.12%
Water Body	Water Bodies	14,222.35	20.27%
	Roads and Highways	2,455.80	3.50%
Totals for Area of Interest		**70,162.88**	**100.00%**

In the City of Apopka, the most prominent FLU is Residential Low, followed by Mixed Use and Industrial. The map of the FLU for the City of Apopka can be found in **Exhibit 6.1.5.**

Table 6.1.5 - Future Land Use in the City of Apopka

Map Unit Symbol	Map Unit Name	Acres	Precent of Study Area
AG	Agriculture	873.49	3.99%
AG-E	Agriculture Estate	229.02	1.05%
AG-HOME	Agriculture Homestead	504.14	2.31%
COMM	Commercial	1,095.76	5.01%
CONSV	Conservation	312.14	1.43%
FLU-IP	In Progress	301.09	1.38%
HDR-25	High Density Residential 25 du/ac	34.64	0.16%
IND	Industrial	2,140.18	9.79%
INST_PU	Institutional - Public Use	893.01	4.08%
MU	Mixed Use	3,371.79	15.42%
OFF	Office	145.21	0.66%
PR	Parks and Recreation	980.22	4.48%
RE	Residential Estate	1,045.21	4.78%
RH	Residential High	235.39	1.08%
RL	Residential Low	4,012.19	18.35%
RLS	Residential Low Suburban	1,778.96	8.13%
RM	Residential Medium	427.23	1.95%
RML	Residential Medium Low	338.76	1.55%
RS	Rural Settlement	1,109.91	5.07%
RVLS	Residential Very Low Suburban	1,232.55	5.64%
	Roads, Highways, and Water Bodies	809.79	3.70%
Totals for Area of Interest		**21,870.67**	**100.00%**



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Study Area

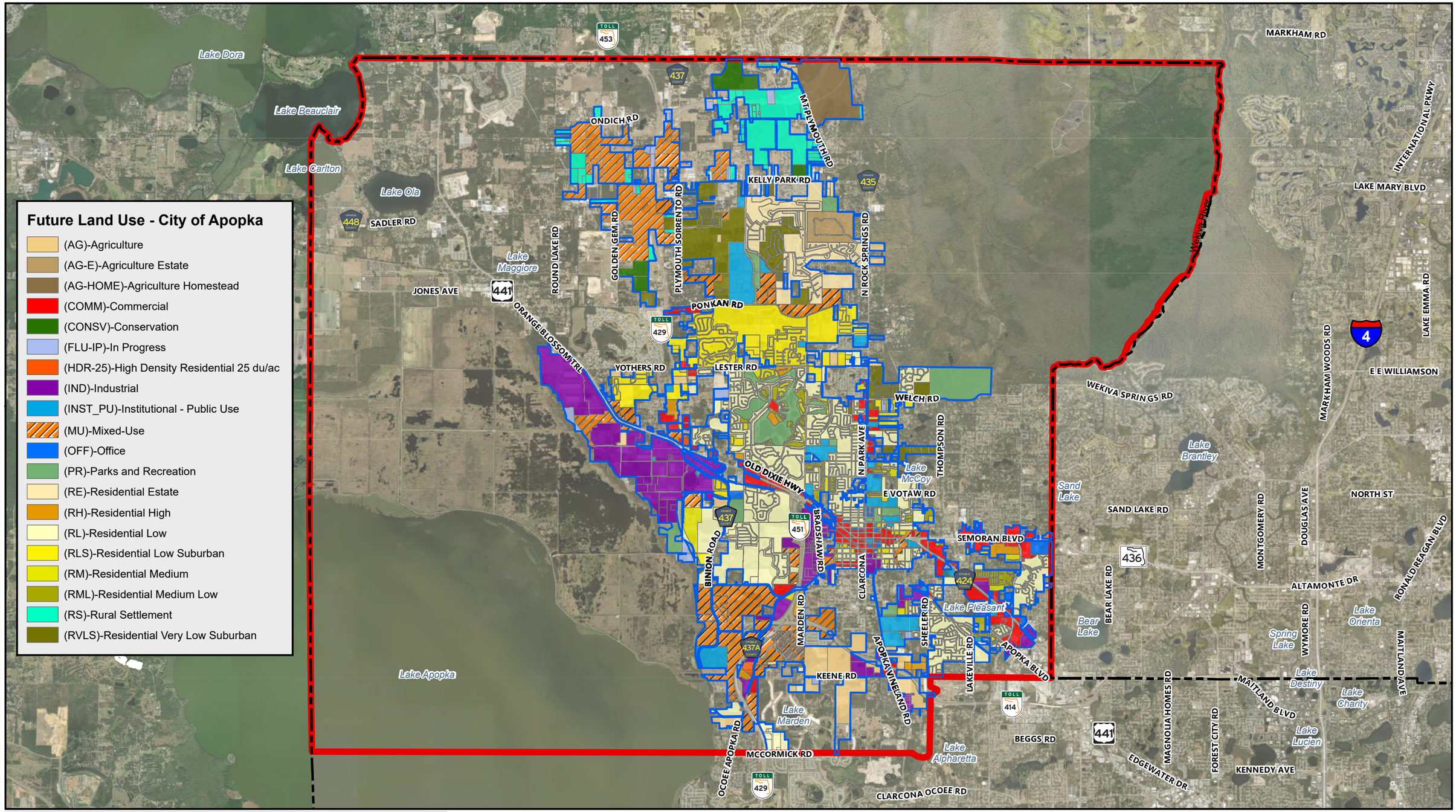
County Boundary

Note: Future Land Use - Orange County Planning, Effective May 2023

Exhibit 6.1.4

Future Land Use Map - Orange County

North West Orange County
Areawide Transportation Study
(NOWOCATS)



Note: Future Land Use data - City of Apopka; FLUM Data April 25, 2024

Exhibit 6.1.5

Future Land Use Map - City of Apopka

North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.1.4 Rural Settlements

Rural Settlements (RS) recognize and preserve communities that existed as of the adoption of the 1991 Orange County Comprehensive Plan. New construction on RS must be approved by the Orange County BCC. The County has also adopted RS-specific land-use policies to preserve the unique character, history, and resources for 22 RS within the entire County.

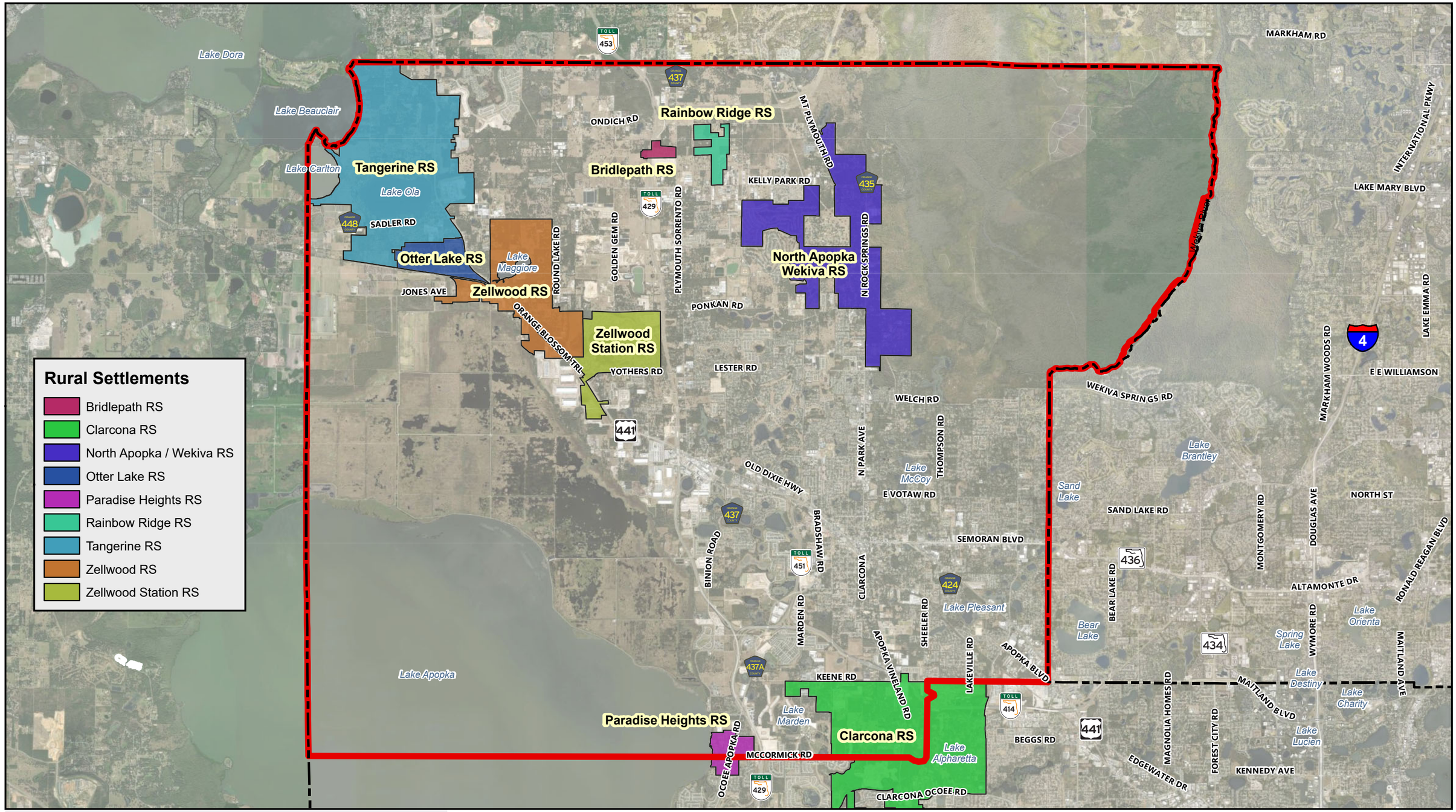
The locations of these RS are shown in **Exhibit 6.1.6.** The nine (9) RS within the study area are listed as follows:

- Bridlepath
- Clarcona
- North Apopka/Wekiva
- Otter Lake
- Paradise Heights
- Rainbow Ridge
- Tangerine
- Zellwood
- Zellwood Station

Source: Orange County BCC and Planning 2025 GIS data

6.1.5 Orange County Urban Service Area

The Orange County Urban Service Area (USA) encompasses existing or anticipated urbanized areas where the county provides urban services and amenities such as utilities, community facilities, and roadway maintenance. The USA is also subject to specific land-use policies to support existing and anticipated urban development. Part of the USA spans the southeastern portion of the study area, generally located south of Ponkan Road and Welch Road, west of the Seminole County line, and east of Plymouth Sorrento Road. The USA is depicted in **Exhibit 6.1.7**.

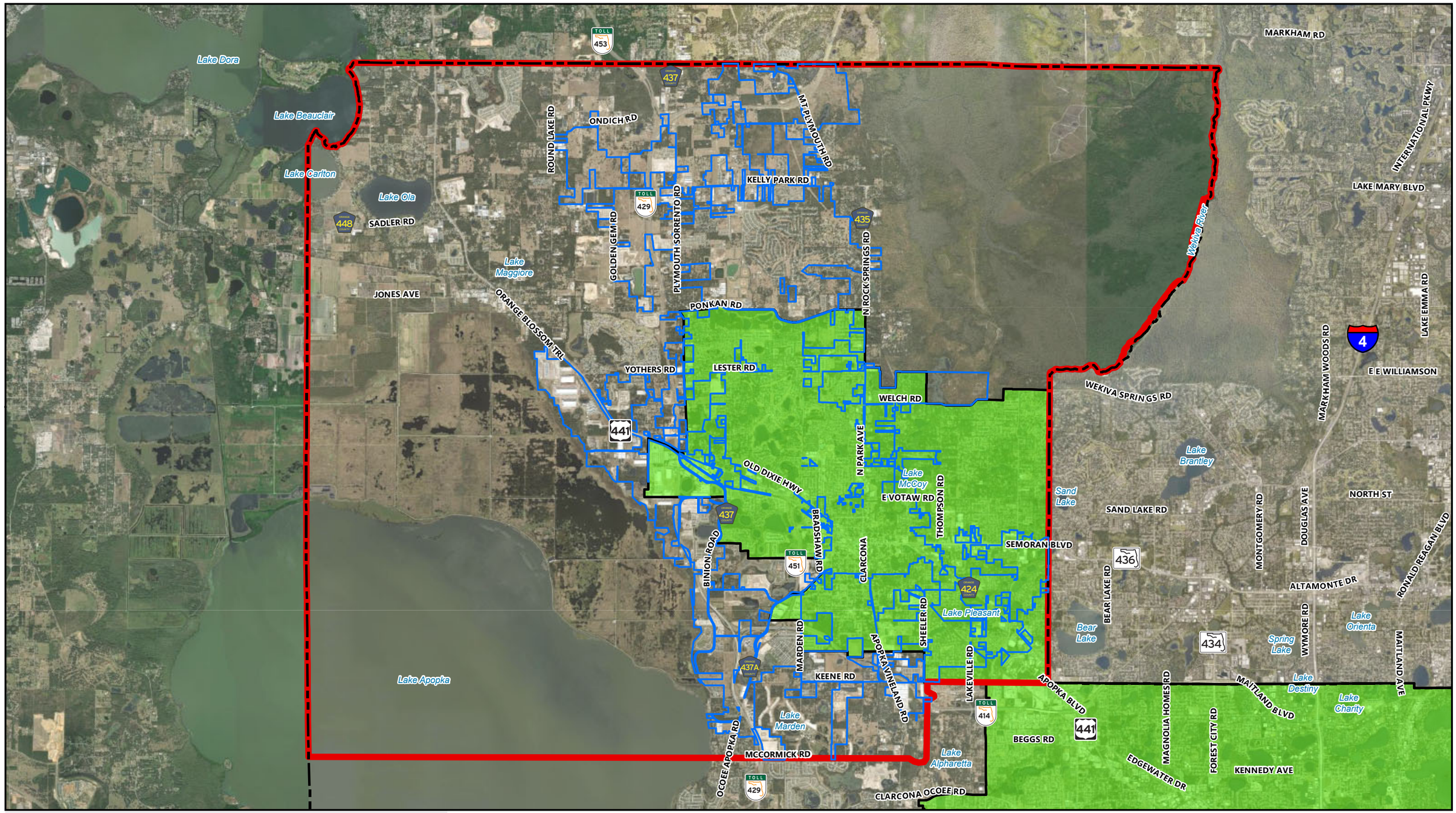


Note: Rural Settlements Data, Orange County, April 2025

Exhibit 6.1.6

Rural Settlements Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)



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Study Area

County Boundary

City of Apopka Boundary

Urban Boundary

Note: Service Area Boundary - Orange County Urban Service Area - 2025.

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Exhibit 6.1.7

Urban Service Area Boundary Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.1.6 Major Developments and Developments of Regional Impact (DRIs)

There are several major Planned Unit Developments (PUDs) and Developments of Regional Impact (DRIs) within the project study area. A PUD is a self-contained development where the subdivision and zoning controls are applied to the entire project, rather than individual lots. This allows for flexible planning and the integration of various uses, such as housing, transportation, parks, and commercial areas, on a large tract of land. PUDs located within the study area are listed as follows:

- Atria Wekiva
- Bargrove Property
- Beauclaire Estates
- Bridle Path LUP
- Cumberland Farms
- Estates at Wekiva
- Evergreen
- Fisher Plantation
- Foothills of Mt Dora
- Garvin Gardens
- Golfside Marketplace
- Grassmere Reserve
- Hampden Dubose Academy
- Estates at Wekiva
- Highland Trails
- Hilltop Ridge
- Holly Creek Subdivision Phase II
- Holly Estates
- Kellogg Estates
- International Bible Institute and Seminary
- Lake Carlton Road
- Lake Ola Grove
- Marden Road
- New Song
- Old Forty Pines
- Sadler Road Estates
- Sandpiper Road
- Sheeler Avenue Townhomes
- Spring Hollow
- Tangerine Estates
- Tangerine Reserve
- Terra Bona
- Terry Property
- Thompson Road Townhomes
- Trimble Park Road
- Wekiva Forest Trails
- Yogi Bear's Jelly Stone Park
- Zellwood Station
- Unnamed PUDs

Source: Orange County BCC and Planning 2025 GIS data

DRIs are large-scale planned developments that are projected to have regional transportation and environmental impacts and may impact multiple counties and municipalities. DRIs located within the study area are listed as follows:

- Lake Ola DRI
- Sweetwater Country Club DRI
- Wekiva Falls DRI
- Kelly Park Crossing DRI

Source: Orange County BCC and Planning 2021 GIS data

Development information gathered related to DRIs was obtained from the Florida Department of Commerce's Developments of Regional Impact Repository and the East Central Florida Regional Planning Council (ECFRPC). The locations of PUDs and DRIs within the study are illustrated in **Exhibit 6.1.8**.

Planned Unit Development (PUD)

- ATRIA WEKIVA (5)
- BARGROVE PROPERTY (6)
- BEAUCLAIRE ESTATES (7)
- BRIDLE PATH LUP (8)
- CHESTER HILL (9)
- CUMBERLAND FARMS (10)
- ESTATES AT WEKIVA (11)
- EVERGREEN (12)
- FISHER PLANTATION (13)
- FOOTHILLS OF MT DORA (14)
- GARVIN GARDENS (15)
- GOLFSIDE MARKETPLACE (16)
- GRASSMERE RESERVE (17)
- HAMPDEN DUBOSE ACADEMY (18)
- HIGHLAND TRAILS (19)
- HILLTOP RIDGE (20)
- HOLLY CREEK SUBDIVISION PHASE II (21)
- HOLLY ESTATES (22)
- INTERNATIONAL BIBLE INSTITUTE AND SEMINARY (23)
- KELLOGG ESTATES (24)
- LAKE CARLTON ROAD (25)
- LAKE OLA GROVE (26)
- MARDEN ROAD (27)
- NEW SONG (28)
- OLD FORTY PINES (29)
- SADLER ROAD ESTATES (30)
- SANDPIPER ROAD (31)
- SHEELER AVENUE TOWNHOMES (32)
- SPRING HOLLOW (33)
- TANGERINE ESTATES (34)
- TANGERINE RESERVE (35)
- TERRA BONA (36)
- TERRY PROPERTY (37)
- THOMPSON ROAD TOWNHOMES (38)
- TRIMBLE PARK ROAD (39)
- WEKIVA FOREST TRAILS (40)
- YOGI BEAR'S JELLY STONE PARK (41)
- ZELLWOOD STATION (42)
- UNNAMED PUD(43A-43G)

Development of Regional Impact (DRI)

- KELLY PARK CROSSING (1)
- LAKE OLA (2)
- SWEETWATER COUNTRY CLUB (3)
- WEKIVA FALLS (4)

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Study Area

County Boundary

Note: Major Developments - Planned Unit Developments FGDL 2009 Q4,
Development of Rgional Impact FGDL 2021 Q2

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Exhibit 6.1.8

Major Developments Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)

Kelly Park Crossing (Future Buildout)

The Kelly Park Crossing DRI is a mixed-use project consisting of approximately 624 acres located in the City of Apopka west of Plymouth Sorrento Road, east of Round Lake Road, and both north and south of Kelly Park Road. The mix of uses includes office, industrial, retail/commercial, community college, hospital, residential dwelling units, institutional uses, hotel rooms, and parks. The breakdown of mixed land uses for the project are shown in **Table 6.1.6.** as follows:

Table 6.1.6 - Kelly Park Crossing DRI

Land Use	Units
Office	1,920,996 SF
Light Industrial	5,227,200 SF
Retail/Commercial	1,372,140 SF
Community College	130,680 SF
Hospital	522,720 SF
Residential Dwelling Units	1,550 DU
Institutional	174,240 SF
Hotel Rooms	400 Rooms
Parks	93.75 AC

The proposed development program was approved in 2011 and was planned to be developed in four phases over a 20-year period, with construction starting in 2012. However, in 2016 a notification of proposed change was submitted extending the build-out schedule to 2038. In 2017, the City of Apopka adopted Ordinance 2602 amending the Development Order with conditions for the Kelly Park Crossing DRI. In 2022, records show the City adopted Ordinance No. 2937, providing for an abandonment of the Kelly Park Crossing DRI, and finding that all mitigation requirements in the development order had been satisfied or would be completed under an existing permit.

Sweetwater Country Club (Buildout Completed)

The Sweetwater Country Club DRI is a mixed use-project located on approximately 1,811 acres in Orange County and Seminole County. This DRI is located along Wekiva Springs Road, and east of Thompson Road. The use in this development is primarily residential with a total of 3,003 detached single family and townhome units, as well as a 13-acre office park, and a 6-acre commercial center. The proposed development was approved in 1973 with an estimated completion date of 1976. Construction has been completed on this project.

Lake Ola (Not Approved)

The Lake Ola DRI was a single-family residential project of approximately 422 acres located in northwestern Orange County, west of Orange Blossom Trail and south of Lake Ola. The project consisted of 419 single family homes, 354 patio homes, and 492 townhomes. Originally proposed in 1973, the DRI approval was reversed for this development in 1974. This decision was subsequently appealed but was eventually dismissed in 1976 and a DRI status was not maintained.

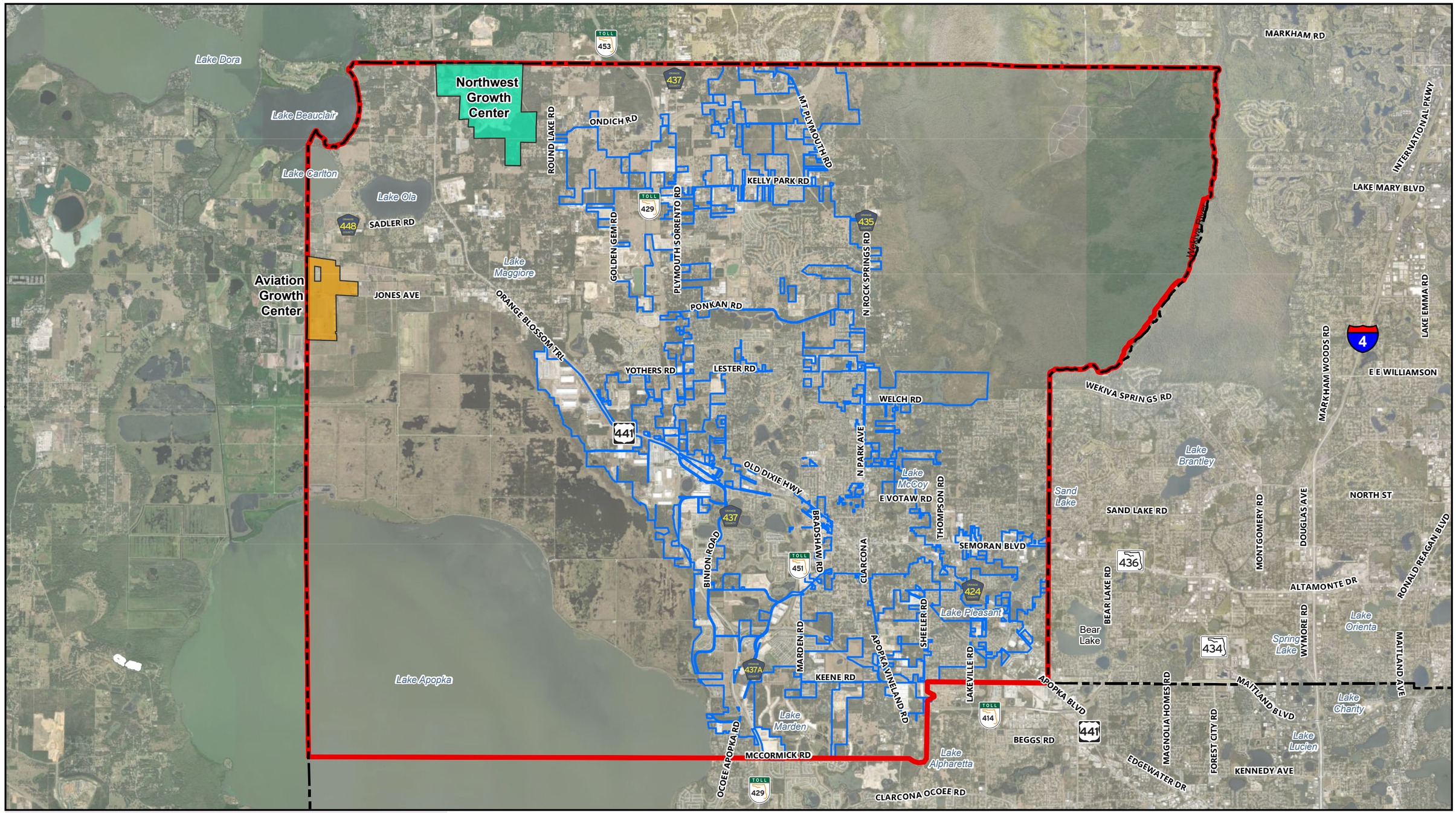
Wekiva Falls (Not Approved)

The Wekiva Falls DRI was a single-family residential project consisting of approximately 1,864 acres located across Lake County and Orange County, to the north and south of Markham Road, and adjacent to the Wekiva Springs State Park and Wekiva River. The project, proposed in 1988, consisted of 2,800 single-family detached homes. Environmental concerns were raised regarding the project's proximity to the state park and was deemed incompatible with the planning objectives in the area. Construction was not completed for this project.

6.1.7 Growth Centers

Growth Centers are areas within the County that are not located within the USA but are still required to connect to public facilities and services provided by adjacent jurisdictions outside of Orange County. These Growth Centers are subject to urban land-use policies based on Joint Planning Area (JPA) agreements between the County and adjacent jurisdictions.

Two Growth Centers are identified within the study area: the Aviation Growth Center and the Northwest Growth Center. The Aviation Growth Center, which includes the Orlando North AirPark, was established to coordinate development related to the establishment of a general aviation facility. The Northwest Growth Center, located at the northwesternmost study limits, was established to provide a transitional area for developments in land use density and intensity. The Foothills of Mount Dora PUD is located within the Northwest Growth Center. **Exhibit 6.1.9** depicts the locations of the two Growth Centers located within the study area.



Note: Growth Centers - Orange County Comprehensive Policy Plan 2025.

Figure 6.1.9

Orange County Growth Center Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.2 ARCHAEOLOGICAL AND HISTORIC FEATURES

Cultural resources are defined by the National Historic Preservation Act (NHPA) of 1966 and governed by federal and state regulations. Section 106 of the NHPA provides a general process for cultural resource assessments and requires historic and archaeological resources to be considered in project planning for federally funded or permitted projects. Cultural resources or "historic properties" include any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP)." Any archaeological sites or historic resources that are listed within the Study Area, determined eligible, or considered potentially eligible by the State Historic Preservation Office (SHPO) for listing in the NRHP, are summarized in **Tables 6.2.1** through **6.2.12.** The Study Area was split up into 12 Sections to assess and depict the available data. These sites along with other state recorded sites and survey locations Section are depicted in **Exhibits 6.2.1** through **6.2.12**.

According to the Florida Master Site File (FMSF), which is the State of Florida's official inventory of historical and cultural resources, there are zero historic structures within Section 1. One resource group, which has not been evaluated by SHPO, is present within Section 1. This resource group is known as the Lake Apopka North Shore Levee located within Lake Apopka. Two cultural resource assessment surveys have been conducted within and in the vicinity of Section 1. These resources are depicted in **Exhibit 6.2.1** and listed in **Table 6.2.1.**

Table 6.2.1 - Summary of Cultural Resources in Section 1 of Study Area

Cultural Resources	Within Section 1
SHPO Structures	0
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	0
SHPO Surveys	2
SHPO Cemeteries	0

Source: Florida Geographic Data Library (FGDL), FMSF

According to the FMSF, there are five historic structures within Section 2**.** These structures are located around Paradise Heights located along the southeast portion of this Section as well as South Binion Road located to the northeast portion of Section 2. Four of these structures have been classified as ineligible to contribute to the National Register District (NRD), while the remaining structure has insufficient data to support any classification. One structure has been classified as ineligible for inclusion in the NRHP and the remaining four have not been evaluated by SHPO. One resource group, which has not been evaluated by SHPO, is present within Section 2. This resource group is known as the Wekiva Basin Geopark Tram Roads. In addition, seven cultural resource assessment surveys have been conducted within and in the vicinity of Section 2. Finally, there are seven archaeological sites located within Section 2. These resources are depicted in **Exhibit 6.2.2** and listed in **Table 6.2.2.**

Table 6.2.2 - Summary of Cultural Resources in Section 2 of Study Area

Cultural Resources	Within Section 2
SHPO Structures	5
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	7
SHPO Surveys	7
SHPO Cemeteries	0

Source: FGDL, FMSF

According to FMSF, there are 317 historic structures within Section 3, and the majority located in South Apopka and Paradise Heights. 177 of these structures have been classified as ineligible to contribute to the NRD, while 138 of the structures have the potential to be contributors to the NRD. The remaining structures have either not been evaluated by a recorder or have insufficient data. There are 13 structures that have been classified as ineligible for inclusion in the NRHP, two are eligible for the NRHP, and three have the potential to become eligible for listing on NRHP. The remaining 299 structures have not been evaluated by SHPO. Four resource groups are present within Section 3. Further, there are three resource buildings located within this Section. In addition, 19 cultural resource assessment surveys have been conducted within and in the vicinity of Section 3. Finally, there are nine (9) archaeological sites, and one (1) cemetery located within Section 3. These resources are depicted in **Exhibit 6.2.3** and listed in **Table 6.2.3.**

Table 6.2.3 - Summary of Cultural Resources in Section 3 of Study Area

Cultural Resources	Within Section 3
SHPO Structures	317
SHPO Bridges	0
SHPO Resource Groups	4
National Register (Site, District, Building)	3
Archaeological Sites	9
SHPO Surveys	19
SHPO Cemeteries	1

Source: FGDL, FMSF

According to FMSF, there are four historic structures within Section 4, and they are located near the intersection of U.S. 441 and North Hiawassee Road. All four structures have been classified as ineligible to contribute to the NRD. One of the structures has been classified as ineligible for inclusion in the NRHP while the remaining three structures have not been evaluated by SHPO. One resource group is present within Section 4, and this resource group is known as Orange Blossom Trail. In addition, nine cultural resource assessment surveys have been conducted within and in the vicinity of Section 4. These resources are depicted in **Exhibit 6.2.4** and listed in **Table 6.2.4.**

Table 6.2.4 - Summary of Cultural Resources in Section 4 of Study Area

Cultural Resources	Within Section 4
SHPO Structures	4
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	0
SHPO Surveys	9
SHPO Cemeteries	0

Source: FGDL, FMSF

According to FMSF, there are 59 historic structures within Section 5 and all of them are located in or near the town of Zellwood. There are 31 structures that are classified as ineligible for inclusion in the NRHP, while four of the structures have been classified as eligible for inclusion in the NRHP, and the remaining 24 structures have not been evaluated by SHPO. There are 35 structures that have been classified as ineligible to be contributors to the NRD, and the other 24 have been classified as potential contributors. There are three (3) resource groups located within Section 5. Two (2) of the resource groups are classified as ineligible for inclusion in the NRHP and the other resource group has not been evaluated by SHPO. Additionally, two (2) cultural resource assessment surveys have been conducted within and in the vicinity of Section 5. Finally, there are five (5) archaeological sites located within Section 5. These resources are depicted in **Exhibit 6.2.5** and listed in **Table 6.2.5.**

Table 6.2.5 - Summary of Cultural Resources in Section 5 of Study Area

Cultural Resources	Within Section 5
SHPO Structures	59
SHPO Bridges	0
SHPO Resource Groups	3
National Register (Site, District, Building)	0
Archaeological Sites	5
SHPO Surveys	2
SHPO Cemeteries	0

Source: FGDL, FMSF

According to FMSF, there are 112 historic structures located throughout Section 6. While 82 of these structures have been classified as ineligible as contributors to the NRD, 29 have been classified as being contributors to the NRD. Of the 112 structures, 66 have been classified as ineligible for inclusion in the NRHP, eight structures have been classified as eligible, and the remaining 38 structures have not been evaluated by SHPO. One resource group, which has not been evaluated by SHPO, is present within Section 6. This resource group is known as Conquest Cemetery. In addition, 16 cultural resource assessment surveys have been conducted within Section 6. Finally, there are 15 archaeological sites, and one (1) cemetery located within Section 6. These resources are depicted in **Exhibit 6.2.6** and listed in **Table 6.2.6.**

Table 6.2.6 - Summary of Cultural Resources in Section 6 of Study Area

Cultural Resources	Within Section 6
SHPO Structures	112
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	15
SHPO Surveys	16
SHPO Cemeteries	1

Source: FGDL, FMSF

According to FMSF, there are 149 historic structures within Section 7, and they are located near U.S. 441, Lester Road, and Rock Springs Road. While 99 of these structures have been classified as ineligible as contributors to the NRD, 50 have been classified as being contributors to the NRD. Of the 149 structures, 25 have been classified as ineligible for inclusion in the NRHP, two structures have been classified as eligible, and the remaining 122 structures have not been evaluated by SHPO. One resource group, which has not been evaluated by SHPO, is present within Section 6. This resource group is known as the Wekiva Basin Geopark Tram Roads. There are two national register buildings located within Section 7 north of U.S. 441. In addition, 15 cultural resource assessment surveys have been conducted within and in the vicinity of Section 7. These resources are depicted in **Exhibit 6.2.7** and listed in **Table 6.2.7.**

Table 6.2.7 - Summary of Cultural Resources in Section 7 of Study Area

Cultural Resources	Within Section 7
SHPO Structures	149
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	2
Archaeological Sites	0
SHPO Surveys	15
SHPO Cemeteries	0

Source: FGDL, FMSF

According to the FMSF, there are two historic structures within Section 8, and they are located on Welch Road and North Thompson Road. Both structures have been classified as ineligible to contribute to the NRD. One site has been classified as ineligible for inclusion in the NRHP, while the other site has not been evaluated by SHPO. One resource group, which has not been evaluated by SHPO, is present within Section 8. This resource group is known as the Wekiva Basin Geopark Tram Roads. In addition, seven cultural resource assessment surveys have been conducted within and in the vicinity of Section 8. Finally, 11 archaeological sites have been identified within Section 8. These resources are depicted in **Exhibit 6.2.8** and listed in **Table 6.2.8.**

Table 6.2.8 - Summary of Cultural Resources in Section 8 of Study Area

Cultural Resources	Within Section 8
SHPO Structures	2
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	11
SHPO Surveys	7
SHPO Cemeteries	0

Source: FGDL, FMSF

According to the FMSF, there are 94 historic structures located throughout Section 9. Of the 94 structures, 50 structures have not been evaluated by SHPO. However, five structures are eligible for inclusion in the NRHP, while the remaining 39 sites are ineligible for inclusion in the NRHP. Of the 94 structures, 49 of the structures are classified as potential contributors to the NRD due to the potential ability of meeting the required criteria put forth by SHPO. According to FMSF, there are 4 resource groups within Section 9. Two of these resource groups are eligible for NRHP while the remaining two are classified as ineligible. Additionally, 15 cultural resource assessment surveys have been conducted within and in the vicinity of Section 9. Finally, there are 12 archaeological sites, and three cemeteries located within Section 9. These resources are depicted in **Exhibit 6.2.9** and listed in **Table 6.2.9.**

Table 6.2.9 - Summary of Cultural Resources in Section 9 of Study Area

Cultural Resources	Within Section 9
SHPO Structures	94
SHPO Bridges	0
SHPO Resource Groups	4
National Register (Site, District, Building)	0
Archaeological Sites	12
SHPO Surveys	15
SHPO Cemeteries	3

Source: FGDL, FMSF

According to FMSF, there are 104 historic structures located throughout Section 10. Eight of the structures have not been evaluated by SHPO, but four structures are eligible for inclusion in the NRHP, and the remaining 92 structures are ineligible for inclusion in the NRHP. Of the 104 structures, 95 of these structures are private residential homes while four of the structures are classified as commercial, four structures are classified as commercial and residential, and one structure is classified as an outbuilding. Eight of the structures are classified as potential contributors to the NRD due to the potential ability of meeting the required criteria put forth by SHPO. In addition, 11 cultural resource assessment surveys have been conducted within and in the vicinity of Section 10. Finally, one cemetery is located within Section 9. These resources are depicted in **Exhibit 6.2.10** and listed in **Table 6.2.10.**

Table 6.2.10 - Summary of Cultural Resources in Section 10 of Study Area

Cultural Resources	Within Section 10
SHPO Structures	104
SHPO Bridges	0
SHPO Resource Groups	0
National Register (Site, District, Building)	0
Archaeological Sites	0
SHPO Surveys	11
SHPO Cemeteries	1

Source: FGDL, FMSF

According to FMSF, there are 69 historic structures within Section 11, and they are located near the intersection of Kelly Park Road, Mount Plymouth Road, and Rock Springs Road. Three of these structures have not been evaluated by SHPO, however, a total of 65 structures have been classified as ineligible for inclusion in the NRHP. One structure has been classified as eligible for inclusion in the NRHP**.** 66 of the sites have been classified as ineligible contributors to the NRD. The remaining three sites have been classified as being potential contributors to the NRD. There is one resource group, however, it has not been evaluated by SHPO. In addition, nine cultural resource assessment surveys have been conducted within and in the vicinity of Section 11. Finally, there are four (4) archaeological structures, and one (1) cemetery located within Section 10. These resources are depicted in **Exhibit 6.2.11** and listed in **Table 6.2.11.**

Table 6.2.11 - Summary of Cultural Resources in Section 11 of Study Area

Cultural Resources	Within Section 11
SHPO Structures	69
SHPO Bridges	0
SHPO Resource Groups	1
National Register (Site, District, Building)	0
Archaeological Sites	4
SHPO Surveys	9
SHPO Cemeteries	1

Source: FGDL, FMSF

According to FMSF, there are zero historic structures within Section 12. There are three resource groups within Section 12. One of the structures is ineligible for inclusion in the NRHP due to the lack of historical significance, while another has not been evaluated by SHPO. The third resource group is classified as Twin Mounds Archeological District, which is eligible for inclusion in the NRHP based upon its historical significance. In addition, five cultural resource assessment surveys have been conducted within and in the vicinity of Section 12. Finally, there are 12 archaeological sites located within Section 12. All of these resources are located within the Wekiwa Spring State Park and Rock Spring Run State Reserve. These resources are depicted in **Exhibit 6.2.12** and listed in **Table 6.2.12**.

Table 6.2.12 - Summary of Cultural Resources in Section 12 of Study Area

Cultural Resources	Within Section 12
SHPO Structures	0
SHPO Bridges	2
SHPO Resource Groups	3
National Register (Site, District, Building)	0
Archaeological Sites	12
SHPO Surveys	5
SHPO Cemeteries	0

Source: FGDL, FMSF

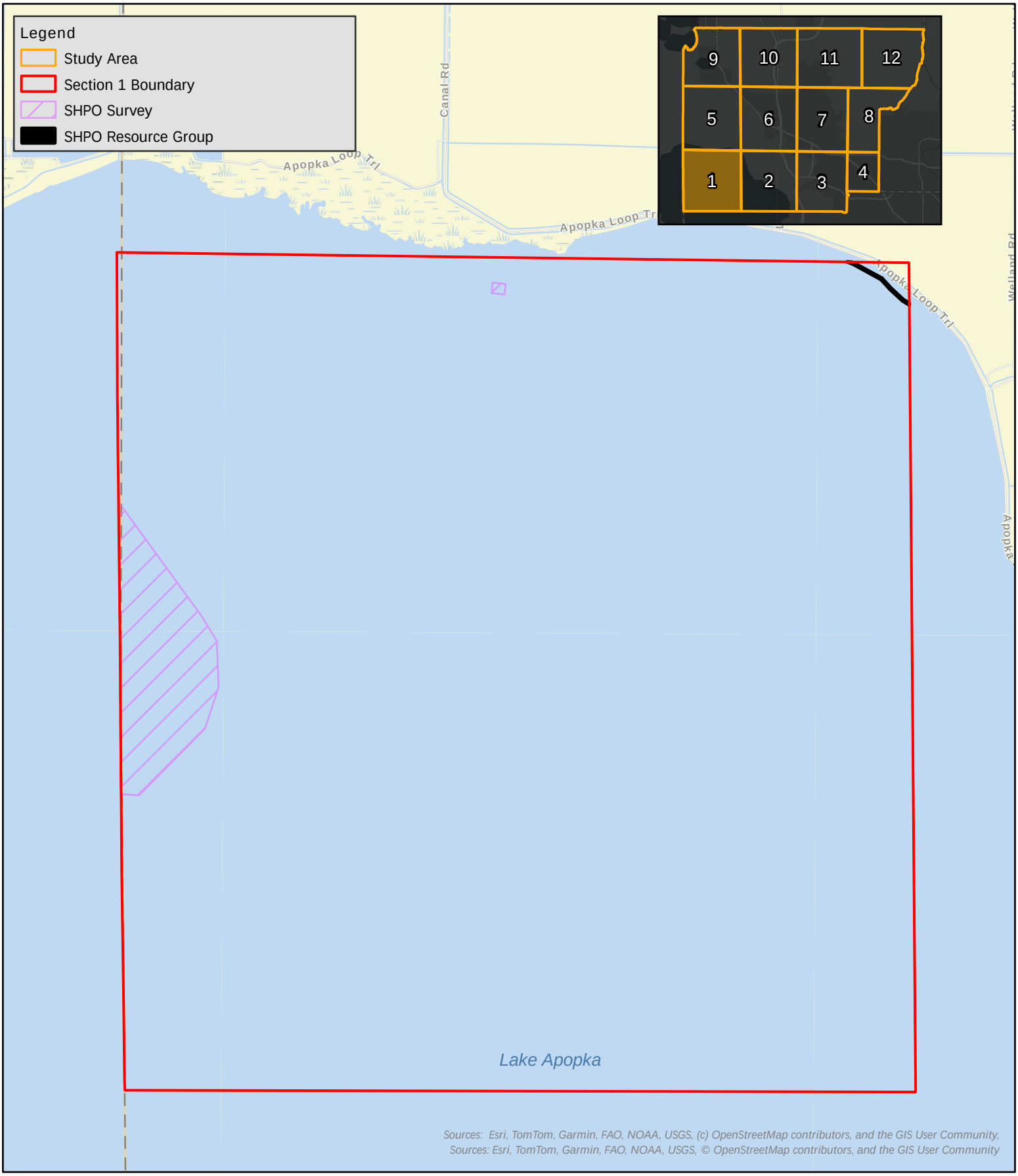


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EXHIBIT - 6.2.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: Cultural Resources Map

Orange County Government Florida

0 1,500 3,000 Feet

Data Source: FGDL.

NOWOCATS - May 2025

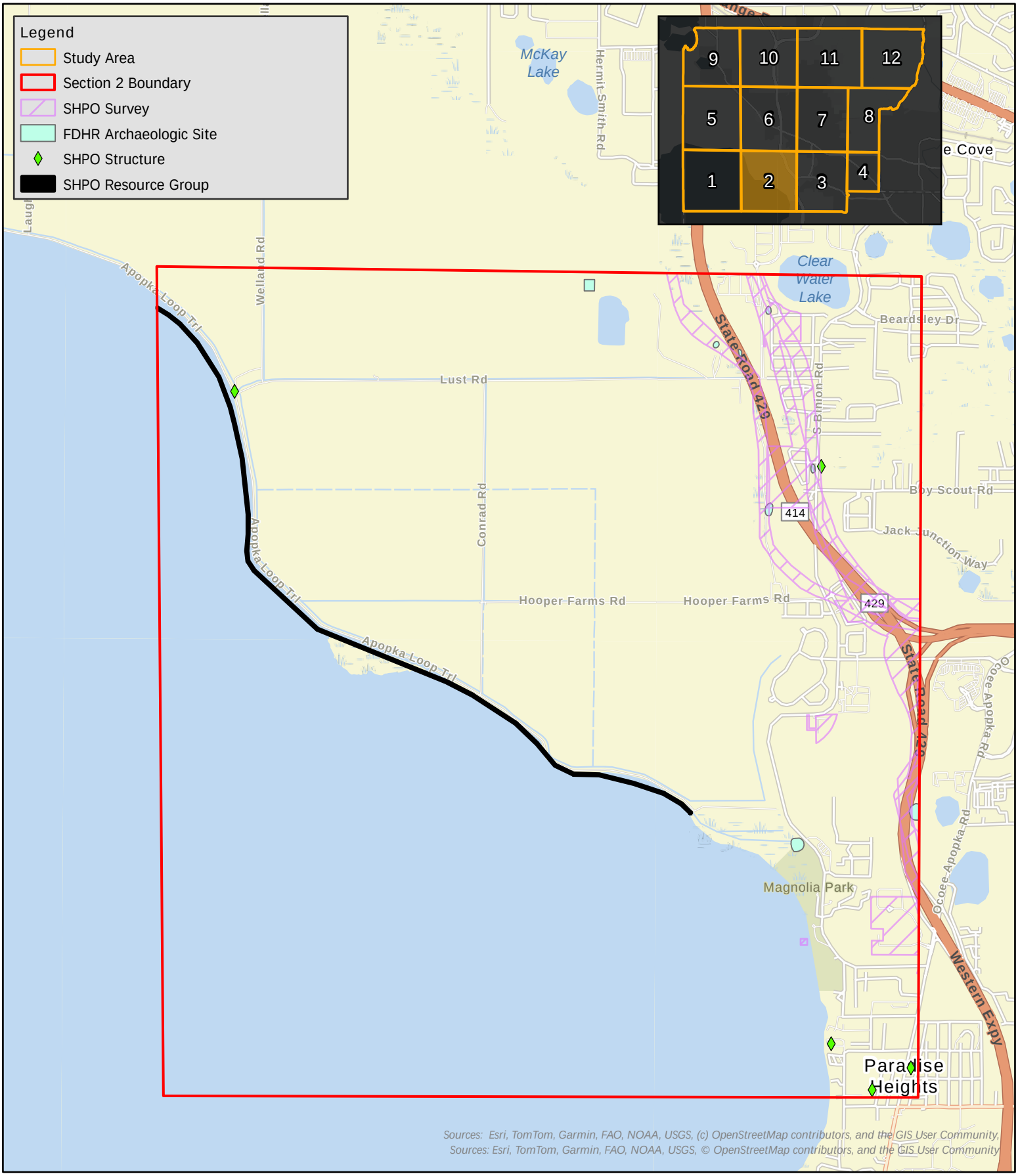

EXHIBIT - 6.2.2

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

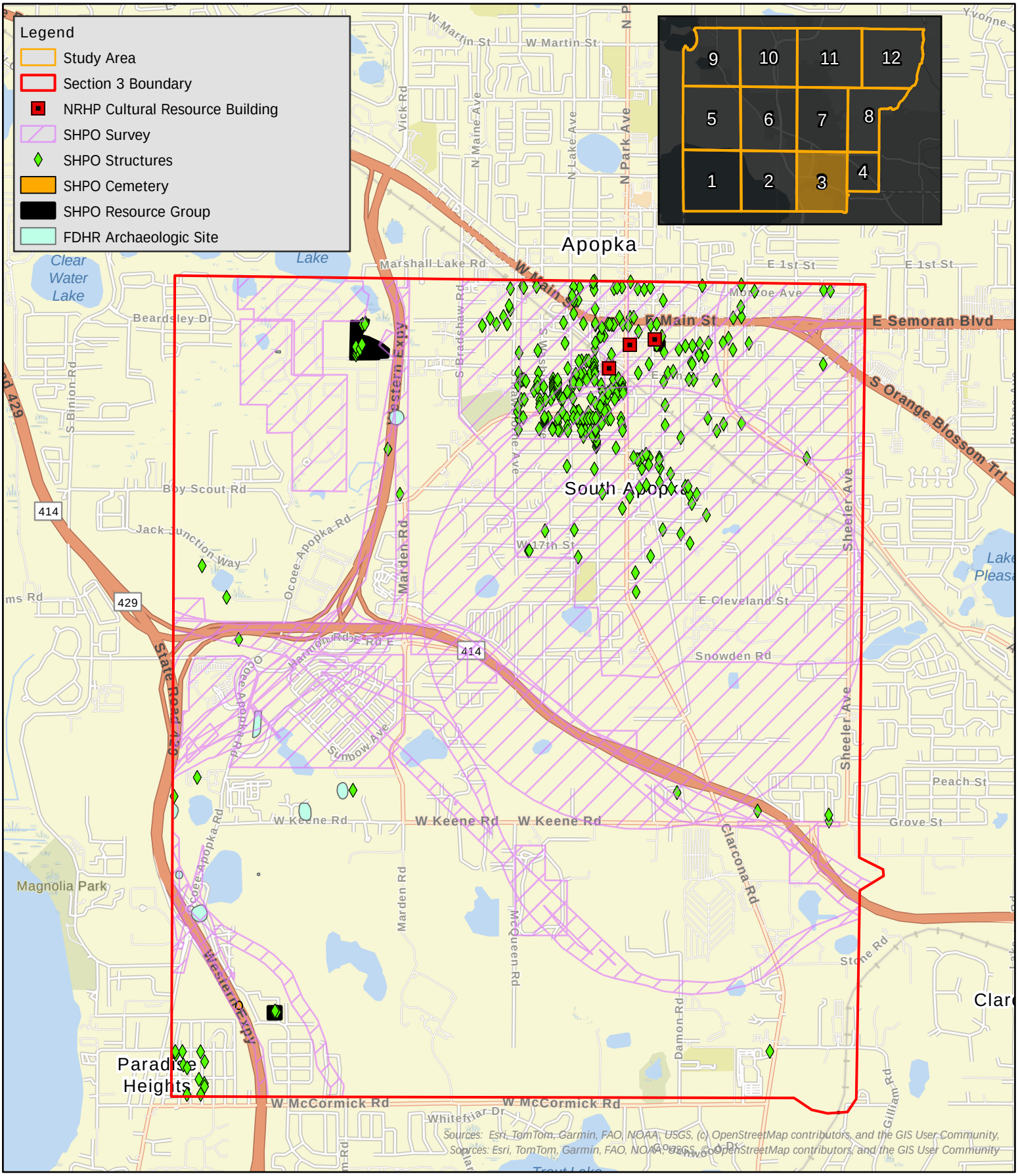

EXHIBIT - 6.2.3

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

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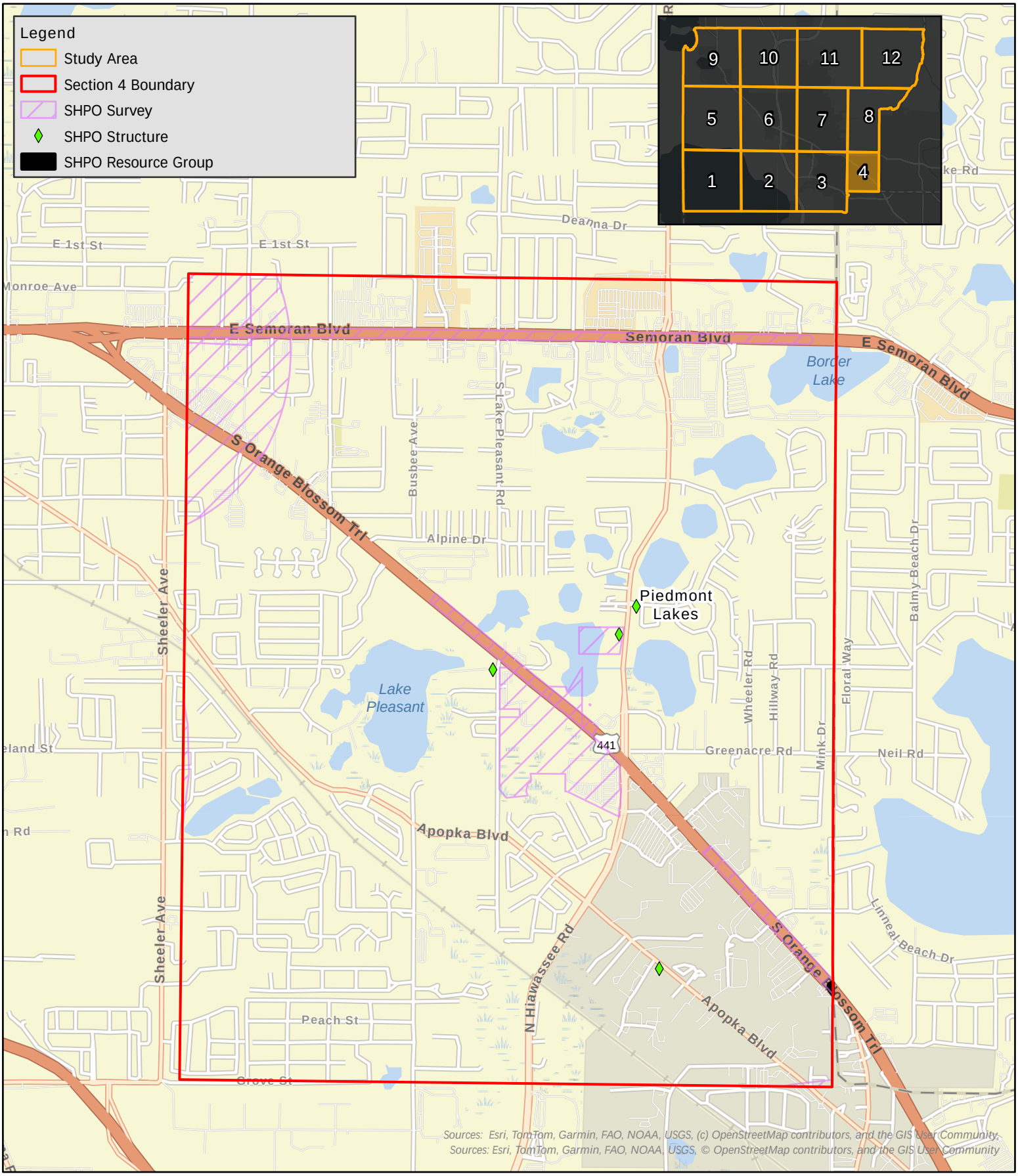

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EXHIBIT - 6.2.4

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,250 2,500 Feet

Data Source: FGDL.

NOWOCATS - May 2025

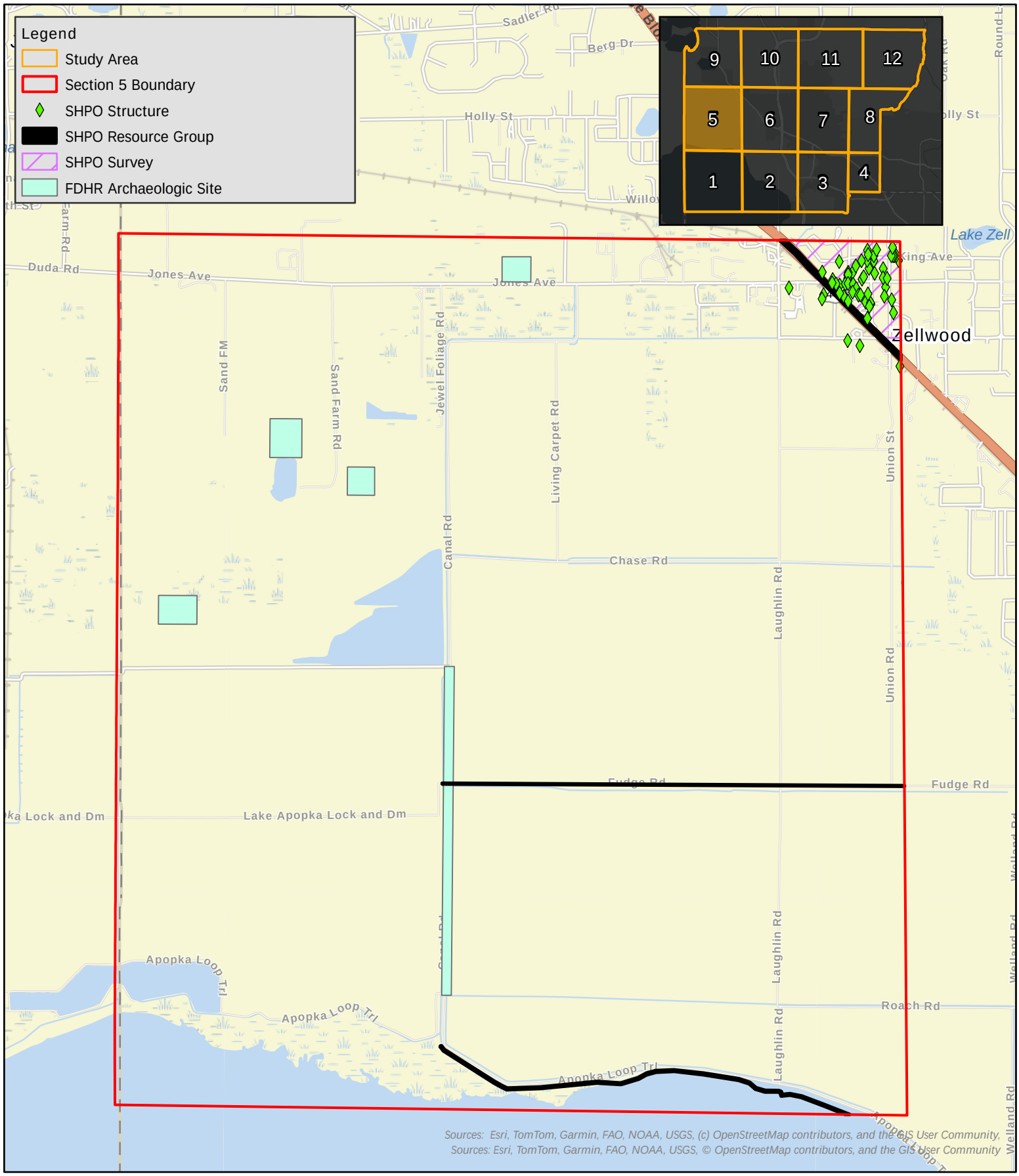

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EXHIBIT - 6.2.5

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: Cultural Resources Map

Orange County Government Florida

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

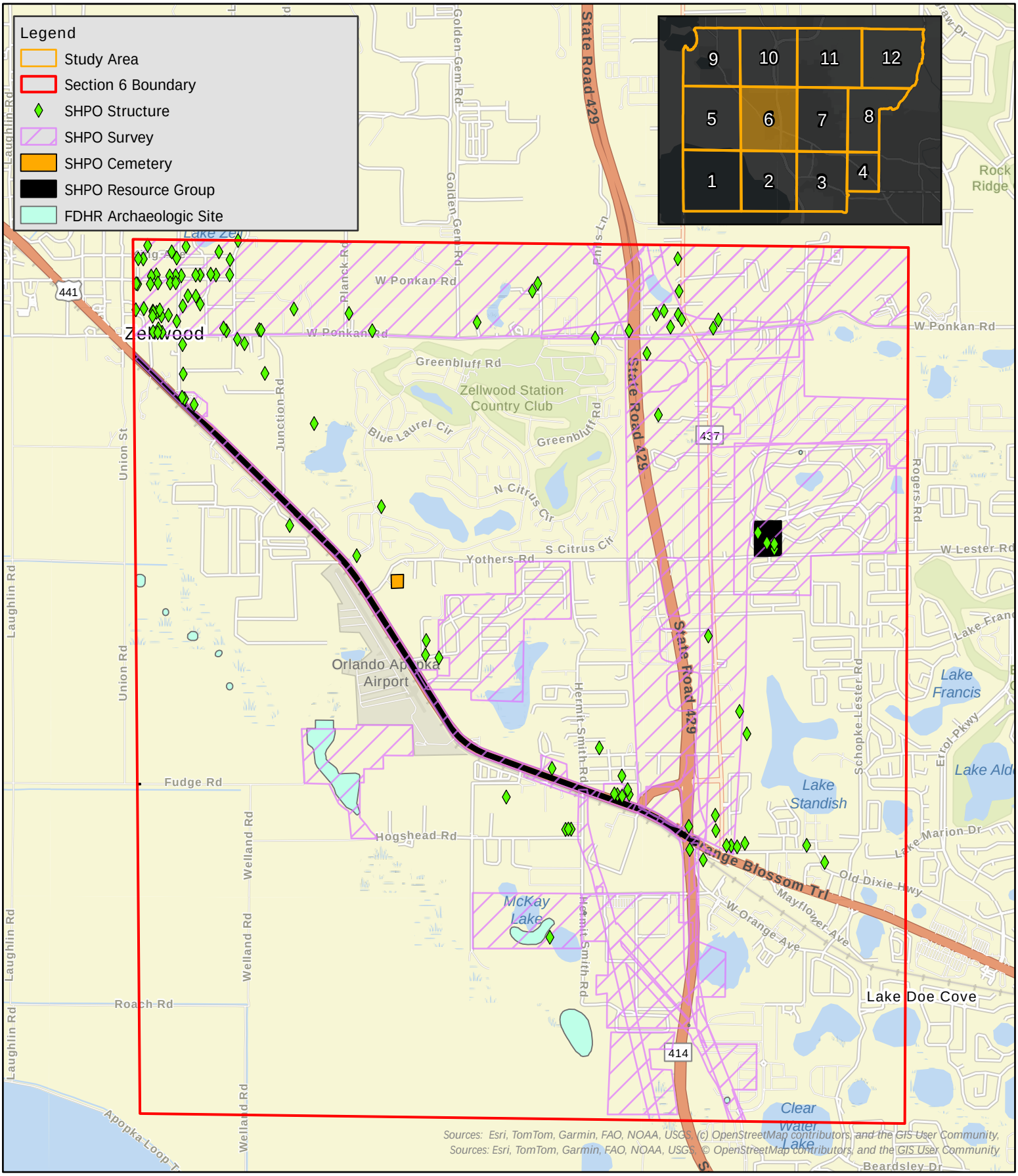

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EXHIBIT - 6.2.6

North West Orange County Areawide Transportation Study (NOWOCATS)

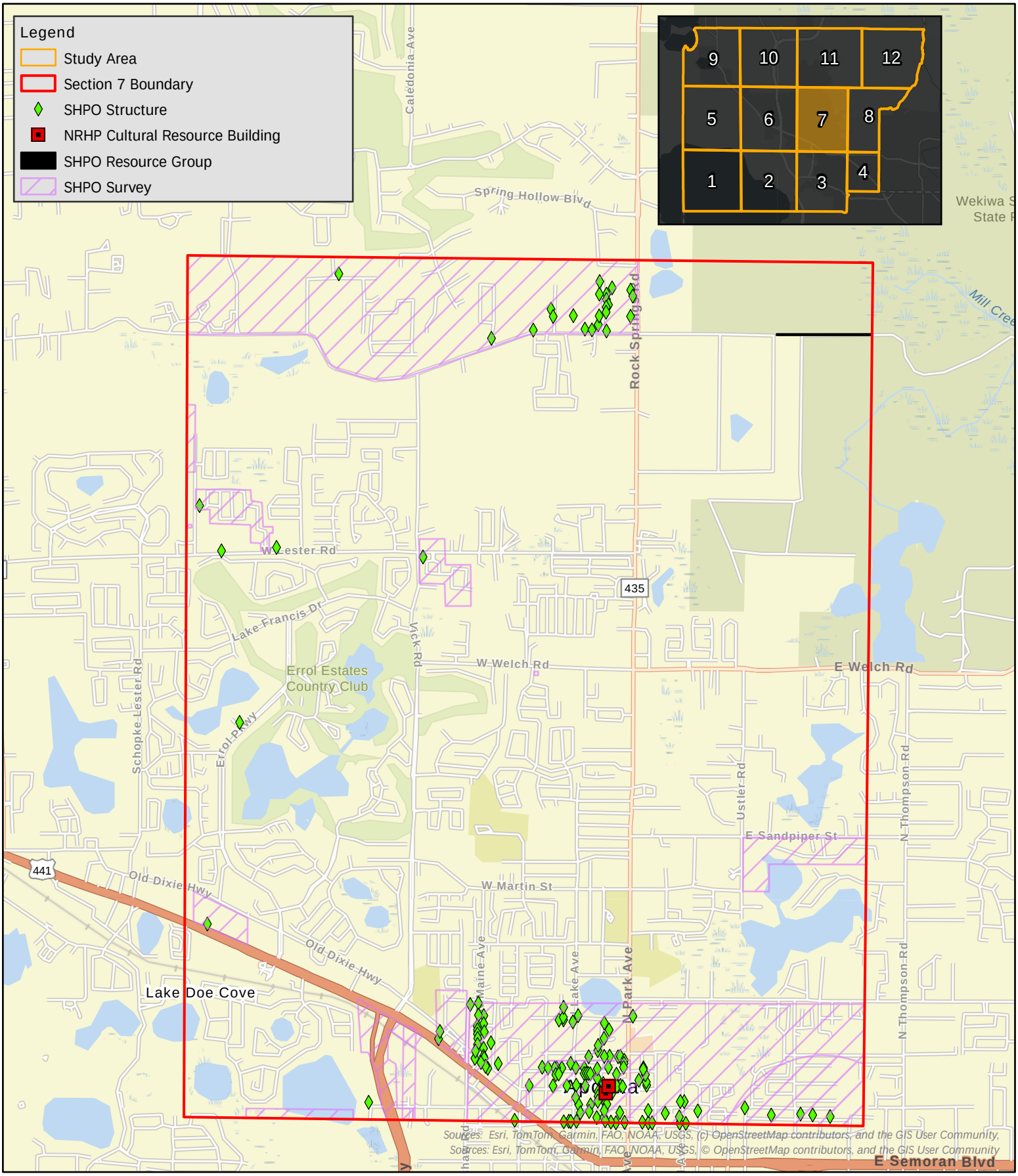
Section 6: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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EXHIBIT - 6.2.7

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL.

NOWOCATS - May 2025

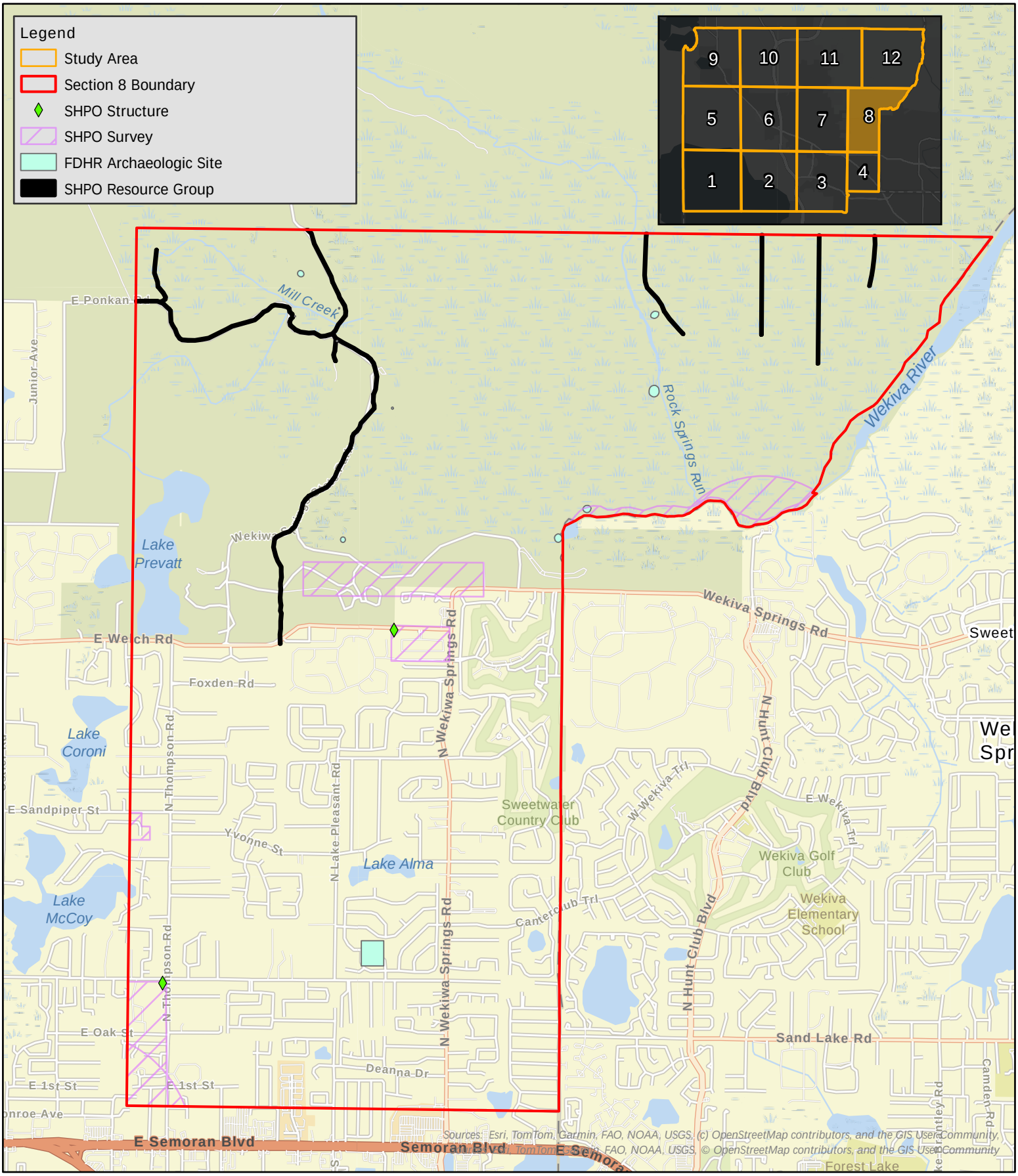

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EXHIBIT - 6.2.8

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

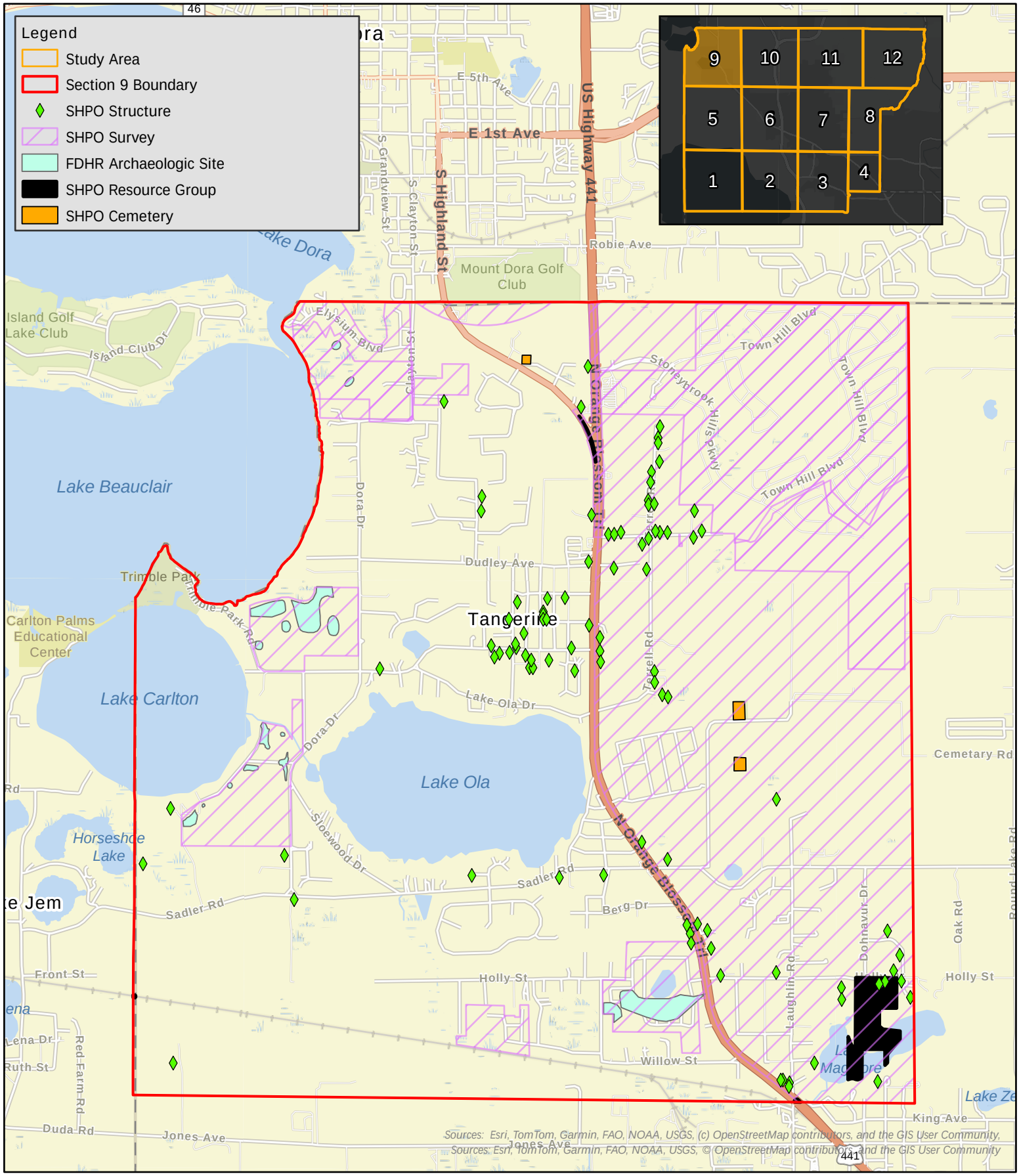

EXHIBIT - 6.2.9

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

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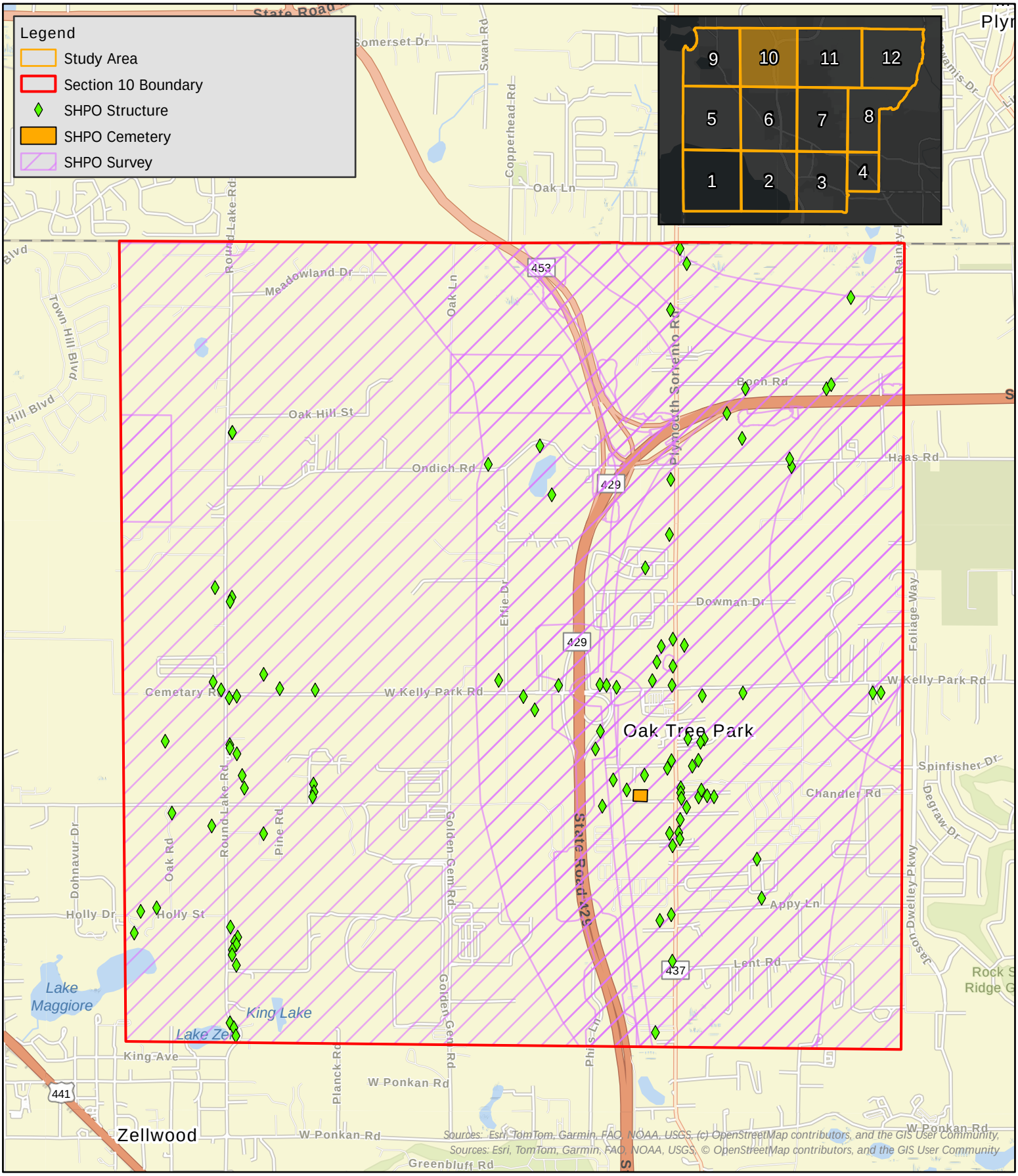

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EXHIBIT - 6.2.10

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL.

NOWOCATS - May 2025

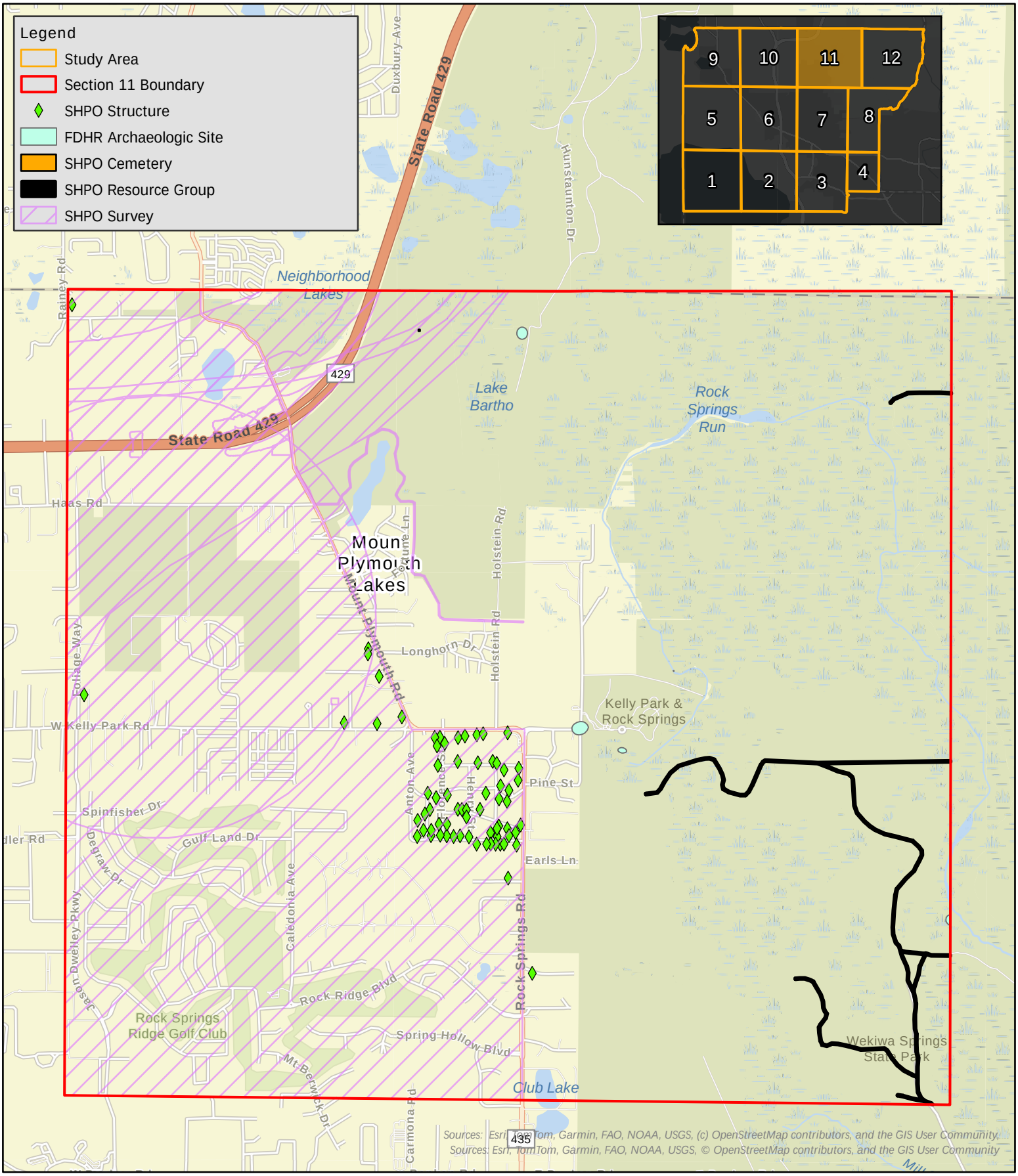

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EXHIBIT - 6.2.11

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

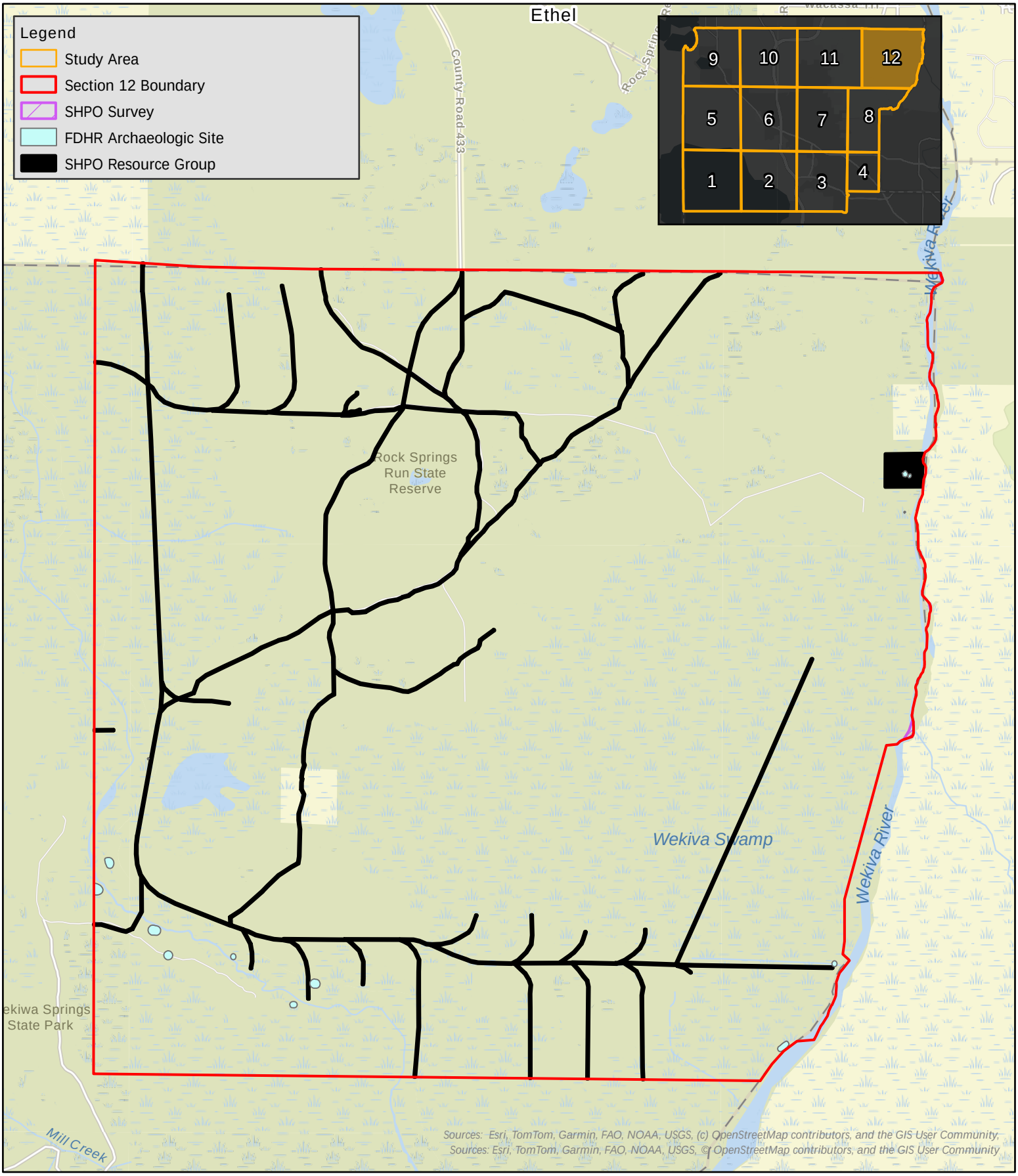

EXHIBIT - 6.2.12

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: Cultural Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FDHR.

NOWOCATS - May 2025

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6.3 SOCIAL RESOURCES

Social resources and facilities include, but are not limited to, trails, parks, schools, and recreational areas as well as the neighborhoods they serve. Many of these features are protected under the Department of Transportation Act (DOT Act) of 1966, Section 4(f) which limits the use of public land. **Table 6.3.1** through **Table 6.3.12** summarize the number of sites that are in public ownership or use for Sections 1 through 12. The locations of social resources are depicted for each of the Sections in Exhibit 6.3.1 through Exhibit 6.3.12.

As shown in **Exhibit 6.3.1** and **Table 6.3.1**, there is one conservation land within Section 1 that is associated with Lake Apopka North Shore Restoration Area (NSRA) which is managed by the St. John's River Water Management District (SJRWMD). Lake Apopka NRSA also includes a wildlife drive and bike trail through the property.

Table 6.3.1 - Summary of Social Resources in Section 1 of Study Area

Social Resources	Within Section 1
Cemetery	0
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	0
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	0
Religious Center	0
School	0
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.2** and **Table 6.3.2**, there is one conservation land within Section 2 which is the Lake Apopka NSRA. This section also includes portions of the wildlife drive and bike trail. There is one park located within Section 2 which is known as Magnolia Park and Boat Ramp. The University of Florida Mid-Florida Research and Education Center also lies within this section.

Table 6.3.2 - Summary of Social Resources in Section 2 of Study Area

Social Resources	Within Section 2
Cemetery	0
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	0
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	1
Religious Center	0
School	1
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.3** and **Table 6.3.3**, there are three cemeteries within Section 3. One cultural center exists within Section 3 and is referred to as the Museum of Apopkans. There are two fire stations, six health care facilities, and one law enforcement station. Six parks are located within Section 3. This section also contains 54 religious centers and nine schools. Lastly, there is one social service facility that operates as a food assistance program.

Table 6.3.3 - Summary of Social Resources in Section 3 of Study Area

Social Resources	Within Section 3
Cemetery	3
Civic Center	0
Conservation Lands	0
Cultural Center	1
Fire Station	2
Government Building	0
Health Care Facility	6
Hospital	0
Law Enforcement	1
Park	5
Religious Center	54
School	9
Social Service Facility	1
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.4** and **Table 6.3.4**, there are two cultural centers. One of them is a library and the other is a movie theater. Apopka Fire Department Station 3 lies within Section 4. as well as five health care facilities. There are nine religious centers, and ten (10) schools located within Section 4.

Table 6.3.4 - Summary of Social Resources in Section 4 of Study Area

Social Resources	Within Section 4
Cemetery	0
Civic Center	0
Conservation Lands	0
Cultural Center	2
Fire Station	1
Government Building	0
Health Care Facility	5
Hospital	0
Law Enforcement	0
Park	0
Religious Center	9
School	10
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.5** and **Table 6.3.5**, there is one conservation land associated within Section 5. This conservation land is associated with Lake Apopka NSRA. The Orange County Fire Department and Rescue Station 20 (Zellwood) lie within this section. There is one park located within Section 5, and it is the Lake Apopka Restoration Area-Jones Avenue Stormwater Park Trailhead. Lastly, there is one religious center also located within the Section.

Table 6.3.5 - Summary of Social Resources in Section 5 of Study Area

Social Resources	Within Section 5
Cemetery	0
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	1
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	1
Religious Center	1
School	0
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.6** and **Table 6.3.6**, there are two cemeteries located within Section 6. Lake Apopka NSRA is the conservation land found within Section 6. There is only one fire station within this section, and it is Apopka Fire Department and Rescue Station 4. Lastly, there are three parks, 15 religious centers, and one school within this Section.

Table 6.3.6 - Summary of Social Resources in Section 6 of Study Area

Social Resources	Within Section 6
Cemetery	2
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	1
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	3
Religious Center	15
School	1
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.7** and **Table 6.3.7**, there is one cemetery and one conservation land located with Section 7. The conservation land is associated with the Wekiwa Springs State Park. There is one fire station, 18 health care facilities, one hospital, and one law enforcement office located within Section 7. Also located within Section 7 there are ten parks, 14 religious centers, and eight schools.

Table 6.3.7 - Summary of Social Resources in Section 7 of Study Area

Social Resources	Within Section 7
Cemetery	1
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	1
Government Building	0
Health Care Facility	18
Hospital	1
Law Enforcement	1
Park	10
Religious Center	14
School	8
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.8** and **Table 6.3.8**, there are two conservation lands located within Section 8. These are the Wekiwa Springs State Park and Rock Springs Run State Reserve which are both managed by FDEP. In addition, there is one fire station, five religious centers, and three schools located within Section 8.

Table 6.3.8 - Summary of Social Resources in Section 8 of Study Area

Social Resources	Within Section 8
Cemetery	0
Civic Center	0
Conservation Lands	2
Cultural Center	0
Fire Station	1
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	0
Religious Center	5
School	3
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.9** and **Table 6.3.9**, there are four cemeteries located within Section 8. There is one conservation land within Section 9, known as Holiday Highlands Sanctuary. Additionally, there are two healthcare facilities, four parks, 11 religious centers, and five schools found within Section 9.

Table 6.3.9 - Summary of Social Resources in Section 9 of Study Area

Social Resources	Within Section 9
Cemetery	4
Civic Center	0
Conservation Lands	1
Cultural Center	0
Fire Station	0
Government Building	0
Health Care Facility	2
Hospital	0
Law Enforcement	0
Park	4
Religious Center	11
School	5
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.10** and **Table 6.3.10**, there are two cemeteries located within Section 10. There are four conservation lands, and two parks also found within Section 9. Finally, there is one religious center and one public school in this section.

Table 6.3.10 - Summary of Social Resources in Section 10 of Study Area

Social Resources	Within Section 10
Cemetery	2
Civic Center	0
Conservation Lands	4
Cultural Center	0
Fire Station	0
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	1
Religious Center	1
School	1
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in Exhibit **6.3.11** and Table **6.3.11**, there is one cemetery located within Section 11. Additionally, seven conservation lands are located within Section 11. The Apopka Fire Department Station Five is also within the area. Finally, there is one park, two religious centers, and one school all found within Section 11.

Table 6.3.11 - Summary of Social Resources in Section 11 of Study Area

Social Resources	Within Section 11
Cemetery	1
Civic Center	0
Conservation Lands	7
Cultural Center	0
Fire Station	1
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	1
Religious Center	2
School	1
Social Service Facility	0
Veteran Facility	0

Source: FGDL

As shown in **Exhibit 6.3.12** and **Table 6.3.12**, there are two conservation lands located within Section 12. The conservation lands are related to Rock Springs Run State Reserve and Wekiwa Springs State Park.

Table 6.3.12 - Summary of Social Resources in Section 12 of Study Area

Social Resources	Within Section 12
Cemetery	0
Civic Center	0
Conservation Lands	2
Cultural Center	0
Fire Station	0
Government Building	0
Health Care Facility	0
Hospital	0
Law Enforcement	0
Park	0
Religious Center	0
School	0
Social Service Facility	0
Veteran Facility	0

Source: FGDL

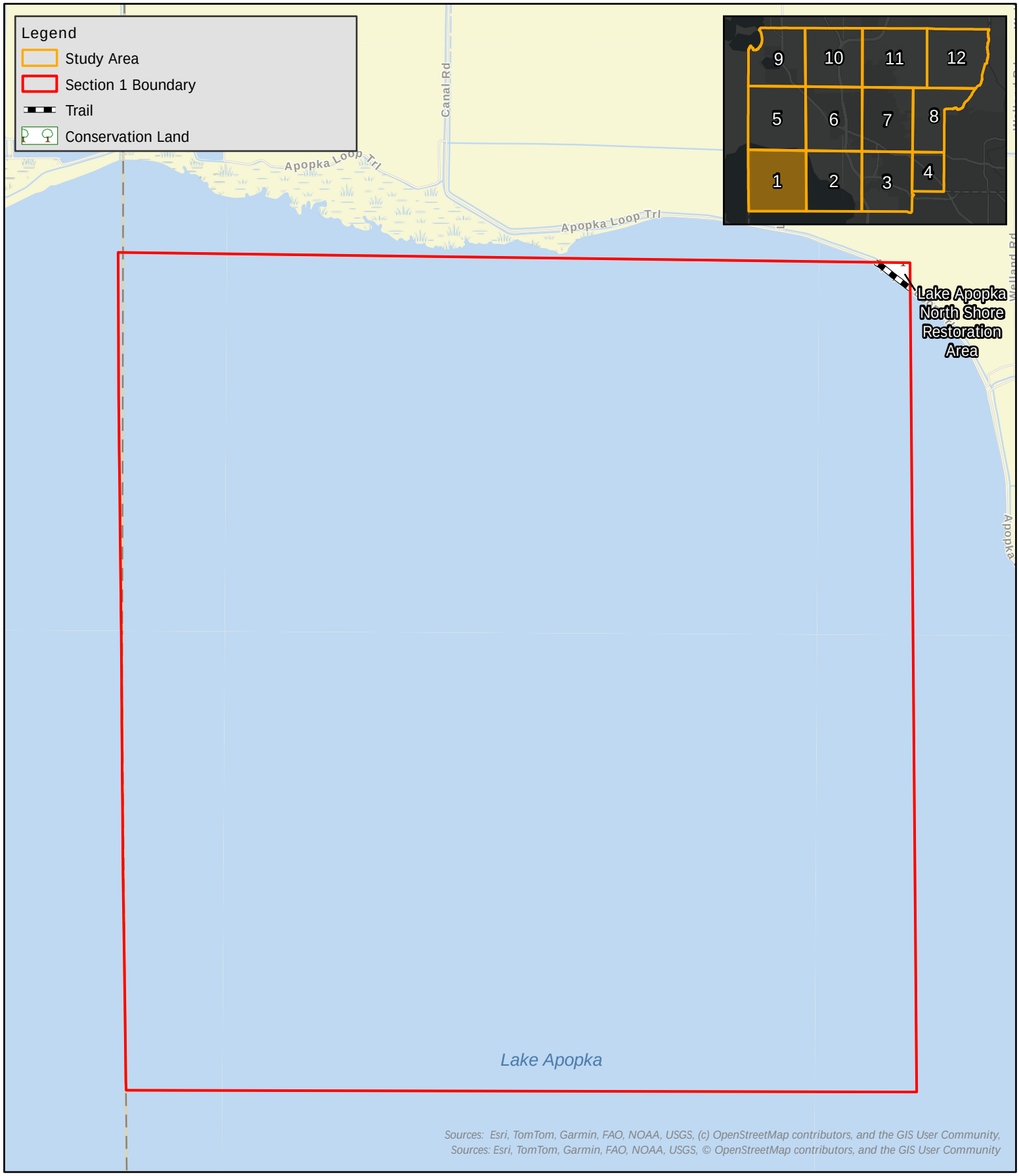

EXHIBIT - 6.3.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

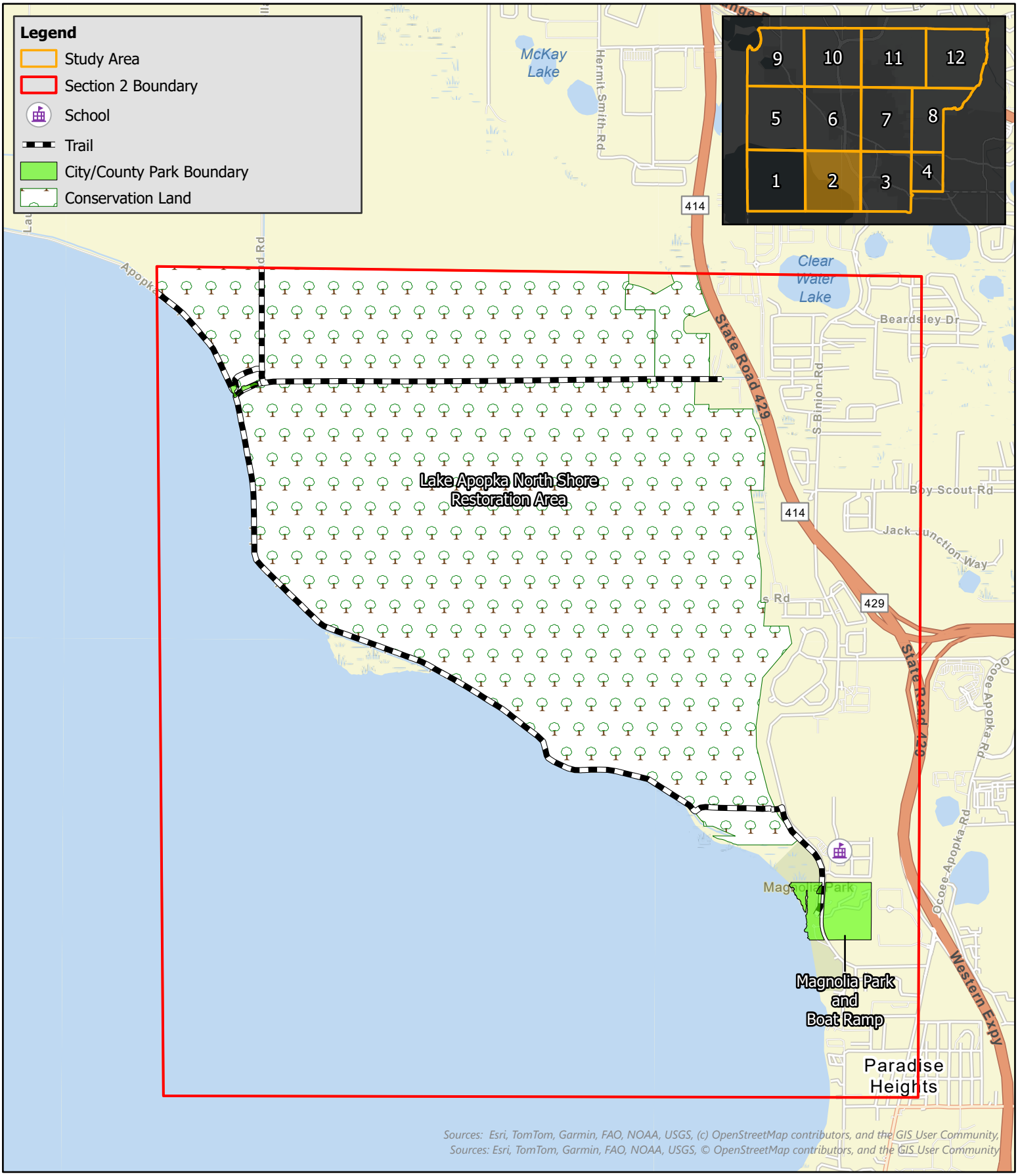

EXHIBIT - 6.3.2

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

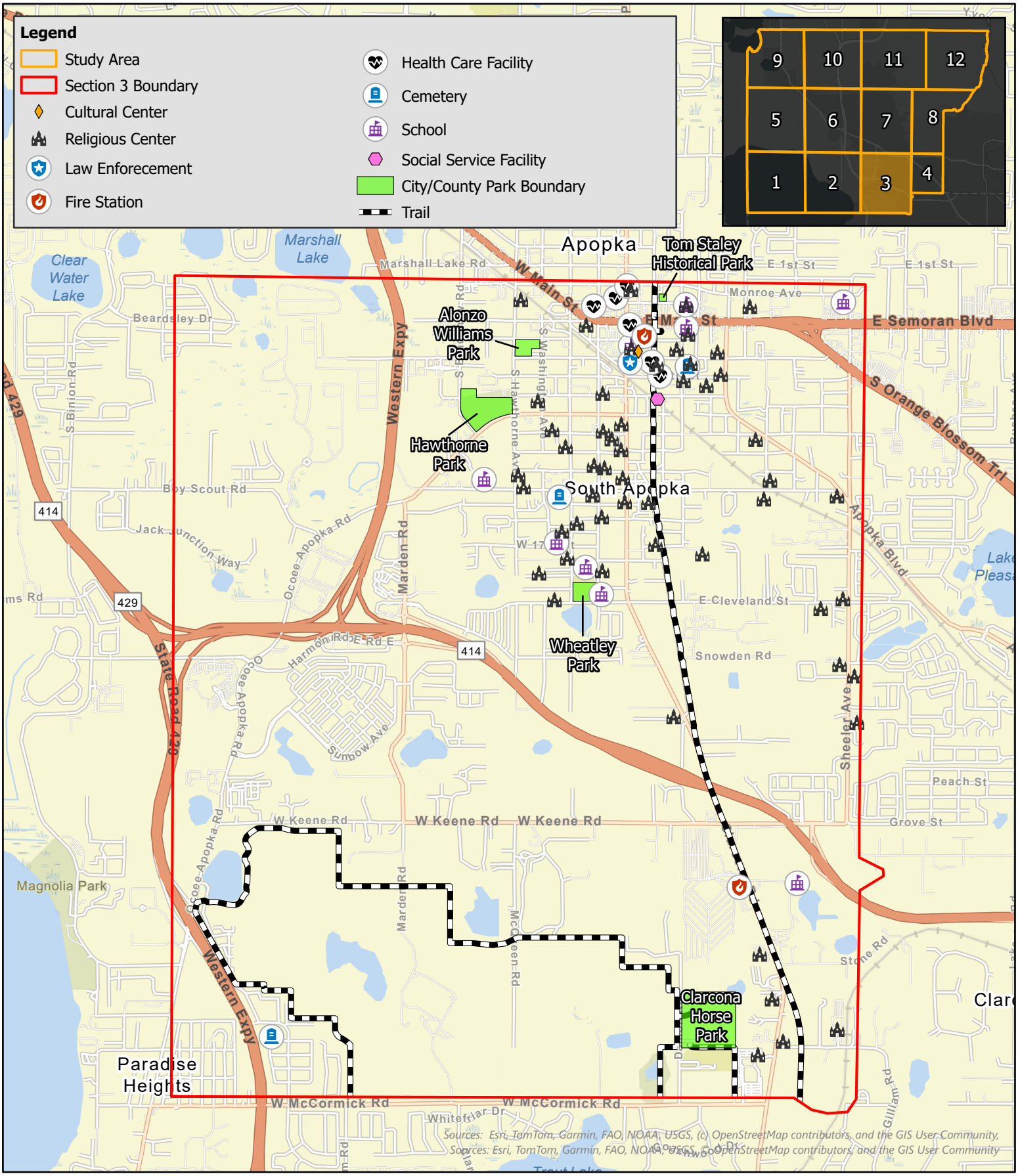

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EXHIBIT - 6.3.3

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL.

NOWOCATS - June 2025

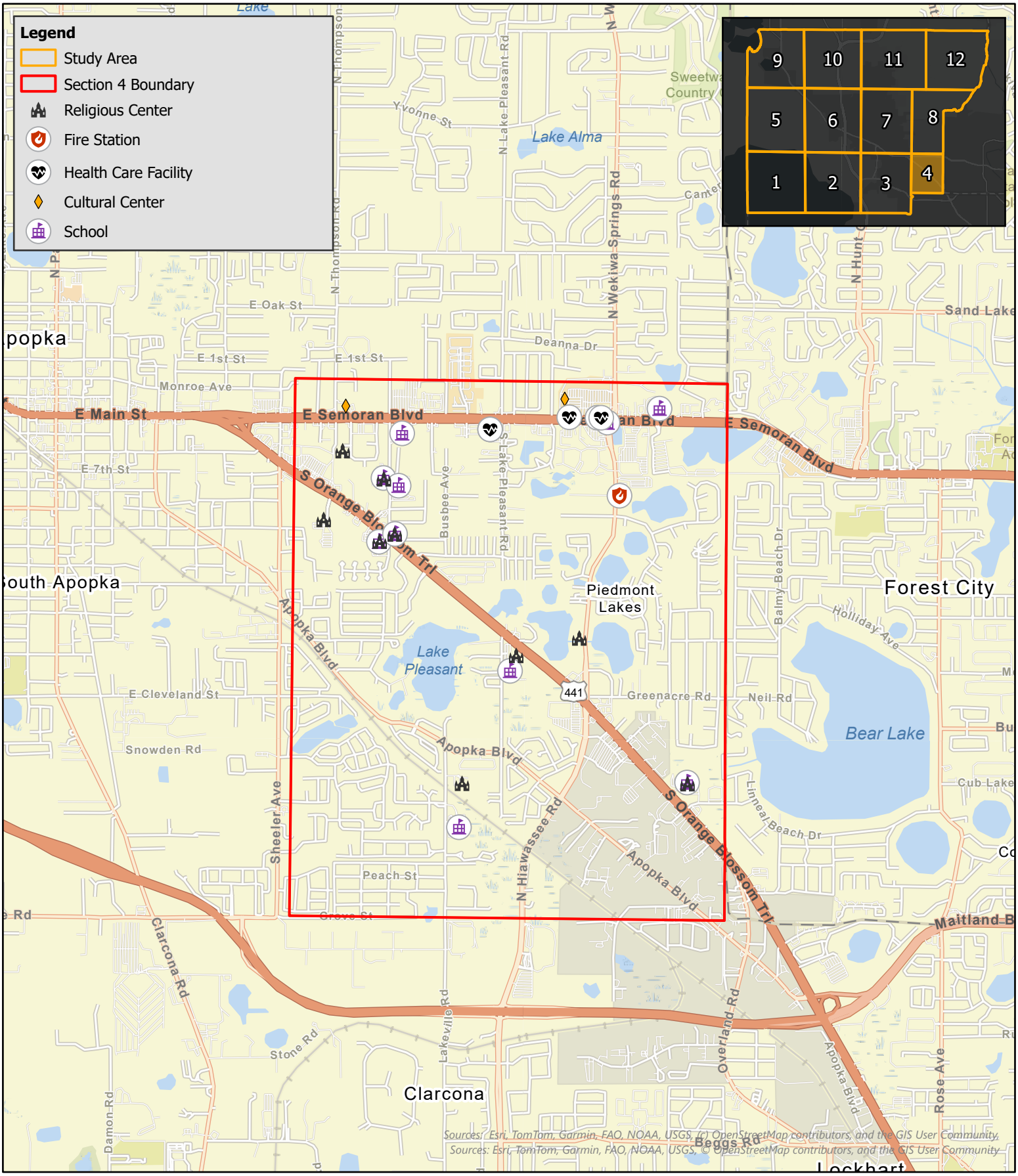

EXHIBIT - 6.3.4

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL.

NOWOCATS - June 2025

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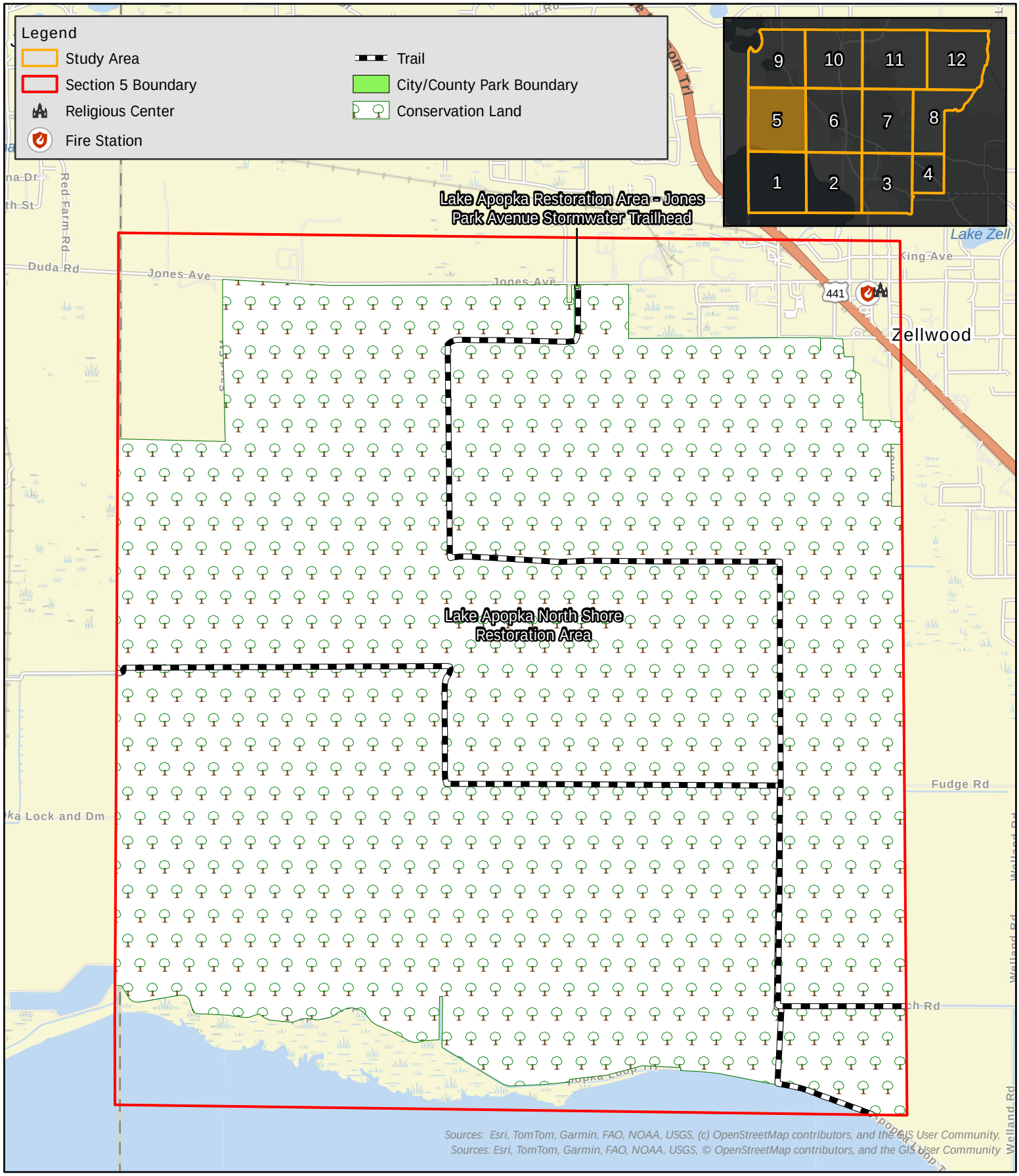

EXHIBIT - 6.3.5

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

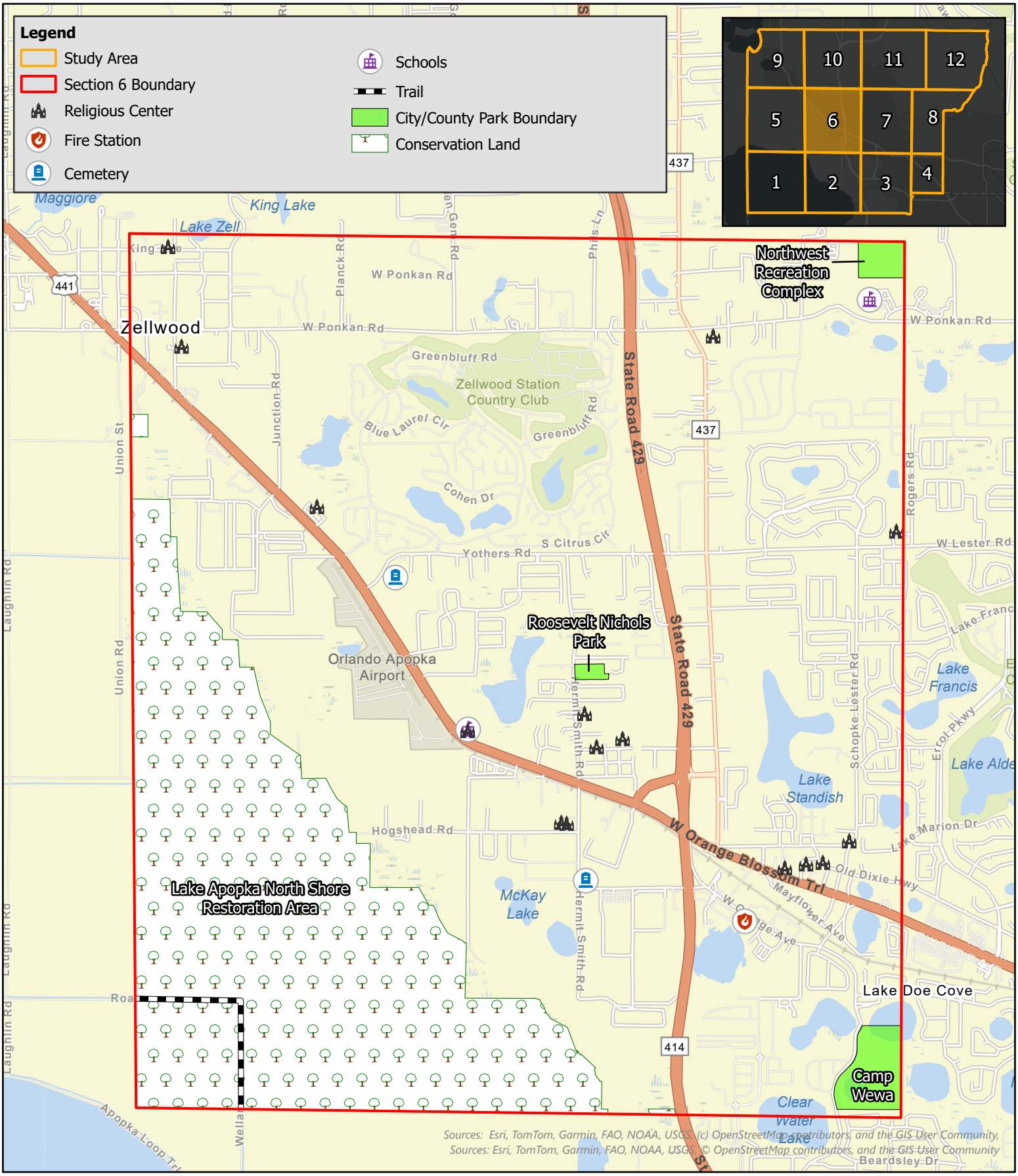

EXHIBIT - 6.3.6

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 6: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

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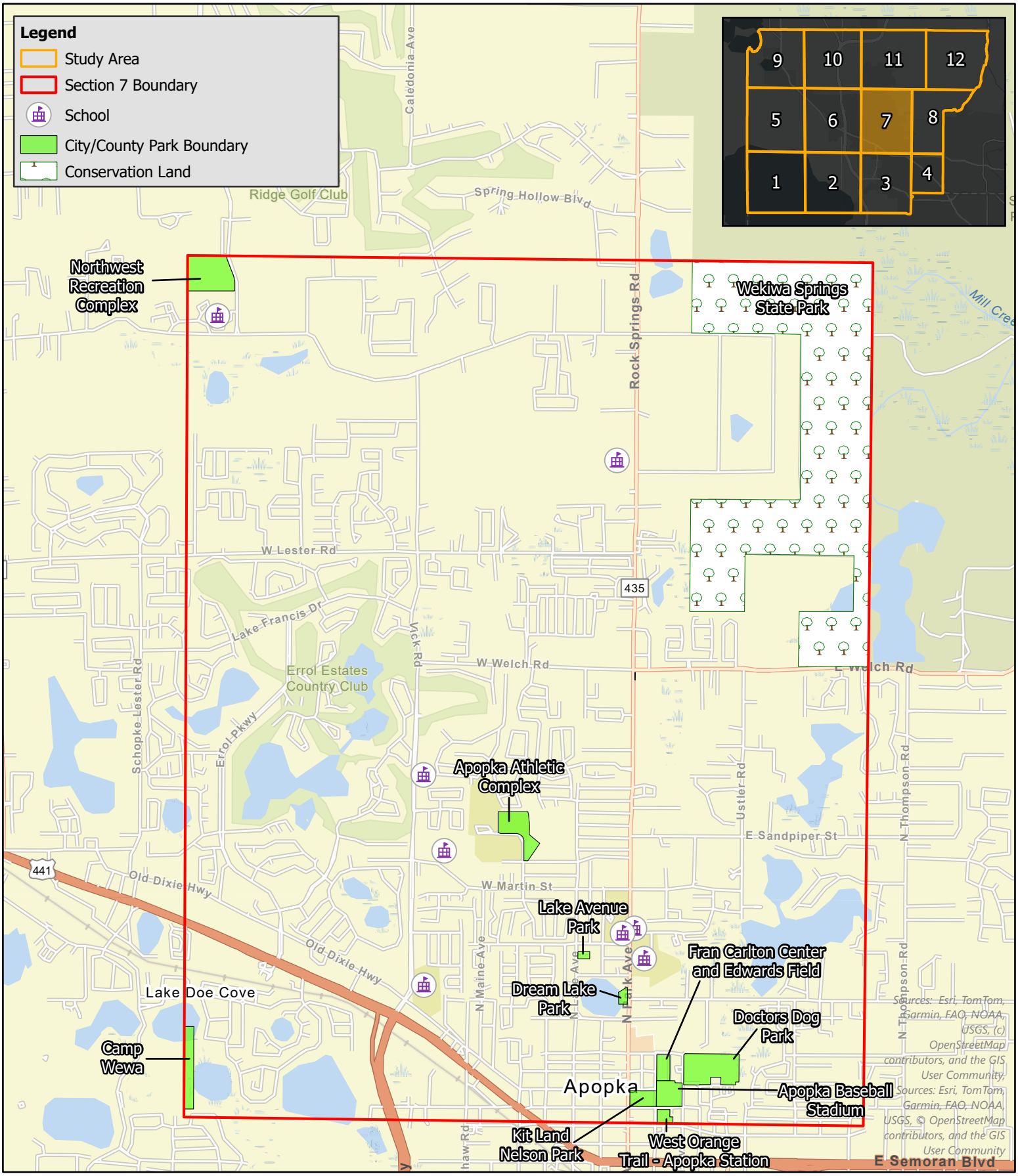

EXHIBIT - 6.3.7

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

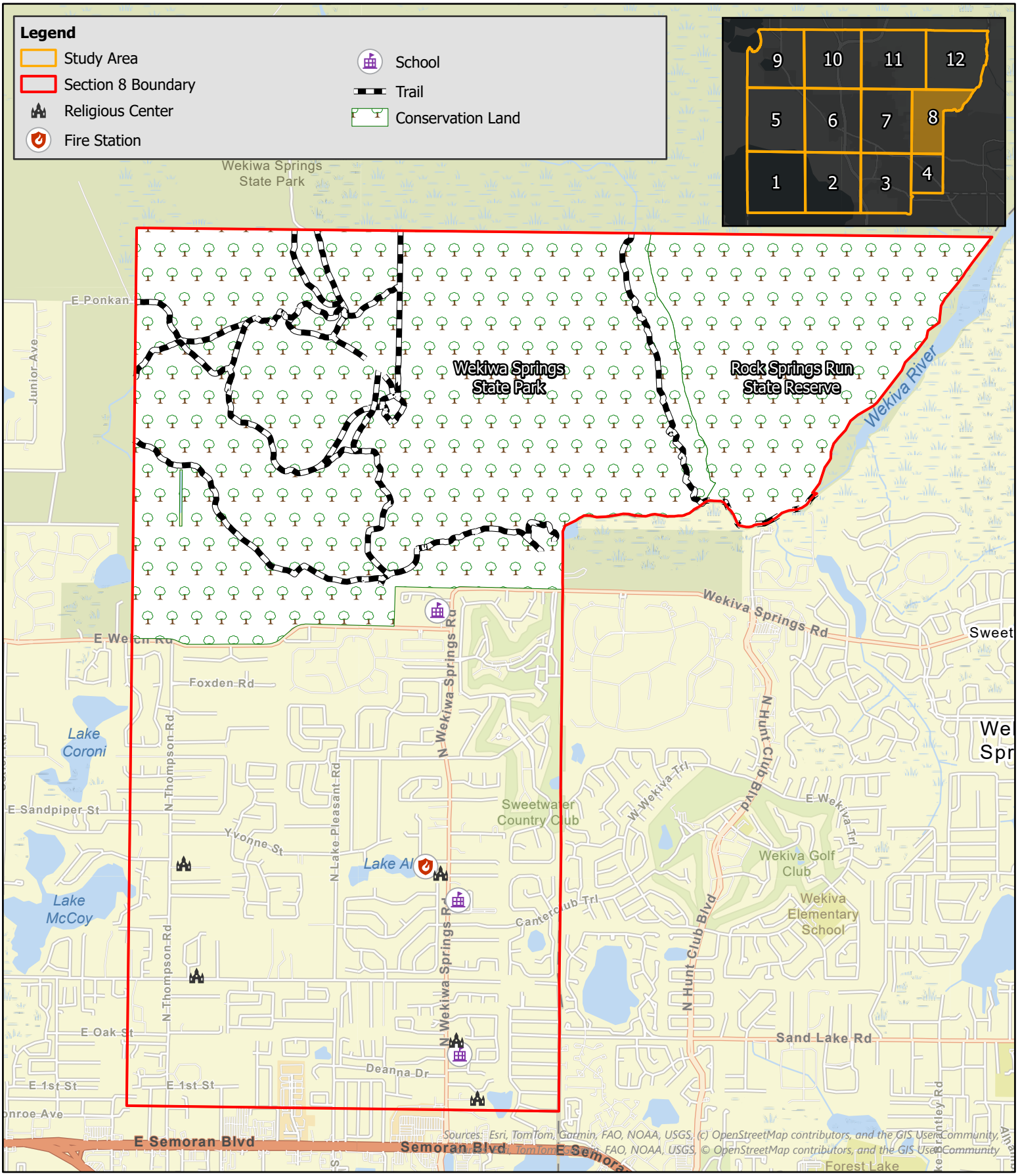

EXHIBIT - 6.3.8

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

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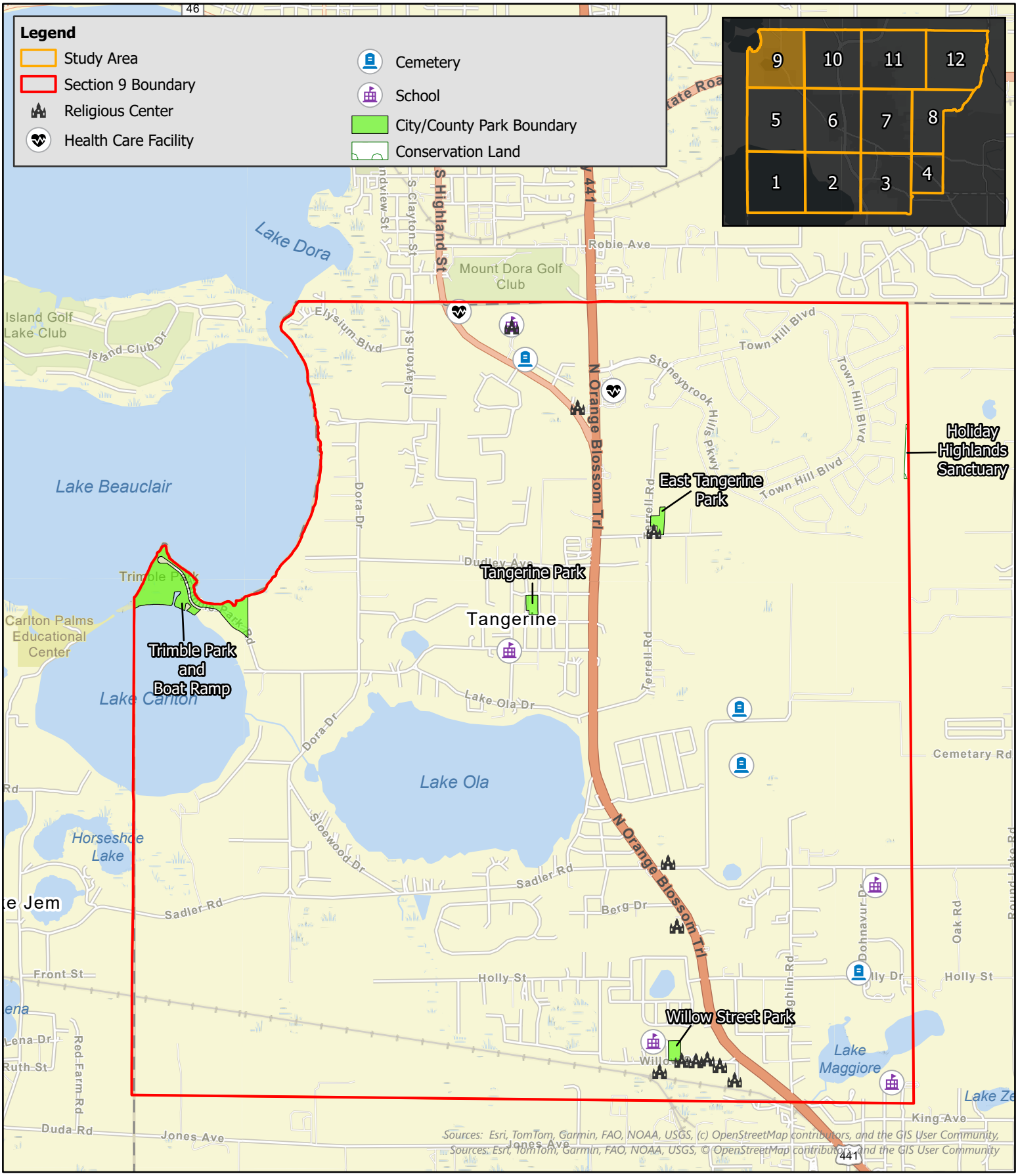

EXHIBIT - 6.3.9

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

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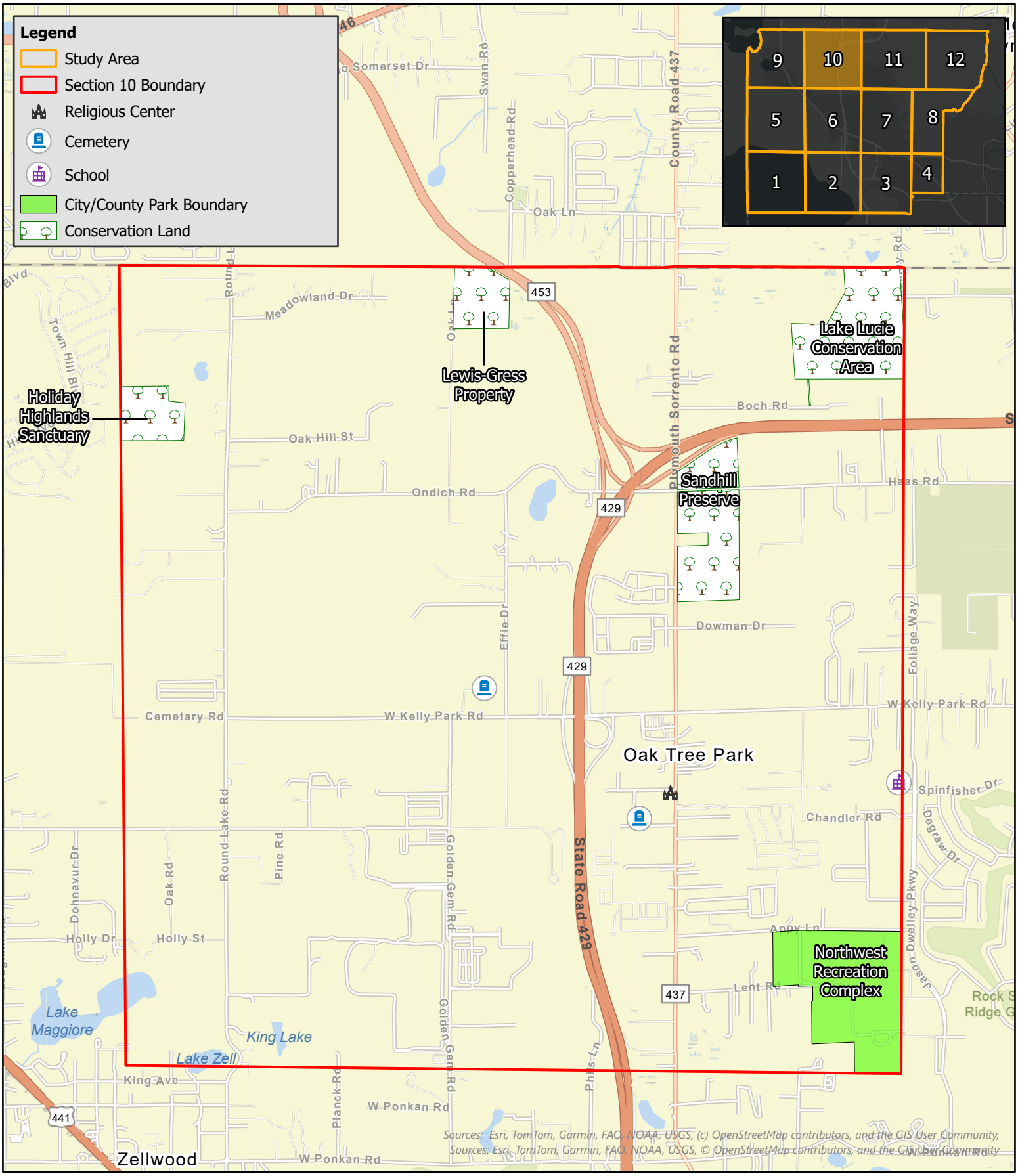

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EXHIBIT - 6.3.10

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

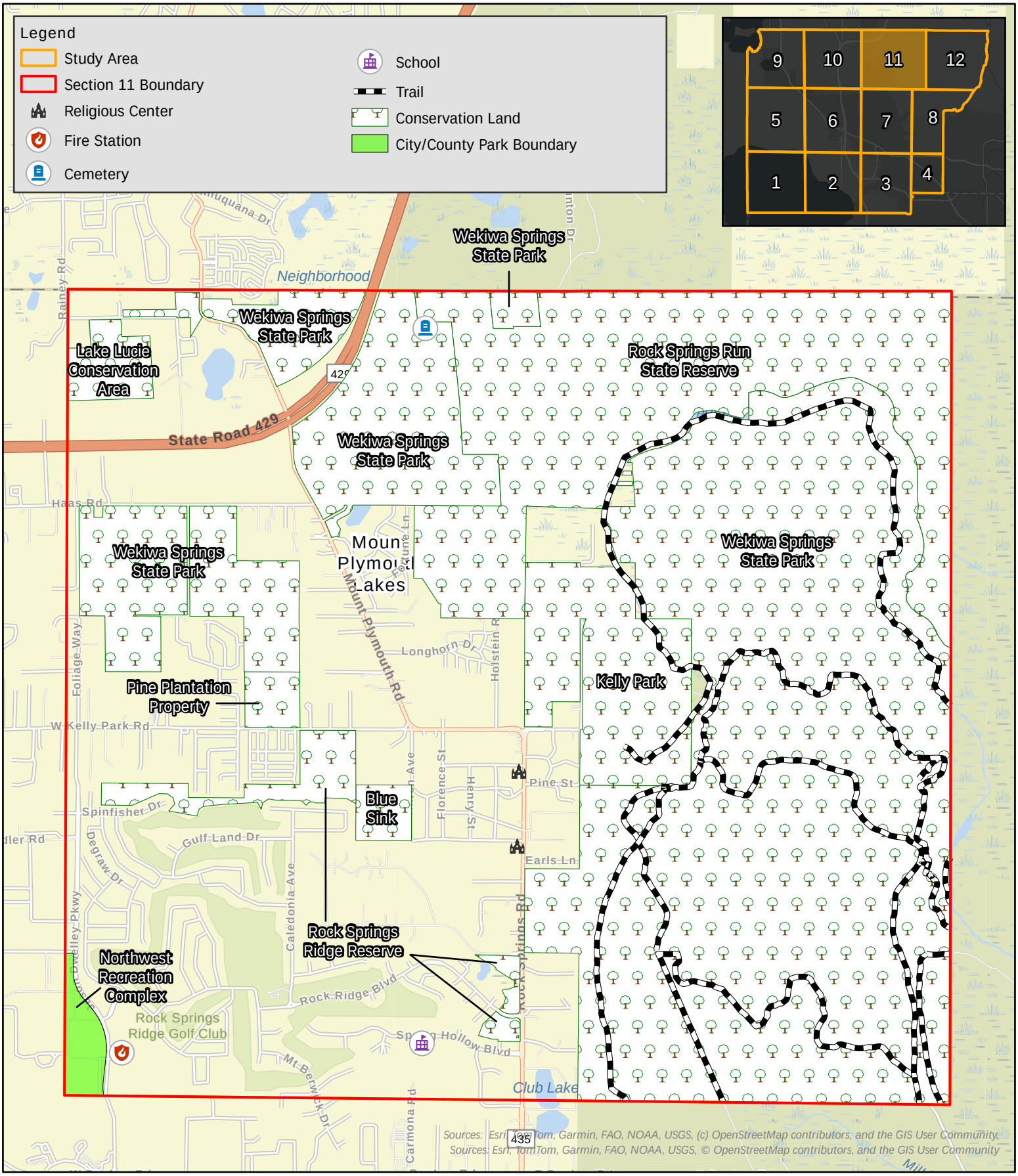

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EXHIBIT - 6.3.11

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

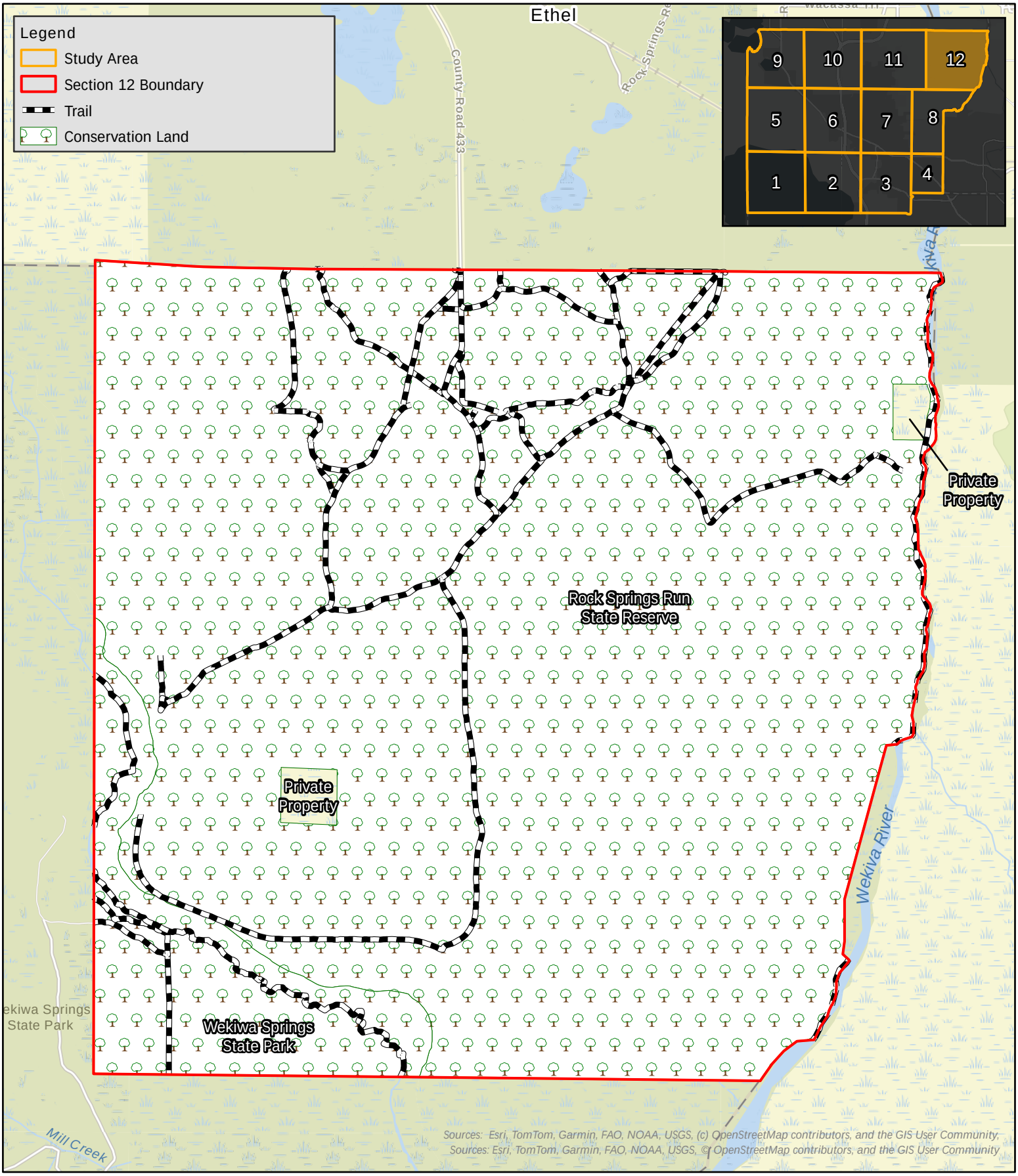

EXHIBIT - 6.3.12

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: Social Resources Map

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FGDL, FNAI.

NOWOCATS - June 2025

6.4 UTILITIES

To better evaluate the various corridor alternatives and potential impacts with existing utilities, available information on the existing utilities was researched and compiled for the study area. Due to the size of the study area, research was performed with a focus on major utilities and existing utility facilities in easements or on property owned by the utility company. This approach allows us to identify possible fatal flaws with existing utilities and additional project cost due to reimbursable utility relocations. Types of major utilities include transmission electric lines, power substations, transmission water/wastewater mains, municipal treatment facilities, water towers/tanks, booster pump stations, large natural gas pipelines, petroleum pipelines, cell towers, and large communication duct banks. Utility Agency/Owners (UAOs) have been identified within the study area through our Sunshine 811 Design Ticket. Additionally, utility information was compiled through research of available GIS information for transmission electric lines, Orange County Utilities (OCU), National Pipeline Mapping System, antenna/cell tower mapper, municipality master plans, as-built plans, plats, utility permits, Orange County Property Appraiser, and desktop review of the study area. Existing UAOs and utility facilities are identified in **Table 6.4.1**.

Thirty-six UAOs have been identified in the project from our Sunshine 811 design ticket and preliminary research. Six of these UAOs include facilities identified as major utilities that may require special consideration with alternatives being evaluated. **Exhibit 6.4.1** depicts major facilities identified in the project study area.

Table 6.4.1 - Summary of Existing Utilities

Utility Company	Description
1. *AT&T Distribution	• Telephone, buried fiber, larger duct banks, and cell towers throughout the project study area.
2. CenturyLink	• Buried fiber throughout the project study area.
3. Central Florida Expressway Authority (CFX)	• Buried fiber throughout the project study area.
4. Charter Communications	• Aerial and buried CATV and fiber throughout the project study area.
5. City of Altamonte Springs	• Water and wastewater facilities along the eastside of the project study area. Electric and fiber in the project limits.
6. City of Apopka	• Water and wastewater facilities within the City limits.
7. City of Mount Dora	• Electric, Water, reclaimed water, storm water, and wastewater facilities within the City limits.
8. City of Ocoee Utilities	• Water, reclaimed water and wastewater facilities within the City limits.
9. City of Winter Garden	• Water and wastewater facilities within the City limits.
10. Comcast	• Aerial and buried CATV and fiber throughout the project study area.
11. Duke Energy-Distribution	• Distribution electric throughout the project study area.

Utility Company	Description
12. Duke Energy-Fiber	• Fiber facilities attached to transmission poles throughout the project study area.
13. *Duke Energy-Transmission	• Numerous 69 kV, 230 kV lines, and substations throughout the project study area. The locations of the electric facilities are graphically shown on **Exhibit 6.4.1**.
14. FGUA-Tangerine	• Water and wastewater facilities within their service area.
15. *Florida Gas Transmission	• 3.5" and 26" natural gas transmission pipelines throughout the project study area. The locations of the natural gas facilities are graphically shown on **Exhibit 6.4.1**.
16. GigaPower	• Buried fiber throughout the project study area.
17. Hotwire Communications	• Buried fiber throughout the project study area.
18. *Lake Apopka Natural Gas	• Distribution gas throughout the project study area.
19. Lumen	• Buried fiber throughout the project study area.
20. MCI	• Buried fiber throughout the project study area.
21. Metro Fibernet	• Buried fiber throughout the project study area.
22. Oak Springs	• Water and wastewater facilities within the service area.
23. OpticalTel	• Buried fiber throughout the project study area.
24. Orange County Public Works	• Traffic fiber throughout the project study area.
25. *Orange County Utilities	• Water, reclaimed water, and wastewater facilities within the County limits.
26. Seminole County Environmental Services	• Water, reclaimed water, and wastewater facilities within the County limits.
27. Seminole County Traffic	• Traffic fiber on the north end of the study area.
28. Smart City Telecom	• Buried fiber throughout the project study area.
29. Summit Broadband	• Buried fiber throughout the project study area.
30. Sunshine Water Services	• Water and wastewater facilities within the service area.
31. *TECO Peoples Gas	• Distribution gas throughout the project study area.
32. Town of Montverde	• Water facilities within the service area.
33. Verizon	• Buried fiber and cell towers throughout the project study area.
34. WOW Fiber	• Buried fiber throughout the project study area.
35. Zayo Group	• Buried fiber throughout the project study area.
36. Zellwood Water	• Water facilities within the service area.

*Major Utility

6.4.1 Utility Mitigation and Avoidance

Due to the nature of the existing conditions throughout the study area, there is a potential for impacts to major utility facilities on the project. Major utility facilities potentially impacted include large diameter water and wastewater mains owned by OCU, transmission electric lines owned by Duke Energy, substations, cell towers, and gas lines.

Mitigation measures should be taken during the study phase of the project to minimize impacts to the existing utilities to the fullest extent possible. If impacts are unavoidable, design alternatives would be reviewed to allow for relocation of impacted facilities in a manner that minimizes cost to the UAO and disruption to their customers.

Since relocations of facilities located in easements and on private property would likely be eligible for reimbursement, all measures will be taken to avoid impacting the existing utility facilities identified in easements or on privately owned parcels. Though relocation of other facilities within the existing right-of-way are anticipated, all efforts will be made during the study to minimize impacts to existing pipelines, power plants, substations, booster/metering stations, and transmission facilities, to the greatest extent possible.

Utilities Types

- Antenna Structure
- Cell Tower
- Substation
- Water Pressurized Main
- Sewer Pressurized Main
- Sewer Gravity Main
- Reuse
- Transmission Electric Line
- Natural Gas Pipeline

0 0.5 1 Miles

- Study Area
- County Boundary
- City of Apopka Boundary

Note: Existing Land Use - FDEP/SJRWMD, Land Use Land Code FLUCCS, 2020-2025.

ORANGE COUNTY FLORIDA

Exhibit 6.4.1

Utilities Map

North West Orange County
Areawide Transportation Study
(NOWOCATS)

6.5 HAZARDOUS SITES

Contaminated sites within the Study Area were identified using data made available by the Florida Department of Health (DOH) and the Florida Department of Environmental Protection (FDEP). **Tables 6.5.1** through **6.5.10** summarize the number of sites that have the potential for contamination or are being monitored for Sections 1 through 12, respectively. For Section 1 and Section 12, no contamination sites were documented in the GIS data; therefore, a table was not developed within these sections. **Exhibits 6.5.1** through **6.5.12** depict the location of potential contamination sites. It must be noted that the facilities shown are regulated facilities which have the potential for contamination or environmental concern but are not necessarily contaminated.

As shown in **Exhibit 6.5.1,** Section 1 contains no contamination or hazardous site data due to the fact that much of Section 1 is located within Lake Apopka. Therefore, a lack of regulated facilities is to be expected as much of that area is underwater or protected by state agencies.

As shown in **Exhibit 6.5.2,** Section 2 contains 51 National Pollutant Discharge Elimination Systems (NPDES), which regulate point sources that discharge pollutants to waters of the United States. Petroleum Contamination Monitoring Sites (PCMS) are storage tank facilities registered with the FDEP that are being tracked for active storage tanks, storage history, or petroleum clean up activity and Section 2 contains two such facilities. There are also 11 Storage Tank Contamination Monitoring (STCM) sites, which are being tracked by petroleum storage tank registration, compliance and clean up and most of them are associated with refueling structures such as gas stations. The State Underground Petroleum Environmental Response (SUPER) Act was created to conduct drinking water well sampling and investigations around known or suspected contaminated petroleum facilities of which one is located within Section 2. There are three United States Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) regulated facilities which include the generation, transportation, treatment, storage, and/or the disposal of hazardous waste within Section 2. These potential contamination sites are listed in **Table 6.5.1.**

Table 6.5.1 - Summary of Contamination Analysis in Section 2 in Study Area

Analysis Type	Within Section 2
Biomedical Waste Facility	0
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	51
Petroleum Contamination Monitoring Site (PCMS)	2
Storage Tank Contamination Monitoring (STCM)	11
SUPER Act Risk Sources	1
EPA RCRA Regulated Facilities	3
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.3,** Section 3 contains 17 biomedical waste facilities as well as two Brownfield Areas. Section 3 also contains 199 NPDES sites, as well as 27 facilities being monitored for petroleum contamination. There are an additional 70 STCM sites, and the majority of them are associated with refueling structures such as gas stations. There are also 21 SUPER Act Risk Sources located within this section. In addition, there are 47 RCRA regulated facilities located within Section 3 as well as one Toxic Release Inventory (TRI) site. The TRI database provides a summary of on-site releases and management, off-site transfer and releases, and off-site transfer and waste management. These potential contamination sites are listed in **Table 6.5.2**.

Table 6.5.2 - Summary of Contamination Analysis in Section 3 of Study Area

Analysis Type	Within Section 3
Biomedical Waste Facility	17
Brownfield Area	2
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	199
Petroleum Contamination Monitoring Site (PCMS)	27
Storage Tank Contamination Monitoring (STCM)	70
SUPER Act Risk Sources	21
EPA RCRA Regulated Facilities	47
Toxic Release Inventory Sites	1
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.4,** Section 4 contains 20 biomedical waste facilities and 124 NPDES sites. There are 22 facilities being monitored for petroleum contamination as well as 48 STCM sites. There are also 13 SUPER Act Risk Sources located within Section 4. In addition, there are 69 RCRA regulated facilities located within Section 4 along with three TRI sites. These potential contamination sites are listed in **Table 6.5.3**.

Table 6.5.3 - Summary of Contamination Analysis in Section 4 of Study Area

Analysis Type	Within Section 4
Biomedical Waste Facility	20
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	124
Petroleum Contamination Monitoring Site (PCMS)	22
Storage Tank Contamination Monitoring (STCM)	48
SUPER Act Risk Sources	13
EPA RCRA Regulated Facilities	69
Toxic Release Inventory Sites	3
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.5,** Section 5 contains one (1) hazardous waste facility. This section also contains 28 NPDES sites. There are an additional 11 PCMS sites and 30 STCM sites mainly associated with refueling structures such as gas stations. There are also seven SUPER Act Risk Sources located within Section 5, also largely associated with refueling structures. In addition, there are two TRI sites within Section 5. These potential contamination sites are listed in **Table 6.5.4**.

Table 6.5.4 - Summary of Contamination Analysis in Section 5 of Study Area

Analysis Type	Within Section 5
Biomedical Waste Facility	0
Brownfield Area	0
Hazardous Waste Facility	1
National Pollutant Discharge Elimination System (NPDES)	28
Petroleum Contamination Monitoring Site (PCMS)	11
Storage Tank Contamination Monitoring (STCM)	30
SUPER Act Risk Sources	7
EPA RCRA Regulated Facilities	0
Toxic Release Inventory Sites	2
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.6,** Section 6 contains 185 NPDES sites. Section 6 also contains 11 PCMS sites being monitored for petroleum contamination. There are an additional 52 STCM sites, and the majority of them are associated with refueling structures such as gas stations. There are also seven SUPER Act Risk Sources located within this section, also largely associated with refueling structures. In addition, there are 38 RCRA regulated facilities which include the generation, transportation, treatment, storage and/or the disposal of hazardous waste. There are seven TRI sites located within Section 6. Lastly, there are two waste cleanup responsible party sites (WCU)

that are currently classified as "open" under the Department of Environmental Protection's jurisdiction. The cleanup of these sites is still ongoing or have been subject to a monitoring plan under the state's purview. These potential contamination sites are listed in **Table 6.5.5**.

Table 6.5.5 - Summary of Contamination Analysis in Section 6 of Study Area

Analysis Type	Within Section 6
Biomedical Waste Facility	0
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	185
Petroleum Contamination Monitoring Site (PCMS)	11
Storage Tank Contamination Monitoring (STCM)	52
SUPER Act Risk Sources	7
EPA RCRA Regulated Facilities	38
Toxic Release Inventory Sites	7
Waste Cleanup Responsible Party Sites - Open	2

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.7,** Section 7 contains 34 biomedical waste facilities and 190 NPDES sites that have also been identified. This section also contains 20 facilities being monitored for petroleum contamination. There are an additional 46 STCM sites, and many of them are associated with refueling structures such as gas stations. There are also 13 SUPER Act Risk Sources located within Section 7, also largely associated with refueling structures. In addition, there are 39 RCRA regulated facilities located within this section. Lastly, there is one WCU site located within Section 7. These potential contamination sites are listed in **Table 6.5.6**.

Table 6.5.6 - Summary of Contamination Analysis in Section 7 of Study Area

Analysis Type	Within Section 7
Biomedical Waste Facility	34
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	190
Petroleum Contamination Monitoring Site (PCMS)	20
Storage Tank Contamination Monitoring (STCM)	46
SUPER Act Risk Sources	13
EPA RCRA Regulated Facilities	39
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	1

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.8**, Section 8 contains one Brownfield Area which is associated with the Wellington Park Green Resue Area. Section 8 also contains 50 NPDES sites as well as three facilities

being monitored for petroleum contamination. There are an additional ten STCM sites, and the majority of them are associated with refueling structures such as gas stations. There are also three SUPER Act Risk Sources located within Section 8. In addition, there are seven RCRA regulated facilities located within Section 8. These potential contamination sites are listed in **Table 6.5.7**.

Table 6.5.7 - Summary of Contamination Analysis in Section 8 of Study Area

Analysis Type	Within Section 8
Biomedical Waste Facility	0
Brownfield Area	1
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	50
Petroleum Contamination Monitoring Site (PCMS)	3
Storage Tank Contamination Monitoring (STCM)	10
SUPER Act Risk Sources	3
EPA RCRA Regulated Facilities	7
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.9**, Section 9 contains seven biomedical waste facilities. There are also 63 NPDES sites located within Section 9. 11 PCMS sites are located within Section 9. There are also 20 STCM sites, which are being tracked by petroleum storage tank registration, compliance and clean up and most of them are associated with refueling structures such as gas stations. Five SUPER Act Risk sites are located within Section 9. There are 19 RCRA regulated facilities which include the generation, transportation, treatment, storage, and/or the disposal of hazardous waste within Section 9. Lastly, there is one WCU site within Section 9. These potential contamination sites are listed in **Table 6.5.8.**

Table 6.5.8 - Summary of Contamination Analysis in Section 9 of Study Area

Analysis Type	Within Section 9
Biomedical Waste Facility	7
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	63
Petroleum Contamination Monitoring Site (PCMS)	11
Storage Tank Contamination Monitoring (STCM)	20
SUPER Act Risk Sources	5
EPA RCRA Regulated Facilities	19
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	1

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.10,** Section 10 contains two (2) biomedical waste facilities and 41 NPDES sites. Section 10 also contains one facility being monitored for petroleum contamination. There are an additional 18 STCM sites, and the majority of them are associated with refueling structures such as gas stations. There are also two SUPER Act Risk Sources located within this section, also largely associated with refueling structures. In addition, there are three RCRA regulated facilities which include the generation, transportation, treatment, storage, and/or the disposal of hazardous waste. These potential contamination sites are listed in **Table 6.5.9**.

Table 6.5.9 - Summary of Contamination Analysis in Section 10 of Study Area

Analysis Type	Within Section 10
Biomedical Waste Facility	2
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	41
Petroleum Contamination Monitoring Site (PCMS)	1
Storage Tank Contamination Monitoring (STCM)	18
SUPER Act Risk Sources	2
EPA RCRA Regulated Facilities	3
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.11**, Section 11 contains 30 NPDES sites and only two (2) petroleum contamination sites. Within Section 11, there are also eight (8) STCM sites which are mainly associated with fueling stations such as gas stations. There are also three (3) SUPER Act Risk sites which are responsible for conducting drinking water well sampling and investigations around known or suspected contaminated petroleum facilities. Finally, there are two (2) RCRA regulated facilities include the generation, transportation, treatment, storage, and/or the disposal of hazardous waste within this section. These potential contamination sites are listed in **Table 6.5.10**.

Table 6.5.10 - Summary of Contamination Analysis in Section 11 of Study Area

Analysis Type	Within Section 11
Biomedical Waste Facility	0
Brownfield Area	0
Hazardous Waste Facility	0
National Pollutant Discharge Elimination System (NPDES)	30
Petroleum Contamination Monitoring Site (PCMS)	2
Storage Tank Contamination Monitoring (STCM)	8
SUPER Act Risk Sources	3
EPA RCRA Regulated Facilities	2
Toxic Release Inventory Sites	0
Waste Cleanup Responsible Party Sites - Open	0

Source: FGDL, DOH, FDEP, USEPA

As shown in **Exhibit 6.5.12**, Section 12 contains no contamination or hazardous site data due to the fact that much of Section 12 is located within the Wekiva River Basin, therefore a lack of regulated facilities is to be expected as much of that area is protected by state agencies.

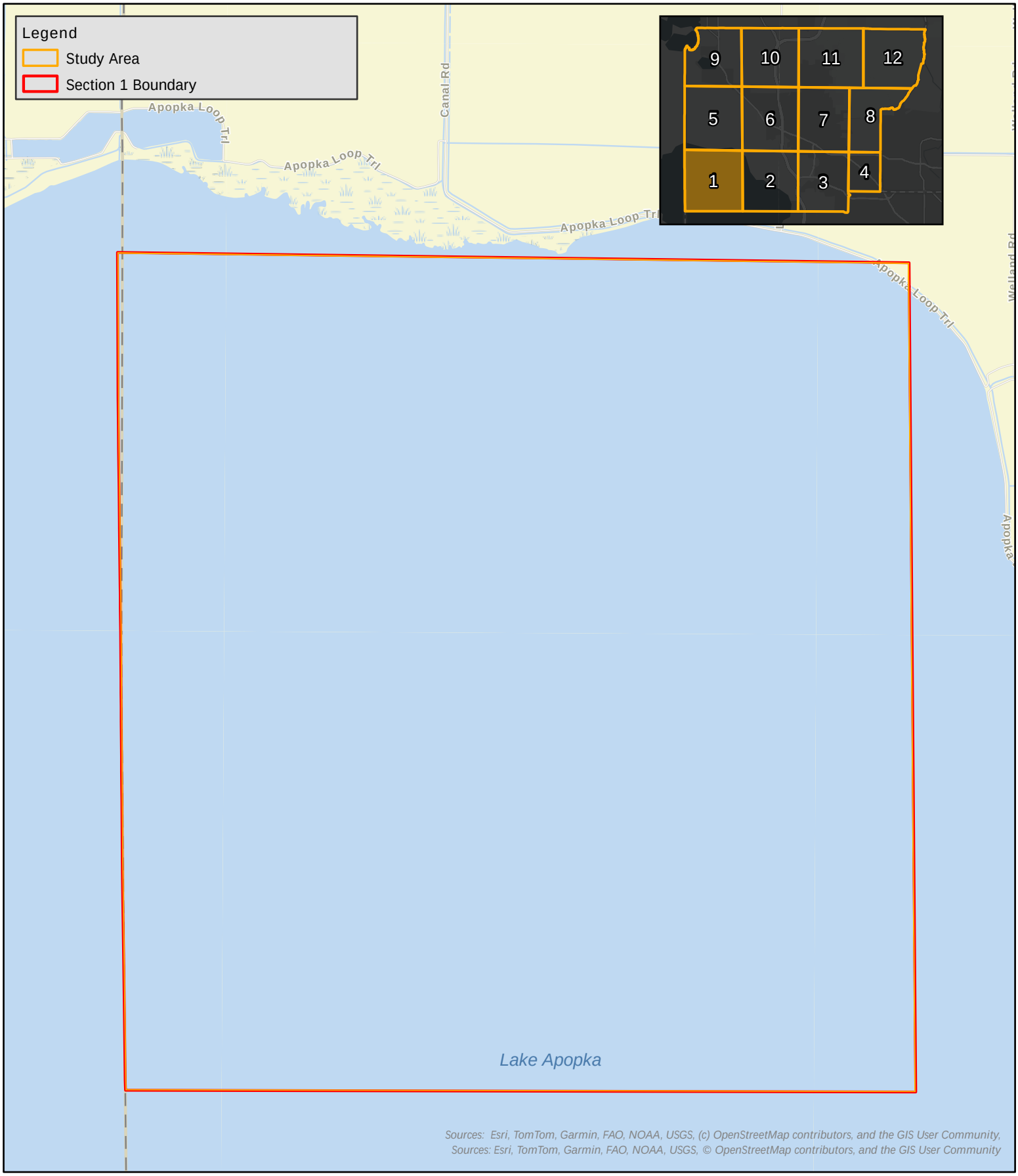

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EXHIBIT - 6.5.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

NOWOCATS - May 2025

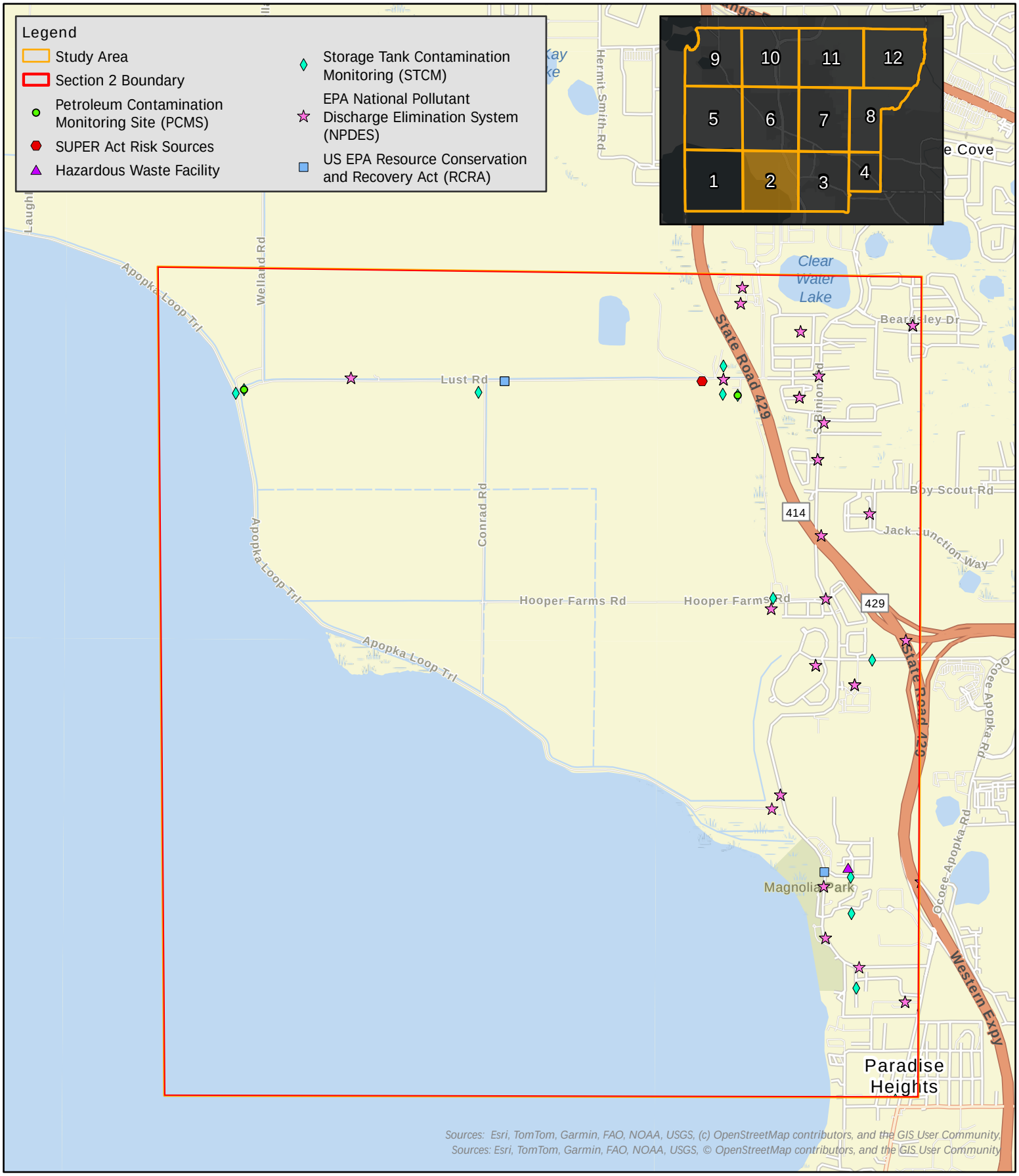

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EXHIBIT - 6.5.2

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

NOWOCATS - May 2025

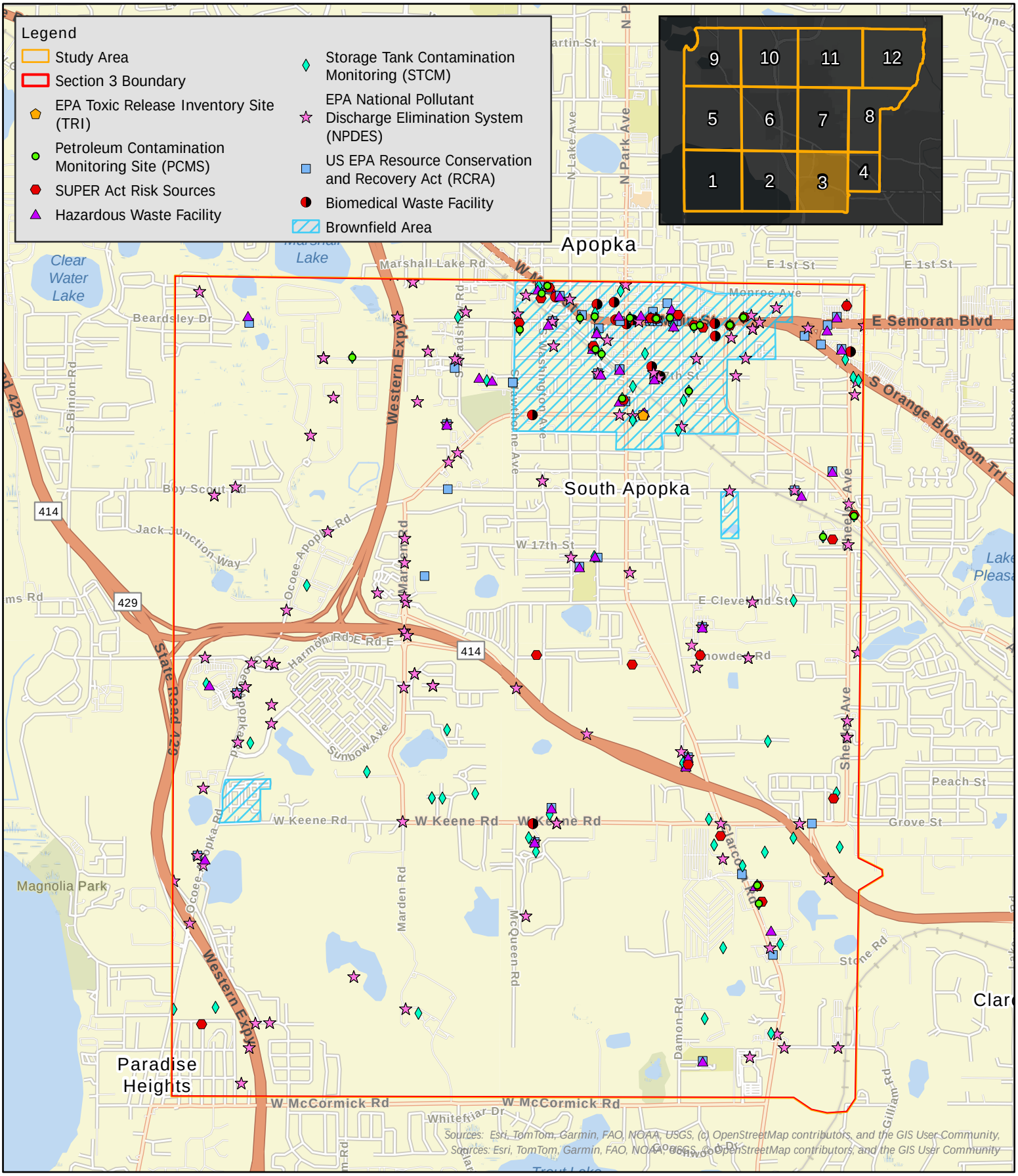

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EXHIBIT - 6.5.3

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

NOWOCATS - May 2025

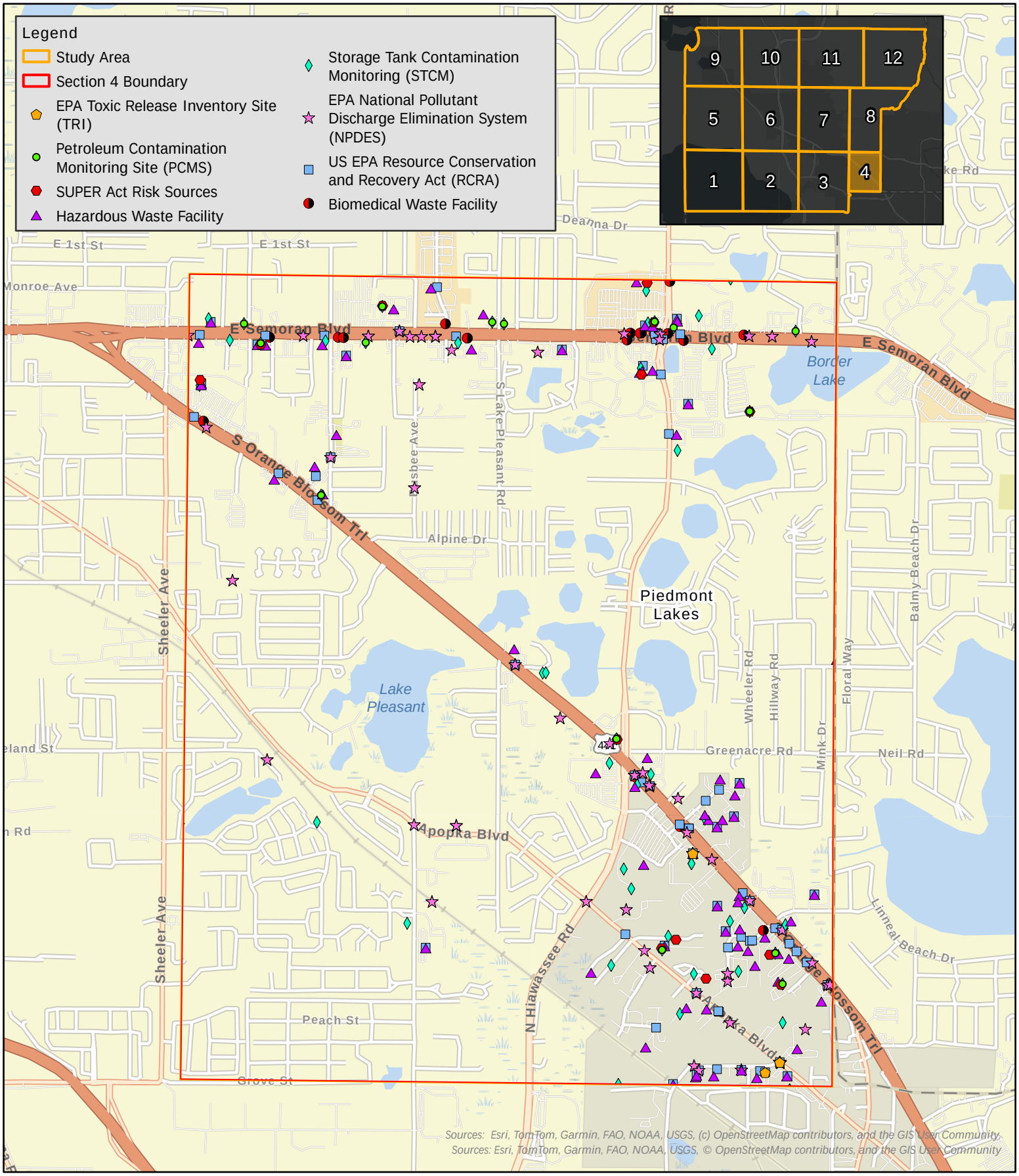

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EXHIBIT - 6.5.4

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,250 2,500 Feet

NOWOCATS - May 2025

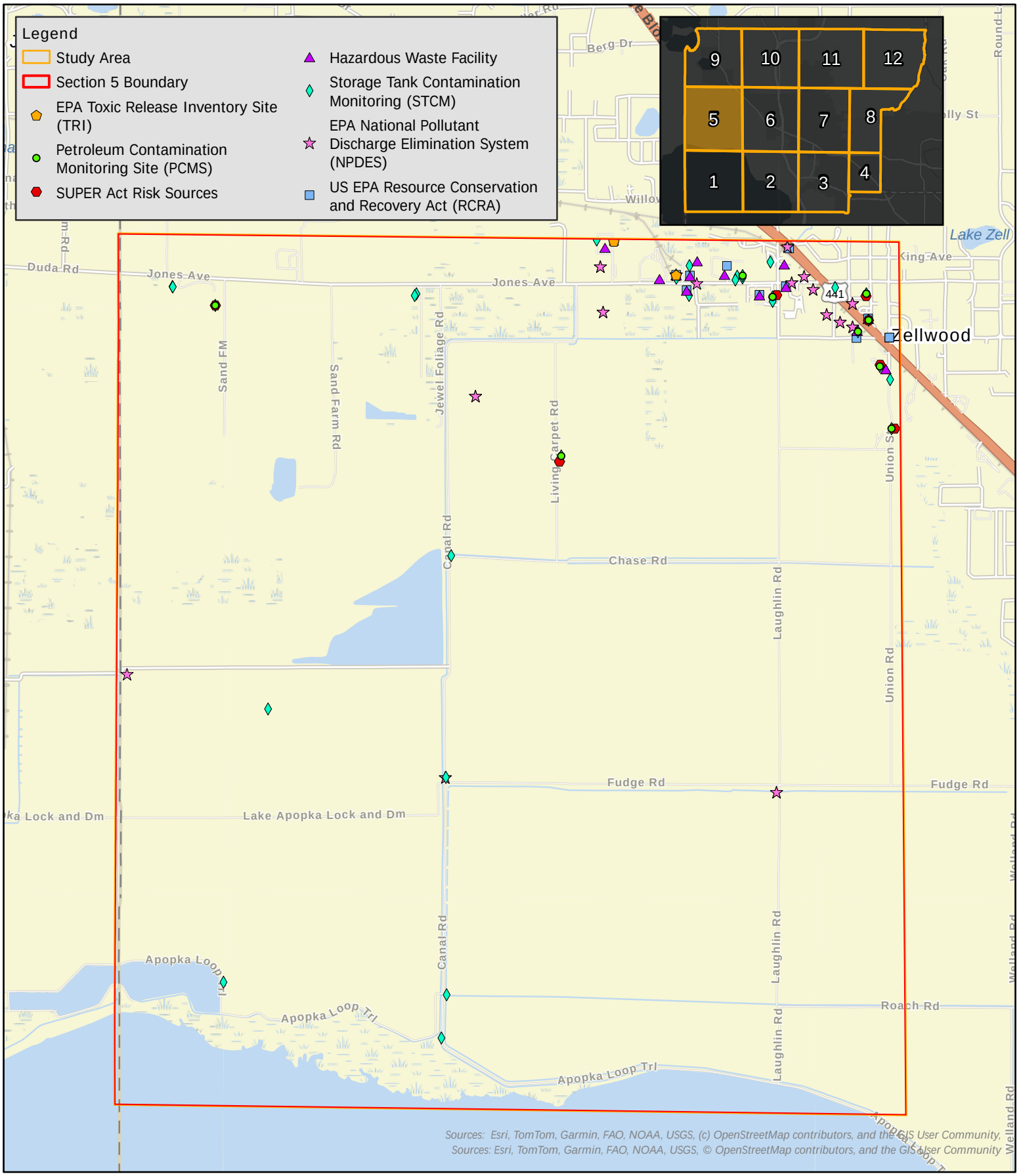

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EXHIBIT - 6.5.5

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

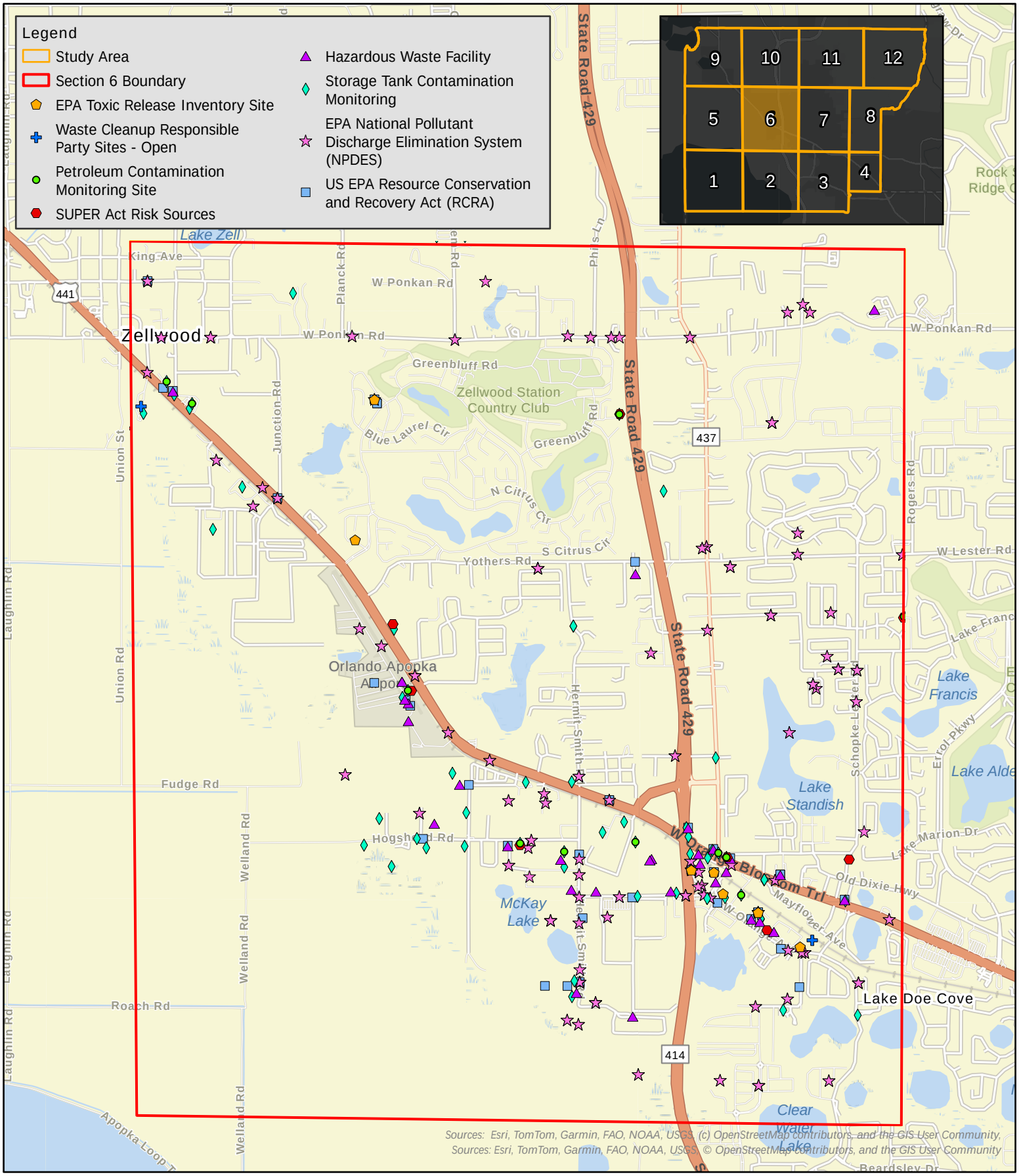

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EXHIBIT - 6.5.6

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 6: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

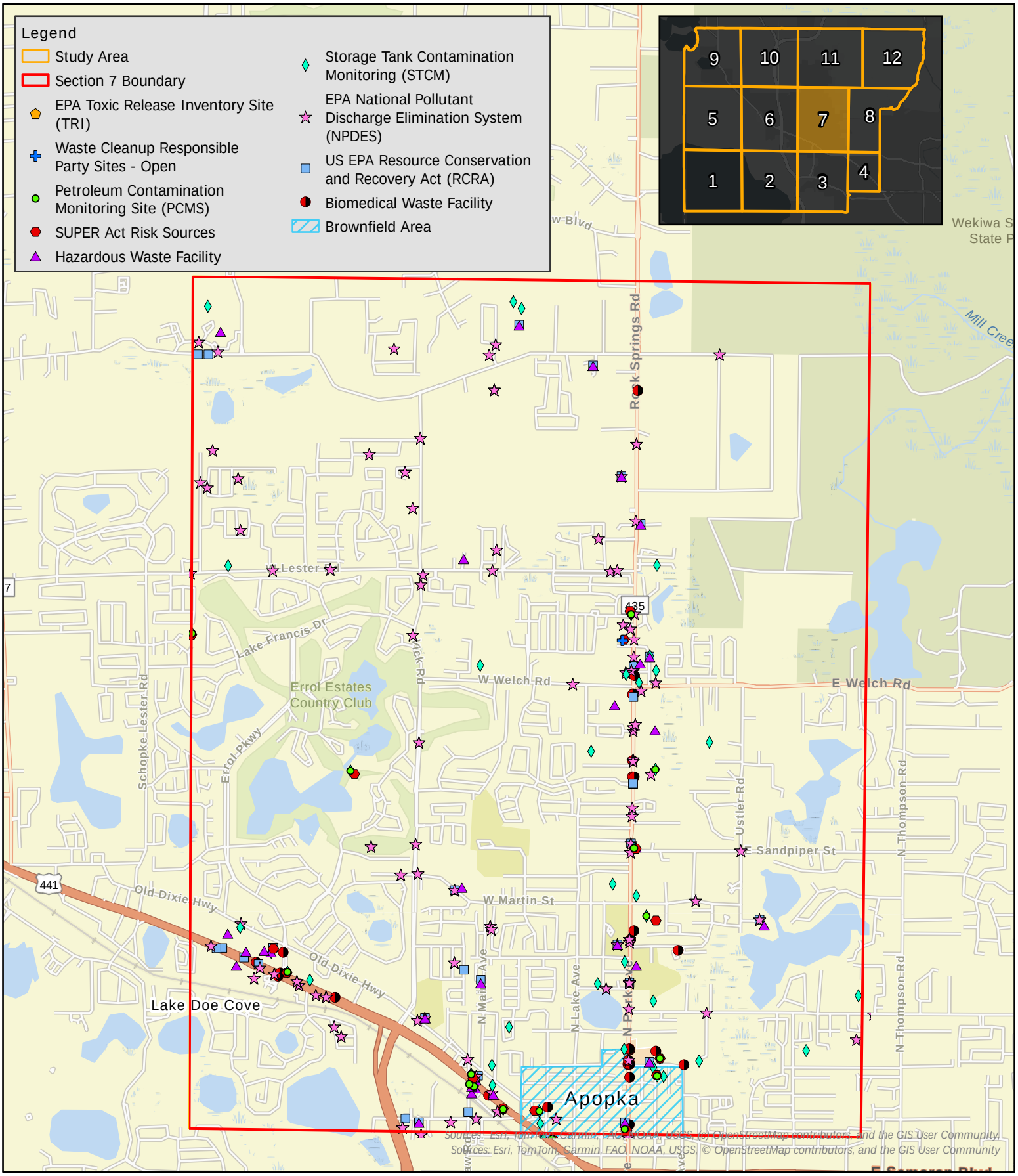

EXHIBIT - 6.5.7

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

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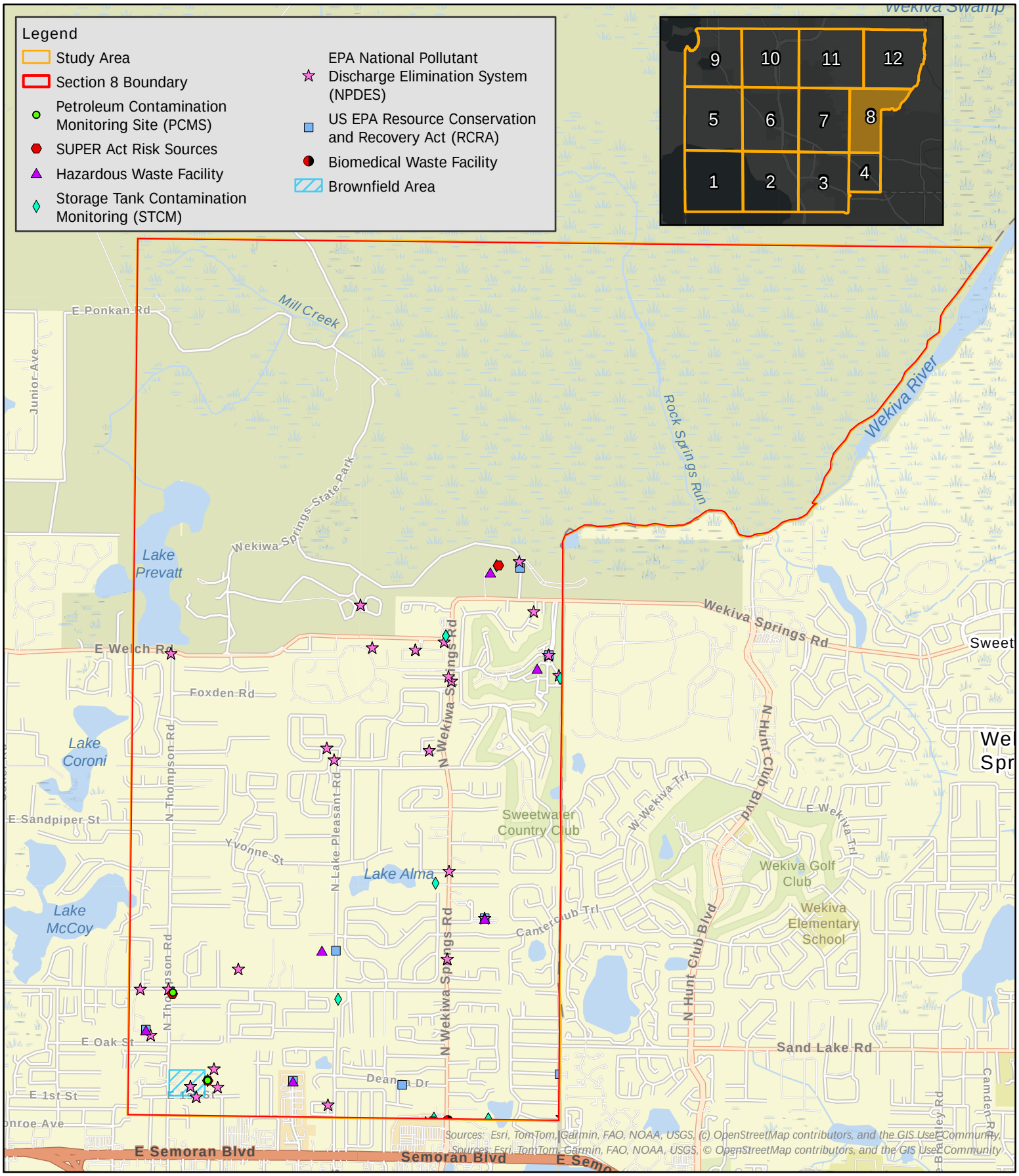

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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EXHIBIT - 6.5.8

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

NOWOCATS - May 2025

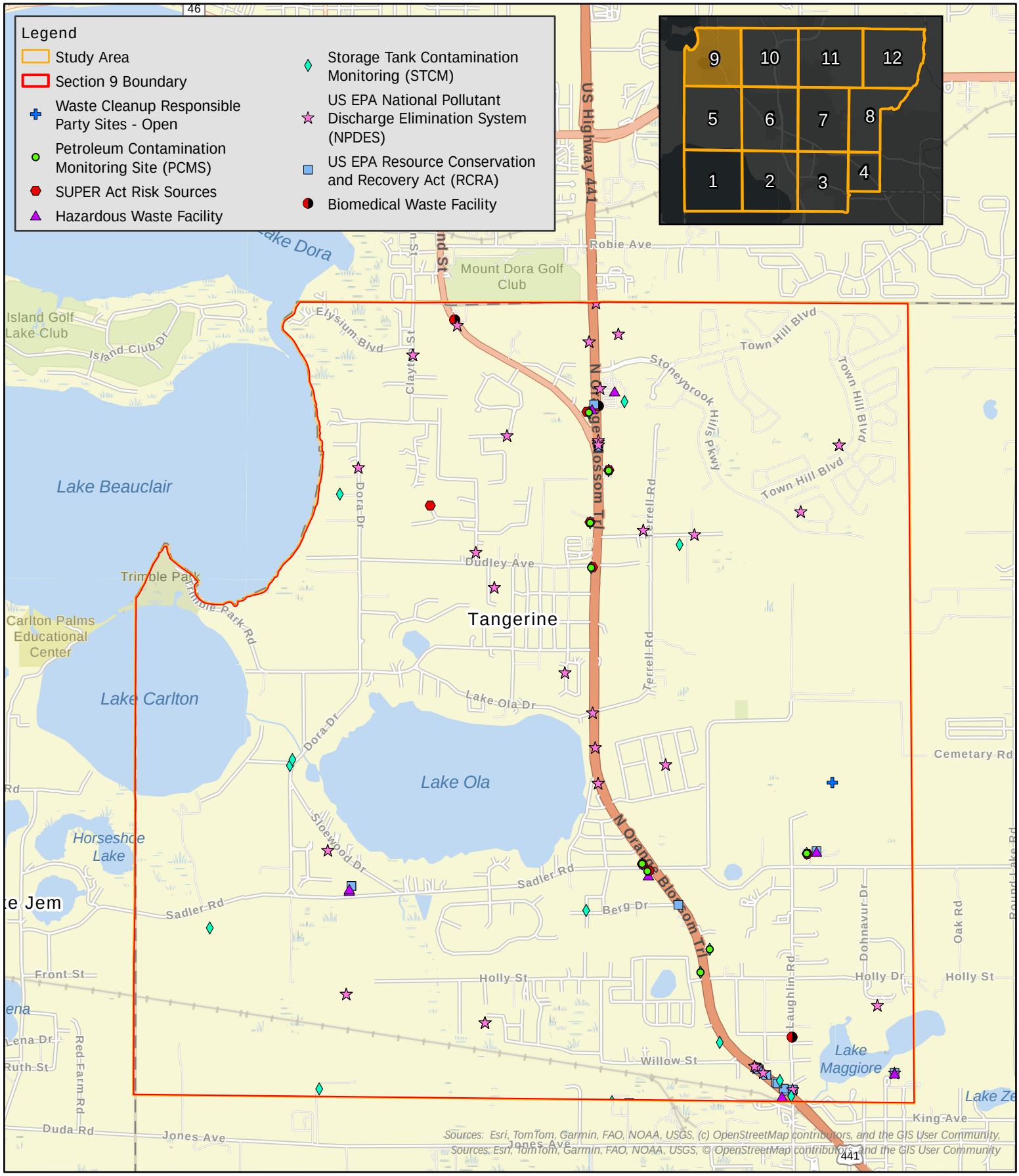

EXHIBIT - 6.5.9

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

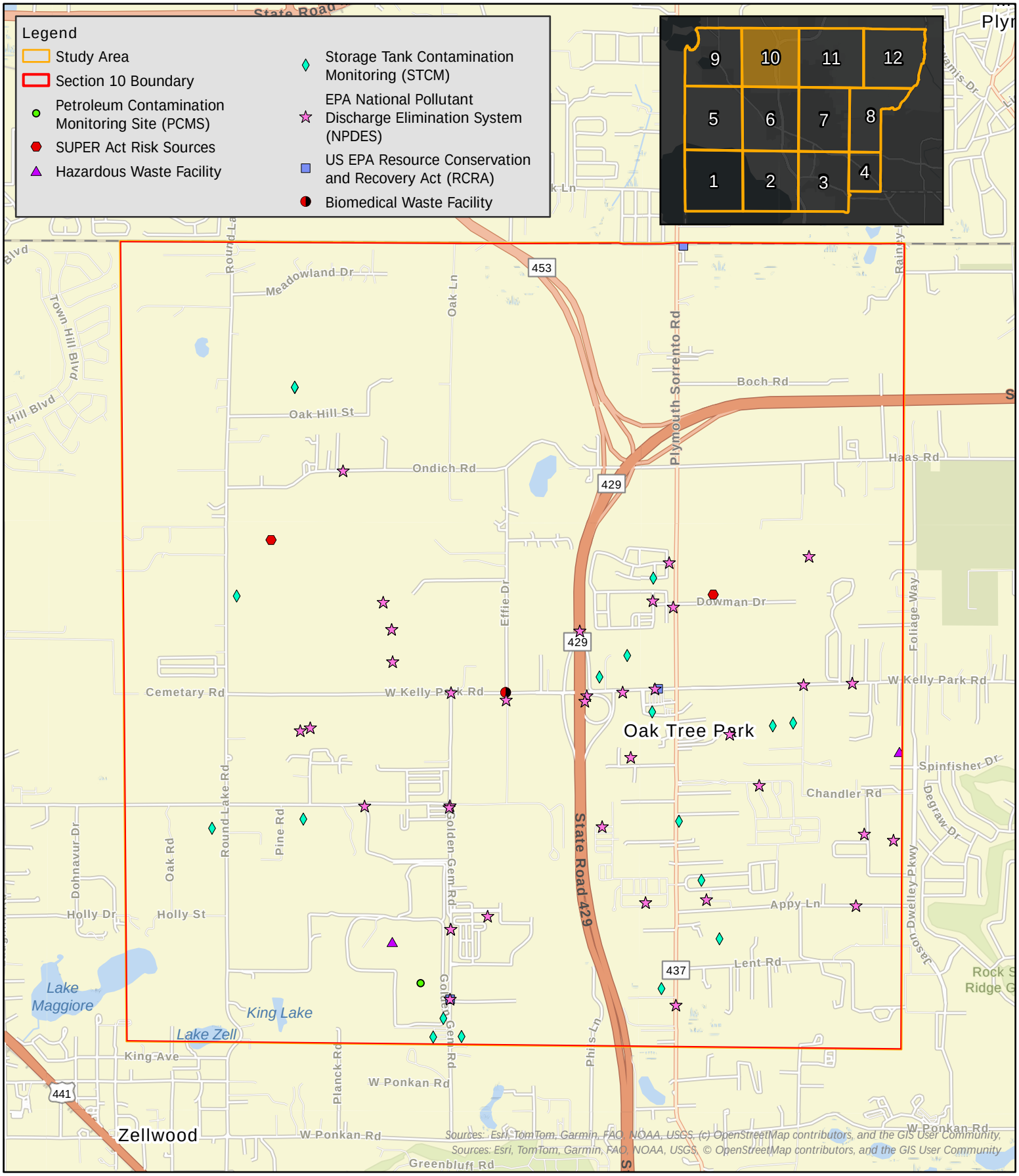

EXHIBIT - 6.5.10

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

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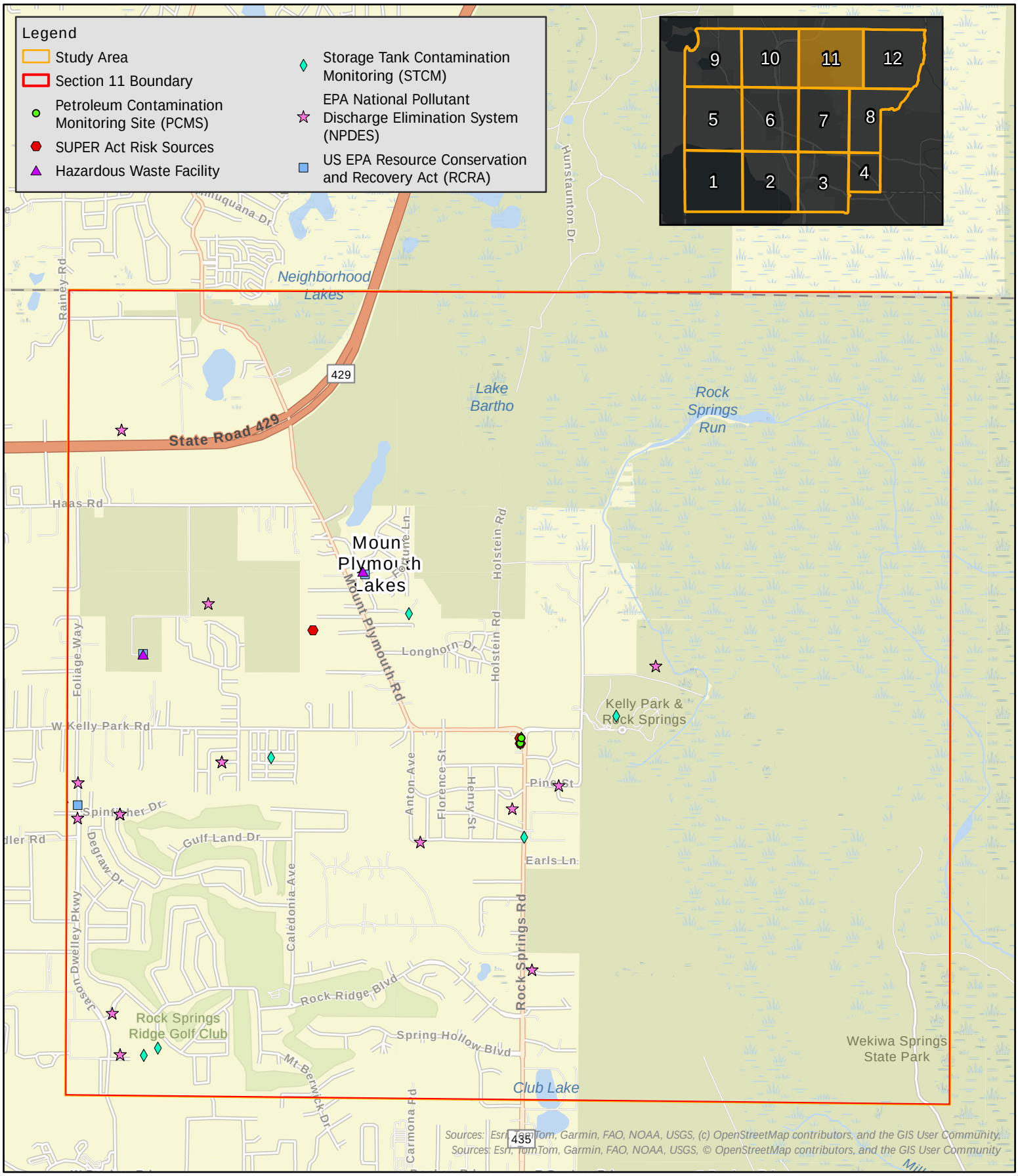

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EXHIBIT - 6.5.11

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

Data Source: FGDL, EPA, FDEP.

NOWOCATS - May 2025

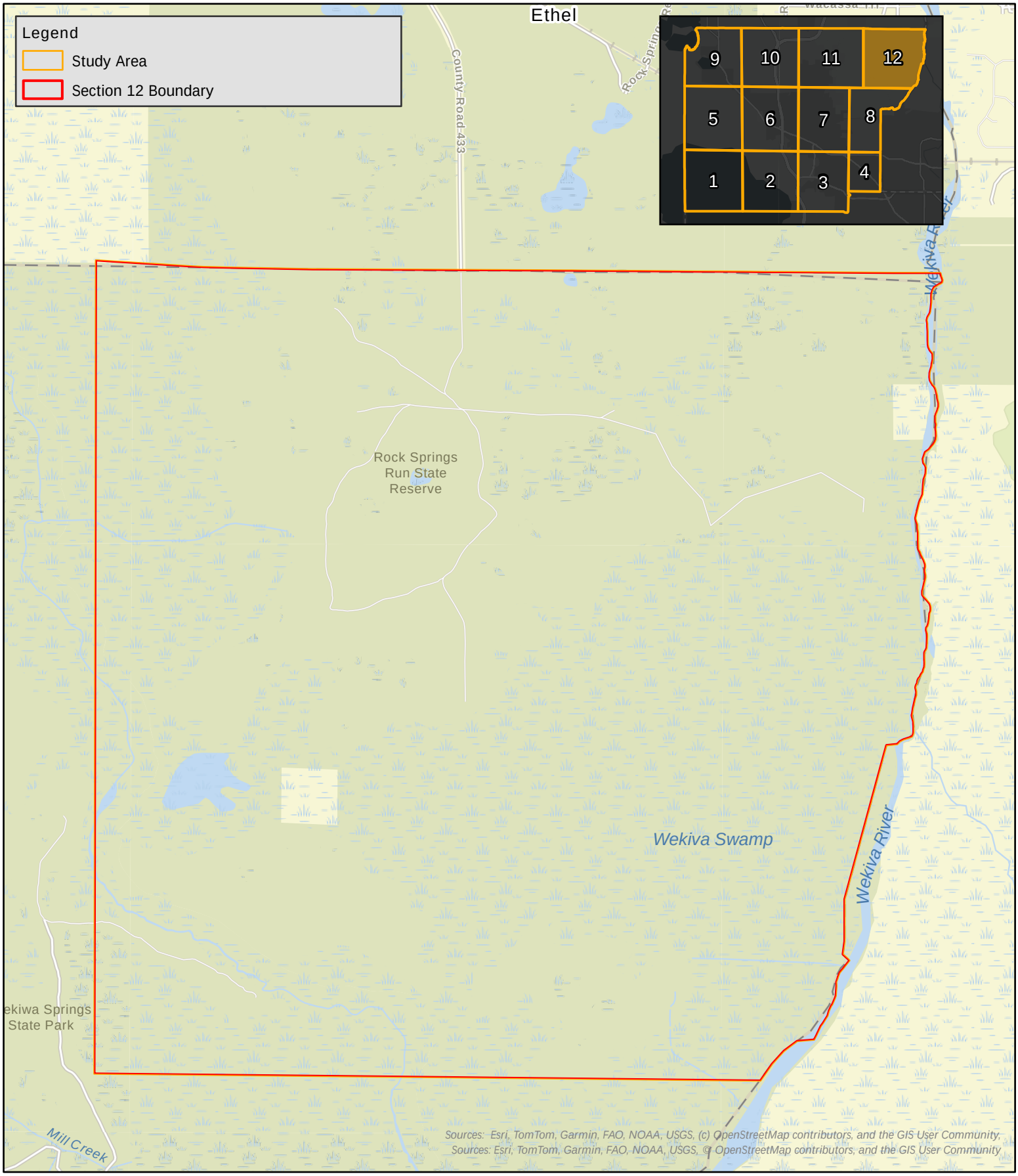

EXHIBIT - 6.5.12

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: Contamination Map

ORANGE COUNTY GOVERNMENT FLORIDA

0 1,500 3,000 Feet

NOWOCATS - May 2025

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6.6 SOILS

Soil types were mapped within the Study Area using GIS data obtained from the Natural Resources Conservation Service (NRCS). **Table 6.6.1** below summarizes the soil types located within each of Sections 1 through 12. Following the table is a general description of the soil types and their characteristics, taken from the USDA *Soil Survey of Orange County, Florida* (August 1989). Hydric and non-hydric soil designations are based on the *Hydric Soils of Florida Handbook*. Non-hydric soils are typically associated with uplands and hydric soils are generally associated with wetlands. The NRCS soils map for each of the sections can be found in **Exhibits 6.6.1** through **6.6.12.**

Table 6.6.1 - Soil Type within the Study Area

Map Unit Symbol	Map Unit Name	Hydric Status
Section 1		
49	Terra Ceia Muck, frequently ponded, 0 to 1 percent slopes	Hydric
99	Water	Unranked
Section 2		
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
9	CANOVA MUCK	Hydric
18	Gator muck, frequently ponded, 0 to 1 percent slopes	Hydric
20	Immokalee Fine Sand	Hydric-Inclusion
21	Lake Fine Sand, 0 to 5 percent slopes	Non-Hydric
23	Malabar Fine Sand	Hydric
25	Okeelanta Muck	Hydric
33	Pits	Hydric-Inclusion
34	Pomello-Urban Land Complex, 0 to 5 percent slopes	Hydric-Inclusion
35	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
46	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
47	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
49	Terra Ceia Muck, frequently ponded, 0 to 1 percent slopes	Hydric

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
54	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric
99	Water	Unranked
Section 3		
1	Arents, nearly level	Non-Hydric
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Hydric
17	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	Hydric
19	Hontoon Muck, frequently ponded, 0 to 1 percent slopes	Hydric
21	Lake Fine Sand, 0 to 5 percent slopes	Non-Hydric
22	Lochloosa Fine Sand	Non-Hydric
24	Millhopper-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
29	Florahome-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
33	Pits	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
39	St. Lucie-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
40	Samsula Muck, frequently ponded, 0 to 1 percent slopes	Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
45	Smyrna Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Hydric-Inclusion
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
50	Urban Land, 0 to 2 percent slopes	Non-Hydric
54	Zolfo-Urban land complex	Non-Hydric
55	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
99	Water	Unranked
Section 4		
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
20	Immokalee Fine Sand	Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
29	Florahome-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
38	St. Lucie Fine Sand, 0 to 5 percent slopes	Non-Hydric
39	St. Lucie-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
40	Samsula Muck, frequently ponded, 0 to 1 percent slopes	Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
45	Smyrna Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Hydric Inclusion
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
54	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric
55	Zolfo-Urban land complex	Non-Hydric
99	Water	Unranked
Section 5		
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
9	CANOVA MUCK	Hydric
13	Felda Fine Sand, 0 to 2 percent slopes	Hydric

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
17	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	Hydric
18	Gator muck, frequently ponded, 0 to 1 percent slopes	Hydric
20	Immokalee Fine Sand	Hydric
23	Malabar Fine Sand	Hydric
25	Okeelanta Muck	Hydric
26	Ona Fine Sand, 0 to 2 percent slopes	Hydric
30	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	Hydric
32	Pinellas Fine Sand, 0 to 2 percent slopes	Hydric
33	Pits	Hydric-Inclusion
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
40	Samsula Muck, frequently ponded, 0 to 1 percent slopes	Hydric
42	Sanibel Muck	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
49	Terra Ceia Muck, frequently ponded, 0 to 1 percent slopes	Hydric
50	Urban Land, 0 to 2 percent slopes	Non-Hydric
51	Wabasso Fine Sand, 0 to 2 percent slopes	Non-Hydric
99	Water	Unranked
Section 6		
1	Arents, nearly level	Non-Hydric
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
9	CANOVA MUCK	Hydric
18	Gator muck, frequently ponded, 0 to 1 percent slopes	Hydric
21	Lake Fine Sand, 0 to 5 percent slopes	Non-Hydric
23	Malabar Fine Sand	Hydric
25	Okeelanta Muck	Hydric

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
26	Ona Fine Sand, 0 to 2 percent slopes	Hydric
33	Pits	Hydric-Inclusion
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
38	St. Lucie Fine Sand, 0 to 5 percent slopes	Non-Hydric
39	St. Lucie-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
49	Terra Ceia Muck, frequently ponded, 0 to 1 percent slopes	Hydric
50	Urban Land, 0 to 2 percent slopes	Non-Hydric
51	Wabasso Fine Sand, 0 to 2 percent slopes	Non-Hydric
54	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric
99	Water	Unranked
Section 7		
1	Arents, nearly level	Non-Hydric
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
15	Felda Fine Sand, 0 to 2 percent slopes, frequently flooded	Hydric
16	Floridana fine sand, 0 to 2 percent slopes, frequently flooded	Hydric
19	Hontoon Muck, frequently ponded, 0 to 1 percent slopes	Hydric
20	Immokalee Fine Sand	Hydric
21	Lake Fine Sand, 0 to 5 percent slopes	Non-Hydric
22	Lochloosa Fine Sand	Non-Hydric
24	Millhopper-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
27	Ona-Urban Land Complex	Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
29	Florahome-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
35	Pomello-Urban Land Complex, 0 to 5 percent slopes	Hydric-Inclusion

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
37	St. Johns Fine Sand	Hydric-Inclusion
38	St. Lucie Fine Sand, 0 to 5 percent slopes	Non-Hydric
39	St. Lucie-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
40	Samsula Muck, frequently ponded, 0 to 1 percent slopes	Hydric
41	Samsula-Hontoon-Basinger Association, Depressional	Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
45	Smyrna Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Hydric Inclusion
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
54	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric
55	Zolfo-Urban land complex	Non-Hydric
99	Water	Unranked
Section 8		
1	Arents, nearly level	Non-Hydric
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
12	Emeralda and Holopaw fine sands, frequently flooded	Hydric
20	Immokalee Fine Sand	Hydric
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
38	St. Lucie Fine Sand, 0 to 5 percent slopes	Non-Hydric
39	St. Lucie-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
41	Samsula-Hontoon-Basinger Association, Depressional	Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
99	Water	Unranked

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
Section 9		
1	Arents, nearly level	Non-Hydric
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
20	Immokalee Fine Sand	Hydric
26	Ona Fine Sand, 0 to 2 percent slopes	Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
33	Pits	Hydric-Inclusion
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
40	Samsula Muck, frequently ponded, 0 to 1 percent slopes	Hydric
41	Samsula-Hontoon-Basinger Association, Depressional	Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
45	Smyrna Fine Sand-Urban Land Complex, 0 to 2 percent slopes	Hydric Inclusion
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
51	Wabasso Fine Sand, 0 to 2 percent slopes	Non-Hydric
54	Zolfo Fine Sand, 0 to 2 percent slopes	Non-Hydric
99	Water	Unranked
Section 10		
1	Arents, nearly level	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
20	Immokalee Fine Sand	Hydric
26	Ona Fine Sand, 0 to 2 percent slopes	Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
33	Pits	Hydric-Inclusion

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
38	St. Lucie Fine Sand, 0 to 5 percent slopes	Non-Hydric
42	Sanibel Muck	Hydric
43	Seffner Fine Sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
99	Water	Unranked
Section 11		
1	Arents, nearly level	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
4	Candler Fine Sand, 0 to 5 percent slopes	Non-Hydric
5	Candler Fine Sand, 5 to 12 percent slopes	Non-Hydric
6	Candler-Apopka Fine Sands, 5 to 12 percent slopes	Non-Hydric
7	Candler-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
8	Candler-Urban Land Complex, 5 to 12 percent slopes	Non-Hydric
12	Emeralda and Holopaw fine sands, frequently flooded	Hydric
14	Felda Fine Sand, 0 to 2 percent slopes, occasionally flooded	Hydric
17	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	Hydric
20	Immokalee Fine Sand	Hydric-Inclusion
21	Lake Fine Sand, 0 to 5 percent slopes	Non-Hydric
26	Ona Fine Sand, 0 to 2 percent slopes	Hydric
28	Florahome Fine Sand, 0 to 5 percent slopes	Non-Hydric
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
41	Samsula-Hontoon-Basinger Association, Depressional	Hydric
42	Sanibel Muck	Hydric
43	Seffner fine sand, 0 to 2 percent slopes	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
46	Tavares Fine Sand, 0 to 5 percent slopes	Non-Hydric
47	Tavares-Millhopper Fine Sands, 0 to 5 percent slopes	Non-Hydric
48	Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes	Non-Hydric
99	Water	Unranked
Section 12		
1	Arents, nearly level	Non-Hydric

Table 6.6.1 - Soil Type within the Study Area		
Map Unit Symbol	**Map Unit Name**	**Hydric Status**
2	Archbold Fine Sand, 0 to 5 percent slopes	Non-Hydric
3	Basinger Fine Sand, frequently ponded, 0 to 1 percent slopes	Hydric
12	Emeralda and Holopaw fine sands, frequently flooded	Hydric
13	Felda Fine Sand, 0 to 2 percent slopes	Hydric
14	Felda Fine Sand, 0 to 2 percent slopes, occasionally flooded	Hydric
17	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	Hydric
20	Immokalee Fine Sand	Hydric-Inclusion
23	Malabar Fine Sand	Hydric
28	Myakka-Myakka, Wet, Sand, 0 to 2 percent slopes	Hydric
34	Pomello Fine Sand, 0 to 5 percent slopes	Hydric-Inclusion
37	St. Johns Fine Sand	Hydric-Inclusion
42	Sanibel Muck	Hydric
44	Smyrna-Smyrna, Wet, Fine Sand, 0 to 2 percent slopes	Hydric
53	Wauberg Fine Sand	Hydric
99	Water	Unranked

6.6.1 Soil Description Summaries

Archbold Fine Sand, 0 to 5 percent slopes - This nearly level to gently sloping and moderately well drained soil is typically found on low ridges and knolls on the flatwoods. Slopes are smooth and convex. The seasonal high-water table is at depth of 42 to 60 inches of the surface for about 6 months, and it recedes to a depth of 60 to 80 inches for the rest of the year. It is at a depth of 24 to 40 inches for about 1 month to 4 months during extended wet periods. It recedes to a depth of more than 80 inches during extended dry periods. The permeability is very rapid throughout. The available water capacity is very low.

Arents, nearly level- Arents consist of material dug from several areas that have different kinds of soil. This soil is used to fill such areas as sloughs, depressions, and other low-lying areas above their natural ground levels during land-leveling operations. Slopes are smooth to concave and range from 0 to 2 percent. A seasonal high-water table varies with the amount of fill material and artificial drainage in any mapped area. In most years, a seasonal high-water table is at depth of 24 to 36 inches for 3 to 4 months. It recedes to a depth of about 60 inches or more during extended dry periods. The water capacity property is variable and also depends on the amount of fill material and artificial drainage in any mapped area.

Astatula-Apopka fine sands, 0 to 5 percent slopes-Astatulas consist of very deep, excessively drained, very rapidly permeable soils on uplands of the South Central Florida Ridge Major Land Resource Area (MLRA) 154, Southern Florida Flatwoods (MLRA 155) and a few areas of the Eastern Gulf Coast Flatwoods (MLRA 152A). They formed in eolian and marine sands. Slopes range from 0 to 30 percent.

Basinger fine sand, frequently ponded, 0 to 1 percent slopes-This nearly level and very poorly drained soil is found on shallow depressions and sloughs and along the edges of freshwater marshes and swamps. Slopes range from 0 to 2 percent. Under natural conditions, the water table is above the surface for 6 to 9 months or more each year and is within 12 inches of the surface for the rest of the year. Permeability is rapid throughout. The available water capacity is low in the surface and subsurface layers and in the substratum and is medium in the subsoil.

Bluff and manatee soils, frequently flooded-The Bluff series consists of very deep, very poorly drained, slowly permeable soils in marshes and on broad low terraces along rivers. The Bluff series are formed in thick beds of alkaline loamy marine sediments. Slopes range from 0 to 2 percent. The Manatee series consists of very deep, very poorly drained, moderately permeable soils in depressions, broad drainageways, and on flood plains. The Manatee series is formed in sandy and loamy marine sediments. Slope is dominantly less than 1 percent but ranges to 2 percent.

Candler-Apopka Fine Sands, 5 to 12 percent slopes-The Candler series consists of very deep, excessively drained, very rapidly to rapidly permeable soils on uplands of Southern Florida Flatwoods (MLRA 155), South Central Florida Ridge (MLRA 154), Eastern Gulf Coast Flatwoods (MLRA 152A) and the Atlantic Coast Flatwoods (MLRA 153A). They formed in thick beds of eolian or sandy marine deposits. Slopes are primarily 0 to 12 percent but range up to 40 percent in the more dissected areas. The Apopka series consists of very deep, well drained, moderately slowly permeable soils on upland ridges, side slopes and knolls of the North Central Florida Ridge (MLRA 138), the South-Central Florida Ridge (MLRA 154) and the Florida Flatwoods (MLRA 155). They formed in thick beds of sandy and loamy marine or eolian deposits. Slopes range from 0 to 25 percent.

Candler-Urban Land Complex, 0 to 5 percent slopes-This nearly level to gently sloping and excessively drained soil in areas of urban land is typically located on uplands. Slopes are nearly smooth to convex. The seasonal high-water table is typically at a depth of more than 80 inches. The permeability is rapid in the surface and subsurface layers, and it is rapid to moderately rapid in the subsoil. The available water capacity is very low in the surface and subsurface layers and low in the subsoil.

Candler-Urban Land Complex, 5 to 12 percent slopes-This nearly level to gently sloping and excessively drained soil in areas of urban land is typically located on uplands. Slopes are nearly smooth to convex. The seasonal high-water table is typically at a depth of more than 80 inches. The permeability is rapid in the surface and subsurface layers, and it is rapid to moderately rapid in the subsoil. The available water capacity is very low in the surface and subsurface layers and low in the subsoil.

Candler Fine Sand, 0 to 5 percent slopes-The Candler series consists of very deep, excessively drained, very rapidly to rapidly permeable soils on uplands of Southern Florida Flatwoods (MLRA 155), South Central Florida Ridge (MLRA 154), Eastern Gulf Coast Flatwoods (MLRA 152A) and the Atlantic Coast Flatwoods (MLRA 153A.) They formed in thick beds of eolian or sandy marine deposits. Slopes are primarily 0 to 12 percent but range up to 40 percent in the more dissected areas.

Candler Fine Sand, 5 to 12 percent slopes-The Candler series consists of very deep, excessively drained, very rapidly to rapidly permeable soils on uplands of Southern Florida Flatwoods (MLRA 155),

South Central Florida Ridge (MLRA 154), Eastern Gulf Coast Flatwoods (MLRA 152A) and the Atlantic Coast Flatwoods (MLRA 153A). They formed in thick beds of eolian or sandy marine deposits. Slopes are primarily 0 to 12 percent but range up to 40 percent in the more dissected areas.

Canova Muck-The Canova series consists of very deep, very poorly drained, moderately slowly permeable soils in depressions and freshwater swamps and marshes. They formed in loamy marine sediments. Slopes range from 0 to 1 percent.

Emeralda and Holopaw Fine Sands, frequently flooded-The Emeralda series consists of very deep, poorly drained, slowly or very slowly permeable soils in broad, low areas generally near lakes and streams in the lower coastal plain. Emeralda series is formed in clayey marine sediments. Slopes range from 0 to 2 percent. The Holopaw series consists of deep and very deep, poorly and very poorly drained soil that formed in sandy and loamy marine sediments. Holopaw soils are on nearly level low lying flats, poorly defined drainageways and depressional areas. Slopes range from 0 to 2 percent.

Felda fine Sand, 0 to 2 percent slopes-The Felda series consists of very deep, poorly drained and very poorly drained soils that formed in sandy and loamy marine deposits. Felda soils are on flatwoods, low broad flats, drainageways, sloughs, depressions, and flood plains. Slopes are linear to concave and range from 0 to 2 percent.

Felda Fine Sand, 0 to 2 percent slopes, frequently flooded-The Felda series consists of very deep, poorly drained and very poorly drained soils that formed in sandy and loamy marine deposits. Felda soils are on flatwoods, low broad flats, drainageways, sloughs, depressions, and flood plains. Slopes are linear to concave and range from 0 to 2 percent.

Felda Fine Sand, 0 to 2 percent slopes, occasionally flooded-The Felda series consists of very poorly drained soils that formed in sandy and loamy marine deposits. Felda soils are on flatwoods, low broad flats, drainageways, sloughs, depressions, and flood plains. Slopes are linear to concave and range from 0 to 2 percent.

Florahome-Urban Land Complex, 0 to 5 percent slopes-The Florahome series consists of deep, moderately well drained, dark surfaced, rapidly permeable soils. They formed in thick, sandy marine and eolian deposits. These soils are typically found on low ridges in Peninsular Florida. Slopes are 0 to 5 percent. Most areas of Florahome soils are in improved pastures.

Florahome Fine Sand, 0 to 5 percent slopes-The Florahome series consists of deep, moderately well drained, dark surfaced, rapidly permeable soils. They formed in thick, sandy marine and eolian deposits. These soils are typically found on low ridges in Peninsular Florida. Slopes are 0 to 5 percent. Most areas of Florahome soils are in improved pastures.

Floridana fine sand, 0 to 2 percent slopes, frequently flooded-The Floridana series consists of very deep, very poorly drained, slowly to very slowly permeable soils on low broad flats, flood plains, and in depressional areas. They formed in thick beds of sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 74 degrees F., and the mean annual precipitation is about 55 inches. Slopes range from 0 to 1 percent.

Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes-The Floridana series consists of very deep, very poorly drained, slowly to very slowly permeable soils on low broad flats, flood plains, and in depressional areas. They formed in thick beds of sandy and loamy marine sediments.

Gator muck, frequently ponded, 0 to 1 percent slopes-The Gator series consists of very poorly drained organic soils that formed in moderately thick beds of hydrophytic plant remains overlying beds of loamy and sandy marine sediments. They are in depressions and on flood plains. Slopes are less than 1 percent. Gator soils are in depressions and on flood plains of lakes, rivers, and streams on the lower coastal plain in central and south Florida.

Hontoon Muck, frequently ponded, 0 to 1 percent slopes-This nearly level and very poorly drained soil is typically located in freshwater swamps and in marshes. Slopes are smooth and less than 1 percent. The seasonal high-water table is typically within 10 inches of the surface, but under natural conditions this soil can be ponded for most of the year. In drained areas the water table is typically controlled at a depth of 10 to 36 inches, in which the water table is at or above the surface for short periods after heavy rains. The permeability is rapid throughout. The available water capacity is very high.

Immokalee Fine Sand-This nearly level and poorly drained soil is typically located on broad flatwoods. Slopes are smooth and range from 0 to 2 percent. The seasonal high-water table is within 10 inches of the surface for 1 month to 3 months, and it recedes to a depth of 10 to 40 inches for more than 6 months. The permeability is rapid on the surface and subsurface layers and in the substratum and is moderate in the subsoil. The available water capacity is very low in the surface and subsurface layers and in the substratum and is medium in the subsoil.

Lake Fine Sand, 0 to 5 percent slopes-The Lake series consists of excessively drained, rapidly to very rapidly permeable soils formed in thick beds of sand. They are on nearly level to steep slopes in central Florida. Slopes range from 0 to 30 percent. These soils formed in beds of sandy marine, aeolian, or fluvial sediments more than 7 feet thick.

Lochloosa Fine Sand-This nearly level and poorly drained soil is typically located in the slightly high positions on the flatwoods. Slopes are smooth to convex and range from 0 to 2 percent. The seasonal high-water table is within 30 to 60 inches of the surface for 1 month to 4 months. It may recede to more than 60 inches during prolonged dry periods. The permeability is moderately rapid to rapid in the surface and subsurface layers, moderate to moderately slow in the subsoil, and slow to moderately slow in the substratum.

Malabar Fine Sand-The Malabar series consists of very deep, very poorly and poorly drained, slowly permeable soils in sloughs, shallow depressions and along flood plains in the Southern Florida Flatwoods (MLRA 155), the Southern Florida Lowlands (MLRA 156B), Florida Everglades and Associated Areas (MLRA 156A) and the South Central Florida Ridge (MLRA 154) Major Land Resource Areas. They formed in sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 73 degrees F., and the mean annual precipitation is about 55 inches. Slopes range from 0 to 2 percent.

Millhopper-Urban Land Complex, 0 to 5 percent slopes-The Millhopper series consists of very deep, moderately well drained, moderately permeable soils that formed in thick beds of sandy and loamy marine sediments. They occur in central and southern Florida. Slopes range from 0 to 5 percent.

Myakka-Myakka, wet, sands, 0 to 2 percent slopes-The Myakka series consists of very deep, very poorly or poorly drained, moderately rapid or moderately permeable soils that occur primarily in mesic flatwoods of peninsular Florida. They formed in sandy marine deposits. Near the type location, the average annual temperature is about 72 degrees F., and the average annual precipitation is about 55 inches. Slopes range from 0 to 2 percent.

Nittaw, Okeelanta, and Basinger soils, frequently flooded-The Nittaw series consists of very poorly drained, slowly permeable soils that formed in thick deposits of clayey sediments of marine origin. These soils are in well-defined drainageways, broad, nearly level swamps, and marshes of central and southern peninsular Florida. The Nittaw series is subject to flooding and water standing above the soil surface for 6 months or more in most years during late spring, summer and fall. Slopes are less than 2 percent. The Okeelanta series consists of very deep, very poorly drained, rapidly permeable soils in large freshwater marshes and small depressional areas of the Southern Flatwoods (MLRA 155) and the Southern Florida Lowlands (MLRA 156B) Major Land Resource Areas. The Okeelanta series is formed in moderately thick deposits of decomposed hydrophytic non-woody sapric material overlying marine sand. Basingers consist of very deep, very poorly drained, very rapidly permeable soils typically found in low flats, depressions, and poorly defined drainageways of the South Central Florida Ridge (MLRA 154), Southern Florida Flatwoods (MLRA 155). Under natural conditions the Okeelanta soil is covered by water (ponded) - very frequently for very long duration for 6 to 9 months.

Okeelanta Muck-The Okeelanta series consists of very deep, very poorly drained, rapidly permeable soils in large freshwater marshes and small depressional areas of the Southern Flatwoods (MLRA 155) and the Southern Florida Lowlands (MLRA 156B) Major Land Resource Areas. They formed in moderately thick deposits of decomposed hydrophytic non-woody sapric material overlying marine sand. Slopes range from 0 to 2 percent.

Ona Fine Sand, 0 to 2 percent slopes-This nearly level and poorly drained soil is typically located in broad areas on the flatwoods. Slopes are smooth and range from 0 to 2 percent. The seasonal high-water table is typically within 10 inches of the surface for 1 month or 2 months. It recedes to a depth of 10 to 40 inches for periods of 6 months or more. The permeability is rapid in surface and subsurface layers, and it is moderate in the subsoil. The available water capacity is medium in the surface layer and subsoil and is low in the substratum.

Ona-Urban Land Complex-This nearly level and poorly drained soil and of areas and of Urban land is typically located on the flatwoods. Slopes are smooth and range from 0 to 2 percent. The seasonal high-water table is typically within 10 inches of the surface for 1 month or 2 months. The permeability is rapid in surface layer and in the substratum and is moderate in the subsoil. The available water capacity is moderate in the surface layer and subsoil and is low in the substratum.

Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes-This very deep, nearly level, poorly drained soil is on broad low flats, hammocks, sloughs, depressions, poorly defined drainageways and flood plains in the Southern Florida Flatwoods (MLRA 155) and to a less extent in South Central Florida Ridge (MLRA 154), Southern Florida Lowlands (MLRA 156B), Florida Everglades and Associated Areas (MLRA 156A), North Central Florida Ridge (MLRA 138) and Eastern Gulf Coast Flatwoods (MLRA 152A). They formed in thick beds of sandy and loamy marine sediments. Slopes range from 0 to 2 percent.

Pinellas Fine Sand, 0 to 2 percent slopes-The Pinellas series consists of very deep, poorly drained, very rapid to rapidly permeable soils on flats that border sloughs and depressions. They formed in sandy marine sediments over loamy sediments. Slopes range from 0 to 2 percent.

Pits-This soil consists of excavated areas of unconsolidated or heterogenous soil and geologic materials which have been removed primarily for use in road construction or as fill material for low areas and building foundations. Most soil properties area variable according to the type and amount of fill material removed.

Pomello Fine Sand, 0 to 5 percent slopes-This nearly level to gently sloping and moderately well drained soil is typically located on low ridges and knolls on the flatwoods. Slopes are smooth to convex. The seasonal high-water table is at a depth to 24 to 40 inches for 1 month to 4 months and recedes to a depth of 40 to 60 inches during dry periods. The permeability is very rapid in surface layer and subsurface layers, moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is very low in the surface and subsurface layers and in the substratum, and it is medium in the subsoil.

Pomello-Urban Land Complex, 0 to 5 percent slopes-This nearly level to gently sloping and moderately well drained soil is associated with urban areas but can be located on low ridges and knolls on the flatwoods. The urban land part of this complex is covered by concrete, asphalt, buildings, or another impervious surface. Slopes are smooth to convex. The seasonal high-water table is at a depth to 24 to 40 inches for 1 month to 4 months and recedes to a depth of 40 to 60 inches during dry periods. The permeability is very rapid in surface layer and subsurface layers, moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is very low in the surface and subsurface layers and in the substratum, and it is medium in the subsoil.

St. Johns Fine Sand-This nearly level and poorly drained soil is typically located on broad flats in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. The seasonal high-water table is within 10 inches of the surface for 6 to 12 months and between depths of 10 and 40 inches for more than 6 months. In rainy period, it rises to the surface for brief periods. The permeability is rapid in surface layer and subsurface layers and the substratum, and it is moderately slow to moderate in the subsoil. The available water capacity is medium in the surface layer, very low to low in the subsurface layer, and substratum, and medium to very high in the subsoil.

St. Lucie Fine Sand, 0 to 5 percent slopes-This deep, nearly level to gently sloping, and excessively drained soil is typically located on uplands. Slopes are uniform and range from 0 to 5 percent. The seasonal high-water table is at a depth of 72 inches or more. The permeability is very rapid. The available water capacity is very slow.

St. Lucie-Urban Land Complex, 0 to 5 percent slopes-This complex consists of St. Lucie soil that is nearly level to gently sloping, and excessively drained. It is typically associated with urban lands. The seasonal high-water table is at a depth of 72 inches or more. The permeability is very rapid. The available water capacity is very slow.

Samsula Muck, frequently ponded, 0 to 1 percent slopes-This nearly level and very poorly drained soil is typically located in freshwater marshes and swamps. Slopes are smooth and are less than 1 percent. The seasonal high-water table fluctuates between depths of about 10 inches to above the surface. The permeability is rapid throughout. The available water capacity is very high in the organic matter and is very low in the underlying sandy material.

Samsula-Hontoon-Basinger Association, Depressional-This nearly level and very poorly drained soil is typically located in freshwater swamps, depressions, slough, and broad, poorly defined drainageways. Slopes are smooth to concave and range from 0 to 2 percent. The seasonal high-water table fluctuates between depths of about 10 inches and the surface. The permeability is rapid throughout. The available water capacity is very high in the organic matter and is very low in the underlying sandy material.

Sanibel Muck (42)-This nearly level and very poorly drained soil is typically located in depressions, freshwater swamps and marshes, and in poorly defined drainageways. Slopes are concave and are less than 1 percent. The seasonal high-water table fluctuates between depths of about 10 inches and the surface for 2 to 6 months. The permeability is rapid throughout. The available water capacity is very high in the organic matter and is medium to low in the underlying sandy material.

Seffner Fine Sand, 0 to 2 percent slopes-This nearly level and somewhat poorly drained soil is typically located on the rims of depressions and on broad, low ridges on the flatwood. Slopes are smooth to concave and range from 0 to 2 percent. The seasonal high-water table is within 18 to 40 inches of the surface for 2 to 4 months and between depths of 10 to 20 inches for periods of up to 2 weeks during wet periods. It recedes to a depth of less than 60 inches during extended dry periods. The permeability is rapid throughout. The available water capacity is medium in the surface layer, and it is low to very low in the underlying material.

Smyrna Fine Sand, 0 to 2 percent slopes-This nearly level and poorly drained soil is typically located on broad flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. The seasonal high-water table is within 10 inches of the surface for 1 month to 4 months. It recedes to a depth of 10 to 40 inches for more than 6 months. The permeability is rapid in the surface and subsurface layers and in the substratum, and it is moderate to moderately rapid in the subsoil. The available water capacity is low to very low in the surface and subsurface layers and in the substratum, and it is medium in the subsoil.

Smyrna Fine Sand-Urban Land Complex 0 to 5 percent slopes-This nearly level and poorly drained soil is typically located on broad flatwoods. Slopes are smooth to concave and range from 0 to 5 percent. The seasonal high-water table is within 10 inches of the surface for 1 month to 4 months. It recedes to a depth of 10 to 40 inches for more than 6 months. The permeability is rapid in the surface and subsurface layers and in the substratum, and it is moderate to moderately rapid in

the subsoil. The available water capacity is low to very low in the surface and subsurface layers and in the substratum, and it is medium in the subsoil.

Smyrna Fine Sand-Urban Land Complex, 0 to 2 percent slopes-This complex contains nearly level and poorly drained soil and area of urban lands. It is typically located on the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent. The seasonal high-water table is within 10 inches of the surface for 1 month to 4 months. The permeability is rapid in the surface and subsurface layers and in the substratum, and it is moderate to moderately rapid in the subsoil. The available water capacity is low to very low in the surface and subsurface layers and in the substratum, and it is medium in the subsoil.

Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes-The Smyrna series consists of very deep, poorly to very poorly drained soils formed in thick deposits of sandy marine materials. Permeability is rapid in the A, E and C horizons and moderate or moderately rapid in the Bh horizons. Slopes range from 0 to 2 percent.

Tavares Fine Sand, 0 to 5 percent slopes-This nearly level to gently sloping and moderately well drained soil is typically located on low ridges and knolls on the uplands. Slopes are smooth to concave. The seasonal high-water table is at a depth of 40 to 80 inches for more than 6 months, and it recedes to a depth of more than 80 inches during extended dry periods. The permeability is very rapid throughout. The available water capacity is very low.

Tavares Fine Sand-Urban Land Complex, 0 to 5 percent slopes-This complex of nearly level to gently sloping and moderately well drained soil typically contains urban land but is also located on low ridges and knolls on the uplands and in the flatwoods. Slopes are smooth to concave and range from 0 to 5 percent. The seasonal high-water table is at a depth of 40 to 80 inches for more than 6 months, and it recedes to a depth of more than 80 inches during extended dry periods. The permeability is very rapid throughout. The available water capacity is very low.

Tavares-Millhopper Fine Sands, 0 to 5 percent slopes-The Tavares series consists of very deep, moderately well drained soils that formed in sandy marine or eolian deposits. Tavares soils are on hills, ridges and knolls of the lower coastal plain. Slopes range from 0 to 8 percent. The Millhopper series consists of very deep, moderately well drained, moderately permeable soils that formed in thick beds of sandy and loamy marine sediments. The Millhopper series occurs in central and southern Florida. Slopes range from 0 to 8 percent.

Terra Ceia Muck, frequently ponded, 0 to 1 percent slopes-The Terra Ceia series consists of very deep, very poorly drained, rapidly permeable soils in fresh water marshes Southern Florida Flatwoods (MLRA 155), and to a lesser extent in the South Central Florida Ridge (MLRA 154), Southern Florida Lowlands (MLRA 155B, Atlantic Coast Flatwoods (MLRA 153A), Eastern Gulf Coast Flatwoods (MLRA 152A) and the Florida Everglades and Associated Areas (MLRA 156A). They formed in more than 50 inches of well decomposed, hydrophytic, herbaceous plant remains.

Urban Land, 0 to 2 percent slopes-This soil designation is a result of natural soils that cannot be observed or identified because it is covered by urban facilities such as shopping centers, parking lots, industrial buildings, houses, streets, airports, and other structures. Soils in unoccupied areas

such as lawns, vacant lots, playgrounds and parks, mostly consist of Candler, Florahome, Millhopper, Ona, Pomello, St. Lucie, Smyrna, Tavares, and Wabasso soils. These soils have been altered by grading and shaping, or a fill material has been used to cover the natural soils to a depth of 12 inches. Drainage systems have been established in most areas and the seasonal high-water table is highly variable.

Wabasso Fine Sand, 0 to 2 percent slopes-This nearly level and poorly drained soil is typically located on broad flatwoods. Slopes are smooth to slightly convex and range from 0 to 2 percent. The seasonal high-water table is at a depth of less than 10 inches for 1 month to 5 months and recedes to a depth of more than 40 inches during dry periods. The permeability is rapid in the surface and subsurface layers and in the substratum and moderate in the sandy part of the subsoil and slow or very slow in the loamy part. The water capacity is very low in the surface and subsurface layers, medium in the subsoil, and low in the substratum.

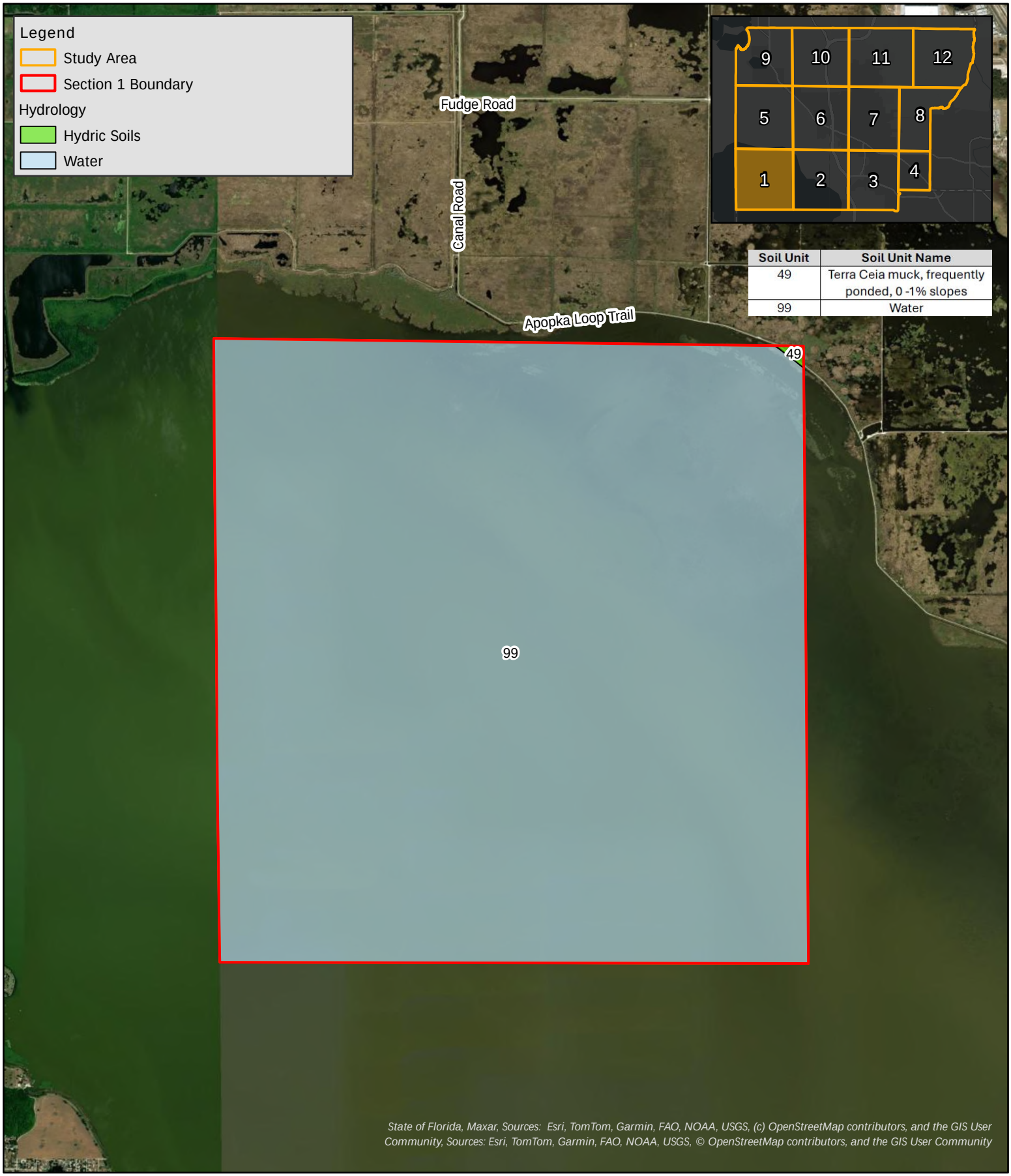
Wauberg Fine Sand-This nearly level and poorly drained soil is typically located in low areas in the flatwoods. Slopes are nearly smooth to slightly concave and range from 0 to 2 percent. The seasonal high-water is within 12 inches of the surface for a period of 6 months and can recede to a depth of more than 40 inches during dry periods. The permeability is rapid in the surface and subsurface layers, very slow in the upper part of the subsoil and substratum and moderately slow in the lower part of the subsoil. The water capacity is low to medium in the surface layer, subsoil, and substratum.

Wauchula sand-The Wauchula series consists of very deep, very poorly or poorly drained, moderately slow or slowly permeable soils on flatwoods on the lower coastal plains. They formed in sandy and loamy marine sediments. Slopes range from 0 to 5 percent.

Water-Water is a miscellaneous area including areas of open water, lakes, ponds, rivers, and streams. There is no hydric soil classification associated with open water and therefore it is an unranked category.

Zolfo Fine Sand, 0 to 2 percent slopes-This nearly level and somewhat poorly drained soil is typically located on broad, slightly higher positions adjacent to the flatwoods. Slopes are smooth to convex and range from 0 to 5 percent. The seasonal high-water table is at a depth of 24 to 40 inches for 2 to 6 months, and it is a depth of 10 to 24 inches during periods of heavy rains. It recedes to a depth of about 60 inches during extended dry periods. The permeability is rapid in the surface and subsurface layers, and it is moderate in the subsoil. The available water capacity is low in the surface and subsurface layers and is medium in the subsoil.

Zolfo-Urban land complex-This complex is nearly level and somewhat poorly drained and contains urban lands. It can be found on broad, slightly higher positions adjacent to flatwoods. Slopes are smooth and range from 0 to 2 percent. The seasonal high water table is at a depth of 24 to 40 inches for 2 to 6 months and at a depth of 10 to 24 inches during periods of high rainfall. It recedes to a depth of 60 inches during extended droughts. When altered and drained in urban areas, the water table is highly variable. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is low in the surface and subsurface layers and medium in the subsoil.



Soil Unit	Soil Unit Name
49	Terra Ceia muck, frequently ponded, 0 -1% slopes
99	Water

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EXHIBIT - 6.6.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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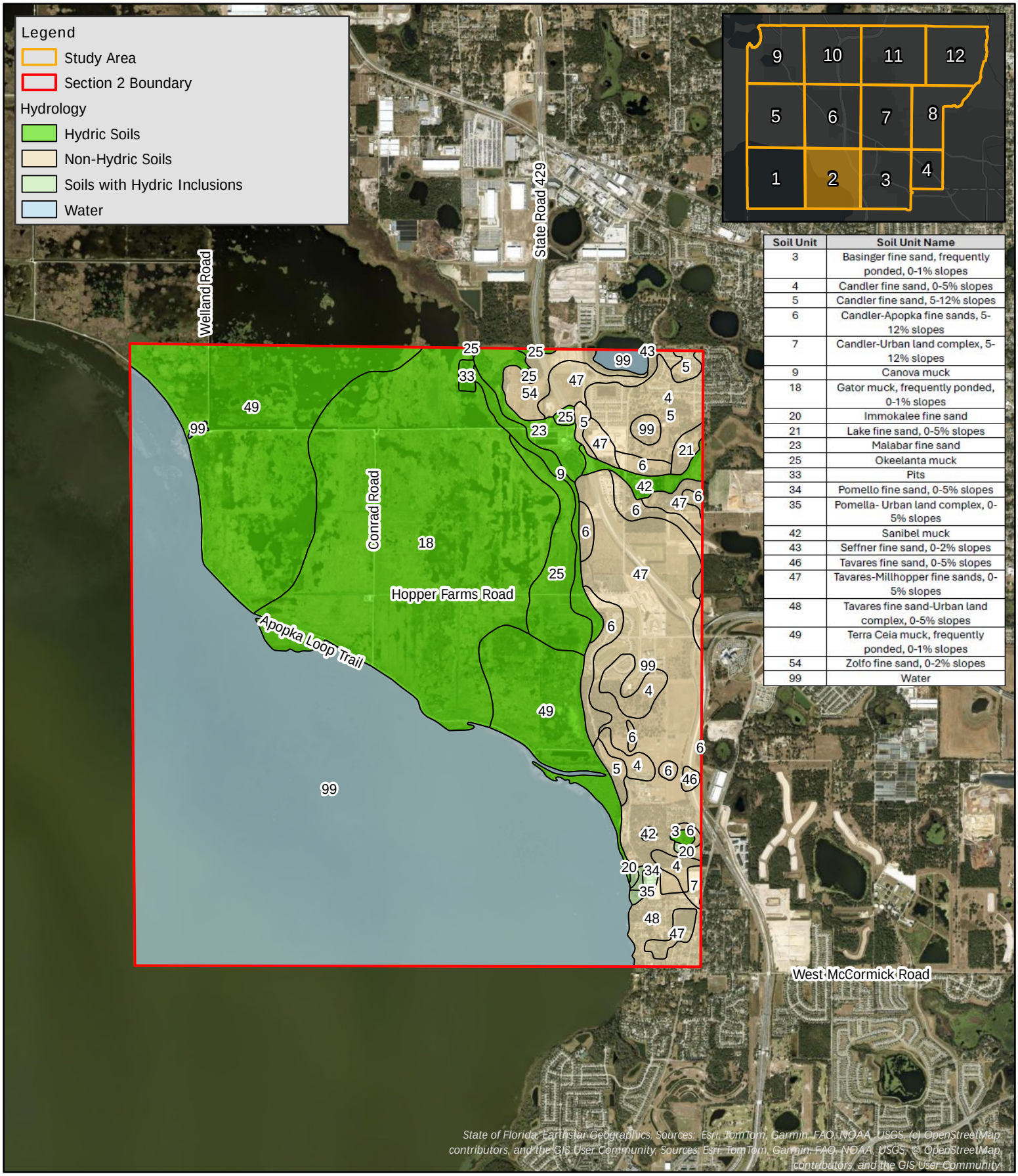
0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 5-12% slopes
9	Canova muck
18	Gator muck, frequently ponded, 0-1% slopes
20	Immokalee fine sand
21	Lake fine sand, 0-5% slopes
23	Malabar fine sand
25	Okeelanta muck
33	Pits
34	Pomello fine sand, 0-5% slopes
35	Pomella- Urban land complex, 0-5% slopes
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
49	Terra Ceia muck, frequently ponded, 0-1% slopes
54	Zolfo fine sand, 0-2% slopes
99	Water

Path: \\vhb.com\gis\proj\Orlando\64928.00 OC NOWOCATS\Project\ENV\ExistingConditionsMap.aprx

EXHIBIT - 6.6.2

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: NRCS Soils Map

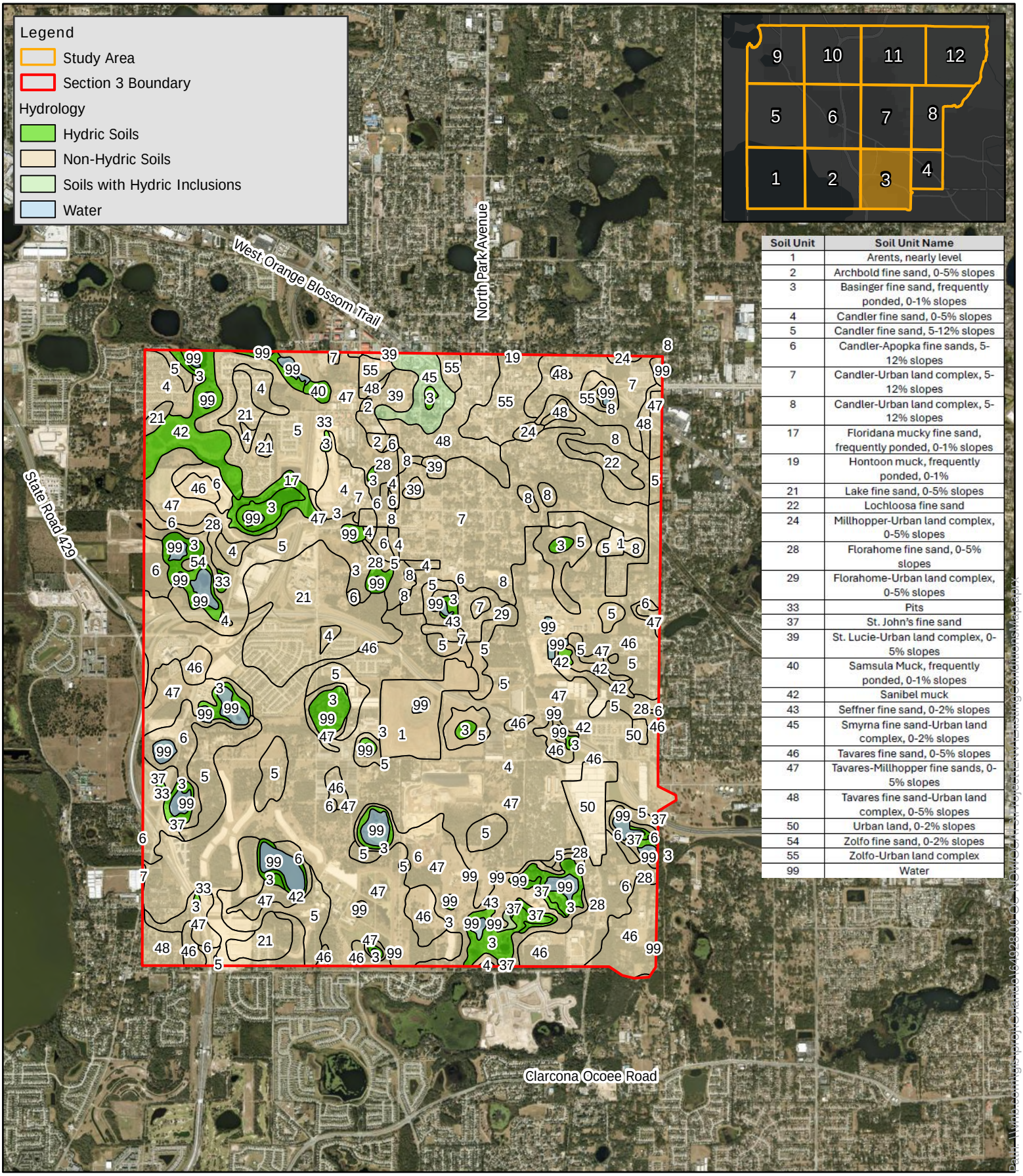
Orange County Government Florida

N

0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 5-12% slopes
8	Candler-Urban land complex, 5-12% slopes
17	Floridana mucky fine sand, frequently ponded, 0-1% slopes
19	Hontoon muck, frequently ponded, 0-1%
21	Lake fine sand, 0-5% slopes
22	Lochloosa fine sand
24	Millhopper-Urban land complex, 0-5% slopes
28	Florahome fine sand, 0-5% slopes
29	Florahome-Urban land complex, 0-5% slopes
33	Pits
37	St. John's fine sand
39	St. Lucie-Urban land complex, 0-5% slopes
40	Samsula Muck, frequently ponded, 0-1% slopes
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
45	Smyrna fine sand-Urban land complex, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
50	Urban land, 0-2% slopes
54	Zolfo fine sand, 0-2% slopes
55	Zolfo-Urban land complex
99	Water

EXHIBIT - 6.6.3

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: NRCS Soils Map

Data Source: NRCS.

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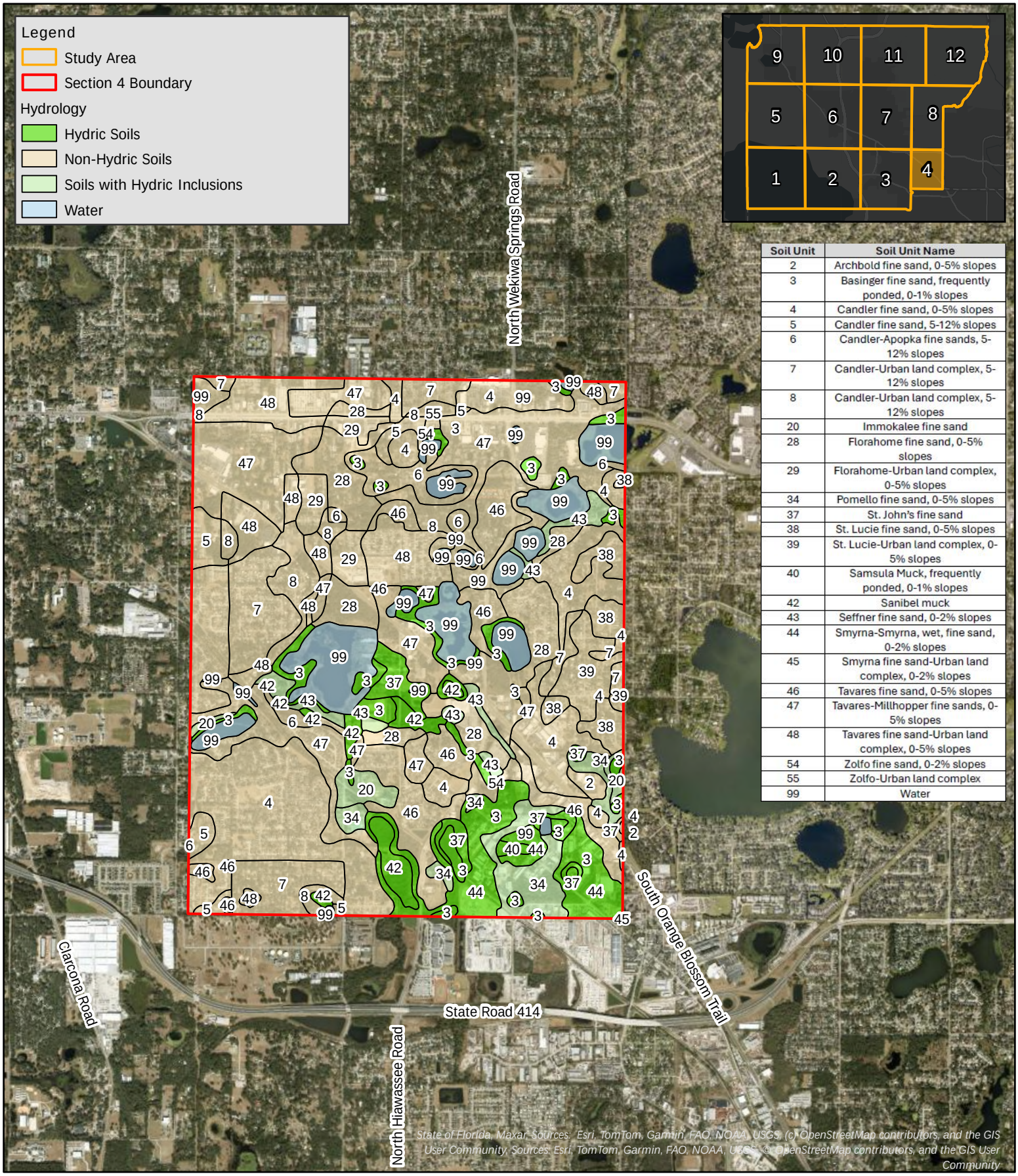
NOWOCATS - May 2025



Soil Unit	Soil Unit Name
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 5-12% slopes
8	Candler-Urban land complex, 5-12% slopes
20	Immokalee fine sand
28	Florahome fine sand, 0-5% slopes
29	Florahome-Urban land complex, 0-5% slopes
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
38	St. Lucie fine sand, 0-5% slopes
39	St. Lucie-Urban land complex, 0-5% slopes
40	Samsula Muck, frequently ponded, 0-1% slopes
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
45	Smyrna fine sand-Urban land complex, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
54	Zolfo fine sand, 0-2% slopes
55	Zolfo-Urban land complex
99	Water

EXHIBIT - 6.6.4

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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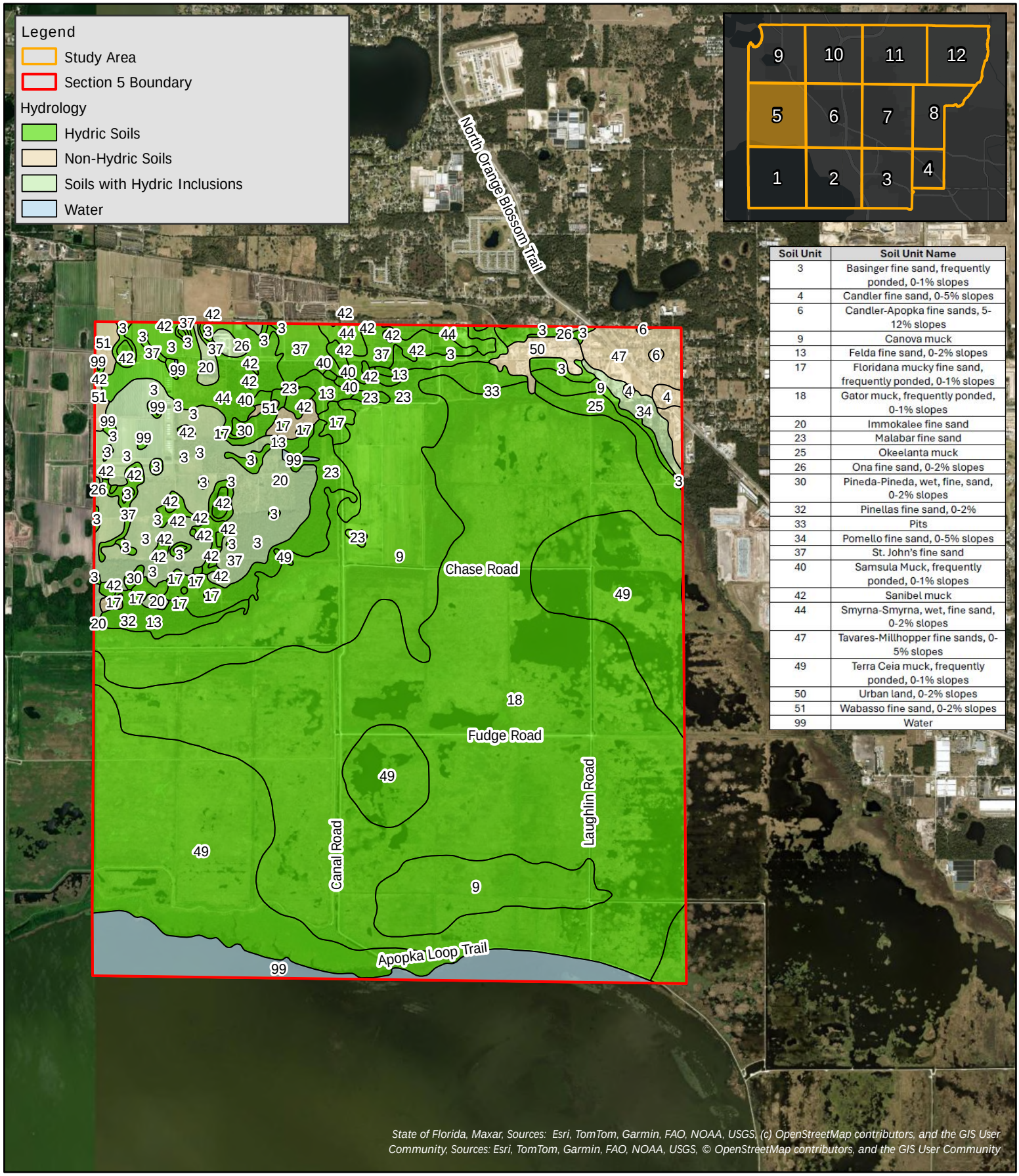
0 1,500 3,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
6	Candler-Apopka fine sands, 5-12% slopes
9	Canova muck
13	Felda fine sand, 0-2% slopes
17	Floridana mucky fine sand, frequently ponded, 0-1% slopes
18	Gator muck, frequently ponded, 0-1% slopes
20	Immokalee fine sand
23	Malabar fine sand
25	Okeelanta muck
26	Ona fine sand, 0-2% slopes
30	Pineda-Pineda, wet, fine, sand, 0-2% slopes
32	Pinellas fine sand, 0-2%
33	Pits
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
40	Samsula Muck, frequently ponded, 0-1% slopes
42	Sanibel muck
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
49	Terra Ceia muck, frequently ponded, 0-1% slopes
50	Urban land, 0-2% slopes
51	Wabasso fine sand, 0-2% slopes
99	Water

EXHIBIT - 6.6.5

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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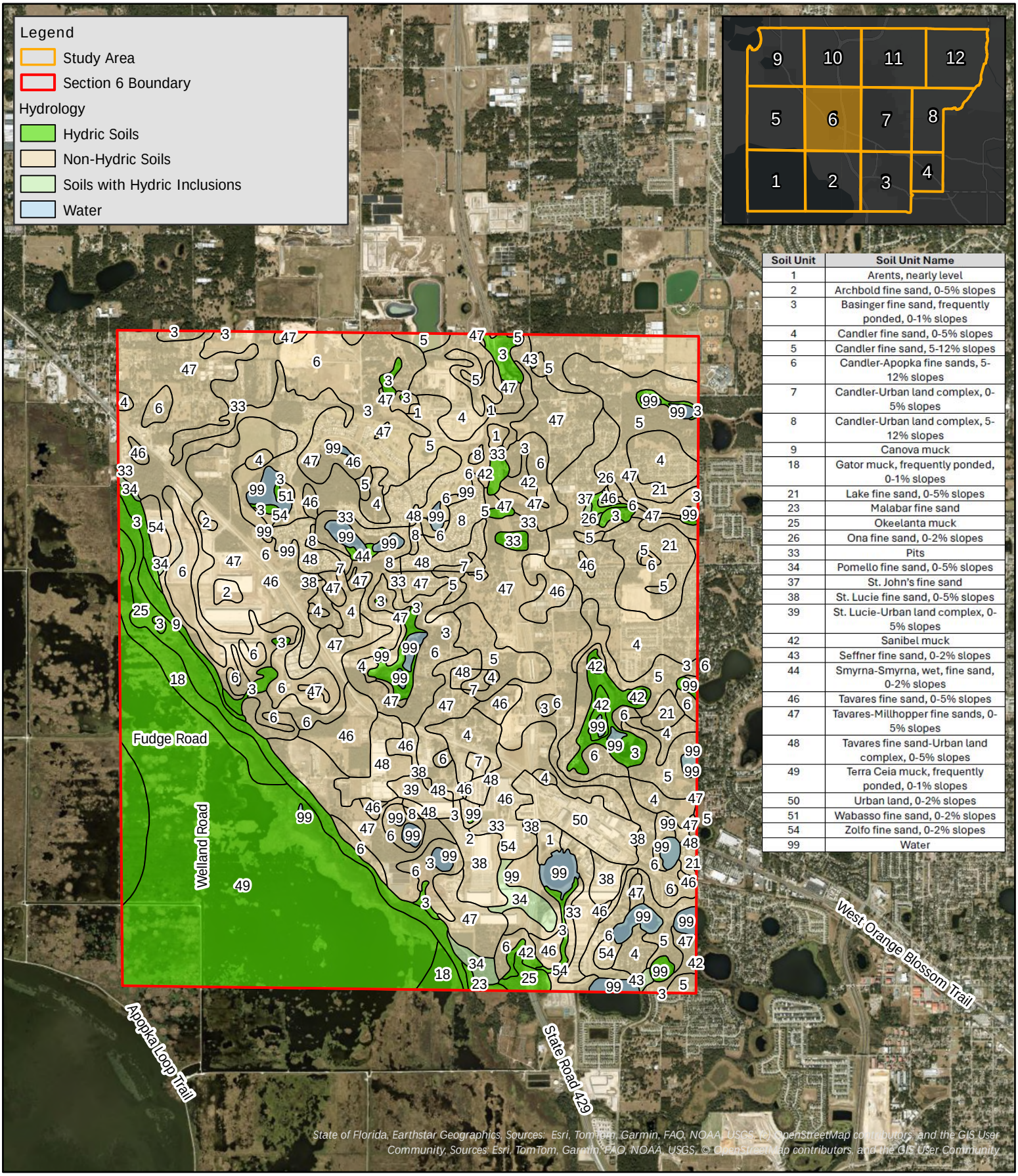
Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
8	Candler-Urban land complex, 5-12% slopes
9	Canova muck
18	Gator muck, frequently ponded, 0-1% slopes
21	Lake fine sand, 0-5% slopes
23	Malabar fine sand
25	Okeelanta muck
26	Ona fine sand, 0-2% slopes
33	Pits
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
38	St. Lucie fine sand, 0-5% slopes
39	St. Lucie-Urban land complex, 0-5% slopes
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
49	Terra Ceia muck, frequently ponded, 0-1% slopes
50	Urban land, 0-2% slopes
51	Wabasso fine sand, 0-2% slopes
54	Zolfo fine sand, 0-2% slopes
99	Water

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EXHIBIT - 6.6.6

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 6: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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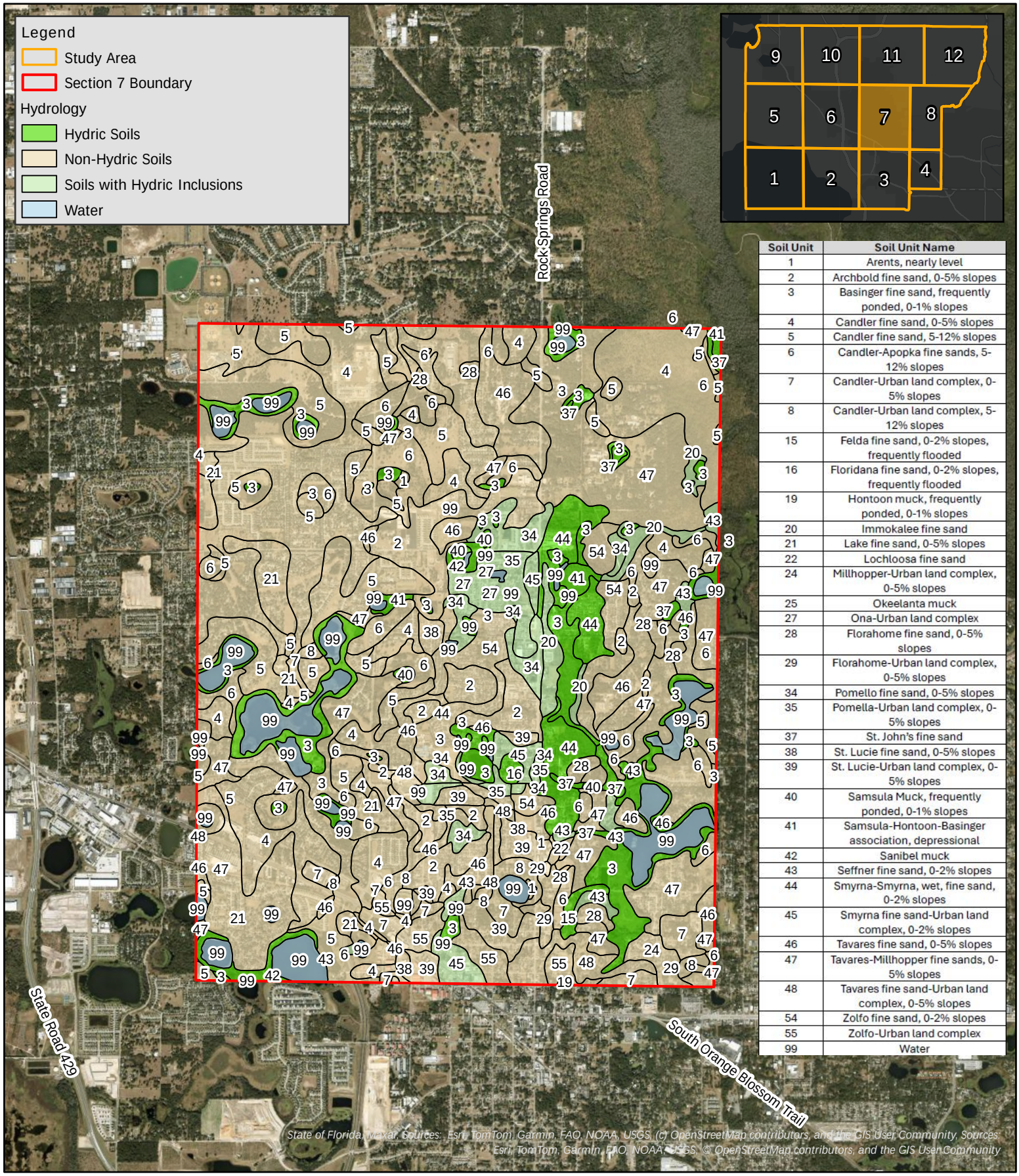
Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
8	Candler-Urban land complex, 5-12% slopes
15	Felda fine sand, 0-2% slopes, frequently flooded
16	Floridana fine sand, 0-2% slopes, frequently flooded
19	Hontoon muck, frequently ponded, 0-1% slopes
20	Immokalee fine sand
21	Lake fine sand, 0-5% slopes
22	Lochloosa fine sand
24	Millhopper-Urban land complex, 0-5% slopes
25	Okeelanta muck
27	Ona-Urban land complex
28	Florahome fine sand, 0-5% slopes
29	Florahome-Urban land complex, 0-5% slopes
34	Pomello fine sand, 0-5% slopes
35	Pomella-Urban land complex, 0-5% slopes
37	St. John's fine sand
38	St. Lucie fine sand, 0-5% slopes
39	St. Lucie-Urban land complex, 0-5% slopes
40	Samsula Muck, frequently ponded, 0-1% slopes
41	Samsula-Hontoon-Basinger association, depressional
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
45	Smyrna fine sand-Urban land complex, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
54	Zolfo fine sand, 0-2% slopes
55	Zolfo-Urban land complex
99	Water

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EXHIBIT - 6.6.7

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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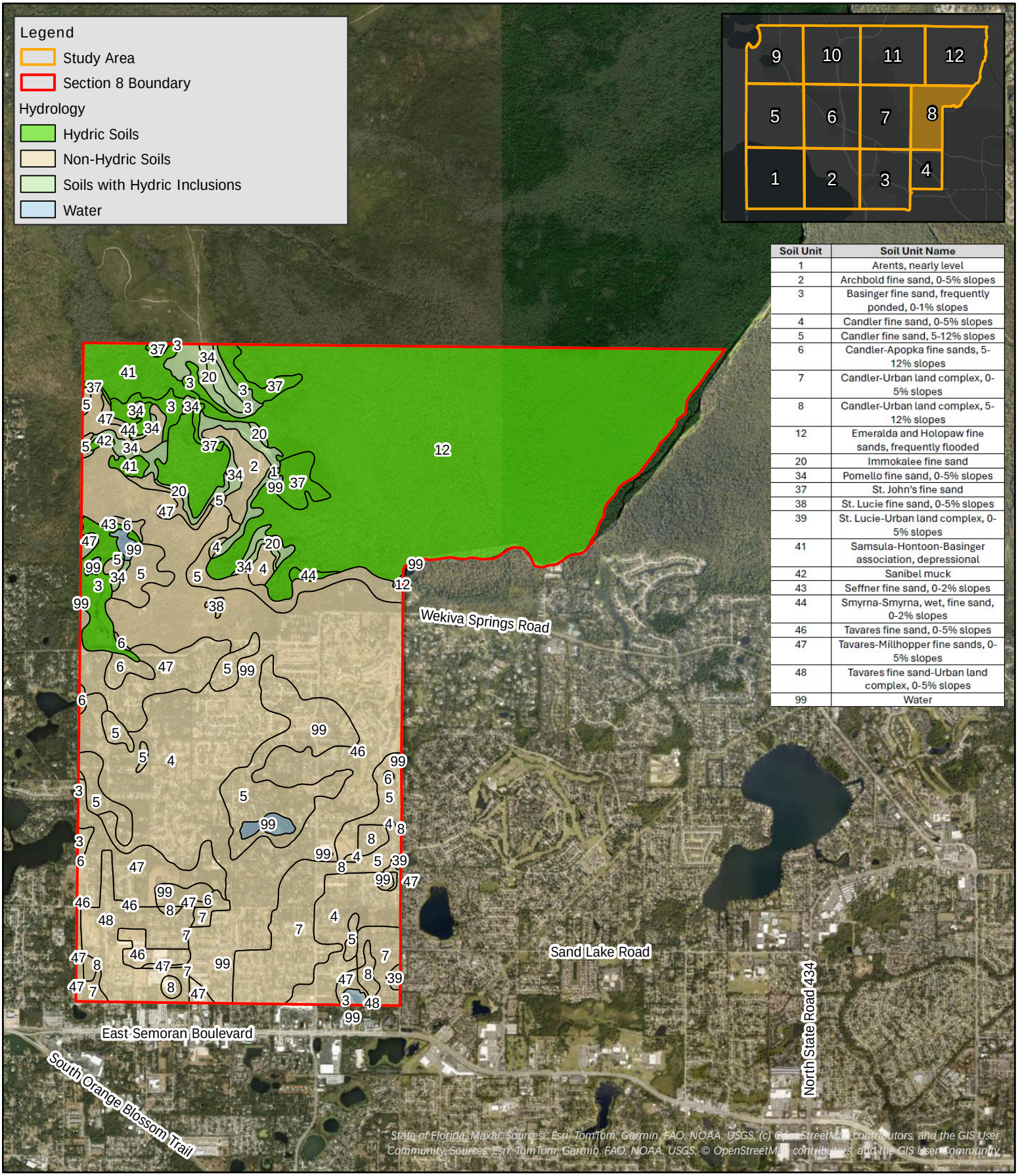
Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
8	Candler-Urban land complex, 5-12% slopes
12	Emeralda and Holopaw fine sands, frequently flooded
20	Immokalee fine sand
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
38	St. Lucie fine sand, 0-5% slopes
39	St. Lucie-Urban land complex, 0-5% slopes
41	Samsula-Hontoon-Basinger association, depressional
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
99	Water

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EXHIBIT - 6.6.8

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: NRCS Soils Map

ORANGE COUNTY GOVERNMENT FLORIDA

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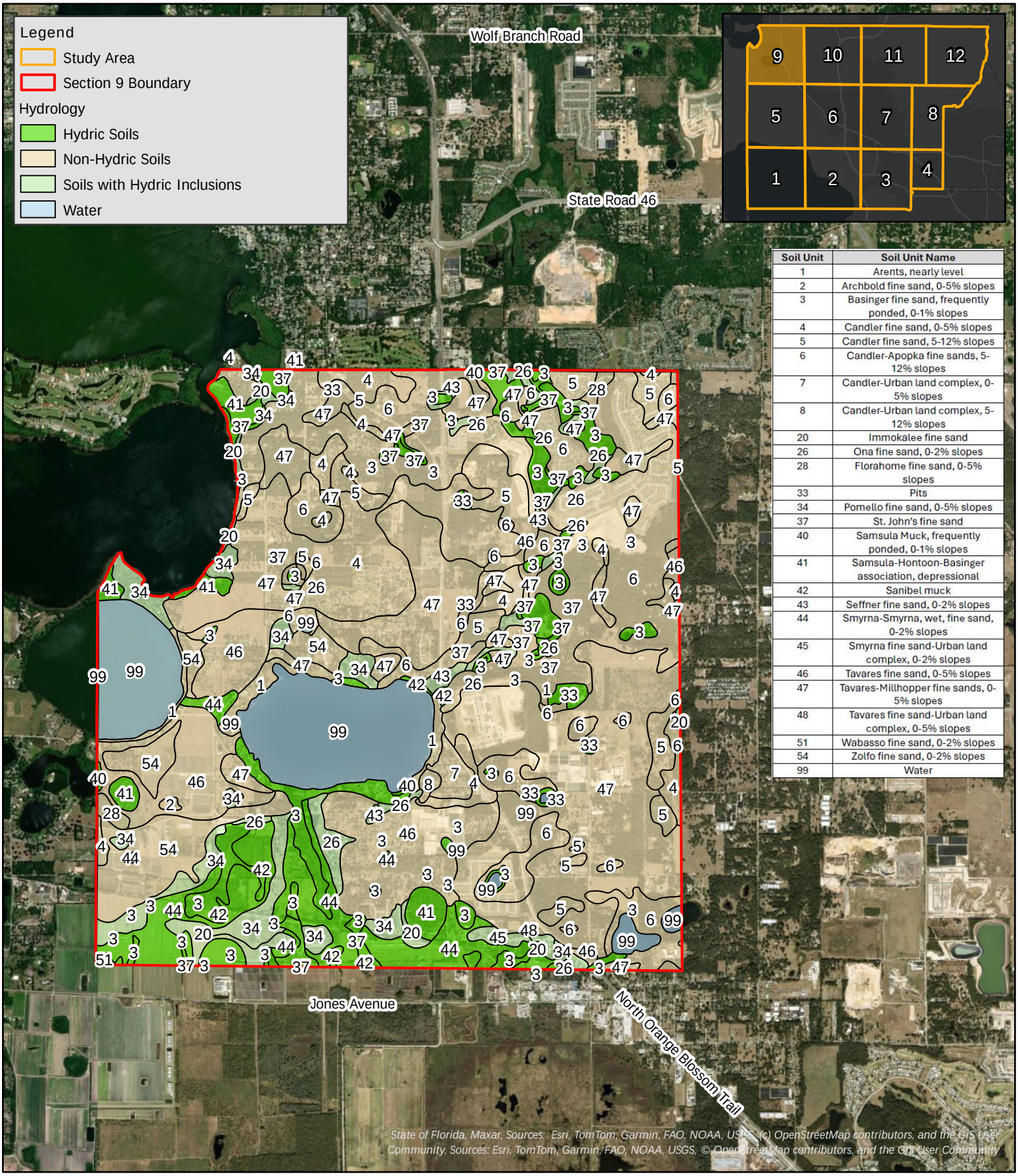
Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
2	Archbold fine sand, 0-5% slopes
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
8	Candler-Urban land complex, 5-12% slopes
20	Immokalee fine sand
26	Ona fine sand, 0-2% slopes
28	Florahome fine sand, 0-5% slopes
33	Pits
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
40	Samsula Muck, frequently ponded, 0-1% slopes
41	Samsula-Hontoon-Basinger association, depressional
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
45	Smyrna fine sand-Urban land complex, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
51	Wabasso fine sand, 0-2% slopes
54	Zolfo fine sand, 0-2% slopes
99	Water

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EXHIBIT - 6.6.9

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: NRCS Soils Map

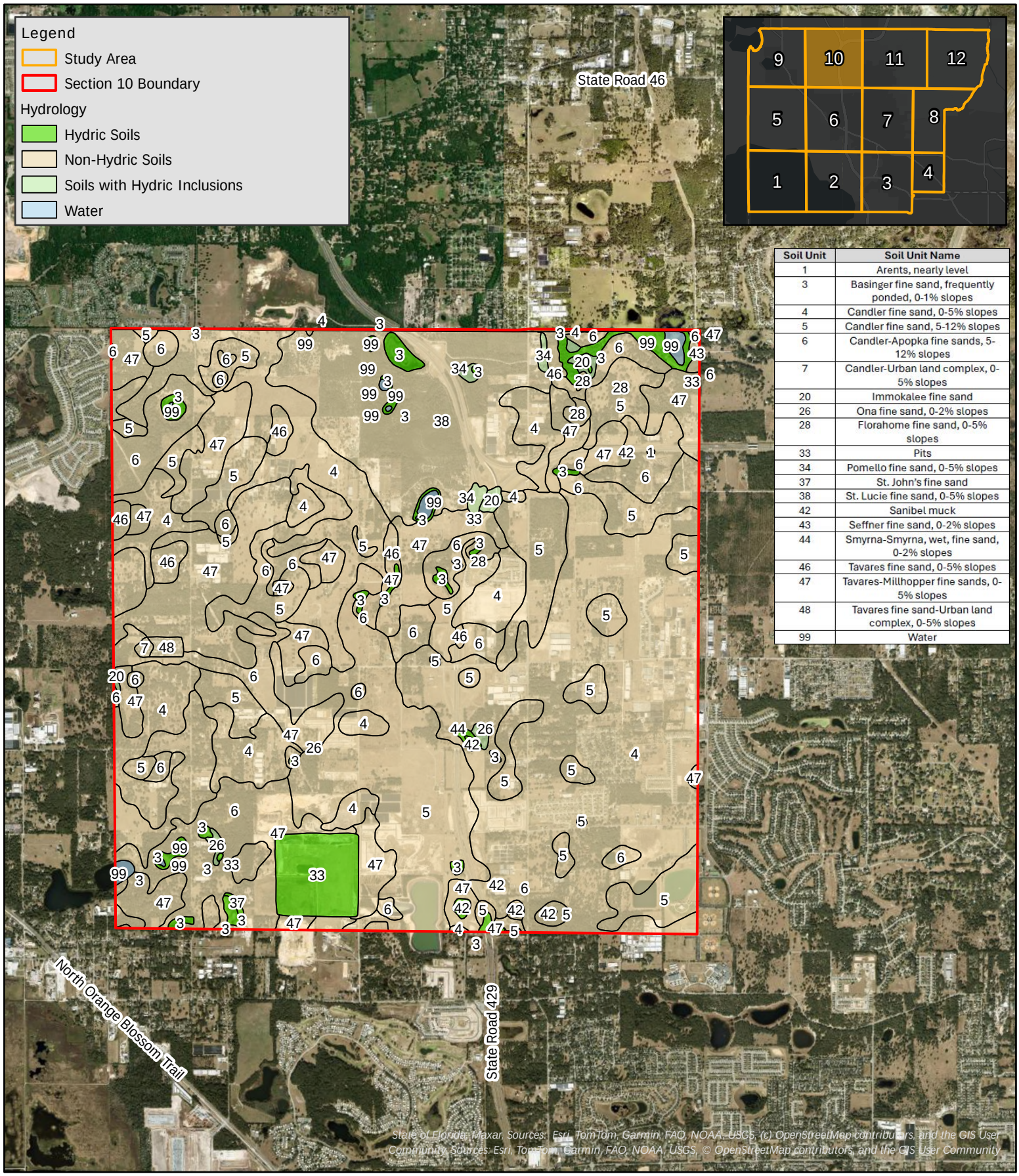
ORANGE COUNTY GOVERNMENT FLORIDA

N

0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
20	Immokalee fine sand
26	Ona fine sand, 0-2% slopes
28	Florahome fine sand, 0-5% slopes
33	Pits
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
38	St. Lucie fine sand, 0-5% slopes
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
99	Water

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EXHIBIT - 6.6.10

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: NRCS Soils Map

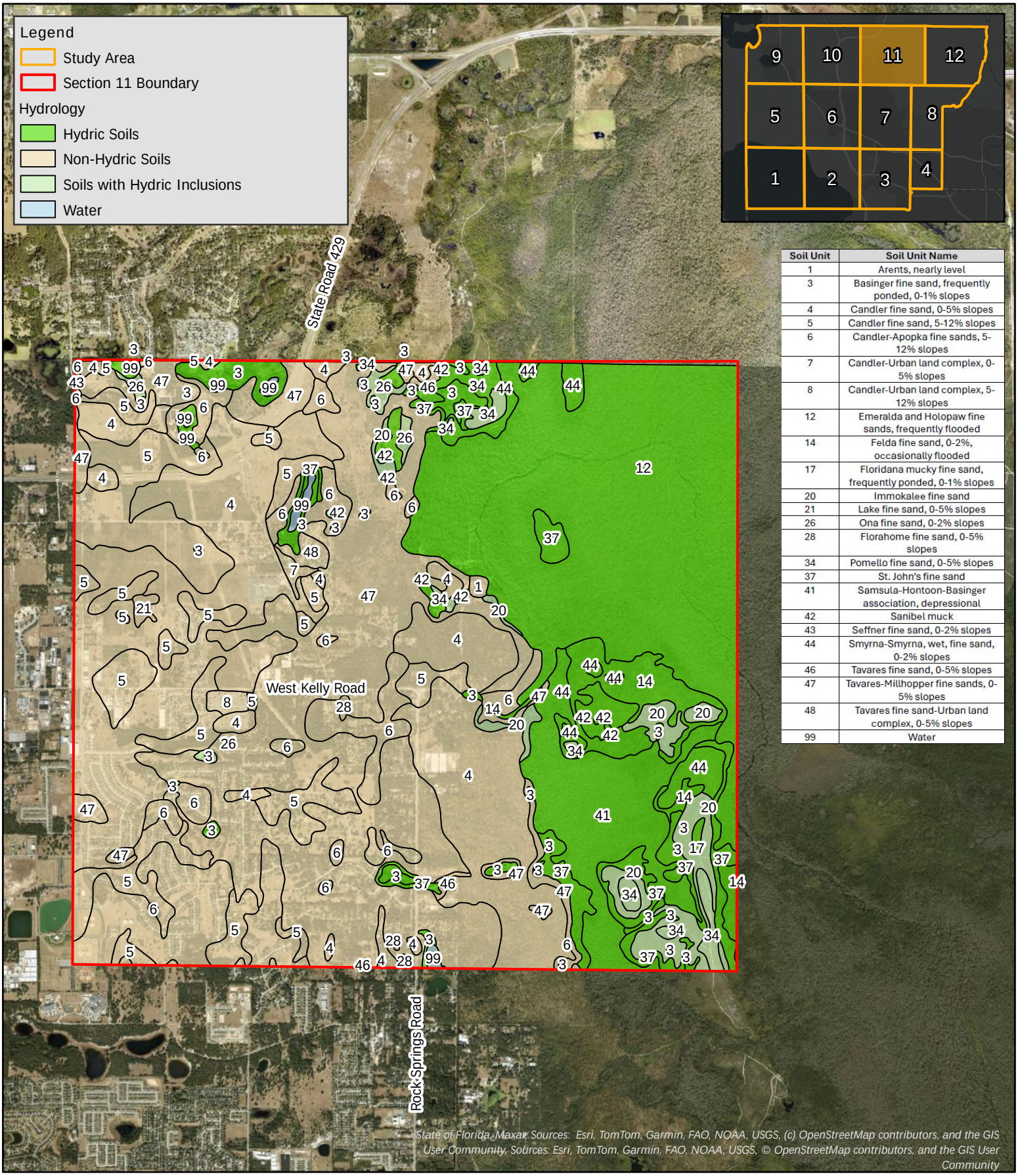
ORANGE COUNTY GOVERNMENT FLORIDA

N

0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Soil Unit	Soil Unit Name
1	Arents, nearly level
3	Basinger fine sand, frequently ponded, 0-1% slopes
4	Candler fine sand, 0-5% slopes
5	Candler fine sand, 5-12% slopes
6	Candler-Apopka fine sands, 5-12% slopes
7	Candler-Urban land complex, 0-5% slopes
8	Candler-Urban land complex, 5-12% slopes
12	Emeralda and Holopaw fine sands, frequently flooded
14	Felda fine sand, 0-2%, occasionally flooded
17	Floridana mucky fine sand, frequently ponded, 0-1% slopes
20	Immokalee fine sand
21	Lake fine sand, 0-5% slopes
26	Ona fine sand, 0-2% slopes
28	Florahome fine sand, 0-5% slopes
34	Pomello fine sand, 0-5% slopes
37	St. John's fine sand
41	Samsula-Hontoon-Basinger association, depressional
42	Sanibel muck
43	Seffner fine sand, 0-2% slopes
44	Smyrna-Smyrna, wet, fine sand, 0-2% slopes
46	Tavares fine sand, 0-5% slopes
47	Tavares-Millhopper fine sands, 0-5% slopes
48	Tavares fine sand-Urban land complex, 0-5% slopes
99	Water

Path: \\vhb.com\gis\proj\Orlando\64928.00 OC NOWOCATS\Project\ENV\ExistingConditionsMap.aprx

EXHIBIT - 6.6.11

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: NRCS Soils Map

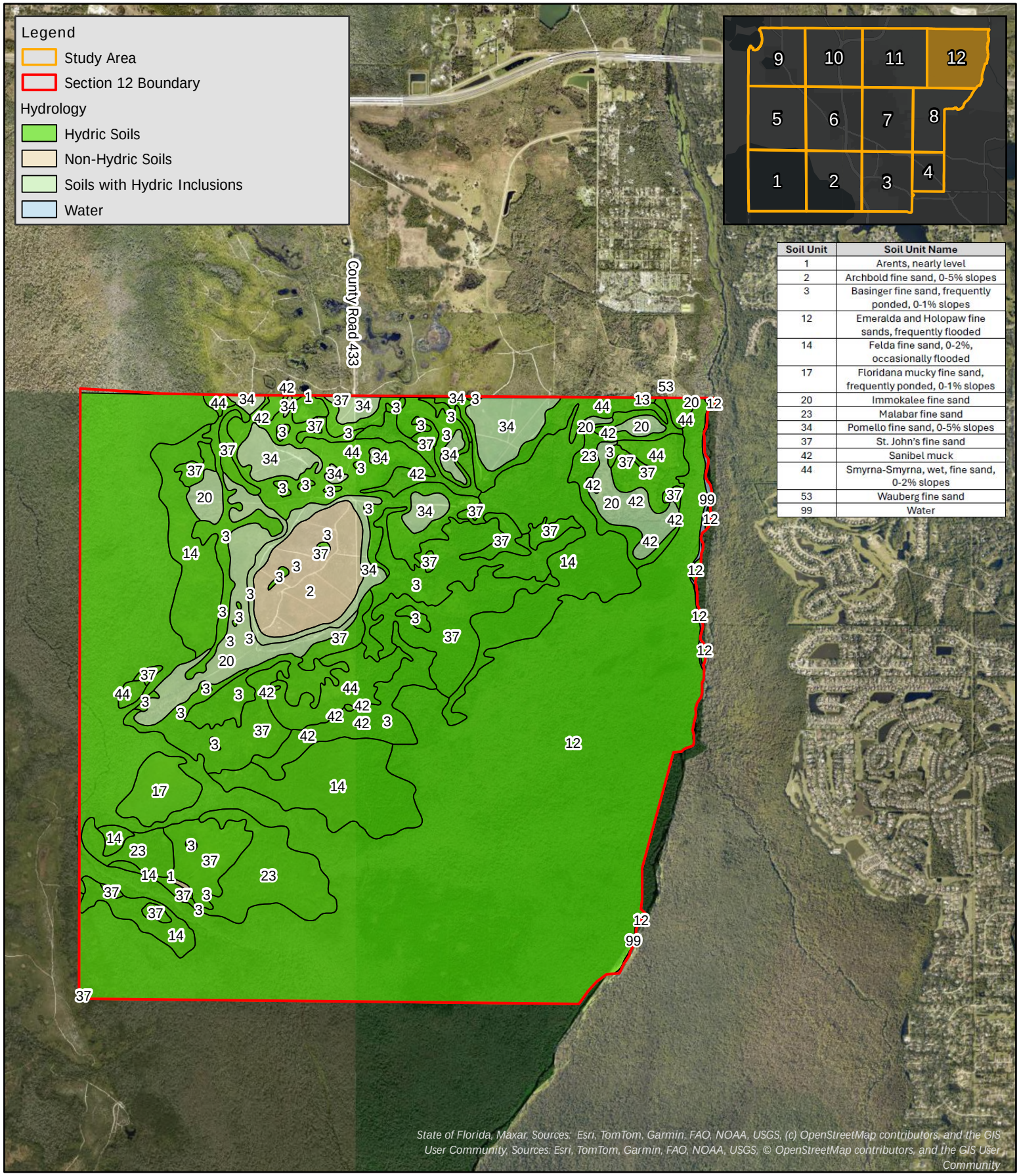
ORANGE COUNTY GOVERNMENT FLORIDA

N

0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025



Path: \\vhb.com\gis\proj\Orlando\64928.00 OC NOWOCATS\Project\ENV\ExistingConditionsMap.aprx

EXHIBIT - 6.6.12

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: NRCS Soils Map

Orange County Government Florida

N

0 2,000 4,000 Feet

Data Source: NRCS.

NOWOCATS - May 2025

6.7 HYDRAULIC AND NATURAL FEATURES

A review of the most recent publicly available information and Geographic Information Systems (GIS) data was conducted to identify environmental resources that have the potential to occur within the study area. The information and data reviewed included local topography, floodplains, wetlands, documented wildlife observations, management plans, and other historical records. Other information reviewed included but was not limited to:

- NRCS Soil Maps
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Maps
- USFWS Wood Stork Colony Core Foraging Area Maps
- USFWS Consultation Areas
- USFWS Information for Planning and Consultation (IPaC)
- Florida Fish and Wildlife Conservation Commission (FWC) Bald Eagle Nests
- FWC Imperiled and Managed Species Lists and Occurrence Data
- Florida Department of Environmental Protection Statewide Land Use Land Cover GIS data
- St. Johns River Water Management District (SJRWMD) Conservation/Regulatory Easements
- Audubon's EagleWatch
- Florida Natural Areas Inventory (FNAI)
- Federal Emergency Management Agency (FEMA) Flood Hazard maps
- Florida Department of Agriculture and Consumer Services (FDACS) Federally Listed Plant Species List

6.7.1 Floodplains and Floodways

Floodplain and floodway extents within the study area were determined via a desktop GIS analysis using the FEMA Flood Hazard data from September 2021. **Table 6.7.1** summarizes the floodplain types, descriptions, and acreage of each floodplain type within the study area. **Tables 6.7.2** through **6.7.13** include floodplain types and descriptions per section. Floodplains and floodways for each of the sections within the study area are depicted in **Exhibits 6.7.1** through **6.7.12**.

The flood zone types found within the study area are as follows:

Zone A: Areas subject to a 1% annual chance flood event (100-year floodplain), where no base flood elevations (BFEs) are provided.
Zone AE: Areas subject to a 1% annual chance flood event (100-year floodplain), with detailed BFEs established.
Zone X:

- **500-Year Floodplain:** Areas within the 0.2% annual chance floodplain (500-year floodplain).
- **Outside Floodplain:** Areas beyond FEMA-designated flood hazard zones.

Approximately 60% of the entire study area is outside of a floodplain (**Table 6.7.1**). Nearly one-third of the study area is within floodplain type AE. Types A and X 500-Year Floodplain make up the remaining floodplain area.

Table 6.7.1 - Floodplains and Floodways in Study Area			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	5,348.73	5.81%
AE	100-Year Floodplain	29,969.95	32.57%
X	500-Year Floodplain	834.81	0.91%
	Outside of Floodplain	55,875.09	60.71%
Total for Study Area		92,028.58	100.00%

Table 6.7.2 depicts that Section 1 is completely within Lake Apopka, so it is 100% FEMA floodplain Type AE.

Table 6.7.2 - Floodplains and Floodways in Section 1			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	0.00	0.00%
AE	100-Year Floodplain	8,580.69	100.00%
X	500-Year Floodplain	0.00	0.00%
	Outside of Floodplain	0.00	0.00%
Total for Section 1		8,580.69	100.00%

Just over 80% of Section 2 is within a floodplain Type AE composing the largest portion (**Table 6.7.3**). Just like Section 1, Lake Apopka covers a large portion of this section. Type A makes up less than 1% of the remaining floodplain area.

Table 6.7.3 - Floodplains and Floodways in Section 2			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	34.27	0.42%
AE	100-Year Floodplain	6,590.83	80.89%
X	500-Year Floodplain	0.00	0.00%
	Outside of Floodplain	1,522.43	18.69%
Total for Section 2		8,147.53	100.00%

Almost 90% of Section 3 is outside of a floodplain area (**Table 6.7.4**). Of the floodplain area within Section 3, Type AE makes the largest portion, followed by Type A, and then Type X 500-Year floodplain.

Table 6.7.4 - Floodplains and Floodways in Section 3			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	134.18	1.83%
AE	100-Year Floodplain	742.59	10.14%
X	500-Year Floodplain	4.41	0.06%
	Outside of Floodplain	6,441.47	87.97%
Total for Section 3		7,322.65	100.00%

As shown in **Table 6.7.5**, About 85% of Section 4 is outside of the floodplain area. Floodplain Type AE makes the majority of the floodplain area, followed closely by Type A. Type X 500-Year floodplain makes up less than 1% of the floodplain area.

Table 6.7.5 - Floodplains and Floodways in Section 4			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	205.72	6.80%
AE	100-Year Floodplain	233.52	7.62%
X	500-Year Floodplain	0.95	0.03%
	Outside of Floodplain	2,584.60	85.55%
Total for Section 4		3,024.79	100.00%

Section 5 is almost 80% within a floodplain. Most of this is composed of Floodplain Type AE, followed by Type A making up less than 1% of the total floodplain area (**Table 6.7.6**).

Table 6.7.6 - Floodplains and Floodways in Section 5			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	78.14	0.87%
AE	100-Year Floodplain	6,962.87	77.97%
X	500-Year Floodplain	0.00	0.00%
	Outside of Floodplain	1,889.74	21.16%
Total for Section 5		8,930.75	100.00%

Section 6 is mostly outside of a FEMA floodplain, with only about one-third of the total area is composed of Type AE mostly, followed by Type A, and only 0.02% of Type X 500-Year floodplain (**Table 6.7.7**).

Table 6.7.7 - Floodplains and Floodways in Section 6			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	419.25	4.79%
AE	100-Year Floodplain	2,069.75	23.63%
X	500-Year Floodplain	1.70	0.02%
	Outside of Floodplain	6,267.04	71.56%
Total for Section 6		8,757.74	100.00%

As depicted in **Table 6.7.8**, Section 7 is almost 90% outside of a floodplain. Within the floodplain area, type AE covers the most area, followed by less than 1% each of type A and Type X 500-Year floodplain, respectively.

Table 6.7.8 - Floodplains and Floodways in Section 7			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	77.11	0.98%
AE	100-Year Floodplain	899.61	11.38%
X	500-Year Floodplain	12.87	0.16%
	Outside of Floodplain	6,916.31	87.48%
Total for Section 7		7,905.90	100.00%

About one-fourth of Section 8 is within the FEMA floodplain. The largest floodplain type is Type AE, followed by Type A, and then Type X 500-Year floodplain (**Table 6.7.9**).

Table 6.7.9 - Floodplains and Floodways in Section 8			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	196.24	3.21%
AE	100-Year Floodplain	1,378.53	22.55%
X	500-Year Floodplain	118.66	1.94%
	Outside of Floodplain	4,420.06	72.30%
Total for Section 8		6,113.49	100.00%

As shown in **Table 6.7.10**, Approximately 15% of Section 9 is located within a FEMA floodplain. Type AE and followed by Type A.

Table 6.7.10 - Floodplains and Floodways in Section 9			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	326.14	4.39%
AE	100-Year Floodplain	836.36	11.27%
X	500-Year Floodplain	0.00	0.00%
	Outside Floodplain	6,261.42	84.34%
Total for Section 9		7,423.92	100.00%

Less than 3% of Section 10 is within a floodplain. Of the minimal floodplain area, Type A is about two-thirds of that, followed by Type AE (**Table 6.7.11**).

Table 6.7.11 - Floodplains and Floodways in Section 10			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	154.53	1.90%
AE	100-Year Floodplain	65.22	0.80%
X	500-Year Floodplain	0.00	0.00%
	Outside Floodplain	7,923.10	97.30%
Total for Section 10		8,142.85	100.00%

As shown in **Table 6.7.12**, Approximately 25% of Section 11 is in a FEMA floodplain. Floodplain Type A, followed by Type AE, make up the remaining floodplain area in the section. The majority of the floodplains mapped for this section are associated with Wekiwa Spring State Park.

Table 6.7.12 - Floodplains and Floodways in Section 11			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	2,316.60	24.90%
AE	100-Year Floodplain	246.47	2.65%
X	500-Year Floodplain	0.00	0.00%
	Outside of Floodplain	6,741.92	72.45%
Total for Section 11		9,304.99	100.00%

As shown in **Table 6.7.13**, Section 12 is approximately 41% classified as being within a FEMA floodplain. Types A and AE are almost equally distributed, followed by Type X 500-Year floodplain. The floodplains mapped for this section are within the Wekiwa Springs State Park.

Table 6.7.13 - Floodplains and Floodways in Section 12			
FEMA Floodplain Type	**FEMA Floodplain Description**	**Acres**	**Percent**
A	100-Year Floodplain	1,406.61	16.79%
AE	100-Year Floodplain	1,363.56	16.28%
X	500-Year Floodplain	696.22	8.33%
	Outside of Floodplain	4,906.90	58.60%
Total for Section 12		8,373.29	100.00%

EXHIBIT - 6.7.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

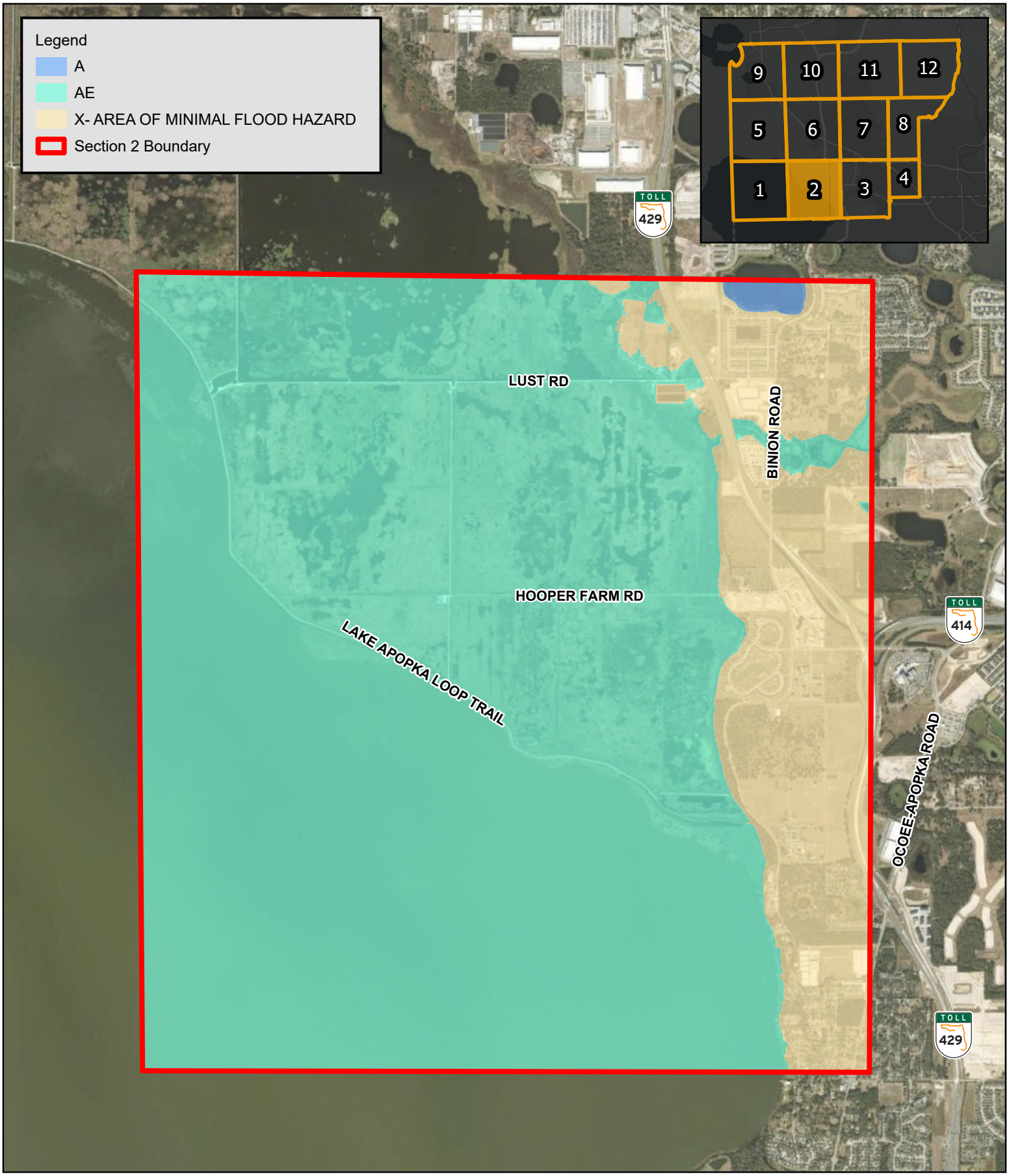


EXHIBIT - 6.7.2

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

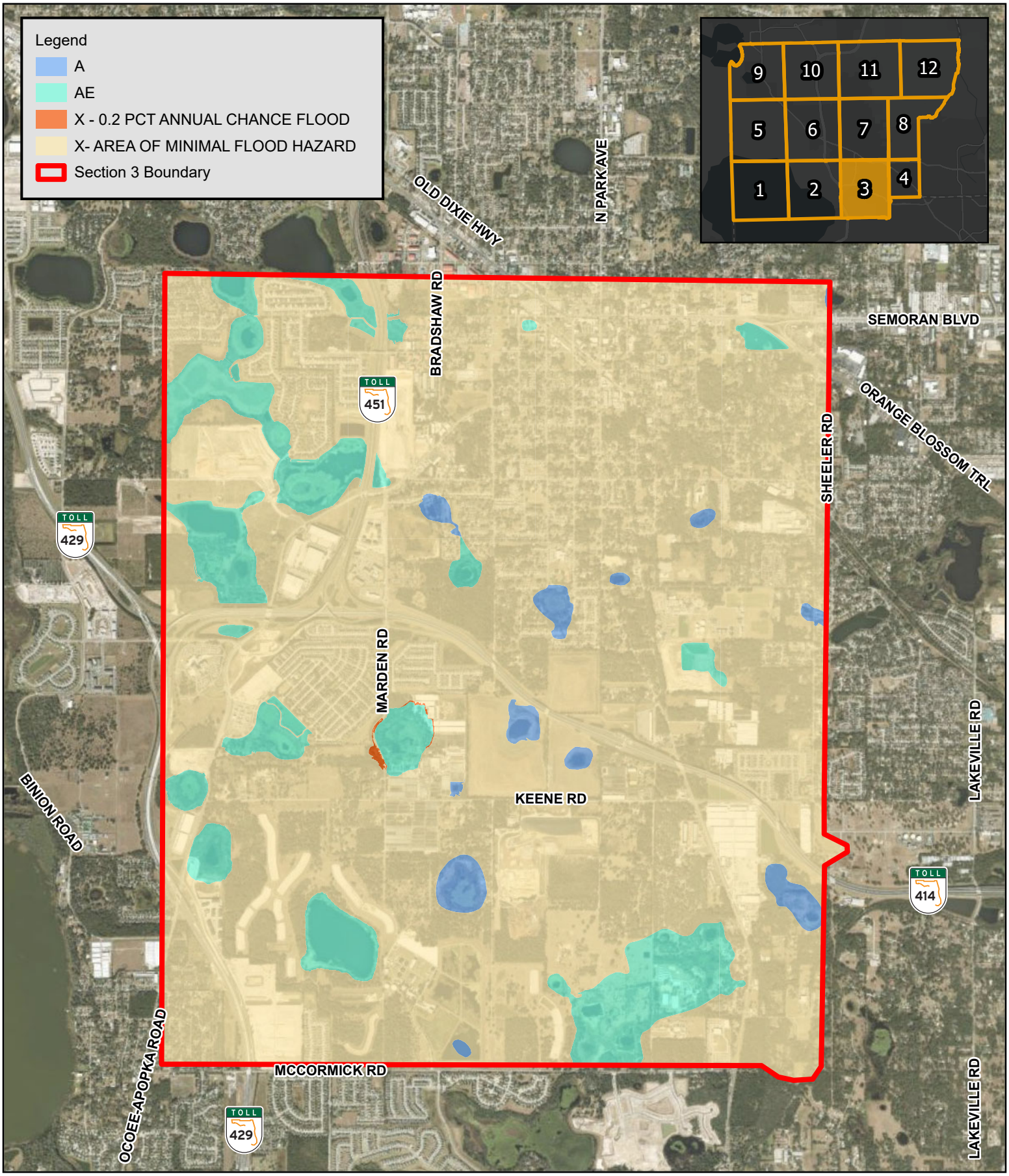


EXHIBIT - 6.7.3

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

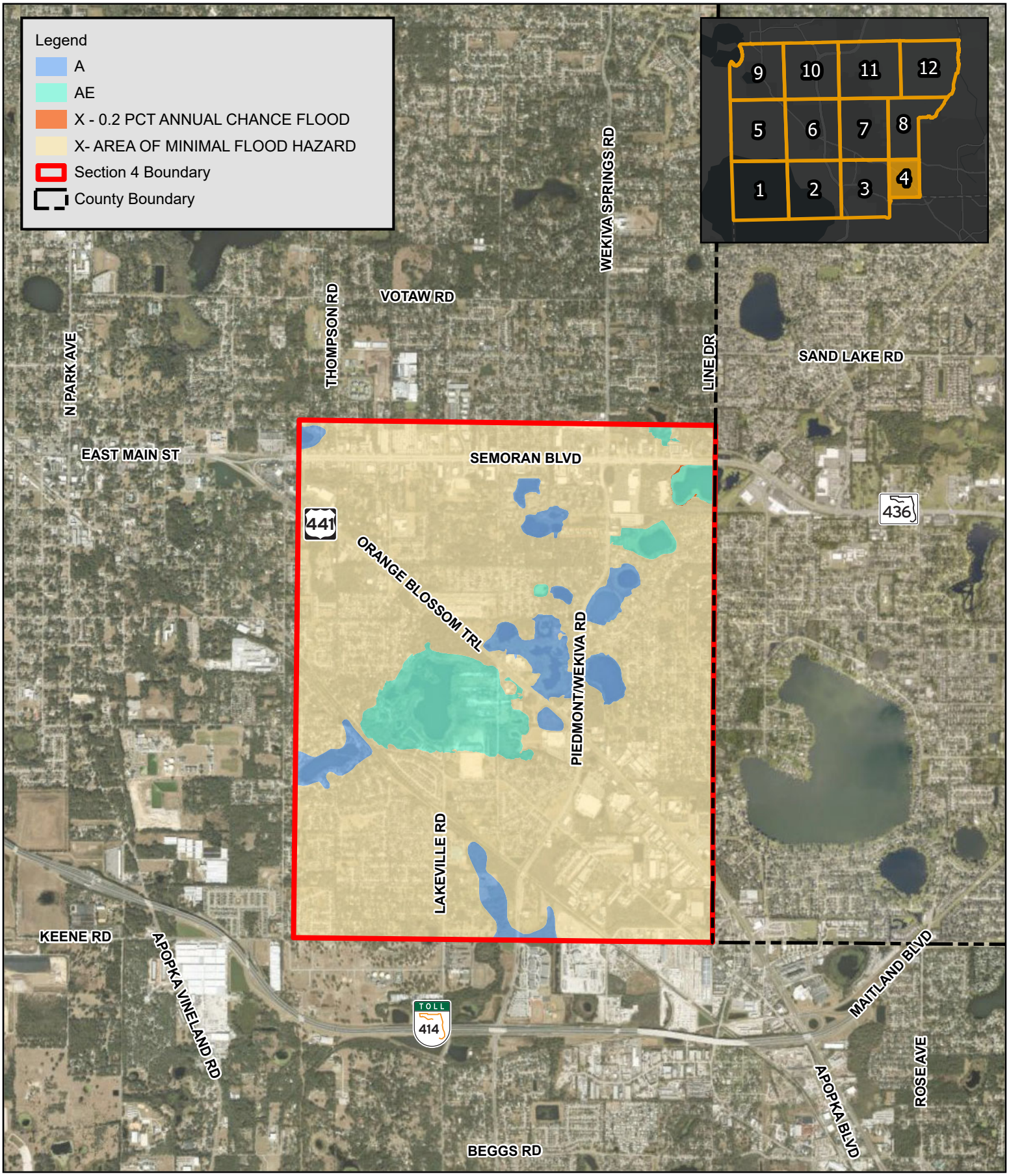


EXHIBIT - 6.7.4

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

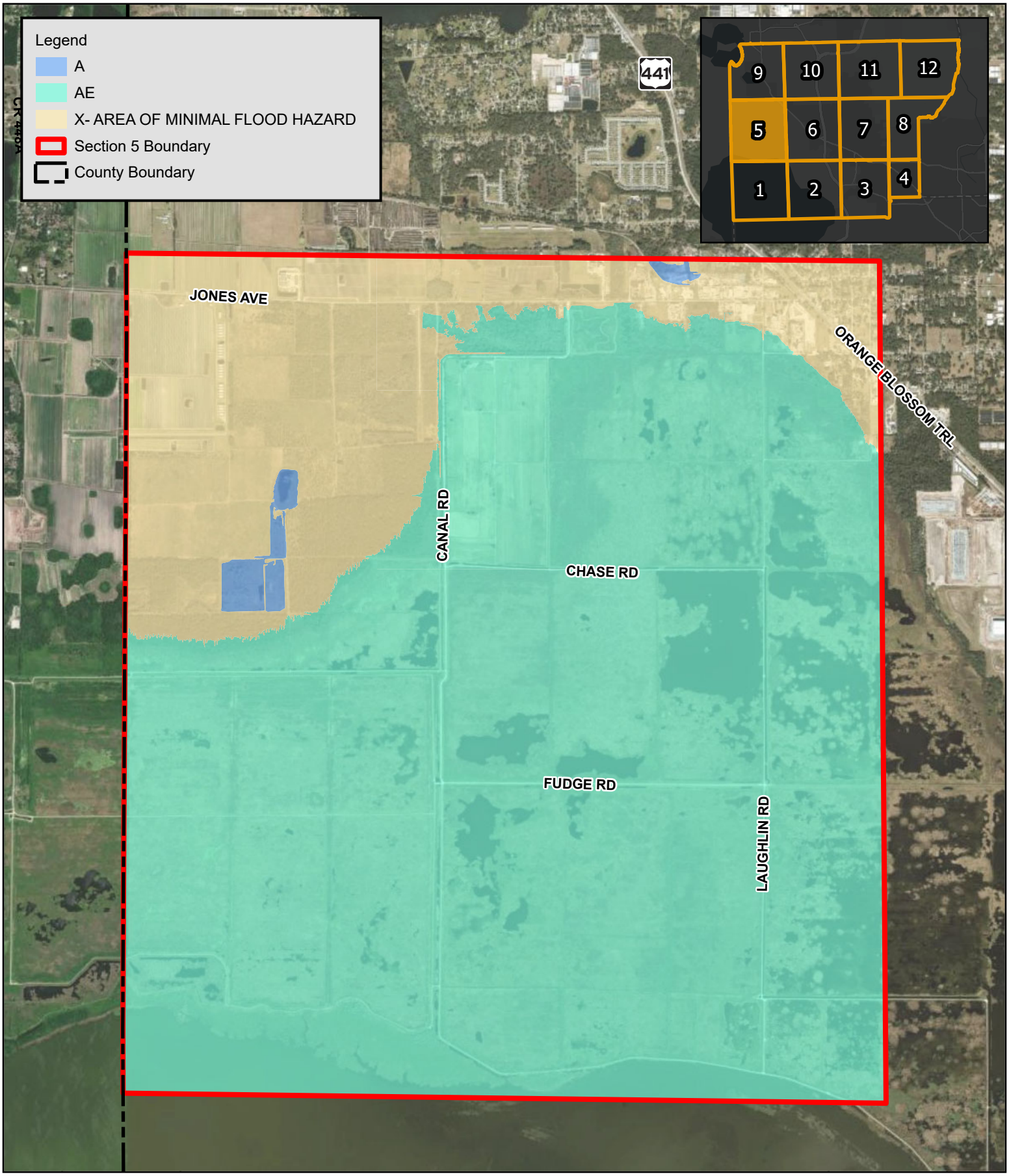


EXHIBIT - 6.7.5

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

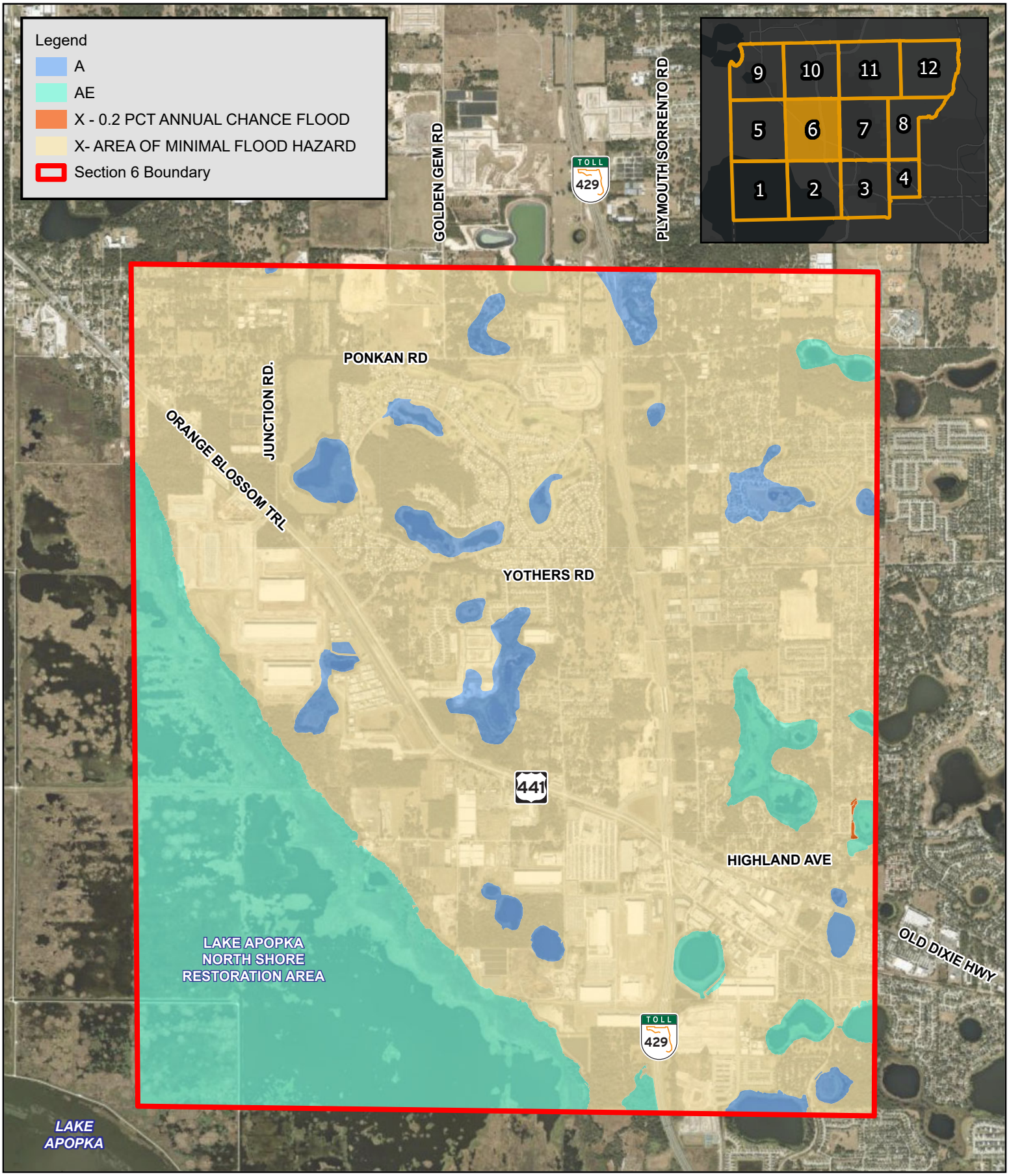


EXHIBIT - 6.7.6

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 6: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

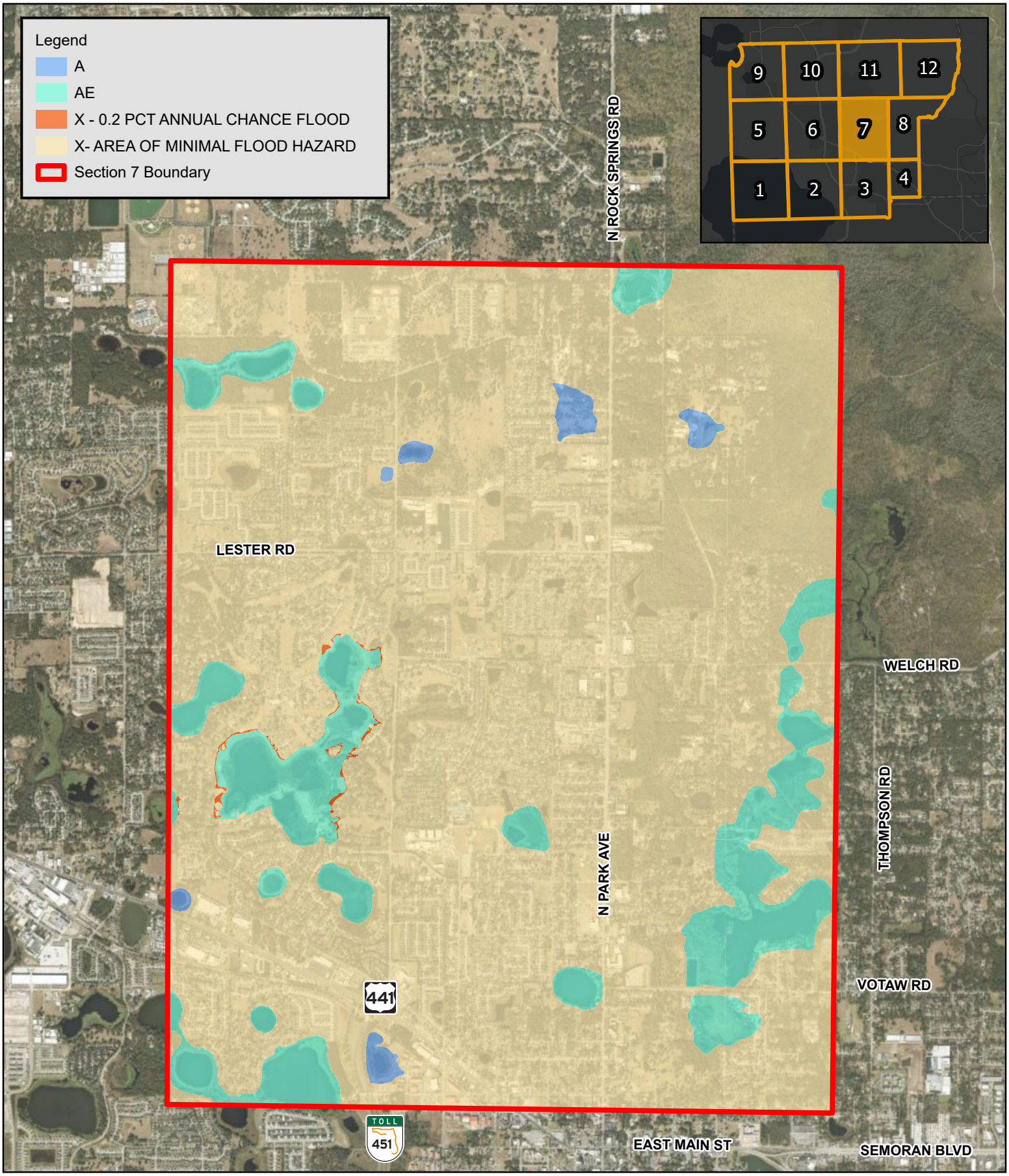


EXHIBIT - 6.7.7

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

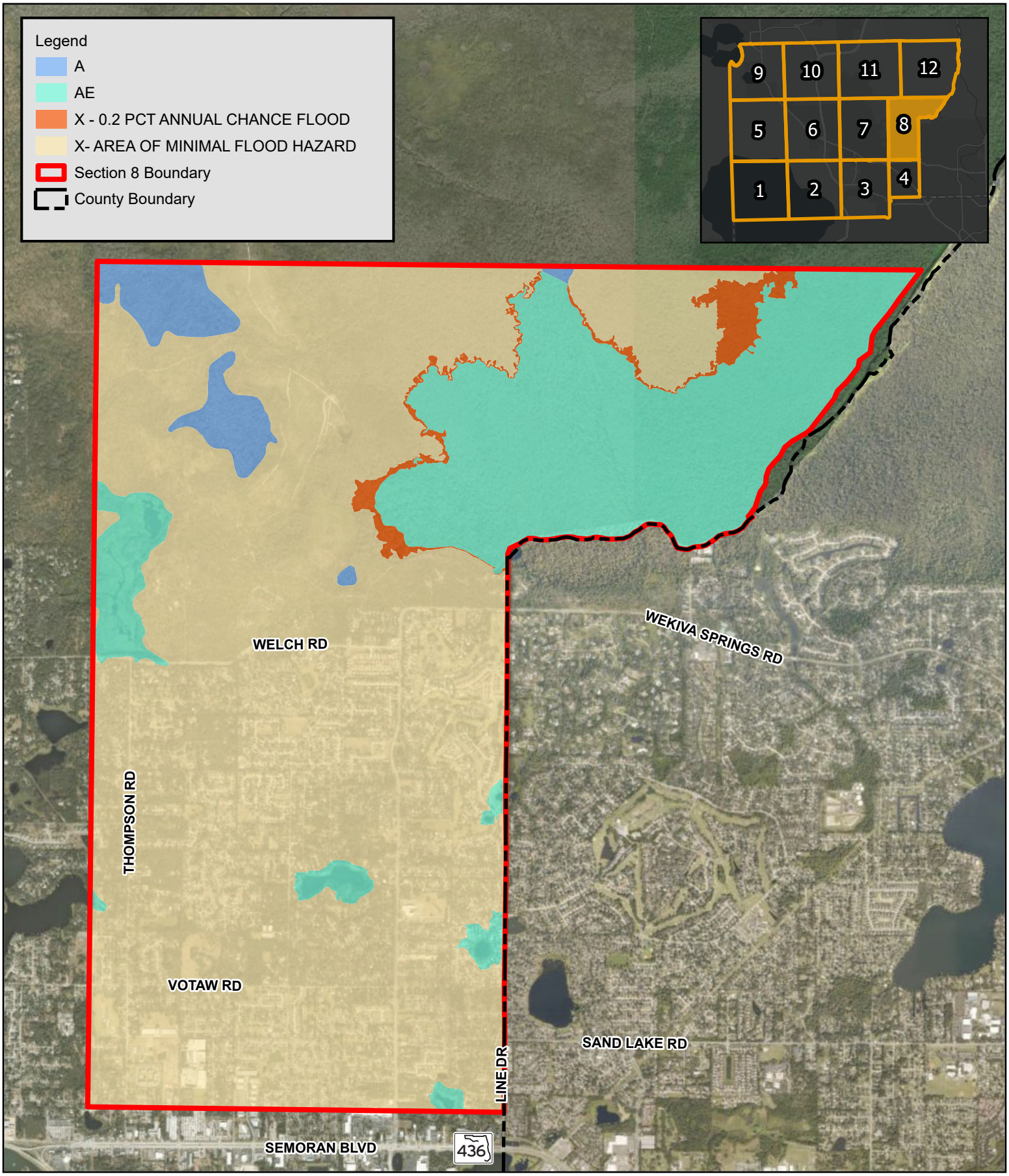


EXHIBIT - 6.7.8

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

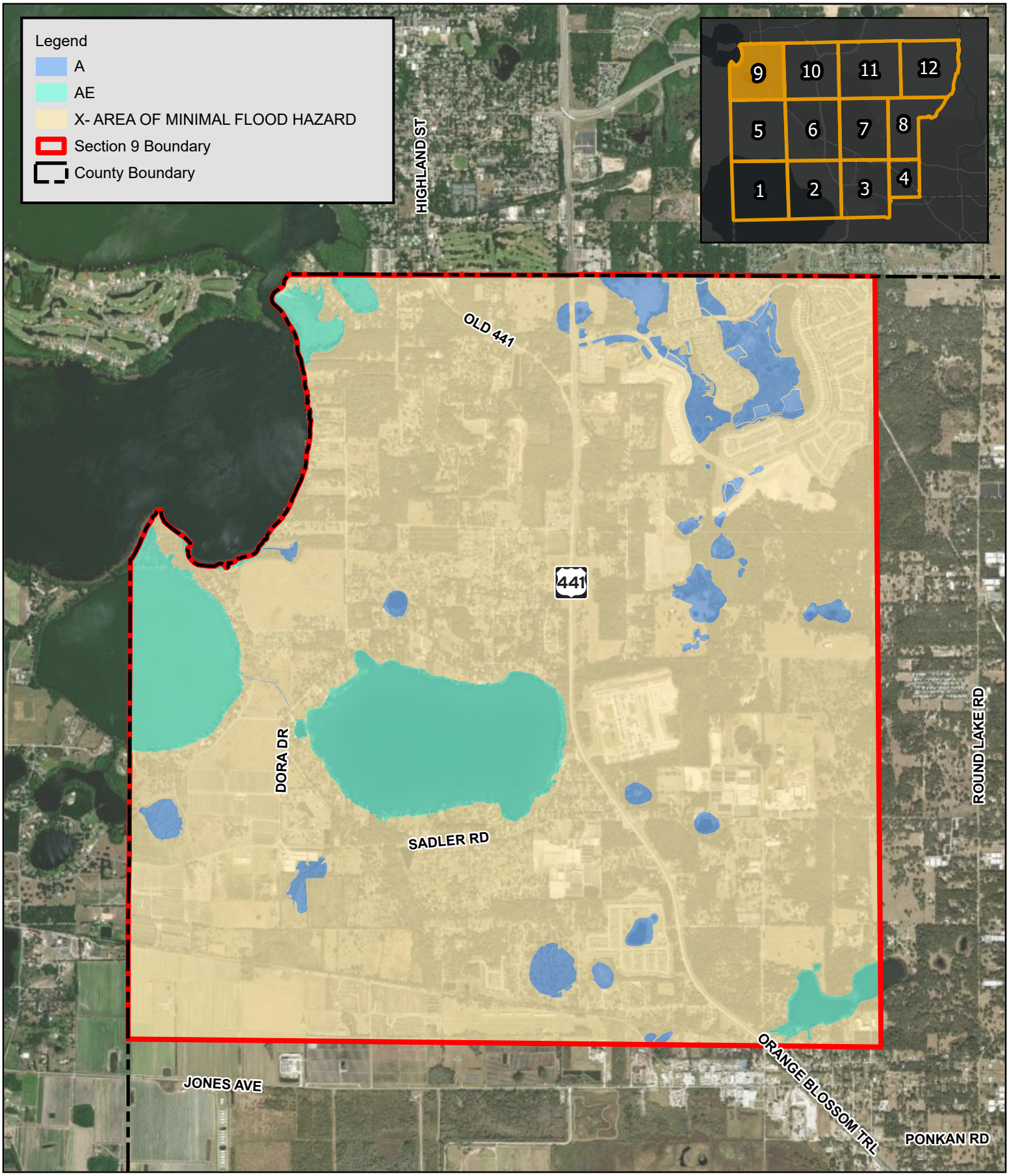


EXHIBIT - 6.7.9

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: Floodplains

Orange County Government Florida

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

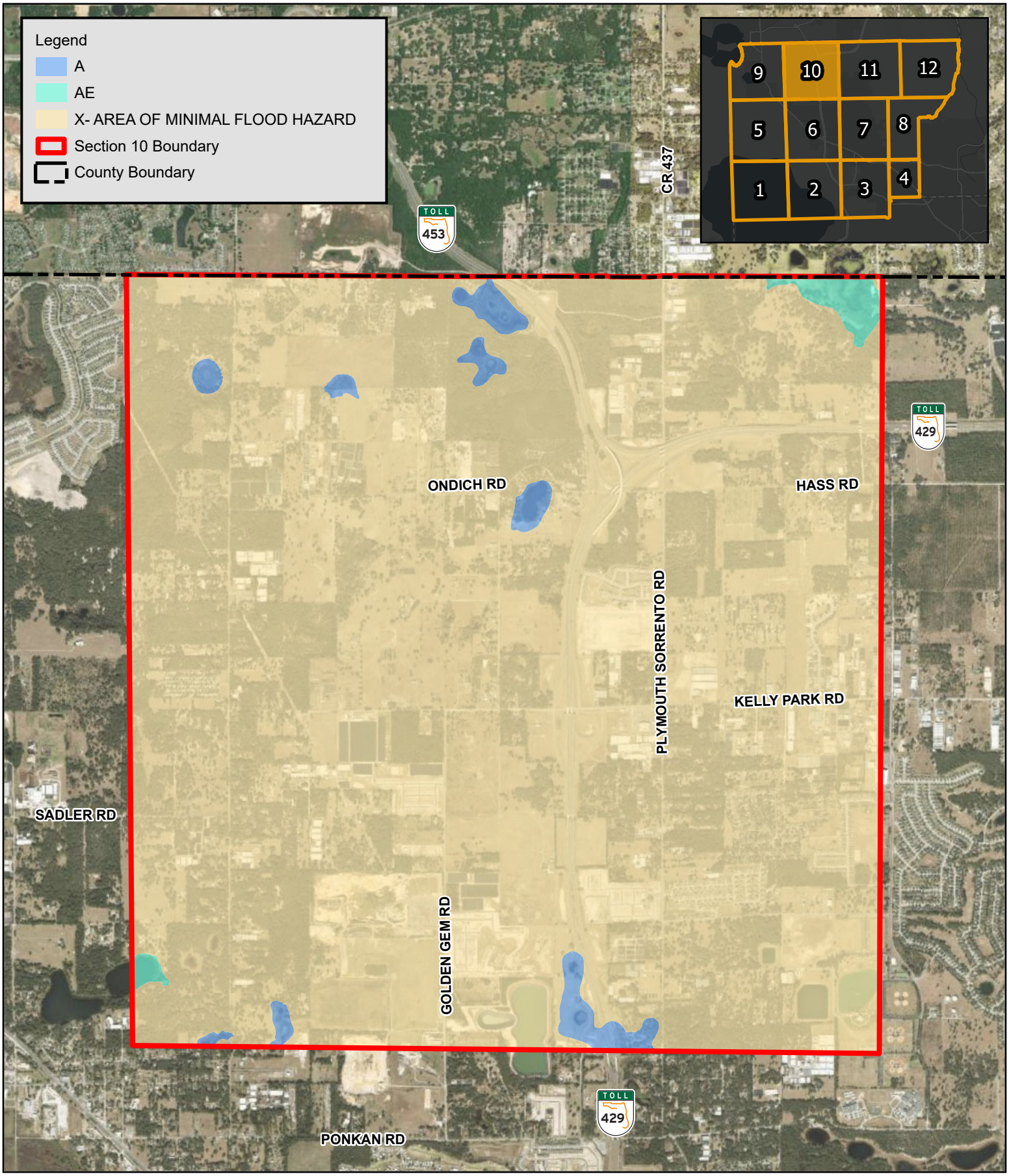


EXHIBIT - 6.7.10

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

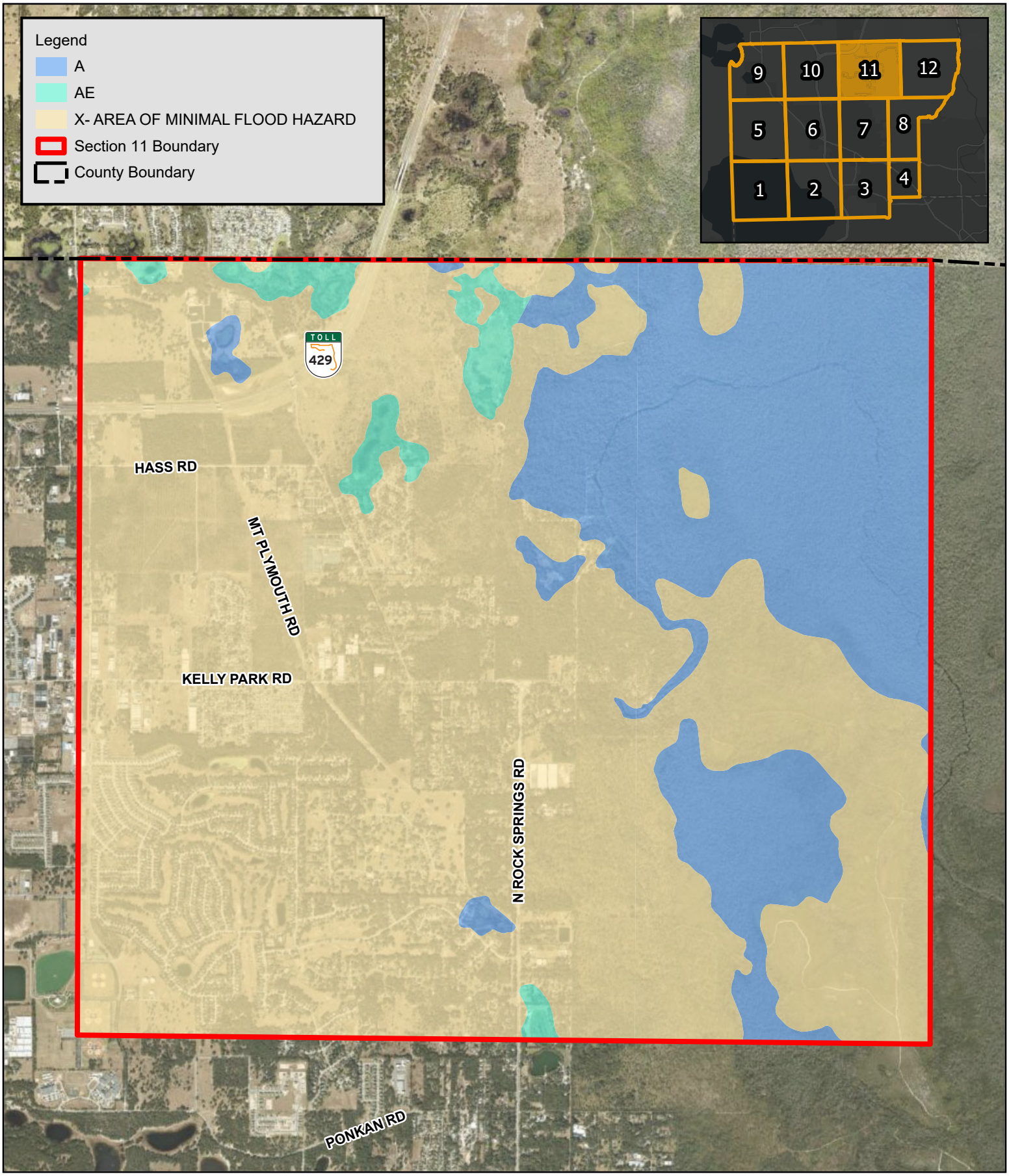


EXHIBIT - 6.7.11

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

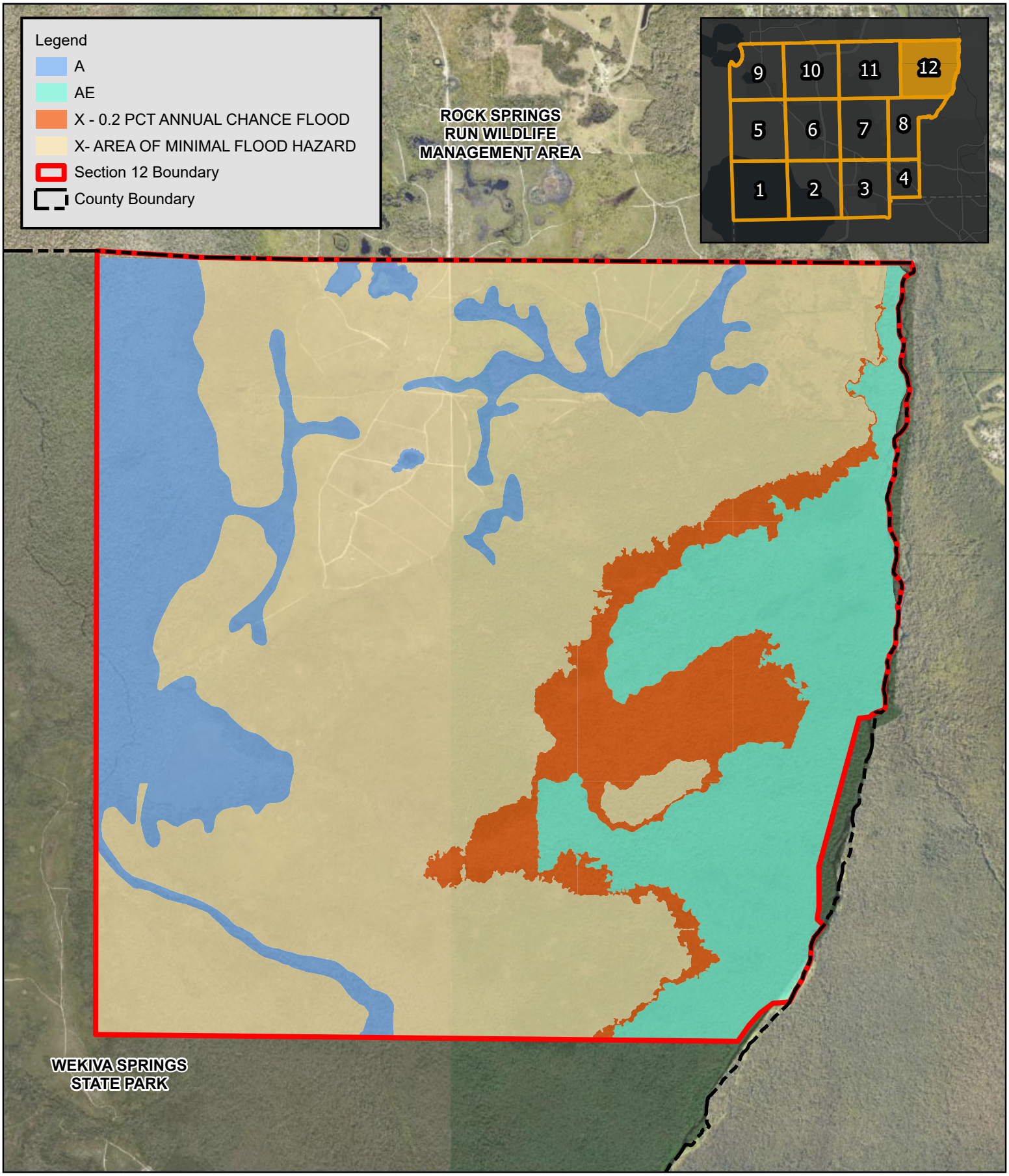


EXHIBIT - 6.7.12

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: Floodplains

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: FEMA Flood Hazard, 2025

NOWOCATS - May 2025

6.7.2 Wetlands and Surface Waters

The extent of wetlands and surface waters within the study area was determined via a desktop GIS analysis using a combination of FDEP Land Use/Land Cover data and USFWS NWI data. **Tables 6.7.14** through **6.7.26** include the wetland classifications, using both the FLUCFCS and the NWI nomenclature, and the approximate acreage of wetlands and surface waters per section within the study area. Wetlands and surface waters for the study area are depicted in **Exhibits 6.7.13** through **6.7.24**. NWI code descriptions are included in the exhibits.

Wetlands and surface waters in the study area include water and both forested and non-forested wetlands (**Table 6.7.14**). Water features include streams and waterways, lakes, open water, reservoirs, and springs. The predominant wetland type in the study area is Non-Forested Wetlands, followed by Hardwood Forested, Mixed Forested Wetlands, and Coniferous Forested Wetlands.

Table 6.7.14 - Wetlands and Surface Waters in Study Area

FLUCFCS Code	FLUCFCS Description	NWI Code	Acres
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	14,313.48
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	7,227.76
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	857.58
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	2,217.77
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	13,171.16
Total for Study Area			**37,787.75**

Section 1 is almost entirely made up of a single lake, Lake Apopka (**Table 6.7.15**). The remaining acreage in this section is singularly Non-Forested Wetland type associated with SJRWMD Lake Apopka North Shore Restoration Area.

Table 6.7.15 - Wetlands and Surface Waters in Section 1			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	8,567.83
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	12.44
Total for Section 1			**8,580.27**

As shown in **Table 6.7.16**, Section 2 contains water and both forested and non-forested wetlands. Water features include lakes (one of which is a portion of Lake Apopka), streams/waterways, and reservoirs. Wetland types within the section include mostly Non-Forested Wetland, followed by Mixed Forested Wetland, then Hardwood Forested Wetland, and finally Coniferous Forested Wetland.

Table 6.7.16 - Wetlands and Surface Waters in Section 2			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	3,586.10
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	22.61
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	20.62
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	53.73
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	2,900.31
Total for Section 2			**6,583.37**

Section 3 contains water and both forested and non-forested wetlands. The wetland coverage is mostly comprised of Non-Forested Wetland, followed by Mixed Forested Wetland, then Hardwood Forested Wetland (**Table 6.7.17**). There is no Coniferous Forested Wetland in this section. Water features found in this section are lakes and reservoirs.

Table 6.7.17 - Wetlands and Surface Waters in Section 3			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	193.49
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	0.96
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	14.51
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	551.56
Total for Section 3			**760.52**

As shown in **Table 6.7.18**, Section 4 contains water features and both forested and non-forested wetlands. Water features are lakes and reservoirs. The dominant wetland type is Non-Forested Wetland. The second-most prevalent type is Mixed Forested Wetland, followed by Hardwood Forested Wetland. There is no Coniferous Forested Wetland in this section.

Table 6.7.18 - Wetlands and Surface Waters in Section 4			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	143.62
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	7.66
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	60.30
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	199.61
Total for Section 4			**411.19**

Wetlands and surface waters in Section 5 include water and forested and non-forested wetlands (**Table 6.7.19**). Water areas are made up of a Lake Apopka, reservoirs, and streams/waterways. Non-Forested Wetland is the largest wetland type in this section, which is associated with Lake

Apopka North Shore Restoration Area. With considerably less coverage, the second-most wetland type is Mixed Forested Wetland, then Hardwood Forested Wetland, and finally Coniferous Forested Wetland.

Table 6.7.19 - Wetlands and Surface Waters in Section 5			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	440.56
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	28.80
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	26.32
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	33.41
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	6,154.47
Total for Section 5			**6,683.56**

As shown in **Table 6.7.20**, Section 6 contains both wetlands and surface waters. Surface water types in this section are lakes, reservoirs, and streams/waterways. Wetland areas are made up mostly of Non-Forested Wetland, followed by Mixed Forested Wetland, then Hardwood Forested Wetland, and finally Coniferous Forested Wetland.

Table 6.7.20 - Wetlands and Surface Waters in Section 6			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	209.01
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	50.31
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	14.12
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	60.65
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx,	1,994.93
Total for Section 6			**2,329.02**

Wetland and surface waters in Section 7 include water and both forested and non-forested wetlands (**Table 6.7.21**). Water features found in this section are lakes and reservoirs. Wetland types within the section include mostly Non-Forested Wetland, followed by Mixed Forested Wetland, and then Hardwood Forested Wetland. There are no Coniferous Forested Wetland types in this section.

Table 6.7.21 - Wetlands and Surface Waters in Section 7			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	334.37
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	28.06
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	180.24
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	355.20
Total for Section 7			**897.87**

Wetlands and surface waters in Section 8 include water and both forested and non-forested wetlands (**Table 6.7.22**). Surface waters in this section include lakes, reservoirs, and streams/waterways (Rock Springs Run and Wekiva River). The wetland type with the most coverage is Hardwood Forested Wetland. Following that is Mixed Forested Wetland, then Non-Forested Wetland. Coniferous Forested Wetland has the least coverage with less than an acre in total.

Table 6.7.22 - Wetlands and Surface Waters in Section 8

FLUCFCS Code	FLUCFCS Description	NWI Code	Acres
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	31.62
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	1,803.32
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	0.26
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	431.64
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	161.18
Total for Section 8			**2,428.02**

Wetlands and surface waters in Section 9 include water and both forested and non-forested wetlands (**Table 6.7.23**). Water areas within the section consist of large lakes with some reservoirs. The surface waters make up almost double the acreage of the wetlands in this section. Wetland areas within the section include mostly Non-Forested Wetlands, followed by Mixed Forested Wetlands, then Coniferous Forested Wetlands and Hardwood Forested Wetlands.

Table 6.7.23 - Wetlands and Surface Waters in Section 9			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	711.37
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	16.52
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	29.05
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	119.20
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx,	240.87
Total for Section 9			**1,117.01**

As shown in **Table 6.7.24**, Section 10 has the least surface area of wetlands and surface waters of all the sections. These include water and both forested and non-forested wetlands. Water features include both smaller lakes and reservoirs. Non-Forested Wetland makes up the most wetland coverage, followed by Mixed Forested Wetland, then Coniferous Forested Wetland, and finally Hardwood Forested Wetland, totaling less than 1 acre.

Table 6.7.24 - Wetlands and Surface Waters in Section 10			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	46.25
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	0.71
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	9.47
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	18.82
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	87.14
Total for Section 10			**162.39**

As shown in **Table 6.7.25**, Section 11 contains both wetlands and surface waters. This section contains lakes, reservoirs, a waterway (Rock Springs Run), and a spring (Rock Springs). The wetland type with the most acreage is Hardwood Forested Wetland, followed by Non-Forested Wetland, then Mixed Forested Wetland, and finally Coniferous Forested Wetland.

Table 6.7.25 - Wetlands and Surface Waters in Section 11			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	30.31
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	2,114.32
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	57.12
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C, PSS3/FO3B, PSS3/FO3Bd	240.80
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	289.03
Total for Section 11			**2,731.58**

As shown in **Table 6.7.26**, Section 12's wetland and surface water coverage is mostly comprised of Hardwood Forested Wetland. Mixed Forested Wetland creates the second-most area, followed by Coniferous Forested Wetland, and Non-Forested Wetland. The least amount of coverage is provided by the surface waters, which consist of two streams/waterways (Wekiva River and Rock Springs Run).

Table 6.7.26 - Wetlands and Surface Waters in Section 12			
FLUCFCS Code	**FLUCFCS Description**	**NWI Code**	**Acres**
5000-5999	Water	L1UBH, L2AB4H, L2USCx, L1UBKx, L2AB4Kx, R2AB4Hx, R2UBH, R2uBHx, R4SBC, R5UBFx, R5UBH	18.95
6000-6199	Hardwood Forested Wetland	PSSF, PSS1F, PSS1Fd, PSS1Cd, PSS1C. PFO4C, PFO4A, PFO2F, PFO2C, PFO1Fd, PFO1F, PFO1Cd, PFO1C, PFO1Bd, PFO1Ad, PFO6F, PSS1A, PSS1Ad	3,154.48
6200-6299	Coniferous Forested Wetland	PFO4Ad, PFO4Cd, PSS3C, PSSF	700.61
6300-6399	Mixed Forested Wetland	PFO1/3A, PFO1/3Bd, PFO1/3C, PFO1/3Cd, PSS1/3C,PSS3/FO3B, PSS3/FO3Bd	1,004.48
6400-6499	Non-Forested Wetland	PEM1/SS1F, PEM1A, PEM1Ad, PEM1Bd, PEM1C, PEM1Cd, PEM1Cx, PEM1F, PEM1Fd, PEM1Fh, PEM1Fx, PAB4F, PAB4Fd, PAB4Fx, PAB4H, PAB4Hx, PUBH, PUBHh, PUBH, PUBHh, PUBHx, PUSC, PUSCx	224.41
Total for Section 12			**5,102.93**

The study area includes lands within or near the Wekiva River Protection Area, which imposes specific development constraints and environmental protections under Orange County Code Chapter 15, Article XIII, and regulations from the SJRWMD. Per F.A.C. 17-4.022 and County ordinance, the following development limitations apply within the Wekiva River Protection Area:

- Buffer zone - 550 feet from the landward limit of Waters of the State or edge of the Wekiva River, or from the landward edge of the wetlands associated with the Wekiva River.
- The density and intensity of development permitted within the protection area are encouraged to cluster or concentrate on those portions of the parcel or parcels which are furthest from the surface waters or wetlands of the Wekiva River system.

The SJRWMD has established special permitting criteria for projects within the Wekiva Recharge Protection Basin, Wekiva River Hydrologic Basin, and the Lake Apopka Hydrologic Basin in their Permit Information Manual (PIM).

Wekiva Recharge Protection Basin

Recharge Standard (PIM sec. 13.3.1; summarized):

- System must provide for retention storage of three inches of runoff from all impervious areas proposed to be constructed on soils defined as Type "A" Soils as defined by the NRCS
- The system shall be capable of infiltrating this storage volume through natural percolation within 72 hours (this requirement may be satisfied with offsite areas) OR it can be demonstrated that post-development recharge capacity is equal to or greater than pre-development

Wekiva River Hydrologic Basin:

SJRWMD has established specific stormwater management criteria regarding storage, erosion and sediment control, water quality, and limiting drawdown (PIM sec. 13.3.2 – 13.3.4). Additionally, the SJRWMD has established additional permitting criteria specific to the Wekiva Riparian Habitat Protection Zone.

Standard for Riparian Wildlife Habitat (PIM sec. 13.3.5; summarized)

- The standard includes wetlands contiguous with the Wekiva River, Little Wekiva River downstream of Maitland Boulevard, Rock Springs Run, Black Water Creek, Sulphur Run, and Seminole Creek.
- Uplands within 50 feet of the landward extent of wetlands listed above
- Uplands within 550 feet landward of the stream's edge as defined as the waterward extent of the forested wetlands abutting Wekiva River, Little Wekiva River downstream of the northernmost crossing of the Little Wekiva River with S.R. 434, and the other above-named tributaries. In absence of forested wetlands abutting these streams, the stream's edge shall be defined as the mean annual surface water elevation of the stream; however, if hydrologic records are unavailable, the landward extent of the herbaceous emergent wetland vegetation growing in these streams shall be considered to be the stream's edge.
- Development and/or construction activities are considered to adversely affect the Riparian Habitat Protection Zone with the exception of any activity which promotes a more endemic state such as construction undertaken to return lands managed for agriculture or silviculture to a vegetative community that is more compatible with the endemic land cover.

Lake Apopka Hydrologic Basin (PIM sec. 13.7; summarized)

Pursuant to section 373.461(3)(a), F.S., the total phosphorus criterion for Lake Apopka is 55 parts per billion. To meet this total phosphorus criterion, the applicant must provide reasonable assurance of compliance with the following total phosphorus discharge limitations and comply with the relevant monitoring requirements in section 13.7(b) and relevant inspection requirements of section 13.7(c):

- Sites Within Lake Apopka Hydrologic Basin: Applicants looking to obtain permits pursuant to chapters 62-330 or 40C-44, F.A.C., for a surface water management system within the Lake Apopka Hydrologic Basin shall demonstrate that
    - the system provides equivalent or greater stormwater treatment for the removal of total phosphorus
    - the post-development total phosphorus load discharged from the project area is less than or equal to pre-development discharge loads
    - under the system will not discharge water to Lake Apopka or its tributaries for the 100-year 24-hour storm event

- Interbasin Diversion of Water to Lake Apopka Hydrologic Basin: Applicants needing a permit under chapters 62-330 or 40C-44, F.A.C., for a surface water management system that imports water into the Lake Apopka Hydrologic Basin must not discharge phosphorus to Lake Apopka or its tributaries unless they reduce an equivalent or greater amount of phosphorus from another existing source. Only stormwater runoff may be imported, and it cannot be discharged when Lake Apopka's water level is in Zone A. All phosphorus reduction measures must be fully constructed, operational, and permitted before importing water, and may not include actions taken on District-owned land.

6.7.3 Wetlands and Surface Waters Qualitative Assessment

Wetlands and surface waters within the overall study area range in size from 0.006 acres to 12,434.16 acres and include a mixture of urban systems with little to no connectivity, intact natural systems, and large, regionally significant systems such as Lake Apopka and its associated wetlands and Wekiva River and its associated wetlands. For development and restoration projects in Florida, the methodology generally used to determine the quality of wetlands and surface waters is the Uniform Mitigation Assessment Methodology (UMAM), which is described in detail in Chapter 62-345 of the Florida Administrative Code (FAC).

UMAM includes two parts: a qualitative description (Part I) and a quantification (Part II) for each assessment area. Part I provides a description of the native community type and current condition of the assessment area, including details such as anticipated wildlife usage; potential listed species usage; significant nearby features; uniqueness or rarity of the habitat; and geographic relationship and hydrologic connection with wetlands, other surface waters, and uplands. Part II provides quantification of the current (or without mitigation) and anticipated condition (after project) using numerical scoring of the location and landscape support, water environment, and community structure. Scoring ranges from 0 to 10 per category, where each point represents a 10% change in perceived function of the assessment area compared to the optimal reference habitat. The scores are then applied to the Assessment Area (AA). The AA is the area that is affected by the action and included in the UMAM assessment.

When conducting a qualitative assessment of wetlands and surface waters within the study area, a full UMAM assessment, without a specific development or restoration project, is premature. However, the identification of regionally significant wetland and surface water features within the

study area is critical to understanding the local ecology as well as potential regulatory requirements that would likely be associated with development in and around these systems. **Tables 6.7.27** through **6.7.38** identify regionally and ecologically significant wetland and surface water features within each section, respectively for Sections 1 through 12.

All features marked with an asterisk are found within 2 or more sections.

Section 1 is almost entirely made of Lake Apopka. Its northeast corner covers a small portion of the Lake Apopka North Shore Restoration Area, which is managed by SJRWMD (**Exhibit 6.7.13**).

Table 6.7.27 - Significant Wetland and Surface Water Features in Section 1	
Feature	**Comment**
Lake Apopka and North Shore*	Lake and associated wetlands within Lake Apopka North Shore Restoration Area

More than half of Section 2 is made up of Lake Apopka and the Nore Shore wetland area, which is managed by SJRWMD (**Exhibit 6.7.14**).

Table 6.7.28 - Significant Wetland and Surface Water Features in Section 2	
Feature	**Comment**
Lake Apopka and North Shore*	Lake and associated wetlands within Lake Apopka North Shore Restoration Area

Section 3 has one (1) significant water feature: the chain of lakes including Upper Lake Doe, Lower Lake Doe, as well as the connecting Marshall Lake and Lake Witherington. These are managed privately and are within the Lake Apopka watershed (**Exhibit 6.7.15**).

Table 6.7.29 - Significant Wetland and Surface Water Features in Section 3	
Feature	**Comment**
Upper and Lower Lakes Doe *	~130-acre chain of lakes with connectivity to wetland and other water bodies

Section 4 has two (2) significant water bodies. These are private lakes within the Wekiva River watershed (**Exhibit 6.7.16**).

Table 6.7.30 - Significant Wetland and Surface Water Features in Section 4	
Feature	**Comment**
Lake Pleasant	~47-acre lake and associated wetlands just north of Apopka Blvd
Page Lake	~48-acre lake and associated wetlands adjacent to Piedmont Wekiva Rd

Section 5 is mostly comprised of Lake Apopka North Shore Restoration Area and has some acreage within the lake itself. The Lake Apopka North Shore Restoration Area is managed by SJRWMD. This lake and its wetlands are also found within Sections 1, 2, and 6 (**Exhibit 6.7.17**).

Table 6.7.31 - Significant Wetland and Surface Water Features in Section 5	
Feature	**Comment**
Lake Apopka and North Shore*	Lake and associated wetlands within Lake Apopka North Shore Restoration Area

Section 6 has four (4) significant water features. The largest feature is the portion of Lake Apopka North Shore that is on the west side of Section 6. Upper Lake Doe, Lower Lake Doe, and their connecting lakes are the next largest feature in this section. Following that is Lake Standish and then Lake Grassmere. Apart from Lake Apopka itself, the remaining are all private access lakes. They are within the Lake Apopka Watershed (**Exhibit 6.7.18**).

Table 6.7.32 - Significant Wetland and Surface Water Features in Section 6	
Feature	**Comment**
Lake Apopka North Shore*	Lake and associated wetlands within Lake Apopka North Shore Restoration Area
Lake Grassmere	~22-acre lake and associated wetlands adjacent to Junction Rd near US 441
Lake Standish	~70-acre lake and its associated wetlands near SR 429 and US 441
Upper Lake Doe and Lower Lake Doe *	~130-acre chain of lakes with connectivity to wetland and other water bodies

Section 7 has three (3) significant wetland and surface water features. Lake McCoy is a private access lake within the Wekiva River Watershed. Upper Lake Doe and Lower Lake Doe and their connecting lakes are the next largest feature in this section and all completely private access. Lake Prevatt is located within Wekiva Springs State Park and managed by the FDEP Division of Recreation and Parks. Lake Alden is a private lake within the Lake Apopka Watershed (**Exhibit 6.7.19**).

Table 6.7.33 - Significant Wetland and Surface Water Features in Section 7	
Feature	**Comment**
Lake McCoy	~86 acres, north of Votaw Rd and associated wetlands,
Lake Prevatt*	~100-acre lake in Wekiva Springs State Park; North of E Welch Rd
Lake Alden	~59-acre lake with connectivity to other nearby lakes and ponds
Upper Lake Doe and Lower Lake Doe *	~130-acre chain of lakes with connectivity to wetland and other water bodies

Section 8 has three (3) significant wetland and surface water features. Wekiva River, Rock Springs Run, and their associated wetlands and tributaries make up most of that acreage. These are managed by FDEP, with the exception of the portion of Rock Springs Run within Kelly Park, which

is managed by Orange County. Lake Prevatt is located within Wekiva Springs State Park and managed by the FDEP Division of Recreation and Parks (**Exhibit 6.7.20**).

Table 6.7.34 - Significant Wetland and Surface Water Features in Section 8	
Feature	**Comment**
Rock Springs Run*	Linear system with associated springs/wetlands/floodplain connecting wetlands and habitats within Rock Springs Run State Preserve and Wekiva Springs State Park
Lake Prevatt*	~100-acre lake in Wekiva Springs State Park; North of E Welch Rd
Wekiva River*	Linear feature with associated tributaries/wetlands/floodplain within Rock Springs Run State Preserve; it is more-or-less coincident with boundary line for Section 8

Section 9 has two (2) significant wetland and surface water features. Lake Ola and Lake Carlton are both within unincorporated Orange County and are part of the Lake Apopka Watershed (**Exhibit 6.7.21**).

Table 6.7.35 - Significant Wetland and Surface Water Features in Section 9	
Feature	**Comment**
Lake Ola	~420-acre lake near US 441 (Orange Blossom Trail) and Seaboard Coast Line (SCL) Railroad
Lake Carlton	~320-acre lake connected to a larger lake system that spills into Lake County; North of SCL Railroad

Section 10 has two (2) significant wetland and surface water features. Both are managed by Orange County Environmental Protection Division. Lake Lucie is within the Wekiva River Watershed (**Exhibit 6.7.22**).

Table 6.7.36 - Significant Wetland and Surface Water Features in Section 10	
Feature	**Comment**
Unnamed wetland in Lewis-Gress Property	~22-acre hydric pine flatwoods and wetland marsh partially within Lewis-Gress conservation easement; adjacent to SR 453
Lake Lucie	~15-acre lake with high recharge value for the Floridian Aquifer within Lake Lucie conservation area

Section 11 has four (4) significant wetland and surface water features which are all publicly managed within Wekiva Springs State Park or Rock Springs Run State Reserve. These are all within the Wekiva River Watershed (**Exhibit 6.7.23**).

Table 6.7.37 - Significant Wetland and Surface Water Features in Section 11	
Feature	**Comment**
Lake Lerla	~30-acres lake and associated wetlands within Wekiva Springs State Park and adjacent to Rock Springs Run State Reserve
Lake Bartho	~45-acre lake and associated wetlands within Rock Springs Run State Reserve
Rock Springs Run*	Linear system with associated springs/wetlands/floodplain connecting wetlands and habitats within Rock Springs Run State Preserve and Wekiva Springs State Park
Neighborhood Lakes	~40-acre collection of lakes with high recharge value to the Floridian Aquifer within Wekiva Springs State Park and adjacent to Rock Springs Run State Reserve; adjacent to county boundary

Section 12 is completely contained within Rock Springs Run State Preserve or Wekiva Springs State Park. The Wekiva River, Rock Springs Run, and all associated wetland area are managed by FDEP (**Exhibit 6.7.24**).

Table 6.7.38 - Significant Wetland and Surface Water Features in Section 12	
Feature	**Comment**
Wekiva River and tributaries and wetlands*	Linear feature with associated tributaries/wetlands/floodplain within Rock Springs Run State Preserve; it is more-or-less coincident with boundary line for Section 12

EXHIBIT - 6.7.13

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 1: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

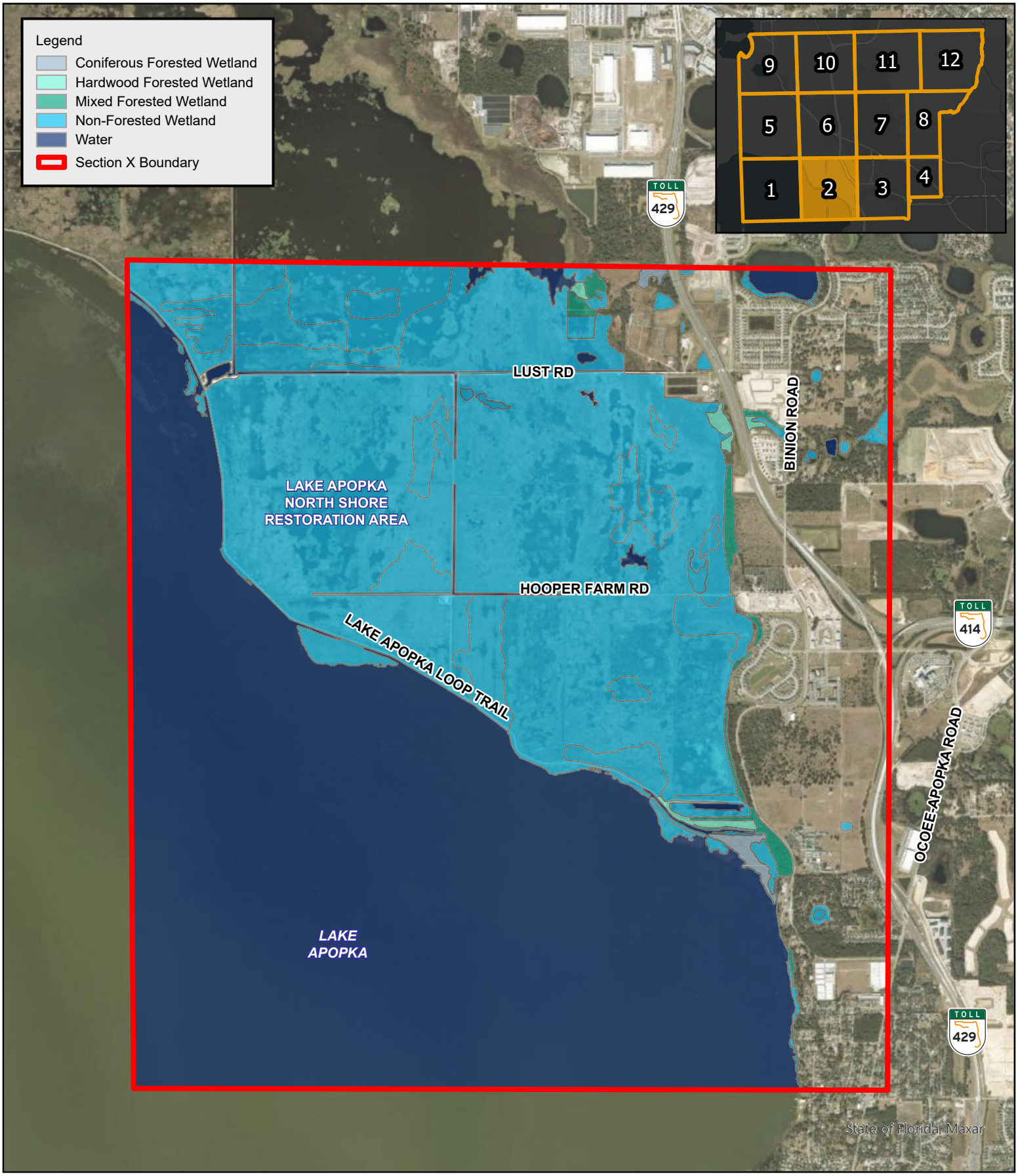


EXHIBIT - 6.7.14

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 2: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

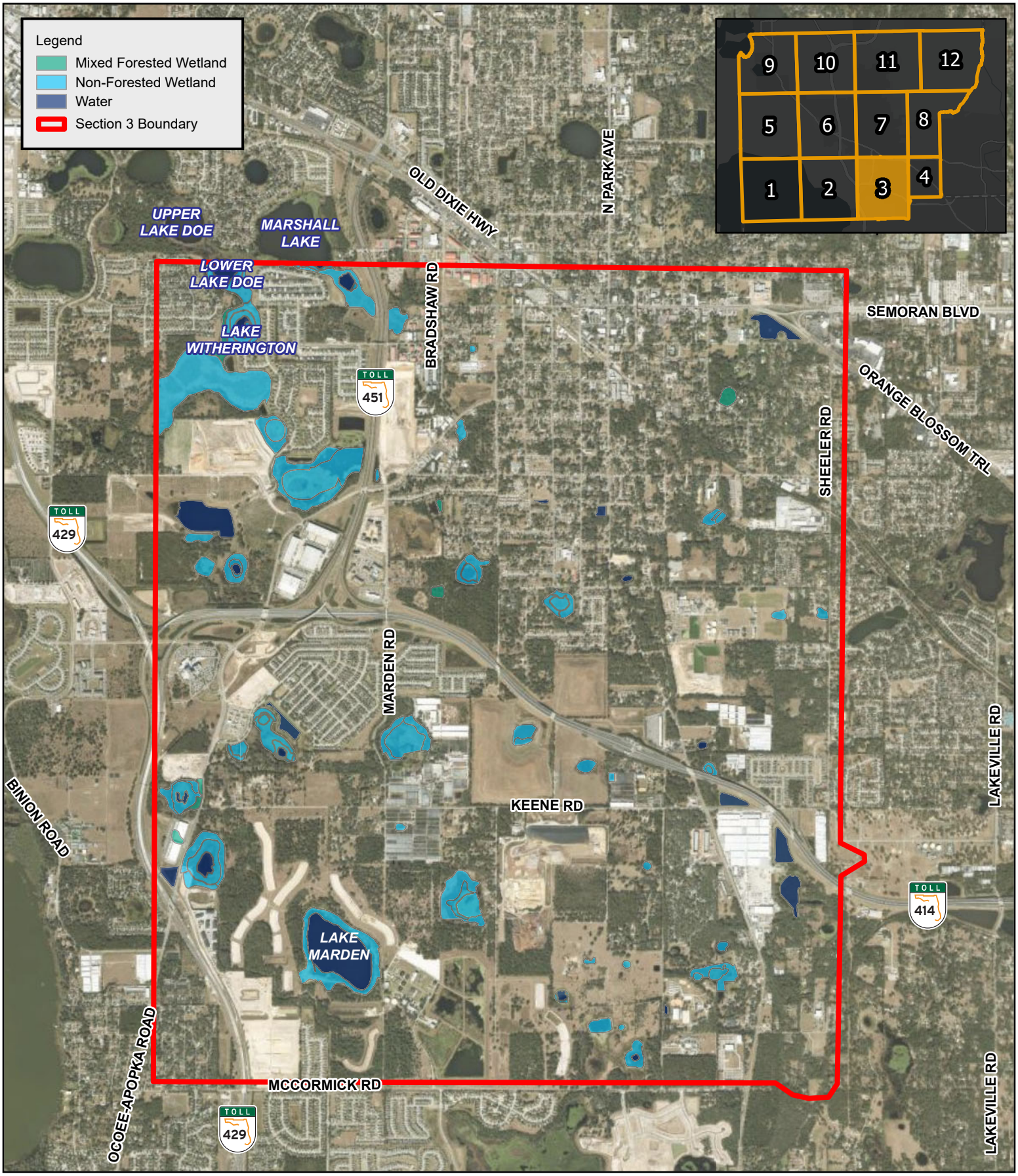


EXHIBIT - 6.7.15

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 3: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

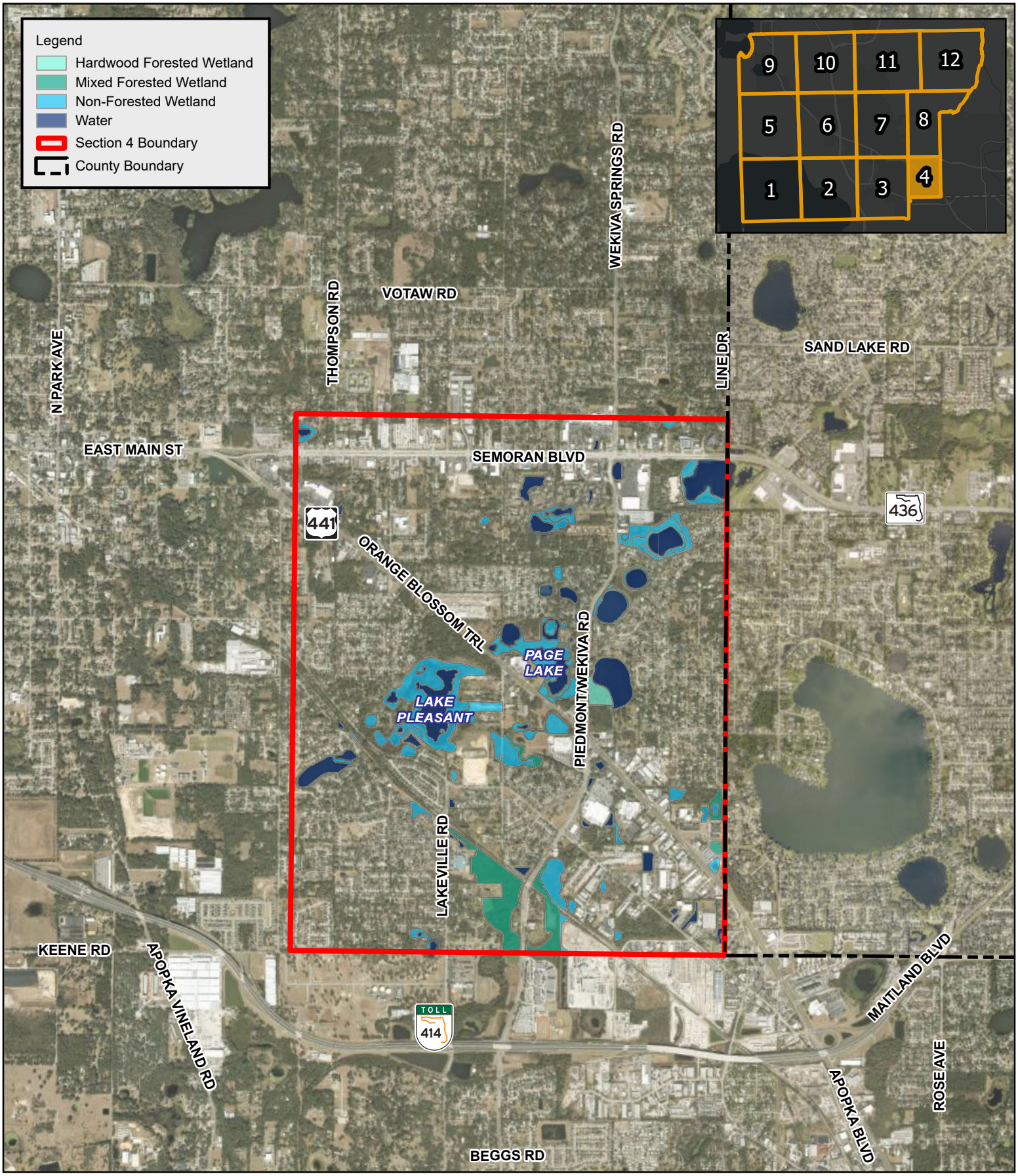


EXHIBIT - 6.7.16

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 4: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

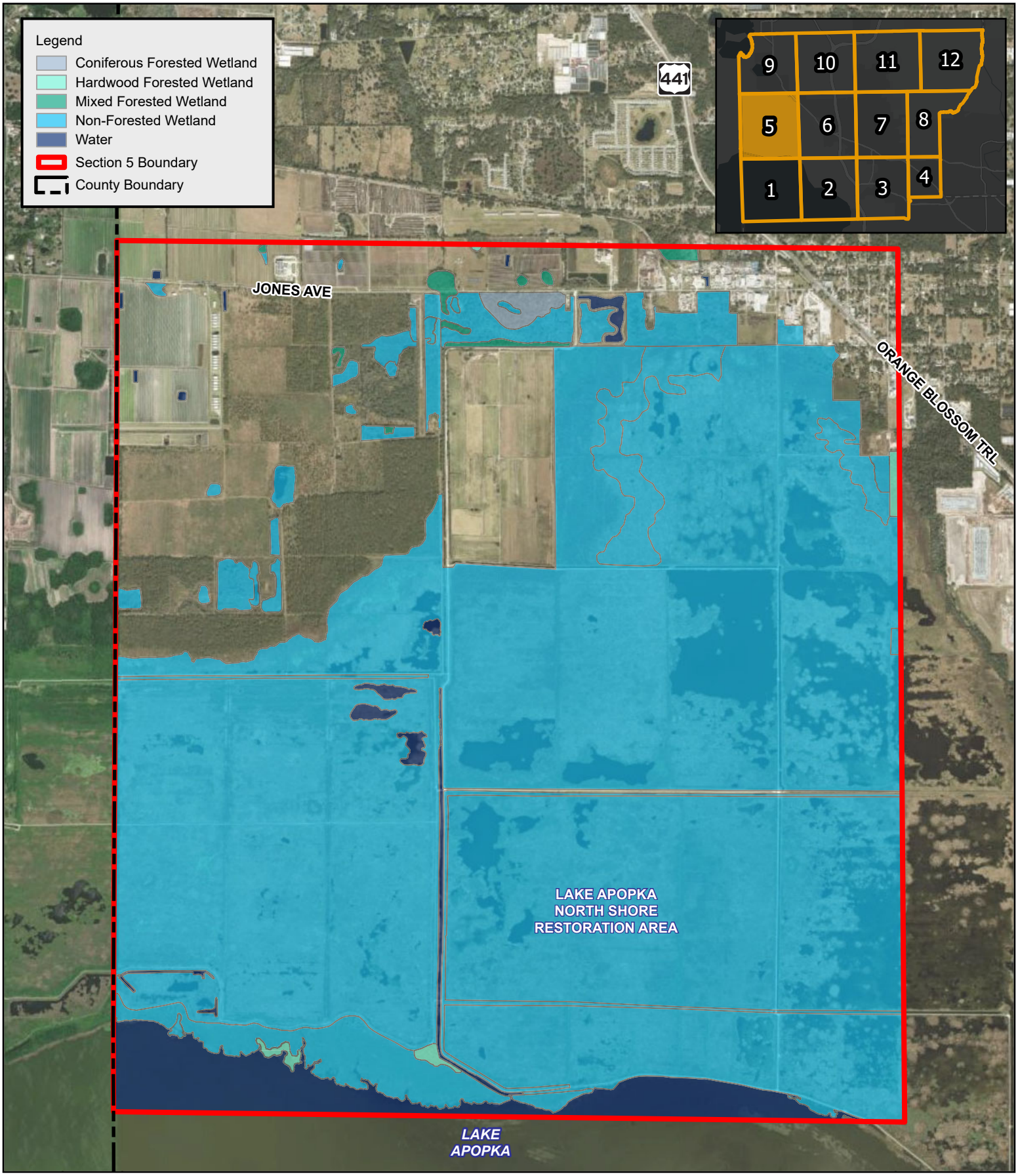


EXHIBIT - 6.7.17

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 5: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

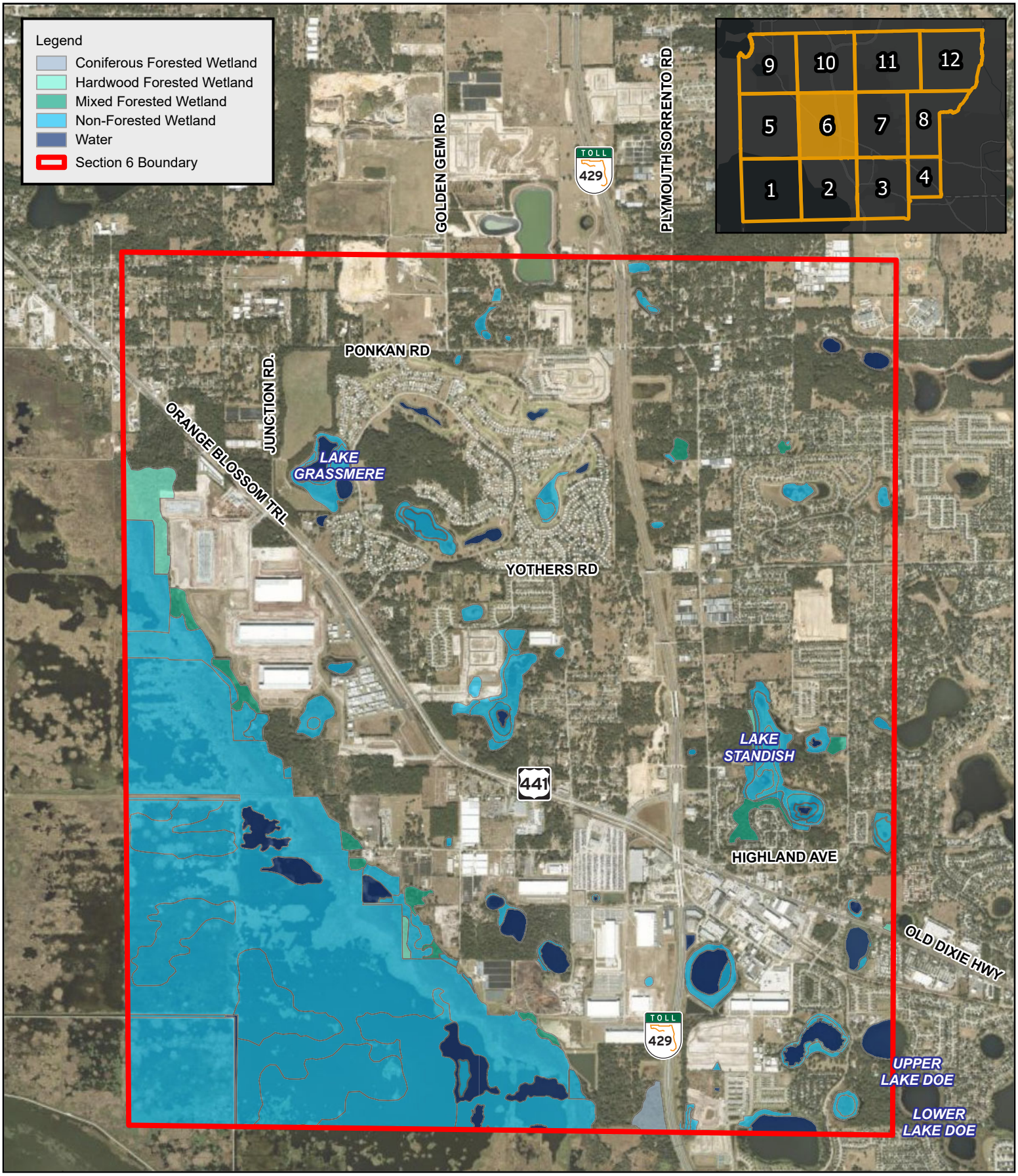


EXHIBIT - 6.7.18

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 6: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

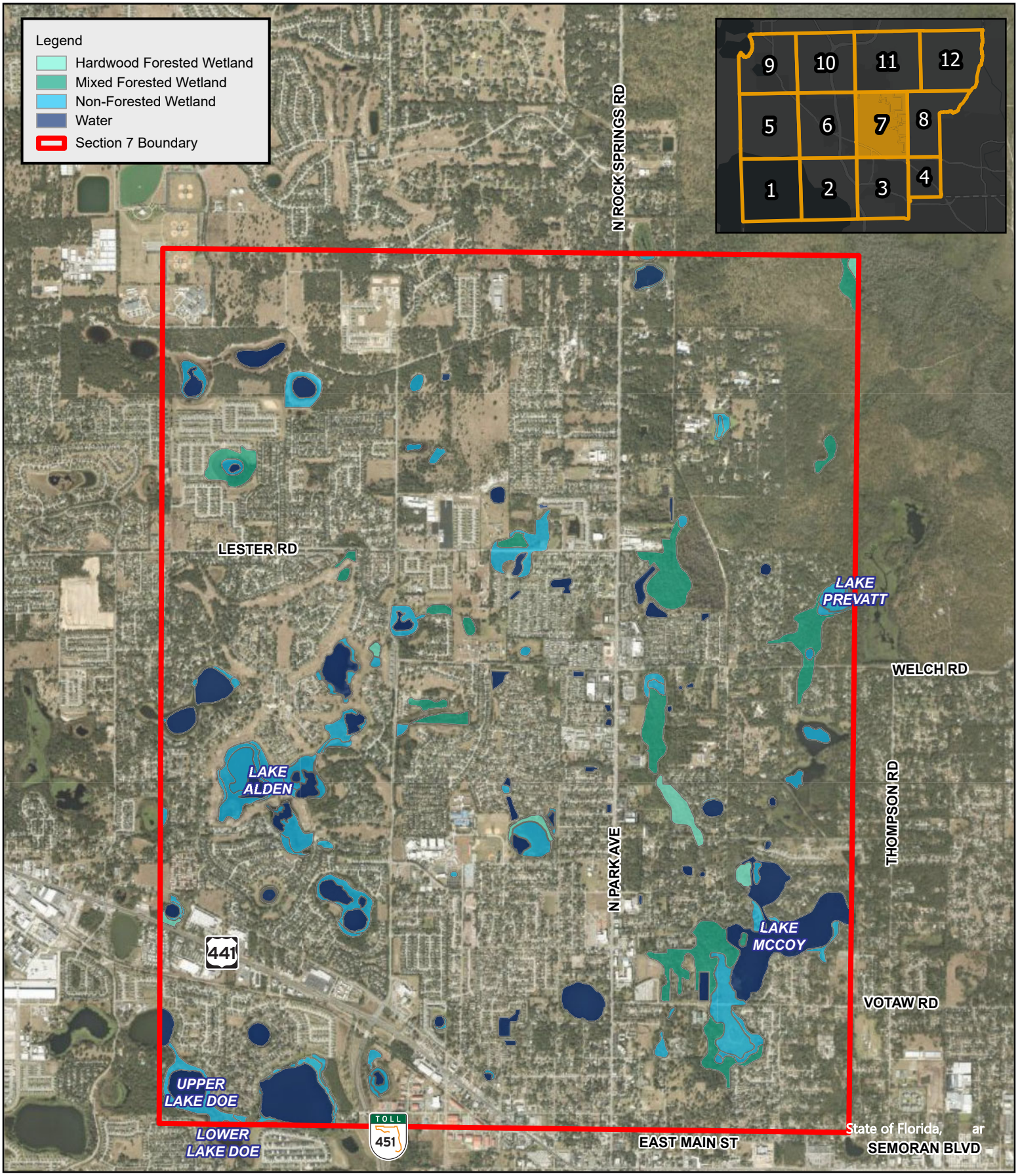


EXHIBIT - 6.7.19

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

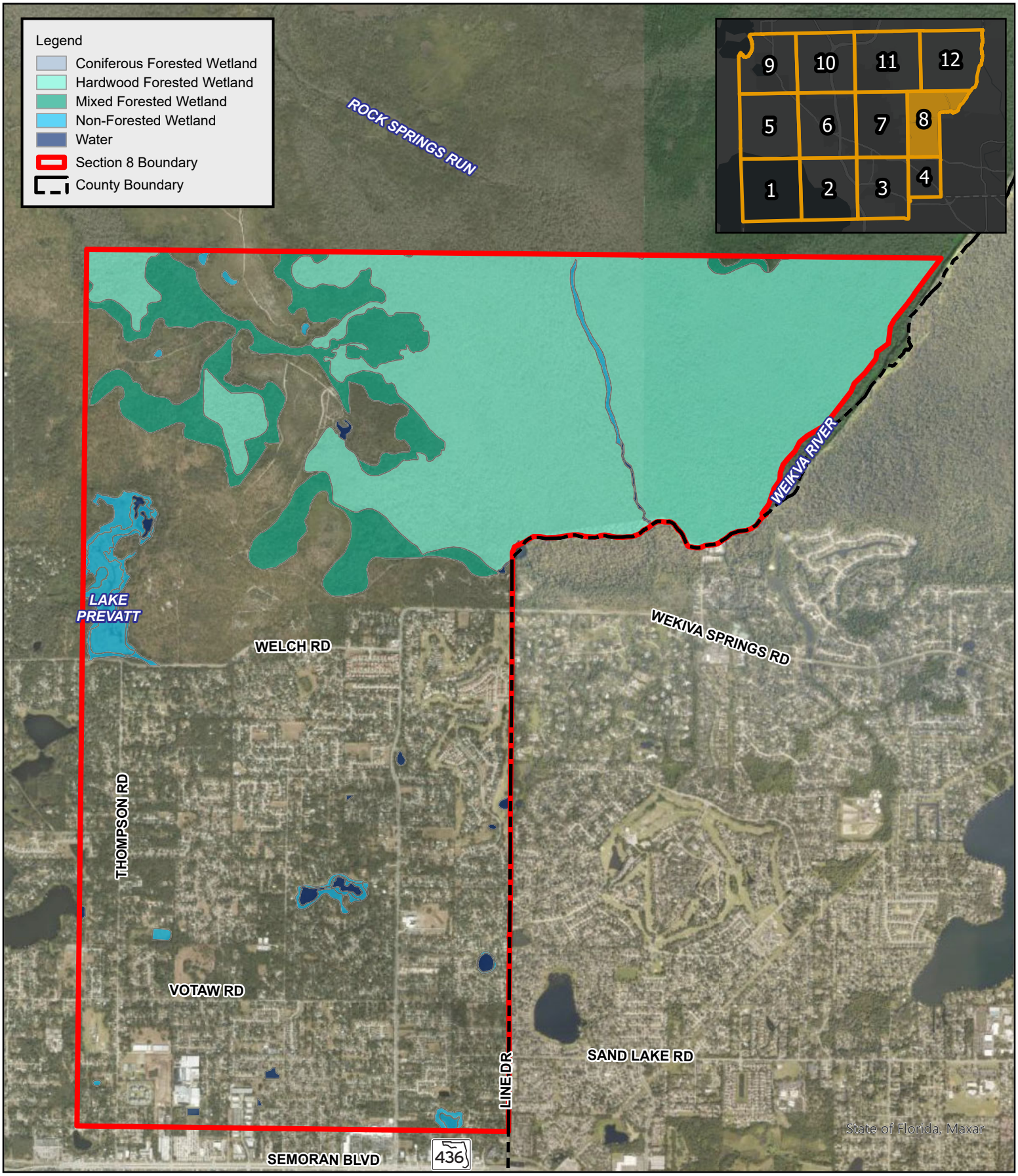


EXHIBIT - 6.7.20

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 8: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

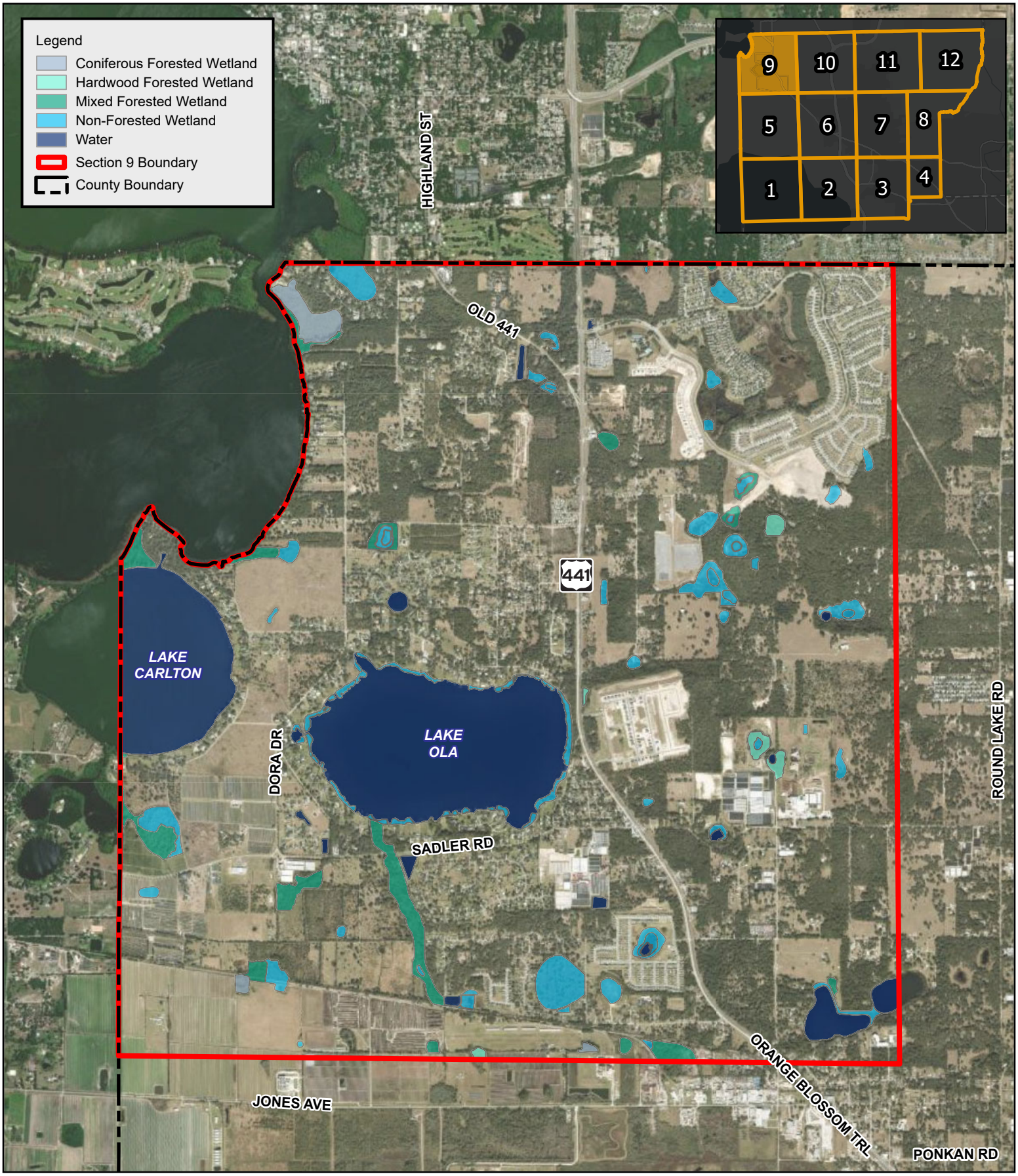


EXHIBIT - 6.7.21

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 9: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

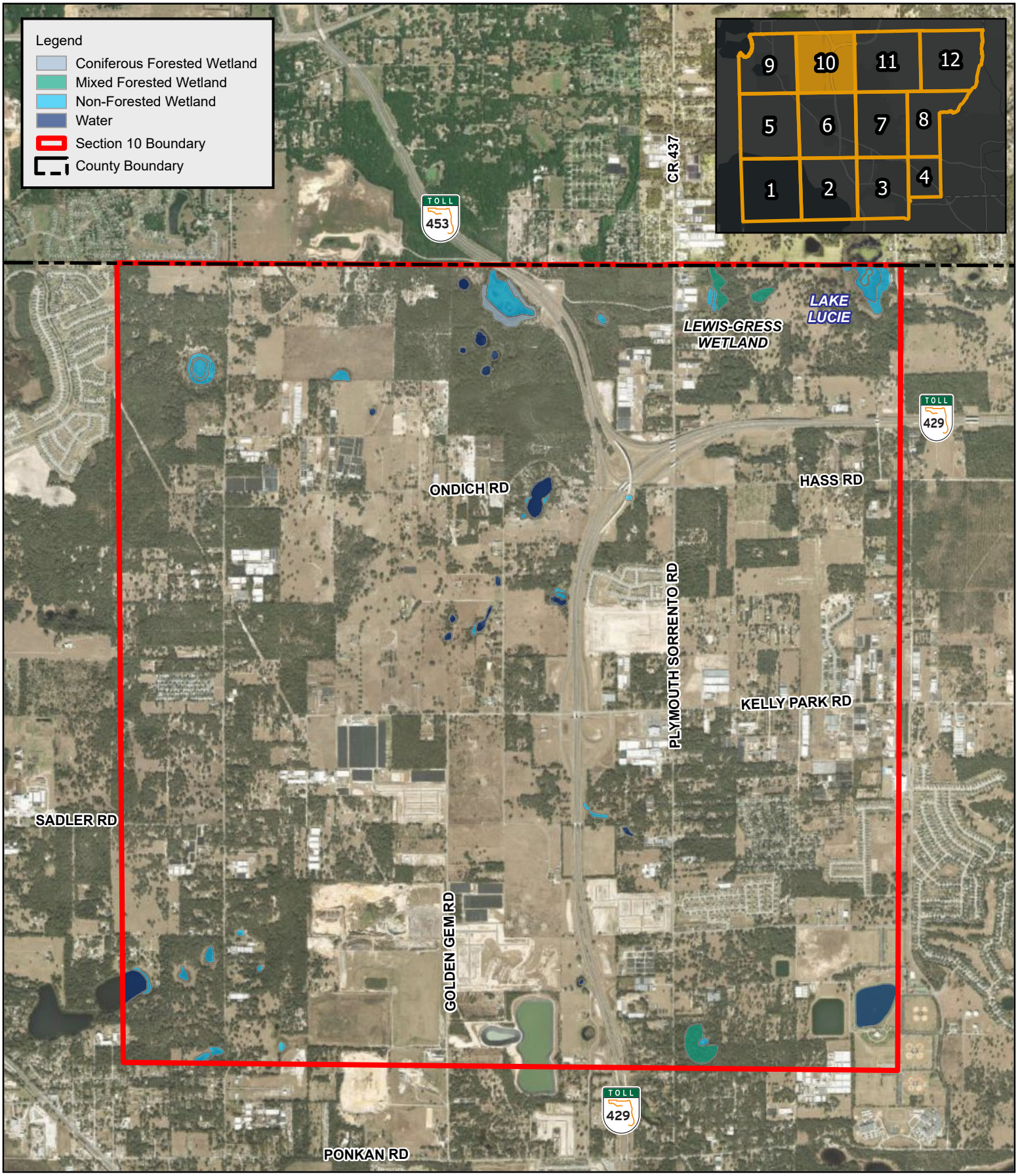


EXHIBIT - 6.7.22

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

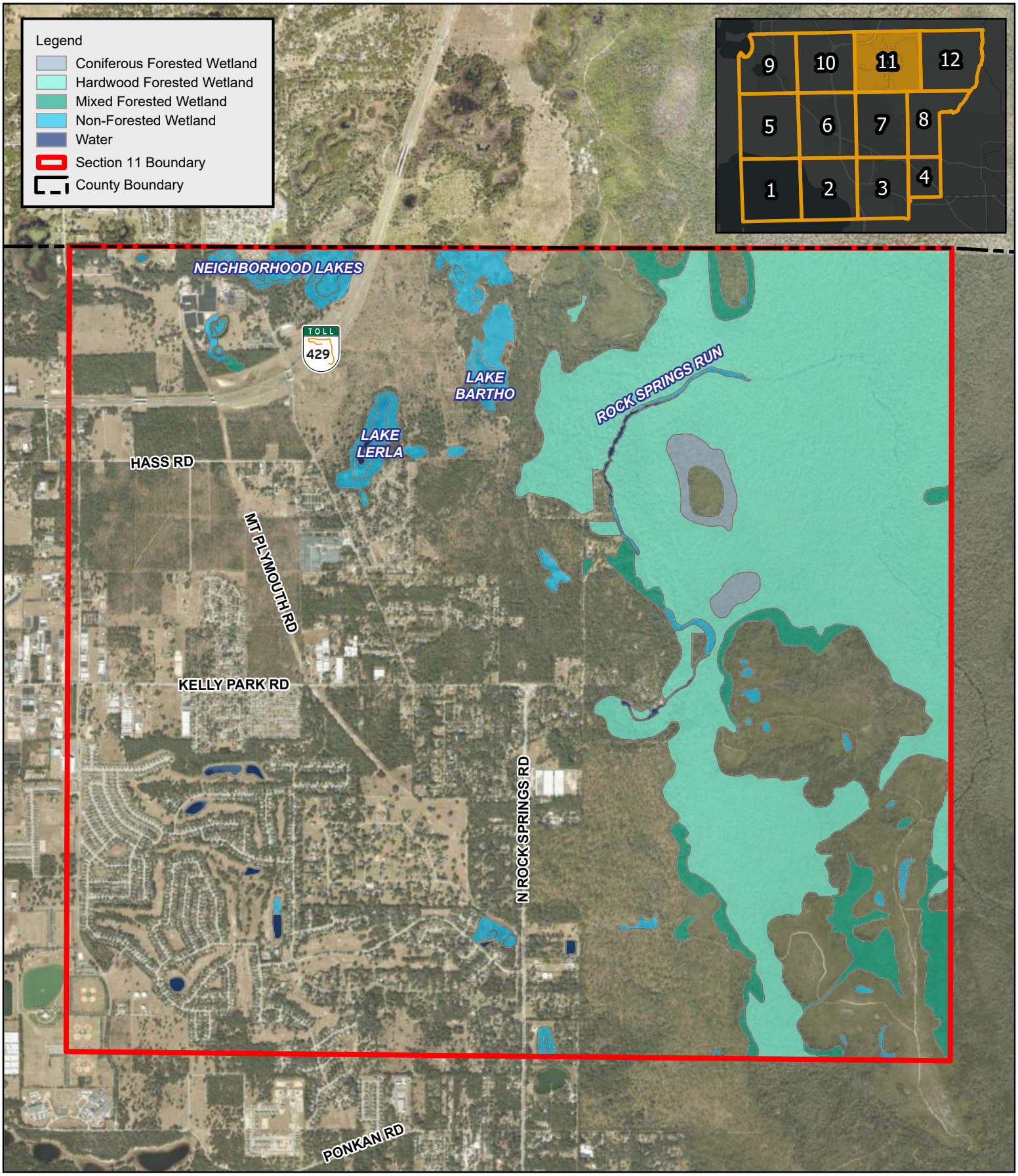


EXHIBIT - 6.7.23

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

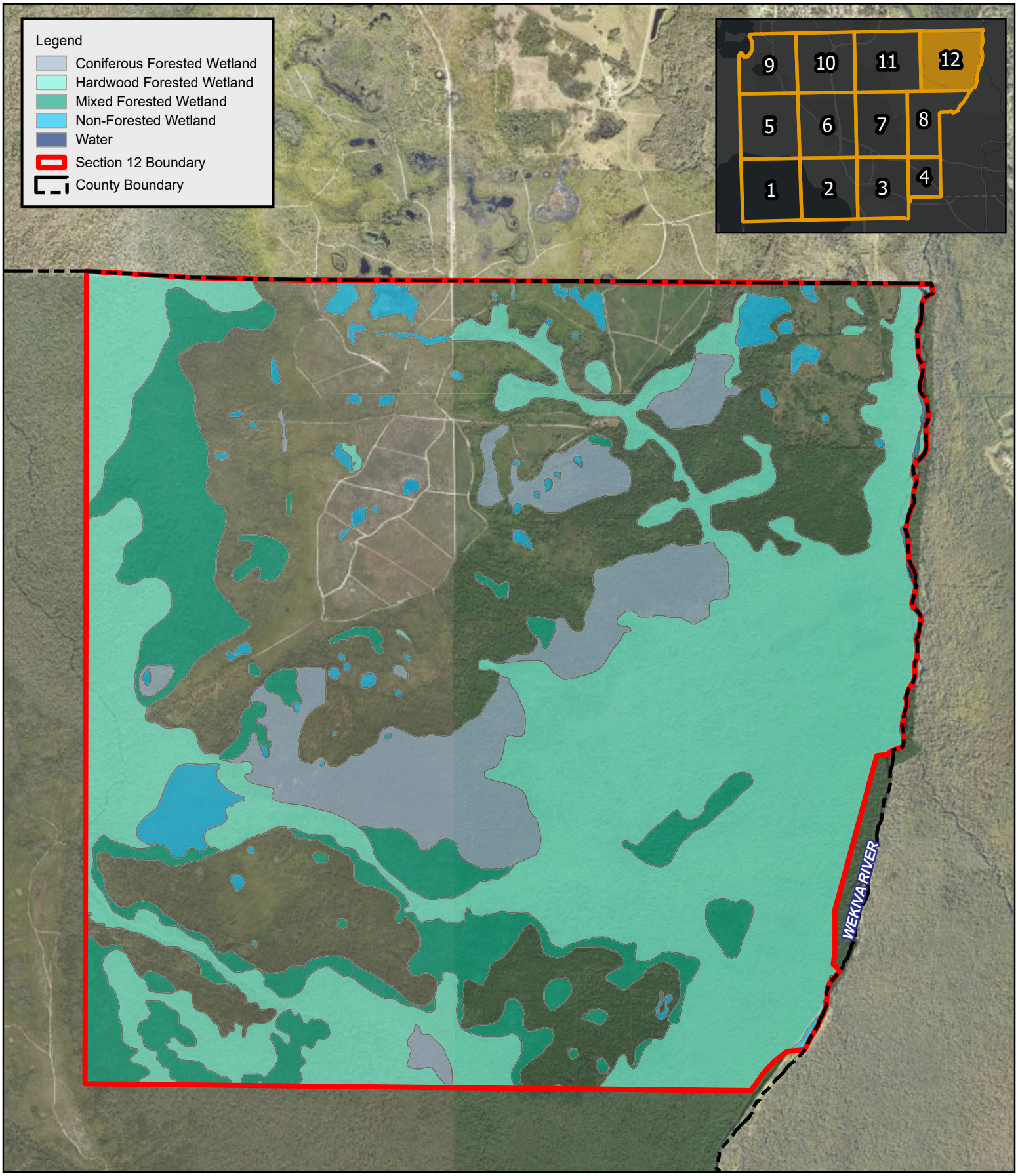


EXHIBIT - 6.7.24

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 12: Wetlands and Surface Waters

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

6.7.4 Conservation Easements and Public Lands

There are 26 conservation easements within the study area. These include all or portions of major wetland systems within the study area, including Lake Apopka and its north shore, Wekiva Springs, Wekiva Swamp, and Rock Springs Run. There are public lands throughout the study area, except Sections 3 and 4. Some public land parcels extend across section boundaries. **Table 6.7.39** provides an overview of public lands located in the study area. These public land parcels are depicted in **Exhibit 6.7.25.**

Table 6.7.39 - Public Lands in Study Area

Map Label	Parcel Name	Owner/Managing Facility	Section(s)
1	Blue Sink	City of Apopka	11
2	Sandhill Preserve	Orange County	10
3	Lake Lucie Conservation Area	Orange County	10, 11
4	Holiday Highlands Sanctuary	Florida Audubon Society, Inc.	9, 10
5	Neighborhood Lakes Reserve	Lake County	11
6	Pine Plantation Property	Orange County	11
7	Rock Springs Run State Preserve	FDEP, Div. of Recreation and Parks	8, 11, 12
8	Kelly Park	Orange County	11
9	Trimble Park	Orange County	9
10	Lake Apopka North Shore Restoration Area	SJRWMD	1, 2, 5, 6
11	Wekiva River Buffer Conservation Area	SJRWMD	12
12	Rock Springs Ridge Preserve	FWC	11
13	Hickerson Property	City of Apopka	2, 6
14	Wekiwa Springs State Park	FDEP, Div. of Recreation and Parks	7, 8, 11, 12
15	Lewis-Grass Property	Orange County	10

Within the study area, Orange County owns and/or manages the following public lands: Sandhill Preserve, Lake Lucie Conservation Area, Pine Plantation Property, Kelly Park, Trimble Park, and the Lewis-Gress Property. All of these are contained within the most northern row of sections within the study area. Of Orange County's public land inventory, Lake Lucie Conservation Area is the only one that can be found in two sections, both 10 and 11.

St. Johns Water Management District owns and manages the Lake Apopka North Shore Restoration Area and the Wekiva River Buffer Conservation Area. Lake Apopka North Shore Restoration Area reaches across 4 sections within the study area: 1, 2, 5, and 6. Conversely, Wekiva River Buffer Conservation Area is mostly contained outside of the study area, but a portion of it does coincide with the most northeast border in Section 12.

FDEP Division of Recreation and Parks owns and manages Rocks Springs Run State Preserve and Wekiwa Springs State Park. Both of these parks reach across Sections 8, 11, and 12, with Wekiwa Springs State Park also extending into Section 7 as well.

Public lands owned and managed by the City of Apopka are Blue Sink and the Hickerson Property. Blue Sink is completely within Section 11. Hickerson Property is mostly contained within Section 2, however a portion of it does spread into Section 6.

Finally, Section 11 contains a portion of Lake County's Neighborhood Lakes Reserve and the entirety of FWC's Rock Springs Ridge Preserve (not to be confused with Rock Springs Run State Preserve).

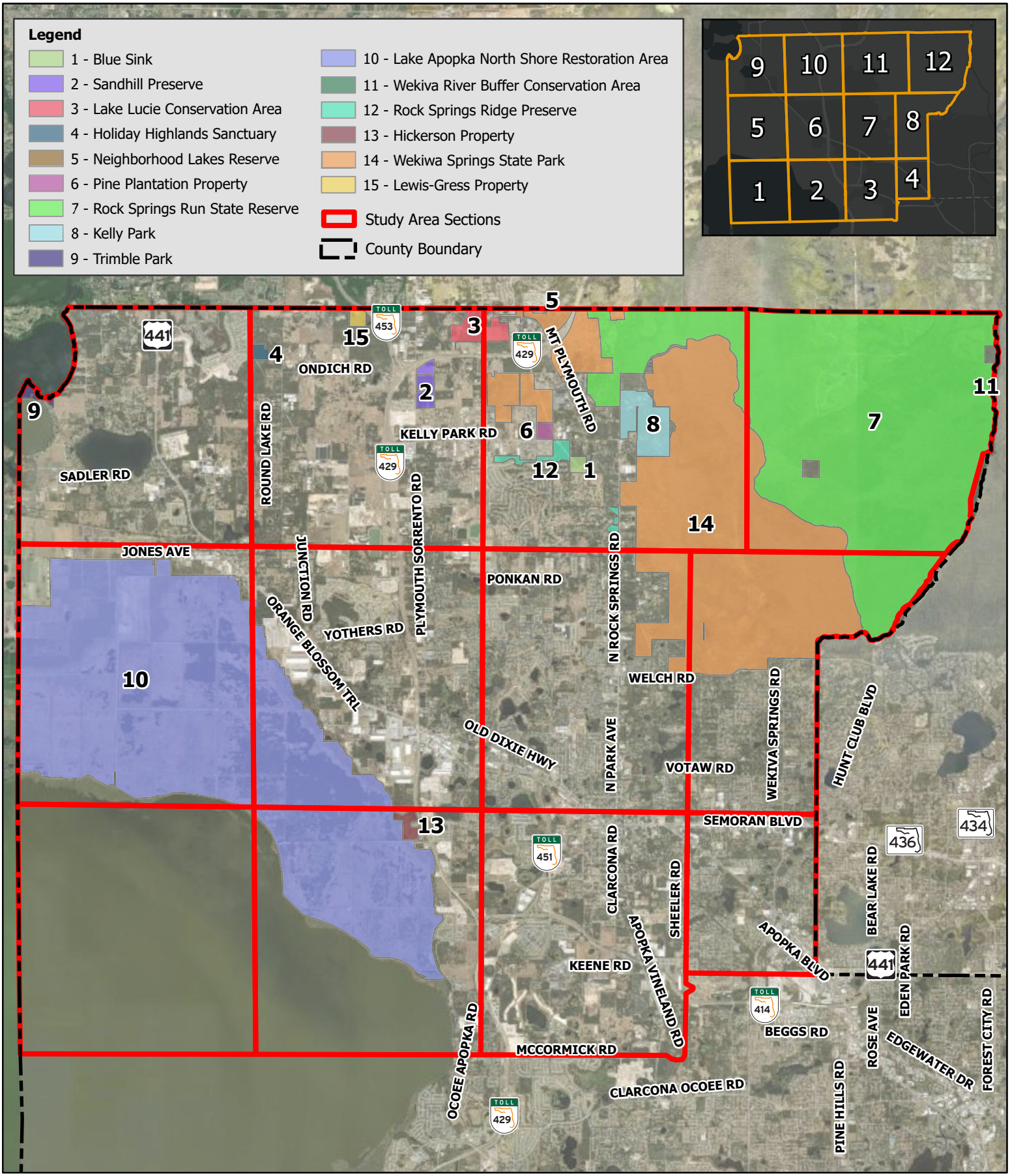


EXHIBIT - 6.7.25

North West Orange County Areawide Transportation Study (NOWOCATS)

Public Lands

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1 2 Miles

Data Source: FNAI Florida Conservation Lands, 2025

NOWOCATS - May 2025

6.7.5 Wildlife Crossings and Habitat Connectivity

Roads can have negative impacts on wildlife, most notably through habitat fragmentation and genetic isolation. Vehicle traffic on roads can lead to wildlife-vehicles collisions and roadkill, which may imperil local wildlife populations. Improved habitat connectivity, road permeability, and deterrents onto roads are all important factors when developing mitigation strategies for wildlife on future road projects. Roads have also surpassed hunting as the leading direct cause of wildlife mortality (Forman and Alexander 1998), particularly among amphibians and reptiles, large mammal species with low reproductive rates and large home ranges, and more mobile bird species (Smith and Dodd 2003, Rytwinski and Fahrig 2011, Rytwinski and Fahrig 2012, Smith et al. 2015). Consequently, roads pose a major obstacle to habitat and wildlife conservation.

A desktop review of the existing transportation infrastructure, habitat connectivity layers, and existing crossings was conducted. As a result, six (6) locations were identified as having the potential to warrant a wildlife crossing or habitat connectivity enhancements. Ardurra ecologists verified these locations during a field review. These locations are within Sections 7, 8, 10, and 11. The wildlife crossing and habitat connectivity enhancement recommendations are provided in **Exhibits 6.7.26 – 6.7.28**.

Section 7 has two (2) possible locations, one of which extends into Section 8 (**Exhibit 6.7.26**).

1. Welch Road (East of North Park Avenue)
   This location was identified to increase permeability for small wildlife species. Small wildlife species include frogs, snakes, salamanders, turtles, alligators, and small mammals, such as mice, racoons, and otters. Additionally, it is just outside of the Wekiva Springs State Park boundary, which is home to a known black bear population. During a field review, a "Wildlife Crossing" sign was already observed on this road. However, due to the frequency of nuisance wildlife interactions, this road may benefit from additional enhancements, such as wildlife Advanced Detection Systems (ADS) and lighting systems to warn drivers of real-time wildlife presence. The location is not specific. Welch Road continues eastward into Section 8. This length of the road may also be considered for the above-mentioned improvements.

2. Votaw Road (At Lake McCoy)
   Votaw Road bisects the freshwater marshes associated with Lake McCoy, a significant wetland and surface water feature in Section 7. It does not appear the current roadway has any cross drains that support wildlife movement. This location may be a good candidate for retrofit improvements such as wildlife cross drains underneath the road itself to increase permeability of the roadway for the wildlife in the wetland.

Section 10 has two (2) locations with the potential to warrant wildlife crossings or connectivity enhancements at SR 453 and Plymouth Sorrento Rd (**Exhibit 6.7.27**).

3. State Road 453 (adjacent to Orange County boundary and Lewis-Gress Conservation Easement)

State Road (SR) 453 is adjacent to a conservation easement and bisects a large mixed wetland-upland system with pine flatwoods and sand pine forested areas. This location was identified to increase the permeability of SR 453 for small species. The location is not specific. However, the overall location within an undeveloped area with a mixture of upland and wetland habitats is ideal for numerous species. It is recommended that future improvements to SR 453 consider habitat connectivity enhancements to increase the permeability of the roadway for smaller species. Such enhancements may include retrofit shelving, funnel fencing, and advance detection systems (ADS) that alert drivers to the presence of nearby wildlife.

4. Plymouth Sorrento Road (SR 437) North of SR 429

This location was identified to increase permeability of Plymouth Sorrento Road for small species. North of SR 429, there are still undeveloped parcels containing upland mixed coniferous/hardwood areas that, if maintained, may benefit from habitat connectivity enhancements. Due to the rural developments in the vicinity, this location may benefit most from wildlife ADS.

In addition to its existing wildlife crossings at Wekiva Parkway (SR 429), two (2) potential locations have been identified in Section 11: W Kelly Park Road and My Plymouth Road (**Exhibit 6.7.28**).

5. W Kelly Park Road

This location was identified to increase permeability for small species. Additionally, it is adjacent to Wekiva Springs State Park which is home to a known black bear population. Proprietary signage observed during the field visit suggests there is likely to be new development in the vicinity. For this location, wildlife ADS and signage may be the most appropriate method for mitigating nuisance wildlife interactions in this area.

6. Mt Plymouth Road (near Haas Road)

The northern portion of this road is located within Rock Springs Ridge Preserve. This location contains medium-density residential and agricultural developments which are adjacent to significant wetland and upland habitat. Implementing wildlife ADS and signage would increase permeability at this location for small and large species alike.

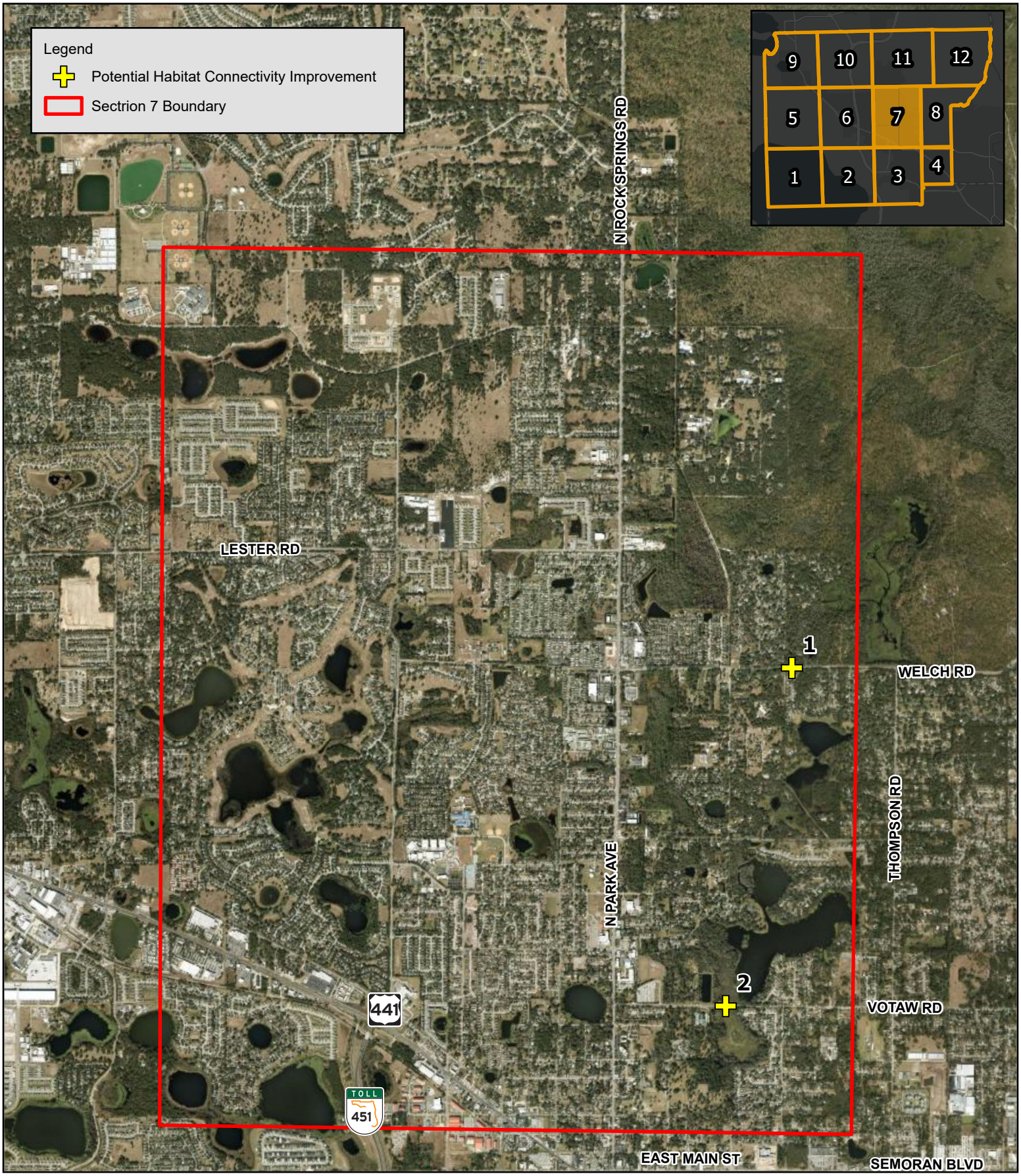


Exhibit - 6.7.26

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 7: Potential Wildlife Crossings

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

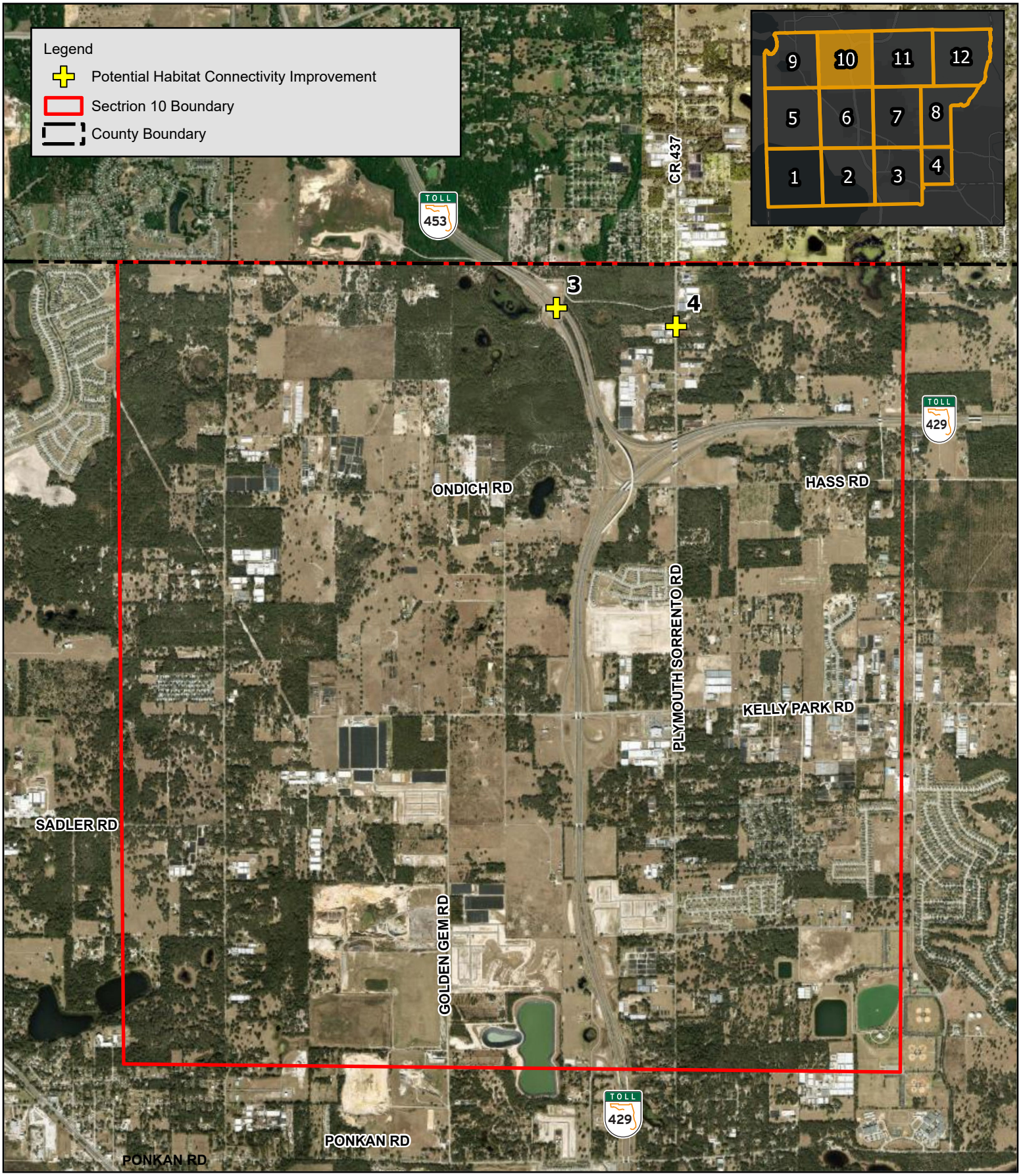


Exhibit - 6.7.27

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 10: Potential Wildlife Crossings

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

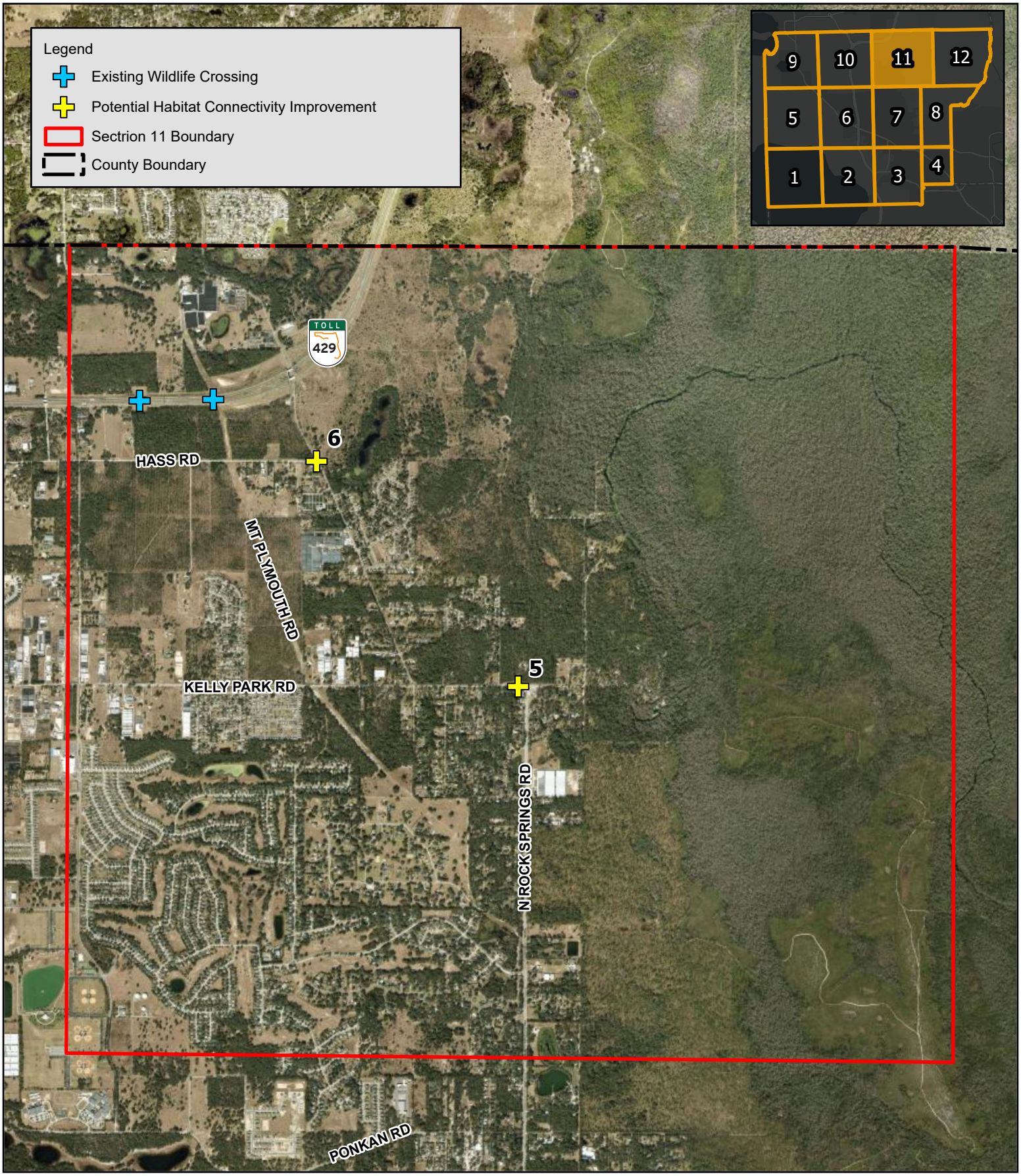


Exhibit - 6.7.28

North West Orange County Areawide Transportation Study (NOWOCATS)

Section 11: Potential Wildlife Crossings

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1,500 3,000 Feet

Data Source: Wetlands and Surface Water - FDEP Land Use Land Cover 2022

NOWOCATS - May 2025

6.8 THREATENED AND ENDANGERED SPECIES

A Threatened and Endangered Species Assessment was conducted using GIS data collected from sources listed in Section 6.7. The term "protected species" refers to those protected by law, regulation, or rule. Species included in the assessment included those identified in the Endangered Species Act (ESA) of 1973, as amended; the Florida Endangered and Threatened Species Act, Section 379.2291, Florida Statues, and the Florida Regulated Plant Index (58-40.0055, FAC).

6.8.1 Potentially Occurring Protected Species

A total of fifty-four (54) protected species have the potential to occur within the study area. These include fourteen (14) avian, three (3) mammal, five (5) reptile, one (1) amphibian, and thirty-one (31) plant species, all of which have been included below in **Table 6.8.1**. Each section in the study area has the potential to support protected species; however, the assessment was conducted for the study area as a whole because the ranges of these species extend well beyond the study area. A map depicting the potential for endangered species within the study area is provided in **Exhibit 6.8.1**.

The species' potential occurrence in the study area was determined by habitat preferences and distributions, existing site conditions, and historical data, when available. The likelihood of occurrence was rated as low, moderate, or high. A low rating indicates that the species occurs in Orange County, but suitable habitat is not present within the study area and the species has not been observed or documented within the study area. A moderate rating indicates that the species occurs in Orange County, suboptimal habitat or limited suitable habitat occurs within the study area, but the species has not been documented within the study area. A high rating indicates that the species occurs within Orange County, suitable habitat is present within the study area and the species is suspected to occur or has been previously documented within the study area.

Table 6.8.1 - Listed Species With Potential to Occur Within the Study Area

Group	Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Avian	*Platalea ajaja*	Roseate Spoonbill		T		High
	Aphelocoma coerulescens	Florida Scrub-Jay	T			High
	Athene cunicularia floridana	Florida Burrowing Owl		T		High
	Egretta caerulea	Little Blue Heron		T		High
	Egretta tricolor	Tricolor Heron		T		High
	Sternula antillarum	Least Tern		T		Moderate
	Falco sparverius paulus	Southeastern American Kestrel		T		High
	Laterallus jamaicensis jamaicensis	Eastern Black Rail	T			Moderate

Table 6.8.1 - Listed Species With Potential to Occur Within the Study Area						
Group	**Scientific Name**	**Common Name**	**USFWS**	**FWC**	**FDACS**	**Potential Occurrence**
	Antigone canadensis pratensis	Florida Sandhill Crane	MBTA	T		High
	Haliaeetus leucocephalus	Bald Eagle	BGEPA			High
	Mycteria americana	Wood Stork	T			High
	Picoides borealis	Red-Cockaded Woodpecker	T			Low
	Caracara plancus audubonii	Audubon's Crested Caracara	T			Moderate
	Rostrhamus sociabilis plumbeus	Everglade Snail Kite	E			High
Mammal	*Trichechus manatus latirostris*	Florida Manatee	T			Moderate
	Perimoyotis subflavus	Tricolored Bat	P			Moderate
	Ursus americanus floridanus	Florida Black Bear		M		High
Reptiles	*Drymarchon corais couperi*	Eastern Indigo Snake	T			High
	Gopherus polyphemus	Gopher Tortoise		T		High
	Pituophis melanoleucus	Florida Pine Snake		T		High
	Stilosoma extenuatum	Short-Tailed Snake		T		Moderate
	Plestiodon reynoldsi	Sand Skink	T			Moderate
Amphibian	*Notophthalmus perstriatus*	Striped Newt		T		Moderate
Plants	*Bonamia grandiflora*	Florida Bonamia	T		E	Moderate
	Calopogon multiflorus	Many-flowered grass-pink			T	High
	Centrosema arenicola	Sand Butterfly Pea			E	High
	Clitoria fragrens	Scrub Pigeon Wing	T		E	Low
	Deeringothamnus pulchellus	Beautiful Pawpaw	E		E	Moderate
	Illicium parviflorum	Yellow Star-anise			E	High
	Lupinus aridorum	Scrub Lupine	E		E	High
	Eriogonum floridanum	Scrub Buckwheat	T		E	High

Table 6.8.1 - Listed Species With Potential to Occur Within the Study Area						
Group	**Scientific Name**	**Common Name**	**USFWS**	**FWC**	**FDACS**	**Potential Occurrence**
	Matelea floridana	Florida Ppiny Pod			E	High
	Nemastylis floridana	Celestial Lily			E	High
	Nolina brittoniana	Britton's Beargrass	E		E	High
	Ophioglossum palmatum	Hand Fern			E	Moderate
	Paronychia chartacea var. chartacea	Paper-Like Nailwort	T		E	Low
	Platanthera integra	Yellow Fringeless Orchid			E	Moderate
	Polygala lewtonii	Lewton's Polygala	E		E	Low
	Polygonella myriophylla	Small's Jointweed	E		E	Low
	Prunus geniculata	Scrub Plum	E		E	Low
	Pteroglossaspis ecristata	Giant Orchid			T	High
	Verbena tampensis	Tampa Vervain			E	Low
	Warea amplexifolia	Clasping Warea	E		E	Moderate
	Chionanthus pygmaeus	Pygmy Fringe-Tree			E	High
	Coelorachis tuberculosa	Piedmont Jointgrass			T	Moderate
	Nolina atopocarpa	Florida Beargrass			E	Low
	Salix floridana	Florida willow			E	Moderate
	Carex chapmanii	Chapman's Sedge			T	Moderate
	Coleataenia abscissa	Cutthroatgrass			E	Low
	Hartwrightia floridana	Hartwrightia			T	Low
	Lechea cernua	Nodding Pinweed			T	High
	Pecluma plumula	Plume Polypody			E	Moderate
	Stylisma abdita	Scrub Stylisma			E	Moderate
	Monotropa hypopithys	Pinesap			E	Low

***E** = Endangered; **T** = Threatened; **M** = Managed; **P**= Proposed*
***BGEPA** = Bald and Golden Eagle Protection Act **MBTA** = Migratory Bird Treaty Act **N/A** = Not Applicable due to lack of habitat*
***USFWS** = United States Fish and Wildlife Service **FWC** = Florida Fish and Wildlife Conservation Commission*
***FDACS** = Florida Department of Agriculture and Consumer Services*

6.8.1.1 USFWS Consultation Areas

The study area is located within or partially within the USFWS Consultation Area (CA) of Everglade snail kite, Florida scrub jay, sand skink, and the consultation range (CR) for tricolored bat, a proposed endangered species. A CA is intended to identify the geographical landscape where each federally listed species is most likely to occur. A CR is the area where the tricolored bat may be present. Portions of the study area also fall within three wood stork Core Foraging Areas (CFA), which include suitable foraging areas important to the reproductive success of known wood stork colonies. The existing habitats in the study area may also support other federally protected species, including the bald eagle, Audubon's crested caracara, Florida sandhill crane, Eastern indigo snake, gopher tortoise, and Florida manatee.

6.8.1.2 Federally Protected Species

Audubon's Crested caracara

Audubon's crested caracara is classified as threatened because of habitat loss and population declines (Layne, 1996). It is a resident, migratory species in Florida that prefers grasslands and pastures in the south-central region of Florida, particularly in Glades, DeSoto, Highlands, Okeechobee, and Osceola Counties (USFWS, 1999). Historically, caracara inhabited dry or wet prairies with scattered cabbage palms and occasionally used lightly wooded areas next to those prairies. Many of those areas were converted and frequently replaced by pastures with non-native sod-farming grasses that still support caracaras. While the study area is outside of the USFWS's CA, IPaC identified the Audubon's crested caracara as having the potential to be affected by activities within the study area. Areas of suitable habitat in the study area primarily include the open pastures within Sections 6, 7, 10, and 11. No critical habitat has been designated for the Audubon's crested caracara.

Everglade Snail Kite

USFWS Everglade snail kite CA is located over the entire study area. The Everglade snail kite is classified as endangered due to a "very small population and increasingly limited amount of fresh marsh with sufficient water to ensure an adequate supply of snails." (Bureau of Sport Fisheries and Wildlife, 1973, p.120). The Everglade snail kite is a non-migratory subspecies only found in Florida, particularly near large watersheds (e.g., Everglades, Lake Okeechobee) and the shallow vegetated edges of lakes that support apple snails, the primary component of the snail kite's diet. The USFWS has designated critical habitat for snail kites, which consists mostly of marshes in South Florida. While no critical habitat for the snail kite occurs within the study area, Lake Apopka North Shore contains suitable habitat.

Florida Scrub-Jay

USFWS Florida scrub-jay CA is located over the entire study area. The scrub-jay is classified as threatened due to habitat loss, degradation, and fragmentation (USFWS, 1987). They only occur on ancient dune ecosystems and scrub habitats of peninsular Florida. Archbold Biological Station has 6 sightings in its historical dataset (1994), all located within Wekiva Springs-Rock Springs Run area.

According to the scrub-jay habitats described by Fitzpatrick et al. (1991) and identified by the FWC during their 1992-1993 scrub-jay survey, suitable habitat exists within Sections 7 and 9 – 12. This is depicted in **Exhibit 6.8.1**. While some of these habitats have since been developed, the remaining areas are disjunct and consist mostly of Type II, Type III, or non-ranked (i.e., non-suitable) scrub-jay habitats. Scrub-jay habitats include the following:

> **Type I**- any upland plant community in which scrub oak species is greater than or equal to 15 percent cover.
>
> **Type II** – any plant community in which one or more scrub oak species is present but is less than or equal to 15 percent cover.
>
> **Type III** – any upland or seasonally dry wetland within 400 meters (0.25 miles) of any area designated as TYPE I or Type II habitat.

Sand Skink

The sand skink is endemic to the sandy ridges of central Florida. The USFWS listed the sand skink as threatened due to habitat loss, fragmentation, and modification, as well as increased competition with invasive species, and loss of genetic diversity (Peninsular Florida Species Conservation and Consultation Guide, 2020). Sand skinks are fossorial, meaning they spend most of their time underground, including moving and hunting, through sandy soils. The study area is located within the USFWS CA for the sand skink, and a large portion of the study area (Sections 2-11) fall within Florida Geographic Data Library's suitable habitat polygons for the sand skink (**Exhibit 6.8.1**).

Red-Cockaded Woodpecker (RCW)

The RCW is listed by the USFWS as threatened due to habitat loss, degradation and fragmentation (35 FR 16047). The species is still widely distributed throughout the state, but the largest populations occur on federally managed lands in the panhandle (USFWS, 1999). RCW habitat consists of pine stands or pine-dominated forests with little to no understory and numerous old-growth pines, particularly longleaf pines. It excavates cavities in the living part of pine trees, typically choosing trees greater than 80 years old. No critical habitat has been designated for the RCW.

While the study area is not within the CA, suitable habitat for RCW exists within Sections 6-12, however, no RCWs have been documented within the study area.

Wood Stork

The wood stork is listed by the USFWS as threatened. Wood storks are associated with freshwater and estuarine wetlands that are used for nesting, roosting, and foraging. Nesting typically occurs in medium to tall trees that occur in stands located in swamps or islands surrounded by open water (Ogden, 1991; Rodgers et al. 1996). Preferred foraging habitat includes wetlands with a mosaic of submerged and/or emergent aquatic vegetation, and shallow open-water areas. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of receding water levels. No critical habitat has been designated for the wood stork.

According to the USFWS's North Florida Ecological Service Office, the habitats within 15 miles of a wood stork breeding colony are considered to be wood stork core foraging areas (CFAs). Portions of the study area fall within the CFA of three wood stork breeding colonies: Lake Yale, Mud Lake, and a very small portion of Rookery No. 612320. Suitable foraging habitat (SFH) for wood storks is located throughout the study area, including marshes, wet pastures, roadside ditches and canals, and areas within stormwater management facility locations.

Eastern Black Rail

Eastern black rail is listed as threatened due to habitat fragmentation and modification, human disturbance, disease, and predation. Black rails can exist in salt, brackish, and freshwater communities, so long as they have dense vegetative cover. In Florida, you might find them in higher elevation wetland zones with shrubby vegetation, intermediate marshes, inland coastal prairies, and associated wetlands.

Sections 1, 2, 5, and 6 contain suitable habitat. No black rails have been documented anywhere within the study area.

Bald Eagle

The bald eagle was removed from the ESA in 2007 and Florida's Endangered and Threatened Species list in 2008; however, it remains protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. Bald eagles tend to nest in the tops of very tall trees that provide unobstructed lines of sight to nearby habitats, particularly lakes and other open waters. Because eagles are piscivorous (fish-eating) raptors, nearly all eagles' nests occur within 1.8 miles of water (Wood et al., 1989). No critical habitat has been designated for the bald eagle.

According to the Audubon's EagleWatch dataset, which maintains the location of known eagles' nests in the state, 16 nests have been documented within the study area (**Table 6.8.2**). The bald eagle is afforded a 330-foot and a 660-foot nest protection buffer, depending on the proposed activity. Work within these ranges of an active eagle nest requires additional coordination with the USFWS and, potentially, additional conservation measures either prior to or during construction activities. The location of both nests along with the 660-foot nest protection buffers are shown in **Exhibit 6.8.1**.

Table 6.8.2 - Eagle Nests in Study Area		
Section	**Count**	**Nest IDs**
3	1	OR915
4	1	OR976
5	3	OR035A OR098 OR105
6	2	OR073 OR993
7	1	OR096
9	5	OR017A OR032 OR033 OR088 OR017
11	3	OR058 OR016 OR108

Eastern Indigo Snake

The eastern indigo snake is listed by the USFWS as threatened due to habitat loss, degradation, and fragmentation (USFWS, 2019). The eastern indigo snake is widely distributed throughout central and south Florida. They occur in a broad range of habitats, from scrub and sandhill to wet prairies and mangrove swamps. Indigo snakes are most closely associated with habitats occupied by gopher tortoises whose burrows provide refugia from cold and desiccating conditions (USFWS, 1999). No critical habitat has been designated from the eastern indigo snake.

As a habitat generalist, the eastern indigo snake has the potential to occur throughout the study area, including the developed areas. However, there are no eastern indigo snakes documented in the resources reviewed within the study area.

Federally Protected Plant Species

According to the USFWS and FNAI, 11 of the 31 plant species listed in **Table 6.8.1** above are federally protected and have the potential to occur within the study area. Generally, these species tend to be endemic and/or habitat specialists. Protected plant surveys are recommended prior to any site alteration, especially in previously undisturbed areas.

6.8.1.3 State Protected Species

Florida Burrowing Owl

The FWC listed the Florida burrowing owl as threatened due to loss of native habitat, dependence on altered habitat, and lack of regulatory protections (FWC, 2013a). The burrowing owl is a non-migratory, year-round breeding resident of Florida, and maintains home ranges and territories while nesting. Burrowing owls inhabit upland areas that are sparsely vegetated. Natural habitats include dry prairie and sandhill, but they will make use a ruderal areas such as pastures, airports,

parks, and road rights-of-way because much of their native habitat has been altered or converted to other uses.

Burrowing owls have been documented within the study area in Sections 10 and 11 (FNAI Biodiversity Matrix). Burrowing owls usually dig their own burrows, but have been known to utilize gopher tortoise burrows and armadillo burrows as well (FNAI). Gopher tortoise burrows have also been documented in the study area.

If burrowing owls are observed onsite, coordination with the FWC is required to discuss avoidance, minimization, and permitting options. Avoidance measures that eliminate the need for FWC incidental take permitting include: avoiding acts that kill or injure burrowing owls or eggs; maintaining a minimum 10-foot buffer during non-breeding season (July 11-February 14) and a minimum 33-foot buffer during breeding season (February 15 – July 10) around the entrance of Potentially Occupied Burrows (POB); and ensuring that the project does not impact 50% or greater of foraging habitat within a 1,970-foot radius of a POB.

Southeastern American Kestrel

The southeastern American kestrel is listed by the FWC as threatened due to habitat loss, degradation, and fragmentation, as well as lack of regulatory protection (FWC 2013d). The southeastern American kestrel is the only non-migratory, permanent resident kestrel in Florida. However, the seasonal occurrence of a migratory subspecies of the northern American kestrel (*Falco sparverius sparverius)* occurs from September through March in Florida. Confident identification of southeastern American kestrels can only be made during the portion of the breeding season when migratory species are not present (FWC, 2013d). The southeastern American kestrel is a secondary cavity nester, preferring habitats of sandhill and open pine savannah maintained by fire. They can be found in open pine habitats, woodland edges, prairies, pastures, and other agricultural lands. Suitable kestrel habitat is documented throughout the study area, primarily in Sections 5-7 and 9-12.

Suitable kestrel habitat is documented throughout the study area. Activities within the 492 feet (150 meter) buffer of an active nest are considered to cause take. Pre-construction surveys are required to adhere to the components of the Imperiled Species Management Plan (ISMP).

Florida Sandhill Crane

The FWC listed the Florida sandhill crane as threatened due to the loss and degradation to nesting and foraging habitat from development and hydrologic alteration to their potential nesting habitat (FWC, 2013c). It is widely distributed throughout most of peninsular Florida. Sandhill cranes rely on shallow marshes for roosting and nesting and open upland and wetland habitats for foraging (Wood and Nesbitt, 2001).

The marshes and wet prairies within the study area provide potential nesting and roosting habitat for the sandhill crane. The pastures and other open uplands, including the roadway rights-of-way, provide foraging habitat. Activities within 400 feet of an active nest, or 1500 feet if flightless young are present, are considered to cause take. Pre-construction surveys should be conducted to adhere to the components of the ISMP and identify nests to avoid, minimize, or mitigate as necessary.

Florida Black Bear

The Florida black bear was removed from Florida's Endangered and Threatened Species list in 2012; however, it remains protected under Chapter 68A-4.009 F.A.C., the Florida Black Bear Conservation Plan. The FWC has identified the following sequential bear range classifications: rare, occasional, common, and frequent. The entirety of the study area falls within the "frequent" bear range in Florida. Additionally, they have identified an established home range within the Wekiva River Basin of about 10 or 20 miles for females and males, respectively (FWC, 2019).

The black bear requires large amounts of space for its home range and a variety of forested habitats, including flatwoods, swamps, scrub oak ridges, bayheads, and hammocks. Self-sustaining populations of bears are generally found on large tracks of contiguous forests with understories of berry producing shrubs or trees. Wekiva River basin is part of the Florida Wildlife Corridor, which is utilized to connect to larger habitats outside of the study area (FWC, 2019).

FWC's Roadkill and nuisance incidence data indicate frequent bear occurrences within the study area, including the more urbanized portions.

Gopher Tortoise

The gopher tortoise is state-designated threatened. This species occurs in the southeastern coastal plain from Louisiana to South Carolina; the largest portion of the total population is located in Florida (FWC, 2012). Gopher tortoises require well-drained, sandy soils for burrowing and nest construction, with a generally open canopy and an abundance of herbaceous groundcover, particularly broadleaf grasses, wiregrass, legumes, and fruits for foraging. Gopher tortoises can be found in most types of upland communities including disturbed areas and pastures. No critical habitat has been designated for the gopher tortoise. Suitable gopher tortoise habitat is located throughout the study area. Additionally, gopher tortoise burrows have been documented within the study area.

Florida Pine Snake

The Florida pine snake is listed by the FWC as threatened due to its habitat loss, fragmentation, and degradation to upland habitats from development and dire suppression (FWC, 2013b). They inhabit areas that feature well-drained sandy soils with a moderate to open canopy (Franz 1992, Ernst and Ernst 2003). Preferred habitats include sandhill and former sandhill, including old fields and pastures, sand pine scrub, and scrubby flatwoods. The pine snake often coexists with gopher tortoises and pocket gophers, spending the majority of its time underground.

Pine snakes have been rarely documented within the study area on FNAI's biodiversity matrix. However, due to the cryptic nature of this species and its known association with gopher tortoise, mammal burrows, and pocket gopher mounds, it is reasonable to assume that pine snakes are likely to be found within the study area. Current FWC guidelines for the relocation of the Florida pine snake state that any incidentally captured pine snake should be released on-site or allowed to escape unharmed if habitat will remain post-development.

Short-Tailed Snake

The short-tailed snake is listed by the FWC as threatened. This snake is endemic to Florida and is only found from the Suwannee River south to Highlands County (FNAI 2001). Short-tailed snakes

are rarely seen above ground as they spend most of their time burrowed in sandy soils. They primarily inhabit areas with well-drained sandy soils, particularly longleaf pine and xeric oak habitats, but may also be found in scrub and xeric hammock habitats (Van Duyn 1939, Carr 1940, Campbell and Moler 1992, Engel 1997). Limited habitat for the short-tailed snake occurs within the study area, as it is restricted to xeric habitats with open, sandy soils.

Striped Newt

Striped newts are listed as threatened by the FWC due to habitat loss and alteration, land use changes, climate change, and diseases. Striped newts may exist on the landscape in the following forms: eggs, larvae, eft, paedomorphic adult, aquatic adult, and terrestrial adult (Dodd et al. 2005, Enge 2019). Due to this variation of form, striped newts rely on both wetland and upland habitats throughout different stages of their life cycle. They can primarily be found in sandhill, scrub, scrubby flatwoods, or mesic flatwoods with suitable breeding wetlands occurring on the landscape. Growing season fire is essential in maintaining herbaceous groundcover required for breeding habitat. Suitable breeding wetland types are depression marsh, dome swamp, basin marsh, sinkhole pond, borrow pit, and sandhill lake habitats. Suitable habitat exists throughout the study area.

Wading Birds

Three wading birds have the potential to occur in the study area. These species are the roseate spoonbill, little blue heron, and tricolor heron. All are listed by the FWC as threatened. While the spoonbill is generally limited to coastal systems, and can be occasionally found inland, both species of herons are widely distributed throughout peninsular Florida. Wading birds depend on healthy wetlands and vegetated areas suitable for resting and breeding which are near foraging areas (FWC, 2013e). They forage in freshwater, brackish, and saltwater habitats. They tend to nest in multi-species colonies of a variety of woody vegetation types including cypress, willow, maple, black mangrove, and cabbage palm (FNAI, 2001).

No wading bird rookeries are documented within the study area, but there are 3 listed along the southern shores of Lake Apopka (FWC Wading Bird Rookeries,1999), part of which makes up almost all of Section 1.

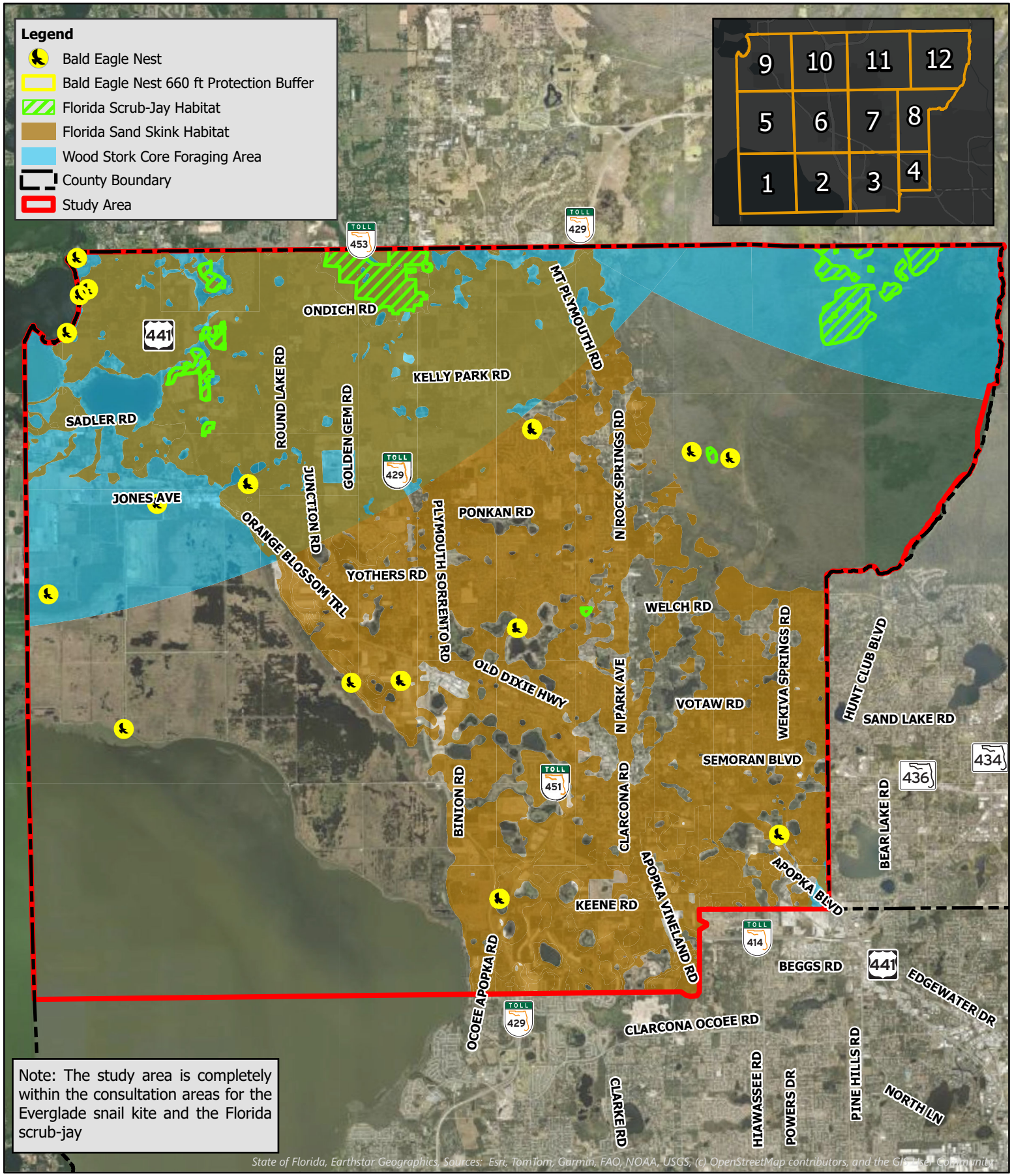


EXHIBIT - 6.8.1

North West Orange County Areawide Transportation Study (NOWOCATS)

Threatened and Endangered Species

NOWOCATS - May 2025

ORANGE COUNTY GOVERNMENT FLORIDA

N

0 1 2 Miles

Data Source: Audubon's EagleWatch; FDEP Wood Stork CFAs; USFWS CAs; FGDL Sand Skink Suitable Habitat