

## 323 Selective Clearing and Grubbing

### 323.1 General

Existing vegetation along transportation corridors are valuable living assets, and preservation of existing plant material is an alternative to removal and replacement with nursery material. Existing vegetation may be larger, established vegetation that serves buffering, ecological, or aesthetic functions. Relocation of plant material is often used to mitigate negative public perceptions of tree removal. The cost of relocation of material should always be considered when determining if relocation is reasonable. It is anticipated that protection of existing vegetation will have cost savings, in minimizing standard clearing and grubbing areas, and reducing the quantity of new nursery material required for buffering or landscape purposes.

Vegetation encompasses all living botanical material. The term “tree” refers to both trees and palms.

Preservation of, and relocation of existing tree and palms is intended to:

- Improve beautification and aesthetics along Florida’s transportation corridors
- Preserve legacy vegetation or landscape material previously installed with transportation funding
- Preserve plant material that may be relocated easily and affordably.

Plant preservation areas are areas in which no clearing and grubbing activities, construction, or staging areas are to occur. Within these areas, vegetation, including grasses, wildflowers, shrubs, or trees are to be protected from construction activities. For an example of a Selective Clearing and Grubbing Plan sheet, see **Exhibit 323-1**.

Areas requiring selective clearing and grubbing, tree protection, or plant preservation may be identified at various project development phases, including the PD&E phase. Review commitments made during the PD&E phase to determine if any of these areas were identified. Areas may also be identified during the Design phase as determined by the District Environmental Office, District Permit Office, District Landscape Architect, through public involvement, or the permitting process. .

Modification for Non-Conventional Projects:

Delete the above paragraph and see RFP for requirements.

The notes required for selective clearing and grubbing and plant preservation areas will vary depending on the project. It may be desirable to provide a separate Selective Clearing and Grubbing Detail sheet to display the notes, symbols, and details that are applicable to the project. For an example of a Selective Clearing and Grubbing Detail Sheet, see **Exhibit 323-2**.

Place Selective Clearing and Grubbing sheets in the component plans in accordance with **FDM 302**.

## **323.2 Selective Clearing and Grubbing Plan Sheet**

Selective Clearing and Grubbing plan sheets include the following information, as applicable:

- Extent and type of type of clearing operation required within the project R/W limits.
- Root pruning and branch pruning.
- Plant preservation areas.
- Tree protection barriers.

### **323.2.1 Sheet Set Up**

Use the standard plan format sheet provided in the FDOT CADD Software to prepare Selective Clearing and Grubbing Plan sheets. Refer to the **CADD Manual** for CADD standards associated with selective clearing and grubbing.

Show existing topography and the centerline of construction with stationing, proposed edge of roadway pavement, R/W lines, limits of construction, canopy of existing trees, limits of vegetation to remain, tree protection barrier, and trees to be relocated. Include a legend on each sheet depicting the type of selective clearing and grubbing operation to be performed.

Place a north arrow and scale in a conspicuous location, typically in the upper right portion of the sheet. Use a scale that provides clarity and legibility. Use appropriate match lines when necessary.

When tree canopies overlap, the entire outline of the tree canopies can be shown as one mass. Show tree protection barrier and root pruning locations. When existing trees to remain are to be root pruned, the trees will be assigned a label which is to be shown adjacent to the tree trunk. Trees that are to be branch pruned may also be labeled in the

plans. Each tree does not need to be labeled when a group of trees are to be branch pruned. Label areas of root or branch pruning on the plans or in the Work Table. The disposition of trees to be relocated will be shown on Tree Disposition sheets. For examples of a Tree Disposition sheet and a Tree Disposition Chart, see **Exhibits 323-3** and **323-4**.

Where clarification is needed, trees to be removed may be noted on the plan.

Delineate areas of tree protection and plant preservation with tree protection barriers. Tree protection barrier may be used to delineate areas of selective clearing and grubbing. When a plant preservation area is adjacent to a R/W fence to remain, or similar permanent barrier, tree protection barrier parallel to the permanent barrier may be omitted.

### **323.3 Detail Sheet**

#### **323.3.1 Work Table**

For an illustration of a Selective Clearing and Grubbing Work Table, see **Exhibit 323-2**.

Selective clearing and grubbing areas are defined and labeled by location. Location numbers can be based on roadway stationing numbers, quadrants or sheet numbers.

Provide a Selective Clearing and Grubbing Work Table when the project includes selective removal of vegetation. As a minimum, the table includes:

- (1) Abbreviated name of primary species to preserve
- (2) Abbreviated name of primary species targeted for removal
- (3) Work Description

Other information that may be included in the table:

- (1) Florida Exotic Pest Plant Council Category I species to be removed
- (2) Estimated percent of Category I vegetative cover for each area
- (3) Additional species to target for removal or preservation
- (4) Root and branch pruning
- (5) Additional Information

### **323.3.2 Species Legend and Work Table Notes**

Include a species legend with the Selective Clearing and Grubbing Work Table. The legend is to show all plant species noted in the table. Plant species are typically abbreviated by the first letter of the genus and the first letter of the species of the botanical name; e.g., show Live Oak, *Quercus virginiana* as QV.

Category 1 plants (as listed by the [Florida Exotic Pest Plant Council](#)) are undesirable, and in most cases should be listed to be removed. The designer may call out Category 1 plants that are to remain in the Work Table Notes or in the Selective Clearing and Grubbing Work Table. Undesirable native species to be targeted for removal can also be listed.

Provide the following note on the Selective Clearing and Grubbing Detail sheet:

“Primary” species to target (remove) or preserve are those that were determined to be most prevalent in that area, and are not intended to be the only species that occur.

### **323.3.3 Selective Clearing and Grubbing Field Assessment**

The field assessment should include, but is not limited to, the following:

- Existing Vegetation: Species, Size, Condition, Location
- Invasive Vegetation: Species, Size, Location
- Opportunities for Vegetation Preservation, or Selective removal of vegetation as an alternative to Standard Clearing and Grubbing
- Construction Limits and the anticipated impacts on surrounding vegetation

The result of the Field Assessment(s) will determine the course of action for Selective Clearing and Grubbing and the extent of the Vegetation Survey.

### **323.3.4 Selective Clearing and Grubbing Site Inventory Analysis and Cross-Discipline Coordination**

Prepare a site inventory and analysis of existing vegetation, opportunities for preservation and protection of existing vegetation, relocation options, and selective removal of vegetation.

Coordinate with roadway design to maximize areas of preservation of existing desirable vegetation. Coordinate with the surveyor to have trees tagged and surveyed, as necessary. Special attention should be given to preservation in urban and suburban corridors where an existing tree or existing trees have been previously protected and cared for, previous beautification projects, designated Scenic Highways, corridors through conservation lands, and rural corridors with exceptional natural beauty that enhance the experience of the traveling public.

Coordinate with utility companies, drainage engineers, and traffic engineers to ensure that preservation of existing vegetation is coordinated between all disciplines. Coordinate with the District Landscape Architect.

### **323.3.5 Selective Clearing and Grubbing Maintenance Report**

Prepare a written or graphic report for the care and maintenance of the tree preservation areas, and selective clearing and grubbing areas. This Maintenance Report will convey the intent of the selective removal and preservation of vegetation. Coordinate with the District Landscape Architect to ensure that the intent of the tree preservation areas is in alignment with future highway landscape plans. Plans must note that the contractor will be responsible for coordination with an arborist for the care of vegetation during construction and during root and branch pruning. The report should have detailed arboricultural practices to facilitate accurate bidding.

### **323.4 Tree Disposition Plans**

Tree Disposition plans are used when there are trees to be relocated. For an example of a Tree Disposition Sheet, see **Exhibit 323-3**.

Tree Disposition plan sheets will show the condition of each tree, and whether each tree is to remain, to be removed or to be relocated. Tree disposition plans and Tree Disposition charts are a catalogue of the trees on a site, and the tree numbers which must correspond to the tag ID numbers on the trees on site. When a group of trees are to remain and are located in close geographic proximity, and inventorying each individual tree is not reasonable or cost effective, groups of trees may be shown as a single cluster and assigned one representative tree number. This representative tree number is to be noted on the Tree Disposition Chart and noted as 'Group of Trees' in the notes column.

Tree Disposition Plans will be prepared as component plans as part of the Roadway Plans set. Tree Disposition plans are to be numbered consecutively with the sheet numbers prefixed by the letters "TD". When prepared as part of a landscape plan set, number the

sheets consecutively and include the Tree Disposition sheets before the landscape plan sheets in the set.

### **323.5 Tree Disposition Chart**

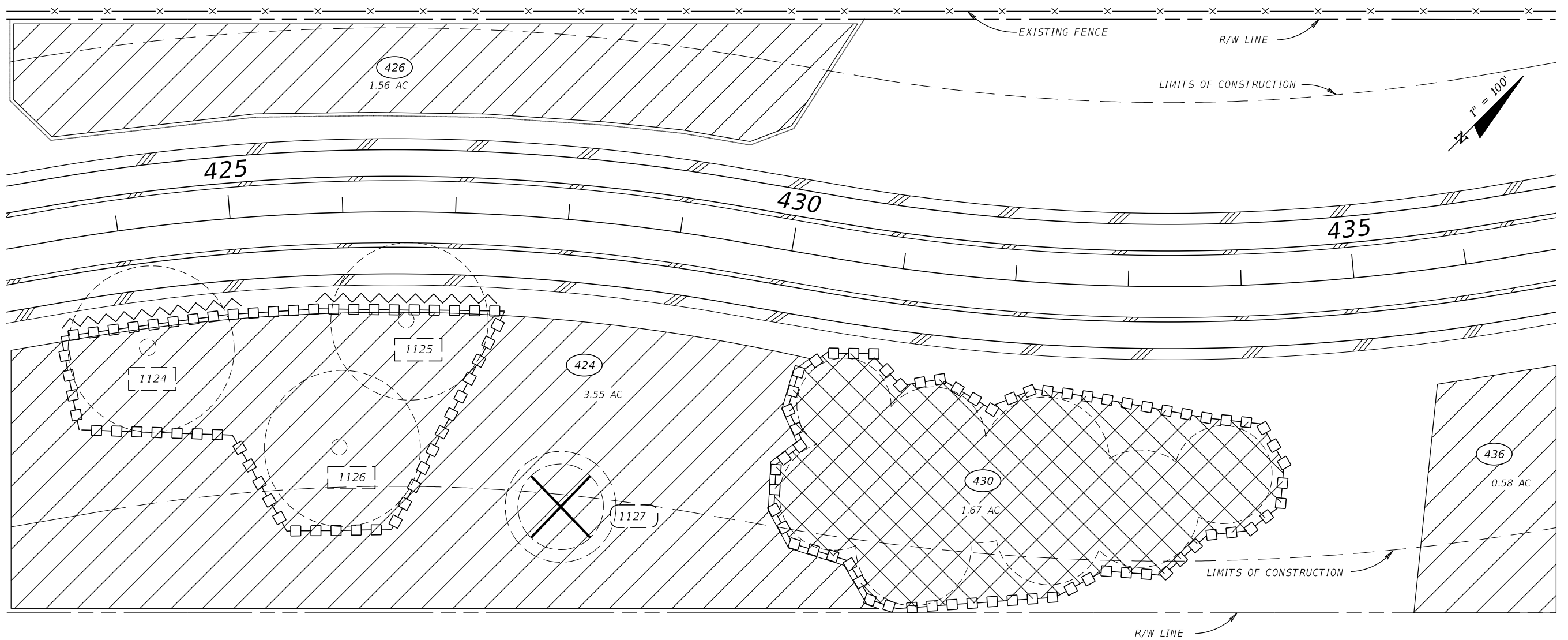
A separate key, Titled “Tree Disposition Chart” in table format should accompany the Tree Disposition Plan, and include:

- The identification number of each tree
- Sheet number
- Botanical and common name of each tree
- Diameter at breast height (DBH) of each tree
- Approximate Tree height (feet)
- Approximate Canopy spread (feet)
- Condition of the tree
- Each tree must be labelled as to remain, to be removed, or to be relocated (Disposition). For CADD symbols refer to ***Exhibit 323-3***.
- If tree does not exist, note ‘Tree/Palm does not exist’

Site-specific requirements may be included as notes. Site-specific requirement may include:

- watering schedule
- fertilizer mix
- fertilizer schedule
- backfill or soil amendments.

An example of a Tree Disposition Chart is included as ***Exhibit 323-4***.



**LEGEND**

—□—□—□—□— TREE PROTECTION BARRIER

~~~~~ ROOT PRUNING LINE

○ ○ CANOPY OF EXISTING TREE  
(DASHED LINE DENOTES DRIPLINE OF TREE)

⊗ TREES TO BE REMOVED

⊘ (XX) SELECTIVE CLEARING AND GRUBBING

⊘ (XX) PLANT PRESERVATION AREAS

XXXX EXISTING TREE TO REMAIN

XXXX) EXISTING TREE TO BE REMOVED

**NOTES**

1. TREE DESIGNATION (ID) NUMBERS ARE DETAILED ON THE TREE DISPOSITION SHEETS.

**Exhibit 323-1**  
Date: 1/1/17

| REVISIONS |             | ARTURITO T. GOMEZ, L.A.<br>L.A. NO.: 99999<br>LANDSCAPERS, LLC.<br>345 IVY LANE<br>ORLANDO, FL 32801<br>CERTIFICATE OF AUTHORIZATION: 98765 |             | STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |        | <b>SELECTIVE CLEARING &amp;<br/>GRUBBING PLAN</b> | SHEET<br>NO. |
|-----------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------|--------|---------------------------------------------------|--------------|
| DATE      | DESCRIPTION | DATE                                                                                                                                        | DESCRIPTION | ROAD NO.                                         | COUNTY |                                                   |              |
|           |             |                                                                                                                                             |             | SR 22                                            | BAY    |                                                   |              |

**SELECTIVE CLEARING & GRUBBING WORK TABLE**

| AREA ID | WORK DESCRIPTION                                                                                                                                                                              | EST. % OF PRIMARY SPECIES TO TARGET | PRIMARY SPECIES TO TARGET | SPECIES TO PRESERVE | ADDITIONAL INFORMATION                                                                                             |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------|
| 424     | DESIGNATES AREAS WHERE CATEGORY #1 INVASIVE, EXOTIC VEGETATION AND NATIVE UNDERSTORY WILL BE SELECTIVELY REMOVED. LARGE DESIREABLE TREES TO REMAIN. ALL TREES UNDER 4" DBH TO BE REMOVED.     | 75%                                 | JP, ST, LY, AA            | PE, QV, SP          | RAISE CANOPY OF QV BY PRUNING. REMOVE LARGE TREE DEBRIS OR GRIND ON SITE AND SPREAD IN UPLAND (NON-GRASSED) AREAS. |
| 426     | DESIGNATES AREAS WHERE ALL NATIVE VEGETATION WILL BE MOWED FLUSH WITH THE GROUND AND ALL CATEGORY #1 INVASIVE, EXOTIC VEGETATION WILL BE TREATED WITH HERBICIDES AND ALLOWED TO DIE IN PLACE. | 100%                                | TS, ST, CW                | NONE                | INCLUDES REMOVAL OR MOWING OF WILLOWS AND WAX MYRTLE.                                                              |
| 436     | DESIGNATES AREAS WHERE CATEGORY #1 INVASIVE, EXOTIC VEGETATION WILL BE SELECTIVELY REMOVED FROM DESIREABLE VEGETATION TO REMAIN.                                                              | 50%                                 | JP, ST, LY                | PE, QV, SP          |                                                                                                                    |

**WORK TABLE NOTES**

- "PRIMARY" SPECIES TO TARGET (REMOVE) OR PRESERVE ARE THOSE THAT WERE DETERMINED TO BE MOST PREVALENT IN THAT AREA, AND ARE NOT INTENDED TO BE THE ONLY SPECIES THAT OCCUR.  
  
THE FOLLOWING ADDITIONAL UNDESIREABLE NATIVE SPECIES WILL BE TARGETED FOR REMOVAL IN ALL AREAS LISTED IN THE WORK TABLE:  
  
*BOTANICAL NAME (COMMON NAME)*  
MYRICA CERIFERA (SOUTHERN WAX MYRTLE)  
TYPHA SPP. (CATTAILS)
- ESTIMATED PERCENTAGES OF INVASIVE EXOTIC VEGETATION ARE BASED ON FIELD OBSERVATIONS AND ARE SUBJECT TO CHANGE.
- THE FOLLOWING CATEGORY #1 INVASIVE SPECIES WILL NOT BE TARGETED FOR REMOVAL:  
  
*BOTANICAL NAME (COMMON NAME)*  
SOLANUM TAMPICENSE (WETLAND NIGHTSHADE)  
PANICUM REPENS (TORPEDO GRASS)

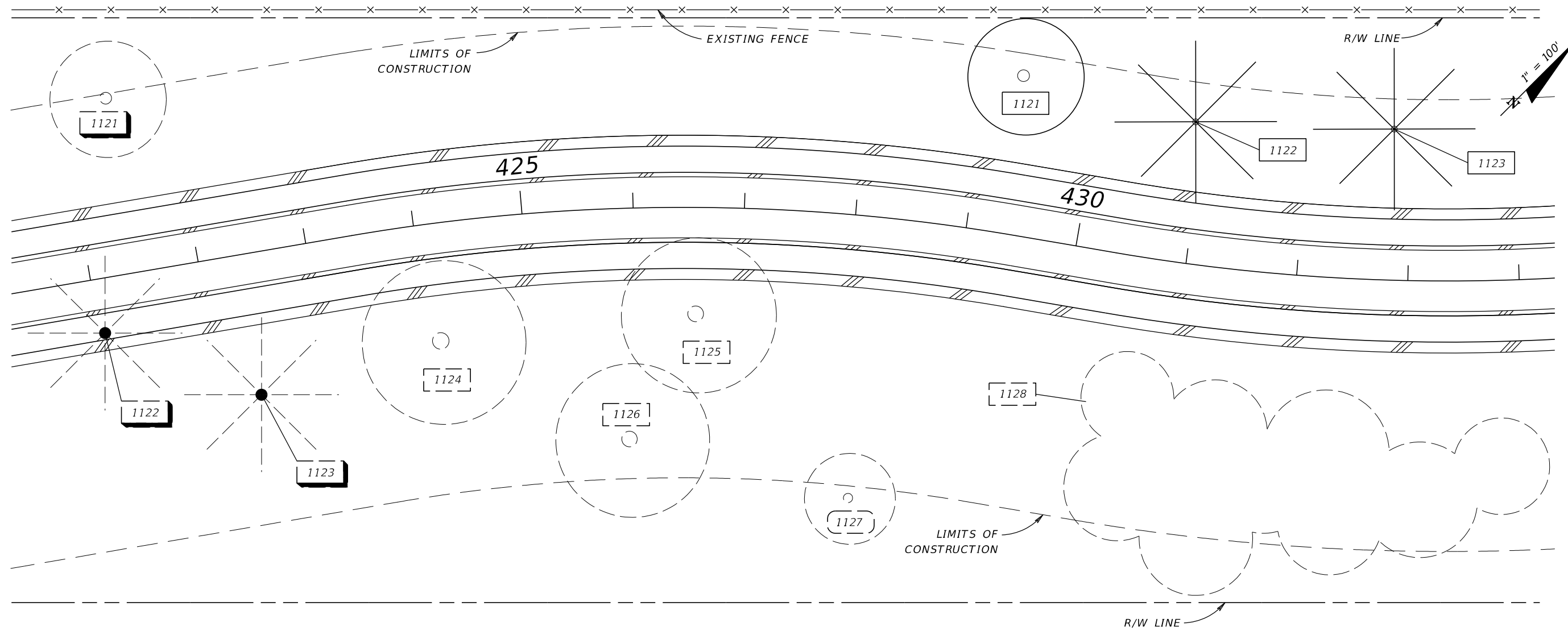
**SPECIES LEGEND**

| (SYM) | BOTANICAL NAME (COMMON NAME)                     |
|-------|--------------------------------------------------|
| (AA)  | ACACIA AURICULIFORMIS (EARLEAF ACACIA)           |
| (ST)  | SCHINUS TEREBINTHIFOLIUS (BRAZILIAN PEPPER)      |
| (TS)  | TYPHA SPP. (CATTAILS)                            |
| (JP)  | SYZYGIVM CUMINI (JAVA PLUM)                      |
| (LY)  | LYGODIVM SPP. (JAPANESE/OLD WORLD CLIMBING FERN) |
| (MC)  | MYRICA CERIFERA (SOUTHERN WAX MYRTLE)            |
| (PE)  | PINUS ELLIOTTII (SLASH PINE)                     |
| (SP)  | SABAL PALMETTO (SABAL PALM)                      |
| (QV)  | QUERCUS VIRGINIANA (LIVE OAK)                    |
| (CW)  | SALIX CAROLINIANA (COASTAL PLAIN WILLOW)         |

**Exhibit 323-2**  
Date: 1/1/17

| REVISIONS |             |      |             | ARTURITO T. GOMEZ, L.A.<br>L.A. NO.: 99999<br>LANDSCAPERS, LLC.<br>345 IVY LANE<br>ORLANDO, FL 32801<br>CERTIFICATE OF AUTHORIZATION: 98765 | STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |        |                      | <b>SELECTIVE CLEARING AND<br/>GRUBBING DETAIL SHEET</b> | SHEET<br>NO. |
|-----------|-------------|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------|----------------------|---------------------------------------------------------|--------------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |                                                                                                                                             | ROAD NO.                                         | COUNTY | FINANCIAL PROJECT ID |                                                         |              |
|           |             |      |             |                                                                                                                                             | SR 22                                            | BAY    | 123456-1-52-01       |                                                         |              |





**LEGEND**

- XXXX EXISTING TREE/ GROUP OF TREES TO REMAIN
 
 EXISTING TREE
 

 RELOCATED TREE
- XXXX EXISTING TREE TO BE REMOVED
 
 EXISTING PALM
 

 RELOCATED PALM
- XXXX EXISTING TREE TO BE RELOCATED
- XXXX RELOCATED TREE

Exhibit 323-3  
 Date: 1/1/18

| REVISIONS |             |      |             | ARTURITO T. GOMEZ, L.A.<br>L.A. NO.: 99999<br>LANDSCAPERS, LLC.<br>345 IVY LANE<br>ORLANDO, FL 32801<br>CERTIFICATE OF AUTHORIZATION: 98765 | STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |        |                      | <b>TREE DISPOSITION SHEET</b> | SHEET NO. |
|-----------|-------------|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------|----------------------|-------------------------------|-----------|
| DATE      | DESCRIPTION | DATE | DESCRIPTION |                                                                                                                                             | ROAD NO.                                         | COUNTY | FINANCIAL PROJECT ID |                               |           |
|           |             |      |             |                                                                                                                                             | SR 22                                            | BAY    | 123456-1-52-01       |                               |           |

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| SHEET NUMBER | TREE NO. | SYMBOL | BOTANICAL NAME     | COMMON NAME | DBH (INCHES) (DIAMETER AT BREAST HEIGHT) | HEIGHT (FEET) (APPROX.) | SPREAD (FEET) (APPROX.) | LOCATION        |             | CONDITION | DISPOSITION                      | NOTES                                                                           |
|--------------|----------|--------|--------------------|-------------|------------------------------------------|-------------------------|-------------------------|-----------------|-------------|-----------|----------------------------------|---------------------------------------------------------------------------------|
|              |          |        |                    |             |                                          |                         |                         | STA.            | OFFSET/SIDE |           |                                  |                                                                                 |
| TD-1         | 1121     | QV     | QUERCUS VIRGINIANA | LIVE OAK    | 4                                        | 16                      | 7                       | 421+20          | 164' LT     | GOOD      | RELOCATE TO STA. 429+30, 145' LT |                                                                                 |
| TD-1         | 1122     | RR     | ROYSTONIA REGIA    | ROYAL PALM  | 19                                       | 19 GW                   |                         | 421+20          | 51' RT      | GOOD      | RELOCATE TO STA. 430+90, 130' LT |                                                                                 |
| TD-1         | 1123     | RR     | ROYSTONIA REGIA    | ROYAL PALM  | 23                                       | 13 GW                   |                         | 422+60          | 131' RT     | GOOD      | RELOCATE TO STA. 432+85, 135' LT |                                                                                 |
| TD-1         | 1124     | QV     | QUERCUS VIRGINIANA | LIVE OAK    | 16                                       | 30                      | 35                      | 424+25          | 108' RT     | GOOD      | REMAIN                           |                                                                                 |
| TD-1         | 1125     | QV     | QUERCUS VIRGINIANA | LIVE OAK    | 14                                       | 30                      | 30                      | 426+57          | 97' RT      | GOOD      | REMAIN                           |                                                                                 |
| TD-1         | 1126     | QV     | QUERCUS VIRGINIANA | LIVE OAK    | 25                                       | 40                      | 50                      | 425+99          | 210' RT     | GOOD      | REMAIN                           | LOCATED INSIDE PLANT PRESERVATION AREA #430, BOUNDED BY TREE PROTECTION BARRIER |
| TD-1         | 1127     | QV     | QUERCUS VIRGINIANA | LIVE OAK    | 6                                        | 20                      | 25                      | 427+95          | 300' RT     | GOOD      | REMOVE                           | SEE SELECTIVE CLEARING AND GRUBBING SHEET                                       |
| TD-1         | 1128     | PC     | PINUS CLAUSA       | SAND PINE   |                                          |                         |                         | 429+96 - 433+79 | RT          | GOOD      | REMAIN                           | GROUP OF PINES                                                                  |

**Exhibit 323-4**  
 Date: 1/1/17

|           |             |      |             |                                                                                                                                             |                                                  |        |                      |                               |           |
|-----------|-------------|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------|----------------------|-------------------------------|-----------|
| REVISIONS |             |      |             | ARTURITO T. GOMEZ, L.A.<br>L.A. NO.: 99999<br>LANDSCAPERS, LLC.<br>345 IVY LANE<br>ORLANDO, FL 32801<br>CERTIFICATE OF AUTHORIZATION: 98765 | STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION |        |                      | <b>TREE DISPOSITION CHART</b> | SHEET NO. |
| DATE      | DESCRIPTION | DATE | DESCRIPTION |                                                                                                                                             | ROAD NO.                                         | COUNTY | FINANCIAL PROJECT ID |                               |           |
|           |             |      |             |                                                                                                                                             | SR 22                                            | BAY    | 123456-1-52-01       |                               |           |

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