

323 Selective Clearing and Grubbing Plans

323.1 General

Selective Clearing and Grubbing Plan sheets are developed when existing vegetation, trees, and palms are to be protected, relocated, pruned, or removed as an alternative to Standard Clearing and Grubbing. **FDM 229** contains design criteria to determine the type and the limits of selective clearing and grubbing.

Place Selective Clearing and Grubbing Plan sheets 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

For an example of a Selective Clearing and Grubbing Plan sheet, see **Exhibit 323-1**.

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 on the plans. Branch and root pruning locations. When existing trees to remain are to be root pruned, the trees are assigned a label which should also be summarized, per tree, in a summary box and shown as pruned on the Tree Disposition Charts. These items may also be labeled on the plans when needed for clarity or called out in the Selective Clearing & Grubbing Work Table, but must be quantified per tree. Each tree does not need to be labeled when a group of trees are to be branch pruned, but the quantity of trees to be pruned must be provided. The disposition of trees to be relocated is shown on Tree Disposition sheets. For an example of a Tree Disposition Sheet and a Tree Disposition Chart, see **Exhibit 323-3** and **323-4**.

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

Generally, the line between where standard clearing and grubbing occurs and where trees to be protected, relocated, or selectively removed demarcates a selective clearing and grubbing area. Selective clearing and grubbing areas are not always demarcated by a means of vegetation treatment or protection (tree protection barrier). Areas of tree protection, plant preservation, or selective clearing and grubbing may be delineated with tree protection barriers. When a tree protection area is adjacent to a R/W fence to remain, a sediment barrier, or similar permanent barrier, the tree protection barrier that is parallel to the permanent barrier may be omitted.

323.3 Selective Clearing and Grubbing Detail Sheet

The notes required for selective clearing and grubbing 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**.

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 and intent (structural, aesthetic, safety, etc.)
- (5) Tree stumps to be removed or to remain
- (6) 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, in cases where it may not be practical or feasible to remove them. 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.

Provide a note describing follow up treatment needed to prevent recurrence of removed plants.

323.4 Tree Disposition Sheets

Tree Disposition Sheets are used when there are trees to be relocated or an inventory of existing trees is necessary. An inventory may be necessary in order to document the species and size, in the case of damage or removal during construction. The inventory will provide a record of what existed, prior to the damage or removal, if mitigation or

replacement is warranted. For an example of a Tree Disposition Sheet, see **Exhibit 323-3**.

Tree Disposition Sheets may be omitted if required information and tree relocations can be clearly and legibly shown on Selective Clearing and Grubbing or Landscape Plan sheets. If a tree or vegetation survey is available, utilize either Selective Clearing and Grubbing, Landscape or Tree Disposition sheets, showing all information on one sheet type on the Tree Disposition Chart. If there is no tree or vegetation survey, utilize only Selective Clearing and Grubbing or Landscape Sheets to show all information.

Note the following in the plans:

- Proper root pruning methods and time schedule for each species of plant to be relocated. See **FDM 323.6** for more information.
- Contractor is responsible for coordination with an arborist for the care of vegetation during construction and during root and branch pruning

Tree bracing that is not covered by **Standard Plans, Index 580-001** is to be detailed in the plans. Refer to **FDM 329.7** to determine when **Standard Plans, Index 580-001** applies. Provide recommended root pruning procedures and time schedule. Provide the above information as plan notes or details to the sheet.

Tree Disposition Sheets show the condition of each tree, and whether each tree is to remain, to be removed, or to be relocated. Tree Disposition Sheets and Tree Disposition Charts (see **FDM 323.5**) list the trees on a site, and the tree numbers which must correspond to the tag ID numbers. Groups of trees to remain may be shown as a single cluster and assigned one representative tree number. Include the representative tree number on the Tree Disposition Chart and noted as 'Group of Trees' in the notes column. Show limits of clear sight and horizontal offset on the Tree Disposition Sheet for the location of relocated material. Only show this information on the Tree Disposition Sheet if it is not shown elsewhere in the plan set, such as on the Landscape Plan.

Tree Disposition Sheets are typically prepared as part of the Selective Clearing and Grubbing Plan Sheets in the Roadway Plans set. When prepared as part of a Landscape plan set, place the sheets prior to the Landscape Plan sheets.

323.5 Tree Disposition Chart

A plan sheet titled "Tree Disposition Chart" should accompany the Tree Disposition Sheets, and include the following in table format:

- Sheet number
- The identification number of each tree
- Botanical and common name of each tree
- Diameter at breast height (DBH) of each tree
- Condition of the tree including health, structure, and damage. Use the following (simplified) version of the International Society of Arboriculture (ISA) tree rating system. (Excellent, Good, Fair, Poor, Dead)
- Label the disposition of each tree as “To Remain,” “To Be Removed,” or “To Be Relocated.” The location for relocation may be added. For CADD symbols refer to **Exhibit 323-3**.
- If a tree or palm is removed following the Vegetation Survey, note ‘Tree/Palm does not exist’

Note: Collecting and providing information on the height and spread of trees may not be cost effective, relevant, or feasible, depending on the scale of the project.

A note must be added to the Tree Disposition Charts when all trees are not shown from the Tree Survey.

Determine if the following is useful information, and provide if required:

- Approximate Tree height (feet)
- Approximate Canopy spread (feet)
- Location of the tree. Location can be based on roadway stationing numbers, quadrants or sheet numbers.

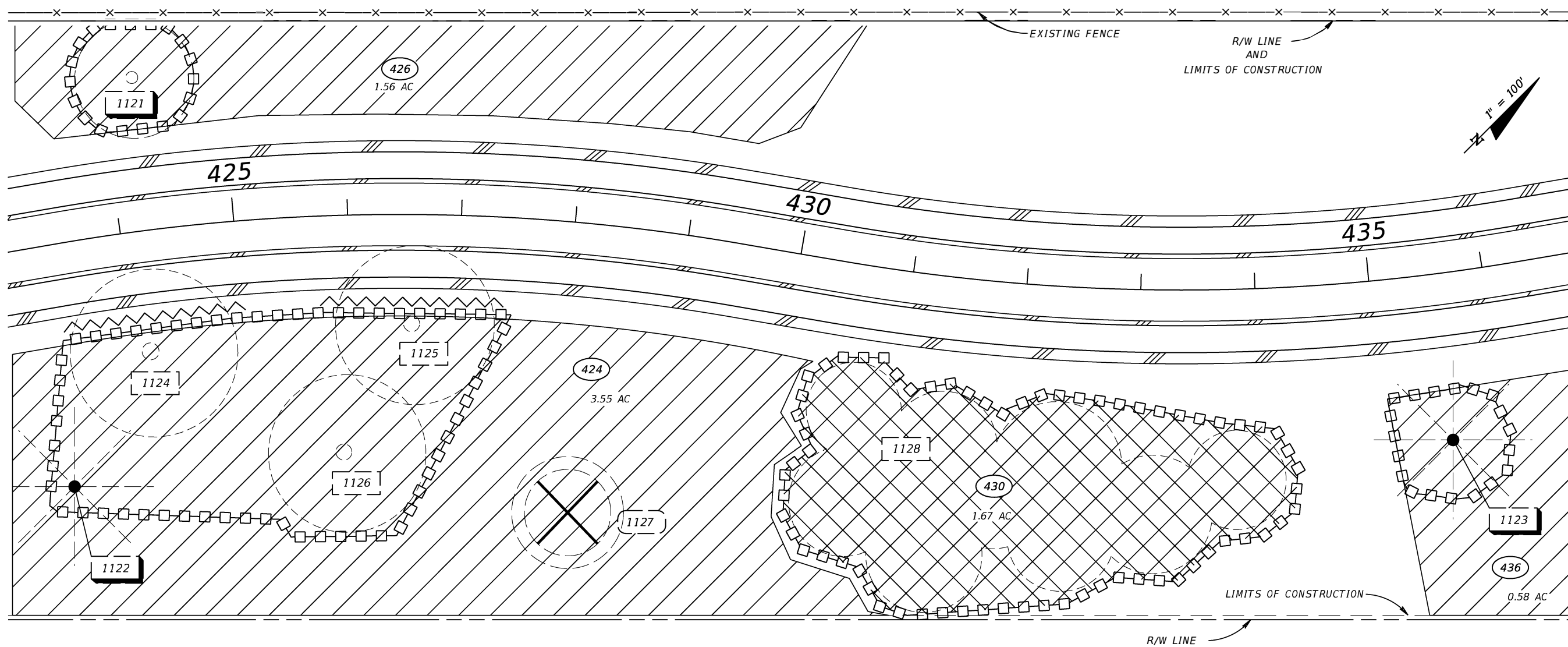
Site-specific requirements may be included under the “Notes” column. Site-specific requirements may include:

- Watering schedule
- Fertilizer mix
- Fertilizer schedule
- Backfill or soil amendments.
- Root or Branch pruning and intent (structural, aesthetic, safety, etc.)

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

323.6 Root and Branch Pruning

Root and/or Branch pruning can be shown in a plant schedule in either the Selective Clearing and Grubbing, Landscape, or Tree Disposition Plans. Do not duplicate information on separate plan sets. Use the sequence of construction to determine where to show root or branch pruning. If root or branch pruning will need to be accomplished early in the construction process, show on the Selective Clearing and Grubbing Plans. If pruning needs to be accomplished late in the construction process, show pruning on the Tree Disposition or Landscape Plans. Always specify the pruning objectives, whether for structural purposes, aesthetics, safety, clearance, etc. Ensure there is enough information provided so this work can be accurately bid by the Contractor and inspected for compliance by the Engineer.



LEGEND

TREE PROTECTION BARRIER

ROOT PRUNING LINE

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

TREES TO BE REMOVED

SELECTIVE CLEARING AND GRUBBING AREAS

PLANT PRESERVATION AREAS

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE RELOCATED

NOTES

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

Exhibit 323-1
Date: 1/1/19

REVISIONS				ARTURITO T. GOMEZ, L.A. L.A. NO.: 99999 LAND DESIGN, LLC. 345 IVY LANE ORLANDO, FL 32801	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 22	BAY	123456-1-52-01	

SELECTIVE CLEARING & GRUBBING WORK TABLE

AREA ID	WORK DESCRIPTION	EST. % OF PRIMARY SPECIES TO TARGET	PRIMARY SPECIES TO TARGET	SPECIES TO REMAIN	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.

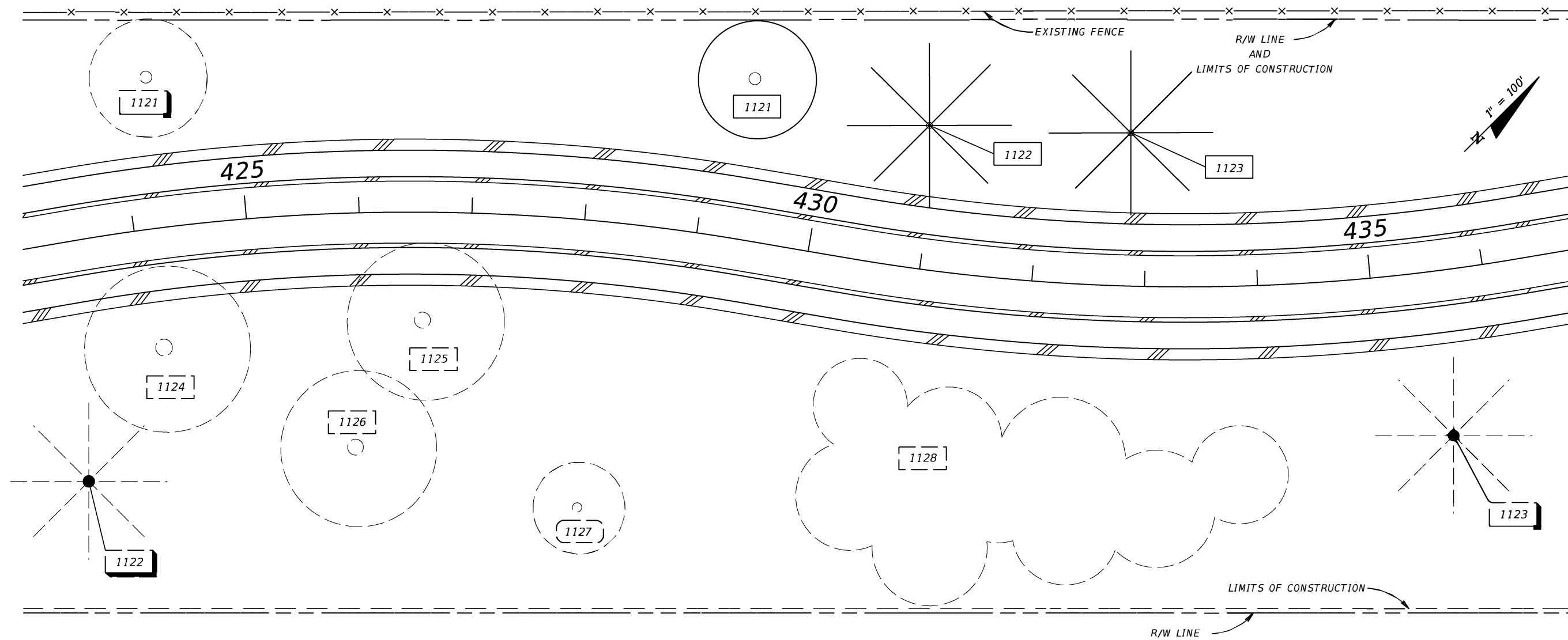
THE FOLLOWING ADDITIONAL UNDESIREABLE NATIVE SPECIES WILL BE TARGETED FOR REMOVAL IN ALL AREAS LISTED IN THE WORK TABLE:
BOTANICAL NAME (COMMON NAME)
MYRICA CERIFERA (SOUTHERN WAX MYRTLE)
TYPHA SPP. (CATTAILS)
- ESTIMATED PERCENTAGES OF INVASIVE EXOTIC VEGETATION ARE BASED ON FIELD OBSERVATIONS AND ARE 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: 1/1/19

REVISIONS				ARTURITO T. GOMEZ, L.A. L.A. NO.: 99999 LAND DESIGN, LLC. 345 IVY LANE ORLANDO, FL 32801	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SELECTIVE CLEARING AND GRUBBING DETAIL SHEET	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 22	BAY	123456-1-52-01		



LEGEND

- | | | | | | |
|--|---|--|---------------|--|----------------|
| | EXISTING TREE/ GROUP OF TREES TO REMAIN | | EXISTING TREE | | RELOCATED TREE |
| | EXISTING TREE TO BE REMOVED | | EXISTING PALM | | RELOCATED PALM |
| | EXISTING TREE TO BE RELOCATED | | | | |
| | RELOCATED TREE | | | | |

Exhibit 323-3
Date: 1/1/19

REVISIONS				ARTURITO T. GOMEZ, L.A. L.A. NO.: 99999 LAND DESIGN, LLC. 345 IVY LANE ORLANDO, FL 32801	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 22	BAY	123456-1-52-01	

TREE DISPOSITION SHEET

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G10-11.011, F.A.C.

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	424+20	130' LT	ABOVE AVERAGE	RELOCATE TO STA. 429+30, 145' LT	NURSERY MATERIAL PLANTED IN 2017 AS PART OF A LANDSCAPE PROJECT
TD-1	1122	RR	ROYSTONIA REGIA	ROYAL PALM	19	19 GW		423+60	210' RT	ABOVE AVERAGE	RELOCATE TO STA. 430+90, 130' LT	
TD-1	1123	RR	ROYSTONIA REGIA	ROYAL PALM	23	13 GW		435+70	140' RT	EXCELLENT	RELOCATE TO STA. 432+85, 135' LT	
TD-1	1124	QV	QUERCUS VIRGINIANA	LIVE OAK	16	30	35	424+25	108' RT	AVERAGE	REMAIN	
TD-1	1125	QV	QUERCUS VIRGINIANA	LIVE OAK	14	30	30	426+57	97' RT	ABOVE AVERAGE	REMAIN	
TD-1	1126	QV	QUERCUS VIRGINIANA	LIVE OAK	25	40	50	425+99	210' RT	ABOVE AVERAGE	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	POOR	REMOVE	SEE SELECTIVE CLEARING AND GRUBBING SHEET
TD-1	1128	PC	PINUS CLAUSA	SAND PINE				430+70 - 434+95	RT	AVERAGE	REMAIN	GROUP OF PINES

Exhibit 323-4
 Date: 1/1/19

REVISIONS				ARTURITO T. GOMEZ, L.A. L.A. NO.: 99999 LAND DESIGN, LLC. 345 IVY LANE ORLANDO, FL 32801	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TREE DISPOSITION CHART	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 22	BAY	123456-1-52-01		