



Agenda

Town of Lake Park

Tree Board

Tuesday, November 10, 2020 6:00 P.M.
Town Hall Commission Chamber,
535 Park Avenue, Lake Park, Florida 33403

PLEASE TAKE NOTICE AND BE ADVISED, that if any interested person desires to appeal any decision of the Town Commission, with respect to any matter considered at this meeting, such interested person will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. *Persons with disabilities requiring accommodations in order to participate in the meeting should contact the Town Clerk's office by calling 881-3311 at least 48 hours in advance to request accommodations.*

Pamela Frazier Board Member
Cynthia Grey Board Member
Edward Viera Board Member

A. CALL TO ORDER/ ROLL CALL

B. PLEDGE OF ALLEGIANCE

C. Consent Agenda:

1. September 21, 2020 Tree Board Meeting Minutes **Tab 1**

D. NEW BUSINESS

2. Education Video on Florida Native Plants and Shrubs **Tab 2**

3. Florida Native and Non-Native Plant Material documents received from Board Member Viera (this agenda item will allow for an open discussion between Board Member Viera and all Board Members so as to review and explain the documents provided) **Tab 3**

E. PUBLIC COMMENT

This time is provided for addressing items that do not appear on the Agenda. Please complete a comment card and provide it to the Agency Clerk so speakers may be announced. Please remember comments are limited to a TOTAL of three minutes.

F. BOARD MEMBER COMMENTS

G. STAFF COMMENTS

H. ADJOURNMENT

The next scheduled Tree Board Meeting will be conducted on December 8, 2020
Tree Board Agenda
November 10, 2020

Consent Agenda

TAB 1



**Minutes
Town of Lake Park, Florida
Tree Board Meeting Minutes
Tuesday, September 21, 2020, 6:30 PM
Via Zoom**

The Tree Board met for the purpose of a training session on Tuesday, September 21, 2020 at 6:30 p.m. Present were Pamela Frazier, Cynthia Grey, and Edward “Eddy” Viera. Town staff included Community Development Director Nadia DiTommaso, and Town Clerk Vivian Mendez.

Town Clerk Mendez performed the roll call and led the pledge of allegiance.

Introductions/Orientation:

1. Introduction of Board Members and Staff.

Town Clerk Member introduced the staff members present and their role with the Board.

2. Board Member Orientation.

Town Clerk Mendez reviewed the Power Point Presentation provided to the Board as part of their agenda packet.

3. Duties and Responsibilities of the Board.

Town Clerk Mendez reviewed the Tree Board Town Code. She then turned the meeting over to Community Development Director DiTommaso for details on the Town Code.

New Business:

4. Map of Public Areas

Community Development Director DiTommaso explained the Town area map provided.

5. Town Code of Ordinance Related to Plantings.

Community Development Director DiTommaso asked the Board members questions to understand their knowledge of plantings related to Trees and Shrubs. After discussion with the Board, it was determined that additional resources to assist the Board with educational material and videos would be provided to assist the Board Members with understanding the different Trees and Shrubs to begin the task of creating the Tree Inventory.

PUBLIC COMMENT:

None

BOARD MEMBER COMMENTS:

Board Member Frazier questioned how often the Tree Board would meet. Town Clerk Mendez announced that the Tree Board would possibly meet once a month for the next three months.

Board Member Grey announced the City of Palm Beach Gardens, and the Village of North Palm Beach had implemented a Tree Dedication program for recently deceased

members of their communities. She suggested that the Town of Lake Park look into creating a similar program.

Board Member Viera had no comments.

Town Clerk Mendez thanked everyone for volunteering their time to the Board. She explained that the next few months the Board would meet monthly and then as the Board began working on projects the Boards would meet every other month. She stated that an email would be sent to the Board members announcing the next meeting.

ADJOURNMENT

There being no further business to come before the Board, the meeting adjourned at 7:32 p.m.

Town Clerk, Vivian Mendez, MMC

Town Seal

Approved on this _____ of _____, 2020

TAB 2



Town of Lake Park Tree Board

Agenda Request Form

Meeting Date: November 10, 2020

Agenda Item No. 2 and 3

Agenda Title: Educational Video selected by Staff (Tab 2) and Documents Provided by Board Member Viera (Tab 3)

- SPECIAL PRESENTATION/REPORTS
- CONSENT AGENDA
- OLD BUSINESS
- NEW BUSINESS**
- OTHER: _____

Nadia Di Tommaso/Community Development Director
 Name/Title

Originating Department:	Costs: \$ N/A Funding Source: Acct. # <input type="checkbox"/> Finance _____	Attachments: → Documents provided by Board Member Vera
Advertised: Date: N/A _____ Paper: _____ <input type="checkbox"/> Not Required	All parties that have an interest in this agenda item must be notified of meeting date and time. The following box must be filled out to be on agenda.	Yes I have notified everyone _____ OR Not applicable in this case _ND_ Please initial one.

Summary Explanation/Background:

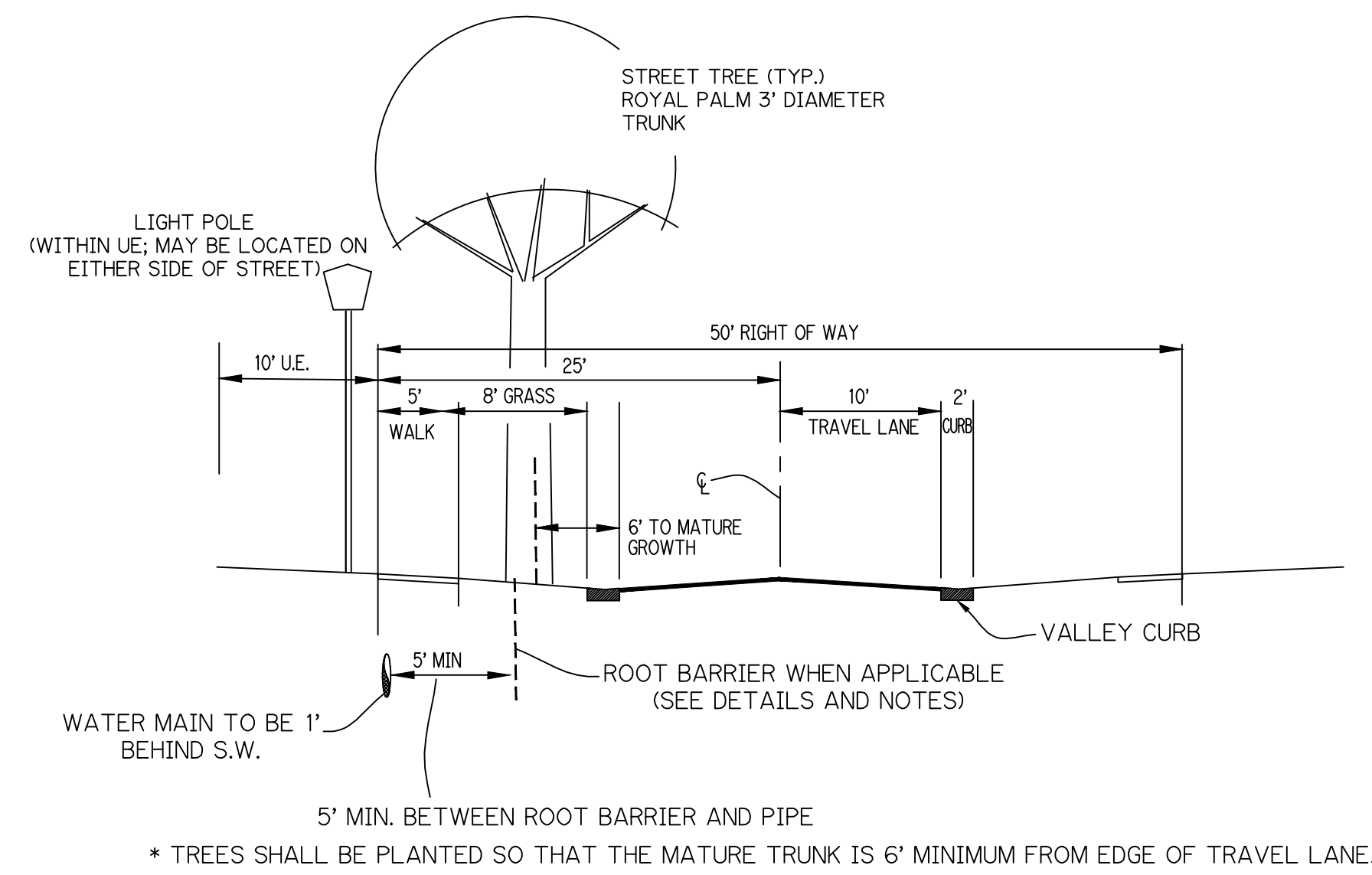
The first Tree Board Meeting was held on Monday, September 21. This meeting focused on the procedural and ethical requirements associated with Tree Board Members and provided an overview of the Town Code requirements and expectations of the Tree Board. At this meeting, the Board Members expressed an interest in working through some short and long term vision plans for the Town as it relates to landscaping and plantings Town-wide. Staff explained, in part, that one of the primary responsibilities required by the Town Code of the Tree Board is the creation of a Town-wide tree inventory and eventual annual maintenance plan of the inventory. The Town's Zoning Map was presented so as to identify the Town park areas (both pocket parks and larger parks), as well as the Town's street network that includes swale areas for which the Town is undergoing a Town-wide 'green' initiative in order to integrate the necessary plantings and green infrastructure to make the Town sustainable well into the future and provide better water and overall

environmental quality. With this being said, it was determined that the best initial steps for the Board would be to present educational materials so as to better educate the Board on Florida's Native Plants and Shrubs.

Tonight's meeting will first focus on a video presentation on Florida Native Plants and Shrubs. The second portion of the meeting will focus on materials provided by Board Member Viera so that Board Member Viera can walk through his documentation and provide some explanations so as to further educate the Board and allow for an open discussion.

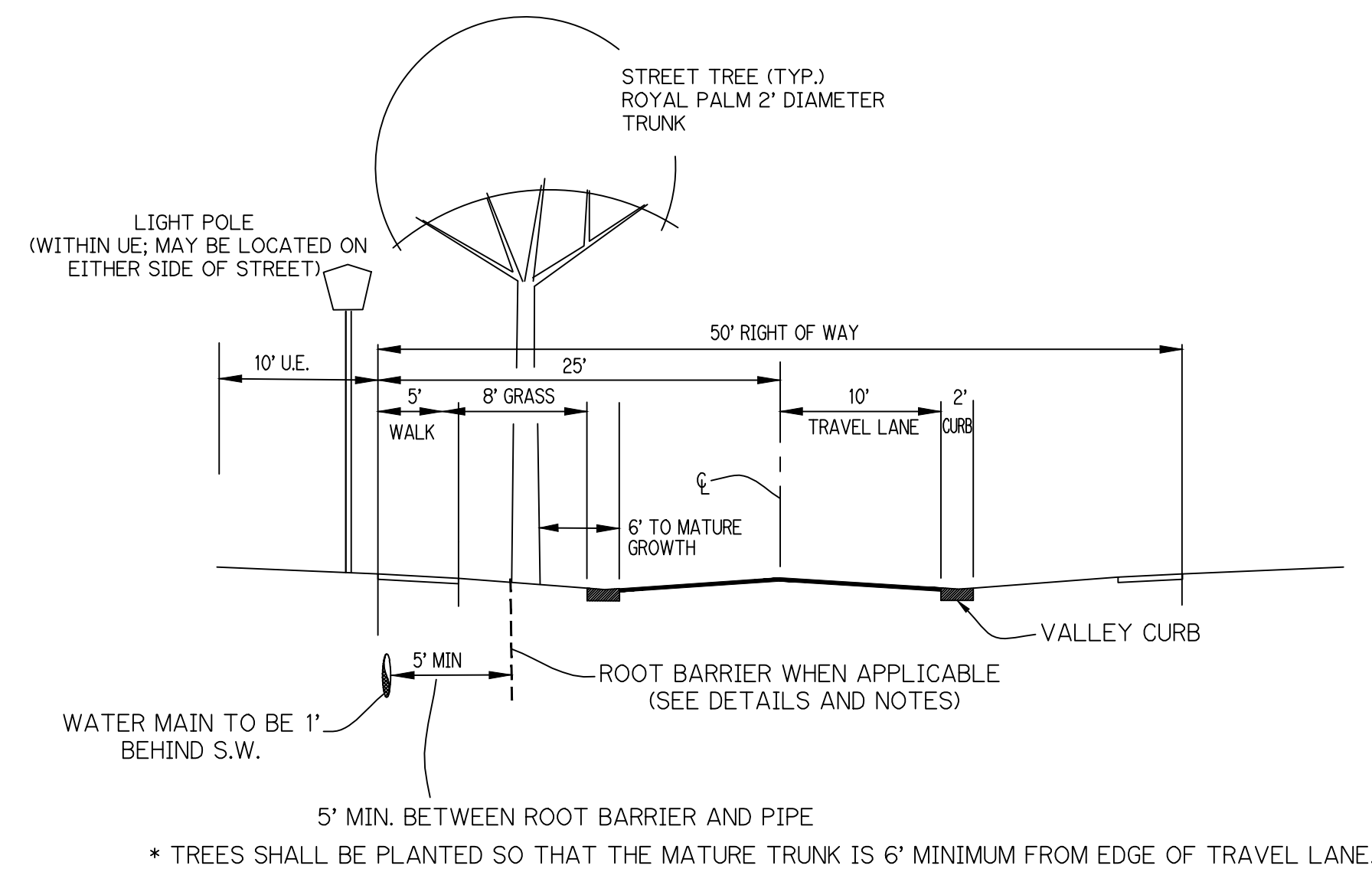
The next Tree Board meeting will focus on a presentation from our consultant, Water Resource Management Associates (WRMA) on the swales/green infrastructure initiative they are working through for the Town since this will help frame the areas and the information needed for the Board to develop both an existing tree inventory of the swale areas, but also create a proposed long-term plan (for Town Staff and Town Commission consideration) to properly retrofit these areas.

SEVEN BRIDGES STREET TREE



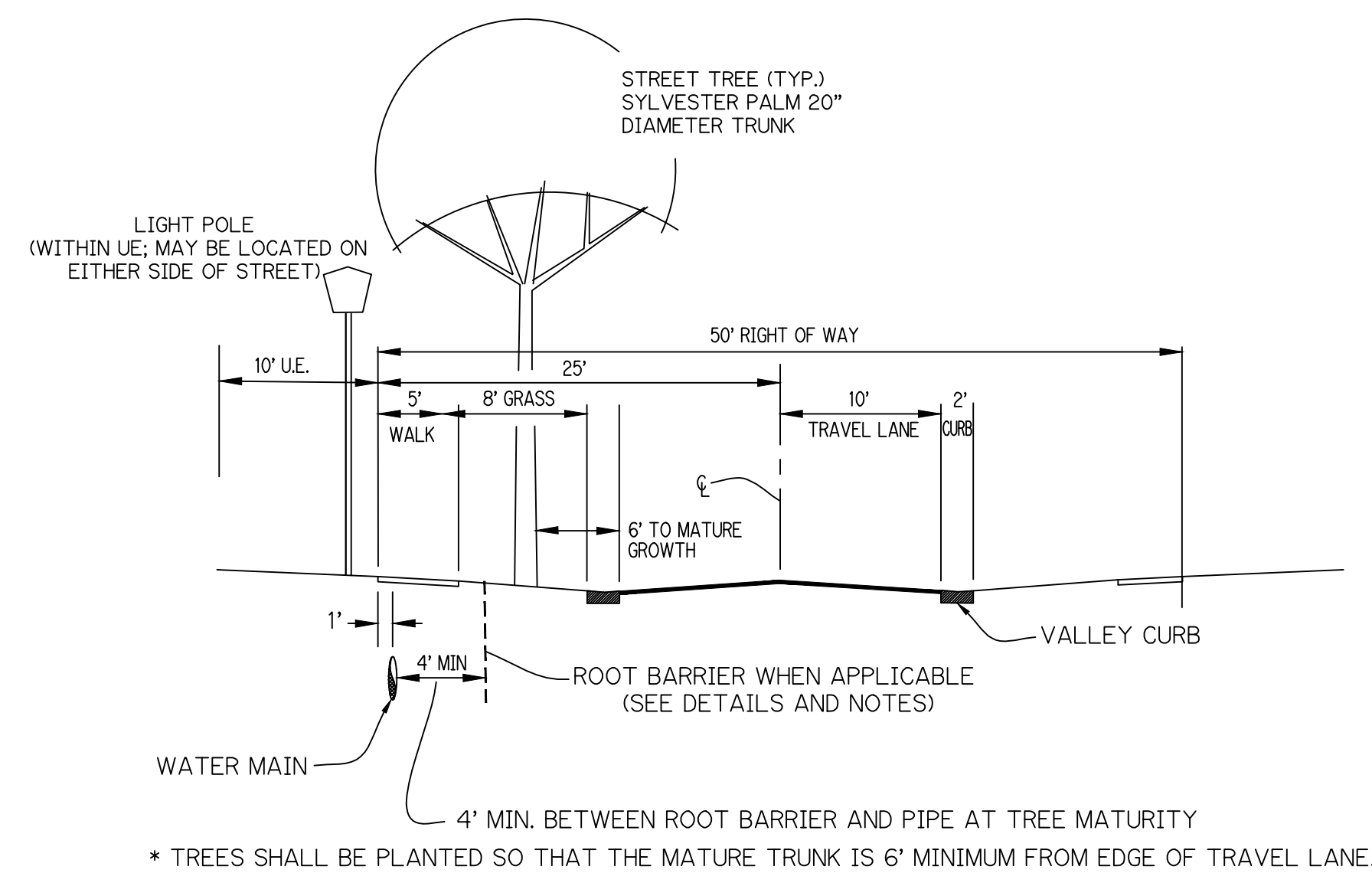
50' Right of Way Cross Section (Current Condition)

N.T.S.



50' Right of Way Cross Section (10' GW Royal)

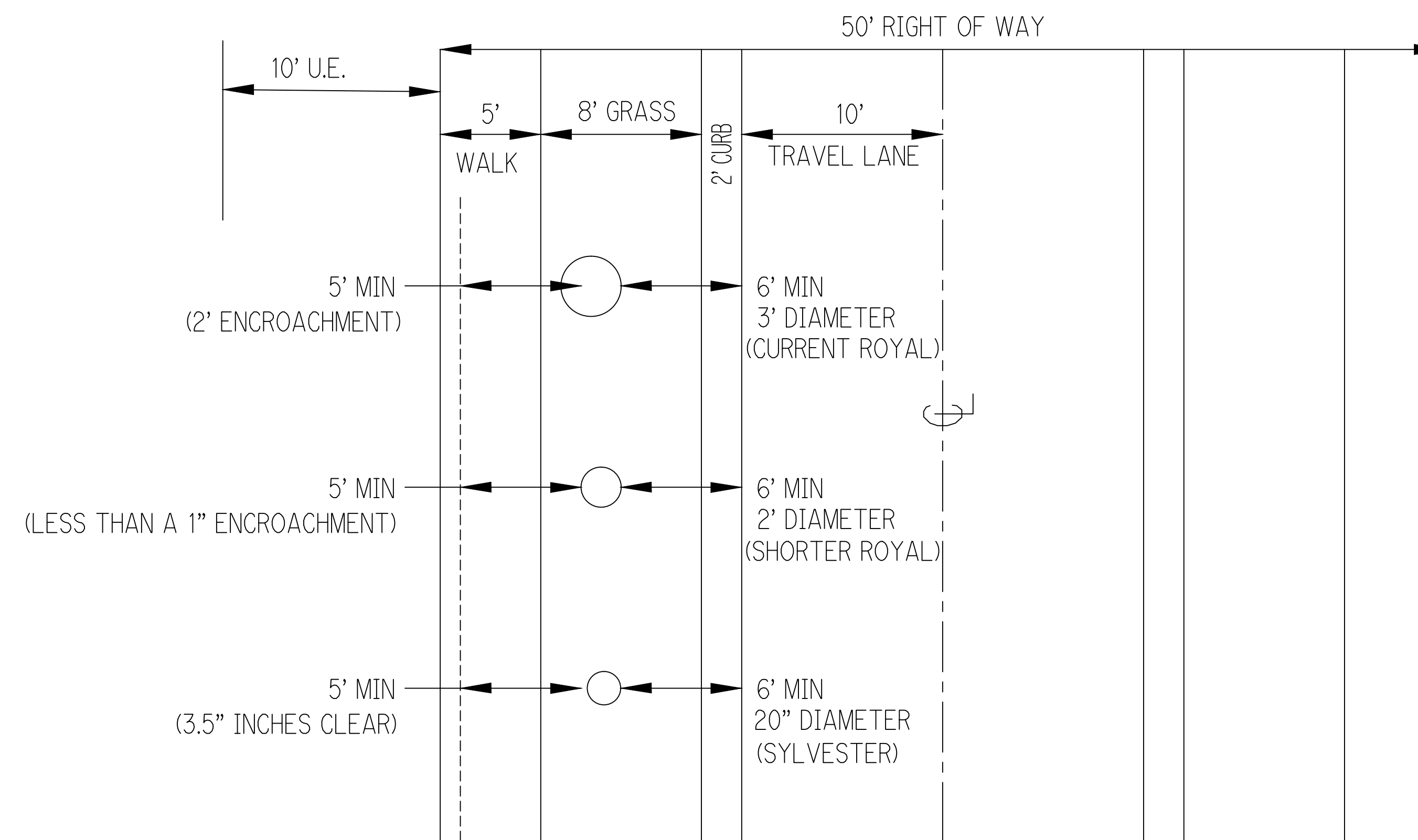
N.T.S.



50' Right of Way Cross Section (Sylvester)

N.T.S.

POD E



Seven Bridges Street Tree Options

POD E

Trees Installed To Date	28
Total Street Trees Needed	103

	Cost	Tree LF Cost	Cost Increase	Total Increase
Royal Palm 20' G.W.(Current) 3' cal.	1480	74	0	\$ -
Royal Palm 10' G.W., 2' cal.	1700	170	220	\$ 22,660.00
Sylvester 10' C.T., 20" cal.	1800	180	320	\$ 32,960.00
Sylvester 14' C.T., 20" cal.	3500	250	2020	\$ 208,060.00
Sylvester 18' C.T., 20" cal.	5400	300	3920	\$ 403,760.00
Foxtail 14' G.W.	760	54	-720	-74160
Foxtail 16' G.W.	840	53	-640	-65920
Foxtail 18' G.W.	920	51	-560	-57680
Foxtail 20' G.W.	1000	50	-480	-49440
Oak 'Cathedral', 6.5" cal.	1700	68	220	22660
Ribbon Palm 10' c.t., 6" cal.	900	90	-580	-59740

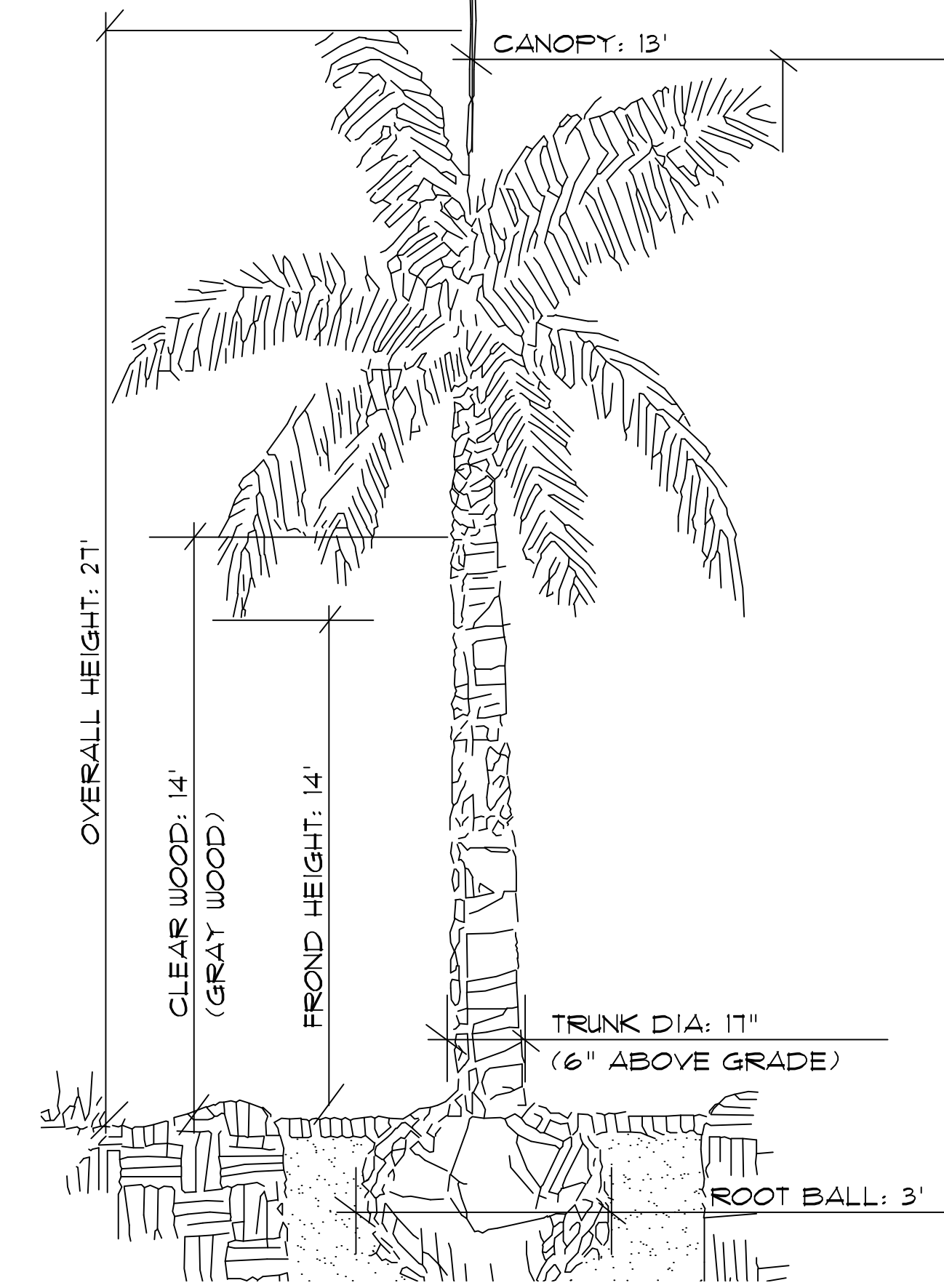
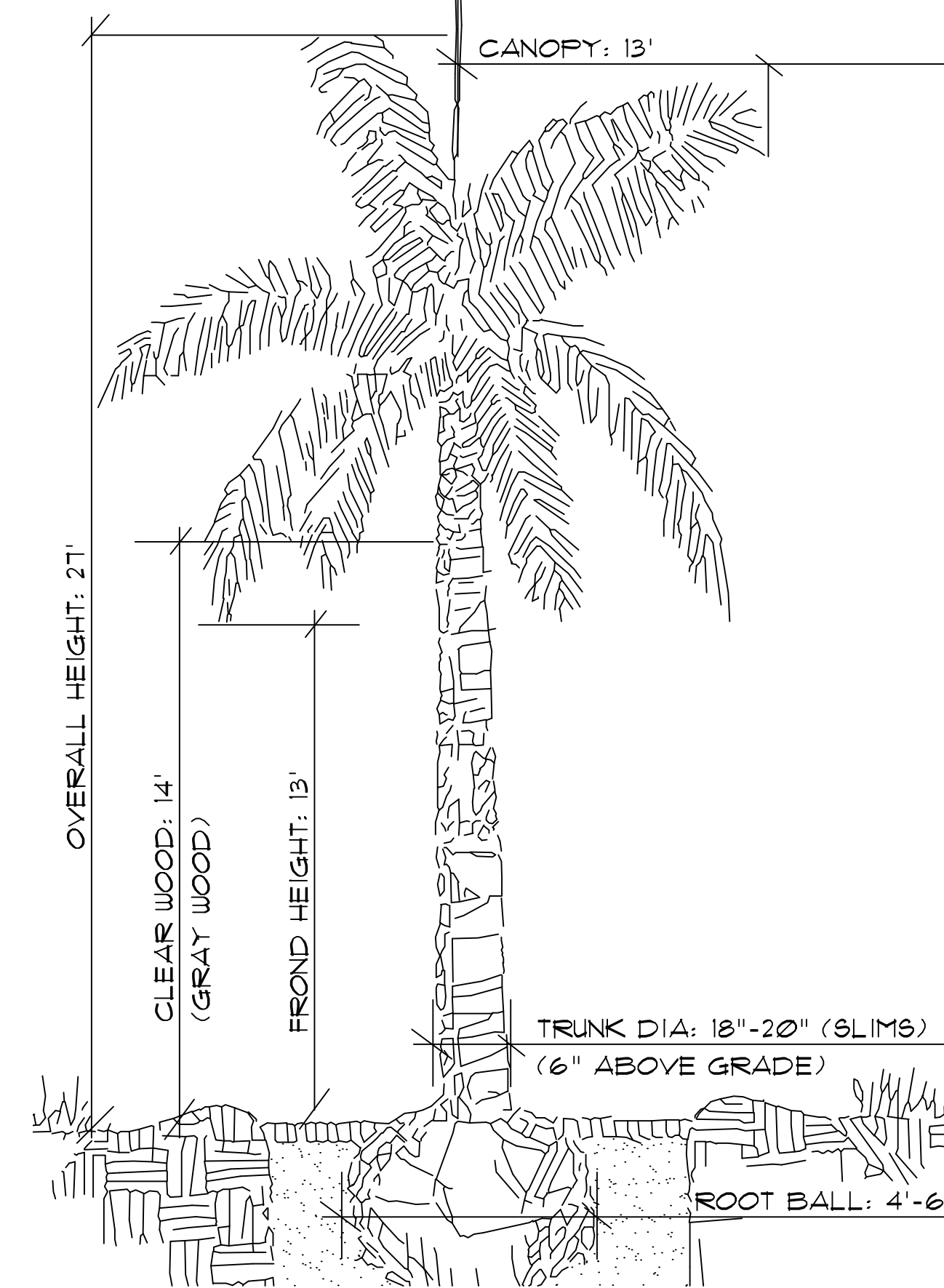
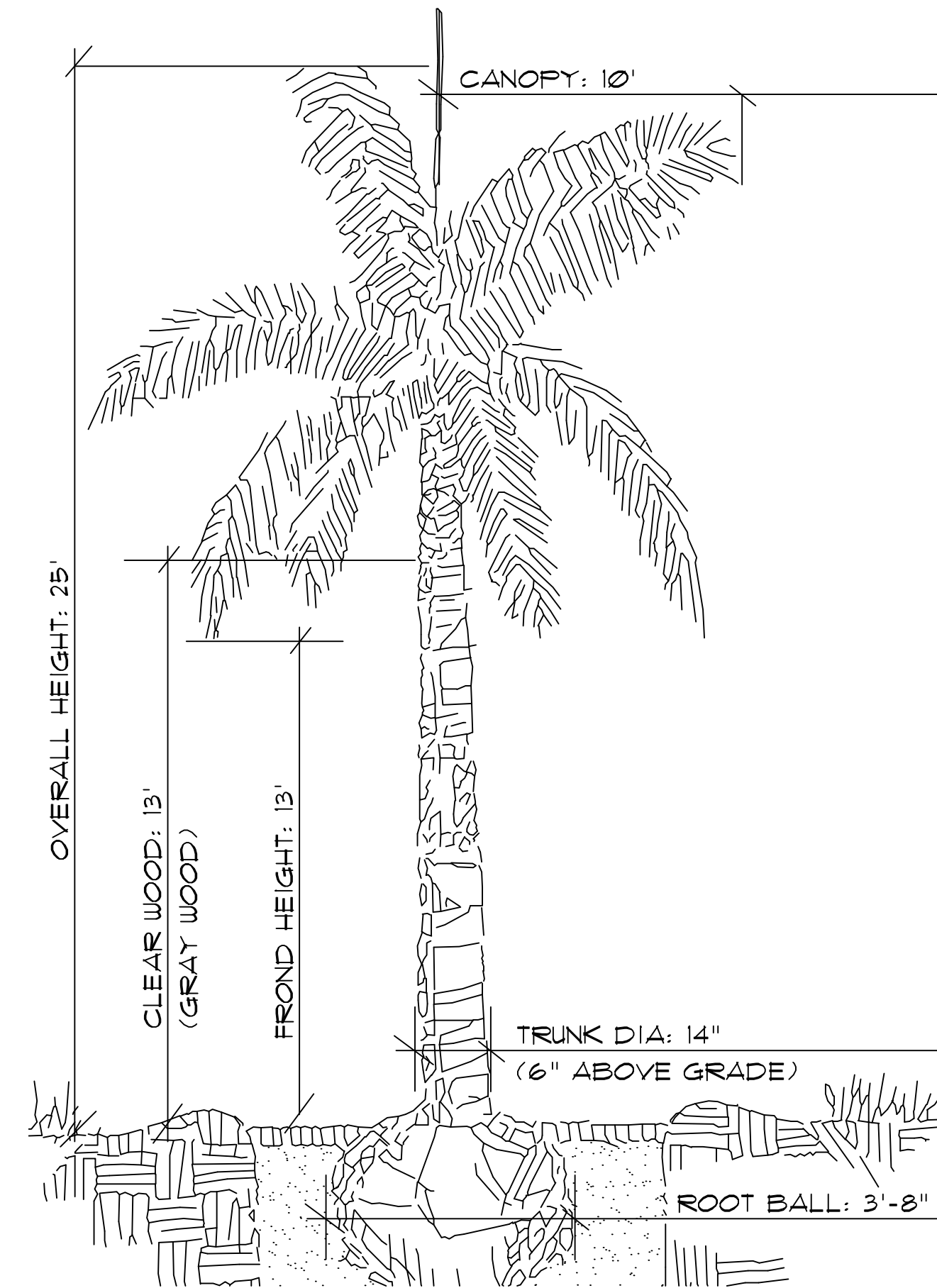
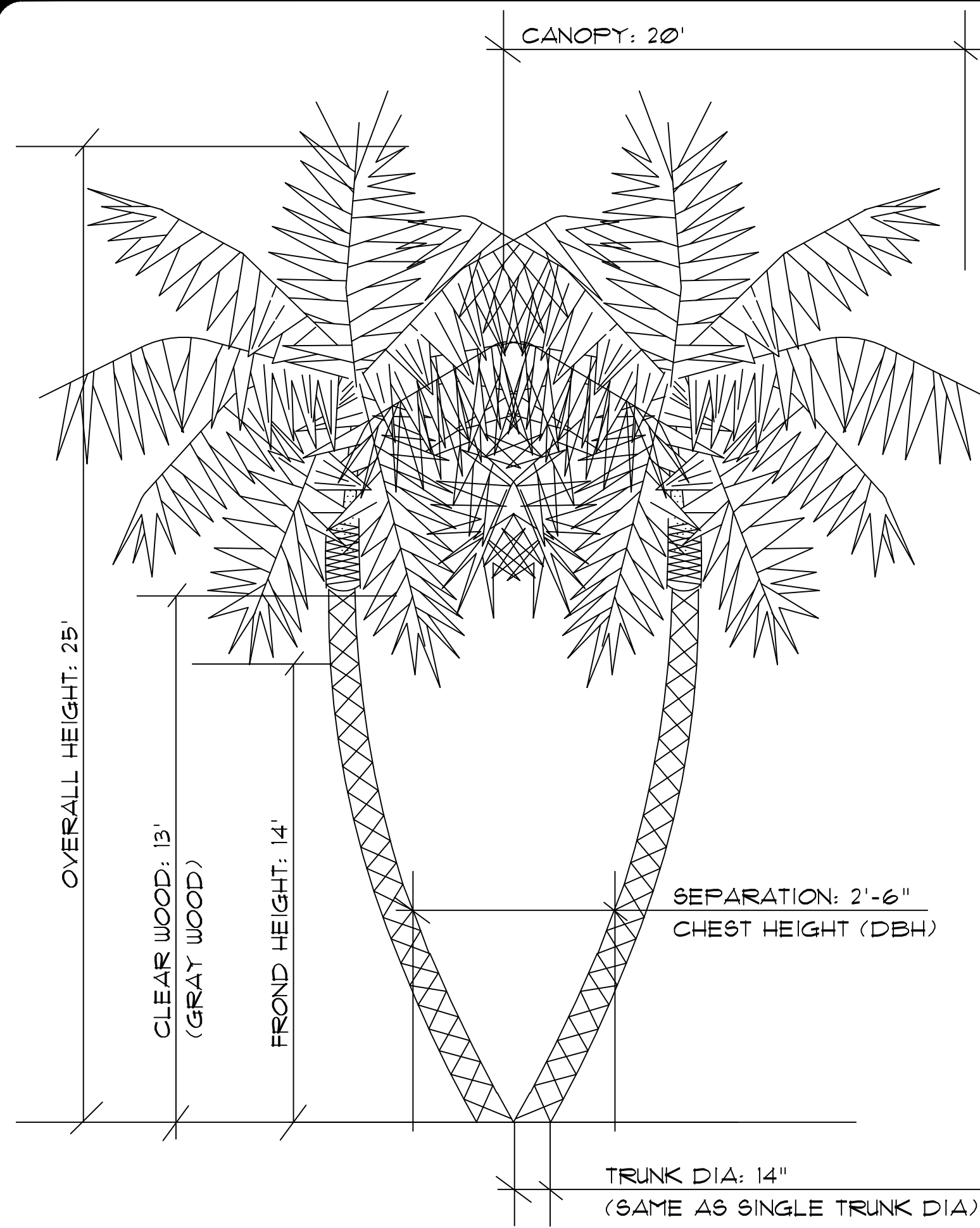
POD F

Trees Installed	0
Total Street Trees Needed	69

If R/W increased Savings on trees

	Cost	Tree LF Cost	Cost Increase	Total Increase
Royal Palm 20' G.W.(Current) 3' cal.	1480	74	0	\$ -
Royal Palm 10' G.W., 2' cal.	1700	170	220	\$ 15,180.00
Sylvester 10' C.T., 20" cal.	1800	180	320	\$ 22,080.00
Sylvester 14' C.T., 20" cal.	3500	250	2020	\$ 139,380.00
Sylvester 18' C.T., 20" cal.	5400	300	3920	\$ 270,480.00
Foxtail 14' G.W.	760	54	-720	-49680
Foxtail 16' G.W.	840	53	-640	-44160
Foxtail 18' G.W.	920	51	-560	-38640
Foxtail 20' G.W.	1000	50	-480	-33120
Oak 'Cathedral', 6.5" cal.	1700	68	220	15180
Ribbon Palm 10' c.t., 6" cal.	900	90	-580	-40020

SEVEN BRIDGES STREET TREE OPTIONS



FOXTAIL: \$900



FOXTAIL: \$840



SYLVESTER(SLIMS): \$4,200



MEDJOOOL: \$6,050

SEVEN BRIDGES STREET TREE

ROYAL PALM



FOXTAIL PALM



Native Trees for South Florida¹

A. W. Meerow, T. K. Broschat, and H. M. Donselman²

In recent years, the subject of native plants has taken on new significance in Florida horticulture. Reasons for this include the loss of natural areas to development, coastal deterioration due to disturbance of native vegetation, and the naturalization of exotic plants that in some cases may out-compete native species. Fortunately, relatively few of the hundreds of exotic ornamentals that have been introduced into the state fall into the latter category. Two in particular, Brazilian pepper (*Schinus terebinthifoliosus*) and punk tree (*Melaleuca quinquenervia*) have become noxious weeds in central and south Florida.

Many counties are considering landscape ordinances that require that a percentage of native plant materials be used in all future developments. Several have already implemented such ordinances. This will result in a need for wider availability of native plant materials. Woody landscape plant producers, landscape architects, and home gardeners in Florida need to become informed about and prepared for the production and cultural needs of native plants.

In actuality, native plants are not really new to our nursery industry. Many native trees are already well-represented in the inventories of south Florida nurseries. Such “staples” of Florida horticulture as sea grape (*Coccoloba uvifera*), cabbage palm (*Sabal palmetto*), mahogany (*Swietenia mahagoni*), bald cypress (*Taxodium distichum*), southern

red cedar (*Juniperus silicicola*), live oak (*Quercus virginiana*), southern magnolia (*Magnolia grandiflora*), gumbo limbo (*Bursera simaruba*), and buttonwood (*Conocarpus erectus*) are all native to the state.

Arguments for the Use of Native Plants

A number of claims both for and against the use of native plants have been proposed. Some claims made in favor of native plants are:

1. **Energy efficiency:** Because native plants are adapted to our soils, temperatures, and rainfall patterns, they are believed to require less irrigation and fertilization than exotics. However, recent research does not support this contention. Just because a tree is native to south Florida does not mean that it is native or adapted to all soil types and hydrological conditions found in south Florida. For example, a wetland species like pond apple, *Annona glabra*, is not going to prosper if planted on dry, limestone fill. All too often, native topsoils have been removed and water flow patterns changed during development. If such is the case, an attempt to recreate the original composition of trees and shrubs may fail.

1. This document is EES-57, one of a series of the Department of Environmental Horticulture, Florida Energy Extension Service, UF/IFAS Extension. Original publication date August 1989. Revised April 1999, October 2003, February 2009, March 2011, and May 2014. Reviewed April 2020. Visit the EDIS website at <https://edis.ifas.ufl.edu>.

2. A. W. Meerow, former associate professor; T. K. Broschat, professor; and H. M. Donselman, former associate professor; Department of Environmental Horticulture, UF/IFAS Ft. Lauderdale Research and Education Center, Ft. Lauderdale, FL 33314.

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U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

2. **Low maintenance:** Native plants are considered to be resistant to pests and diseases in Florida because they have evolved under constant exposure to these organisms. While this is generally true for native pests, exotic pests, to which native plants have no evolved resistance, are regularly introduced, often with catastrophic outcomes. Thus, plant diversity in the landscape is an important means of minimizing the risks from such pest or disease outbreaks. Of course, any newly planted tree, whether native or exotic, will require regular irrigation until it becomes established.

3. **Ecological-educational factor:** The use of native trees in landscapes preserves the state's natural resources. This argument is perhaps the best one for wider use of native plants. Florida's continued increase in population places enormous pressures on our native vegetation. The educational benefits of native plant landscapes are of great value, particularly in teaching new residents about our state's natural bounty.

Arguments Against the Use of Native Plants

Claims made against the landscape use of native plants include:

1. **They are slow-growing.** Plants differ in their growth rates as much as in any other characteristic. Native plants range as widely in this category as exotics. In many cases, slow growth rates can be improved with regulated nutritional levels during production. Cultivar selection and evaluation programs also can improve slow growth rates. In some situations, slow growth rates may be advantageous; for example, slower growing trees will require less pruning to control size or prevent interference with power lines.
2. **They are unattractive.** Native plants include attractive trees like satin leaf (*Chrysophyllum oliviforme*) and more homely species such as wax myrtle (*Myrica cerifera*). Both have a niche in landscape situations.
3. **Their propagation is difficult, therefore native plants are expensive.** Certain plants become widely available in the trade in part because they are easy to produce. This knowledge comes about through research, in both the private and public sectors. It is true that many choice native species are tricky to propagate successfully, but on the whole, this is due to the fact that few research efforts have been applied in that direction. This is now beginning to change.

4. **They are generally unavailable.** Even with the limited amount of in-depth knowledge on native plant propagation, there are currently more than 70 nurseries within the state listed by the Association of Florida Native Nurseries, with a combined plant inventory of more than 500 species. A substantial number of native species are already represented in the inventories of "traditional" nurseries.

Landscape Situations for Native Trees

In certain landscape situations, native plants are particularly desirable. These include:

1. **New development with pre-existing vegetation in which a tree canopy has been retained.** Some showy exotics can look out of place in landscapes in which a great deal of pre-existing native vegetation has been spared the bulldozer's blade. In such developments, the use of additional native materials may create a more harmonious and aesthetic effect.
2. **Environmentally sensitive areas such as the coastal strand, barrier islands, and wetlands.** These areas have suffered a great deal of mismanagement and shortsighted development. Many of the plants native to these environmentally sensitive areas are particularly adapted to the specialized conditions found there. The use of these native plants may actually help to slow further deterioration of some of these environments.
3. **Public areas (parks, beaches, nature centers).** Native plants should be a priority in public areas for their environmental and educational value and are required for restoration of disturbed areas within nature preserves.

Considering Site Factors

The characteristics of the planting site must be carefully considered when choosing native plant materials for landscaping. First, some concerns relating to the past history of the site must be addressed.

What was the original vegetation of the area? This knowledge will indicate which native plants will perform best on the site. Assuming the native soil and hydrology have not been modified, native species that once grew in a given location are likely to do better when re-planted than species from very different types of native habitat.

Have the native soil and/or hydrology been modified? During development, topsoil is often removed and original drainage patterns disturbed. Fill soil of very different quality may have been brought in to replace the topsoil removed. If such is the case, it may be impossible to re-establish the same species that once grew on the site, or it may require a great deal of maintenance to do so.

Additional consideration must be given to the present condition of the site. Does the site accumulate standing water? What is the soil type: muck? white sand? coral rock? Is there salt spray exposure on the site? Will the landscape plants have to be integrated with turf, and possibly be subjected to turf-oriented irrigation and fertilization practices? All of these factors will influence the degree of success with which particular native species will perform in a landscape. The size of the lot also may restrict the use of some species whose mature dimensions require a lot of space.

Finally, certain aesthetic factors come into play when choosing natives, just as they do with exotic plant materials. What landscape functions need to be fulfilled? Should the trees primarily provide shade, barrier effects, beauty in the form of flowers or fruit, or is low maintenance the main criterion for plant selection?



Figure 1. The paurotis palm (*Acoelorrhaphes wrightii*) is a native, clumping palm that makes an attractive vertical accent in close spaces.

Credits: UF/IFAS



Figure 2. Pigeon plum (*Coccoloba diversifolia*), a hardwood hammock-dwelling relative of the sea grape, makes a fine, slow-growing urban tree.

Credits: UF/IFAS



Figure 3. The geiger tree (*Cordia sebestena*) has spectacular orange flowers and a high salt tolerance.

Credits: UF/IFAS

Planting Native Trees

Planting native tree species is no different from planting exotics. Amending the backfill soil (the soil originally excavated from and then returned to the planting hole) is not recommended. The top of the root ball of nursery stock should be placed in the soil at the same depth at which it grew in the field or the container. Circling roots in container stock should be cut just behind the point of their deflection to more firmly anchor the tree and prevent future root girdling. It may be necessary or desirable to reduce top growth; this should be accomplished by *thinning out* (the well-distributed removal of one or several branches at their point of origin), rather than *heading back* (cutting all top growth back to approximately the same level). Thinning cuts will preserve the natural shape of the tree.

The trees should be regularly irrigated after planting, and a mulch of organic material is recommended. A top dressing of a slow-release fertilizer can be applied within the dripline of the tree before the mulch is placed down. If rainfall is received on a regular basis in the first few months after

planting, this may be sufficient for establishment of small container stock (1 gallon size). If not, periodic irrigation will be necessary. Larger plants may require a year or more to properly establish in the landscape. The frequency of irrigation (weekly to several times per week during the first few months) will depend on temperature, rainfall, and the water-holding capacity of the soil. Irrigation frequency can be reduced in successive months. Generally, the production of new growth is the best indication that a tree is becoming established. Supplementary fertilization 1 to 2 times per year may be desirable, at least during the first year after planting. Some native plant producers recommend using fertilizer formulations with good trace mineral analyses traditionally designed for palms, particularly if the native trees are being planted on fill soils.

How to Use the Selection Table

Table 1 and Table 2 of native tree species suitable for use in south Florida will help in making the right choices for various landscape situations. The list is by no means a complete inventory of the subtropical or tropical tree species that are native to the state. However, the list is representative of those native trees that have proven themselves in the landscape, are available from nurseries, or are judged worthy of wider use and availability. The trees in the tables are arranged alphabetically by scientific name, accompanied by one or more common names (same list of trees in both tables).

Special attention should be paid to environmental factors such as soil pH, light requirements, and drought and salt tolerances (Table 1). Table 2 offers information on plant type, shape, flower color, flower characteristics, flowering season, and uses for the native trees listed. In Table 1, *drought tolerance* refers only to Florida conditions and should be interpreted as follows: *High*: will not require supplemental irrigation *after* establishment; *Medium*: may require occasional irrigation during periods of unusual water stress; and *Low*: will require supplemental irrigation during periods of drought.

Nutritional requirements (Table 1) should be interpreted as: *High*: the species will typically suffer from moderate to severe deficiencies of one or more elements and plant growth and quality will be strongly affected. Regular fertilization may be required to keep these plants alive. *Medium*: Most plants will show mild to moderate deficiency symptoms of one or more elements. Regular fertilization will be required to completely eliminate deficiency symptoms. *Low*: Nutrient deficiencies are rarely encountered and fertilization is unnecessary.

Salt tolerance (Table 1) should be interpreted as follows: *High*: will withstand direct salt spray and soil salinity; *Medium*: should be protected from direct salt spray but will withstand slightly saline conditions; and *Low*: sensitive to salt on the foliage and in the root zone.

Under the category of Hardiness Zone, *subtropical* refers to the transitional area between central and tropical Florida where an occasional winter frost will occur. *Tropical* refers to southernmost mainland Florida and the Keys where winter frosts are rare to nonexistent. To illustrate, silver buttonwood is categorized in Table 1 as a subtropical/tropical tree with a high tolerance for salt and drought. Before installing a large-scale landscape using native trees listed as *tropical* only, it is best to confer with your county cooperative Extension service agent about minimum winter temperatures expected in your area. If a particular species can be used in central and north Florida as well, this has been indicated (Table 1).



Figure 4. The silver buttonwood (*Conocarpus erectus* var. *sericeus*) is a very salt- and drought-tolerant species.

Credits: UF/IFAS

Obtaining Native Plants

Native plants should not be transplanted from the wild without the permission of the landowner, and never from public lands. In general, it is best to leave wild populations intact, unless the plants face destruction from development. Superior clones in native populations should be identified where possible, and nursery stock propagated vegetatively or from seed. The advantages of seed vs. clonal propagation is that a degree of the genetic diversity of the species is maintained in cultivation.

There is a place in Florida horticulture for both superior exotic and native ornamentals. The “native plant movement” should not be looked upon as a threat, but as an impetus to add to the diversity of landscape materials at our disposal in Florida.

Table 1. Height, growth rate, soil pH, hardiness zone, salt tolerance, drought tolerance, light requirements, and nutritional requirements of native trees for south Florida.

Scientific Name	Common Name	Natural Height (in feet)	Growth Rate	Soil pH	Hardiness Zone*	Salt Tolerance	Light Requirement	Drought Tolerance	Nutritional Requirement
<i>Acacia farnesiana</i>	Sweet acacia	10–12	Medium	Wide	C,ST,T	Medium	High	High	Medium
<i>Acer rubrum</i>	Red maple	35–50	Fast	Wide	C,N,ST	Low	High	Low	Low
<i>Acoelorrhaphe wrightii</i>	Paurotis palm, everglades palm	15–25	Slow	Acid to neutral	C,ST,T	Medium	Medium, high	Medium	Medium to high
<i>Amphitecna (Enallagma) latifolia</i>	Black calabash	20–30	Medium	Wide	ST,T	High	High	High	Low
<i>Annona glabra</i>	Pond apple, alligator apple	25–40	Medium	Wide	C,ST,T	Medium	High	Low	Low
<i>Ardisia escallonioides</i>	Marlberry, marbleberry	15–25	Medium	Wide	ST,T	High	Medium, high, low	Medium	Low
<i>Avicennia germinans</i>	Black mangrove	20–30	Medium	Wide	T	High	High	Low	Low
<i>Bourreria succulenta</i> var. <i>revoluta</i>	Strongbark	20	Medium	Wide	ST, T	Medium	High	High	Low
<i>Bumelia</i> spp.	Buckthorn, saffron plum, bumelia	20–40	Medium	Wide	C,N,ST,T	Medium, low	Medium	Medium, high	Medium
<i>Bursera simaruba</i>	Gumbo limbo, tourist tree	40–60	Medium	Wide	ST,T	Medium	High	High	Low
<i>Canella alba</i>	Wild cinnamon	20–35	Slow	Wide	ST,T	Medium	High	High	Low
<i>Chrysophyllum oliviforme</i>	Satin leaf	30–40	Slow	Wide	ST,T	Medium	High	High	Low
<i>Citharexylum fruticosum</i>	Fiddlewood	25–30	Slow	Wide	C,ST,T	Medium	High	High	Low
<i>Clusia rosea</i>	Pitch apple, autograph tree	25–30	Slow	Wide	T	High	High	High	Low
<i>Coccoloba diversifolia</i>	Pigeon plum	25–30	Slow	Wide	ST,T	High	High	High	Low
<i>Coccoloba uvifera</i>	Sea grape	15–30	Medium	Wide	ST,T	High	High	High	Low
<i>Coccothrinax argentata</i>	Silver palm	10–20	Slow	Wide	ST,T	High	Medium, high	High	Low
<i>Conocarpus erectus</i>	Buttonwood	30–50	Medium	Wide	ST,T	High	High	High	Low
<i>Cordia sebestena</i>	Geiger tree	20–25	Medium	Wide	T	High	High	High	Low
<i>Dipholis salicifolia</i>	Willow-leaved bustic	30–50	Medium	Wide	ST,T	Low	High	Medium	Low
<i>Eugenia</i> spp.	Stoppers	15–20	Slow	Wide	ST,T	High	Medium, high	High	Low
<i>Exostema caribaeum</i>	Princewood	20–25	Slow	Wide	ST,T	Low	High	Medium	Medium
<i>Ficus aurea</i>	Strangler fig	40–50	Fast	Wide	ST,T	Medium	High	High	Low
<i>Ficus citrifolia</i>	Shortleaf fig	40–50	Fast	Wide	ST,T	Medium	High	High	Low
<i>Gordonia lasianthus</i>	Loblolly bay	30–40	Medium	Wide	C,N,ST	Low	High	Low	Medium
<i>Guaiacum sanctum</i>	Lignum vitae	10–20	Slow	Wide	ST,T	Medium	High	High	Low
<i>Guapira discolor</i>	Blolly	35–50	Medium	Wide	ST,T	Medium	High	High	Low
<i>Guettarda elliptica</i>	Everglades velvetseed	10–20	Medium	Alkaline	T	Low	Medium	Low	Medium
<i>Guettarda scabra</i>	Rough velvetseed	15–30	Medium	Alkaline	T	High	High	High	Low

Scientific Name	Common Name	Natural Height (in feet)	Growth Rate	Soil pH	Hardiness Zone*	Salt Tolerance	Light Requirement	Drought Tolerance	Nutritional Requirement
<i>Gymnanthes lucida</i>	Crabwood	15–30	Slow	Wide	ST,T	Medium	High	High	Low
<i>Hibiscus tiliaceus</i>	Mahoe, sea hibiscus	30–45	Fast	Wide	ST,T	High	High	High	Low
<i>Hypelate trifoliata</i>	White ironwood	30–40	Slow	Wide	ST,T	High	High	High	Low
<i>Ilex cassine</i>	Dahoon holly	25–40	Medium	Acid	C,N,ST	Medium	High	Medium	Low
<i>Ilex krugiana</i>	Tawnyberry holly	25–40	Medium	Wide	T	High	Medium	Medium	Medium
<i>Ilex vomitoria</i>	Yaupon holly	20–25	Medium	Wide	C,N,ST	High	Medium, high	High	Low
<i>Juniperus silicicola</i>	Southern juniper	25–30	Medium	Wide	C,N,ST	High	High	High	Low
<i>Krugiodendron ferreum</i>	Black ironwood	20–30	Slow	Wide	ST,T	Medium	High	High	Low
<i>Languncularia racemosa</i>	White mangrove, white buttonwood	40–60	Medium	Wide	ST,T	High	High	Low	Low
<i>Leucothrinax morrisii</i>	Key thatch palm	15–30	Slow	Wide	ST,T	High	Medium, High	High	Low
<i>Lysiloma latisiliqua</i>	Wild tamarind	40–50	Fast	Wide	ST,T	High	High	High	Low
<i>Magnolia grandiflora</i>	Southern magnolia	60–100	Medium	Acid	C,N,ST	High	High	High	Low
<i>Magnolia virginiana</i>	Sweetbay	40–60	Medium	Acid	C,N,ST,T	Low	High	Low	Low
<i>Mastichodendron foetidissimum</i>	False mastic	45–70	Slow	Wide	ST,T	High	High	High	Low
<i>Myrcianthes fragrans</i>	Simpson's stopper, twinberry	20–30	Medium	Wide	ST,T	High	Medium, high	High	Low
<i>Myrica cerifera</i>	Wax myrtle	15–25	Medium	Wide	C,N,ST	High	High	High	Low
<i>Nectandra coriacea</i>	Lancewood	30–40	Medium	Wide	C,ST,T	Low	High	Medium	Medium
<i>Persea borbonia</i>	Red bay	50–60	Medium	Wide	C,N,ST,T	Medium	High	High	Low
<i>Pinus clausa</i>	Sand pine	60–80	Slow	Wide	C,N,ST	High	High	High	Low
<i>Pinus elliotii</i> var. <i>densa</i>	South Florida slash	80–100	Fast	Wide	C,ST,T	Medium	High	High	Low
<i>Piscidia piscipula</i>	Jamaican dogwood, fish-poison tree	35–50	Fast	Wide	T	High	High	High	Low
<i>Plantanus occidentalis</i>	Sycamore	70–110	Fast	Wide	C,N,ST	Low	High	Low	Medium
<i>Prunus myrtifolia</i>	West Indian cherry	15–40	Medium	Wide	T	Low	High	Medium	Medium
<i>Pseudophoenix sargentii</i>	Buccaneer palm, cherry palm	10–15	Slow	Wide	ST,T	High	Medium, high	High	Medium
<i>Quercus laurifolia</i>	Laurel oak	60–100	Fast	Wide	C,N,ST	Low	High	High	Low
<i>Quercus virginiana</i>	Live oak	50–80	Medium	Wide	C,N,ST	High	High	High	Low
<i>Reynosia septentrionalis</i>	Darling plum	20–30	Slow	Wide	ST,T	High	High	High	Low
<i>Rhizophora mangle</i>	Red mangrove	30–80	Medium	Wide	ST,T	High	High	Low	Low
<i>Roystonea regia</i>	Royal palm	60–125	Medium	Wide	ST,T	Medium	High	Medium	Medium to high

Scientific Name	Common Name	Natural Height (in feet)	Growth Rate	Soil pH	Hardiness Zone*	Salt Tolerance	Light Requirement	Drought Tolerance	Nutritional Requirement
<i>Sabal palmetto</i>	Cabbage palmetto, sabal palm	45–70	Slow	Wide	C,N,ST,T	High	High	High	Medium to high
<i>Salix caroliniana</i>	Coastal plain willow	20–30	Fast	Wide	C,N,ST	Low	High	Low	Low
<i>Sapindus saponaria</i>	Soapberry	35–45	Medium	Wide	C,ST,T	High	High	High	Low
<i>Schaefferia frutescens</i>	Florida boxwood	20–40	Slow	Alkaline	T	Medium	Medium	Medium	Medium
<i>Simarouba glauca</i>	Paradise tree	35–50	Slow	Wide	T	Medium	High	High	Medium
<i>Swietenia mahogany</i>	Mahogany	35–60	Fast	Wide	ST,T	High	High	High	Low
<i>Taxodium ascendens</i>	Pond cypress	60	Medium	Wide	C,N,ST	Medium	High	High	Low
<i>Taxodium distichum</i>	Bald cypress	60–100	Medium	Wide	C,N,ST	Medium	High	High	Low
<i>Tecoma stans</i>	Yellow elder	10–20	Fast	Wide	ST,T	Medium	High	High	Medium
<i>Thrinax morrisii</i>	Key thatch palm	15–30	Slow	Wide	ST,T	High	Medium, high	High	Low
<i>Thrinax parviflora</i>	Florida thatch palm	20–25	Slow	Wide	ST,T	High	High	High	Low
<i>Thrinax radiata</i>	Thatch palm	15–25	Slow	Wide	ST,T	High	Medium, high	High	Low
<i>Tilia floridana</i>	Florida basswood	30–60	Fast	Acid	C,N,ST,	Low	Medium	Low	High
<i>Ximenia americana</i>	Tallowwood plum	20–25	Medium	Wide	ST,T	High	High	High	Low
<i>Zanthoxylum clava-herculis</i>	Hercules club, toothache tree	25–50	Medium	Wide	C,N,ST	Medium	Medium	High	Medium
<i>Zanthoxylum fagara</i>	Wild lime	20–30	Medium	Wide	ST,T	High	High	High	Low

*C=Central; ST=Subtropical; T=Tropical; N=North

Table 2. Plant type, foliage and flower color, flower characteristics, flowering season, uses, and notes for native trees for south Florida.

Scientific Name	Common Name	Plant Type	Shape	Flower Color	Flower Characteristics	Flowering Season	Uses	Notes
<i>Acacia farnesiana</i>	Sweet acacia	Evergreen	Oval, round	Yellow	Showy, fragrant	Year-round	Parks; medians	Small, thorny, bushy tree. Flowers used for perfume.
<i>Acer rubrum</i>	Red maple	Deciduous	Oval	Red	Showy	Winter, spring	Shade; perimeters; parking lots; medians; boulevards; residences; buffers	Variable red fall color. Good for wet sites.
<i>Acoelorrhaphe wrightii</i>	Paurotis palm, everglades palm	Palm	Upright, clumping	White	Insignificant	Spring	Medians; residences; buffers	Susceptible to potassium and manganese deficiencies.
<i>Amphitecna (Enallagma) latifolia</i>	Black calabash	Evergreen	Round	Yellow	Insignificant	Spring	Parks; residences	Not particularly wind resistant.
<i>Annona glabra</i>	Pond apple, alligator apple	Evergreen	Oval	Whitish-yellow	Insignificant	Year-round	Buffers	Good for swampy sites.
<i>Ardisia escallonioides</i>	Marlberry, marbleberry	Evergreen	Oval	White	Insignificant, fragrant	Fall	Residences; buffers	Often shrubby. Attracts wildlife.
<i>Avicennia germinans</i>	Black mangrove	Evergreen	Oval	White	Insignificant, fragrant	Spring	Parks; residences (along estuaries); perimeters	Grows in brackish water sites.
<i>Bourreria succulenta</i> var. <i>revoluta</i>	Strongbark	Evergreen	Oval	White	Insignificant	Year-round	Residences	Can be a large shrub. Native to the Keys.
<i>Bumelia</i> spp.	Buckthorn, saffron plum, bumelia	Deciduous, evergreen	Round	White	Insignificant	Fall	Perimeters; parks; parking lots	Several native spp. reach tree size; not all are cold hardy; thorny.
<i>Bursera simaruba</i>	Gumbo limbo, tourist tree	Deciduous	Round	Green	Insignificant	Winter, spring	Shade; perimeters; parking lots; boulevards; residences	Large branches will root directly in the ground. Attractive reddish bark.
<i>Canella alba</i>	Wild cinnamon	Evergreen	Oval	White	Insignificant	Spring, summer	Residences	An attractive native flowering tree. Not readily available.
<i>Chrysophyllum oliviforme</i>	Satin leaf	Evergreen	Oval	White	Insignificant	Fall	Shade; parking lots; medians; boulevards; residences; parks	Leaves glossy on top and bronzy satin below.
<i>Citharexylum fruticosum</i>	Fiddlewood	Evergreen	Round	White	Insignificant, fragrant	Year-round	Parks; boulevards; residences	Forms with hairy leaves also occur.
<i>Clusia rosea</i>	Pitch apple, autograph tree	Evergreen	Round	Pink and white	Showy	Summer	Parks; residences	Has stilt roots. Leaves very tough and leathery.
<i>Coccoloba diversifolia</i>	Pigeon plum	Evergreen	Oval	White	Insignificant	Spring	Residences; parks; parking lots; medians; boulevards	Attractive bark. Variable leaf shape and size. Good small native tree.

Scientific Name	Common Name	Plant Type	Shape	Flower Color	Flower Characteristics	Flowering Season	Uses	Notes
<i>Coccoloba uvifera</i>	Sea grape	Evergreen	Round, spreading	White	Insignificant	Summer	Edible fruit; buffers; parks	Edible fruit used for jelly. Good seaside plant. Broad spreading.
<i>Coccothrinax argentata</i>	Silver palm	Palm	Single-trunked	White	Showy	Summer	Residences; medians; parks; parking lots	Excellent slow-growing native palm.
<i>Conocarpus erectus</i>	Buttonwood	Evergreen	Round	Orange, purplish-green	Insignificant	Summer	Residences; parks; boulevards; medians; parking lots	Good seaside plant. A silver-leaved variety is widely grown.
<i>Cordia sebestena</i>	Geiger tree	Evergreen	Oval	Orange	Showy	Year-round	Residences; parks; boulevards	Frequently defoliated by geiger beetles.
<i>Dipholis salicifolia</i>	Willow-leaved bustic	Evergreen	Round	White	Insignificant	Year-round	Residences; parks	
<i>Eugenia</i> spp.	Stoppers	Evergreen	Oval	White	Insignificant	Spring, summer	Residences; parks	Many species, some with edible fruits.
<i>Exostema caribaeum</i>	Princewood	Evergreen	Oval	White	Showy, fragrant	Spring, summer	Parks; residences	Hard wood used for cabinetwork.
<i>Ficus aurea</i>	Strangler fig	Evergreen	Spreading	Orange	Insignificant	Summer	Parks; shade	This native ficus often begins its life as an epiphyte.
<i>Ficus citrifolia</i>	Shortleaf fig	Evergreen	Round	Yellow	Insignificant	Year-round	Residences; parks; boulevards	A native fig without aerial roots. Well-adapted for south Florida.
<i>Gordonia lasianthus</i>	Loblolly bay	Evergreen	Oval	White	Showy, fragrant	Summer	Residences; shade; parks; boulevards	A good native for wet areas. Only for northern part of south Florida.
<i>Guaiacum sanctum</i>	Lignum vitae	Evergreen	Round	Blue	Showy	Year-round	Residences; parks	A small, slow-growing tree.
<i>Guapira discolor</i>	Blolly	Evergreen	Round	Greenish-yellow	Insignificant	Spring, summer	Residences; shade; boulevards; parks	A drought-tolerant native tree.
<i>Guettarda elliptica</i>	Everglades velvetseed	Evergreen	Oval	Yellow	Showy	Spring	Parks; residences; shade	A small, tropical hammock tree with some shade tolerance.
<i>Guettarda scabra</i>	Rough velvetseed	Evergreen	Oval	White	Showy	Winter, spring	Parks; parking lots; residences	An attractive, salt-tolerant coastal native for south Florida.
<i>Gymnanthes lucida</i>	Crabwood	Evergreen	Oval	Red	Insignificant	N/A	Residences; parks	A small native tree that is not readily available.
<i>Hibiscus tiliaceus</i>	Mahoe, sea hibiscus	Evergreen	Round, spreading	Yellow, red	Showy	Year-round	Parks; buffers; problem tree	Wood can be weak. Requires shaping to be tree-like; weedy.

Scientific Name	Common Name	Plant Type	Shape	Flower Color	Flower Characteristics	Flowering Season	Uses	Notes
<i>Hypelate trifoliata</i>	White ironwood	Evergreen	Round	White	Insignificant	Spring, summer	Residences; parks	A small native tree. May not be readily available.
<i>Ilex cassine</i>	Dahoon holly	Evergreen	Oval	White	Insignificant	Spring	Parks; perimeters; residences	Red-berried native holly. Grows in boggy sites.
<i>Ilex krugiana</i>	Tawnyberry holly	Evergreen	Oval	White	Insignificant	Spring	Parks; residences; shade	A native, tropical holly.
<i>Ilex vomitoria</i>	Yaupon holly	Evergreen	Oval	White	Insignificant	Spring, summer	Residences; parks; buffers	Selected varieties available.
<i>Juniperus silicicola</i>	Southern juniper	Evergreen	Pyramidal	Brown	Cone	Spring	Perimeters; parks; residences; buffers	A tough pyramidal-shaped tree.
<i>Krugiodendron ferreum</i>	Black ironwood	Evergreen	Round	Greenish-yellow, green, yellow	Insignificant	Spring	Residences; parks; boulevards	Slow-growing; dense-wooded.
<i>Laguncularia racemosa</i>	White mangrove, white buttonwood	Evergreen	Oval	Green	Insignificant, fragrant	Spring	Shade; parks; perimeters; residences; buffers	Grows best in warm coastal areas.
<i>Leucothrinax morrisii</i>	Key thatch palm	Palm	Single-trunked	White	Showy	Spring	Residences; parks; medians	Slow-growing fan palm.
<i>Lysiloma latisiliqua</i>	Wild tamarind	Deciduous	Weeping, spreading	White	Insignificant	Spring, summer	Residences; shade; boulevards; parks; parking lots; medians	This tree has a weeping form.
<i>Magnolia grandiflora</i>	Southern magnolia	Evergreen	Oval	White	Showy, fragrant	Spring	Residences; parks; shade; perimeters; buffers; medians	This hardy tree has large, leathery leaves and showy flowers.
<i>Magnolia virginiana</i>	Sweetbay	Deciduous	Oval	White	Showy, fragrant	Summer	Residences; shade; parks; medians; boulevards	Good for wet sites. Attractive silvery leaves.
<i>Mastichodendron foetidissimum</i>	False mastic	Evergreen	Round	Greenish-yellow	Insignificant	Spring, summer, fall	Shade; perimeters; parking lots; medians; residences	Female trees have messy fruit.
<i>Myrcianthes fragrans</i>	Simpson's stopper, twinberry	Evergreen	Round	White	Insignificant, fragrant	Year-round	Residences; parks; medians; boulevards	A native shrub that can be pruned into a small tree.
<i>Myrica cerifera</i>	Wax myrtle	Evergreen	Oval	White	Insignificant	Summer, spring	Residences; parks; buffers; problem tree	Can be weedy. Root suckers profusely and stains masonry.
<i>Nectandra coriacea</i>	Lancewood	Evergreen	Oval, round	White	Insignificant	Year-round	Shade; perimeters; residences; buffers	A small native tree for the Keys.
<i>Persea borbonia</i>	Red bay	Evergreen	Oval, round	Green	Insignificant	Spring	Residences; parks; shade; boulevards	Good for wet sites. Susceptible to laurel wilt disease.
<i>Pinus clausa</i>	Sand pine	Evergreen	Oval	Brown	Cone	Spring	Parks; shade; residences	Very tolerant of dry, sandy soils.
<i>Pinus elliotti</i> var. <i>densa</i>	South Florida slash	Evergreen	Oval	Brown	Cone	Spring	Parks; residences; buffers; boulevards	Intolerant of grade changes, irrigation, and traffic above the root system.

Scientific Name	Common Name	Plant Type	Shape	Flower Color	Flower Characteristics	Flowering Season	Uses	Notes
<i>Piscidia piscipula</i>	Jamaican dogwood, fish-poison tree	Evergreen	Spreading	Whitish-lavender, white, lavender	Showy	Spring	Parks; residences; medians	Bark and other tree parts have been used to stun fish. Native to the Keys.
<i>Plantanus occidentalis</i>	Sycamore	Deciduous	Oval, round	Green	Insignificant	Spring	Parks; residences; shade; boulevards	Large deciduous tree for moist sites. Exfoliating bark.
<i>Prunus myrtifolia</i>	West Indian cherry	Evergreen	Round	White	Insignificant	Spring	Parks; residences; shade	A tropical substitute for cherry laurel (<i>P. caroliniana</i>)
<i>Pseudophoenix sargentii</i>	Buccaneer palm, cherry palm	Palm	Single-trunked	Yellow	Insignificant	Summer	Residences; parks	A very slow-growing, small native palm.
<i>Quercus laurifolia</i>	Laurel oak	Evergreen	Oval	Green	Insignificant	Spring	Shade; residences; parks; boulevards	A fast-growing, but comparatively short-lived tree.
<i>Quercus Virginiana</i>	Live oak	Evergreen	Spreading	Green	Insignificant	Spring	Shade; boulevards; residences; parks	A wind-resistant, long-lived oak.
<i>Reynosia septentrionalis</i>	Darling plum	Evergreen	Round	Greenish-yellow	Insignificant	Spring, summer	Residences; parks; boulevards	Fruits are edible.
<i>Rhizophora mangle</i>	Red mangrove	Evergreen	Round, pyramidal	Yellow	Insignificant	Year-round	Parks	A native stilt-rooted tree or shrub growing in salt or brackish water.
<i>Roystonea gia</i>	Royal palm	Palm	Single-trunked, columnar	Yellow	Insignificant	Spring	Parks; residences; boulevards; perimeters	Susceptible to potassium, manganese, and boron deficiencies
<i>Sabal palmetto</i>	Cabbage palmetto, sabal palm	Palm	Single-trunked	White	Insignificant	Spring, summer, fall	Residences; parks; boulevards; parking lots; medians; perimeters	Our state tree. Small plants are difficult to transplant. Susceptible to potassium deficiency and Texas Phoenix palm decline
<i>Salix caroliniana</i>	Coastal plain willow	Deciduous	Round	Green	Insignificant	Spring	Parks	Grows in wet areas around lakes and ponds.
<i>Sapindus saponaria</i>	Soapberry	Deciduous	Oval, round	White	Insignificant	Winter, spring	Parks; residences; boulevards	Fruit contains a soap-like material used in some tropical countries.
<i>Schaefferia frutescens</i>	Florida boxwood	Evergreen	Oval	Green	Insignificant	Spring	Perimeters; parks	Useful as a large, informal hedge.
<i>Simarouba glauca</i>	Paradise tree	Evergreen	Oval	Yellow	Insignificant	Spring	Residences; parks; boulevards	Does well in exposed locations. New foliage is reddish.
<i>Swietenia mahagoni</i>	Mahogany	Evergreen	Round	Greenish-yellow	Insignificant	Spring	Residences; shade; parks; boulevards; medians; parking lots	Mahogany webworm often defoliates tree briefly.

Scientific Name	Common Name	Plant Type	Shape	Flower Color	Flower Characteristics	Flowering Season	Uses	Notes
<i>Taxodium ascendens</i>	Pond cypress	Deciduous	Oval, pyramidal	Green	Cone	Spring	Parks; shade; residences; boulevards	Pyramidal growth habit when young. Has small, juniper-like leaves
<i>Taxodium distichum</i>	Bald cypress	Deciduous	Oval, pyramidal	Green	Cone	Spring	Parks; shade; residences; boulevards	Pyramidal growth habit when young. Has soft, feathery leaves.
<i>Tecoma stans</i>	Yellow elder	Evergreen	Round	Yellow	Showy	Year-round	Residences; parks; boulevards	Must be trained and shaped into a tree.
<i>Thrinax morrisii</i>	Key thatch palm	Palm	Single-trunked	White	Showy	Spring	Residences; parks; medians	A slow-growing native palm
<i>Thrinax parviflora</i>	Florida thatch palm	Palm	Single-trunked	White	Showy	Spring, summer, fall	Residences; parks; medians	A slow-growing native palm. Rarely cultivated.
<i>Thrinax radiata</i>	Thatch palm	Palm	Single-trunked	White	Showy	Spring	Residences; parks; medians	An excellent slow-growing native palm. Not widely available.
<i>Tilia floridana</i>	Florida basswood	Deciduous	Round	Yellow	Insignificant	Spring, summer	Buffers; parks; residences; shade	Sprouts vigorously from base. Good nectar source for bees.
<i>Ximenia americana</i>	Tallowwood plum	Evergreen	Oval	Yellow	Insignificant	Year-round	Parks; residences	Spiny stems, edible fruits.
<i>Zanthoxylum clava-herculis</i>	Hercules club, toothache tree	Deciduous	Round	White	Insignificant	Spring	Buffers; perimeters; parks	Thorny.
<i>Zanthoxylum fagara</i>	Wild lime	Evergreen	Round, spreading	Green	Insignificant	Year-round	Parks; residences	Has recurved prickles. Foliage has lime aroma when bruised.

NON-FLOWERING STREET TREE OPTIONS



BEAUTY LEAF
\$350



EAGELSTON
\$585



OAK
\$350



OLIVE
\$750

50'

50'

40'

40'

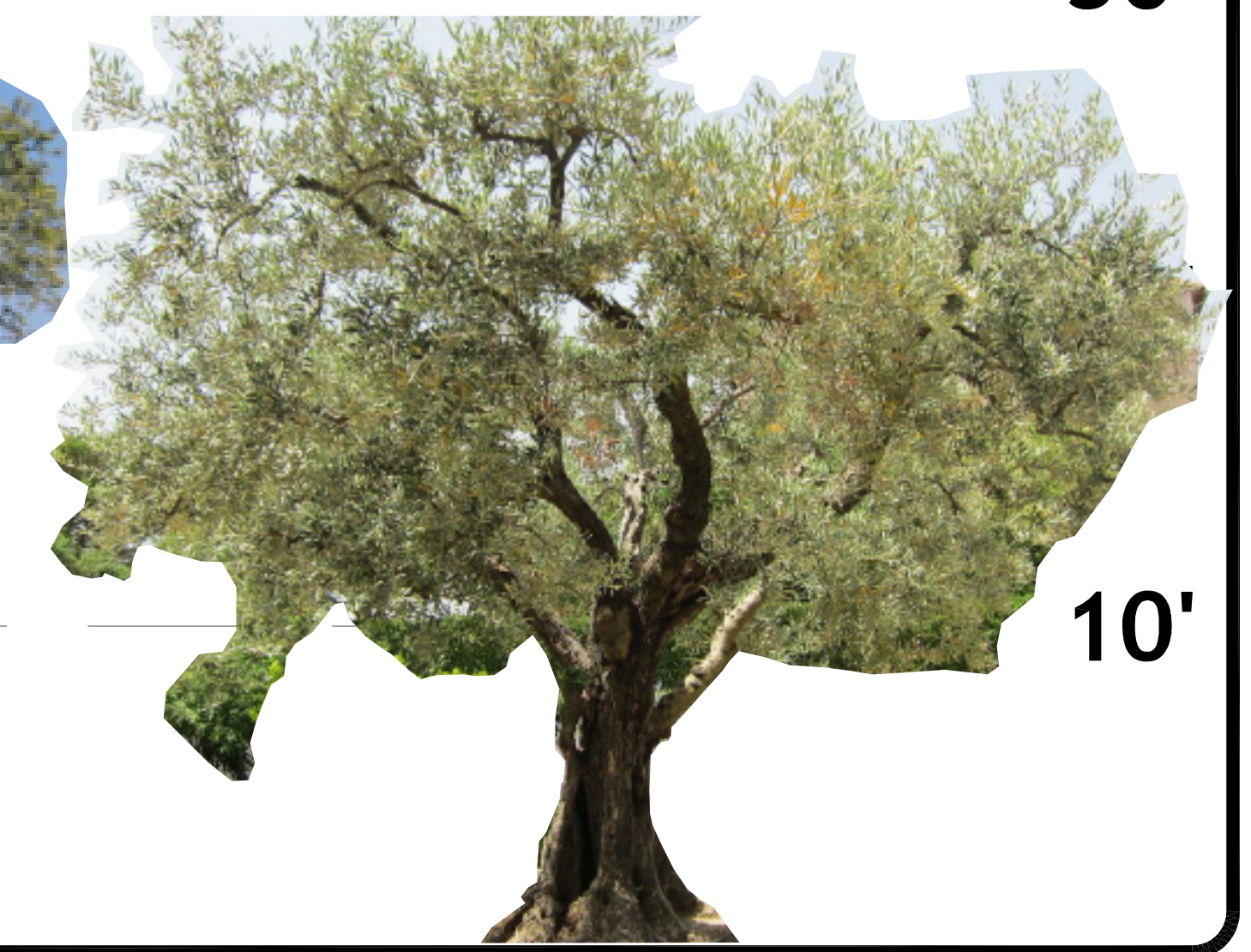
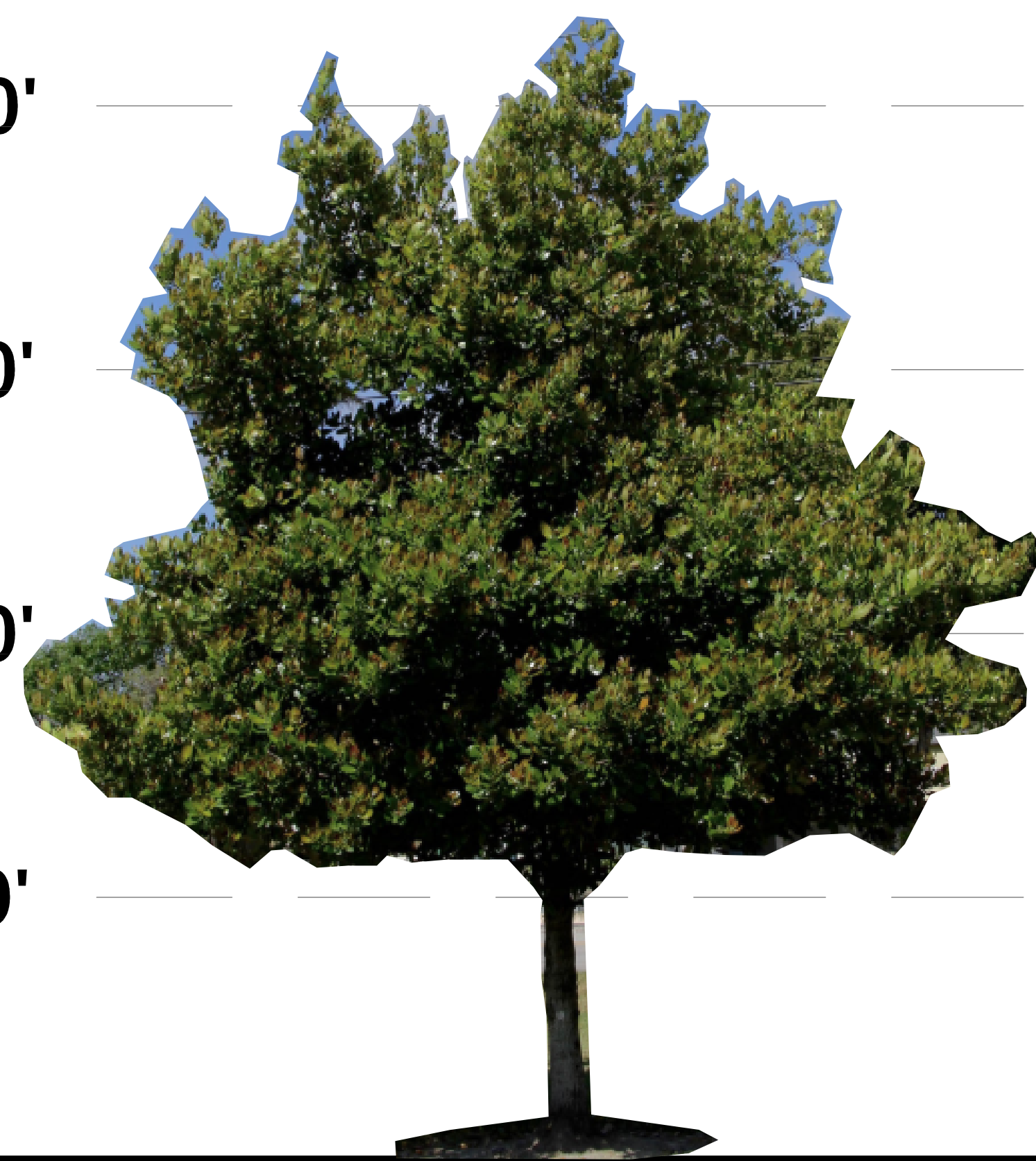
30'

30'

20'

10'

10'



FLOWERING STREET TREE OPTIONS



VERAWOOD
\$425



JACARANDA
\$450



TABEBUIA
\$400

