

Street Tree Requirements

Subcommittee Goals

Review existing code and installation provisions and determine if additional code language should be recommended to BCC to address root damage to infrastructure

Subcommittee Objective

To identify methods to address infrastructure damage caused by street trees in PUDs:

- approved prior to the 2011 amendments to the ULDC
- with public rights-of-way (maintained by PBC) less than 50 feet in width

Options / Recommendations for Discussion

To minimize future damage to infrastructure the following options should be considered when trees are required to be replaced:

- root barriers - effectiveness
- Informational Plant List - limitation on the size / type of that can be installed
- Installation – verify proper procedures are followed and proper materials and products are utilized

History of Street Trees in Palm Beach County

Prior to 1992 street trees were either installed by developers, with no approval, or conditioned to have them installed by Board of County Commissioners (BCC).

In 1992 street trees were required by code. Developers did not always provide plans to PBC Land Development prior to installation of the street trees. The Developers would provide an as built street tree plan at the end of the project, prior to Land Development signing off.

In 1997 Palm Beach County Land Development section started requiring the submittal of street tree plans. Plans are submitted, reviewed, approved and trees installed accordingly.

1992 Zoning Code Requirements

- 6.8 – Street Trees shall be provided on both sides of all local street right-of ways, within a PUD, thirty-two (32) feet in width or greater.
- The street trees of the subject development shall be installed within the street tracts or right-of-ways. Prior to the issuance of the Certificate of Occupancy.
- (50% unit) street trees shall be installed
- (98%) street trees shall be installed

Wording from 1992 as it appears on approved site plan

STREET TREE PROGRAM

PRESENTLY U.L.D.C. SECTION 6.8 & P.B. COUNTY ENGINEERING POLICY ARE IN CONFLICT SECTION 6.8 REQUIRES THAT STREET TREES BE PROVIDED WITHIN ALL LOCAL R/W'S WITHIN A P.U.D. AT THE SAME TIME, P.B. COUNTY ENGINEERING DOES NOT ALLOW TREES WITHIN 32' & 40' R/W'S. IN ADDITION, ALTHOUGH TREES ARE ALLOWED WITHIN 50' R/W'S P.B. COUNTY ENGINEERING IS NOT INCLINED TO PERMIT TREES WITHIN 50' R/W'S WHERE VALLEY CURBS AREA ARE UTILIZED.

TO RESOLVE THIS DISCREPANCY, YET STILL MEET THE INTENT OF THE CODE, IT IS PROPOSED THAT THE STREET TREES BE LOCATED OUTSIDE OF THE R/W & REQUIRED 10' UTILITY EASEMENT WITHIN THE ADJACENT LOTS, AS DEPICTED IN THE CROSS SECTIONS FOR 32', 40' & 50' R/W'S.

ADMINISTRATIVE APPROVAL

DATE 4/10/92 BY 10/23/92

To reduce the # of trees required to be planted on lots. Zoning director made the determination that zero-lot line lots can accommodate

Code Requirements 2000

2000 ULDC - Article 3.E.1.C.2.d

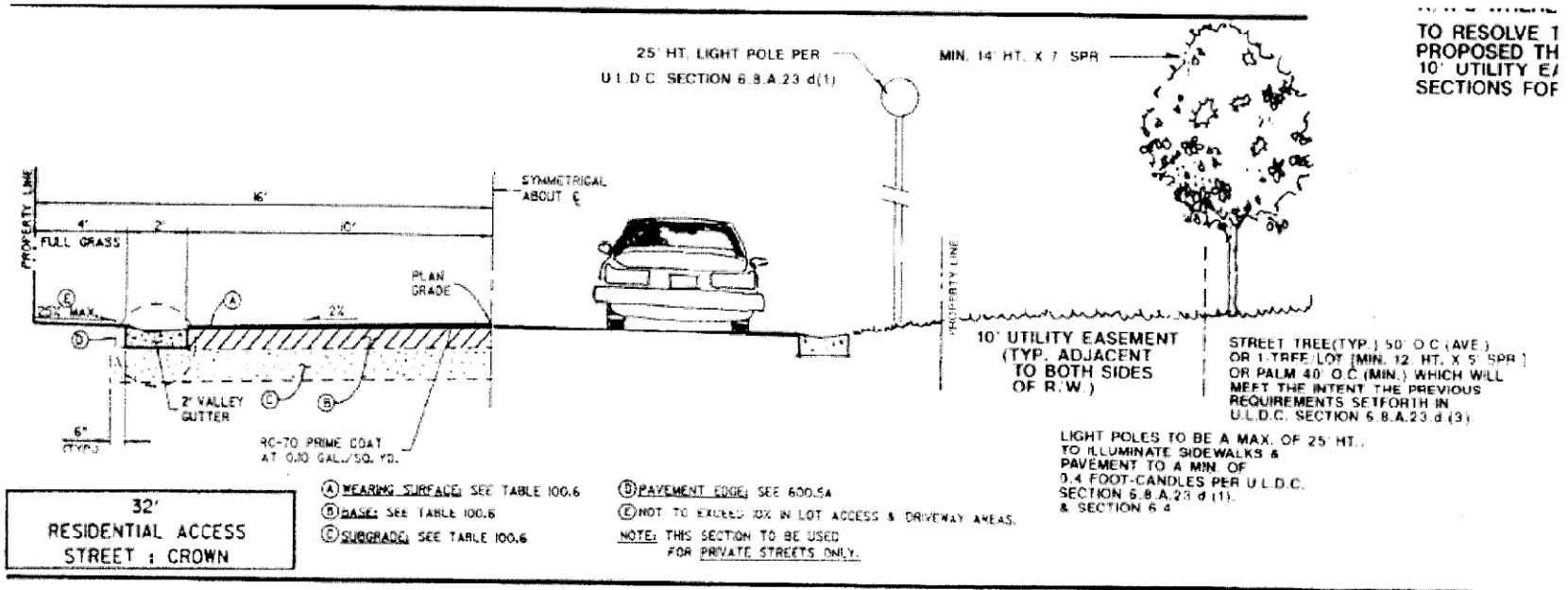
- Concern from Engineering on streets less than 40 feet in width.
- Along one side of all internal PUD right-of-ways forty (40) in width or greater.
- Along both sides of all internal PUD right-of-ways fifty (50) width or greater.

Code Requirements 2011

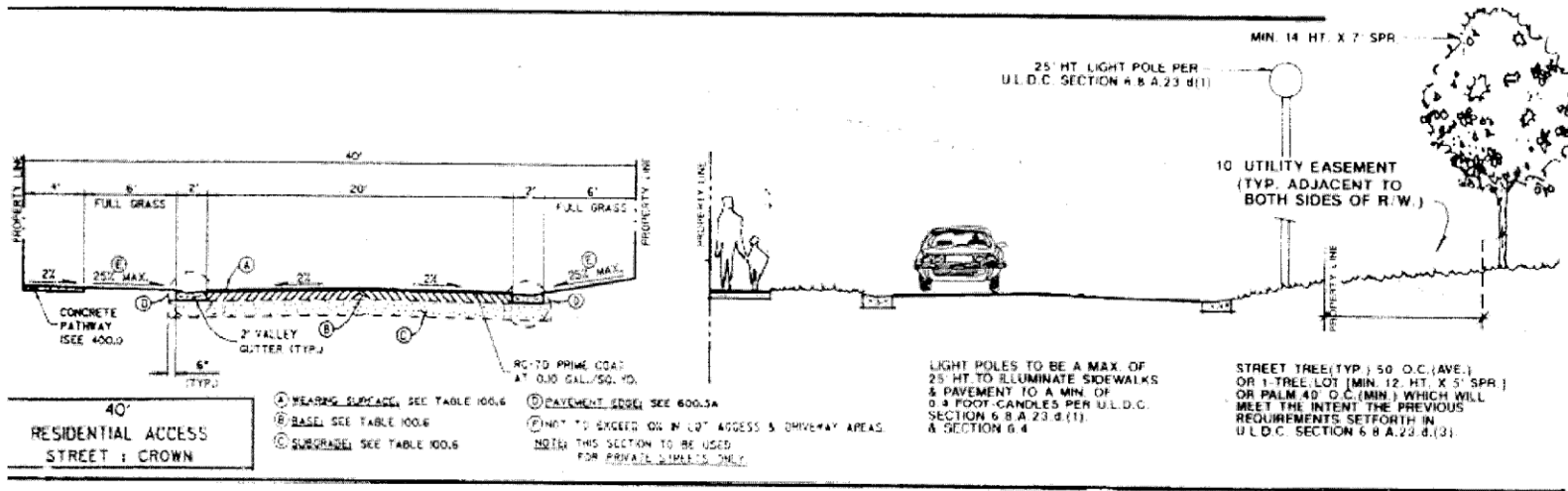
- ULDC Revision (Ordinance 2011-001)
- ULDC Article 3.E.1.C
- To require street trees only for those streets that are fifty (50) feet in width or greater.

**Cross Sections
from previous
ULDC**

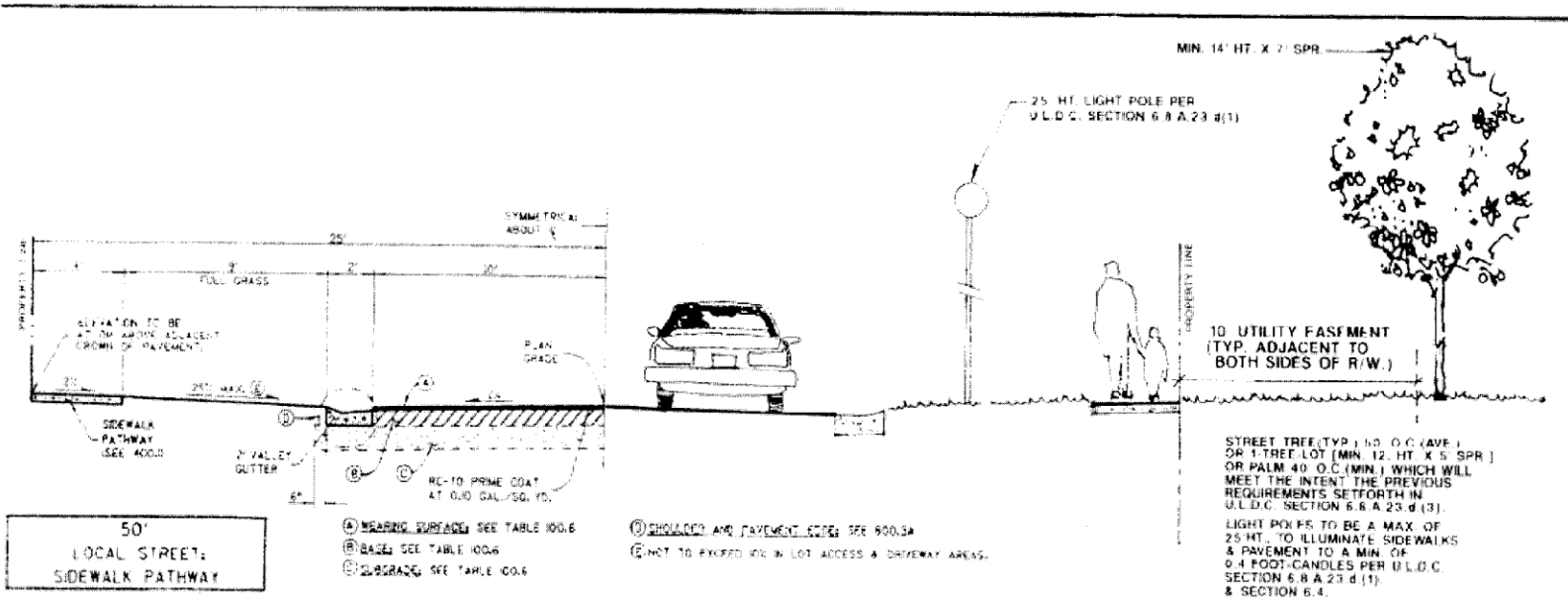
32' Right of Way Detail



40' Right of Way Detail



50' Right of Way Detail



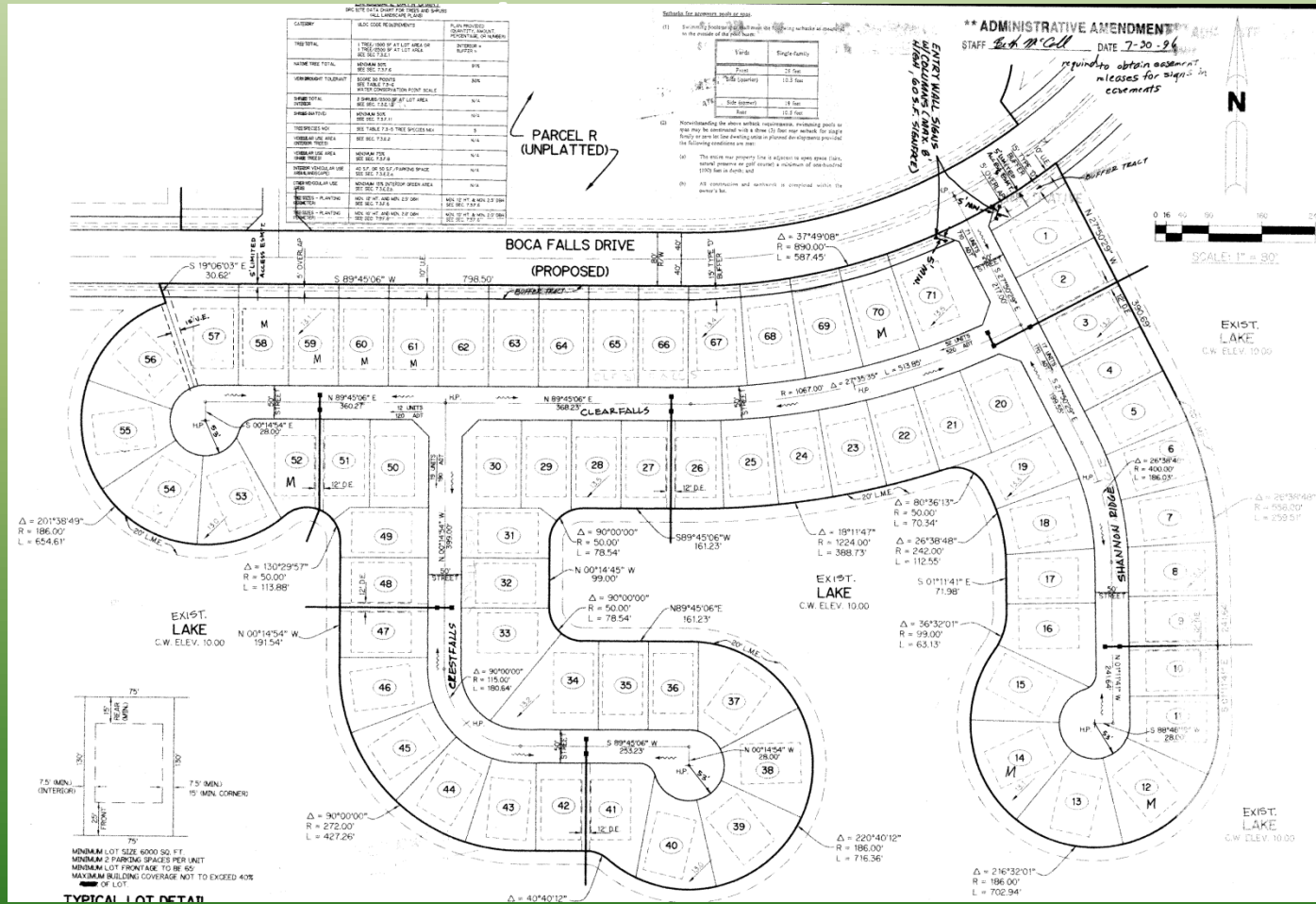
**Site plans and
pictures from
previous
approvals
No Damage**

No apparent damage seen





Boca Falls 80-47



No apparent damage from Royal Palms







**Charleston Place off
18th in Boca**

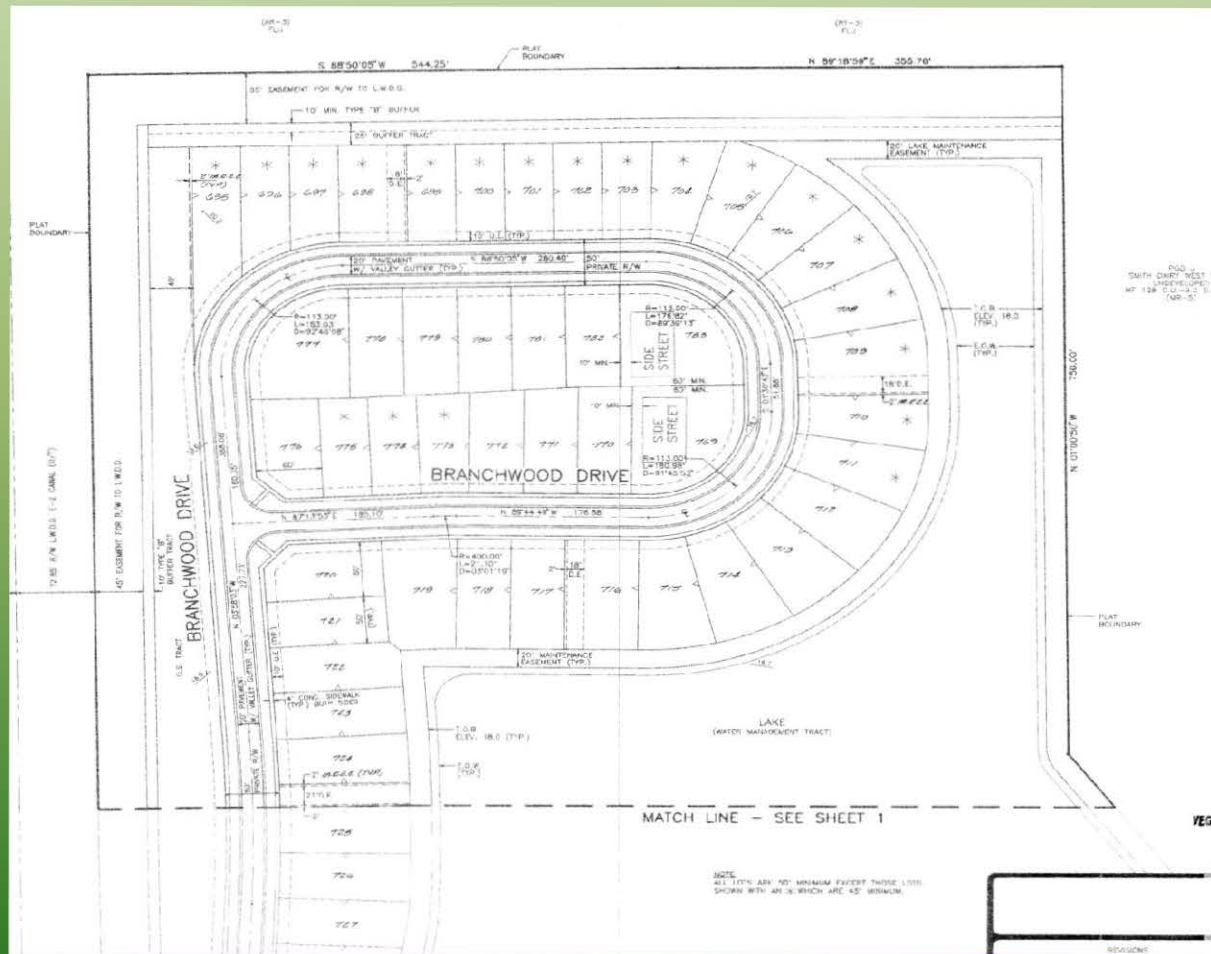




No apparent damage

**Site plans and
pictures from
previous
approvals
Damage**

Smith Dairy 1994-77



Mahogany Tree in 50' R/W



Minor lifting along sidewalk





Sidewalk and Driveway Damage



Damage to driveway due to location of tree and no root barrier





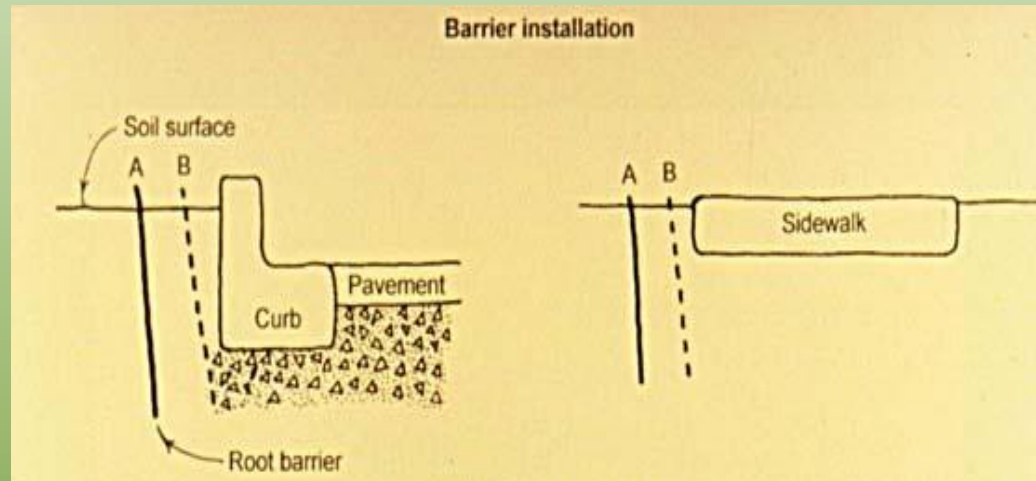
Once concrete was removed it was obvious that proper precautions weren't taken. Why is there no damage to the side walk due to it's location to the tree?



Here we have a problem with a side walk – the cause the tree roots. Remove the sidewalk (problem) and see if anything can be done with the cause.

**Measures to
protect
surrounding areas
from potential root
damage**

Root barriers can deflect roots



- Barriers have been placed vertically in the soil to deflect roots away from hardscapes
- Place the barriers sufficiently away from the structure (about six inches) to be protected so that as the roots grow wider they will not touch the curb or walk
- Be sure the top of the barriers reaches above the top of the soil so roots do not grow over it

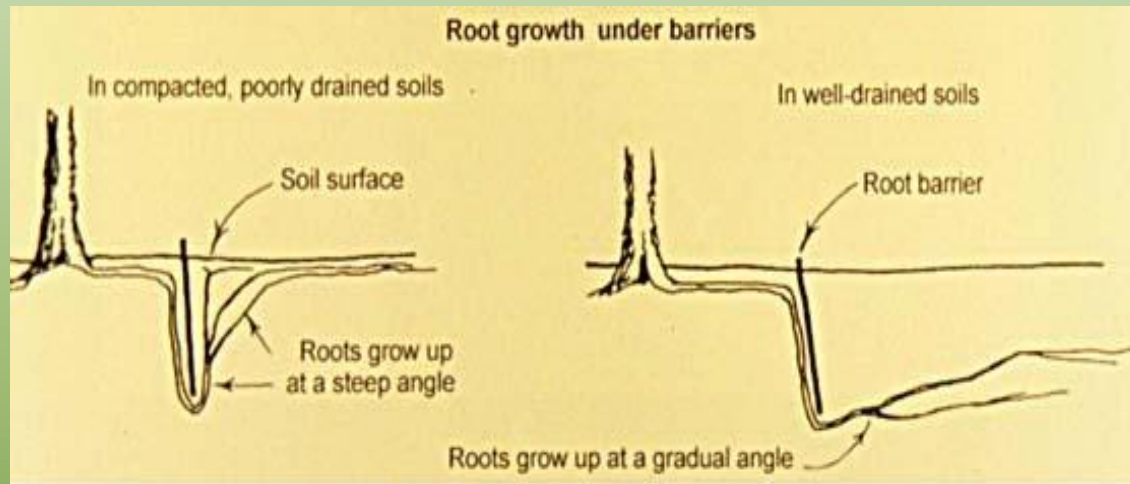
The studies



Gilman
1996

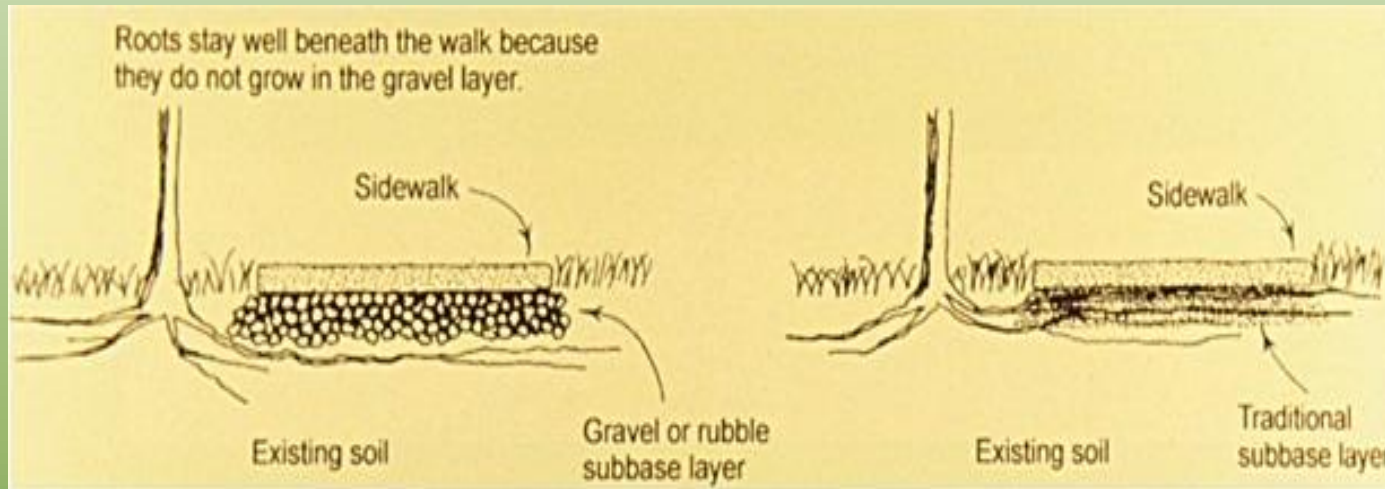


Root barriers can deflect roots



- Roots are deflected horizontally and down by most of the barriers on the market
- In compacted soils and soils with a high water table, roots grow under the barrier and up the other side
- In well drained soil, roots may remain at deeper depths longer

Install alternate sub-base material



- Layer of washed gravel installed as sub-base material - roots remained under the gravel (left)
- Roots did not grow directly under the slab as they often do when a sand, limestone, or no sub-base is used (right)
- Gravel installation helped prolong the life of sidewalks

8 year study



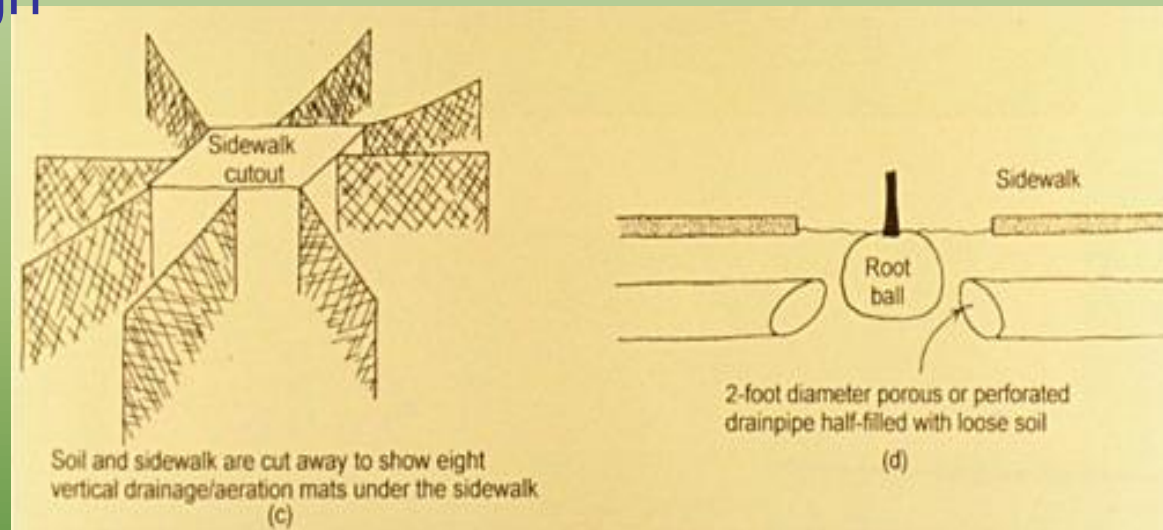
Tree is over here



**Roots
growing up
after
clearing
gravel**

Channeling roots under pavement

Tree roots can be directed to grow in channels provided for by good design



- (LEFT) One-inch thick aeration or drainage pads installed to increase the effective root zone beyond the small planting pit
- (RIGHT) Using pipes about 2 feet in diameter half filled with loose top soil and slow release fertilizer



**Current list of approved street
trees from Engineering
Department.**

**New varieties of trees are being
created and proven to grow in
South Florida and may be
approved for planting that are not
listed.**

Types of trees permitted from streetscape standards 2008

- LARGE PALMS

• COMMON NAME!	' BOTANICAL NAME	Paurotis Palm * Acoelorrhaphe wrighti	DROUGHT I HEIGHT TOLERANT 15-25'
'Mod (4.6-7.6m)	COST RATING Mod	STREET VALUE Out**	MAINT. VALUE Low
• Alexandra Palm	Archontophoenis alexandrae	40-45' Very (12.2 -13.7m)	Mod High Low
• Bismark Palm	Bismarkia nobilis	30-60' (9.1 • 18.3m)	Very High low low
• Chinese Fan Palm	Livistonia chinensis	20-30' (6.1 ~.1m)	Very High low low
• Majesty Palm	Ravenea glauca	50-80' (15 -24m)	low Mod Mod low
• Medjool Date Palm	Phoenix 'medjool	60-90' Very (18.3 27.4m)	High High low
• Senegal Date Palm	Phoenix reclinata	25-35' (7.6 -10.7m)	Very High low Low
• Solitaire Palm	Ptychosperma elegans	15-25' (4.6 -7.6m)	Very Mod Mod Low
• Royal Palm *	Roystonea elata	50-70' Mod (15.2 21.3m)	High High Low
• Sabal Palm *	Sabal palmetto	45-70' Very (13.7 21.3m)	Low Mod Low
• Queen Palm	Syagrus romanzoffiana	40-45' Mod (12.2 -13.7m)	low High Low
• Windmill Palm	Trachycarpus fortunei	20-40' (6.1 -12.2m)	Very High Mod Low
• Washingtonia Palm	Washingtonia robusta	50-80' Very (15.2 24.4m)	Mod High Low

- * ** Denotes plants native to Florida Use only outside of sight triangle

• SMALL PALMS

COMMON NAME!, STREET VALUE	BOTANICAL NAME MAINT. VALUE	HEIGHT	DROUGHT TOLERANT	COST RATING	
• Pindo Palm	<i>Butia capitata</i>	10-15' (3 -4.6m)	Very High	Mod	Low
• .. European Fan Low	<i>Chamaerops humilis</i>	15-20' (4.5-6m)	Low	High	Mod
• Silver Palm Low	<i>Coccothrinax argentata</i>	to-20' (3 -6.1m]	Very	High	Mod
• Pygmy Date Palm Low	<i>Phoenix roebellini</i>	9-12' (2.7-3.6m)	Mod	Mod	Out**
• Needle Palm Low	<i>Rhapidophyllum hystrix</i>	3-5' (.9-1.5m)	Mod	Mod	Out**
• Dwarf Palmetto *	<i>Sabal minor</i>	5-7' (1.5-2.1m)	Very	Mod	Out** Low
• Saw Palmetto *	<i>Serenoa repens</i>	6-15' (1.8-4.6m)	Very	Low	Out** Low
• Silver -Saw Palmetto Out** Low	<i>Serenoa repens 'Cinerea'</i>	6-15' (1.8-4.6m)	Very	Low	Low
• Thatch Pa 1m *	<i>Thrinax spp.</i>	15-25' (4.6-7.6m)	Very	Mod	Mod Low
• Christmas Palm	<i>Veitchii merrillii</i>	15-20' (4.6-6.1m)	Very	Mod	Mod Low

• LARGE TREES

- | COMMON NAME! | BOTANICAL NAME | Black Olive | Bucida buceras l' | DROUGHT | HEIGHT TOLERANT | 40- |
|-------------------------------|--------------------------|----------------------------|-------------------|------------------|------------------|------|
| 50' Low (12.2 -15.2m) | | COST RATING Low | | STREET VALUE Mod | MAINT. VALUE Mod | |
| • Gumbo Limbo *
Mod | Bursera simarub~ | 40-60' Very (12.2 -18.3m) | | | Low | Mod |
| • Satin Leaf *
Mod | Chrysophyllum oliviforme | 30-40' (9.1 -12.2m) | | Mod | Mod | Mod |
| • Green Buttonwood *
Mod | Conocarpus erectus | 30-40' (9.1 -12.2m) | | Very | Low | High |
| • Queen's Crepe Myrtle
Mod | Lagerstroemia speciosa | 30-45' (9.1 ~ 13.7m) | | | Very | Mod |
| • Redbay *
High | Persea borbonia | 50-60' Very (15.2 -18.3m) | | Mod | Low | Low |
| • Slash Pine *
High | Pinus elliotii | 80-100 Very (24.4 -30.5m) | | Mod | Low | Low |
| • Laurel Oak *
High | Quercus lauritolia | 60-100' Very (18.3 -30.5m) | | Mod | High | Low |
| • Live Oak *
High | Quercus virginiana | 50-60'. Very (15.2 -18.3m) | | Mod | High | Low |
| • Mahogany *
Low | Swietenia mahogani | 35-60' 'Very (10.7 -18.3m) | | | Low | High |
| • Chinese Elm
Low | Ulmus parvifolia 'drake' | 40-60' Very (12.2 -18.3m) | | | Mod | Mod |

• MEDIUM TREES

- | COMMON NAME! . BOTANICAL NAME | Pitch Apple * <i>Clusia rosea</i> | HEIGHT 25-35' (7.6 -10.7m) | DROUGHT TOLERANT 'Very | COST RATING Mod | STREET VALUE Out** | MAINT. VALUE |
|---|-----------------------------------|----------------------------|------------------------|-----------------|--------------------|--------------|
| | | | Low | | | |
| Pigeon Plum * <i>Clusia diversifolia</i> | 25-30' (7.6 -9.1m) | Very | Mod | Mod | Low | |
| Dahoon Holly * <i>Ilex cassine</i> | 25-30', (7.6 -9.1m) | Very | Mod | Mod | Low | |
| Black Ironwood • <i>Krugiodendron ferreum</i> | 20-30' (6.1-9.1m) | Very | Mod | Mod | Low | |
| Madagascar Olive <i>Noronhia ernarginata</i> | 20-30' (6.1-9.1m) | Very | Mod | Mod | Low | |

- SMALL TREES

- COMMON NAME! BOTANICAL NAME Silver Buttonwood ConOcarpus erectus var "sericeus" * HEIGHT 15-20' (4.6 -6.1m) DROUGHT COST STREET I TOLERANT RATING VALUE Very , Mod Mod MAINT. VALUE Low
- Stoppers • Myrcianthes fragrans 'Crepe Myrtle lagei'stroemia indica 15-20' (4.6 -6.1m) 15-20' (4.6 -6.1m) Very Mod' Mod Mod Low High Low High
- Tree Ligustrum ligustrum japonicum 15-25' , (4.6-7.6m) Very Mod High Low
- Orange Jasmine Murraya paniculata 15-20' (4.6 -6.1m) Very Mod Mod Low
- Wax Myrtle· Myrica ceritera 15-20' (4.6 -~.1m) Very Low High High
- Oleander Standard Nerium oleander 15-20', (4.6-6.1m) Very Mod Mod Low
- Kopsla Ochrosia elliptica 15-20' (4.6 -6.1m) Very Mod Mod Low

The Right Tree in the Right Place

Aggressive surface roots from deep planting



- Excavation (using an air spade) of root collar on trees planted too deeply can show severe defects such as these
- If this tree does not currently show above ground symptoms, it is likely to soon

Root flare on forest grown trees



- Root flare causes no problems where there is adequate soil space for expansion
- Note the abundant flare at the base of all these trees

Root flare can destroy infrastructure



- Roots at the base of certain trees become extremely large and can displace curbing, sidewalks, and pavement
- The curbing and pavement were lifted by up to two feet next to each of the trees on this street

Root Flare

Big island means healthier trees



- Here is a parking lot constructed on a compacted clay soil
- The two trees on the left and center (blue arrows) are larger and darker green than the tree on the right
- The stressed tree on the right was planted in a tiny island whereas the healthier ones were in a larger island.

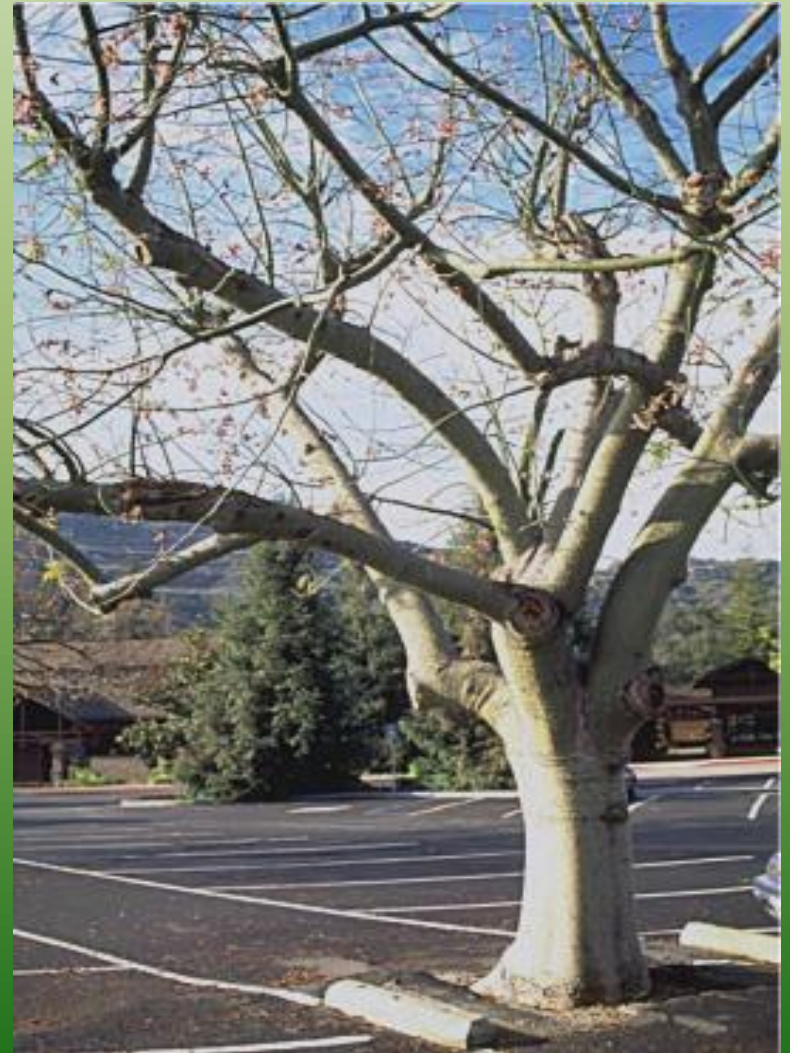
Small trees for small islands

- Small-maturing trees such as crape myrtle are the best ones to choose for small islands
- They cause less damage to hardscape than trees that grow to be large



Defying reason?

- Occasionally, trees appear to be defying reason, i.e, the tree appears healthy and the pavement is intact
- There can be several explanations for this:
 - pavement might have been added under the tree recently
 - the soil under the pavement may not have been compacted well
 - specially designed structurally soil may be present under the pavement
 - the existing soil may be gravelly
 - luck



Approval letter from county to developer for the Bridges



**Department of Engineering
and Public Works**

P.O. Box 21229
West Palm Beach, FL 33416-1229
(561) 684-4000
FAX (561) 684-4050
www.pbcgov.com



**Palm Beach County
Board of County
Commissioners**

Shelley Vana, Chair
Steven L. Abrams, Vice Chairman
Karen T. Marcus
Paulette Burdick
Burt Aaronson
Jess R. Santamaria
Priscilla A. Taylor

County Administrator

Robert Weisman

*"An Equal Opportunity
Affirmative Action Employer"*

September 27, 2012

Boca Raton Associates VI, LLLP
1600 Sawgrass Corporate Parkway Suite 400
Sunrise, Florida 33323

Attention: Rick Elsner, P.E.

**SUBJECT: BRIDGES - PLAT FOUR - REVISED STREET TREE
PLANS (NO JOB NUMBER, SHEETS 1-4, DATED MAY
18, 2012)**

Dear Rick,

Enclosed is a copy of the approved street tree plan for your file. Note that a signed and sealed certification by an R.L.A. that street trees have been installed in conformance with the approved plans will be required as part of the developer's final submittal to this office requesting acknowledgement of completion of required improvements. Note also this plan approval applies only to plantings within the limits of the street tracts per the subject plat.

If you have any questions, please call George McDermott at 684-4099.

Sincerely,

Joanne M. Keller, P.E., Director
Land Development Division

Encl. Approved street tree plan

cc: Mark Tomlinson, Director-Construction Coordination (w/2 plan sets)

Re: 922-009gm2mis

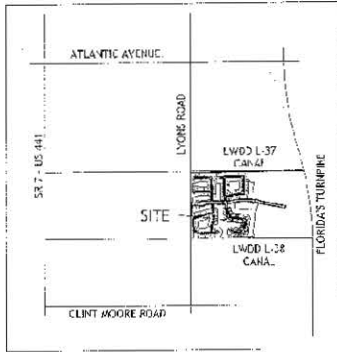
△ BRIDGES- PLAT FOUR

(aka Dubois AGR-PUD)

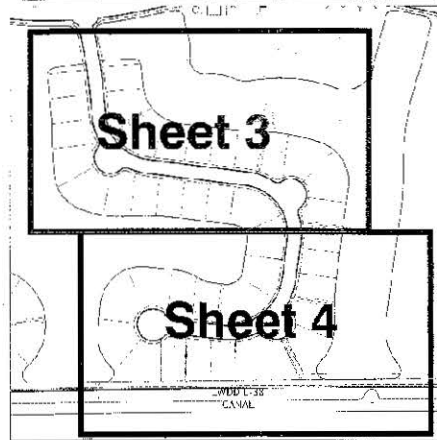
△ Boca Raton Associates VI, LLLP
Palm Beach County, Florida

STREET TREE PLANS

Location Map



Key Map



Sheet Index

- 1 - Key Map, Location Map, Sheet Index
- 2 - Planting Notes & Details
- 3 - Planting Plans & Plant Schedules
- 4 - Planting Plans & Plant Schedules

NOTED ONLY FOR STREET TREES

J. Dubois
DIRECTOR, LAND DEVELOPMENT DIVISION
PALM BEACH COUNTY ENGINEERING DEPARTMENT

RECEIVED
JUN 12 2002
LAND DEVELOPMENT DIVISION
PALM BEACH COUNTY

GENERATED & ACCEPTED
DESIGNER: J. DUBOIS
DATE: 05-10-2002

JUN 05 2002
LAND DEVELOPMENT DIVISION
PALM BEACH COUNTY

△ BRIDGES- PLAT FOUR
(aka Dubois AGR-PUD)
△ Boca Raton Associates VI, LLLP
Palm Beach County, Florida
STREET TREE PLANS

REVISED

WUD # 11-555

1. STREET TREES SHALL HAVE AN OVERALL HEIGHT OF TWELVE FEET (12'), SIX FEET (6') CLEAR TRUNK AND AN AVERAGE CANOPY DIAMETER OF SEVEN FEET (7'). ALL TREES SHALL BE F.C. GRADE #1 OR BETTER, PER 2/98 GRADES AND STANDARDS.

2. ONE CANOPY TREE FOR EVERY FORTY (40) LINEAR FEET OF STREET FRONTAGE WITH A MAXIMUM SPACING OF SIXTY (60) FEET BETWEEN CLUSTERS.

3. ALL TREES SHALL BE INSTALLED TO PROVIDE SIX FEET (6') FROM THE EDGE OF TRAVEL LANE (4 FEET FROM THE FACE OF CURB) TO THE FACE OF THE TREE TRUNK AT ITS ANTICIPATED MATURE GROWTH DIAMETER. THE INSTALLER IS RESPONSIBLE FOR THE PLACEMENT OF THE TREE IN ACCORDANCE WITH HIS KNOWLEDGE OF THE GROWTH HABIT OF THE TREE; IF THE INSTALLER IS NOT SURE THAT THE LOCATION OF THE TREE AS DESIGNATED ON THESE PLANS WILL ALLOW FOR THE MATURE GROWTH TO MEET THE SETBACK CRITERIA AS STATED HEREIN IT IS THE INSTALLER'S RESPONSIBILITY TO ADJUST THE LOCATION OF THE TREE AND BRING SAID ADJUSTMENT TO THE ATTENTION OF THE LANDSCAPER AND/OR ARCHITECT.

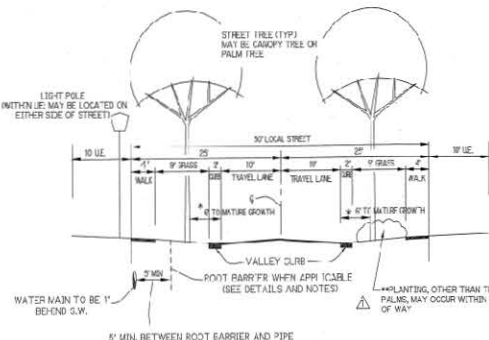
4. TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIGHT STATIONS. IF A TEN FOOT (10') SEPARATION CANNOT BE ACHIEVED, THE TREE MAY BE INSTALLED WITH A ROOT BARRIER SYSTEM - REFER TO THE "ROOT BARRIER" DETAIL SHOWN HEREIN FOR INSTALLATION REQUIREMENTS - HOWEVER, IN NO CASE SHALL A TREE ENCRUST INTO A UTILITY CASING AND ONLY SOO CAN BE INSTALLED WITHIN SEVEN AND ONE-HALF FEET (7'-6") OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL.

5. ALL LANDSCAPING AND ABOVE GROUND STRUCTURES SHOWN HEREON ARE DESIGNED AND ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PALM BEACH COUNTY STREETScape STANDARDS MANUAL, INCLUDING REVISIONS DATED THROUGH FEBRUARY 24, 2008.

6. ALL TREES LOCATED WITHIN A SAFE SIGHT TRIANGLE MUST BE SPACED A MINIMUM OF FORTY (40) LINEAR FEET ON CENTER AND HAVE AN EIGHT FOOT (8') CLEAR TRUNK AND SIXTEEN FEET (16') OVERALL HEIGHT.

7. ANY PALM AND COCONUT PALMS INSTALLED HEREIN SHALL HAVE REGULAR MAINTENANCE, PERFORMED BY THE HOMEOWNERS ASSOCIATION OF RECORDS, TO A LEVEL THAT SIGNIFICANTLY REDUCES THE LIKELIHOOD OF ANY FROND OR COCONUT FROM FALLING INTO A ROADWAY OR ONTO A PEDESTRIAN AREA.

Notes



* TREES SHALL BE PLANTED SO THAT THE MATURE TRUNK IS 6' MINIMUM FROM EDGE OF TRAVEL LANE.
 ** PLANTING OTHER THAN TREES AND PALMS SHALL MEET SAFE SIGHT DISTANCE CRITERIA WHERE APPLICABLE.

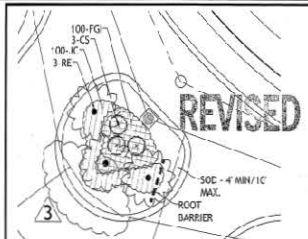
50' Local Street Cross Section

N.T.S.



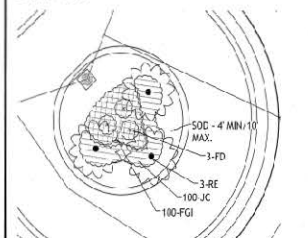
Tree Planting Detail

N.T.S.



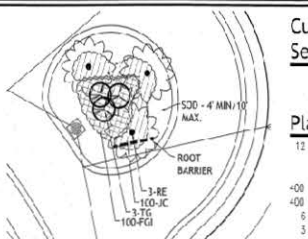
Island 'A'

SCALE: 1"=20'



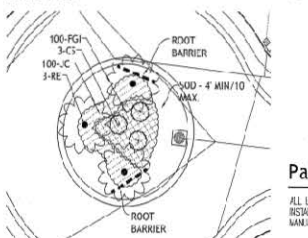
Island 'C'

SCALE: 1"=20'



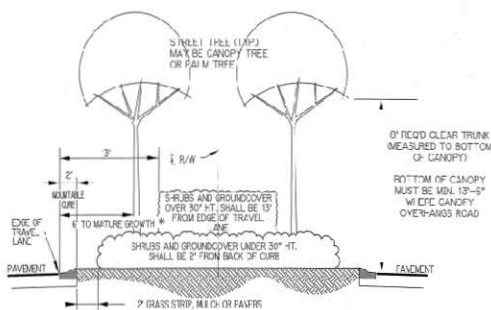
Island 'B'

SCALE: 1"=20'



Island 'D'

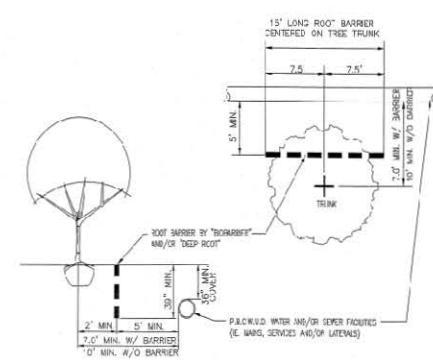
SCALE: 1"=20'



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 ** PLANTING OTHER THAN TREES AND PALMS SHALL MEET SAFE SIGHT DISTANCE CRITERIA WHERE APPLICABLE.

Cul-de-Sac Section

N.T.S.



Root Barrier Detail

N.T.S.

TREES SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY. TREE SPACING IS BASED ON DESIGN REQUIREMENTS AND THE TREES SHOWN ON THESE PLANS ATTEMPT TO ACCOMPLISH THE SPACING WHILE MAINTAINING THE REQUIRED SETBACKS FROM UTILITIES. TREES MAY BE FIELD ADJUSTED TO AVOID UTILITIES WITH UTILITIES ALWAYS AND UNDERGROUND UTILITIES. IN ANY CASE, THE TREES SHALL BE LOCATED IN THE FIELD IN ACCORDANCE WITH THE PLANTING DETAILS SHOWN HEREON.

ADDITIONALLY, TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY UNDERGROUND PIPE (WATER, SEWER OR RECLAIM MAINS) AND/OR SERVICE HYDRANTS, LIGHT STATIONS AND GRABBASE CULVERTS OR BASINS. IF A TEN FOOT (10') SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM REFER TO THE "ROOT BARRIER" DETAIL FOR INSTALLATION REQUIREMENTS. HOWEVER, IN NO CASE SHALL A TREE ENCRUST INTO A FACILITY WITHIN 10' FROM PUBLIC ROAD, APPROVAL, AND ONLY SOO CAN BE INSTALLED WITHIN 7'-6" OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL AND P.B.C.W.U.D.

Cul-de-sac Island Planting

See sheets 3 & 4 for locations

Plant Schedule - This Sheet Only:

- 12 - RE - *Roystonia elata* - Royal Palm 24" H., 8" d., 12" caliper measured at 6' above grade.
- Trees shall be pruned to meet "C1" (clear trunk) height at time of planting.
- 00 - JC - *Juniperus conferta* - Shore Juniper; 15' spread, 6" H., 24" oc.
- 00 - FC - *Ficus macrocarpa* - Shore Island Ficus; 15' spread, 15" H., 24" oc.
- 6 - CC - *Cordia alliodora* - 8" H., 5' spread
- 3 - TG - *Thubergia grandis* - 8" H., 5' spread
- 3 - FE - *Ficus decipiens* - Japanese Fern Tree - 3' H., 5' spread

Soc - St. Augustine Floratum - Load smooth and light, stagger poles.

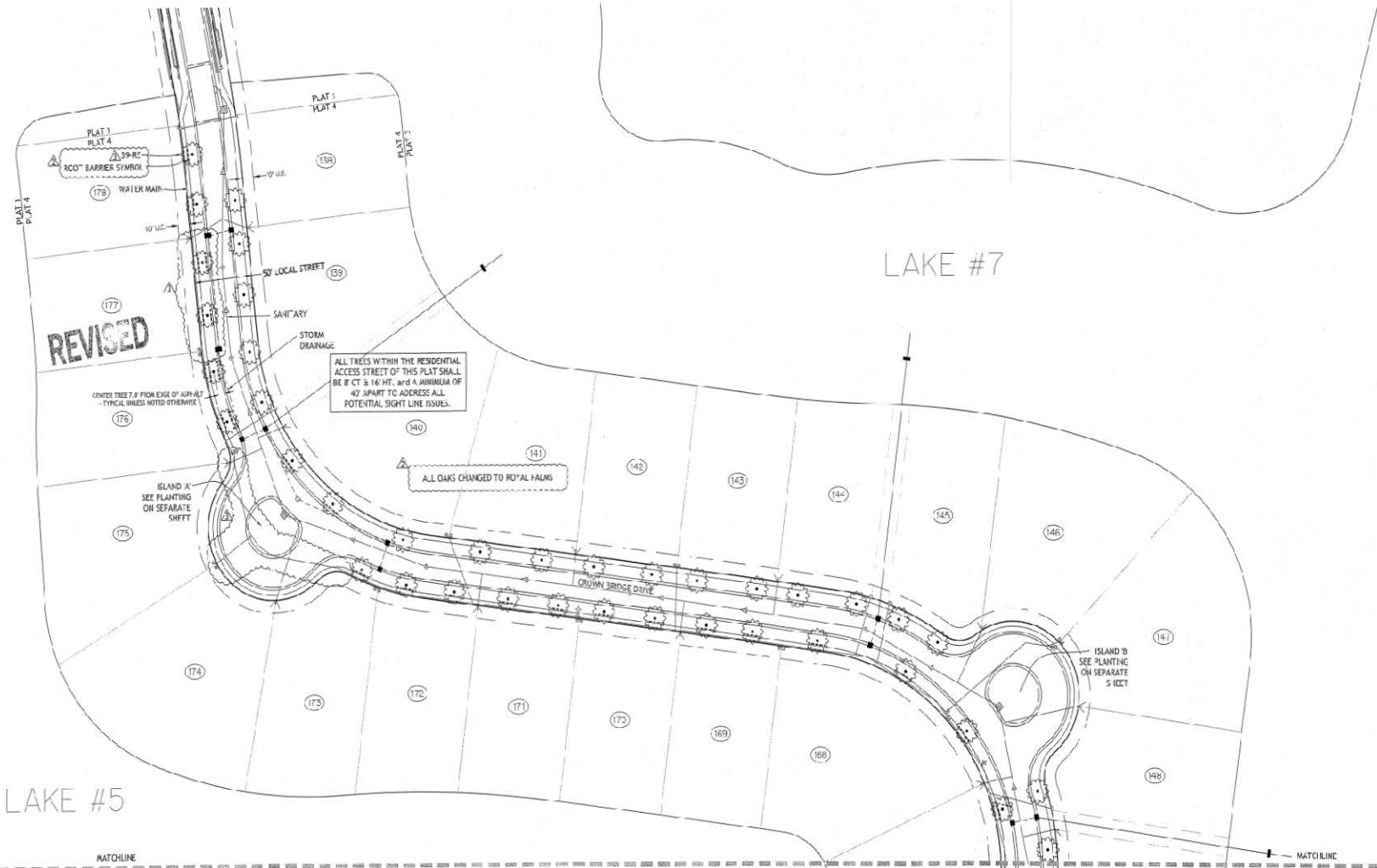
Palm Beach County Landscape Note:

ALL LANDSCAPING AND ABOVE GROUND STRUCTURES SHOWN HEREON ARE DESIGNED AND ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PALM BEACH COUNTY STREETScape STANDARDS MANUAL, INCLUDING REVISIONS DATED FEBRUARY 24, 2008

GLHOMES
 LANDSCAPE ARCHITECTURE
 1000 S. PALM BEACH BLVD., SUITE 100
 PALM BEACH, FLORIDA 33480

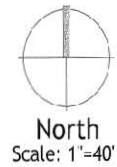
BRIDGES-PLAT FOUR
 (aka Dubois AGR-PLUD)
 Boca Raton Associates VI, LLLP
 Palm Beach County, Florida
STREET TREE PLANS

Date: 08-16-11
 Revision Dates:
 11-22-11
 01-19-12
 per 01-17-12 comments & changes to Plans
 05-18-12
 trees added where plans relocated
 Sheet Number: 2
 Scale:
 Date: JUN 09 2012
 Charles A. Mucclio
 FLA 1071



Symbols Legend

	UTILITY EASEMENT		LOT NUMBER
	DRAINAGE EASEMENT		STREET TREE
	LAKE MAINTENANCE EASEMENT		TREE REQUIRING ROOT BARRIER
	STORM SEWER LINE WITH MANHOLE		
	STORM SEWER LINE WITH CATCH BASIN		
	SANITARY SEWER LINE WITH MANHOLE		
	WATER MAIN		
	WATER SVC TO LOT WITH METER		
	SANITARY SVC TO LOT WITH CLEANOUT		



ATTENTION LANDSCAPE CONTRACTOR:
TREES PLANTED IN LOCATIONS OTHER THAN THOSE SHOWN MAY INTERFERE WITH UNDERGROUND PIPES. BEFORE CHANGING LOCATIONS VERIFY UNDERGROUND AND PROVIDE ROOT BARRIER AS SPECIFIED ON DETAILS SHEET OR ELIMINATE TREE AS DEEMED NECESSARY. CONFLICTS REQUIRING DEVIATION FROM PLANS MUST BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OF RECORD.

Plant Schedule - This Sheet Only:

39 - RF - Roystonea alba - Royal Palm 24" Ht., 8 ct., 12" caliper measured at 6" above grade.
Trees shall be pruned to meet "CT" (clear trunk) height at time of planting.

Palm Beach County Landscape Note:

ALL LANDSCAPING AND ABOVE GROUND STRUCTURES SHOWN HEREIN ARE DESIGNED AND ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PALM BEACH COUNTY STREETSCAPE STANDARDS MANUAL, INCLUDING REVISIONS DATED FEBRUARY 20, 2008.

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Date: 08-16-11

Revision Dates:
11-03-11
01-11-12
07-17-12 comments to be changed (Date in Italic)
05-10-13
Trees added where pipe relocations

Sheet Number: 3

Scale

Charles A. Barrisio
FL 14 9271

MATCH LINE

MATCH LINE

LAKE #5

LAKE #7

REVISED

ALL TREES WITHIN THE RESIDENTIAL ACCESS STREET OF THIS PLAT SHALL BE 8' CT & 16' HT. AND A MINIMUM OF 40' APART TO ADDRESS ALL POTENTIAL SIGHT LINE ISSUES.

ISLAND D' SEE PLANTING ON SEPARATE SHEET

STORM DRAINAGE

SHIFTED TREE WEST

CROWN BRIDGE DRIVE

ISLAND C' SEE PLANTING ON SEPARATE SHEET

WATER MAIN

SANITARY

50' LOCAL STREET

10' U.E.

10' U.E.

24" RC

ROOT BARRIER SYMBOL

167

145

50

151

152

153

154

161

162

163

164

165

160

159

158

157

156

155

154

L.W.D.D. L-38 CAVAL

ATTENTION LANDSCAPE CONTRACTOR:
TREES PLANTED IN LOCATIONS OTHER THAN THOSE SHOWN MAY INTERFERE WITH UNDERGROUND PIPE. BEFORE CHANGING LOCATIONS VERIFY UNDERGROUND AND PROVIDE ROOT BARRIER AS SPECIFIED ON DETAILS SHEET OR ELIMINATE TREE AS DEEMED NECESSARY. CONFLICTS REQUIRING DEVIATION FROM PLAN MUST BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OF RECORD.



Plant Schedule - This Sheet Only:

- RE Royalton eate - Royal Palm, 24" H, 5' ct, 12" caliper measured at 6' above grade.
- Trees shall be pruned to meet CT (clear trunk) height at time of planting.

Palm Beach County Landscape Note:

ALL LANDSCAPING AND HEDGE GROUND STRUCTURES SHOWN HEREON ARE DESIGNED AND ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PALM BEACH COUNTY STREETSCAPE STANDARDS MANUAL, INCLUDING REVISIONS DATED FEBRUARY 28, 2008.

JUL 23 2011

WUD # 11-555

Symbols Legend

- U.E. UTILITY EASEMENT
- D.C. DRAINAGE EASEMENT
- L.W.A.E. LAKE MAINTENANCE EASEMENT
- L.W.A.E. LAKE MAINTENANCE ACCESS EASEMENT
- STORM SEWER LINE WITH MARKING
- STORM SEWER LINE WITH CATCH BASIN
- SANITARY SEWER LINE WITH MANHOLE
- WATER MAIN
- WATER SVC. TO LOT WITH UTILITY M.A.M.
- SANITARY SVC. TO LOT WITH CLEANSUIT
- LOT NUMBER
- STREET TREE
- TREE REQUIRING ROOT BARRIER



North
Scale: 1"=40'

GLHOMES
LANDSCAPE ARCHITECTURE
1600 S.W. 8th Ave., Suite 400
Palm Beach, FL 33480

BRIDGES - PLAT FOUR
(aka Dubois AGR-PUD)
Boca Raton Associates VI, LLLP
Palm Beach County, Florida
STREET TREE PLANS

Date
08-16-11

Revisions Dates
11-07-11
01-15-12
09-27-12 comments & changes date to Royalton
05-16-12 trees added where pipe relocated

Sheet Number
4

Seal
Charles A. Muccillo
P.L.C. 1021

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Current 50' R/W Street tree planting plan approved by PBC Engineering Department.

Project is new and trees have not been installed that we are aware of.