

DEVELOPMENT ORDER PLAN FOR HIGHLAND OAKS DRIVE AT UNIVERSITY HIGHLAND

PART OF SECTION 26, TOWNSHIP 46 SOUTH, RANGE 26 EAST,
VILLAGE OF ESTERO, LEE COUNTY, FLORIDA

PENINSULA ENGINEERING
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 Florida Certificate of Authorization #28275

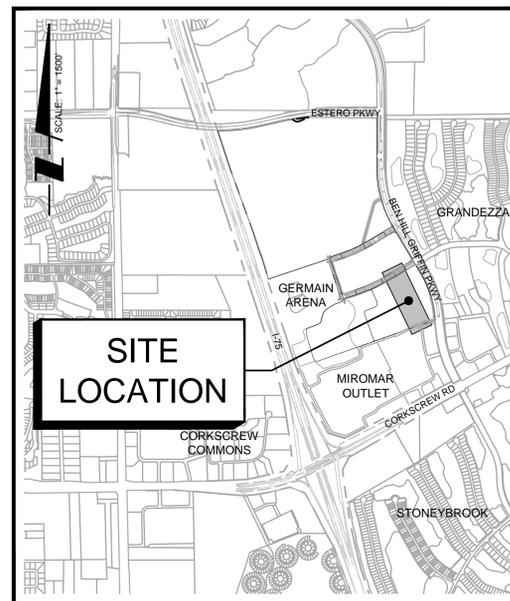
PROJECT:
**HIGHLAND OAKS DRIVE AT
 UNIVERSITY HIGHLAND**

PLAN TITLE:
DEVELOPMENT ORDER PLAN

SHEET TITLE:
COVER SHEET



VICINITY MAP



LOCATION MAP

SHEET INDEX

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OWNER/DEVELOPER
UNIVERSITY HIGHLAND LIMITED PARTNERSHIP
 9130 GALLERIA COURT, SUITE 316
 NAPLES, FLORIDA 34109
 (239) 598-3196

REVISIONS:

REV. NO.	DESCRIPTION	SHEETS AFFECTED	DATE
1	REVISED PER LEE COUNTY COMMENTS	1,2,4-14,16	05/27/15

LEGAL DESCRIPTION:
 TRACT "3" ACCORDING TO THE PLAT OF UNIVERSITY HIGHLAND AS RECORDED IN OFFICIAL RECORDS
 INSTRUMENT 2014000100081, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA.

BUILDING SUMMARY:

CONSULTANTS:
 SURVEY: STANTEC
 TRAFFIC/LIGHTING: TREBILCOCK CONSULTING SOLUTION
 LANDSCAPE: NOVAKOVICH LAND DESIGN

DATUM CONVERSION:
 ALL ELEVATIONS SHOWN ARE IN NAVD
 CONVERT ELEV. TO NAVD = +0.00
 CONVERT ELEV. TO NGVD = +1.18

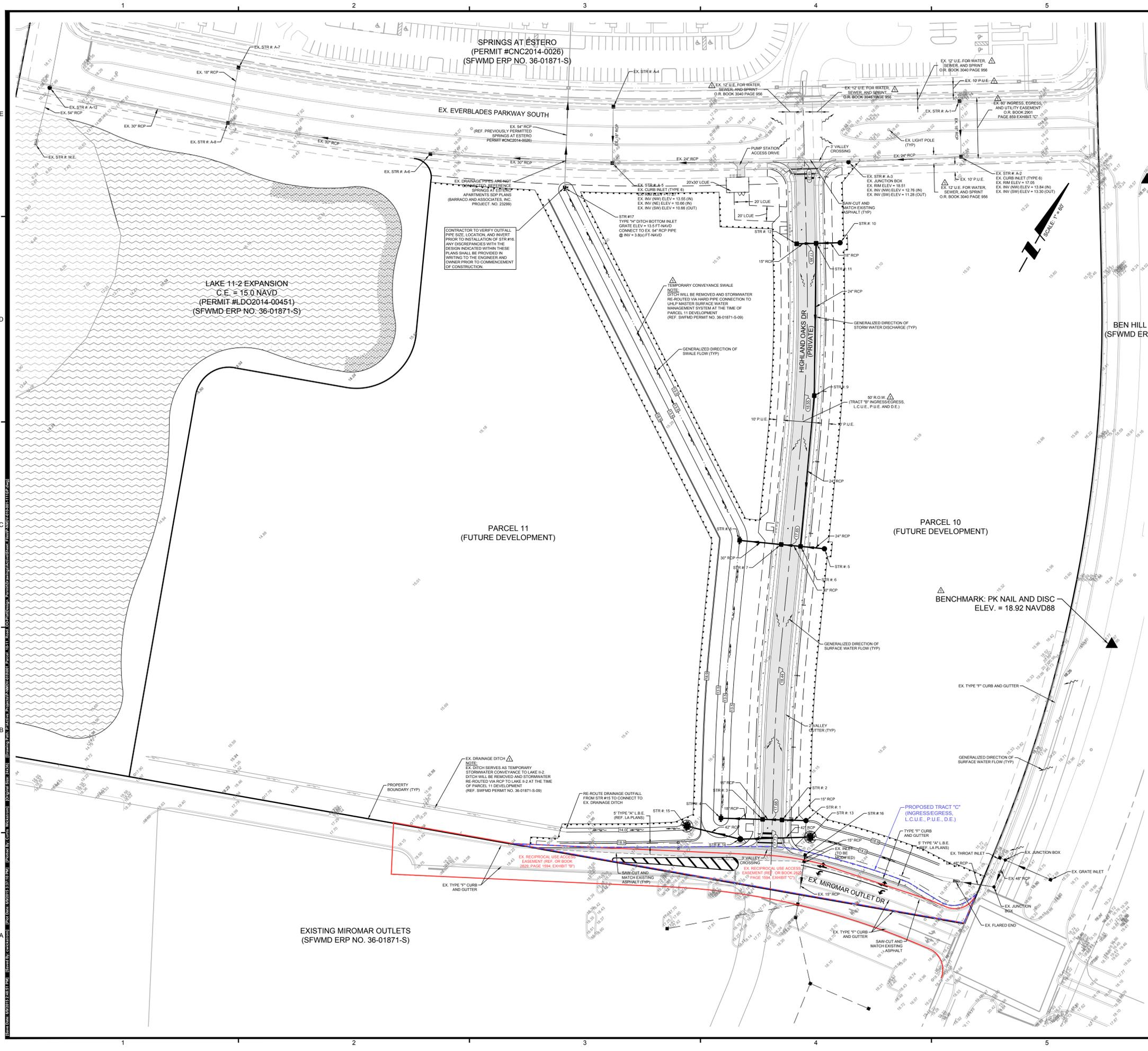
PROJECT INFORMATION:
 AR Number:
 FOLIO Number:
 DRI Name: TIMBERLAND & TIBURON DRI
 SFWMD ERP Number: 36-01871-S-09
 PUD Ordinances Number: TIMBERLAND & TIBURON DRI
 Zoning: MPD
 Zoning (North): MPD
 Zoning (South): CPD
 Zoning (East): MPD
 Zoning (West): ROW

DESIGN TEAM:
 PROJECT MANAGER: DAVID HURST, P.E.
 PROJECT ENGINEER: DAVID HURST, P.E.
 PROJECT DESIGNER: CURTIS WICKSTROM
 DRAWING BY: CURTIS WICKSTROM
 PROJECT SURVEYOR: JOHN MALONEY, P.S.M.
 FILE DATE: JANUARY 2015
 FILE NUMBER: P-NMDV-010-001-001CV
 SHEET ID: C-001

PROFESSIONAL SEALS:
 PROFESSIONAL ENGINEER: DAVID HURST, P.E.
 FLORIDA LICENSE NUMBER: 60727

PROJECT NUMBER: **P-NMDV-010**
 SET NUMBER: **001**

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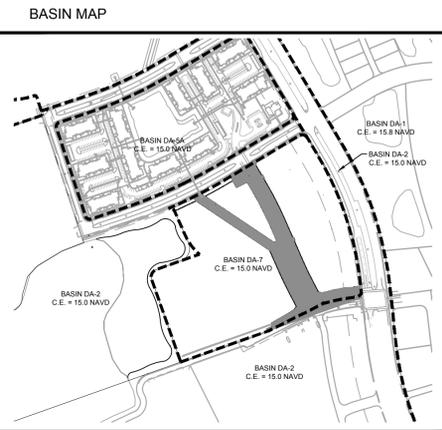
LAND USE SUMMARY

LOCATION	CATEGORY	SQUARE FOOTAGE	ACREAGE	PERCENTAGE OF TOTAL
IMPERVIOUS	SIDEWALK / PATHS	10,809	0.25	5.9%
	PAVEMENT / CURB	44,239	1.02	24.2%
	IMPERVIOUS (SUB-TOTAL)	55,039	1.26	30.2%
PERVIOUS	OPEN SPACE	56,581	1.30	31.0%
	DRAINAGE SWALES	70,920	1.63	38.9%
	PERVIOUS (SUB-TOTAL)	127,501	2.93	69.8%
TOTAL		182,540	4.19	100%

LANDSCAPE BUFFER CALCULATIONS TABLE

BUFFER TYPE	BUFFER CALCULATION (REQUIRED)	REQUIRED BUFFER LENGTH	NUMBER OF TREES REQUIRED
TYPE 'A'	4 TREES / 100 LF	525 LF	21 TREES

NOTE: REMOVE EXOTIC VEGETATION AND TREES ARE REMOVED WITH THE REQUIRED TYPE 'A' BUFFER THE DEVELOPER WILL EVALUATE THE NUMBERS OF EXISTING TREES TO DETERMINE IF LEE COUNTY BUFFER REQUIREMENTS ARE NOT BY REMAINING NATIVE VEGETATION. IF NOT, DEVELOPER SHALL SUBMIT AN LID AMENDMENT TO INCLUDE AND INSTALL THE CORRECT NUMBER AND TYPES OF TREES TO OFFSET IN BUFFER DEFICIENCY.



SFWMD WATER MANAGEMENT SUMMARY

WATER MANAGEMENT PARAMETER	DRAINAGE AREAS							
	BASIN 1	BASIN 2	BASIN 3	BASIN 4	BASIN 5A	BASIN 5B	BASIN 6	BASIN 7
CONTROL ELEVATION (FT NAVD)	15.8	15.0	15.0	15.0	15.0	15.0	15.0	15.0
5-YEAR, 1-DAY RAINFALL (INCHES)	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
25-YEAR, 3-DAY RAINFALL (INCHES)	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
100-YEAR, 3-DAY RAINFALL (INCHES)	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
PEAK 5-YEAR, 1-DAY STORM STAGE (FT NAVD)	17.1	16.5	17.2	17.2	17.3	17.0	17.3	17.0
PEAK 25-YEAR, 3-DAY STORM STAGE (FT NAVD)	18.0	17.4	18.9	18.9	18.9	18.4	18.4	18.9
PEAK 100-YEAR, 3-DAY STORM DISCHARGE (CFS)	19.0	28.2	11.8	31.0	18.3	2.4	16.7	0.0
PEAK 100-YEAR, 3-DAY ZERO DISCHARGE STORM STAGE (FT NAVD)	18.7	18.3	19.9	19.9	19.9	20.3	20.9	20.4
FEMA ELEVATION (FT NAVD)	FEMA ZONE AE (20 FT NAVD) Z1 (21 FT NAVD) AND ZONE X							
MINIMUM REQUIRED ROAD ELEVATION (FT NAVD)	17.8	17.0	17.3	17.3	17.3	17.0	17.3	17.1
MINIMUM REQUIRED FINISHED FLOOR ELEVATION (FT NAVD)	19.3	20.0	19.9	20.0	20.0	20.3	20.0	N/A
MINIMUM PERMETER BEAM ELEVATION 25-YEAR, 3-DAY PEAK STAGE (FT NAVD)	18.0	17.5	18.9	18.9	18.9	18.4	18.9	18.5000

NOTES:
 1. PEAK DISCHARGES SHOWN ABOVE DO NOT REPRESENT DISCHARGE TO OFF-SITE AREA. REFERENCE THE PEAK MODELLED DISCHARGE SUMMARY FOR THE PEAK OFF-SITE DISCHARGE FROM THE TRAILBLAZER & TIBURON ERP.
 2. THE MINIMUM FINISHED FLOOR ELEVATION FOR BASINS 5 & 6 ARE BASED ON THE EXISTING FEMA FEMA PANEL. THE MINIMUM FINISHED FLOOR ELEVATIONS FOR BASINS 1-2A ARE BASED ON THE PREVIOUSLY APPROVED ERP. BUILDING CONSTRUCTION WITHIN THIS PORTION OF THE SITE HAS BEEN COMPLETED.

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OWNER/CLIENT/CONSULTANT:
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PROJECT:
HIGHLAND OAKS DRIVE DEVELOPMENT ORDER PLAN

TITLE:
MASTER PAVING AND DRAINAGE PLAN

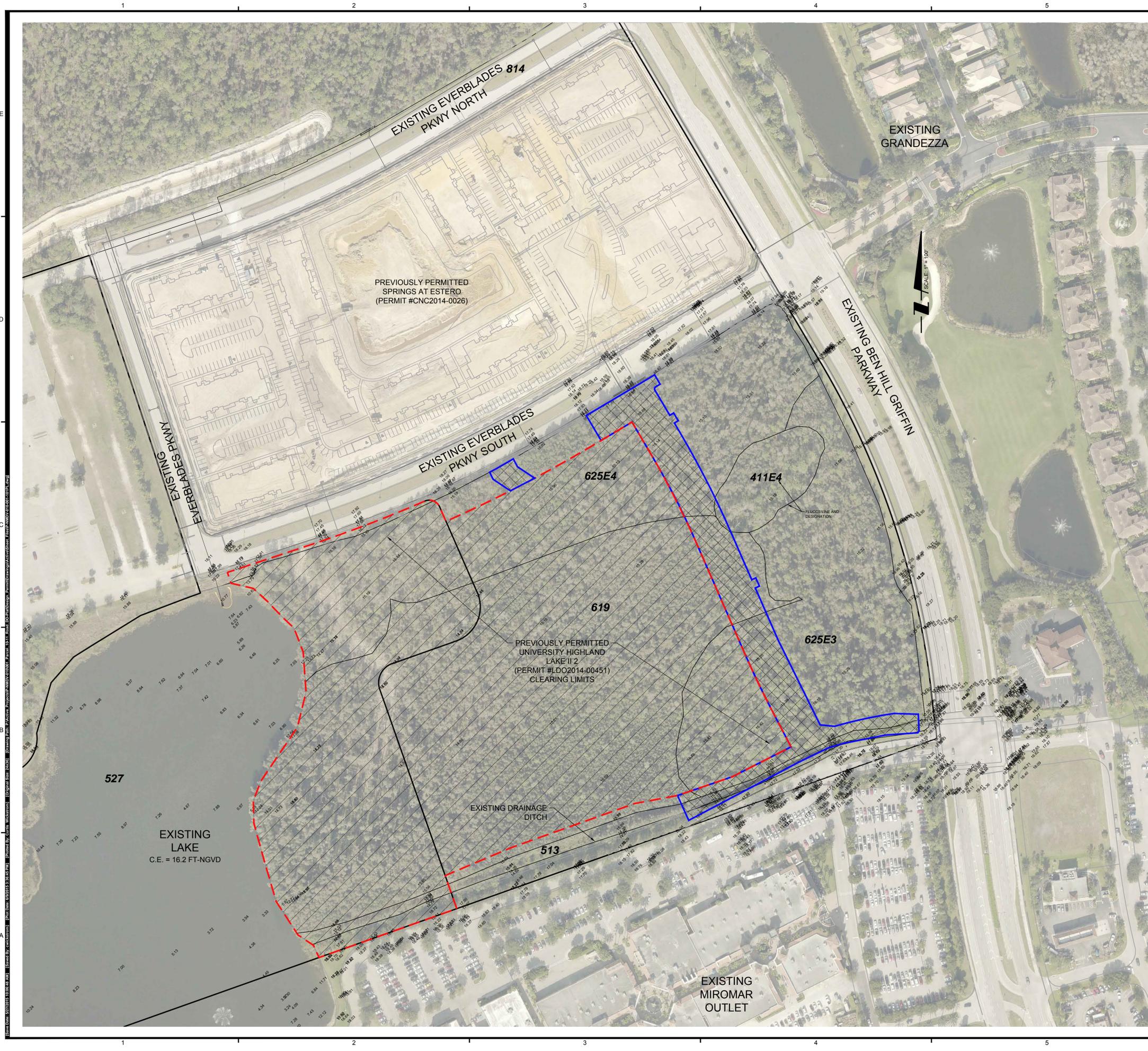
REVISIONS:
 No. Revision: Date:
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PROFESSIONAL SEALS:
 PROFESSIONAL ENGINEER: DAVID HURST, P.E.
 FLORIDA LICENSE NUMBER: 60727

SEC: 26 TWP: 46S RGE: 25E
 Designed by: DAVID HURST, P.E.
 Drawn by: CURTIS WICKSTROM
 Date: JANUARY 2015
 Horizontal Scale: 1" = 60'
 Vertical Scale: N.T.S.
 Project Number: P-NMDV-010-001
 File Number: P-NMDV-010-001-111GP
C-111
 Sheet Number: 04 of 16



OWNER/CLIENT/CONSULTANT:
UNIVERSITY HIGHLAND LIMITED PARTNERSHIP

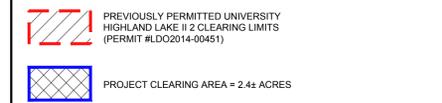
PROJECT:
HIGHLAND OAKS DRIVE DEVELOPMENT ORDER PLAN

TITLE:
AERIAL WITH EXISTING CONDITIONS, AND CLEARING PLAN

FLUCCS LEGEND

411E4	PINE FLATWOODS, PALMETTO UNDERSTORY, EXOTICS > 75%
513	DITCHES
527	STORMWATER
619	EXOTIC WETLAND HARDWOODS (MIX OF PEPPER/MELALEUCA, NEITHER DOMINANT)
625E3	PINE FLATWOODS, GRAMINOID UNDERSTORY, EXOTICS 50% - 74%
625E4	PINE FLATWOODS, PALMETTO UNDERSTORY, EXOTICS > 75%

- CLEARING NOTES**
1. REFERENCE LEE COUNTY LAND DEVELOPMENT CODE FOR NATIVE VEGETATION REQUIREMENTS.
 2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE APPLICANT SHALL INSTALL TEMPORARY CONSTRUCTION FENCING (MINIMUM 6 FT HIGH) BEYOND THE BOUNDARIES OF RETAINED VEGETATION ALONG THE LIMITS OF CLEARING. THIS FENCE SHALL REMAIN ERECTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
 3. CONTRACTOR SHALL EMPLOY METHODS IN ACCORDANCE WITH "BEST MANAGEMENT PRACTICES" AND REFERENCE NPDES DISCHARGE CONTROL PLAN AND DETAILS TO PREVENT EROSION.
 4. ALL PROHIBITED EXOTIC VEGETATION (CATEGORY I AND II EXOTICS AS DEFINED BY THE FLORIDA EXOTIC PEST PLANT COUNCIL (FEPPC)) SHALL BE REMOVED FROM THE SITE AND ALL NATIVE PRESERVATION AREAS SHALL BE MAINTAINED FREE OF PROHIBITED EXOTICS IN PERPETUITY.
 5. WHERE HEAVY CONSTRUCTION ACTIVITIES ARE ADJACENT TO EXISTING NATIVE VEGETATION TO BE RETAINED, THE LIMITS OF CLEARING WILL BE CLEARLY MARKED AND BARRICADED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.
 6. STANDARD STRUCTURAL BUFFERS WILL BE PLACED ADJACENT TO ALL REMAINING CONSERVATION AREAS WHERE A 15' WIDE VEGETATED BUFFER BETWEEN THE WETLAND JURISDICTION LINE AND ADJACENT DEVELOPMENT CANNOT BE MAINTAINED. THE STANDARD STRUCTURAL BUFFER WILL BE A HEDGE OF NATIVE VEGETATION (A FENCE, A SMALL WALL, OR A COMBINATION OF THESE). A HEDGE OF NATIVE VEGETATION (SHRUBS) WILL TYPICALLY BE UTILIZED. IF A FENCE OR WALL IS USED, IT WILL BE CONSTRUCTED ALONG THE CONSERVATION AREA BOUNDARY BUT NOT INTRUDE INTO THE CONSERVATION AREA. IF A HEDGE IS USED, PLANTS WILL BE INSTALLED IN A ZONE BEGINNING AT THE CONSERVATION AREA BOUNDARY AND EXTENDING INTO THE CONSERVATION AREA NOT MORE THAN 3 FEET.

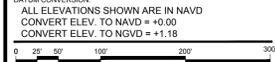


REVISIONS:

No.	Revision	Date

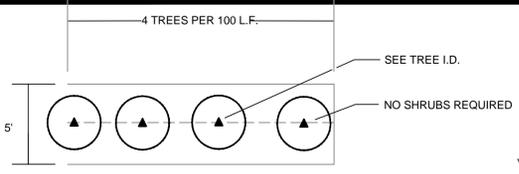
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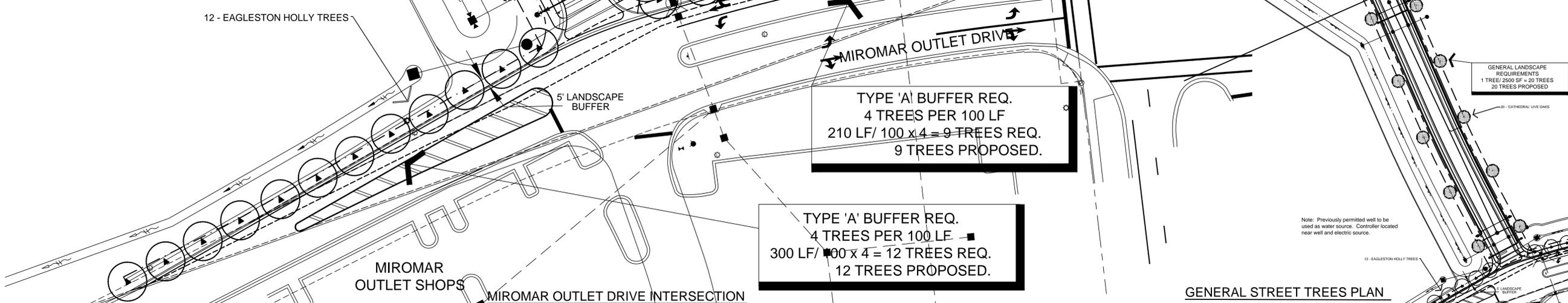
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 Date: JANUARY 2015
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 Vertical Scale: N.T.S.
 Project Number: P-NMDV-010-001
 File Number: P-NMDV-010-001-101PL
C-101
 Sheet Number: 03 of 16



TYPE 'A' BUFFER
SCALE: NTS

Note: Previously permitted well to be used as water source. Controller located near well and electric source.



PLANT MATERIALS LIST

QTY.	NOMENCLATURE	COMMON NAME	SPECIFICATION
21	ILEX VAR. 'EAGLESTON'	EAGLESTON HOLLY	12'-14 HT., 3 1/2" CAL., 6' SPR., min. 45 gal. Tree form standard, matching
20	QUERCUS VIRGINIANA 'CATHEDRAL'	CATHEDRAL LIVE OAK	12'-14 HT., 3 1/2" CAL., 6' SPR., min. 45 gal., matching
77	CONOCARPUS ERECTUS	GREEN BUTTWOOD	3 GAL. Min. AND 24" Ht. x 24" spr., 36" o.c., alternate plants
	PASPALUM NOTATUM	BAHIA SOD	ALL DISTURBED AREAS
	MULCH	EUCALYPTUS	3" THICK, ALL TREE RINGS

CITY OF ESTERO LDC REQUIREMENTS AND CALCULATIONS

SEC. 10-416 LANDSCAPE STANDARDS

Developed Parcels - N/A - this submittal	0	0
	(Trees Required)	(Trees Provided)
(a) GENERAL TREES		
Area = 47,927 s.f. / 2500 sf = 20 Trees	20	20
(d) BUFFERING ADJACENT PROPERTY		
Type A: 5' width, with 4 trees required per 100 lf	21	21
TOTAL TREES	41	41
	(Trees Required)	(Trees Provided)

SEC. 10-420 PLANT MATERIAL STANDARDS

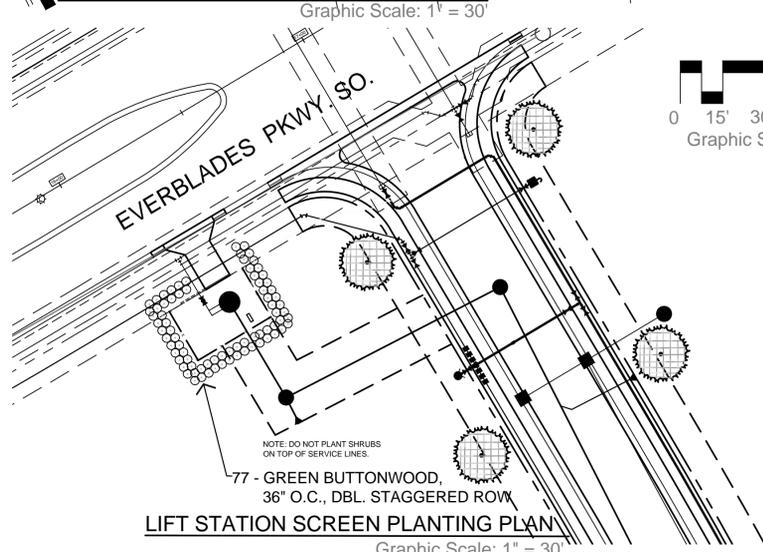
(b) NATIVE VARIETIES	75% native	100% native
	(Trees Required)	(Trees Provided)
75% of required trees must be native	77	77
50% of required shrubs must be native		

NOTE: For Restoration Plantings, 100% native trees & 100% native shrubs required.
-N/A

NOTE: SCOPE OF IRRIGATION WORK ONLY TREES SHOWN ON THIS PLAN SHALL BE IRRIGATED WITH IRRIGATION BUBBLERS PER DETAILS.

LANDSCAPE NOTES

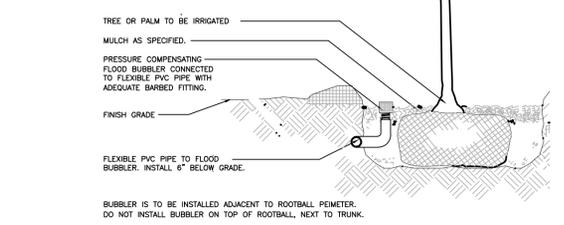
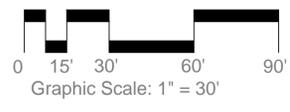
- QUALITY: PLANT MATERIALS USED TO MEET THE REQUIREMENTS OF THIS PLAN SHALL MEET THE STANDARDS FOR FLORIDA NO.1 OR BETTER AS SET OUT IN GRADES AND STANDARDS FOR NURSERY PLANTS, PART I AND PART II, DEPARTMENT OF AGRICULTURE, STATE OF FLORIDA (AS AMENDED). ROOT BALL SIZES ON ALL TRANSPLANTED PLANT MATERIALS SHALL ALSO MEET STATE STANDARDS.
- ALL PLANT MATERIALS SHALL BE INSTALLED ACCORDING TO ESTABLISHED HORTICULTURAL METHODS AND STANDARDS.
- SOD TO COVER ALL DISTURBED AREAS EXCLUDING PLANTING BEDS AND PAVEMENT. ALL TREE PLANTING BEDS TO BE MULCHED TO A DEPTH OF 3".
- PER SECTION 10-420(H), ALL PROHIBITED EXOTIC VEGETATION, AS DEFINED BY THE LEE COUNTY LDC, INCLUDING THOSE SPECIES LISTED BELOW, SHALL BE REMOVED FROM THE SITE IN SUCH A MANNER THAT ROOTS ARE REMOVED OR TREATED TO PREVENT RE-GROWTH AND SO AS TO PRESERVE NATIVE TREES AND UNDERSTORY PLANTS. IN ALL PROTECTION AREAS EXOTICS SHALL BE REMOVED BY HAND. PROPERTY OWNER SHALL BE RESPONSIBLE FOR SUBSEQUENT ANNUAL EXOTIC REMOVAL AND IS COMMITTED TO MAINTAIN THESE AREAS FREE FROM INVASIVE EXOTICS IN PERPETUITY.
- ALTERNATE PLANT SPECIES MAY BE SUBSTITUTED AS LONG AS NATIVE PLANT REQUIREMENTS ARE MET.



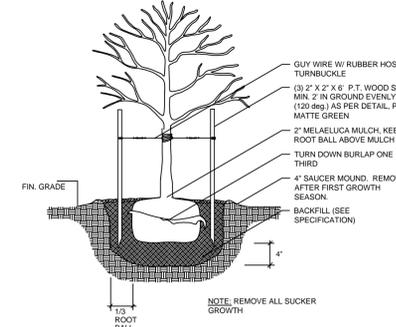
INVASIVE EXOTIC PLANTS INCLUDE:

Earleaf Acacia	Acacia auriculiformis	Old World climbing fern	Lygodium microphyllum
Woman's Tongue	Melaleuca, paper tree	Melaleuca, paper tree	Melaleuca quinquenervia
Bishopwood	Bischofia javanica	Downy rose myrtle	Rhodomerytus tomentosus
Australian pines	All Casuarina species	Chinese tallow	Sapium sebiferum
Carrotwood	Cuplinopsis anacardioides	Brazilian pepper, Florida holly	Schinus terebinthifolius
Rosewood	Dalbergia sissoo	Tropical soda apple	Solanum viarum
Air potato	Disocoria alata	Java plum	Syzygium cumini
Murray red gum	Eucalyptus camaldulensis	Rose apple	Syzygium jambos
Weeping fig	Ficus benjamina	Cork tree	Thespesia populnea
Cuban laurel fig	Ficus microcarpa	Wedelia	Wedelia trilobata
Japanese Climbing fern	Lygodium japonicum		

- IRRIGATION NOTES:**
- ALL CODE REQUIRED PLANTINGS TO BE IRRIGATED AND MAINTAINED BY DEVELOPER/DEVELOPER'S ASSOCIATION. BAHIA SOD NEED NOT BE IRRIGATED.
 - THE CONTROLLER SHALL BE SET TO OPERATE AT APPROPRIATE RUN TIMES FOR THE VARIOUS ZONES AND THEIR REQUIRED PRECIPITATION NEEDS IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES FOR IRRIGATION OF FLORIDA LANDSCAPES.
 - A MOISTURE SENSOR WILL BE INCLUDED SYSTEM TO OVERRIDE SPRINKLER ACTIVATION MECHANISM DURING PERIODS OF INCREASED RAINFALL. IT WILL BE LOCATED ON THE SITE SO THAT IT WILL RECEIVE DIRECT RAINFALL AND NOT BE IMPEDED BY OTHER OBJECTS.
 - THE SYSTEM WILL BE DESIGNED TO ELIMINATE THE APPLICATION OF WATER TO IMPERVIOUS AREAS.
 - IRRIGATION OF DRY DETENTION AREAS: - N/A



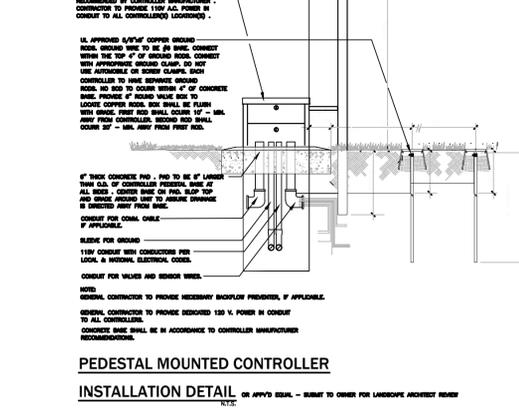
TREE IRRIGATION FLOOD BUBBLER BELOW GRADE, INSTALLATION DETAIL
N.T.S.



CANOPY TREE PLANTING DETAIL
SCALE: NTS



PEDESTAL MOUNTED CONTROLLER INSTALLATION DETAIL
SCALE: AS SHOWN



GENERAL STREET TREES PLAN

NOTE: THIS SITE PLAN IS NOT A SURVEY. CONTRACTORS TO FIELD VERIFY EXACT LOCATIONS AND DIMENSIONS OF ALL FIELD ITEMS.

NLD
NOVAKOVICH LAND DESIGN
FL. LANDSCAPE ARCHITECT NO. 1457
DANIEL A. NOVAKOVICH
E-MAIL: NOVAKOVICH@GMAIL.COM
TEL: 239-250-9505

UNIVERSITY HIGHLAND LIMITED PARTNERSHIP
Estero, Florida
LEE COUNTY

ROADWAY BUFFER - CODE COMPLIANCE LANDSCAPE

DATE: _____ REVISION: _____

Digitally signed by Daniel A. Novakovich, LA 0001457 FL
DN: cn=Daniel A. Novakovich, LA 0001457 FL, o=Novakovich Land Design, ou=Novakovich Land Design Landscape Architect, email=NovakovichD@gmail.com, c=US
Date: 2014.10.20 17:04:00 -04'00'

FL LANDSCAPE ARCHITECT #0001457
Daniel A. Novakovich
11000 UNIVERSITY HIGHLAND LIMITED PARTNERSHIP
ESTERO, FLORIDA 33928

DRAWN BY: dan
CHECKED BY: dan
DATE: 5.27.2015
DWGNO: 000
SCALE: AS NOTED
SHEET: 1 OF 1