

DEVONSHIRE BOULEVARD

LANDSCAPE AND IRRIGATION REFURBISHMENT PLANS

"COLLIER COUNTY LANDSCAPE BEAUTIFICATION MASTER PLAN"

100% SUBMITTAL PLANS

(06-06-11)

PURCHASE ORDER #4500124715

PREPARED FOR
COLLIER COUNTY BOARD OF COUNTY COMMISSIONERS
3301 EAST TAMiami TRAIL
NAPLES, FLORIDA 34112
(239) 253-8097

COORDINATING AGENCY: ALTERNATIVE TRANSPORTATION MODES,
PAMELA J. LULICH, ASLA, LANDSCAPE OPERATIONS MANAGER
DARRYL RICHARD, ASLA MSTU PROJECT MANAGER
2885 SOUTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104
(239) 253-6291



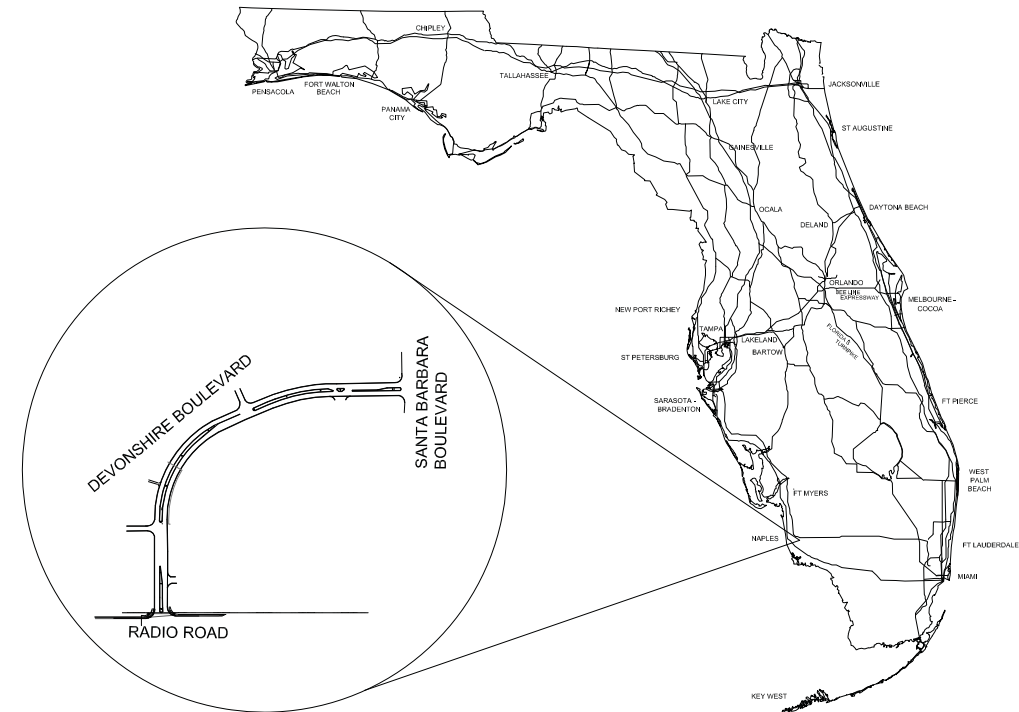
PREPARED BY:



Scott Windham, ASLA
Landscape Architect, RLA 0001516

8891 brighton lane #112
bonita springs, florida 34135
phone: 239.390.1936
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scott@windhamstudio.com

JAMES C. ABNEY & ASSOCIATES
IRRIGATION CONSULTING, SITE OBSERVATION, SYSTEM AUDITING
& MANAGEMENT
2984 44th STREET SW
NAPLES, FLORIDA 34116
PHONE: (239) 353-8724
FAX: (239) 353-1850
E-MAIL: JAAIDC2@aol.com



GENERAL PROJECT DECLARATIONS:

- A. County will restrict construction during peak traffic hours.
- B. No clearing of any native vegetation will take place.
- C. This project is in general compliance with Collier County Streetscape master plan and Collier County right-of-way ordinance.
- D. Collier County maintenance of traffic policy and FDOT "Roadway and Traffic Design Standards" index 600 series is located in the attached written contract documents.
- E. Intersection sight distance is in compliance with AASHTO guidelines for design speed of 25mph using combination truck/trailer vehicles.

UTILITY CONTRACT REFERENCES:

Florida Power and Light Company
4105 15th Avenue SW
Naples, Florida 34116
Mr. E. Hartley, Senior Designer

Collier County Public Utilities Division/ North Wastewater Plant Admin
6027 Shirley Street
Naples, Florida 34109
George Yilmaz, Wastewater Department Director
(239) 597-5355

3301 East Tamiami Trail
Naples, Florida 34112
Mr. Paul Mattausch, Water Department Director
(239) 252-6112
Locates: 591-0882

Collier County Traffic Operations and Alternative Transportation Modes
2885 South Horseshoe Drive
Naples, Florida 34104
Mr. Anthony Khawaja, Engineer-Traffic Operations
(239) 252-8260

Investigate before you excavate, "Call Sunshine State One" Toll Free 1-800-432-4770,
www.callsunshine.com
Florida Statute 553.851 (1979) requires minimum of 2 days and maximum of 5 days notice before you excavate.

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COLLIER COUNTY P.O. # 4500124715

PREPARED FOR: COLLIER COUNTY ATM

JOB #: 013-10

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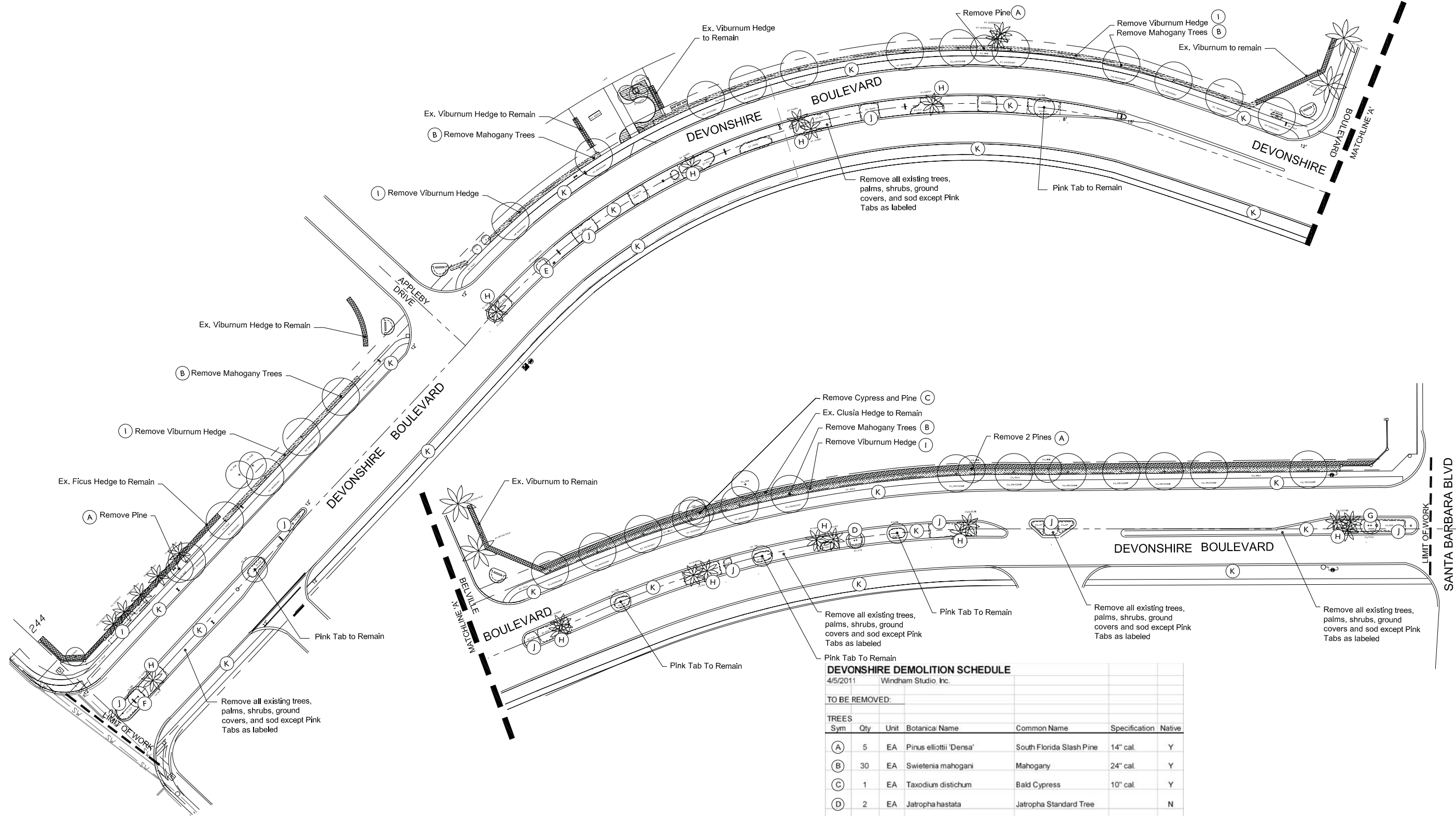
SCALE: N.T.S.



LANDSCAPE PLANTING AND IRRIGATION PLANS

Date: 06-06-11
Revision Date: 11-15-11, 12-13-11, 02-14-12, 03-15-12 (100% Submittal)
Revision Date: 04-25-11 (100% Submittal), 06-06-11 (100% Submittal)
Revision Date: 06-06-11

SHEET NUMBER
TITLE



DEMOLITION PLAN

SCALE: 1" = 40.0'

DEVONSHIRE DEMOLITION SCHEDULE

4/5/2011 Windham Studio Inc.

TO BE REMOVED:

TREES						
Sym	Qty	Unit	Botanical Name	Common Name	Specification	Native
(A)	5	EA	Pinus elliottii 'Densa'	South Florida Slash Pine	14" cal.	Y
(B)	30	EA	Swietenia mahogani	Mahogany	24" cal.	Y
(C)	1	EA	Taxodium distichum	Bald Cypress	10" cal.	Y
(D)	2	EA	Jatropha hastata	Jatropha Standard Tree		N
(E)	1	EA	Hibiscus	Hibiscus Standard		N
(F)	1	EA	Tabebuia impetiginosa	Pink Ipe Tabebuia Tree	10" cal.	N
PALMS						
Sym	Qty	Unit	Botanical Name	Common Name	Specification	Native
(G)	1	EA	Phoenix roebelenii	Double Pygmy Date Palm		N
(H)	17	EA	Syagrus romanzoffiana	Queen Palm	varies	N
SHRUBS						
Sym	Qty	Unit	Botanical Name	Common Name	Specification	Native
(I)	1599	LF	Viburnum and related mulch	Viburnum		N
(J)	6759	SF	Miscellaneous Median Shrubs/Groundcovers			
MISCELLANEOUS						
Sym	Qty	Unit	Botanical Name	Common Name	Specification	Notes
(K)	41,055	SF	Sod to be sprayed with herbicide for a 100% kill and removed			

NOTE: The contractor will be responsible for completing a thorough site review of the proposed demolitions prior to preparing their bid.

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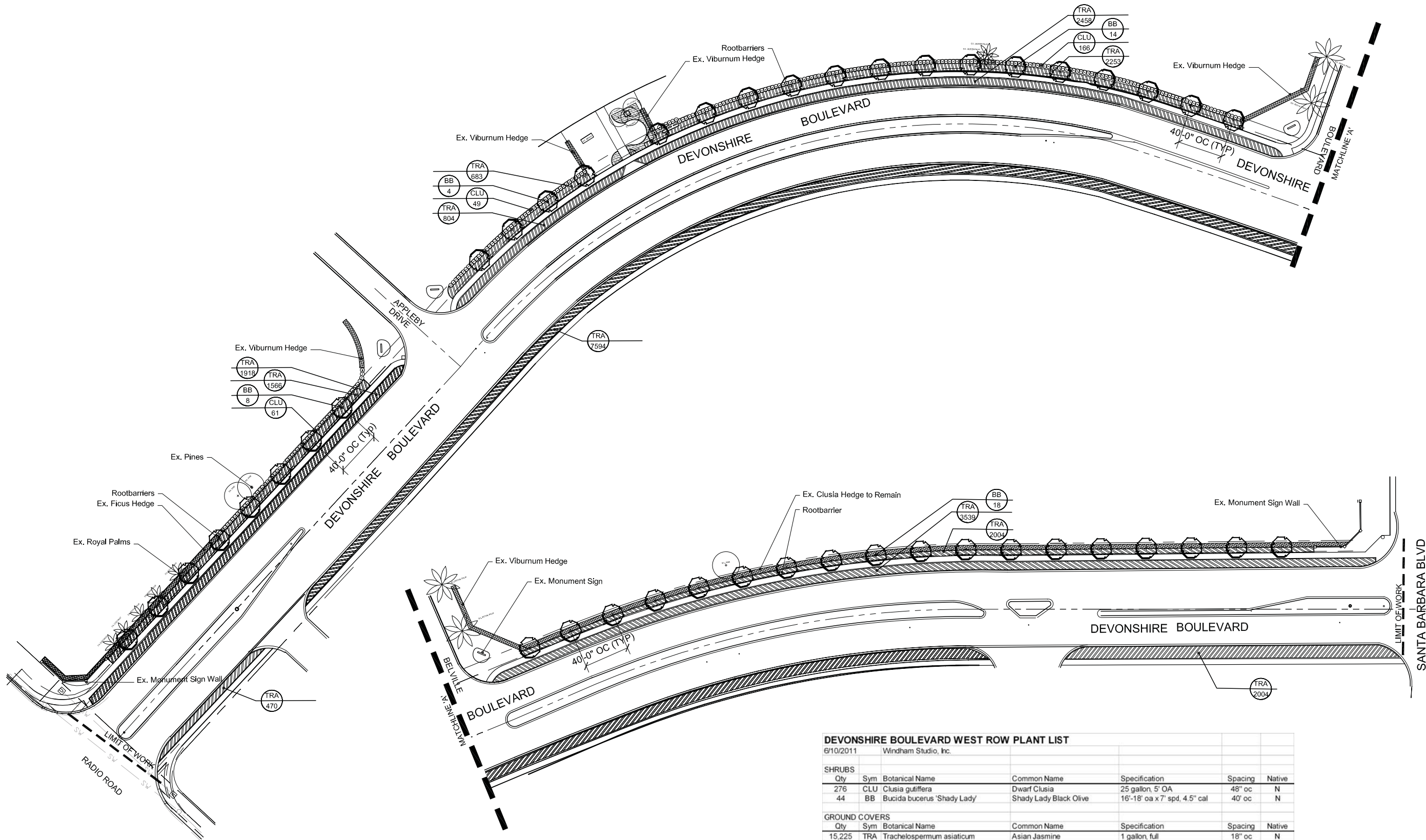
JOB #: 013-10
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SCALE: 1" = 40.0'

DEMOLITION PLAN

DATE: 04-04-11
DESIGN DATE: 04-04-11
REVISION DATE: 04-04-11
DRAWN DATE: 04-04-11

SHEET NUMBER: **L-1**



ROW PLANTING PLANS

SCALE: 1" = 40.0'

DEVONSHIRE BOULEVARD WEST ROW PLANT LIST

6/10/2011 Windham Studio, Inc.						
SHRUBS						
Qty	Sym	Botanical Name	Common Name	Specification	Spacing	Native
276	CLU	Clusia guttifera	Dwarf Clusia	25 gallon, 5' OA	48" oc	N
44	BB	Bucida bucerus 'Shady Lady'	Shady Lady Black Olive	16'-18' oa x 7' spd, 4.5" cal	40' oc	N
GROUND COVERS						
Qty	Sym	Botanical Name	Common Name	Specification	Spacing	Native
15,225	TRA	Trachelospermum asiaticum	Asian Jasmine	1 gallon, full	18" oc	N
MISCELLANEOUS						
Qty	Sym	Botanical Name	Specification	Notes		
2,528	SF	Forestry Resources, Transportation Blend	Pro-Eucalyptus Colored Mulch	2 CF Bags, 4" Fluffed Depth		
880	LF	Root Barrier (100'LF roll of Bio-Barrier, 440-006, 19.5")				
22,838	SF	Potting Soil	Potting soil instead of mulch for TRA only, 2" Depth			

DEVONSHIRE BOULEVARD EAST ROW PLANT LIST

6/10/2011 Windham Studio, Inc.						
GROUND COVERS						
Qty	Sym	Botanical Name	Common Name	Specification	Spacing	Native
10,068	TRA	Trachelospermum asiaticum	Asian Jasmine	1 gallon, full	18" oc	N
15,102	SF	Potting Soil	Potting soil instead of mulch for TRA only, 2" Depth			

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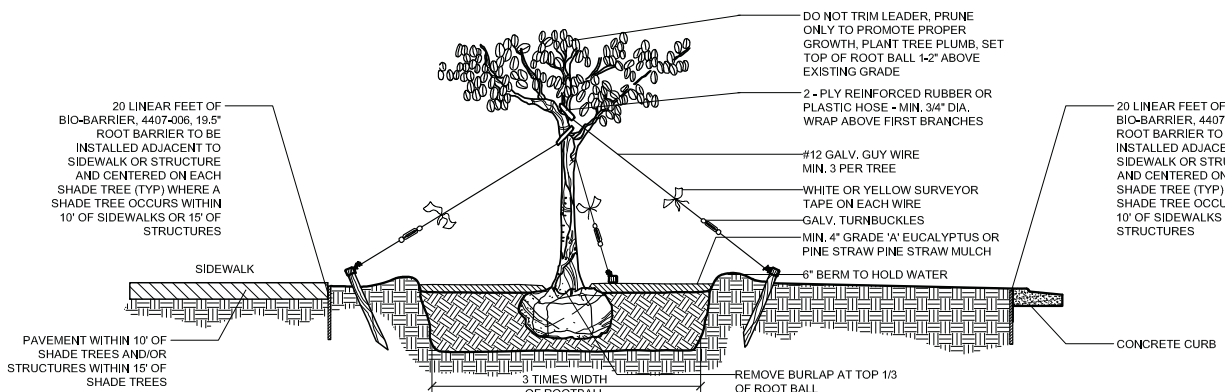
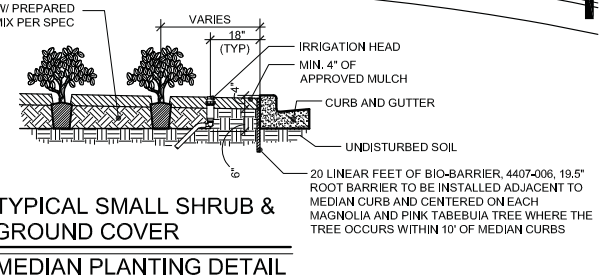
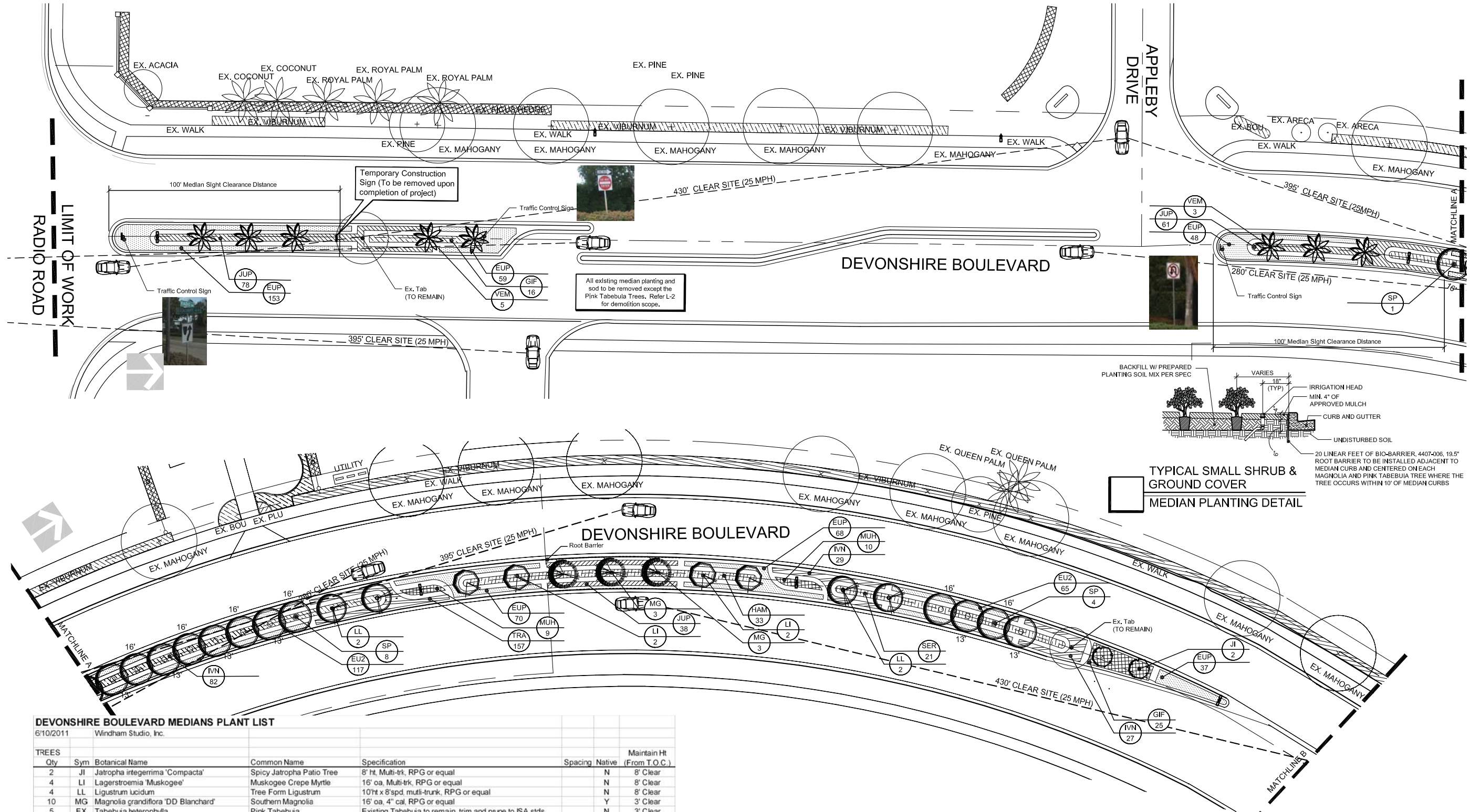
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RIGHT OF WAY PLANTING PLAN
SHEET NUMBER: L-2



DEVONSHIRE BOULEVARD MEDIANS PLANT LIST				
6/10/2011	Windham Studio, Inc.			
TREES				
Qty	Sym	Botanical Name	Common Name	Maintain Ht (From T.O.C.)
2	JL	Jatropha integririma 'Compacta'	Spicy Jatropha Patio Tree	8' Clear
4	LI	Lagerstroemia 'Muskogee'	Muskogee Crepe Myrtle	8' Clear
4	LL	Ligustrum lucidum	Tree Form Ligustrum	8' Clear
10	MG	Magnolia grandiflora 'DD Blanchard'	Southern Magnolia	3' Clear
5	EX	Tabebuia heterophylla	Pink Tabebuia	3' Clear
PALMS				
Qty	Sym	Botanical Name	Common Name	Maintain Ht (From T.O.C.)
13	SP	Sabal palmetto	Cabbage Palm	Y
20	VEM	Veitchia montgomeryana	Montgomery Palm	N
SHRUBS				
Qty	Sym	Botanical Name	Common Name	Maintain Ht (From T.O.C.)
66	HAM	Hamelia nodosa	Dwarf Firebush	3 gallon, 18" 48" oc Y 36"
34	MUH	Muhlenbergia capillaris	Muhly Grass	3 gallon, 24" 36" oc Y N/A
21	SER	Serenoa repens 'Silver Form'	Silver Saw Palmetto	3 gallon 16" x 16" 48" oc Y N/A
GROUND COVERS				
Qty	Sym	Botanical Name	Common Name	Maintain Ht (From T.O.C.)
22	BS	Bougainvillea 'Silhouette'	Silhouette Dwarf Bougainvillea	3 gallon 12" ht x 16" spd. 48" oc N 18"
436	EU2	Euphorbia 'Little Red'	Little Red Crown of Thorns	1 gallon, 8" ht x 8" spd. (American Farms or equal) 24" oc N 18"
746	EUP	Euphorbia 'Dinn'	Dwarf Crown of Thorns	1 gallon, 8" ht x 8" spd. (American Farms or equal) 24" oc N 12"
41	GIF	Ficus macrophylla 'Green Island'	Green Island Ficus	3 gallon, 12" ht x 16" spd. 48" oc N 18"
197	IVN	Ilex vomitoria 'Nana Shillings'	Ilex Shillings	3 gallon 10" Ht x 12" spd. 36" oc Y 18"
389	JUP	Juniperus chinensis 'Parsonii'	Parson's Juniper	3 gallon, 10" ht x 24" spd. 36" oc N 14"
221	TRA	Trachelospermum asiaticum	Asian Jasmine	1 gallon, full 18" oc N 12"
MISCELLANEOUS				
Qty	Sym	Botanical Name	Common Name	Notes
17,575	SF	Forestry Resources, Transportation Blend	Pro-Eucalyptus Colored Mulch	2 CF Bags, 4" Fluffed Depth 1,465 Bags
360	LF	Root Barrier (100'LF roll of Bio-Barrier, 440-006, 19.5")		
332	SF		Potting soil instead of mulch for TRA only, 2" Depth	

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JOB #: 013-10

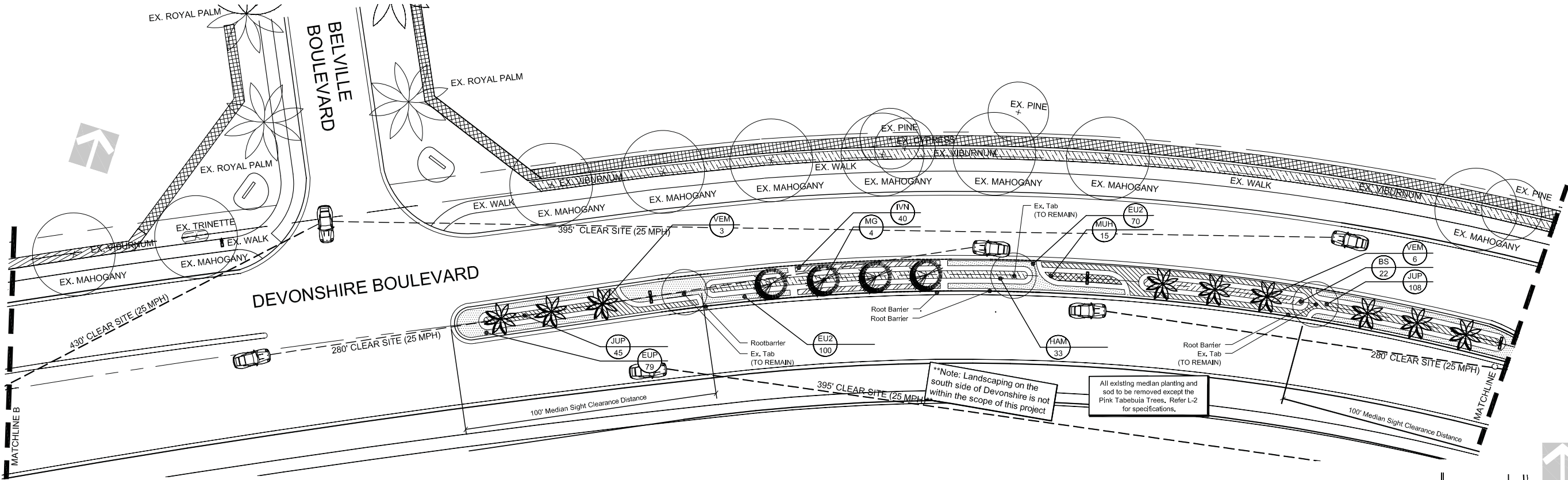
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SCALE: 1" = 200'

MEDIAN PLANTING PLANS

Date: 10-16-10
Revision Date: 11-16-10, 12-15-10, 02-15-11, 06-01-11, 08-01-11
Revision Date: 04-24-11, 10-09-11, 01-09-12, 04-24-11, 09-09-12, 04-24-11, 09-09-12
Revision Date: 10-16-11, 01-09-12, 04-24-11, 09-09-12

SHEET NUMBER:
L-3



GENERAL NOTES

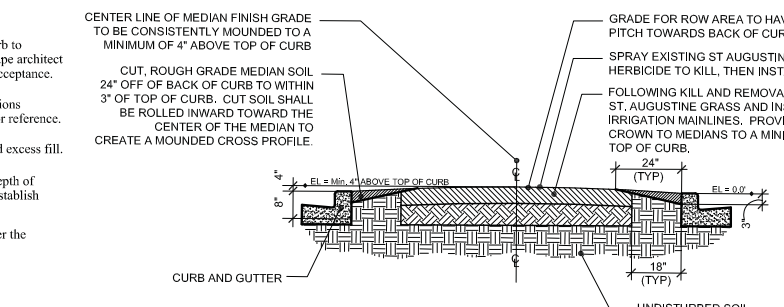
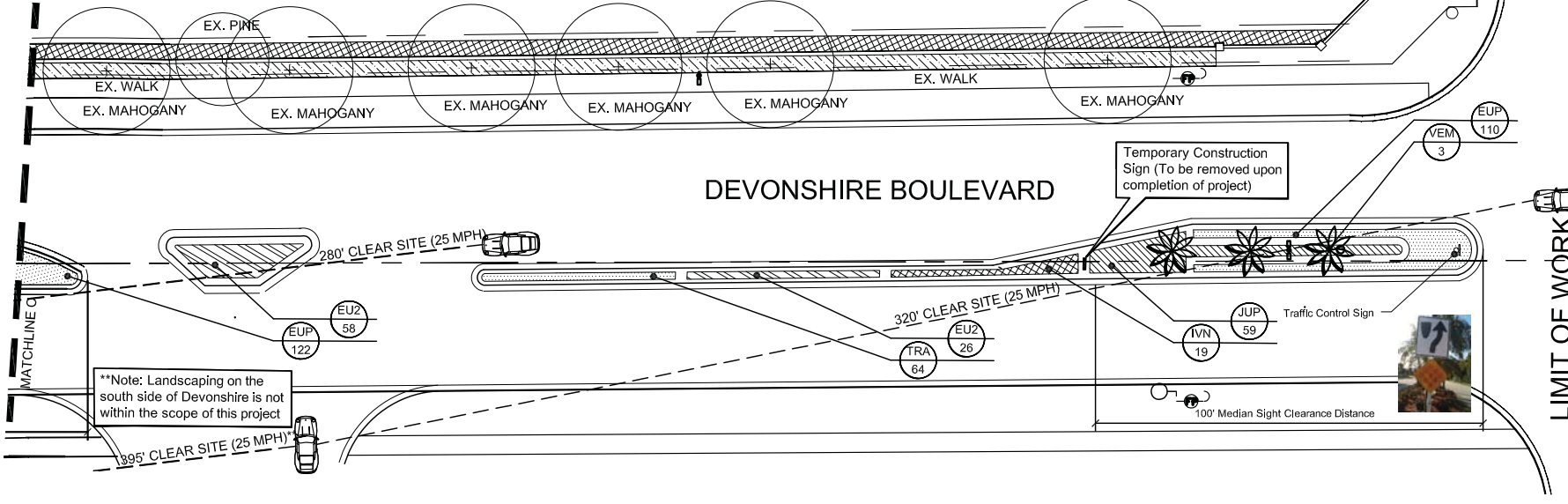
- All plant material shall be Florida No. 1 or better as specified by the Department of Agriculture's Grades & Standards for Nursery Plants" Volume I & II Latest Edition.
- All specified sizes for plant material shall be considered minimum. Plants must meet or exceed these requirements.
- All plant material indicated as specimen shall be reviewed by the Landscape Architect prior to the installation.
- The contractor shall verify location of all plant material on site with the landscape architect before planting. All tree and palm locations shall be approved by the landscape architect prior to planting.
- Mulch, plants, seeding, soil and sod quantities, as specified in the plant schedule shall be considered estimated only, subject to lump sum bids, field counts and/or measurements.
- Planting beds or areas containing limrock or otherwise unsuitable growing material as determined by landscape architect or project manager shall have the material removed to an 18-inch depth and then replaced with clean native topsoil or specified growing quality planting material before plant installation.
- The contractor shall verify the location and mark of all overhead and underground utilities on site, and notify the landscape architect of any possible conflicts before starting any work.
- The bidder shall provide unit and total prices for all items listed in the schedules or specified within the plans. Items noted by others (N.L.C.) are not within the landscaping and irrigation contract.
- The contractor shall provide to the Landscape Architect three (3) copies of the "As-built/Record Drawings" Plan prints to include highlighting any changes to the approved permitted plans.
- The Landscape Architect is not responsible for the means and method of installation and/or construction by the contractor or the subcontractor.
- All proposed and/or preserved existing landscaping shown on the plans requires continuous horticultural maintenance services. These services are to be provided by the owner or the owner's representatives for proper plant establishment and continued proper and/or controlled growth of the above ground foliage and underground root system.
- All construction or installation shall be in compliance with these plans, contract documents and the FDOT "Roadway and Traffic Design Standards" January 2004 Indexes, #104, 300, 545, 546, 600, 610, 611, 612, 613, 617, 622, 623, 625, 17721 and the FDOT "Plans and Preparation Manual" Volume 1, Chapter 2, Section 2.11.5 & 2.12. Latest Editions.
- All Directional Boring of Conduit Shall comply with the FDOT "Utility Accommodation Manual," June 1993 Doc. No. 7-10020-001-C, or Latest Edition.
- The Construction Bid Prices shall include providing inspection services and certifications of density and concrete testing performed by independent, certified and FDOT approved laboratory or firm.
- All products or materials to be supplied for the project must have samples submitted for approved laboratory or firm.
- All products or materials to be supplied for the project must have samples submitted for approval as directed by the landscape architect or project manager.
- All large canopy trees and palms shall be installed so as to try and maintain a 5 foot separation and minimally a 2.5 separation from underground utilities.
- Installed bid cost for individual canopy trees, palms, or large shrubs planted in turf areas shall include planting soil mix per specifications.
- The Landscape Contractor is to prepare and submit, M.O.T. (Maintenance of Traffic) Plan in written and graphic format.
- Existing manholes, valve boxes, etc., within landscape areas must have access maintained.
- The landscape architect is not responsible for the site safety, means or methods of installation and/or construction by the contractor or owner.

EROSION CONTROL NOTES

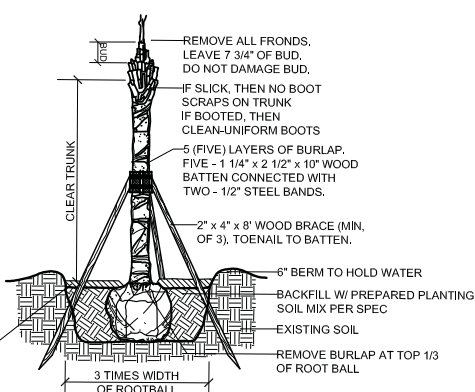
- The Contractor shall execute all measures necessary to limit the transport of sediment outside the limits of the project to the volume and amount that exist prior to the commencement of construction. This condition will be satisfied for the total anticipated construction period. Provision must be made to preserve the integrity of and capacity of check weirs, sediment basins, slope drains, grading patterns, etc., required to meet this provision throughout the life of the construction. The contractor shall provide hay bales, silt barriers, temporary grassing, etc., as required to fully comply with the intent of this specification.
- All features of the project shall be constructed to prevent erosion sediment and shall be maintained during the life of the construction so as to function properly without the transport of sediments outside the limits of the project.
- Erosion control at all inlet drainage structures during construction shall be done in accordance with Standard Index no. 102.
- If the Prime Contractor has removed erosion control devices due to completion of roadway work, new erosion control devices must be installed by the landscape contractor.
- Quantity of hay or straw bales is for estimation purposes only.
- Contractor's attention is directed to the special provisions of this contract, which require the preparation, and approval of the erosion control plan that addresses the prevention, control, and abatement of water pollution.

MEDIAN AND ROW GRADING AND SOIL PREPARATION

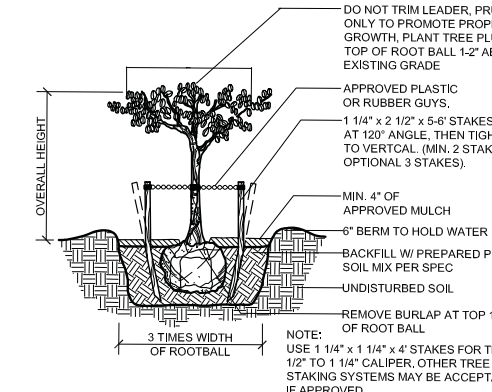
- The contractor shall spray existing sod in medians and in ROW from back of curb to sidewalk grass with contact herbicide for a 100% kill as approved by the landscape architect and maintain the areas weed free throughout landscape construction until final acceptance.
- Contractor to then install irrigation mainlines and wiring and stub up valve locations to within eight inches of existing surface grade, marking locations on the curb for reference.
- Contractor to remove irrigation excavation debris, unsuitable excavated soils and excess fill.
- Contractor to cut existing soil to a width of 24" from the back of curb and to a depth of 3" from top of curb and spread the cut fill toward the center of the medians to establish a minimum 4" crown.
- Prior to planting, contractor to fine grade medians to proposed uniform profile per the Typical Median Excavation/Prep Detail with 4" crown above top of curb.
- Contractor to remove all debris/rocks larger than 1" in diameter from within the top 4" of the finished grade.
- Final median grades must meet final approval by landscape architect.
- Existing irrigation hydrants to be preserved as per irrigation plans and specs.



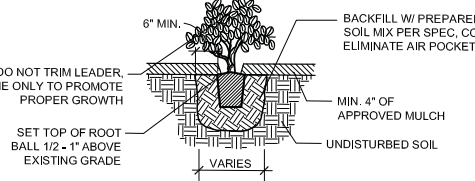
TYPICAL MEDIAN EXCAVATION / PREP DETAIL



TYPICAL SABAL PALM PLANTING DETAIL



TYPICAL SMALL TREE PLANTING DETAIL



TYPICAL SHRUB PLANTING DETAIL

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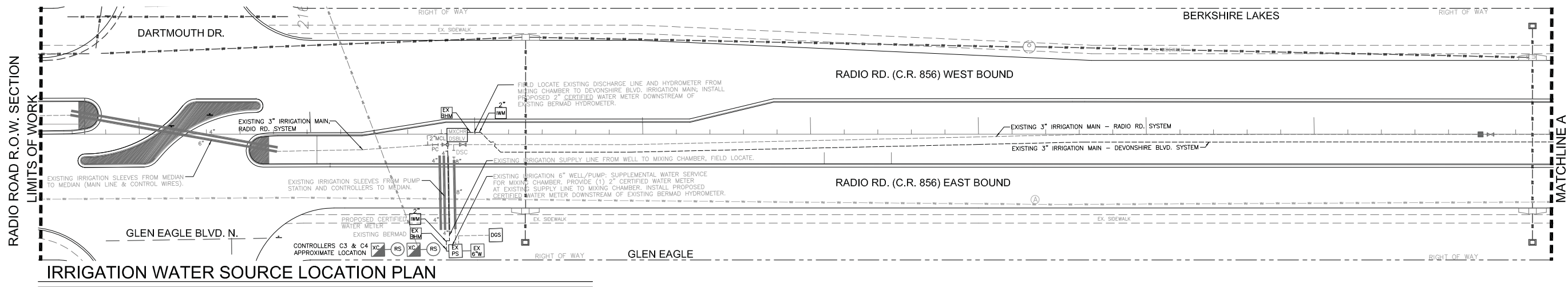
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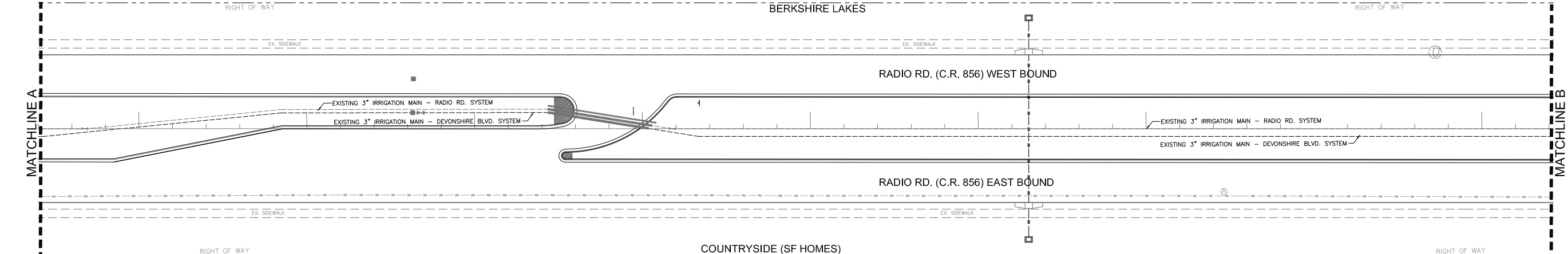
MEDIAN PLANTING AND SPECIFICATION PLAN
Date: 10-16-10
Revision Date: 11-25-10, 12-15-10, 01-15-11 (100% Submittal)
Revision Date: 04-26-11 (100% Submittal, Re-bid) (100% Submittal)
Revision Date: 04-14-11 (100% Submittal)

SHEET NUMBER:
L-4



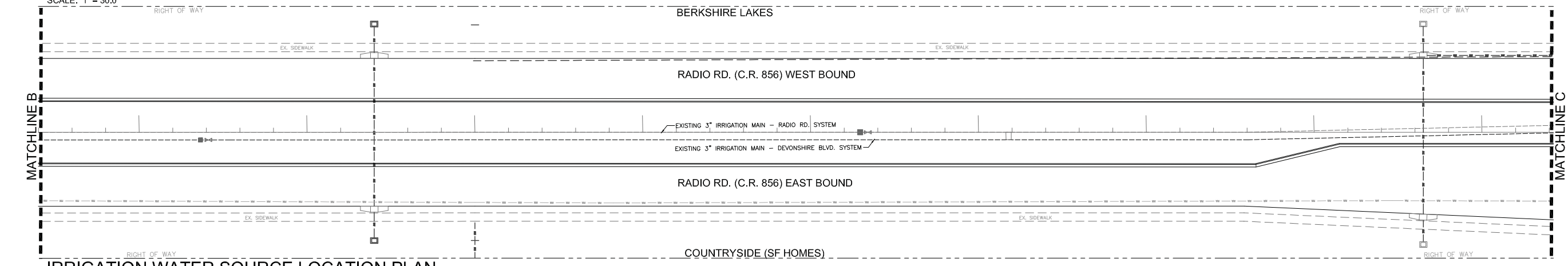
IRRIGATION WATER SOURCE LOCATION PLAN

SCALE: 1" = 30.0'



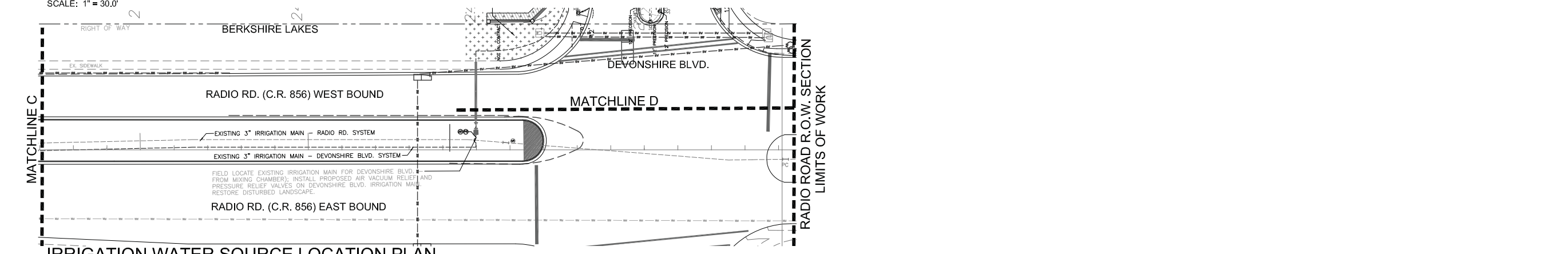
IRRIGATION WATER SOURCE LOCATION PLAN

SCALE: 1" = 30.0'



IRRIGATION WATER SOURCE LOCATION PLAN

SCALE: 1" = 30.0'



IRRIGATION WATER SOURCE LOCATION PLAN

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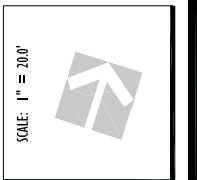


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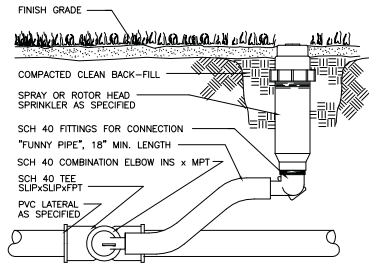
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Drawn: 10/16/11	Revised Date: 11/15/11, 12/13/10, 03/15/11 (100% Submit)
Checked: 04/25/11	Revised Date: 04/25/11 (100% Submit), 04/26/11 (100% Submit)
Designed: 04/25/11	Revised Date: 04/25/11

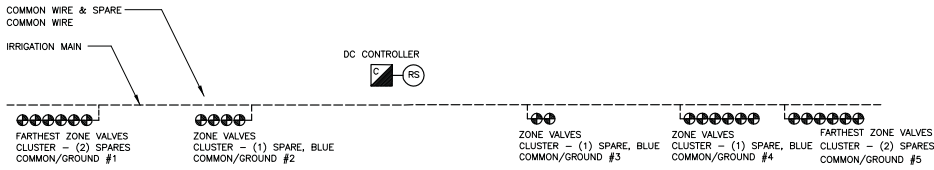
IRRIGATION PLAN

SHEET NUMBER:
IR-1



NOTE:
NO SPRINKLER HEADS SHALL OCCUR WITHIN 9\"/>

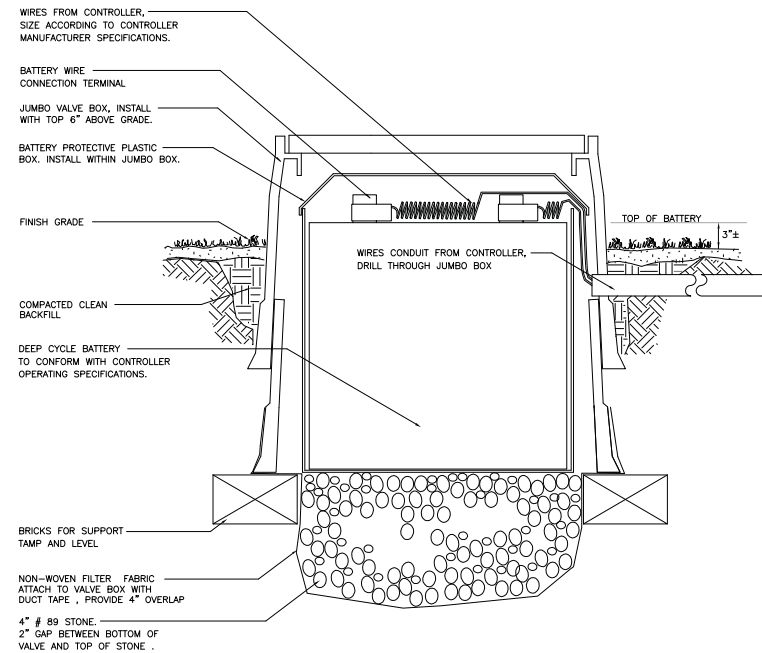
POP-UP SPRINKLER INSTALLATION DETAIL
N.T.S.



DC CONTROLLER(S) CONTROL WIRE NOTES:

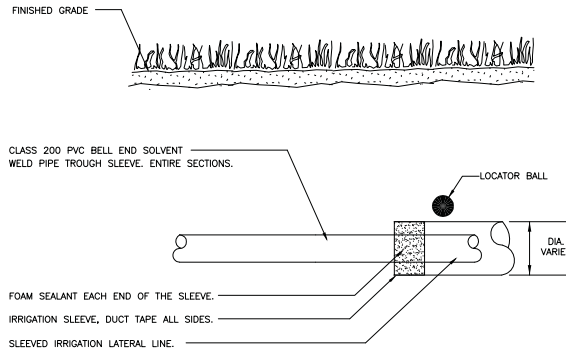
- THE WIRE TYPE, SIZE, QUANTITIES AND LENGTH LIMIT SHALL BE IN ACCORDANCE TO THE DC CONTROLLER MANUFACTURER SPECIFICATIONS.
- PROVIDE (1) COMMON WIRE SHALL BE PROVIDED PER (6) ZONE CONTROL VALVES, OR AS SPECIFIED BY THE DC CONTROLLER MANUFACTURER SPECIFICATIONS.
- THE SPARE COMMON WIRES ARE NOT SHOWN DUE TO GRAPHIC CLARITY ISSUES; PROVIDE (1) SPARE COMMON WIRE PER EVERY COMMON WIRE.
- COMMON/GROUNDING PRINCIPAL WIRES, WHITE; COMMON/GROUNDING SPARE WIRES, WHITE W/ COLOR STRIPE; PHASE 1 & 2 ACTIVE WIRES, RED; PHASE 1A & 3A ACTIVE WIRES, ORANGE; PHASE 1B & 3B ACTIVE WIRES, YELLOW; SPARE #1 WIRE, BLUE; SPARE #2 WIRE, GREEN.

DC CONTROLLER COMMON WIRE SCHEMATIC PLAN VIEW DETAIL
N.T.S.

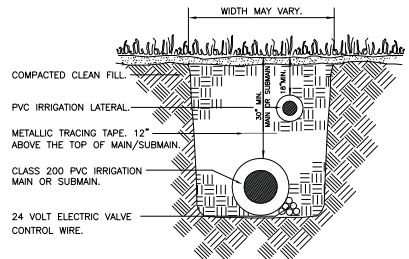


INSTALLATION NOTES:
THE BATTERY SHALL BE IN ACCORDANCE TO THE CONTROLLER MANUFACTURER SPECIFICATIONS.
THE PIT SHALL BE EXCAVATED TO A DEPTH THAT ENABLES THE TOP OF THE BATTERY TO BE AT AN ELEVATION OF 3\"/>

DC CONTROLLER EXTERNAL BATTERY INSTALLATION DETAIL
N.T.S.

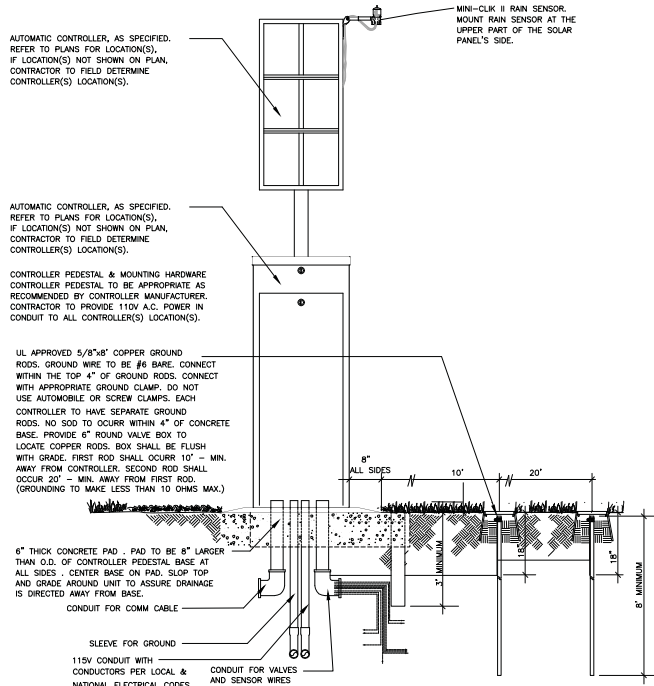


IRRIGATION SLEEVE SEALING DETAIL
N.T.S.



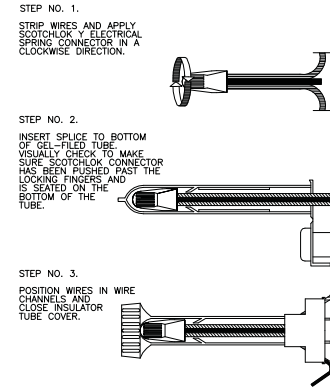
NOTES:
METALLIC TRACING TAPE MUST BE INSTALLED 12\"/>

TYPICAL TRENCHING DETAIL
N.T.S.

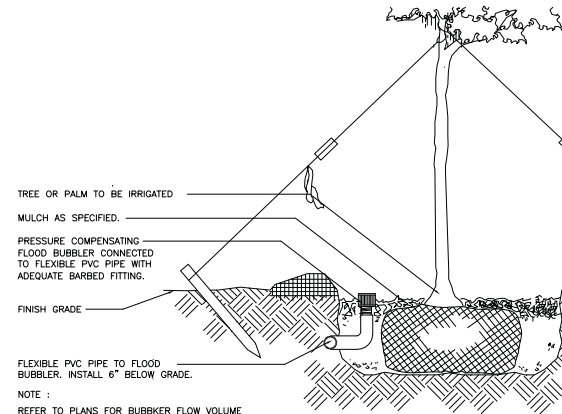


NOTES:
DO NOT INSTALL THE CONTROLLER WITHIN 100\"/>

PEDESTAL MOUNTED DC CONTROLLER INSTALLATION DETAIL
N.T.S.

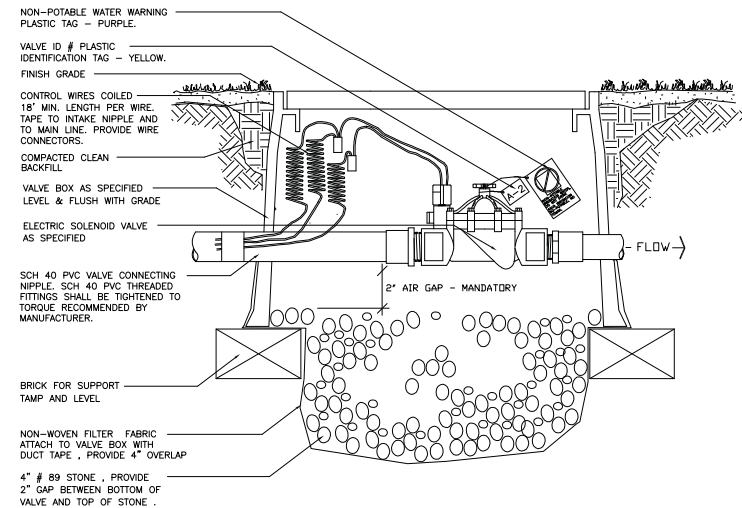


24 VOLT WIRE CONNECTION DETAIL
N.T.S.



NOTE:
REFER TO PLANS FOR BUBBLER FLOW VOLUME AND BUBBLER QUANTITIES PER TREE. IF CONNECTED TO ROTOR HEAD ZONE PROVIDE SCREW CLAMP AT FLEXIBLE PVC CONNECTING POINTS.
BUBBLER IS TO BE INSTALLED ADJACENT TO ROOTBALL PERIMETER. DO NOT INSTALL BUBBLER ON TOP OF ROOTBALL, NEXT TO TRUNK.

TREE IRRIGATION FLOOD BUBBLER INSTALLATION DETAIL
N.T.S.



IRRIGATION CONTRACTOR SHALL FIELD DETERMINE NIPPLE LENGTHS. MAINLINE OUTLET TEE, INTERCONNECTING NIPPLES AND ALL OTHER INTERCONNECTING FITTINGS SHALL BE SIZED TO THE VALVES INLET OPENINGS. COORDINATE WITH UTILITIES CONTRACTOR.

ZONE CONTROL VALVE INSTALLATION DETAIL
N.T.S.

Scott Windham, ASLA
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DEVONSHIRE BOULEVARD
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PREPARED FOR: COLLIER COUNTY ATM

JOB #: 013-10

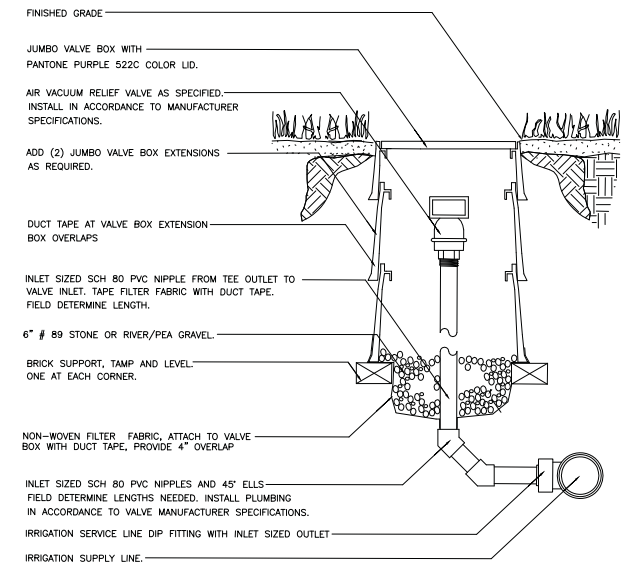
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SCALE: NTS

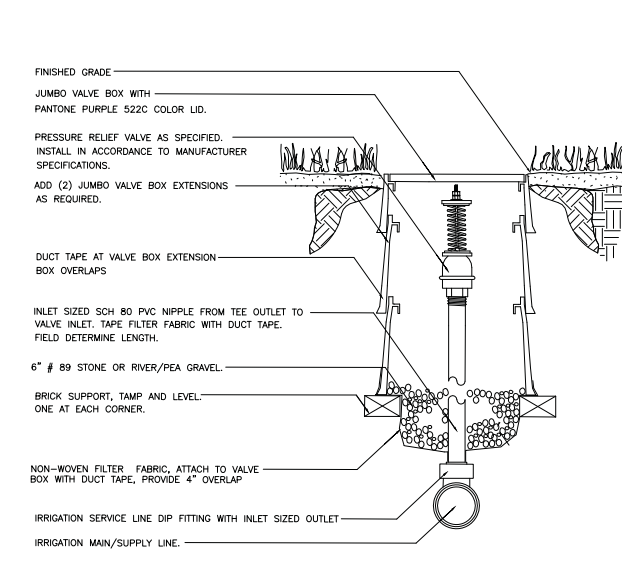
IRRIGATION DETAILS PLAN

Draw: (D-Hell)
Revision Date: 04-25-10 (100% Submittal)
Revision Date: 04-25-10 (100% Submittal)
Revision Date: 04-25-10 (100% Submittal)

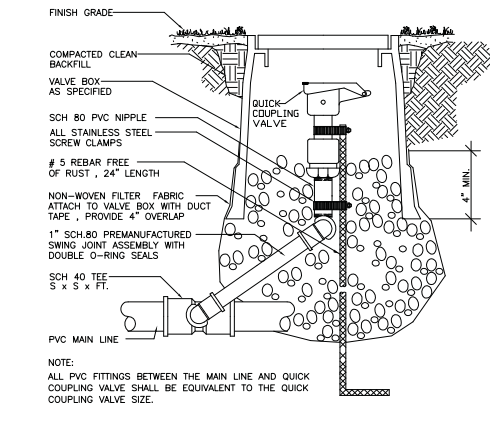
SHEET NUMBER:
IR-6



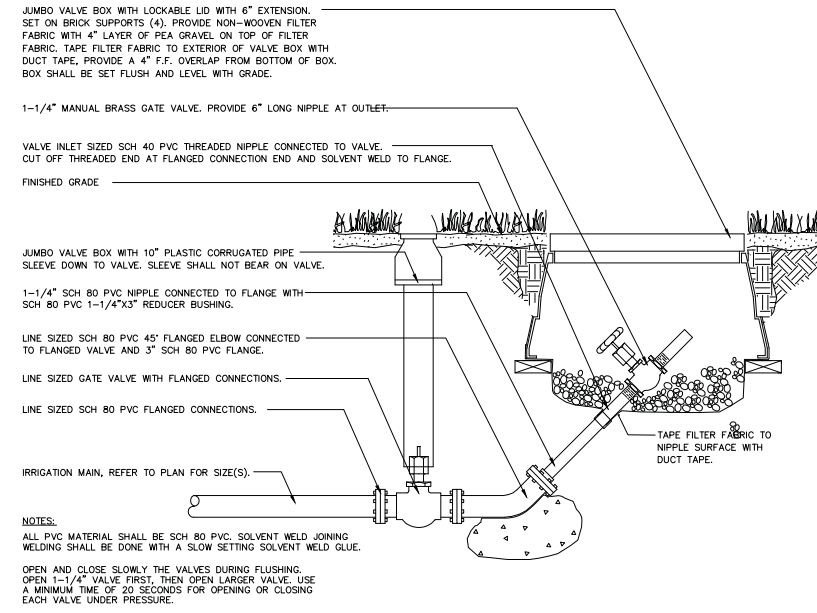
MAIN LINE AIR VACUUM RELIEF VALVE INSTALLATION DETAIL
N.T.S.



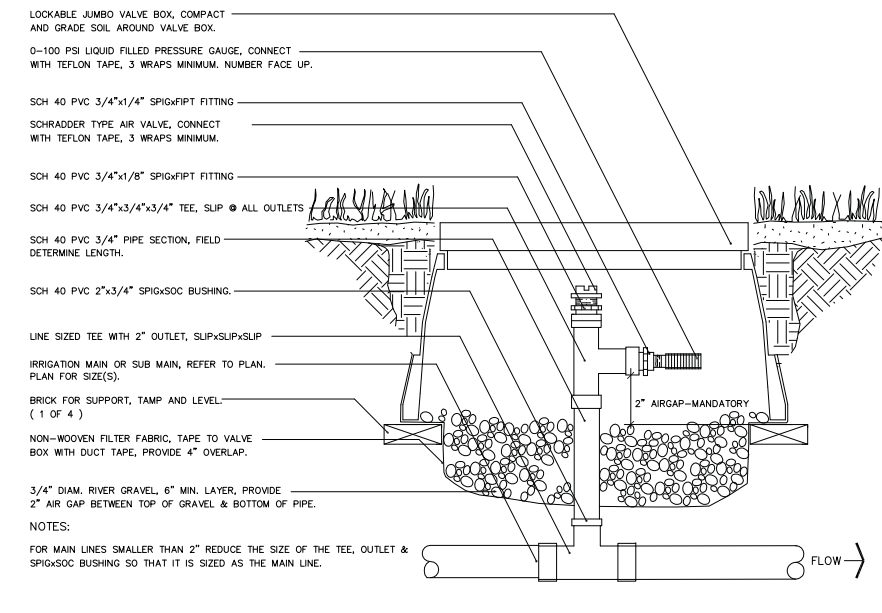
MAIN LINE PRESSURE RELIEF VALVE INSTALLATION DETAIL
N.T.S.



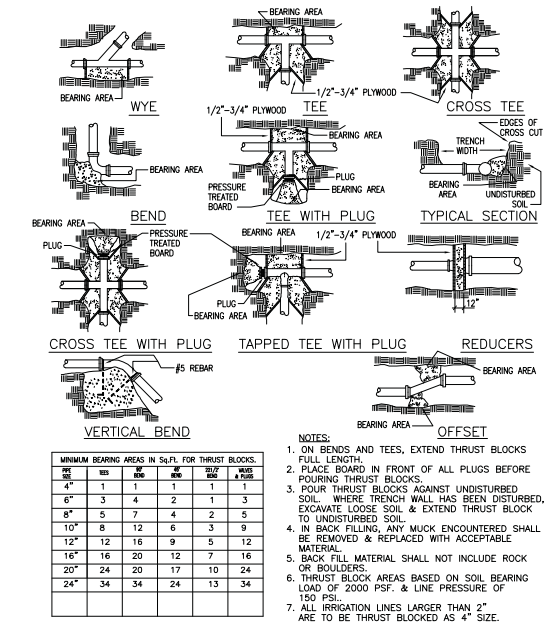
QUICK COUPLING VALVE INSTALLATION DETAIL
N.T.S.



IRRIGATION MAIN DOUBLE VALVE BLOW-OFF ASSEMBLY INSTALLATION DETAIL
N.T.S.



IRRIGATION MAIN LINE PRESSURE CHECK UNIT INSTALLATION DETAIL
N.T.S.



TYPICAL THRUST BLOCKS INSTALLATION DETAIL
N.T.S.

IRRIGATION SLEEVES & BORES TABLE

Table with columns: Orig #, Rev #, Length, Location**, Sheet, Existing Proposed, Size, Type, Measured Length, Date Measured, Found, Utilized, Use, Phase, Notes. Rows 1-22 detailing sleeve and bore specifications.

N = North; S = South; E = East; W = West; SM = Side to Median Crossing; MS = Median to Side Crossing; MM = Median to Median Crossing; SW: Sidewalk Crossing; ST = Street Crossing; DR = Driveway Crossing; EX = Existing Sleeve; PR = Proposed Sleeve; * Assumed existing PVC sleeve, submit an alternate bid for SDR 11 HDPE

IRRIGATION LEGEND

Legend table mapping symbols to descriptions and quantities. Includes symbols for manholes, valves, pipes, and various irrigation components.

IRRIGATION LEGEND

Legend table mapping symbols to descriptions and quantities. Includes symbols for valves, pumps, and irrigation components.

IRRIGATION SYSTEM SEASONAL WATER BUDGETING FEATURE ADJUSTING TABLE

Table with columns: JANUARY, FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER. Shows seasonal adjustment percentages.

THE SEASONAL ADJUSTMENTS SCHEDULING TABLE SHOWN ABOVE IS BASED ON HISTORICAL ETa RATES. IT ASSUMES THAT SYSTEM WILL HAVE ADEQUATE MAINTENANCE WITH NO ALTERATIONS TO THE ZONES DESIGNED BY JCA&A, AND THAT PLANT MATERIAL SELECTION WILL BE AS SPECIFIED BY WINDHAM STUDIO, INC.

IRRIGATION APPLICATION CONTROL PARAMETERS

- CROPS TO IRRIGATE: XERIC PLANTINGS, TREES, PALMS, SHRUBS AND GROUND COVERS.
• REQUIRED WEEKLY APPLICATION REQUIRED AT PEAK TIME OF THE YEAR: PLANTINGS 1.0" PER WEEK.
• ACREAGE TO IRRIGATE & REQUIRED FLOW DEMAND: 2± ACRES; 80+/- GPM. INCLUDES A 20% ALLOWANCE FOR POTENTIAL LANDSCAPE AREAS INCORPORATION IN THE FUTURE.
• RECOMMENDED OPERATING SCHEDULE: 3 NIGHTS PER WEEK, 8+/- HOURS PER NIGHT PER SYSTEM.
• IRRIGATION WATER SOURCE & FLOW CAPACITY AVAILABLE: CONNECTIONS TO EXISTING 3" MAIN, DO NOT EXCEED 35± GPM FLOW DEMAND PER PROPOSED ZONE.
• ESTIMATED PROPOSED ZONES APPLICATION RATES: SPRAY HEADS IN FULL COVERAGE, 1.0" PER HOUR; SPRAY & ROTOR HEADS IN SINGLE ROW COVERAGE, .50± PER HOUR.
• RECOMMENDED WEEKLY APPLICATION AMOUNTS AT PEAK TIME OF THE YEAR: R.O.W. TURF ZONES, 1.25± PER WEEK; PLANTINGS 1.0"± PER WEEK.
• RECOMMENDED RUN TIME: FULL COVERAGE SPRAY HEADS ZONES AT PLANTING AREAS (MEDIANS), 3 NIGHTS PER WEEK, 20± MINUTES PER NIGHT; SINGLE ROW COVERAGE SPRAY HEAD ZONES AT TURF AREAS (R.O.W.), 3 NIGHTS PER WEEK, 50± MINUTES PER NIGHT; SINGLE ROW COVERAGE SPRAY HEAD ZONES AT PLANTING AREAS, 3 NIGHTS PER WEEK, 40 MINUTES PER NIGHT; ROTOR HEAD ZONES FOR BUFFER PLANTING AREAS, 3 NIGHTS PER WEEK, 40± MINUTES PER NIGHT; BUBBLERS AT TREES/PALMS, 3 NIGHTS PER WEEK, 20 MINUTES PER NIGHT.
• THE IRRIGATION MANAGER SHALL SCHEDULE THE PROPOSED ZONES TO OPERATE IN A FASHION THAT DOES NOT CREATE CONFLICT WITH THE EXISTING ZONES UNTIL THE ENTIRE SYSTEM IS RENOVATED. AT THE TIME OF DESIGN THERE WAS NO INFORMATION AVAILABLE ON THE CURRENT SCHEDULING OF THE EXISTING SYSTEM ZONES, AND THE APPLICATION MANAGEMENT MODIFICATIONS THAT WERE DONE AFTER THE DESIGN PROVIDED BY MCGEE AND ASSOCIATES WAS IMPLEMENTED.
• THE TORO PRECISION SERIES SPRAY NOZZLES ARE BEING SPECIFIED DUE TO THEIR LOWER FLOW DEMAND (34% ±) IN COMPARISON TO STANDARD FLOW SPRAY NOZZLES, AND A SUPERIOR CLOGGING RESISTANCE. THE ESTIMATED FLOW DEMANDS CALCULATED AND PRESENTED PER THIS SET OF CONSTRUCTION DOCUMENTS IS BASED ON THE FLOW DEMANDS COMMONLY EXPERIENCED IN THE USE OF STANDARD SPRAY NOZZLES. THE FLOW DEMANDS WERE CALCULATED IN THAT FASHION IN THE EVENT THAT THE TORO PRECISION SERIES SPRAY NOZZLES BECOME NOT AVAILABLE IN THE FUTURE, AND THE STANDARD FLOW NOZZLES HAVE TO BE USED.
• THE TORO PRECISION SERIES SPRAY NOZZLES LOWER FLOW DEMAND WILL PRESENT AN APPLICATION RATE LOWER THAN STANDARD FLOW SPRAY NOZZLES, THEREFORE, THE SPRAY HYDRANT ZONES WILL HAVE TO OPERATE FOR LONGER PERIODS OF TIME.

IRRIGATION NOTES

IRRIGATION NOTES CONTENT

A. GENERAL NOTES

- 1. The plans and drawings are diagrammatic of the work to be performed. The work shall be executed in a manner to avoid conflicts with utilities and other elements of construction, including landscape materials. Any and all deviations shall be brought to the attention of the owner or owners. The contractor shall not willfully install any aspect of the irrigation system as shown on the plans or drawings when it is obvious in the field that obstructions, grade differences, or discrepancies exist that might not have been known during the design of the irrigation system. In the event that notification of the conflict is not given to the representative, the contractor will assume full responsibility for all revisions.
2. Irrigation system shall be installed in accordance with the plans, Irrigation System Specifications and all contract documents. Contractor shall comply with all prevailing local codes, ordinances and regulations.
3. Check and verify all site conditions, including service utility locations, prior to trenching or digging. Coordinate all irrigation system construction with existing and/or new plantings to avoid conflict or interference with location of piping, sleeving, cables and service utilities. The irrigation contractor is responsible for coordinating installation with all other construction on site, especially landscape installation. Irrigation system is to be relocated at no additional cost for any conflict with landscape installation or any other site construction or existing conditions. All components that are not contained within the specific areas shown on the drawings will not be accepted. All piping and other components are to remain within the property of the OWNER.
4. Where existing or new trees, light standards, signs, electronic controllers and/or other objects are an obstruction to an irrigation sprinkler's pattern, flow rates and operation time, as indicated on the drawings and on the Irrigation System Specifications. Adjust all sprinklers to avoid overthrow of water onto buildings, roadways, sidewalks or existing native vegetation.
5. Component spacings are maximum. Do not exceed spacings shown or noted on the plans. Component spacings may be adjusted to accommodate changes in terrain and planting layout as long as the modified spacings do not exceed the spacings shown in the plans. Unless shown otherwise, irrigation contractor shall provide 100% coverage.
6. All materials and equipment shown shall be installed as detailed on the plans. If the drawings do not thoroughly describe the techniques to be used, the installer shall follow the installation methods/instructions recommended by the manufacturer.
7. Irrigation contractor shall adjust all sprinklers, controller and other devices to obtain specified operating characteristics, including coverage, operating pressure, flow rates and operation time, as indicated on the drawings and on the Irrigation System Specifications. Adjust all sprinklers to avoid overthrow of water onto buildings, roadways, sidewalks or existing native vegetation.
8. Contractor to provide installation shop drawings and manufacturer product information for all irrigation components. All installations shall be as recommended by manufacturers. The quantities shown in the legends and symbol sheets shall not be used for bidding purposes. The contractor will be responsible for conducting a comprehensive takeoff of materials to determine the actual quantities of material necessary to execute the work described on the plans and drawings.
9. All trenches shall be backfilled with clean, debris-free materials. Clean sand shall be used for bedding material if parent soil cannot be adequately rid of rock and other extraneous debris. Pulling pipe shall be prohibited.
10. All solvent welding shall be preceded by priming of the fittings and pipe as recommended by the manufacturer.
11. Contractor to label/number all zone valve covers with corresponding controller zone number and isolation valve box covers with record drawing numbers. Provide tags to all valves as shown per details.

B. MAINLINE & PIPING

- 1. All irrigation main(s) & submain(s) shall be 1120-1220 class 200 PVC gasketed pipe with gasketed fittings. All pipes used downstream of each remote control valve shall be class 160 PVC solvent weld pipe. Unless shown otherwise.
2. The depth of all lines shall be as specified per plans and details. Measurements shall be from top of pipe(s) to finish grade. Contractor will be responsible for retrenching and relaying any pipe not meeting specified depth(s).
3. All mainlines will be installed with a tracing tape labeled "Non-potable Irrigation Main".
4. All piping stubouts for future zone expansions shall have the end capped, and be located using a 6" valve box.

C. SLEEVING

- 1. All roadway crossings on existing surfaces not scheduled for renovation, whether shown or not shall be made using SDR11 PE casings installed using directional boring technology. At crossings scheduled for construction or renovations, shall be made using SCH 40 PVC piping as specified by the project's engineer. A second sleeve dedicated for controller wires shall occur adjacent to the main/submain line. Refer to plan sheets for the size of the sleeves at the crossings.

- 2. Irrigation contractor shall coordinate with general contractor for the location of sleeve crossings whether shown or not. At no time will wiring share the same sleeve with main(s) or other piping. Wiring sleeves shall be dedicated only for wiring.
3. All sleeving shall extend: 36" for main/submain; 12" for laterals, beyond the edge of the surface requiring sleeving.
4. All sleeves shall be two sizes larger than the piping within, or as sized per plan.

D. ISOLATION VALVES

- 1. All isolation valves shall be brass. Isolation valves shall be sized as identified by symbols on the drawings, or by matching the size of the pipes they occur within. Valves of 3/4" through 2-1/2" shall be threaded, valves 3" and larger shall be flanged.
2. All isolation valves installed along the mainline shall be installed with a valve box. Refer to details and specifications for valve box sizes. Contractor shall provide valve box extensions when necessary. Extensions may be made with black plastic corrugated pipe.

E. QUICK COUPLER VALVES

- 1. All quick coupler valves shall be brass. Quick coupler valves shall occur at locations shown on the plans, if applicable. Quick coupler valves shall be installed in 10" round valve boxes and as detailed on the drawings.
2. The contractor shall furnish one (1) key and swivel assembly per (4) quick coupler valves.

F. CONTROL SYSTEM

- 1. All controller(s) (each if applicable) will be installed in areas designated by the Irrigation Consultant. In the event that no areas are designated, the irrigation contractor shall determine and field locate all controller(s) and rain sensor(s) location(s). Controller(s) shall be located in areas accessible to maintenance personnel. Rain sensor(s) shall be installed in open areas as per manufacturer recommendations. General contractor to provide dedicated 120 V. power in conduit to all controller locations and provide electrical contractor to connect 120 V. power from source to timer. All hardware necessary must be included as part of connection service.
2. All controller(s) (each if applicable) will be grounded using two eight foot (8') copper clad rods with #6 solid copper wire. Copper clamps will be used to attach the wire to the rods. If another controller is utilized, an earth ground of five (10) ohms or less shall be obtained on the grounding equipment.
3. All controller(s) (each if applicable) will have a Rain sensor and by-pass switch installed to meet state and local codes. Rain sensors and by-pass switches also will be installed in accordance to manufacturer's guidelines. Rain sensors to be manufactured by Mini-Click II unless otherwise specified.
4. It shall be the responsibility of the irrigation contractor to coordinate with other trades on site. Program or schedule the irrigation sequence for the irrigation system during construction and normal operation until final acceptance by the Irrigation Consultant. Controller & valve operation shall be chronological. Schedule (1) minute start time per (3) minutes of spray head operation; (10) (5) Minutes of Spray head single row coverage operation; (10) Minutes of rotary gear drive head operation.

G. REMOTE CONTROL VALVES

- 1. All control valves shall be installed as close as possible to the mainline(s) or submain(s) piping as possible. Control valves shall be type and size as specified herein and indicated on the drawings.
2. Wire sizes for control valve connections to the controller will be as specified per plan and specific notes. Red wire will be used for activation, white wire for common, blue wire for future expansions, and green wire for spare. The contractor shall furnish sufficient wires to allow for (1) spare and (1) future expansion, at valves located farthest distances away from the controller, and at all other designated locations. Contractor shall provide spare and future expansion wire splices in a 6" round box valve box.
3. All electrical splices shall be made using 3M-DBY and 3M-3570 Scotchlock Seal Pack Connectors as detailed herein.

H. VALVE & SPLICE BOXES

- 1. All valve boxes shall meet specifications, be sized & installed as shown and detailed herein. Top of valve boxes shall be flush and level with grade when installed. Contractor to reinstall and relevel boxes if soil setting occurs.
2. Where possible and feasible install valve boxes within planting bedlines. No valve boxes shall be installed within: 3' of a sidewalk or other pedestrian use surface, 5' from any vehicular roadways. Do NOT install at the bottom of swale(s) or any other low point.

I. POP-UP SPRAYHEADS, TURF GEAR DRIVE HEADS, TURF BUBBLERS & TREE BUBBLERS

- 1. All sprinkler heads will be installed and connected to lateral lines as per details. The smallest pipe size allowed to connect sprinkler/sprinkler heads shall be 1" or as specified per plan.
2. All pop-up spray heads occurring in turf areas shall be 6" sprayheads. Rotor heads shall be those as specified herein. All sprinkler heads occurring within low plantings (24" or lower - average mature height) shall be 12" high pop-up sprinklers. All sprinkler heads occurring within plantings (24" or greater - average mature height) shall be installed on sch. 80 PVC risers and "shrub" designated sprinkler adapters or 12" high pop-ups, unless otherwise shown on the drawings.
3. All trees and palms designated to have supplemental irrigation shall have it in the form of pressure compensating flood type bubblers. The discharge rate shall be: (1) 1 GPM nozzle per tree or palm. Bubbler hydrants shall be zoned separate from other hydrants in zones dedicated exclusively for supplemental hydration for trees and palms.
4. Sprayhead nozzle range shall be selected based on the spacings shown on the plan(s). The following guide lines shall be considered when selecting sprayhead nozzle ranges: 1"-4" spaces use side strip nozzles; 5"-8" spaces, 8" flat spray nozzles; 8"-11" spaces, 10" nozzles; 11"-15.5" spaces, 12" nozzles; 14"-16" spaces, 15" nozzles. The contractor shall consult with the Landscape Architect for arc adjustments if needed. The rotor head for rotor heads shall be adjusted to provide head to head coverage.
5. Small narrow irregular shaped turf areas with minimal (<10%) or no slope shall be irrigated with Nibco's Wick Irrigation Turf Bubblers. The turf bubblers shall be installed in accordance to the manufacturer specifications. The spacings shall not exceed 5' and the layout shall be triangular.

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DEVONSHIRE BOULEVARD
COLLIER COUNTY P.O.#4500124715
PREPARED FOR: COLLIER COUNTY ATM

JOB #: 013-10

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SCALE: NTS

IR-8
Revision Date: 10/15/16
Revision Date: 04/24/17
Revision Date: 04/24/17

IRRIGATION NOTES PLAN
SHEET NUMBER: IR-8