

**LANDSCAPE CONSTRUCTION
AND MAINTENANCE MEMORANDUM OF AGREEMENT**

THIS AGREEMENT, made and entered into this _____ day of _____, 2020 by and between the **STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION**, a component agency of the State of Florida, hereinafter called the “**DEPARTMENT**” and the City of Orlando, a municipal corporation duly enacted under the laws of the State of Florida, hereinafter called the “**LOCAL GOVERNMENT**.”

W I T N E S S E T H

WHEREAS, the **DEPARTMENT** has jurisdiction over and maintains State Road 526 as part of the State Highway System; and

WHEREAS, the **LOCAL GOVERNMENT** seeks to install and maintain certain landscaping within the right of way of State Road 526, specifically, as part of the Orange & Robinson Apartments development; and

WHEREAS, the **DEPARTMENT** agrees to allow the landscaping only under certain conditions necessary to protect the traveling public using said right of way; and

WHEREAS, Rule 14-40.003, Florida Administrative Code, requires the parties to enter into an Agreement designating and setting forth the responsibilities of each party; and

WHEREAS, the **LOCAL GOVERNMENT**, by Resolution No. _____, dated _____, 2020, and attached hereto as Exhibit “A,” has authorized its officers to execute this **AGREEMENT** on its behalf.

NOW THEREFORE, for and in consideration of the mutual benefits to flow each to the other, the parties covenant and agree as follows:

1. The **LOCAL GOVERNMENT** hereby agrees to install or cause to be installed landscaping as specified in the Landscape Plan(s) included as Exhibit “B.” Such installation shall be in conformance with Florida Administrative Code Rule 14-40.003, as it may be amended from time to time, and the Florida Highway Landscape Guide, which is incorporated into Rule 14-40.003 by reference. The **LOCAL GOVERNMENT** shall not change or deviate from said plans(s) without written approval of the **DEPARTMENT**.
2. The **LOCAL GOVERNMENT** agrees to maintain the landscaping referenced above in accordance with the Landscape Maintenance Plan(s) included as Exhibits “C” & “C-1.” Said maintenance will be in accordance with Florida Administrative Code Rule 14-40.003 and the Florida Highway Landscape Guide, as they may be amended from time to time. The **LOCAL GOVERNMENT**’s responsibility for maintenance shall be consistent with the requirements of Florida Administrative Code Rule 14-40.003. The above-named functions to be performed by the **LOCAL GOVERNMENT** shall be subject to periodic inspections by

the **DEPARTMENT**. The **LOCAL GOVERNMENT** shall not change or deviate from said plan(s) without written approval of the **DEPARTMENT**.

3. All landscape installation and all maintenance activities undertaken by the **LOCAL GOVERNMENT** shall be in accordance with the Maintenance of Traffic Plans(s) included as Exhibit "D" and Florida Administrative Code Rule 14-40.003.
4. If at any time after the **LOCAL GOVERNMENT** has assumed the landscaping installation or the maintenance responsibility above-mentioned, it shall come to the attention of the **DEPARTMENT** that the limits or a part thereof is not properly installed or maintained pursuant to the terms of this **AGREEMENT**, the District Secretary or his designee may issue a written notice that a deficiency or deficiencies exist(s), by sending a certified letter to the **LOCAL GOVERNMENT** to place said **LOCAL GOVERNMENT** on notice thereof. The certified letter shall be sent to the City Manager. Thereafter the **LOCAL GOVERNMENT** shall have a period of thirty (30) calendar days within which to correct the cited deficiencies. If said deficiencies are not corrected within this time period, the **DEPARTMENT** may at its option, proceed as follows:
 - (a) If installation is not completed in accordance with the plans in paragraph 1, the **DEPARTMENT** may complete the installation, with **DEPARTMENT** or Contractor's personnel, and invoice the **LOCAL GOVERNMENT** for expenses incurred.
 - (b) If installation has been properly completed or if the **DEPARTMENT** elects not to complete the installation under (a) above, and maintenance by the **LOCAL GOVERNMENT** is not in compliance with paragraphs 2 or 3, the **DEPARTMENT** may take action to maintain the landscaping or existing sidewalk or a part thereof, with **DEPARTMENT** or Contractor's personnel and invoice the **LOCAL GOVERNMENT** for expenses incurred, or
 - (c) The **DEPARTMENT** may terminate the **AGREEMENT**, in which case the **LOCAL GOVERNMENT** shall at its own expense and within sixty (60) days after written notice by the **DEPARTMENT**, remove all of the landscaping that the **DEPARTMENT** directs be removed and return the right-of-way to its original condition. The **LOCAL GOVERNMENT** will own such materials as it removes and the **DEPARTMENT** shall own any materials remaining. The **DEPARTMENT** may, in its discretion, remove, relocate or adjust the landscaping materials, with the **LOCAL GOVERNMENT** being responsible for the cost of any removal.

Upon **DEPARTMENT** action under one of the above options and upon direction of the **DEPARTMENT**, the **LOCAL GOVERNMENT** shall cease installation and maintenance activities under this **AGREEMENT**.

5. It is understood between the parties hereto that the landscaping covered by this **AGREEMENT** may be removed, relocated or adjusted by the **DEPARTMENT** at any time in the future as determined to be necessary by the **DEPARTMENT** in order that the state

road be widened, altered or otherwise changed which activities may include, but are not limited to, emergency or routine maintenance which may impact the landscaping. The **LOCAL GOVERNMENT** shall be given sixty (60) calendar days notice to remove said landscaping/hardscape after which time the **DEPARTMENT** may remove the same, with the **LOCAL GOVERNMENT** being responsible for the cost of removal.

6. The **LOCAL GOVERNMENT** may utilize its employees or third parties to accomplish its obligations under paragraphs 1, 2 or 3; however, the **LOCAL GOVERNMENT** remains responsible for proper performance under this **AGREEMENT** and shall take all steps necessary to ensure that its employees or third parties perform as required under this **AGREEMENT**.

7. The **LOCAL GOVERNMENT** agrees to include the following indemnification in all contracts with contractors, subcontractors, consultants, and subconsultants, who perform work in connection with this Agreement:

“The contractor/subcontractor/consultant/subconsultant shall indemnify, defend, save and hold harmless the State of Florida, Department of Transportation and all of its officers, agents or employees from all suits, actions, claims, demands, liability of any nature whatsoever arising out of, because of, or due to any negligent act or occurrence of omission or commission of the contractor/subcontractor/consultant/subconsultant, its officers, agents or employees.”

8. The term of this **AGREEMENT** commences upon execution. The **LOCAL GOVERNMENT** shall notify or cause the Department’s Maintenance Engineer or his designee to be notified a minimum of 48 hours, excluding Saturday, Sunday, and legal holidays, prior to starting work in the right-of-way, unless said Engineer or his designee waives this period in writing. When the Department through said Engineer or his designee issues a Notice to Proceed, the **LOCAL GOVERNMENT** may proceed with the project.
9. **LEGAL REQUIREMENTS.** This Agreement is executed and entered into in the State of Florida and will be construed, performed, and enforced in all respects in strict conformity with local, state, and federal laws, rules, and regulations.

- (a) If any term or provision of the Agreement is found to be illegal or unenforceable, the remainder of the Agreement will remain in full force and effect and such term or provision will be deemed stricken.
- (b) The **LOCAL GOVERNMENT** shall allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119, Florida Statutes, and made or received by the **LOCAL GOVERNMENT** in conjunction with this Agreement. Failure by the **LOCAL GOVERNMENT** to grant such public access shall be grounds for immediate unilateral cancellation of this Agreement by the **DEPARTMENT**.
- (c) The **LOCAL GOVERNMENT** and the **DEPARTMENT** agree that the **LOCAL GOVERNMENT**, its employees, contractors, subcontractors, consultants, and subconsultants are not agents of the **DEPARTMENT** as a result of this Agreement.

- (d) The **LOCAL GOVERNMENT** shall not cause any liens or encumbrances to attach to any portion of the **DEPARTMENT** right-of-way.
- (e) Nothing herein shall be construed as a waiver of either party's sovereign immunity.
- (f) **LOCAL GOVERNMENT**:
 - i. shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the **LOCAL GOVERNMENT** during the term of the contract; and
 - ii. shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.
- 10. This writing embodies the entire **AGREEMENT** and understanding between the parties hereto and there are no other **AGREEMENTS** and understanding, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby.
- 11. This **AGREEMENT** may not be assigned or transferred by the **LOCAL GOVERNMENT** in whole or part without the consent of the **DEPARTMENT**.
- 12. This **AGREEMENT** shall be governed by and construed in accordance with the laws of the State of Florida. In the event of a conflict between any portion of the **AGREEMENT** and Florida law, the laws of Florida shall prevail.
- 13. Public Entity Crime - A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.
- 14. Anti-Discrimination - An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity.
- 15. The Parties agree to comply with s.20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055(5), Florida Statutes.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed the day and year first above written.

**City of Orlando
(LOCAL GOVERNMENT)**

By: _____

Printed Name & Title

Attest: _____ **(SEAL)**
Stephanie Herdocia, City Clerk

Legal Approval _____

**STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION**

By: _____
John Hatfield, P.E., District Maintenance Engineer

Attest: _____ **(SEAL)**
Tina Carroll, Administrative Assistant

Legal Approval _____

RESOLUTION NO. _____

A RESOLUTION OF THE CITY OF ORLANDO, FLORIDA, AUTHORIZING EXECUTION OF THE LANDSCAPE CONSTRUCTION AND MAINTENANCE MEMORANDUM OF AGREEMENT WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION RELATING TO STATE ROAD 526 RIGHT-OF-WAY PROPERTY, LOCATED AT 310 NORTH ORANGE AVE., ORLANDO FL, 32801; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, "FDOT", and CITY OF ORLANDO, "CITY", desire to enter into a Landscape Construction and Maintenance Memorandum of Agreement wherein the CITY OF ORLANDO will cause the installation and maintenance of certain landscaping/hardscape and sidewalk improvements within the FDOT right-of-way on State Road 526, "Robinson Street", in the proximity of 310 North Orange Ave.; and

WHEREAS, the State of Florida Department of Transportation agrees to allow the landscaping/hardscape and sidewalk improvements only under certain conditions necessary to protect the traveling public using said right-of-way, and has therefore requested the City of Orlando to execute and deliver to the State of Florida Department of Transportation the Landscape Construction and Maintenance Memorandum of Agreement for the aforesaid project; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ORLANDO, FLORIDA, that:

SECTION 1. - The City Council hereby authorizes the Mayor of the City of Orlando to execute and deliver to the State of Florida Department of Transportation the Landscape Construction and Maintenance Memorandum of Agreement for the aforementioned project.

SECTION 2. - This Resolution shall take effect immediately upon its adoption.

PASSED AND DULY ADOPTED BY THE CITY COUNCIL OF THE CITY OF ORLANDO THIS _____ DAY OF _____, 2020.

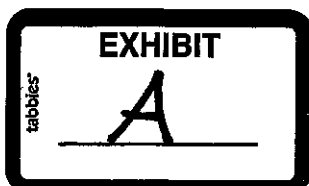
ATTEST:

CITY OF ORLANDO, FLORIDA, a municipal corporation, organized and existing under the laws of the State of Florida

By: _____
Stephanie Herdocia, City Clerk

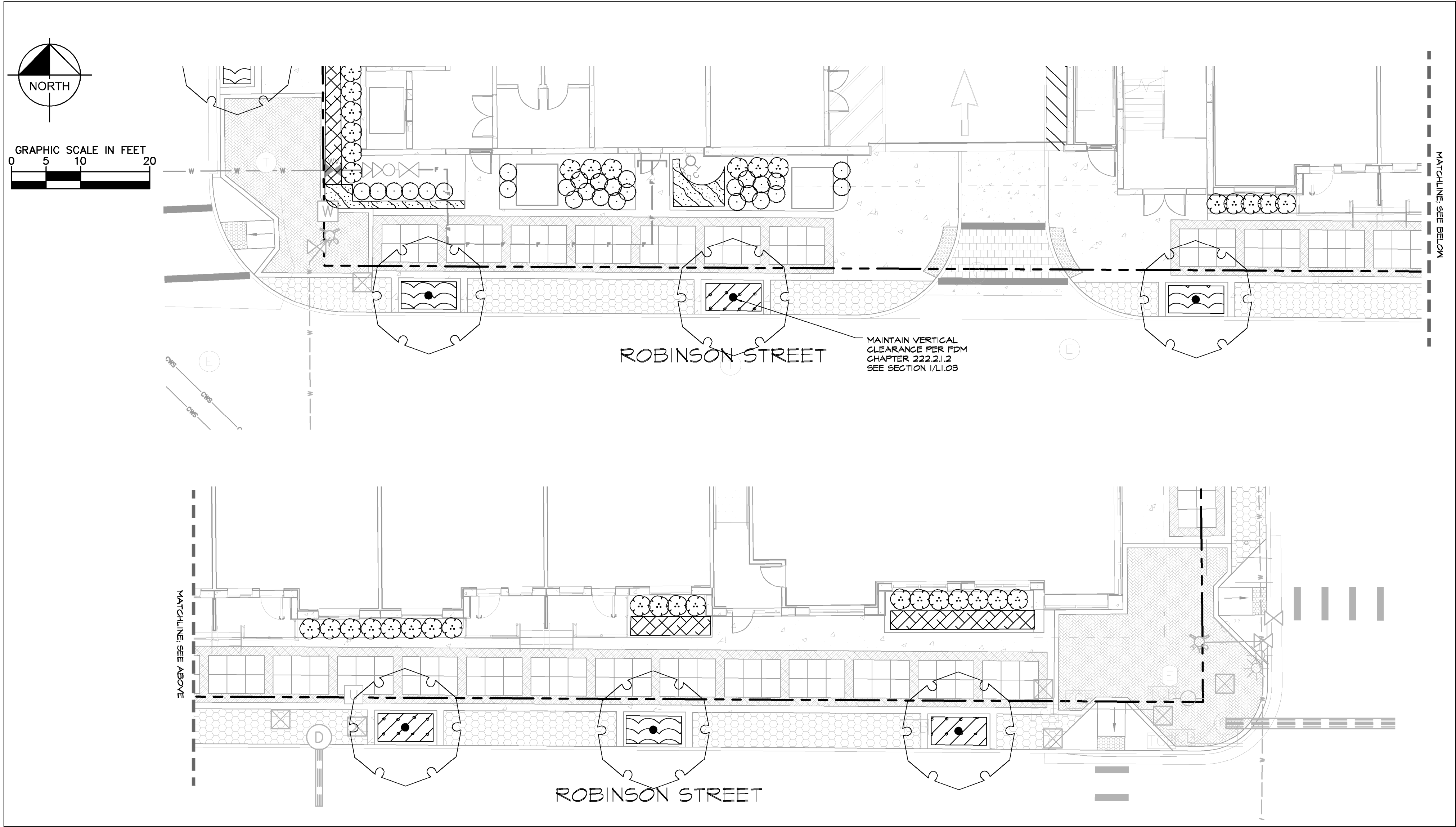
By: _____
Mayor / Mayor Pro Tem

Date: _____



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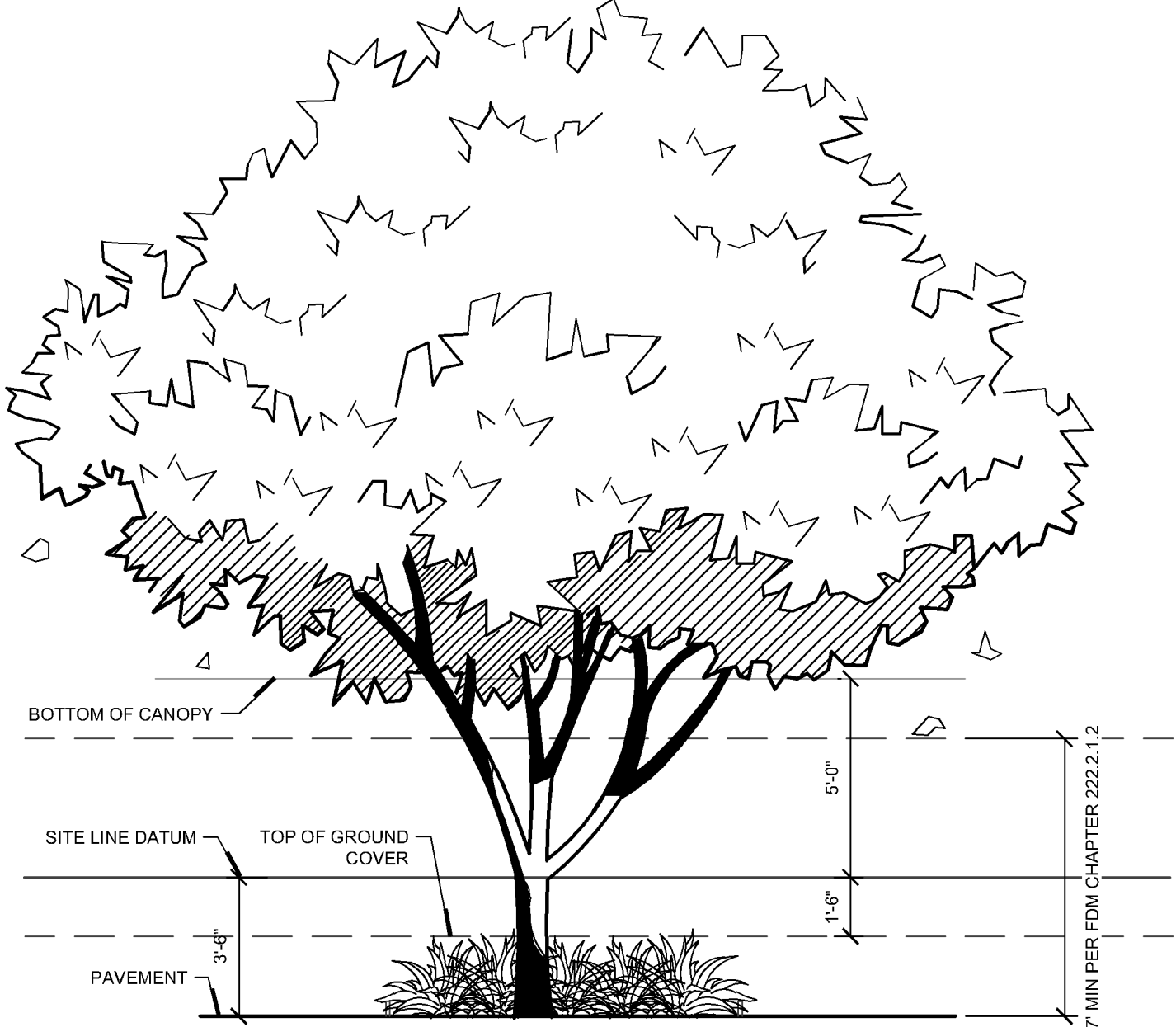
EXHIBIT B



ROBINSON STREET LANDSCAPE ENLARGEMENT

PLANT SCHEDULE

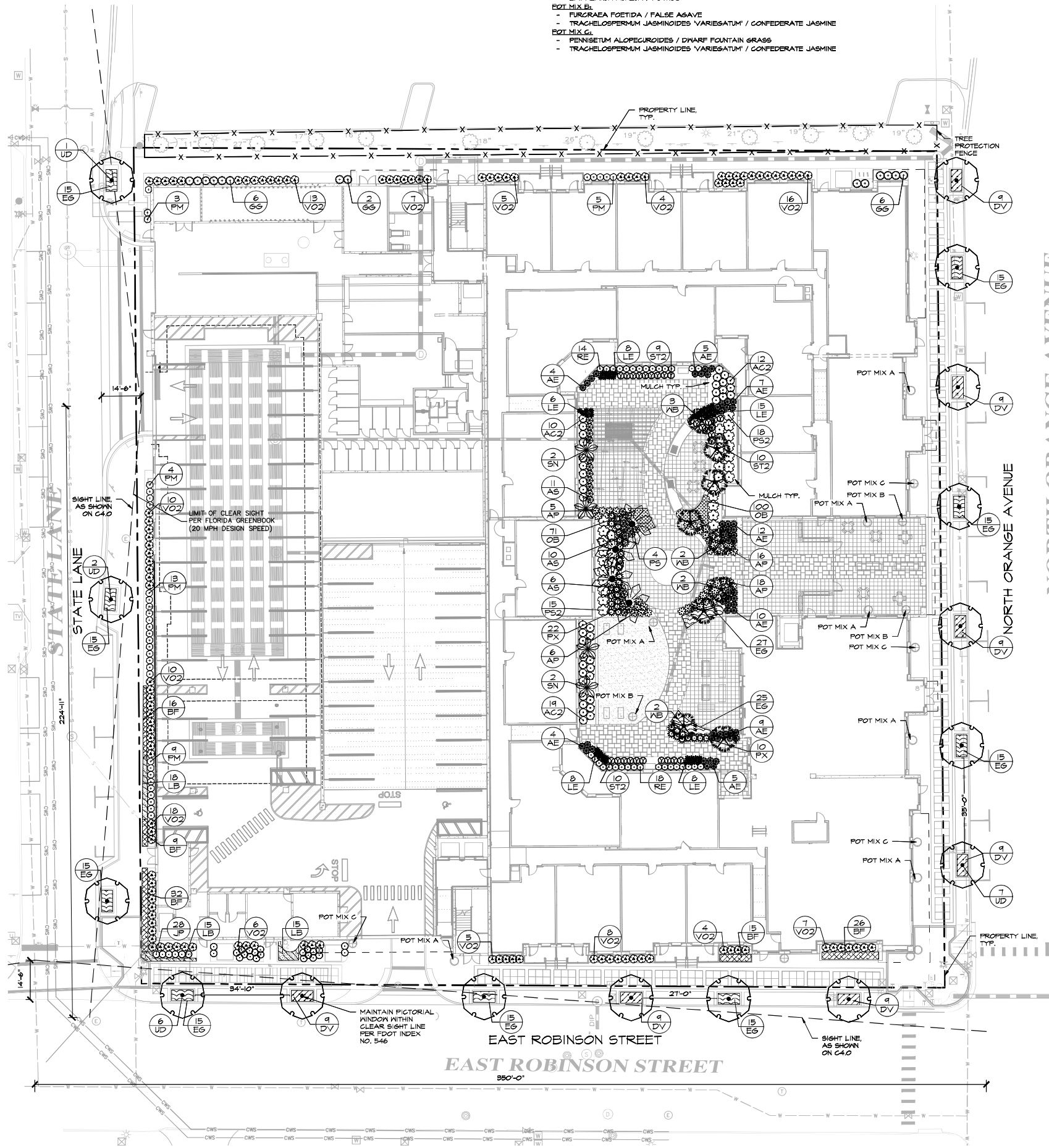
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	GAL	SIZE
	UD	6	ULMUS PARVIFOLIA 'DRAKE' SINGLE STRAIGHT LEADER, FL #1, FULL, 7' C.T. MIN.	DRAKE ELM	F6	9.5" GAL MIN	16' HT. X 8" SPR.
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING
	DV	27	DIANELLA TASMANICA 'VARIESATA' FULL	FLAX LILY	1 GAL	14" FULL	24" OC
	E6	45	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL, NATIVE	BLUE DAZE	3 GAL	18" FULL	18" OC



ORANGE & ROBINSON APARTMENTS CITY OF ORLANDO FLORIDA	LANDSCAPE PLAN ENLARGEMENT - ROBINSON STREET	KHA PROJECT 149934000 DATE 04/23/2020 SCALE AS SHOWN DESIGNED BY BLN DRAWN BY BLN CHECKED BY KNM DATE: 5/5/2020	L1.03	SHEET NUMBER	CITY OF ORLANDO	FLORIDA	No.	REVISIONS	DATE	BY	6	100% CDs	04/23/20KHA	4	OWNER REVIEW	12/20/19 KHA	3	REVISION 3	11/26/19 KHA	2	REVISION 2	11/08/19 KHA	1	REVISION 1	09/23/19 KHA
											6	100% CDs	04/23/20KHA	4	OWNER REVIEW	12/20/19 KHA	3	REVISION 3	11/26/19 KHA	2	REVISION 2	11/08/19 KHA	1	REVISION 1	09/23/19 KHA
											6	100% CDs	04/23/20KHA	4	OWNER REVIEW	12/20/19 KHA	3	REVISION 3	11/26/19 KHA	2	REVISION 2	11/08/19 KHA	1	REVISION 1	09/23/19 KHA
											6	100% CDs	04/23/20KHA	4	OWNER REVIEW	12/20/19 KHA	3	REVISION 3	11/26/19 KHA	2	REVISION 2	11/08/19 KHA	1	REVISION 1	09/23/19 KHA
											6	100% CDs	04/23/20KHA	4	OWNER REVIEW	12/20/19 KHA	3	REVISION 3	11/26/19 KHA	2	REVISION 2	11/08/19 KHA	1	REVISION 1	09/23/19 KHA















Kimley»Horn
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189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
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




- POT SCHEDULE**
- POT MIX A:**
- HELICONIA PSITTACORUM 'LADY DI' / LADY DI HELICONIA
 - EPIPRENUM AUREUM / POTIOS
- POT MIX B:**
- FURCRAEA FOETIDA / FALSE AGAVE
 - TRACHELOSPERMUM JASMINOIDES 'VARIESATUM' / CONFEDERATE JASMINE
- POT MIX C:**
- PENNSETUM ALOPECUROIDES / DWARF FOUNTAIN GRASS
 - TRACHELOSPERMUM JASMINOIDES 'VARIESATUM' / CONFEDERATE JASMINE

PLANT SCHEDULE COURTYARD

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	GAL.	SIZE
	PS	4	PHOENIX SYLVESTRIS STRAIGHT, SINGLE LEADER, FULL, FL #1	WILD DATE PALM	FG	-	14' CT MIN
	VB	4	MODYETIA BIFURCATA FULL, FL #1, CLOSELY MATCHING	FOXTAIL PALM	FG	-	12' CT MIN
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SPACING	SIZE
	AC2	41	ALOCASIA ODORA 'CALIFORNIA' FULL	DWARF ELEPHANT EAR	9 GAL	36" OC	18" HT MIN
	AE	56	ASPIDISTRA ELATOR FULL	CAST IRON PLANT	9 GAL	30" OC	18" FULL
	AP	45	AZALEA X 'PINK RUFFLE' FULL	AZALEA	9 GAL	36" OC	18" FULL
	AS	27	ALPINIA ZERUM'BET 'VARIEGATA' FULL	VARIEGATED GINGER	9 GAL	30" OC	18" FULL
	LE	45	LIRIOPE MUSCARI 'EMERALD GODDESS' FULL	LIRIOPE	9 GAL	24" OC	12" FULL
	PS2	33	PHILODENDRON SELLOUM FULL	LACY TREE PHILODENDRON	7 GAL	48" OC	24" FULL
	PX	32	PHILODENDRON XANADU FULL	XANADU PHILODENDRON	9 GAL	36" OC	18" FULL
	RE	32	RHAPIS EXCELSA FULL	LADY PALM	9 GAL	30" OC	30" HT MIN
	SN	4	STRELITZIA NICOLAI FULL	GIANT BIRD OF PARADISE	7 GAL	SEE PLAN	48" HT MIN
	ST2	24	STROMANTHE SANSUINEA 'TRICOLOR' FULL	TRICOLOR STROMANTHE	9 GAL	30" OC	14" FULL
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	EG	52	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL, NATIVE	BLUE DAZE	9 GAL	18" FULL	18" OC
	OB	171	OPHIPOGON JAPONICUS	MONDO GRASS	1 GAL	10" FULL	10" OC
MISC.	QTY	BOTANICAL/COMMON NAME		SPECIFICATIONS			
MULCH	TBD	EUCALYPTUS MULCH		3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL			

PLANT SCHEDULE STREETScape

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	GAL.	SIZE
	UD	16	ULMUS PARVIFOLIA 'DRAKE' SINGLE STRAIGHT LEADER, FL #1, FULL, 6' C.T. MIN.	DRAKE ELM	FG	35" GAL MIN	16' HT. X 8' SPR.
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SPACING	SIZE
	GS	14	GALPHIMIA SLAUCA FULL	THRYSALIS	9 GAL	36" OC	18" FULL
	JP	28	JUNIPERUS CHINENSIS 'PARSONII' FULL	PARSONI JUNIPER	9 GAL	30" OC	18" FULL
	PM	34	PODOCARPUS MACROPHYLLUS FULL TO BASE, CLOSELY MATCHING	PODOCARPUS	7 GAL	30" OC	30" HT MIN
	VO2	113	VIURNUM ODORATISSIMUM FULL	SWEET VIURNUM	9 GAL	36" OC	30" FULL
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	BF	40	BULBINE FRUTESCENS	STALKED BULBINE	1 GAL	18" FULL	18" OC
	DV	63	DIANELLA TASMANICA 'VARIESATA' FULL	FLAX LILY	1 GAL	14" FULL	24" OC
	EG	135	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL, NATIVE	BLUE DAZE	9 GAL	18" FULL	18" OC
	LB	48	LIRIOPE MUSCARI 'BIG BLUE' FULL	BIG BLUE LILYTUFF	9 GAL	16" FULL	18" OC
MISC.	QTY	BOTANICAL/COMMON NAME		SPECIFICATIONS			
MULCH	TBD	EUCALYPTUS MULCH		3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL			

LANDSCAPE NOTES:

- ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
- ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
- ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
- ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
- ALL TREES MUST BE GUED OR STAKED AS SHOWN IN THE DETAILS.
- ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA (2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD (3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE AFFURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
- ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
- STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
- ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
- ALL INVASIVE / EXOTIC SPECIES AND NURSERY TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
- ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
- TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
- ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.

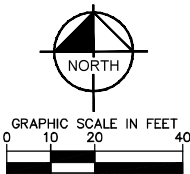
REQUIRED LANDSCAPE / STREETScape (DOWNTOWN ORLANDO STREETScape GUIDELINES)

N. ORANGE AVE. STREET TREE REQUIREMENTS:

- REQUIRED:
- TREATMENT 1 - PRIMARY PEDESTRIAN STREET
- 15' WIDE SIDEWALKS WITH TREE WELLS
- (STREET TREES PLANTED 44' O.C. WITHIN TREE WELLS)
- 308' LP / 44 LP = 7 TREES REQUIRED
- PROVIDED:
- 15' WIDE SIDEWALKS WITH TREE WELLS
- TREES
- ALL NEW STREET TREES TO HAVE 6' CLEAR TRUNK, 14'-16' HT. X 8"-10" SPR.

E. ROBINSON STREET TREE REQUIREMENTS:

- REQUIRED:
- TREATMENT 2 - SECONDARY PEDESTRIAN STREET
- 15' WIDE SIDEWALKS WITH TREE WELLS
- (STREET TREES PLANTED 44' O.C. WITHIN TREE WELLS)
- 284 LP / 44 LP = 5 TREES REQUIRED
- PROVIDED:
- 15' WIDE SIDEWALK
- 6 TREES



Kimley»Horn

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180 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM CA 0000696

Digitally signed by Matthew T Franko
Date: 2020.02.18 16:53:13 -05'00'



KHA PROJECT	149934000
DATE	01/30/2020
SCALE	AS SHOWN
DESIGNED BY	BLN
DRAWN BY	BLN
CHECKED BY	KHM

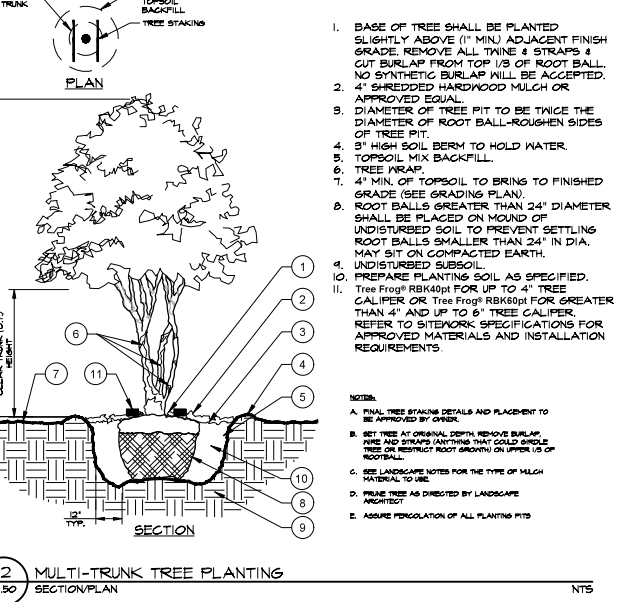
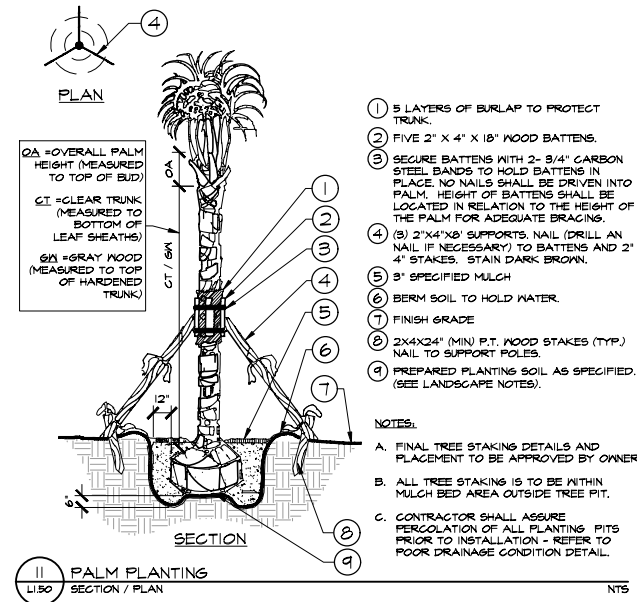
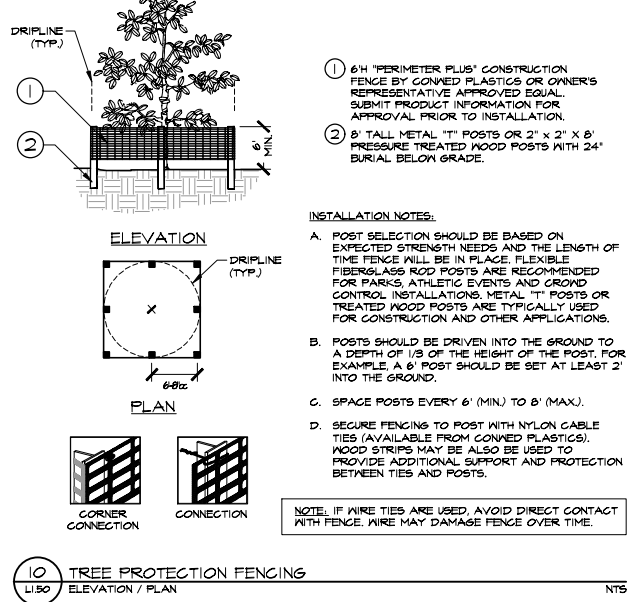
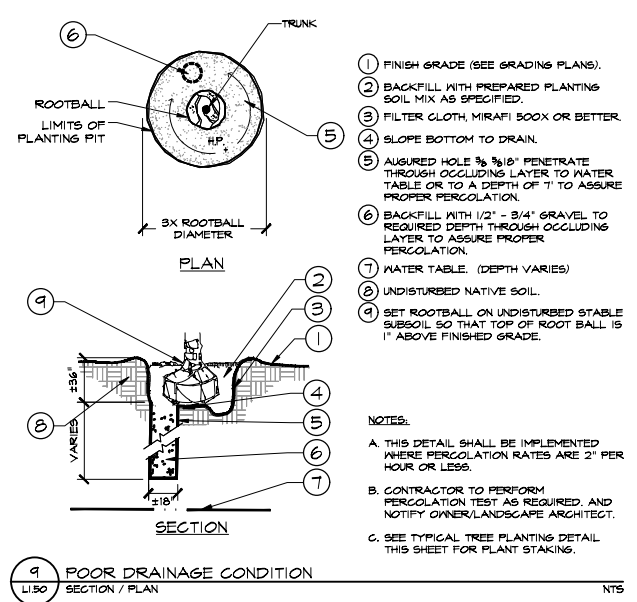
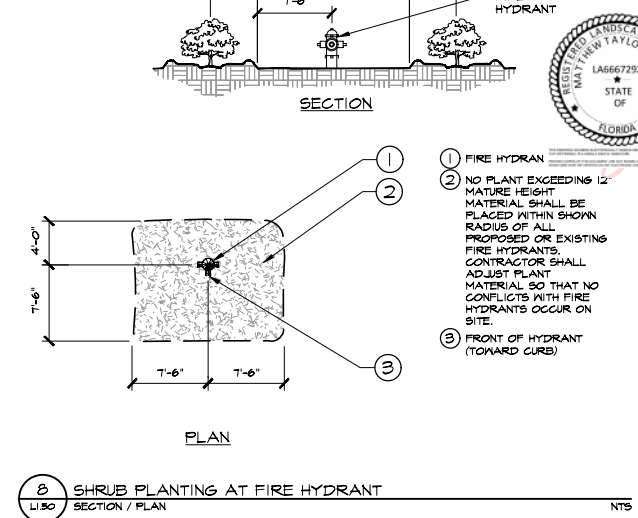
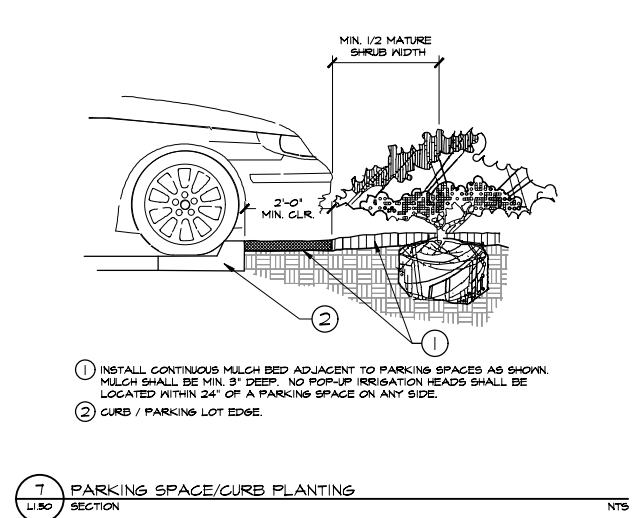
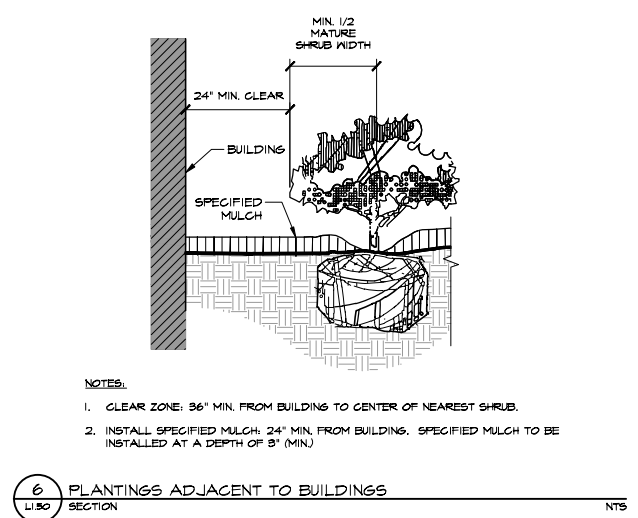
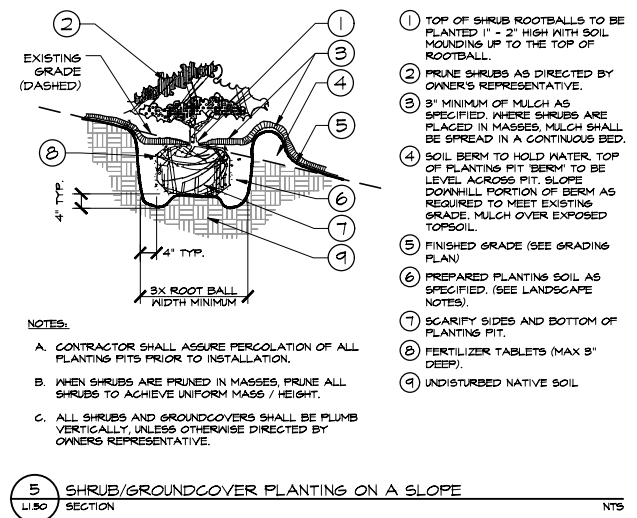
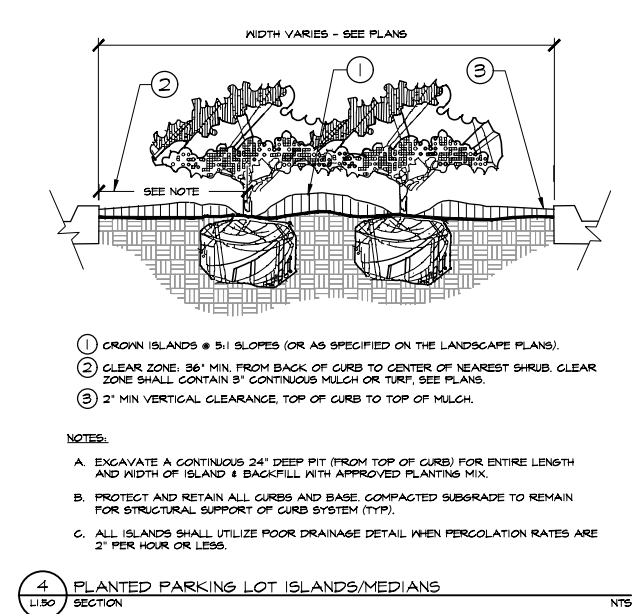
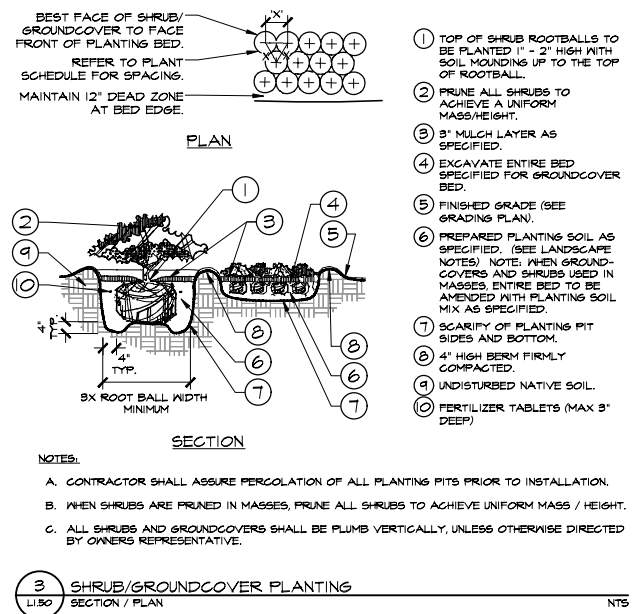
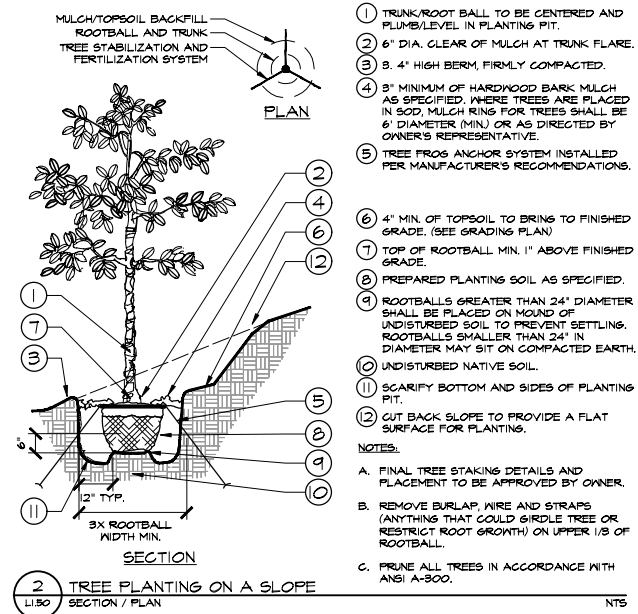
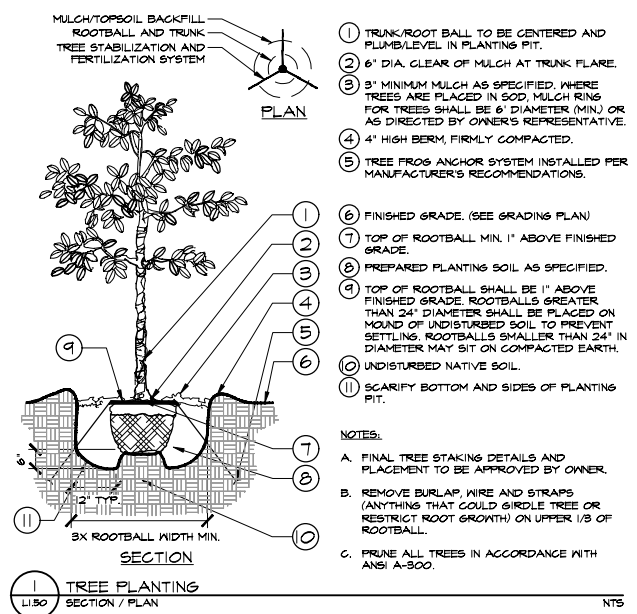
LANDSCAPE PLAN -
GROUND LEVEL

ORANGE & ROBINSON
APARTMENTS

SHEET NUMBER
L1.00

FLORIDA
CITY OF ORLANDO

Plotted By: Nelson, Eric Sheet Set: ORANGE AND ROBINSON APARTMENTS L1.50 February 18, 2020 01:25:07pm K:\ORL_CNV\49934000-N Orange Multifamily\CADD\CONST\PlanSheets\L1.50 - LANDSCAPE DETAILS.dwg
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REVISED BY		DATE	REVISIONS	
Matthew T. Franko		01/30/2020	MSA	
Digitally signed by Matthew T. Franko		2020.02.18	16:53:31 -05'00'	
KHA PROJECT 149934000		DATE 01/30/2020	SCALE AS SHOWN	DESIGNED BY KHA
DRAWN BY KHA		CHECKED BY KHA	CITY OF ORLANDO	
ORANGE & ROBINSON APARTMENTS		LANDSCAPE DETAILS		
SHEET NUMBER L1.50				

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS SPECIFIED HEREIN.
2. WORK SHALL INCLUDE MAINTENANCE AND MATTERS OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVINGS, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTINGS ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT DESIGN STANDARDS, INDEX 600. IF A DIRECT APPLICATION OF INDEX 600 IS PROPOSED, THE CONTRACTOR SHALL SUBMIT IN WRITING A STATEMENT INDICATING THE STANDARD INDEX AND PAGE NUMBER NO LESS THAN 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION. WHEN A DIRECT APPLICATION OF FDOT STANDARD INDEX 600 IS NOT ACCEPTABLE A PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A FLORIDA PROFESSIONAL ENGINEER WHO HAS SUCCESSFULLY COMPLETED ADVANCED TRAINING IN MAINTENANCE OF TRAFFIC, AS DEFINED BY FDOT FOR APPROVAL BY THE COUNTY ENGINEER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION. THE SAFETY AND PROTECTION THEREOF, REPAIRING ANY DAMAGE THERE TO RESULTING FROM THE WORK, THE COST OF ALL, WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

C. PROTECTION OF EXISTING PLANT MATERIALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC., THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRAINAGE LINE AND SPILLING OIL, GASOLINE, OR OTHER DESTRUCTIVE MATERIALS WITHIN THE DRAINAGE LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNBILKLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF THREE HUNDRED DOLLARS (\$300) PER CALIF. INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIF. AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIF. SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIF. AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIF.
2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

D. MATERIALS

1. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER, UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER, WHERE ANY REQUIREMENTS ARE NOT SHOWN ON THE PLANT LIST. THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW.
2. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
- a. TOPSOIL: FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER. IT SHALL BE FREE OF STONES, BRUSH, WEEDS AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 5.5 AND 7.0.
- b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.
2. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

F. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY TANKS, HOSES, SPRINKLERS, ETC., IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

* WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

6. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

* FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S GROWN (BASE). MULCH SHALL BE "FLORIMULCH," EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.
2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6" MINIMUM) PLANTED UNDER THIS CONTRACT.

I. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("MILTUP" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED (B&B) AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.
3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS: ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.
- J. CONTAINER GROWN STOCK
1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.
4. RP6+ "ROOTS PLUS GROWER" CONTAINER PRODUCTS SHALL BE USED WHERE SPECIFIED.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS EQUIVALENT AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

N. FINE GRADING

1. FINE GRADINGS UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADINGS OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS, AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.
- O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, GEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL, IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, GAS, AND TELEPHONE. PROPERTY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEATED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 2601, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLOUSHED INTO PLACE WITH A SLOW FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTINING" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL. APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL. APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, ROPE, WIRES, BASKETS, ETC., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SICKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST, IN ACCORDANCE WITH ANSI A-300.

14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6". REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO HAVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROAD-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER (AS ALLOWED BY JURISDICTIONAL AUTHORITY).
- P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED, NET PREPARED AREA THOROUGHLY.
4. SODDING
- a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.
- c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED IMMEDIATELY FOLLOWING SOD LAYING. THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL, AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND NECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE
- a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL BROKEN, SUNKEN OR BARE SPOTS LARGER THAN (12"x12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
- b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.
- G. CLEANUP
- UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- R. PLANT MATERIAL MAINTENANCE
- ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.
5. FINAL INSPECTION AND ACCEPTANCE OF WORK
- FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.
- T. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.
2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.
3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.



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Date: 2020.02.18 16:53:54 -05'00'

KHA PROJECT 149334000	DATE 01/30/2020	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY KHA	CHECKED BY MSA	DATE 01/30/2020
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LANDSCAPE SPECIFICATIONS

ORANGE & ROBINSON APARTMENTS

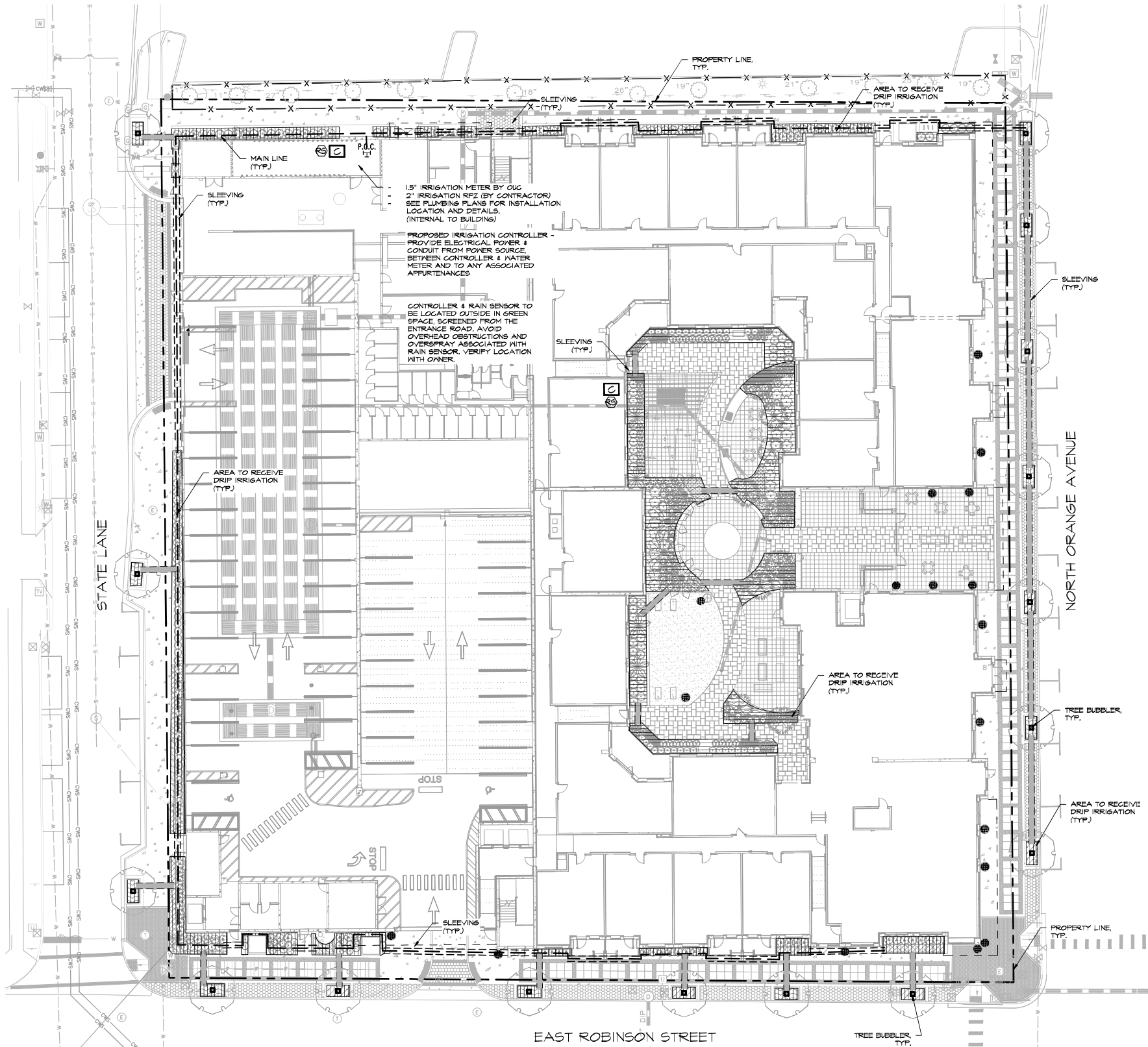
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







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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	RAIN BIRD 1800-1400 FLOOD FIXED FLOW RATE WITH TWO (2) 0.5 GPM (1402 SERIES) FULL CIRCLE BUBBLERS PER TREE ON 5' LENGTH FLEXIBLE PIPE, 1/2" FIPT.	16	20
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	AREA TO RECEIVE DRIP EMITTERS TORO T-DAK 15 VARIABLE ADJUSTABLE EMITTER WITH 4-3/4" STAKE AND 1/4" BARBED INLET. ADJUSTABLE FROM 0 - 14 GPH.	100.7 S.F.	
	AREA TO RECEIVE DRIP LINE RAIN BIRD XFD-04-12 XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE, 0.4 GPM EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, UV RESISTANT, SPECIFY XE INSERT FITTINGS.	5,365 L.F.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	RAIN BIRD ESP12LXMEF 12 STATION COMMERCIAL CONTROLLER, PLASTIC WALL MOUNT, FLOW SENSING	2	
	RAIN BIRD RSD-BEX RAIN SENSOR, WITH METAL LATCHING BRACKET, EXTENSION WIRE.	2	
	POINT OF CONNECTION 1"	1	
	IRRIGATION MAINLINE, PVC SCHEDULE 40	876.8 L.F.	
	PIPE SLEEVE, PVC SCHEDULE 40 MAINLINE SLEEVING	976.2 L.F.	
	PIPE SLEEVE, PVC SCHEDULE 40 LATERAL SLEEVING	986.5 L.F.	

FLOW TOTALS

FLOW TOTALS
Area for Drip: 81.2 / 40 GPM = 2 ZONES
Supplier: 0.5 / 40 GPM = 1 ZONE
Total: 41.1 GPM

IRRIGATION SYSTEM USAGE:
4/- 0.12 AG x 48360 = 5221 SF
5221 SF x 0.875 = 4571 OF (ASSUMING 1.05' OF IRRIGATION PRECIPITATION)
4571 OF x 1.854 (GALLONS TO COVER 1.05') = 3592 GALLONS (COVER SITE WITH 1.05' OF IRRIGATION PRECIPITATION)
3592 GALLONS / 7 DAYS = 513 GALLONS PER DAY (+/-)
513 GALLONS PER DAY x 30.4 = 15601 GALLONS PER MONTH (+/-)
15601 GALLONS PER MONTH x 12 = 187208 GALLONS PER YEAR (+/-)

OVERALL IRRIGATION SYSTEM USAGE:

4/- 6278 SF
6278 SF x 0.875 = 548.89 CF (ASSUMING 1.05' OF IRRIGATION PRECIPITATION)
548.89 CF x 1.854 (GALLONS TO COVER 1.05') = 4311 GALLONS (COVER SITE WITH 1.05' OF IRRIGATION PRECIPITATION)
4311 GALLONS / 7 DAYS = 615.85 GALLONS PER DAY (+/-)
615.85 GALLONS PER DAY x 30.4 = 18721.84 GALLONS PER MONTH (+/-)
18721.84 GALLONS PER MONTH x 12 = 224662.1 GALLONS PER YEAR (+/-)

TOTAL ANTICIPATED IRRIGATION SYSTEM USAGE (LOW SYSTEM USAGE):
ASSUMING THE MONTHS OF JUNE, JULY, AUGUST, AND SEPTEMBER PROVIDE ENOUGH RAINFALL FOR IRRIGATION TO BE OBSOLETE - AVERAGE YEARLY USAGE CAN BE ESTIMATED BY MULTIPLYING MONTHLY DEMAND BY EIGHT (8).
18721.84 GALLONS PER MONTH x 8 = 149775.2 GALLONS PER YEAR
THIS NUMBER CAN THEN FURTHER BE REDUCED BY ESTIMATING RAINFALL PROVIDED PER NON-PEAK MONTHS WHICH WOULD YEARLY ESTIMATED RAINFALL IN HALF.
149775.2 GALLONS PER YEAR / 2 = 74887.6 GALLONS PER YEAR

IRRIGATION NOTES

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, ETC. PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING OR CONTINUING WORK.
- THE CONTRACTOR SHALL MAKE NO SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS.
- THIS PLAN IS SCHEMATIC AND DUE TO THE NATURE OF CONSTRUCTION SLIGHT FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT PLAN.
- CONTRACTOR TO VERIFY ACTUAL AVAILABLE WATER PRESSURE BEFORE BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AVAILABLE WATER PRESSURE WILL NOT ALLOW SYSTEM MODIFICATION TO BE POSSIBLE.
- IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY, SHALL HAVE A BACKFLOW PREVENTER INSTALLED.
- WHERE APPLICABLE IRRIGATION HEADS ARE TO BE ADJUSTED FOR COMPLETE COVERAGE WITH MINIMUM OVER SPRAY BEYOND LANDSCAPE AREAS.
- EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
- ALL IRRIGATION SLEEVINGS TO BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES.
- IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNERS REPRESENTATIVE.
- ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
- CONTRACTOR TO PROVIDE PERMANENT BENCH-MARKS ON ALL CURB LINES AT RELATED SLEEVE LOCATIONS (TYP.).
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED TO MINIMIZE ROOT DISTURBANCE IN EXISTING TREES.
- IRRIGATION SPRAYS AND ROTORS ARE NOT COMBINED ON THE SAME CONTROL VALVE CIRCUIT - LANDSCAPE BEDS AND TURF ON SEPARATE CIRCUITS.
- MATCH PRECIPITATION RATES WITH ANY HEADS THAT ARE REPLACED.

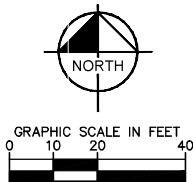
NOTE:

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT OF THE SYSTEM, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.

MAINLINE SHOWN FOR CLARITY. INSTALL MAINLINE AND VALVE 6" FROM B.O.C. WHEN POSSIBLE. COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS (TYP.).

CONTRACTOR TO PERMANENTLY MARK ALL SLEEVE CROSSINGS AT ASSOCIATED TOPS OF CURB (TYP.).

COORDINATE/DISCUSS PROJECT LIMITS WITH GENERAL CONTRACTOR TO ENSURE ALL IRRIGATION EQUIPMENT IS INSTALLED WITHIN PROJECT AREA.



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by Matthew T Franko
Date:
2020.02.18
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KHA PROJECT	149334000
DATE	01/30/2020
SCALE	AS SHOWN
DESIGNED BY	BLN
DRAWN BY	BLN
CHECKED BY	KIM
DATE:	2/18/2020

IRRIGATION PLAN -
GROUND LEVEL

ORANGE & ROBINSON
APARTMENTS

SHEET NUMBER
L2.00

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IRRIGATION SYSTEM NOTES:

- THE IRRIGATION MAINLINE LAYOUT IS DIAGRAMMATIC. ANY CHANGES MADE IN THE IRRIGATION MAINLINE DUE TO FIELD CONDITIONS OR CONTRACTOR'S SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
 - SET SPRAY HEADS 6" AND ROTORS 12" IN FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURBS.
 - IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.
 - CONTRACTOR TO PROVIDE NEW AUTOMATIC CONTROLLER FOR PROPOSED SYSTEM (NO BATTERY OPERATED CONTROLLERS ALLOWED). COORDINATE LOCATION WITH OWNER.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AUTOMATIC RAIN SENSOR. COORDINATE LOCATION W/ OWNER.
 - IRRIGATION SHALL NOT BE COMBINED ON A SINGLE ZONE AND SHALL BE ZONED ACCORDING TO IRRIGATION TYPE, PRECIPITATION RATE, AND THE SYSTEM'S AVAILABLE WATER / PRESSURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO INSTALLATION.
 - VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY.
 - CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND GPM PRIOR TO CONSTRUCTION.
 - INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE.
 - CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION.
 - CONTRACTOR SHALL PROVIDE 'AS-BUILT' DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
 - PRODUCTS SHALL BE AS SPECIFIED OR APPROVED EQUAL.
- PRE-APPROVED MANUFACTURERS:
1. Toro
2. Hunter
3. Rainbird
- IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.A. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
 - LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2x SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
 - MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
 - THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVEING AND DIRECTIONAL BORES.
 - ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE 'AS-BUILT' DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE 'AS-BUILT' DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
 - ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
 - NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION 'HB'. LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
 - THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: 'CAUTION: IRRIGATION LINE BURIED BELOW'. THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
 - ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
 - ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
CONTROL WIRES - #14
COMMON WIRES - #14
 - ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
-RECTANGULAR 12"x11" HEAVY DUTY BOX (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
 - ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
 - HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
 - LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 8'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
 - IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
 - ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 12" O.C. WITH 12" LINE SPACINGS AT A MINIMUM.
 - ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
 - ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 1/2" ELECTRICAL CONDUIT.
 - SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
 - IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
 - IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
 - CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
 - ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
 - IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVING AT 2X THE PIPE SIZE. ALL SLEEVING SHALL BE FREE OF STONES AND DEBRIS.
 - IRRIGATION SOURCE TO BE EITHER WELL, POTABLE, OR NON-POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
 - POINT OF CONNECTION TO BE DETERMINED BY OWNER. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
 - IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION. VERIFY WITH LOCAL JURISDICTION.
 - IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE.



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by Matthew T
Franko
Date: 2020.02.18
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ORANGE & ROBINSON APARTMENTS				IRRIGATION SPECIFICATIONS				ORANGE & ROBINSON APARTMENTS			
CITY OF ORLANDO				FLORIDA				CITY OF ORLANDO			
SHEET NUMBER L2.51				KIMLEY»Horn © 2019 KIMLEY-HORN AND ASSOCIATES, INC. 180 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM CA 0000696				KIMLEY»Horn © 2019 KIMLEY-HORN AND ASSOCIATES, INC. 180 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM CA 0000696			
				OWNER REVIEW				OWNER REVIEW			
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EXHIBIT C
MAINTENANCE PLAN

All landscaping shall be maintained in accordance with Rule Chapter 14-40, FAC, the Landscape Construction and Maintenance Memorandum of Agreement, Landscape Plans, and the FDOT Standard Plans.

EXHIBIT C-1

MAINTENANCE PLAN Landscape Improvements

Project State Road No(s): East Robinson Street
State Lane

Permit/FM No(s): 2019-A-594-00041
Maintaining Agency: City, Town, County
RLA of Record: Matthew Franko R.L.A. No 6667292
Date: February 18, 2020

I. GENERAL MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS:

The purpose of a plan for the landscape improvements maintenance practices is to allow the plant material on your project to thrive in a safe and vigorous manner while fulfilling their intended purpose and conserving our natural resources. Plantings and all other landscape improvements shall be maintained to avoid potential roadway hazards and to provide required clear visibility, accessibility, clearance, and setbacks as set forth by Florida Department of Transportation (FDOT) governing standards and specifications: *FDOT Standard Plans*, *FDOT Plans Design Manual* and *FDOT Standard Specifications for Road and Bridge Construction*, as amended by contract documents, and all other requirements set forth by the District 4 Operations Maintenance Engineer. The initial portion of the Maintenance Plan describes general maintenance requirements and recommendations. **The concluding section provides recommendations prepared by the Registered Landscape Architect of Record specific to the attached approved plans.**

WATERING REQUIREMENTS

Watering is a critical concern for not only the maintenance of healthy plant material but also for observing water conservation practices. The amount of water to apply at any one time varies with the weather, drainage conditions and water holding capacity of the soil. For plant materials that have been established, it is imperative that any mandated water restrictions be fully conformed to on FDOT roadways.

Proper watering techniques should provide even and thorough water dispersal to wet the entire root zone, but not saturate the soil or over-spray onto travel lanes.

IRRIGATION SYSTEM

The Agency shall ensure there are no roadway overspray or irrigation activities during daytime hours (most notably "rush hour" traffic periods). It is imperative the irrigation controller is properly set to run early enough that the watering process will be entirely completed before high traffic periods, while adhering to mandated water restrictions. To ensure water conservation, the Agency shall monitor the system for water leaks and the rain sensors to ensure they are functioning properly so that the system shuts down when there is sufficient rainfall.

INTEGRATED PLANT MANAGEMENT

An assessment of each planting area's soil is recommended to periodically determine the nutrient levels needed to sustain healthy, vigorous plant growth.

Palms, shrubs, trees and turf areas shall be fertilized in such a manner and frequency to ensure that the plant material remains healthy and vigorously growing. Please be alert to changes in fertilization types per University of Florida, Institute of Food and Agricultural Services (I.F.A.S.) recommendations. Establishment of an integrated pest management program is encouraged to ensure healthy plants, which are free of disease and pests.

MULCHING

Mulch planting beds in such a manner as to prevent weed growth, retain moisture to the plants, protect against soil erosion and nutrient loss, maintain a more uniform soil temperature, and improve the appearance of the planting beds. Avoid mulch mounded up on the trunks of trees, palms, and the base of shrubs to encourage air movement in this area which aids in lowering disease susceptibility. Cypress mulch is prohibited on state right of way.

PRUNING

All pruning, and the associated safety criteria, shall be performed according to American National Standard Institute (ANSI) A300 standards and shall be supervised by an International Society of Arboriculture (ISA) Certified Arborist. Pruning shall be carried out with the health and natural growth of plant materials in mind, to specific pruning heights maintaining clear visibility for motorists, and provide vertical clearance for pedestrian, bicyclist, and truck traffic where applicable. Visibility windows must be maintained free of view obstructions, and all trees and palms must be maintained to prevent potential roadway and pedestrian hazards, all palms are to be kept fruit free. The specific pruning heights are determined by understanding the designer's intent when selecting and placing the plants. The intended mature maintained height and spread of plants are noted on the plans (See Exhibit B.) and see Part II., Specific Project Site Maintenance Requirements and Recommendations as guidance. The understory plant materials selected for use within the restricted planting areas (Limits of Clear Sight) are to be mature height in compliance with Window Detail. Vertical tree heights must meet *FDOT Maintenance Rating Program* (MRP) standards. See Reference pages.

STAKING AND GUYING

All staking materials, except for replacements, are to be removed by the completion of FDOT establishment or after one year (whichever comes first). Any subsequent staking and guying activities by the Agency must adhere to *FDOT Standard Plans* guidelines (See Index 580-001). The Agency shall closely monitor staking and guying attachment materials so that they are securely fastened to avoid potential roadway hazards.

TURF MOWING:

All grassed areas are to be mowed and trimmed with sufficient frequency to maintain a deep, healthy root system while providing a neat and clean appearance to the urban landscape. All turf efforts, mowing, curb/sidewalk edging and turf condition, must at a minimum, meet *FDOT Maintenance Rating Program* (MRP).

LITTER CONTROL:

The project site shall remain as litter free as practicable. It is recommended to recycle this litter to avoid unnecessary waste by its reuse. Litter removal efforts must meet *FDOT Maintenance Rating Program* (MRP) standards.

WEEDING/HERBICIDE

All planting areas shall be maintained as weed free as practicable by enlisting integrated pest management practices in areas specified on the plans and maintaining proper mulch levels. Extreme care is recommended when using a chemical herbicide to avoid overspray onto plant materials. It is the applicator's responsibility to restore any damage resulting from overspray to the plantings, per the approved plans.

PLANT REPLACEMENT

Plant replacement shall be the same species and specification as the approved plan. Move and replace all plant materials that may conflict with utility relocations and service. Only plants graded Florida #1 or better, per the *Florida Department of Agriculture and Consumer Services, Grades and Standards for Nursery Plants* are permitted on FDOT roadways. Should it become necessary to change the species, a permit is required from FDOT for approval by the FDOT District Landscape Architect.

HARDSCAPE (SPECIALTY SURFACING)

All tree grates and specialty surfacing (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the surfacing and tree grates. Final surface tolerance from grade elevations shall, at a minimum, meet the most current FDOT Maintenance Rating Program Handbook for a sidewalk; ADA accessible sidewalk; and FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on The State Highway System. If the specialty surfacing or tree grates become damaged, they shall be replaced with the same type and specification as the approved plan.

HARDSCAPE (CONCRETE PAVERS)

All tree grates and concrete pavers (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the pavers and tree grates. Final surface tolerance from grade elevations shall, at a minimum, meet the most current *Interlocking Concrete Pavement Institute (ICPI), Guide Specifications for Pavers on an Aggregate Base, Section 23 14 13 Interlocking Concrete Pavers*, Part 3.05. If the specialty surfacing or tree grates become damaged, they shall be replaced with the same type and specification as the approved plan.

It shall be the responsibility of the AGENCY to maintain all signs located within a non-standard surfacing area. Such maintenance to be provided by the AGENCY shall include repair and replacement of the sign panel, post, and base.

HARDSCAPE (NON-STANDARD) TRAVELWAY SURFACING

It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway, including asphalt pavement (if applicable), caused or contributed by the installation or failure of non-standard surfacing, and/or the header curb, on the Department of Transportation right of way within the limits of this Agreement. Pavement restoration areas or "patches" will have a minimum length of 10-ft, measured from the edge of the header curb, and a width to cover full lanes for each lane affected by the restoration.

Pavement restoration will be performed in accordance with the most current edition of the *FDOT Standard Specifications for Road and Bridge Construction*, and the *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System*.

HARDSCAPE (LANDSCAPE ACCENT LIGHTING) (IF APPLICABLE)

Landscape accent lighting shall be maintained in such a manner as to prolong the life of the lighting fixture and prevent potential safety hazards. If the lighting fixtures and their system become damaged, they shall be replaced with the same type and specification as the approved plan. Landscape lighting shall meet requirements for the sea turtle nesting and hatching.

MAINTENANCE OF TRAFFIC CONTROL

Reference the FDOT website regarding the selection of the proper traffic control requirements to be provided during routine maintenance and / or new installations of this DOT roadway.

VEGETATION MANAGEMENT AT OUTDOOR ADVERTISING (ODA) (IF APPLICABLE)

To avoid conflicts with permitted outdoor advertising, please reference the State of Florida website regarding the vegetation management of outdoor advertising. This website provides a portal to search the FDOT Outdoor Advertising Inventory Management System Database. The database contains an inventory of outdoor advertising structures, permits and other related information maintained by the Department.

Also, reference the *Florida Highway Beautification Program* website link for *Vegetation Management at ODA signs* Florida Statutes and Florida Administrative Code related to vegetation management at outdoor advertising sign, permit applications for vegetation management and determining mitigation value of roadside vegetation.

II. SPECIFIC PROJECT SITE MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS

In order to maintain the design intent please fulfill the following maintenance of the landscape material as follows:

- *Ulmus parvifolia* 'Drake': Maintain a form of natural height and spread (approximately thirty-foot height and thirty-foot spread). Selectively prune the tree to maintain a clear trunk of approximately six to ten feet and trim all branches adjacent to/touching the building.
- *Dianella tasmanica* 'variegata': Trim as necessary to remove old/dead growth and to maintain as a low spreading groundcover (two-three feet in height). Trim to prevent the plant from spreading or growing over curbs but allow to grow horizontally into each other to present a uniform appearance.
- *Evolvulus glomeratus* 'blue daze': Trim as necessary to maintain as a low spreading groundcover (two-three feet in height), trim borders as necessary to keep from growing over curb.

To promote healthy/heat landscape beds, spread mulch (per plan) twice a year – spring and fall.

REFERENCES (Revised 10-22-19)

This reference list is provided as a courtesy. The list may not contain the most current websites. The most current references must be accessed for up to date information.

Accessible Sidewalk (ADA)

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks>

Americans with Disabilities Act (ADA) (ADAAG)

http://www.ada.gov/2010ADAstandards_index.htm

American National Standard Institute, *ANSI A300, (Part 1) for Tree Care Operations – Trees, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning)*, available for purchase

<http://webstore.ansi.org>

Florida Department of Agriculture and Consumer Services, Division of Plant Industry, *Florida Grades and Standards for Nursery Plants 2015*

<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Bureau-of-Plant-and-Apiary-Inspection>

Florida Department of Community Affairs (DCA), *Florida Board of Building Codes & Standards, 2017 Florida Building Code, Chapter 11 Florida Accessibility Code for Building Construction Part A*

http://www.floridabuilding.org/fbc/workgroups/Accessibility_Code_Workgroup/Documentation/CHAPTER_11_w_fla_specifics.htm

Florida Department of Transportation, *Program Management, Maintenance*

Specifications Workbook Supplemental Specifications, Section 580 Landscape

Installation <http://www.fdot.gov/programmanagement/Maintenance/2019Jan/default.shtm>

Florida Department of Transportation, *FDOT Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 580-001*

Landscape Installation

<http://www.fdot.gov/design/standardplans/current/IDx/580-001.pdf>

Florida Department of Transportation, *FDOT Design Manual for Design, Construction, Maintenance and Utility Operations on the State Highway System, Chapter 212.11 Clear Sight Triangles*

<http://www.fdot.gov/roadway/FDM/current/2018FDM212Intersections.pdf>

Florida Department of Transportation, *FDOT Design Manual for Design, Construction, Maintenance and Utility Operations on the State Highway System, Chapter 215.2.3*

Clear Zone Criteria and 215.2.4 Lateral Offset

Table 215.2.1 Clear Zone Width Requirements

Table 215.2.2 Lateral Offset Criteria (for Trees)

<http://www.fdot.gov/roadway/FDM/current/2018FDM215RoadsideSafety.pdf>

Florida Department of Transportation, *FDOT Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index Series 102-600*

Traffic Control through Work Zones

<http://www.fdot.gov/design/standardplans/current/IDx/102-600.pdf>

Department of Transportation, Landscape Architecture Website
www.MyFloridaBeautiful.com

Florida Department of Transportation, *Maintenance Rating Program Handbook*
<http://www.dot.state.fl.us/statemaintenanceoffice/MaintRatingProgram.shtm>

Florida Department of Transportation Outdoor Advertising Database
<http://www2.dot.state.fl.us/rightofway/>

Florida Exotic Pest Plant Council Invasive Plant Lists
<http://www.fleppc.org/list/list.htm>

Florida Irrigation Society
<http://www.fisstate.org>

Florida Power and Light (FPL), *Plant the Right Tree in the Right Place*
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

EXHIBIT D

To be setup in accordance with Standard Plans 102-616, 102-660 102-612 & TA20 of the MUTCD

Table II Taper Length - Merge (12' Lateral Transition)		
Speed (mph)	L (ft)	Notes (Merge)
25	125	$L = \frac{WS^2}{60}$
30	180	
35	245	
40	320	
45	540	$L=WS$

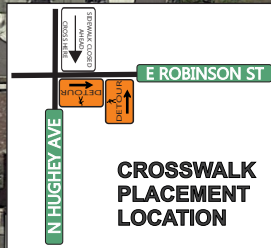
For lateral transitions other than 12', use formula for L shown in the notes column, Where:
 L = Length of taper in feet
 W = Width of lateral transition in feet
 S = Posted speed limit (mph)

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50

DISTANCE BETWEEN SIGNS			
Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

* 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

PLACE SIGNS AT ENTRANCE/EXIT TO PARKING GARAGE



JOB SITE

NOT EXACT PLACEMENT OF SIGNS SEE CHART FOR CORRECT SPACING

NO EQUIPMENT ON RAIL RIGHT OF WAY

TONY BRITTEN

FDOT
This Certifies that
Anthony W. Britten Jr.
Has Completed a Florida Department of Transportation Approved
Temporary Traffic Control (TTC) Advanced (Refresher) Course.
Date Expires 04/16/2022 Certificate # 28961
Instructor: Richard Cabrera FDOT Provider # 37

ATSSA
Phone: 540-368-1701
15 Riverside Parkway Ste.100
Fredericksburg, VA
www.atssa.com
donna.clark@atssa.com

ATSSA
SAFER ROADS. SAVE LIVES.

To be setup in accordance
with Standard Plans 102-660 &
102-602

Table II
Taper Length - Merge
(12' Lateral Transition)

Speed (mph)	L (ft)	Notes (Merge)
25	125	L = WS^2 60
30	180	
35	245	
40	320	L=WS
45	540	

For lateral transitions other than 12',
use formula for L shown in the notes
column, Where:
L = Length of taper in feet
W = Width of lateral transition in feet
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Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350

* 500' beyond the ROAD WORK AHEAD sign or
midway between signs whichever is less.

SITE FENCE MOVED TO EDGE OF
ROAD & LOW PROFILE BARRIER-WALL
ADDED TO PROTECT FENCE

SIDEWALK CLOSED
AND DETOURED

FLAGMEN TO BE STATIONED
@ CONSTRUCTION ENTRANCE
& STOP TRAFFIC WHEN TRUCKS
ARE ENTERING OR EXITING JOB SITE

MARK MEYERS

This Certifies that
Mark Meyers
Has Completed a Florida Department of Transportation Approved
Temporary Traffic Control (TTC) Advanced (Refresher) Course.
Date Expires: 02/11/2023 Certificate # 47529
Instructor: Richard Cabrera FDOT Provider # 37

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DRAWN BY:
Tony Britten

DATE: 10/15/2019

SITE LOCATION: State Lane



500 ft