

SECTION: 86010000
PERMIT: 2023-L-491-00020
COUNTY: Broward
STATE RD: 5

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR
LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT

THIS AGREEMENT, made and entered into this ____ day of _____ 20____, by and between the **FLORIDA DEPARTMENT OF TRANSPORTATION**, a component agency of the State of Florida, hereinafter called the **DEPARTMENT**, and the **CITY OF FORT LAUDERDALE**, a municipal corporation, existing under the Laws of Florida, hereinafter called the **AGENCY**.

WITNESSETH:

WHEREAS, the DEPARTMENT has jurisdiction over **State Road 5 (US 1 /Federal Highway)** as part of the State Highway System; and

WHEREAS, as part of the continual updating of the State Highway System, the DEPARTMENT, for the purpose of safety, protection of the investment and other reasons, has constructed and does maintain the highway facility as described in **Exhibit "A"**, within the corporate limits of the AGENCY; and

WHEREAS, the AGENCY seeks to install by permit and maintain certain landscape improvements within the right of way of **State Road 5 (US 1 /Federal Highway)** at the southwest corner of SE 2nd Avenue, as described in **Exhibit "B"**; and

WHEREAS, the AGENCY is agreeable to maintaining those landscape improvements within the AGENCY'S limits, including plant materials, irrigation systems and/or hardscape, such as specialty surfacing, site furnishings, or other nonstandard items, if applicable. The AGENCY agrees that such improvements shall be maintained by periodic mowing, fertilizing, weeding, litter pick-up, pruning, necessary replanting, irrigation repair and/or repair/replacement of the specialty surfacing, as needed; and

WHEREAS, the parties hereto mutually recognize the need for entering into an Agreement designating and setting forth the responsibilities of each party; and

WHEREAS, the AGENCY, by Resolution No. _____, dated _____, 20____, attached hereto as **Exhibit "D"** and by this reference made a part hereof, desires to enter into this Agreement and authorizes its officers to do so.

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 recitals set forth above are true and correct and are deemed incorporated herein.
2. INSTALLATION OF FACILITIES

The AGENCY shall install and agrees to maintain the *landscape improvements* described herein as: plant materials, irrigation and/or hardscape on the highway facilities substantially as specified in plans and specifications hereinafter referred to as the Project(s) and incorporated herein as **Exhibit "B"**. *Hardscape* shall mean, but not be limited to, any site amenities such as landscape accent lighting, bike racks, fountains, tree grates, decorative free-standing walls, and/or sidewalk, median and/or roadway specialty surfacing such as concrete pavers, stamped colored concrete and/or stamped colored asphalt (also known as patterned pavement).

- (a) All plant materials shall be installed and maintained in strict accordance with sound nursery practice prescribed by the International Society of Arboriculture (ISA). All plant materials installed shall be Florida #1 or better according to the most current edition of Florida Department of Agriculture, *Florida Grades and Standards for Nursery Stock*; and all trees shall meet Florida Power & Light, *Right Tree, Right Place, South Florida*.
- (b) Trees and palms within the right of way shall be installed and pruned to prevent encroachment to roadways, lateral offsets, and sidewalks. Definition of these criteria is included in the most current editions of FDOT standards for design, construction, maintenance, and utility operations on the state highway system and **Exhibit "C"**, the Maintenance Plan.
- (c) Tree and palm pruning shall be supervised by properly trained personnel trained in tree pruning techniques and shall meet the most current standards set forth by the International Society of Arboriculture (ISA) and the American National Standard Institute (ANSI), Part A-300.
- (d) Irrigation installation and maintenance activities shall conform to the standards set forth by the Florida Irrigation Society (FIS) latest edition of FIS, *Standards and Specifications for Turf and Landscape Irrigation Systems*.
- (e) The AGENCY shall provide the FDOT Local Operation Center accurate as-built plans of the irrigation system so if in the future there is a need for the DEPARTMENT to perform work in the area, the system can be accommodated as much as possible. (See paragraph (g) for contact information.)
- (f) If it becomes necessary to provide utilities (water/electricity) to the median or side areas, it shall be the AGENCY'S responsibility to obtain a permit for such work through the local Operations Center (see paragraph (g) below) and the AGENCY shall be responsible for all associated fees for the installation and maintenance of these utilities.
- (g) The AGENCY shall provide the local FDOT Operation Center (Broward Operations, 5548 NW 9th Avenue, Ft. Lauderdale, FL 33309 (954) 776-4300) a twenty-four (24) hour telephone number and the name of a responsible person that the DEPARTMENT may contact. The AGENCY shall notify the local maintenance office forty-eight (48) hours prior to the start of the landscape improvements.

- (h) All specialty surfacing shall be installed and maintained in strict accordance with the most current edition of the *Florida Accessibility Code for Building Construction* and the *Interlocking Concrete Pavement Institute (ICPI)*.
- (i) All activities, including landscape improvements installation and future maintenance operations performed on State highway right of way, must be in conformity with the most current edition of the *Manual on Uniform Traffic Control (MUTCD)* and *FDOT Standard Plans for Road Construction, 102-XXX series, Maintenance of Traffic*.
- (j) The most current edition of *FDOT Design Manual, Section 212.11 and Exhibits 212.4 through 212.7 regarding clear sight triangles at intersections* must be adhered to.
- (k) Clear Zone Lateral Offset and as specified in the *FDOT Design Manual, Chapter 215* must be adhered to.
- (l) Landscape improvements shall not obstruct roadside signs or permitted outdoor advertising signs, (see Florida Administrative Code [F.A.C.] Rule Chapter 14-10.)
- (m) If there is a need to restrict the normal flow of traffic, it shall be done on non-holiday, weekday, off-peak hours (9 AM to 3 PM), and the party performing such work shall give notice to the local law enforcement agency within whose jurisdiction such road is located prior to commencing work on the landscape improvements. The DEPARTMENT'S Public Information Officer (see telephone number in paragraph (g) for Operation Center) shall also be notified.
- (n) The AGENCY shall be responsible for ensuring no impacts to utilities will occur within the landscape improvement limits before construction commences.
- (o) The AGENCY shall follow the minimum level of maintenance guidelines as set forth in FDOT'S Rule Chapter 14-40 *Highway Beautification and Landscape Management*, in the *FDOT Guide to Roadside Mowing and Maintenance Management System*, and **Exhibit "C"**, the *Maintenance Plan* for maintenance activities for landscape improvements.

3. MAINTENANCE OF FACILITIES

- A. The AGENCY agrees to maintain the landscape improvements, as existing and those to be installed, within the physical limits described in **Exhibit "A"** and as further described in **Exhibit "B"**. The non-standard improvements within and outside the traveled way shall be maintained by the AGENCY regardless if the said improvement was made by the DEPARTMENT, the AGENCY, or others authorized pursuant to Section 7, by periodic mowing, pruning, fertilizing, weeding, curb and sidewalk edging, litter pickup, necessary replanting, irrigation system repair and/ or repair of any median concrete replacement associated with specialty surfacing (if applicable) following the DEPARTMENT'S landscape safety and maintenance guidelines, **Exhibit "C"**, the *Maintenance Plan*. The AGENCY'S responsibility for maintenance shall include all landscaped, turfed and hardscape areas on the sidewalk or within the medians and areas outside the traveled way to the right of way and/or areas within the traveled way containing specialty surfacing. The AGENCY shall be responsible for all maintenance and repairs to FDOT sidewalks directly attributable to tree roots or other AGENCY maintained improvements. It shall be the responsibility of the AGENCY to restore an

unacceptable ride condition of the roadway caused by the differential characteristics of non-standard traveled way surfacing (if applicable) on DEPARTMENT right of way within the limits of this Agreement.

- B. Such maintenance to be provided by the AGENCY is specifically set out as follows: to maintain, which means to properly water and fertilize all plant materials; to keep them as free as practicable from disease and harmful insects; to properly mulch the planting beds; to keep the premises free of weeds; to mow the turf to the proper height; to properly prune all plants which at a minimum includes: (1) removing dead or diseased parts of plants, (2) pruning such parts thereof to provide clear visibility to signage, permitted outdoor advertising signs per Florida Statute 479.106 and for those using the roadway and/or sidewalk; (3) preventing any other potential roadway hazards. *Plant materials* shall be those items which would be scientifically classified as plants and including trees, palms, shrubs, groundcover and turf. To maintain also means to remove or replace dead or diseased plant materials in their entirety, or to remove or replace those that fall below original project standards. Palms shall be kept fruit free year-round. To maintain also means to keep the header curbs that contain the specialty surfacing treatment in optimum condition. To maintain also means to keep the nonstandard hardscape areas clean, free from weeds and to repair said hardscape as is necessary to prevent a safety hazard. To maintain also means to keep litter removed from the median and areas outside the travel way to the right of way line. All plants removed for whatever reason shall be replaced by plants of the same species type, size, and grade as specified in the original plans and specifications. Any changes to the original plans shall be submitted by permit application to the DEPARTMENT for review and approval.
- C. If it becomes necessary to provide utilities (water/electricity) to the medians or areas outside the traveled way to maintain these improvements, all costs associated with the utilities associated for the landscape improvements including any impact and/or connection fees, and the on-going cost of utility usage for water and electrical, are the maintaining AGENCY'S responsibility.
- D. The maintenance functions to be performed by the AGENCY may be subject to periodic inspections by the DEPARTMENT at the discretion of the DEPARTMENT. Such inspection findings will be shared with the AGENCY and shall be the basis of all decisions regarding repayment, reworking or agreement termination. The AGENCY shall not change or deviate from said plans without written approval of the DEPARTMENT.

4. DEPARTMENT ACCESS TO FACILITIES

The DEPARTMENT will periodically need access to various features within the limits of this Agreement. Upon request of the DEPARTMENT, the AGENCY will have 14 calendar days to provide access to the items noted by the DEPARTMENT. This may require temporary or permanent removal of improvements such as hardscape, landscape or other items conflicting with the items to which the Department needs access.

Should the AGENCY fail to remove or relocate items as requested, the Department may:

- (a) Remove conflicting improvements or any portion thereof.

- (b) Restore the area with any material meeting Department standards.
- (c) Restore the improvements at the request and funding of the AGENCY.

5. NOTICE OF MAINTENANCE DEFICIENCIES

If at any time after the AGENCY has undertaken the landscape improvements installation and/or maintenance responsibility for the landscape improvements it shall come to the attention of the DEPARTMENT'S District Secretary that the limits, or a part thereof, are not properly maintained pursuant to the terms of this Agreement, said District Secretary, may at his/her option, issue a written notice that a deficiency or deficiencies exist(s), by sending a certified letter to the AGENCY, to place said AGENCY on notice thereof. Thereafter, the AGENCY shall have a period of thirty (30) calendar days in 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) Maintain the landscape improvements or any part thereof, with the DEPARTMENT or Contractor's personnel and invoice the AGENCY for expenses incurred; and/or
- (b) At the discretion of the DEPARTMENT, terminate the Agreement in accordance with Paragraph 9 of this Agreement and remove, by the DEPARTMENT or Contractor's personnel, all of the landscape improvements installed under this Agreement or any preceding Agreements, except as to trees and palms, and charge the AGENCY the reasonable cost of such removal.

6. FUTURE DEPARTMENT IMPROVEMENTS

It is understood between the parties hereto that the landscape improvements covered by this Agreement may be removed, relocated, or adjusted at any time in the future, as determined to be necessary by the DEPARTMENT, in order that the adjacent state road be widened, altered, or otherwise changed to meet future criteria or planning needs of the DEPARTMENT.

The AGENCY shall be given sixty (60) calendar days' notice to remove said landscape improvements at the AGENCY'S expense after which time the DEPARTMENT may remove same. All permits (including tree permits), fees, and any mitigation associated with the removal, relocation or adjustments of these improvements are the AGENCY'S responsibility.

7. FUTURE AGENCY IMPROVEMENTS

The AGENCY may construct additional landscape improvements within the limits of this Agreement, identified in **Exhibit "A"**, subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT. The AGENCY shall not change or deviate from said plans without written approval by the DEPARTMENT.
- (b) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.
- (c) The AGENCY agrees to comply with the requirements of this Agreement with regard to any additional landscape improvements it chooses to have installed and there will be no cost to the DEPARTMENT.

8. ADJACENT PROPERTY OWNER IMPROVEMENTS

The DEPARTMENT may allow an adjacent property owner to construct additional landscape improvements within the limits of the right of way identified in **Exhibit "A"** that the AGENCY shall be responsible for maintaining under this Agreement, subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT and shall require a valid permit attached with a letter of consent to said plans by the AGENCY. The plans shall not be changed or deviated from without written approval by the DEPARTMENT and the AGENCY.
- (b) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.
- (c) The AGENCY agrees to comply with the requirements of this Agreement with regard to any additional landscape improvements installed by an adjacent owner.

9. AGREEMENT TERMINATION

In addition to those conditions otherwise contained herein, this Agreement may be terminated under any one (1) of the following conditions:

- (a) By the DEPARTMENT, if the AGENCY fails to perform its duties under this Agreement, following ten (10) days written notice.
- (b) By the DEPARTMENT, for refusal by the AGENCY to 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 AGENCY in conjunction with this Agreement.

10. AGREEMENT TERM

- (a) The term of this Agreement commences upon execution by all parties and shall remain in effect as long as the improvements shall exist, or until this Agreement is terminated by either party in accordance with Paragraph 9.
- (b) If the DEPARTMENT chooses to cancel the landscape improvements described in **Exhibit "B"**, this Agreement becomes void and the original Agreement is reinstated, if any.

11. LIABILITY AND INSURANCE REQUIREMENTS

- A. With respect to any of the AGENCY'S agents, consultants, sub-consultants, contractors and/or sub-contractors, such party in any contract for the landscape improvements shall agree to indemnify, defend, save and hold harmless the DEPARTMENT from all claims, demands, liabilities, and suits of any nature arising out of, because of or due to any intentional and/or negligent act or occurrence, omission or commission of such agents, consultants, subconsultants, contractors and/or subcontractors. The AGENCY shall provide the DEPARTMENT with written evidence of the foregoing upon the request of the DEPARTMENT. It is specifically understood and agreed that this indemnification clause does not cover or indemnify the DEPARTMENT for its own negligence.

B. In the event that AGENCY contracts with a third party to provide the services set forth herein, any contract with such third party shall include the following provisions:

- (1) AGENCY'S contractor shall at all times during the term of this Agreement keep and maintain in full force and effect, at contractor's sole cost and expense, Comprehensive General Liability with minimum limits of \$1,000,000.00 per occurrence combined single limit for Bodily Injury Liability and Property Damage Liability and Worker's Compensation insurance with minimum limits of \$500,000.00 per Liability. Coverage must be afforded on a form no more restrictive than the latest edition of the Comprehensive General Liability and Worker's Compensation policy without restrictive endorsements, as filed by the Insurance Services Office. The AGENCY and DEPARTMENT shall be named as additional insured on such policies.
- (2) AGENCY'S contractor shall furnish AGENCY with Certificates of Insurance of Endorsements evidencing the insurance coverage specified herein prior to the beginning performance of work under this Agreement.
- (3) Coverage is not to cease and is to remain in full force and effect (subject to cancellation notice) until all performance required of AGENCY'S contractor is completed. All policies must be endorsed to provide the DEPARTMENT with at least thirty (30) day notice of cancellation and/or restriction. If any of the insurance coverage will expire prior to the completion of work, copies of renewal policies shall be furnished at least (30) days prior to the date of expiration.

12. E-VERIFY REQUIREMENTS

The AGENCY shall:

- (a) Utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the AGENCY during the term of the contract; and
- (b) 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.

13. SUPERSEDED AGREEMENTS

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.

14. FISCAL TERMS

The DEPARTMENT, during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money will/may be paid on such contract. The DEPARTMENT shall require a statement from the Comptroller of the

DEPARTMENT that funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding one (1) year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years; and this paragraph shall be incorporated verbatim in all contracts of the DEPARTMENT which are for an amount in excess of TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) and which have a term for a period of more than one year.

15. DISPUTES

The DEPARTMENT'S District Secretary shall decide all questions, difficulties, and disputes of any nature whatsoever that may arise under or by reason of this Agreement, the prosecution or fulfillment of the service hereunder and the character, quality, amount, and value thereof; and his decision upon all claims, questions, and disputes shall be final and conclusive upon the parties hereto.

16. ASSIGNMENT

This Agreement may not be assigned or transferred by the AGENCY, in whole or in part, without the prior written consent of the DEPARTMENT.

17. LAWS GOVERNING

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 contract and Florida law, the laws of Florida shall prevail. The AGENCY agrees to waive forum and jurisdictional venue. The DEPARTMENT shall determine the forum and venue in which any dispute under this Agreement is decided.

18. NOTICES

Any and all notices given or required under this Agreement shall be in writing and either personally delivered with receipt acknowledgement or sent by certified mail, return receipt requested. All notices shall be sent to the following addresses:

If to the DEPARTMENT:

Florida Dept. of Transportation
3400 West Commercial Blvd.
Ft. Lauderdale, FL 33309-3421
Attn: D4 Landscape Manager

If to the AGENCY:

City of Fort Lauderdale
100 N. Andrews Avenue
Fort Lauderdale, FL 33301
Attn: City Manager

19. LIST OF EXHIBITS

- Exhibit A: Landscape Improvements Maintenance Boundaries
- Exhibit B: Landscape Improvement Plans
- Exhibit C: Maintenance Plan for Landscape Improvements
- Exhibit D: Resolution

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective the day and year first written above.

CITY OF FORT LAUDERDALE

By: _____
Chairperson / Mayor / Manager

Date: _____

Attest: _____
City Clerk

(SEAL)

Legal Approval: _____

**STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION**

By: _____
Transportation Development Director

Date: _____

Attest: _____
Executive Secretary

(SEAL)

Legal Review: _____
Office of the District General Counsel

SECTION: 86010000
PERMIT: 2023-L-491-00005
COUNTY: Broward
STATE RD: 5

EXHIBIT A

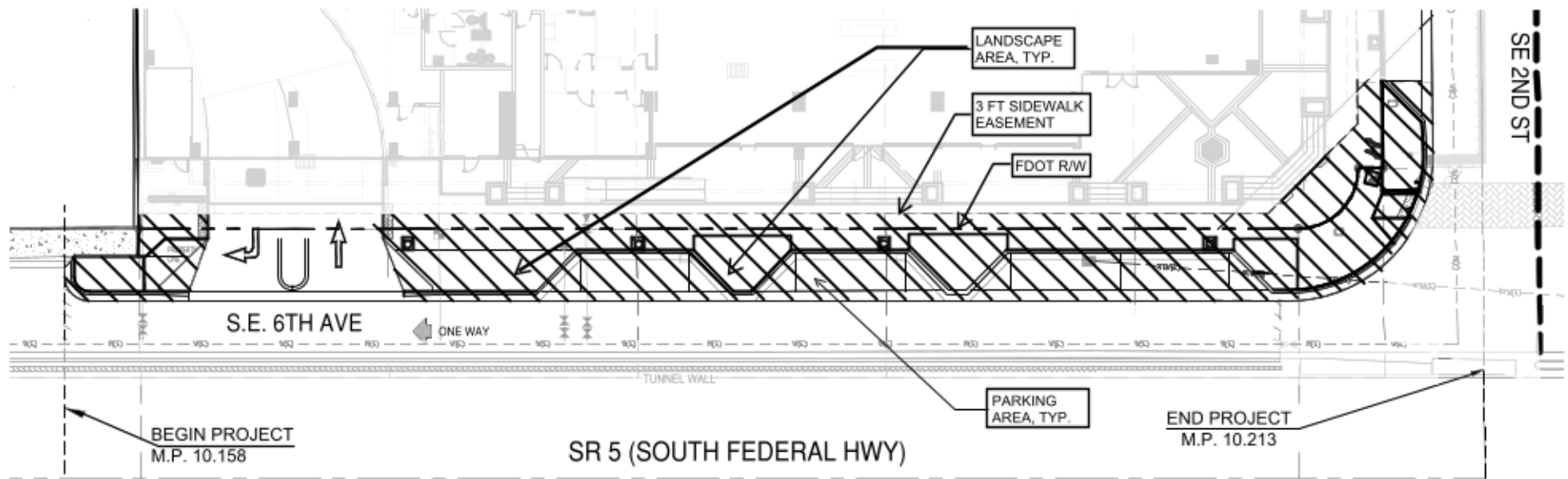
LANDSCAPE IMPROVEMENTS MAINTENANCE BOUNDARIES

I. LIMITS OF MAINTENANCE FOR LANDSCAPE IMPROVEMENTS:

West side of SR 5 (US Highway 1 /S. Federal Highway) from M.P. 10.158 to M.P. 10.213

II. LANDSCAPE IMPROVEMENTS MAINTENANCE BOUNDARIES:

See attached map



LIMITS OF MAINTENANCE PROVIDED BY
CITY OF FORT LAUDERDALE



LANDSCAPE IMPROVEMENTS MAINTENANCE BOUNDARY MAP

FDOT LANDSCAPE PERMIT NO: 2023-L-491-00020
SR 5 (S FEDERAL HWY)
MP 10.158 - MP 10.213

March 12, 2024

SECTION: 86010000
PERMIT: 2023-L-491-00005
COUNTY: Broward
STATE RD: 5

EXHIBIT B
LANDSCAPE IMPROVEMENT PLANS

The AGENCY agrees to install the landscape improvements in accordance with the plans and specifications attached hereto and incorporated herein.

Please see attached plans prepared by: Hugh Johnson, RLA
Architectural Alliance Landscape

Date: June 3, 2024



LOCATION MAP



RD LAS OLAS

SCOPE OF WORK

STATE ROAD NO: 5 (SOUTH FEDERAL HWY)
MILE POST: 9.691 TO 10.33

FDOT SPECIFICATIONS AND DESIGN STANDARDS

Governing Standard Plans: Florida Department of Transportation, FY 2023-24 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs)

Governing Standard Specifications: Florida Department of Transportation, FY 2023-24 Standard Specifications for Road and Bridge Construction
ROADWAY DESIGN SPEED FOR SR 5 = 30 MPH

INDEX OF SHEETS

SHEET No.	TITLE
CS-1	COVER SHEET

LANDSCAPE ARCHITECTURE

LP-1	LANDSCAPE PLAN
LP-2	LANDSCAPE DETAILS & SPECIFICATIONS

IRRIGATION

IR-1	IRRIGATION PLAN
IR-2	IRRIGATION NOTES



Revision Dates
07-23-24
08-08-24
09-03-24

FDOT SUBMITTAL
RD LAS OLAS
 RELATED
 Fort Lauderdale, Florida

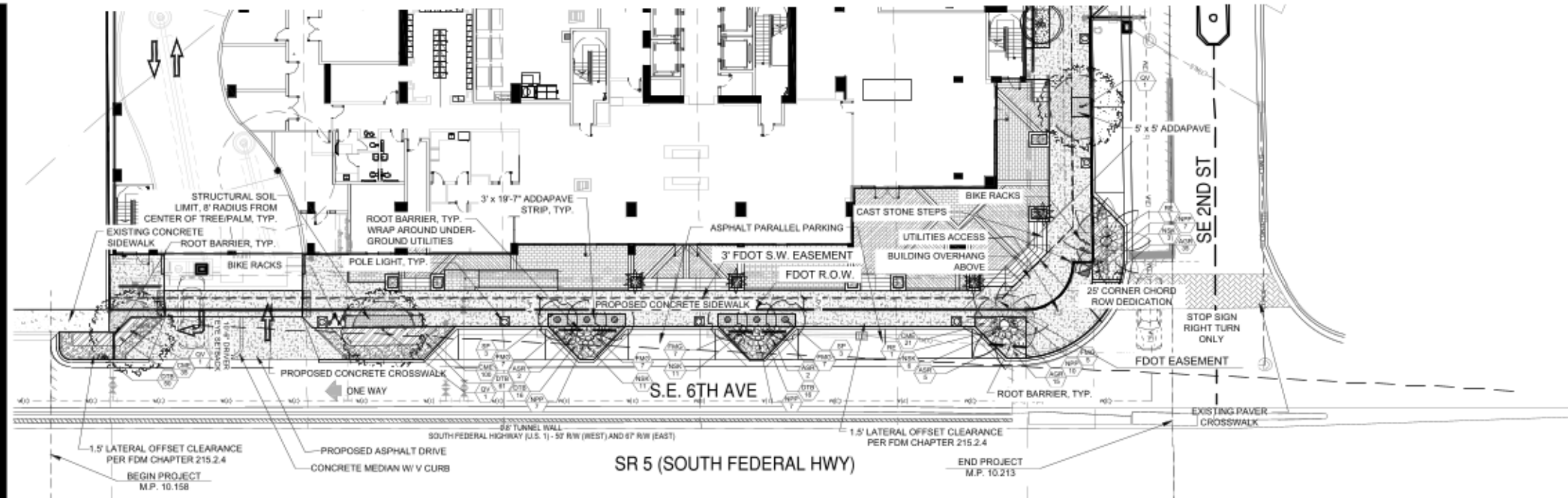
Sheet Description
COVER SHEET

Release Date
12-07-23

Project Number
1666

Drawing Number
CS-1

Sheet 1 of 5



NOTES:
GENERAL PLANTING REQUIREMENTS
 All sizes shown for plant material on the plans are to be considered Minimum. All plant material must meet or exceed these minimum requirements for both height and spread. Any other requirements for specific shape or effect as noted on the plan(s) will also be required for final acceptance.
 All plant material furnished by the landscape contractor shall be Florida #1 or better as established by "Grades and Standards for Florida Nursery Plants" and "Grades and Standards for Florida Nursery Trees". All material shall be installed as per CSI specifications.
 All plant material included herein shall be warranted by the landscape contractor for a minimum period as follows: All trees and palms for 12 months, all shrubs, vines, groundcovers and miscellaneous planting materials for 90 days, and all lawn areas for 60 days after final acceptance by the owner or owner's representative.
 All plant material shall be planted in planting soil that is delivered to the site in a clean loose and friable condition. All soil shall have a well drained characteristic. Soil must be free of all rocks, sticks, and objectionable material including weeds and weed seeds as per CSI specifications.
 Twelve inches (12") of planting soil 50/50 sand/topsoil mix is required around and beneath the root ball of all trees and palms, and 1 cubic yard per 50 bedding or groundcover plants.
 All landscape areas shall be covered with Eucalyptus or sterilized seed free Melaleuca mulch to a minimum depth of three inches (3") of cover when settled. A four-inch clear space must be left for air between plant bases and the mulch. Cypress bark mulch shall not be used.
 All plant material shall be thoroughly watered in at the time of planting; no dry planting permitted. All plant materials shall be planted such that the top of the plant ball is flush with the surrounding grade.
 All landscape and lawn areas shall be irrigated by a fully automatic sprinkler system adjusted to provide 100% coverage of all landscape areas. All heads shall be adjusted to 100% overlap as per manufacturers specifications and performance standards utilizing a rust free water source. Each system shall be installed with a rain sensor.
 It is the sole responsibility of the landscape contractor to insure that all new plantings receive adequate water during the installation and during all plant warranty periods. Deep watering of all new trees and palms and any supplemental watering that may be required to augment natural rainfall and site irrigation is mandatory to insure proper plant development and shall be provided as a part of this contract.
 All plant material shall be installed with fertilizer, which shall be State approved as a complete fertilizer containing the required minimum of trace elements in addition to N-P-K, of which 50% of the nitrogen shall be derived from an organic source as per CSI specifications.
 Contractors are responsible for coordinating with the owners and appropriate public agencies to assist in locating and verifying all underground utilities prior to excavation.
 All ideas, designs and plans indicated or represented by this drawing are owned by and are the exclusive property of Architectural Alliance.
 The plan takes precedence over the plant list.
SPECIAL INSTRUCTIONS
 General site and berm grading to +/- 1 inch (1") shall be provided by the general contractor. All finished site grading and final decorative berm shaping shall be provided by the landscape contractor.
 All sod areas as indicated on the planting plan shall receive Stenotaphrum secundatum, St. Augustine Palmetto solid sod. It shall be the responsibility of the landscape contractor to include in the bid, the repair of any sod which may be

FDOT GENERAL NOTES

- GOVERNING STANDARD PLANS:** Florida Department of Transportation, FY 2023-24 Standard Plans for Road and Bridge Construction and applicable Interim Revisions. (IR's) website: <https://www.fdot.gov/design/standardplans>
- GOVERNING STANDARD SPECIFICATIONS:** Florida Department of Transportation, FY 2023-24 Standard Specifications for Road and Bridge Construction. website: <https://www.fdot.gov/programmanagement/implemented/specbooks>
- Contractor shall repair any and all damage done to FDOT property during demolition, relocation &/or installation activities at his sole expense.
- Any plant material substitution within or impacting the FDOT Right of Way whether requested by the Contractor, Owner, Landscape Architect or other will need to get approval from the FDOT District Landscape Architect.
- Architectural pavers installation for sidewalks, medians, driveways, or roadways within the FDOT right of way shall comply with current FDOT Standard Specification 426.
- Ownership of all suitable excavated materials, as determined by the Department, shall remain in the Department until a final acceptance of the permitted project is fulfilled. Excavated materials shall be hauled by the Permittee, at their cost and expense from the site to the Broward Operations Center or stockpiled in those areas as directed by the Department, including asphalt millings.
- Maintenance of Traffic (MOT) for this project will comply with FDOT Standard Plans Index (102 Series) and the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). Special attention will be given to FDOT Design Plans Standard Index 102-600, 102-601, 102-602, 102-613 and 102-660.
- Permittee will restore the Right-Of-Way as a minimum, to its original condition or better in accordance w/ FDOT's latest Standard Specifications for Road and Bridge Construction or as directed by the Resident Operations Engineer.
- Restricted hours of operations will be from 9:00am to 3:30pm, (Monday-Friday), unless otherwise approved by the operations Engineer, or designee.
- Permittee will ensure that all locates have been performed prior to scheduling of any WORKING activities. This shall include soft digs to verify vertical and horizontal alignment.
- Permittee will coordinate all work with Asset Management. Contact David Moore of Transfield Services at 954-317-8044, moore@transfieldservices.com. Coordination will include a Pre-Construction meeting.

PLANT SCHEDULE ROW

CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	SIZE	NATIVE	DROUGHT	SPACING
TREES									
OV	2	QUERCUS VIRGINIANA	LIVE OAK	FG88B	5" CAL	18" HT. X 8" SPR. 8" CT	YES	HIGH	
PALM TREES									
RE	1	ROYSTERIA ELATA	FLORIDA ROYAL PALM	FG88B		30" GA. MATCHED HEIGHTS	YES	MEDIUM	
SP	6	SABAL PALMETTO	CABBAGE PALMETTO	FG88B		12" CW. MATCHED	YES	HIGH	
SHRUBS									
ASR	9	ANDROPOLIS SKINERI RED TIP BROMELIAD	RED ANDROPOLIS	-		24-36" DA	NO	HIGH	
NPP	24	NEOREGELIA X 'PITRA'	PINK BROMELIAD	-		12"x12" DA	NO	HIGH	
NSK	26	NEOREGELIA X 'SUNKISS'	SUNKISS BROMELIAD	-		20"x20" DA	NO	HIGH	
SHRUB AREAS									
PMO	267 SF	FIGUS MICROCARPA 'GREEN ISLAND'	GREEN ISLAND FIGUS	-		14" HT. X 14" SPR	NO	HIGH	18" o.c.
GROUND COVERS									
AGR	25 SF	ARACHIS GLABRATA	PERENNIAL PEANUT	-		4" HT. X 12" SPR	NO	HIGH	18" o.c.
CME	20 SF	CARISSA MACROCARPA 'EMERALD BLANKEET'	EMERALD BLANKEET DWARF NATAL PLUM	-		12" HT. X 12" SPR	NO	HIGH	12" o.c.
DTS	242 SF	DIANELLA TASMANICA	BLUBERRY PLAX LILY	-		16" HT. X 16" SPR	NO	MEDIUM	18" o.c.

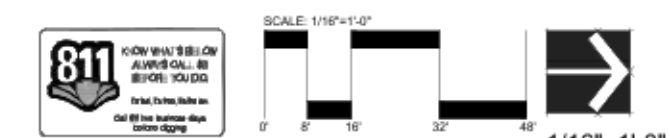
FDOT PLANTING NOTES

- For the portion of landscape plant material that will be installed within the FDOT Right of Way landscape installation shall comply with current FDOT Maintenance Specifications 580-11 (by work document). Online Reference: <http://www.fdot.gov/programmanagement/Maintenance/2023July/default.shtm>.
- For the portion of landscape plant material that will be installed within the FDOT Right of Way refer to FDOT Standard Plans Index 580-001 Landscape Installation. Online Reference: <http://www.fdot.gov/design/standardplans/current/IDx/580-001.pdf>
- No Category I or II invasive plants shall be planted on FDOT right of way.
- Cypress Mulch is not permitted on FDOT right of way. Mulch permitted to be used are Hardwood Mulch (containing no Cypress products), Recycled Mulch or approved equal, certified by the Mulch and Soil Council (MSC). Submit proof of certification to the FDOT District Operations Permit Landscape Inspector upon inspection.

ADDITIONAL INSTRUCTIONS

For areas in which existing pavement is being removed and replaced with landscaped areas, Contractor shall preserve a continuous band of undisturbed compacted subbase 18" from the back of curb. Contractor shall insure that all unsuitable soil including concrete, pavement, road base, stones over 3" diameter and all construction debris, is removed from median area to be planted and replaced with specified planting soil, e.g. 60% sand and 40% muck.

Areas to be planted with shrubs and/or groundcovers: removed compacted soil to a depth of 12" and replace with specified planting soil. Planting soil shall come up to 4" from top of curb, reserving space for 3" compacted mulch and 1" clear from top of curb.



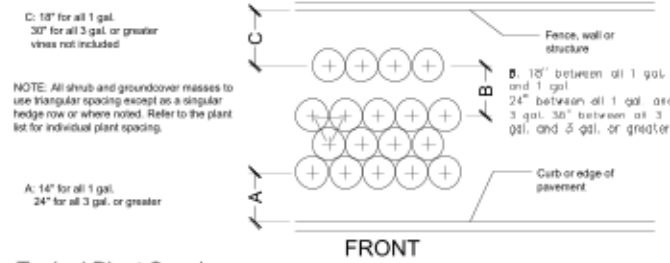
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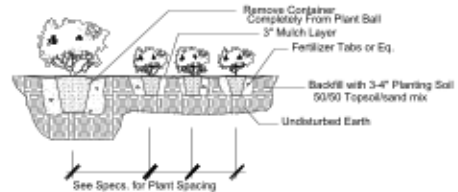
Revision Dates
 01-23-24
 02-09-24
 06-03-24

FDOT SUBMITTAL
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 RELATED
 Fort Lauderdale, Florida

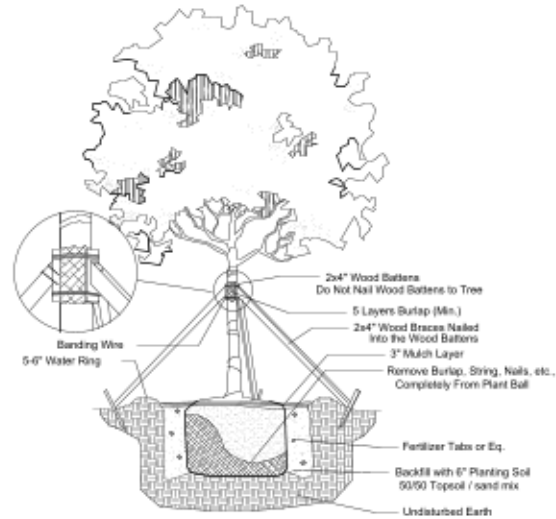
Sheet Description
 LANDSCAPE PLAN
 Release Date
 12-07-23
 Project Number
 1666
 Drawing Number
LP-1



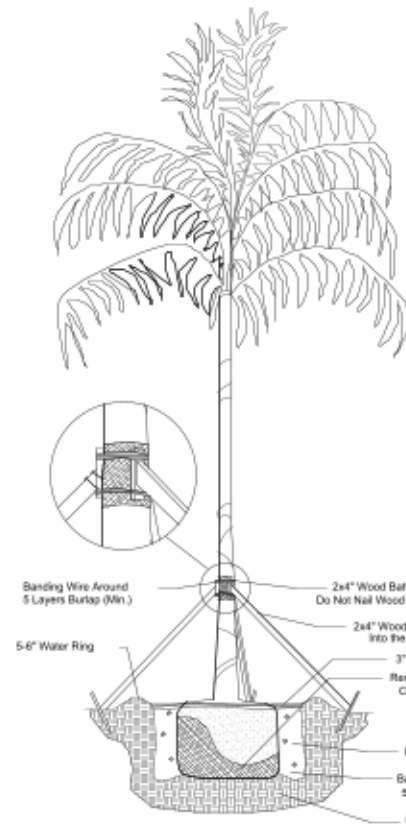
Typical Plant Spacing



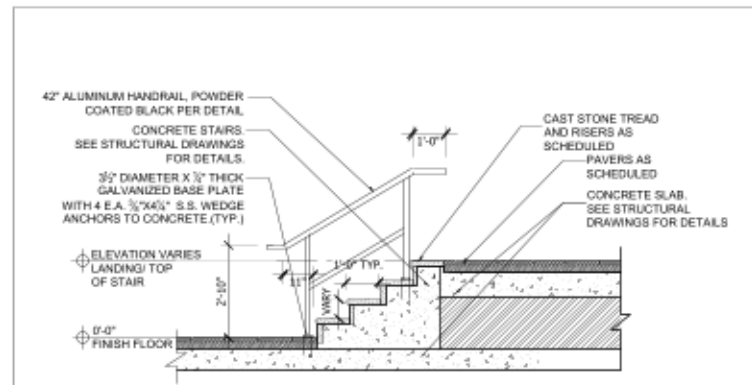
Shrub & Ground Cover Planting Detail



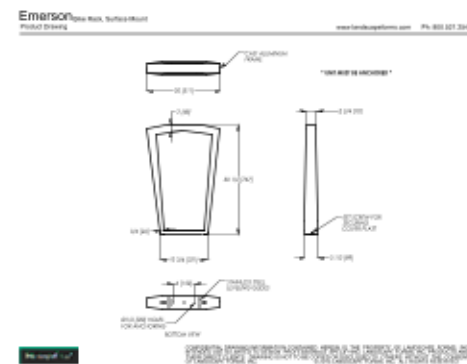
Large Tree Planting Detail



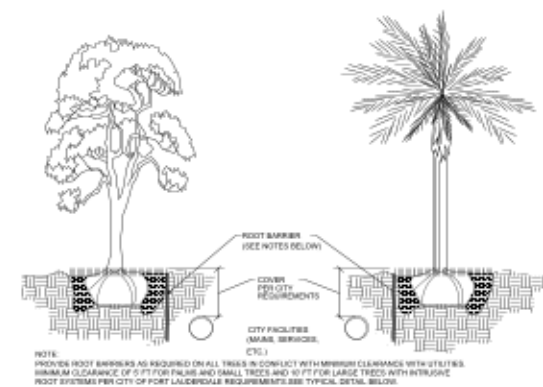
Palm Planting Detail



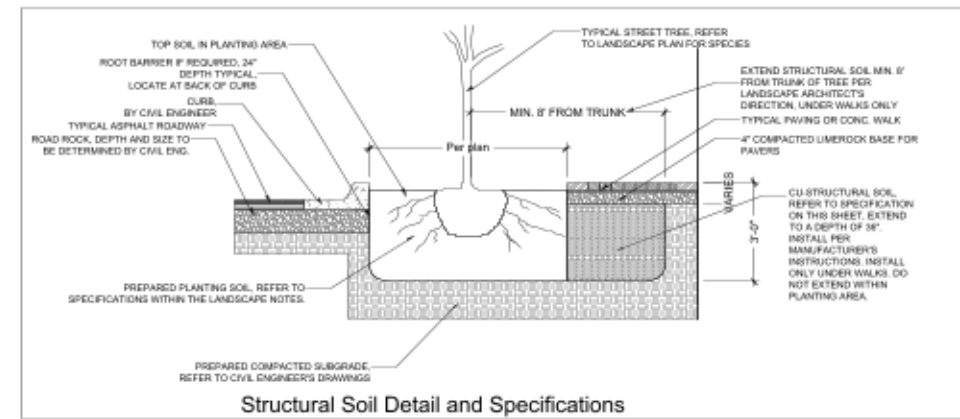
Cast Stone Steps Detail



Bike Rack Detail



Typical Root Barrier Detail



Structural Soil Detail and Specifications

CU-STRUCTURAL SOIL[®] SPECIFICATIONS

PART 2 - MATERIALS

2.1 CLAY LOAM

- A. Soil shall be a "loam" with a minimum clay content of 20% or a "clay loam" based on the "USDA classification system" as determined by mechanical analysis (ASTM D-422) and it shall be of uniform composition, without admixture of subsoil. It shall be free of stones, lumps, plants and their roots, debris and other extraneous matter. It shall not contain toxic substances harmful to plant growth. Clay loam shall contain not less than 2% or more than 5% organic matter as determined by the loss on ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 degrees F., plus or minus 9 degrees.
- B. Mechanical analysis for the loam or clay loam shall be as follows:
- | Textural Class | % of Total Weight |
|----------------|-------------------|
| Gravel | less than 5% |
| Sand | 20-45% |
| Silt | 20-50% |
| Clay | 20-40% |
- C. Chemical analysis: Meet, or be amended to meet the following criteria:
- pH between 5.5 to 6.5
 - Percent organic matter 2% - 5% by dry weight

- Adequate nutrient levels
 - Soluble salt less than 1.0 mmho/cm
 - Cation Exchange Capacity (CEC) greater than 10
 - Carbon/Nitrogen ratio less than 33:1
- D. Loam or clay loam shall not come from USDA - classified prime farmland.

2.2 FERTILIZER (if needed)

- A. Should nutrient analysis suggest that the loam or clay loam need additional nutrients, it shall be amended by Ameroq's licensed producer.

2.3 SULFUR (if needed)

- A. Sulfur shall be a commercial granular, 90% pure sulfur, with material and analysis appearing on the labeled container.
- B. Sulfur used to lower pH shall be a ferrous sulfate formulation.
- C. Application rates shall be dependent on soil test results.

2.4 LIME (if needed)

- A. Agricultural lime containing a minimum of 85% carbonates.
- B. Application rates shall be dependent on soil test results.

2.5 CRUSHED STONE

- A. The size of the crushed stone shall be 0.75 inches to 1.5 inches allowing for up to 10% being greater than 1.5 inches, and up to 10% less than 0.75 inches.
- B. Acceptable aggregate dimensions will not exceed 2.5:1:0 for any two dimensions.
- C. Minimum 90% with two or more fractured faces.
- D. Results of Aggregate Soundness Loss test shall not exceed 18%.
- E. Losses from LA Abrasion tests shall not exceed 40%.

2.6 HYDROGEL

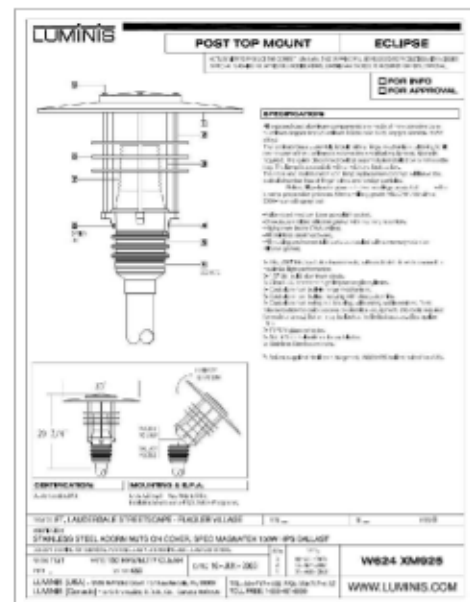
- A. Hydrogel shall be a coated potassium propenoate-propenamide copolymer (Gelscape[®] Hydrogel Tackifier) as manufactured by Ameroq, Inc. 800-832-8788.

2.7 WATER

- A. The installing contractor shall be responsible to furnish his own supply of water (if needed) free of impurities, to the site.

2.8 CU-STRUCTURAL SOIL[®]

- A. A uniformly blended urban tree mixture of crushed stone, clay loam and Gelscape[®] Hydrogel Tackifier, as produced by an Ameroq-licensed company, mixed in the following proportion:
- | Material | Unit of Weight |
|--|--|
| specified crushed Stone | 100 units dry weight |
| specified clay loam | 20 - 25 units (to achieve minimum CBR of 50) |
| Gelscape [®] Hydrogel Tackifier | 0.035 units dry weight |
| moisture | ASTM D698/AASHTO T-99 optimum moisture |



Pedestrian Light Pole Fixture Detail, TYP.



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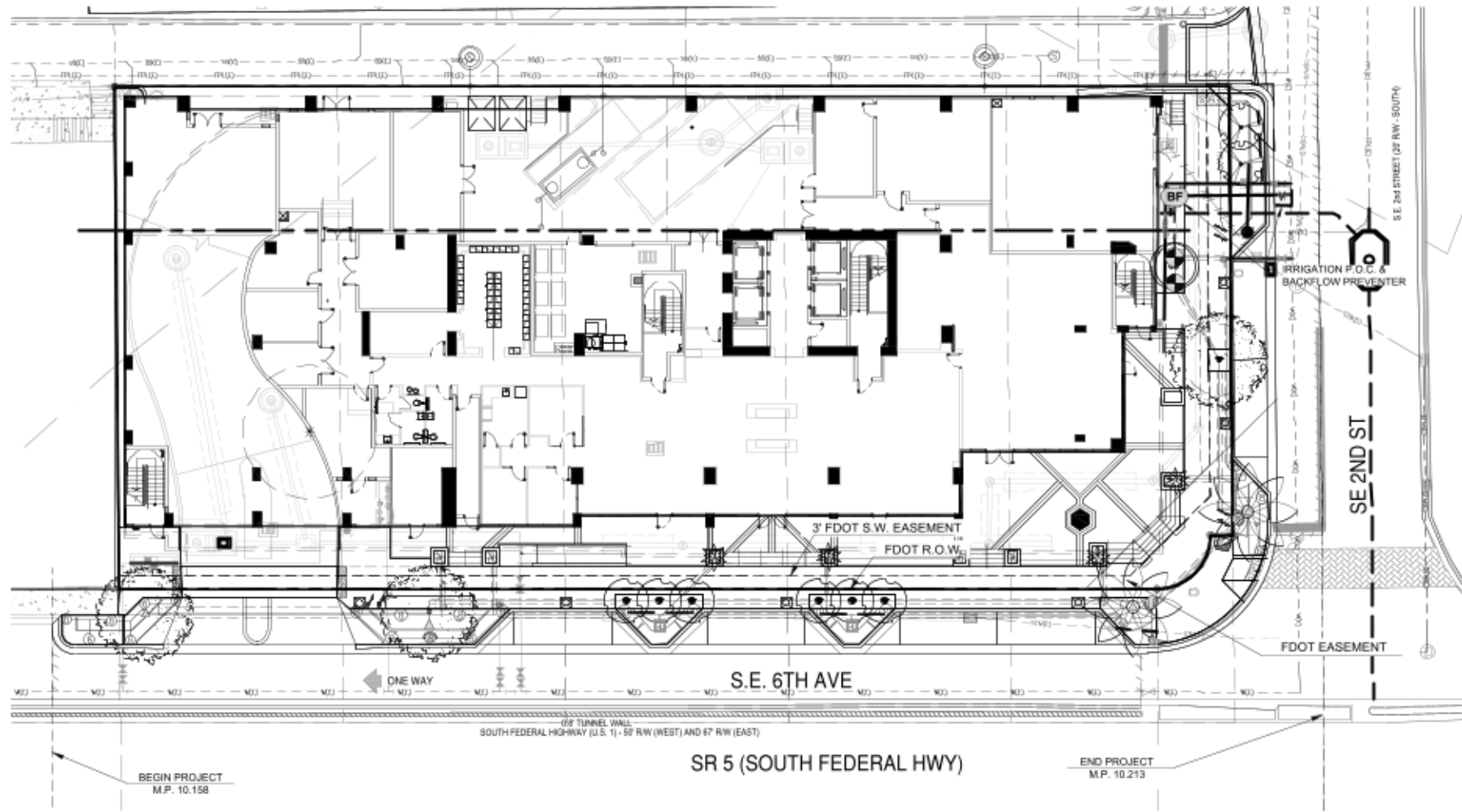
FDOT SUBMITTAL
RD LAS OLAS
RELATED
Fort Lauderdale, Florida

Sheet Description
LANDSCAPE
DETAILS &
SPECIFICATIONS

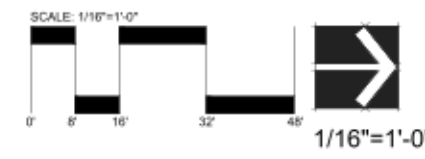
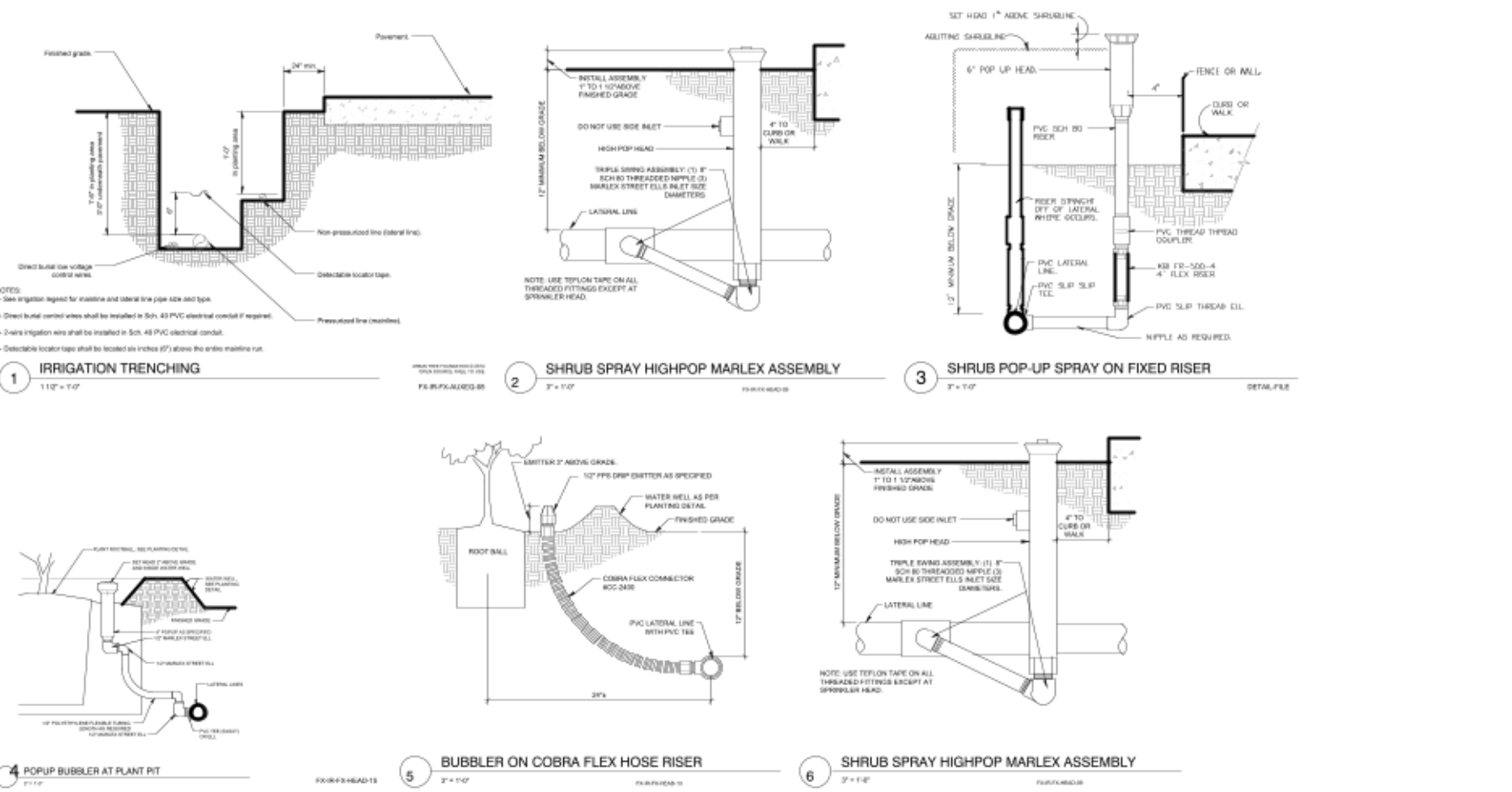
Release Date
12-07-23

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1666

Drawing Number
LP-2



IRRIGATION SCHEDULE ROW		
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD 1812-SAM 5 SERIES MPR SHRUB SPRAY 12" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE.	1
	RAIN BIRD 1812-SAM 8 SERIES MPR SHRUB SPRAY 12" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE.	2
	RAIN BIRD 1812-SAM 10 SERIES MPR SHRUB SPRAY 12" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE.	1
	RAIN BIRD 1812-SAM ADJ SHRUB SPRAY 12" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE.	21
	RAIN BIRD 1806-SAM 90 SERIES SHRUB SPRAY 8" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE.	2
	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0 GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	4
	RAIN BIRD RWS-M-B W RWS-SOCK 1400 SERIES MINI ROOT WATERING SYSTEM WITH 4IN. DIAMETER X 18IN. LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM OR 1402 0.5 GPM BUBBLER AS INDICATED, WITH SAND SOCK FOR SANDY SOIL.	6
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	IRRIGATION LATERAL LINE, PVC CLASS 200 SDR 21	735.5 L.F.
	PIPE SLEEVE, PVC CLASS 200 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	362.8 L.F.



FDOT IRRIGATION NOTES

- The irrigation system shall use the lowest quality water available which adequately and safely meets the water needs of the system. Storm water, reclaim water, or grey water irrigation shall be used whenever possible.
- Irrigation heads shall have a trajectory of 30 degrees or less to minimize overspray onto travel lanes.
- FDOT requires 24-hour emergency access to water source.
- Contractor shall provide FDOT District Operations Manager with a set of "As-Built" irrigation plans.



Revision Dates
01/23/24
02/06/24
02/07/24

FDOT SUBMITTAL
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RELATED
Fort Lauderdale, Florida

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Release Date	12-07-23
Project Number	1666
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WIRING

Irrigation control wire shall be thermoplastic solid copper, single conductor, low voltage irrigation controller wire, suitable for direct burial and continuous operation at rated voltages.

Tape and bundle control wire every 10' and run alongside the mainline. At all turns in direction, make a 2' coil of wire. At all valve boxes coil wire around a 3/4" piece of PVC pipe to make a coil using 30 linear inches of wire. Make electrical connections with 3MDBYR connectors.

Number all wires, using an electrical book of numbers, according to the plans. Number wires in all valve boxes, junction boxes and at the controller.

- Wire sized, numbered and colored as follows:
#14 white for common
#14 spare black common
#14 individual color coded hot wire
#14 spare yellow hot wire

Spare wires
Leaving each controller, run four spare wires in both directions (eight spare wires total). Install as 1 common spare (2 total) and 3 hot wires (6 total). Loop these wires into each RCV along their path and terminate in the last valve box controlled by the wires respective controller.

Controller and pump station Control Panel grounding - Contractor to utilize 4"x8"x5/8" copper grounding plates, 3/8"x10" copper clad grounding rods, 'One Strike' CAD wells at all connection points, #8 insulated copper wire, and earth contact material. Install these and other required components as outlined in the detail. Contractor to verify that the earth to ground resistance does not exceed 10 ohms.

LAYOUT

Lay out irrigation system mainlines and lateral lines. Make the necessary adjustments as required to take into account all site obstructions and limitations prior to excavating trenches.

Stake all sprinkler head locations. Adjust location and make the necessary modifications to nozzle types, etc. required to ensure 100% head to head coverage. Refer to the Edge of Pavement Detail on the Irrigation Detail sheet.

Spray heads shall be installed 4" from sidewalks or curbed roadways and 12" from uncurbed roadways and building foundations. Rotors shall be installed 4" from sidewalks or curbed roadways, 12" from building foundations, and 36" from uncurbed roadways.

Shrub heads shall be installed on 3/4" Sch 40 PVC risers. The risers shall be set at a minimum of 18" off sidewalks, roadway curbing, building foundations, and/or any other hardscaped areas. Shrub heads shall be installed to a standard height of 2" above maintained height of plants and shall be installed a minimum of 6" within planted masses to be less visible and offer protection.

Locate valves prior to excavation. Ensure that their location provides for easy access and that there is no interference with physical structures, plants, trees, poles, etc. Valve boxes must be placed a minimum of 12" and a maximum of 15" from the edge of pavement, curbs, etc. and the top of the box must be 2" above finish grade.

VALVES

Sequence all valves so that the farthest valve from the POC operates first and the closest to the POC operates last. The closest valve to the POC should be the last valve in the programmed sequence.

Adjust the flow control on each RCV to ensure shut off in 10 seconds after deactivation by the irrigation controller.

Using an electric branding iron, brand the valve ID letter/number on the lid of each valve box. This brand must be 2"-3" tall and easily legible.

EQUIPMENT

All pop-up heads and shrub risers shall be pressure compensating. All pop-up heads shall be mounted on flex-type swing joints. All rotors shall be installed with PVC triple joints unless otherwise detailed.

All sprinkler equipment, not otherwise detailed or specified on these plans, shall be installed as per manufacturer's recommendations and specifications, and according to local and state laws.

TRENCHING

Excavate straight and vertical trenches with smooth, flat or sloping bottoms. Trench width and depth should be sufficient to allow for the proper vertical and horizontal separation between piping as shown in the pipe installation detail on the detail sheet.

Protect existing landscaped areas. Remove and replant any damaged plant material upon job completion. The replacement material shall be of the same genus and species, and of the same size as the material it is replacing.

INSTALLATION

Solvent Wld Pipe: Cut all pipe square and deburr. Clean pipe an fittings of foreign material; then apply a small amount of primer while ensuring that any excess is wiped off immediately. Primer should not puddle or drip from pipe or fittings. Next apply a thin coat of PVC cement; first apply a thin layer to the pipe, next a thin layer inside the fitting, and finally another very thin on the pipe. Insert the pipe into the fitting. Insure that the pipe is inserted to the bottom of the fitting, then um the pipe a 1/2 turn and hold for 10 seconds. make sure that the pipe doesn't recede from the fitting. If the pipe isn't at the bottom of the fitting upon completion, the glue joint is unacceptable and must be discarded.

BACK FILL

The back fill 6" below, 6" above, and around all piping shall be clean sand and anything beyond that in the trench can be of native material but nothing larger than 2" in diameter. All piping and excavations shall be backfilled and compacted to a density of 95% modified Proctor, or greater.

Main line pipe depth measure to the top of pipe shall be:
24" minimum for 2" - 2 1/2" PVC with a 30" minimum at vehicular crossings;
30" minimum for 3" & 4" PVC with a 36" minimum at vehicular crossings.

Lateral line depths measure to top of pipe shall be:
18" minimum for 3/4" - 3" PVC with a 30" minimum at vehicular crossings;
24" minimum for 4" PVC and above with a 30" minimum at vehicular crossings.

Contractor shall backfill all piping, both mainline and laterals, prior to performing any pressure tests. The pipe shall be backfilled with the exception of 2' on each side of every joint (bell fittings, 90's, tees, 45's, etc). These joints shall not be backfilled until all piping has satisfactorily passed its appropriate pressure test as outlined below.

FLUSHING

Prior to the placement of valves, flush all mainlines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Prior to the placement of heads, flush all lateral lines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Use screens in heads and adjust heads for proper coverage avoiding excess water on walks, walls and paving.

TESTING

Schedule testing with Owner's Representative a minimum of three (3) days in advance of testing.

Mainline: Remove all remote control valves and cap using a threaded cap on SCH 80 nipple. Hose bibs and gate valves shall not be tested against during a pressure test unless authorized by written permission from the owner. fill mainline with water and pressurize the system to 125 PSI. Monitor the system pressure at two gauge locations; the gauge locations must be at opposite ends of the mainline. With the same respective pressures, monitor the gauges for two hours. There can be no loss in pressure at either gauge for solvent-welded pipe.

If these parameters are exceeded, locate the problem; repair it; wait 24 hours and retry the test. This procedure must be followed until the mainline passes the test.

Lateral lines: The lateral lines must be fully filled to operational pressure and visually checked for leaks. Any leaks detected must be repaired.

Operational Testing - Once the mainline and lateral lines have passed their respective tests, and the system is completely operational, a coverage test and demonstration of the system is required. The irrigation contractor must demonstrate to the owner, or his/her representative, that proper coverage is obtained and the system works automatically from the controller. This demonstration requires each zone to be turned on, in the proper sequence as shown on the plans, from the controller. Each zone will be inspected for proper coverage and function. The determination of proper coverage and function is at the sole discretion of the owner or owner's representative.

Upon completion of the operational test, run each zone until water begins to puddle or run off. This will allow you to determine the number of irrigation start times necessary to meet the weekly evapotranspiration requirements of the planting material in each zone. In fine sandy soils, it is possible no puddling will occur. If this is experienced, then theoretical calculations for run times will be required for controller programming.

SUBMITTALS

Pre-Construction: Deliver five (5) copies of submittals to Owner's Representative within ten (10) working days from date of Notice to Proceed. Furnish information in 3-ring binder with table of contents and index sheet. Index sections for different components and label with specification section number and name of component. Furnish submittals for components on material list. Indicated which items are being supplied on catalog cut sheets when multiple items are shown on one sheet. Incomplete submittals will be returned without review. In lieu of hardcopies, an electronic package in PDF format can be submitted.

After project completion:
As a condition of final acceptance, the irrigation contractor shall provide the owner with:

- 1. Irrigation As-builts - shall be provided accurately locating all mainlines, sleeves, remote control valves, gate valves, independent wire runs, wire splice boxes, controllers, high voltage supply sources/conduit path, control mechanisms, sensors, wells and water source connections. All mainline and independent runs of wire shall be located every 30' for straight runs and at every change of direction. Sleeves will be located at end points and every 20' of length. All underground items shall include depth in inch format.
2. Controller charts - Upon completion of "as-built" prepare controller charts; one per controller. Indicate on each chart the area controlled by a remote control valve (using a different color for each zone). This chart shall be reduced to a size that will fit inside the controller door. The reduction shall be hermetically sealed inside two 2ml pieces of clear plastic.
3. Grounding Certification - Provide ground certification results for each controller and pump panel grounding grid installed. This must be on a licensed electrician letter head indication location tested (using IR plan symbols), date, time, test method and testing results.

INSPECTIONS AND COORDINATION MEETINGS REQUIRED - Contractor is required to schedule, perform, and attend the following, and demonstrate to the owner and/or owners representative to their satisfaction, as follows:

- 1.Pre-construction meeting - Designer and contractor to review entire install process and schedule with owner/general contractor.
2. Mainline installation inspection(s) - All mainline must be inspected for proper pipe, fittings, depth of coverage, backfill and installation method.
3. Mainline pressure test - All mainline shall be pressure tested according to this design's requirements.
4. Flow meter calibration - All flow meters must be calibrated. Provide certified calibration report for all flow meters.
5. Coverage and operational test
6. Final inspection
7. Punch list inspection

FINAL ACCEPTANCE

Final acceptance of the irrigation system will be given after the following documents and conditions have been completed and approved. Final payment will not be released until these conditions are satisfied.

- 1.All above inspections are completed, documented, approved by owner.
2.Completion and acceptance of 'as-built' drawings.
3. Acceptance of required controller charts and placement inside controllers.
4. All other submittals have been made to the satisfaction of the owner.

GUARANTEE: The irrigation system shall be guaranteed for a minimum of one calendar year from the time of final acceptance.

MINIMUM RECOMMENDED IRRIGATION MAINTENANCE PROCEDURES

1. Every irrigation zone should be checked monthly and written reports generated describing the date(s) each zone was inspected, problems identified, date problems repaired, and a list of materials used in the repair. At minimum, these inspections should include the following tasks:

- A. Turn on each zone from the controller to verify automatic operation.
B. Check schedules to ensure they are appropriate for the season, plant and soil type, and irrigation method. Consult an I.A. certified auditor for methods used in determining proper irrigation scheduling requirements.
C. Check remote control valve to ensure proper setting, if present.
D. Check setting on pressure regulator if verify proper setting, if present.
E. Check flow control and adjust as needed; ensure valve closure within 10-15 seconds after deactivation by controller.
F. Check for leaks - mainline, lateral lines, valves, heads, etc.
G. Check all heads as follows:
1. Proper set height (top of sprinkler is 1" below mow height)
2. Verify head pop-up height - 6" in turf, 12" in groundcover, and riser in shrub beds
3. Check wiper seal for leaks - if leaking, clean head and re-inspect.
4. If still leaking, replace head with the appropriate head with pressure regulator and built-in check valve.
5. All nozzles checked for proper pattern, clogging, leaks, correct make & model, etc. - replace as needed
6. Check for proper alignment - perfectly vertical; coverage area is correct; minimize over spray onto hardscapes
7. Riser height raised/lowered to accommodate plant growth patterns and ensure proper coverage.
8. Verify pop-ups retract after operation. If not, repair/replace as needed.
H. Check controller/C.C.U. grounds for resistance (10 ohms or less) once per year. Submit written reports.
I. check rain shut-off device monthly and clean/repair/replace as needed.
J. Inspect all valve boxes to ensure they are in good condition, lids are in place and locked.
K. Inspect backflow devices by utilizing a properly licensed backflow inspector. This should be done annually, at minimum.
L. Inspect all filters monthly and clean/repair/replace as needed.
M. Check pump stations for proper operation, pressures, filtration, settings, etc. - refer to pump station operations manual.
N. Check and clean intake screens on all suction lines quarterly, at minimum. Clean and/or repair, as needed.
O. Winterize, if applicable, as weather in your area dictates. follow manufacturer recommendations and blow out all lines and equipment using compressed air. Perform seasonal startup of system as per manufacturer recommendations.
P. Conduct additional inspections, maintenance tasks, etc. that are particular for your site.

SOIL MOISTURE SENSOR (When applicable)

- 1. Place all soil moisture sensor wiring in 1" SCH 40 PVC conduit
2. Soil moisture sensor should be placed in the middle of a spray or drip area as per manufacturer's recommendations.
3. Controller shall be set to the Florida Automated Weather Network's urban scheduler settings using the SMS as a moisture cut off device (like a rain switch) per manufacturer directions.



01-23-24
02-09-24
03-07-24
04-03-24

Revision Dates

FDOT SUBMITTAL
GCI RESIDENTIAL - AVENTURA EAST
GCI RESIDENTIAL
Aventura, Florida

Sheet Description

IRRIGATION
NOTES

Release Date
12-07-23

Project Number
1666

Drawing Number

IR-2

Sheet 5 of 5

SECTION: 86010000
PERMIT: 2023-L-491-00005
COUNTY: Broward
STATE RD: 5

EXHIBIT C

MAINTENANCE PLAN FOR LANDSCAPE IMPROVEMENTS

This Exhibit forms an integral part of the LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT between the Florida Department of Transportation and the AGENCY.

Please see attached

MAINTENANCE PLAN

Landscape Improvements

Project State Road No(s): SR5 (US1 /Federal Hwy), M.P. 10.158 to M.P. 10.213, west side
Permit or FM No(s): 2023-L-491-00020
RLA of Record: Hugh Johnson, PLA
Maintaining Agency: City of Fort Lauderdale
Date: April 8, 2024

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 within FDOT right of way 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.

Part I of the Maintenance Plan describes general maintenance requirements and recommendations that are standard for all projects. Part II provides recommendations prepared by the Registered Landscape Architect of Record specific to the attached approved plans.

PART I. GENERAL MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS:

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.

MULCHING

Mulch planting beds 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. Do not mound mulch against the trunks of trees, palms, and the base of shrubs to allow air movement which aids in lowering disease susceptibility. Cypress mulch is prohibited on state right of way.

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.

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 achieve the FDOT requirements for 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 understory plant materials selected for use within the restricted planting areas (Limits of Clear Sight) are to be mature height in compliance with the *FDM Window Detail*. Vertical clear zones for vegetation heights over roadways and sidewalks must meet the requirements of the *FDOT Maintenance Rating Program (MRP)* standards. See Reference pages. The R.L.A. of Record will provide the specific pruning heights for mature or maintained height and spread of all plant material to achieve the design intent shall be noted in Part II., Specific Project Site Maintenance Requirements and Recommendations.

STAKING AND GUYING

All staking materials are to be removed after one year or as directed by the RLA of Record.). 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.

TREE CELL STRUCTURES

Underground tree cells shall be maintained in such a manner as to prolong the life of the structure and prevent potential safety hazards. If the structures fail or become damaged, they shall be replaced with the same type and specification as the approved plan.

LANDSCAPE ACCENT LIGHTING

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.

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 concrete pavers (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the pavers. 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 concrete pavers 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 TRAVELED WAY 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*.

SITE FURNISHINGS

Site furnishing such as Trash Receptacles, Benches, Bollards and Bicycle Racks shall be maintained in such a manner as to prolong the life of the fixture and prevent potential safety hazards. If the fixtures and their overall function and mounting systems become damaged, they shall be replaced with the same type and specification as the approved plan.

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)

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.

PART II.

SPECIFIC PROJECT SITE MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS:

1. Canopy Trees are intended to be maintained at mature height and spread. Live oaks should be pruned to maintain a minimum of 8.5' clear trunk.
2. Remove suckering growth from base and clear trunk areas for Live oak trees on a quarterly basis.
3. To maintain the intended appearance of all palms, apply the latest palm fertilizer recommended by the University of Florida IFAS Extension per the manufacturer's specifications.
4. To maintain the intended appearance of all shrubs, apply the latest fertilizer recommended by the University of Florida IFAS Extension per the manufacturer's instructions.
5. Do not remove fronds from self-cleaning palms, (Royal palms) unless damaged. Royal palms shall only have dead fronds removed, do not remove any green fronds. If it is deemed necessary to prune a palm's fronds, no fronds shall be trimmed above 3 o'clock and 9 o'clock on the horizontal plain. The same holds true for the Sabal palms. Sabal palms shall be pruned yearly with no fronds being trimmed above 3 o'clock and 9 o'clock on the horizontal plane.
6. Groundcover and shrub horizontal growth shall be maintained to prevent foliage from growing beyond the limits of the planting areas shown on the plan. Maintain a 2" setback from the foliage to the edge of curb, pavement, sidewalk and/or other hardscape improvements.
7. Maintain the vertical height of groundcovers and shrubs as follows:
 - Dwarf carissa between 12" and 18", full to ground
 - Perennial peanut between 6" and 12", full to ground
 - Blueberry flax lily between 18" and 24", full to ground
 - Green island ficus between 24" and 30", full to ground
 - Bromeliads should be left to grow to mature height but pruned back on a quarterly basis to keep them within the specified areas shown on the plans.
8. Inspect groundcovers and shrubs on a monthly basis for maintaining full ground coverage.
9. Evaluate plant material on a monthly basis for pests, diseases, drought stress or general decline. If required, follow the integrated pest management program established by the Agency to ensure healthy plants.
10. Addapave areas shall be inspected on a quarterly basis for the aesthetic appearance and safety conditions. Address any issues identified by repairing or replacing those specific locations. Joints and cracks in concrete, patterned concrete or asphalt, concrete pavers, concrete curbs, expansion joints, catch basins, gutter areas, etc. shall be inspected on a quarterly basis to keep those areas free of weeds.
11. Inspect the irrigation system performance on a monthly basis to ensure the system is providing 100% coverage, does not have sections of low pressure, heads and valves are clean and clear of debris and any damaged irrigation components (i.e., spray nozzles, spray heads, valve boxes, etc.) are repaired or replaced.

REFERENCES (4-27-20)

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-Apary-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

SECTION: 86010000
PERMIT: 2023-L-491-00020
COUNTY: Broward
STATE RD: 5

EXHIBIT D

RESOLUTION

This Exhibit forms an integral part of the LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT between the Florida Department of Transportation and the AGENCY.

Please see attached

(To be provided by City)