**SCHEDULE “B”**

**RIGHT OF WAY LANDSCAPE MAINTENANCE SPECIFICATIONS**

These specifications are intended to provide the information by which private entities may understand the minimum requirements of Collier County relative to maintaining County rights of ways. Records of all specification requirements shall be kept and made available to the County’s representative upon request.

1. **MOWING AND EDGING:**  Mowing and edging shall include medians as well as those areas, if existing, along the outside edge of the sidewalks of adjacent properties. All turf shall be mowed with mulching type mower equipment to eliminate the need to bag and transport grass clippings. Should bagging be necessary, the bagged clippings shall be collected and removed at no additional cost. Grass shall be cut at a height of three and one half inches (3 ½”). The frequency of cutting will be weekly or fifty-two (52) times.

Mechanical edging of the turf shall be done with each mowing along all sidewalk edges, back of concrete curbs, around all planting beds, utility service boxes, streetlight bases, sign posts, headwalls, guardrails, timer pedestals, posts, and trees. Metal blade edging is not permitted along back of curbing. Grass root runners extending into the mulched areas shall be cut and removed when the edging is performed. Edging will also be required in all turf areas around isolated trees, sprinkler heads, valve boxes, shrubs, signposts, manholes, etc. where they exist. All debris on streets, sidewalks or other areas resulting from edging shall be removed. No herbicide shall be used for edging.

All sidewalks, curbing and/or gutters shall be cleaned after each service. All sidewalks shall be blown clean, but no clippings or other debris shall be blown or allowed to be deposited on other adjacent property or accumulate on right-of-way areas.

1. **WEEDING:** Weeding of plant beds, sidewalks (asphalt, concrete or pavers), guardrail bases, and curb joints as well as other mulched areas by chemical and/or hand removal will be performed weekly or as necessary to provide a weed free and well-maintained area.
2. **GENERAL SITE PRUNING:**  General site pruning shall be defined as the pruning of any plant’s foliage below ten-foot (10’) foot.

All groundcovers, shrubs, canopy trees and palms up to ten-foot (10’) level, shall be inspected and pruned on a weekly or an as needed basis, so to maintain the proper or required heights for visibility, vehicular movement purposes and desired shape or form as determined by County’s representative. Pruning shall also include removal of water sprouts, suckers and any dead or diseased foliage or branches.

During the first week of October and April, ornamental grasses, such as Fountain grass, Florida Gamma or Fakahatchee grass shall be pruned in a pyramid shape to a twelve-inch (12”) or twenty-four (24”) height based upon the type of plant. Ornamental type grasses such as Liriope muscari ‘Evergreen Giant’, shall only be pruned at the direction and approval of the County’s representative.

Plant material with a canopy over pedestrian sidewalks shall be maintained at a minimum height of one hundred twenty inches (120”). Shrubs and groundcovers adjacent to pathways or sidewalks shall be pruned to maintain one foot (1’) of clearance from the edge of the pathway. IT is recommended that adjacent shrubs and groundcovers be maintained so that they angle or are rounded away from the pathway.

1. **TRASH REMOVAL:**  With each service, all sites shall be cleaned by removing all trash or debris to include, but not limited to; paper, bottles, cans, other trash, and horticultural debris. All debris or trash pick-ups shall be performed “prior” to mowing in all turf areas. The disposal of all trash and debris must be at a proper landfill or disposal site.
2. **STREET CLEANING/SWEEPING:**  Street Cleaning: A four foot (4’) wide area measured from the face of the curb and gutters including turn lanes shall be cleaned with each site service to remove any accumulation of debris or objectionable growth so to maintain a neat and safe condition.
3. **TRAFFIC CONTROL:** The Association shall comply with the requirements of Collier County Maintenance of Traffic (MOT) Policy, copies of which are available through Risk Management or the Purchasing Department. The Association shall obtain and review the County MOT policy requirements prior to submitting a bid.

The Association will be responsible for obtaining copies of all required manuals, MUTCD, FDOT Roadway & Traffic Design Standard Indexes, or other related documents, so to become familiar with the requirements. Strict adherence to the requirements of the MOT policy will be enforced under this Contract.

To assist in employee visibility, employees servicing the area shall wear high visibility safety apparel in compliance with the most current editions of the FDOT Design Standards and the Collier County Maintenance of Traffic (MOT) policy.

###### **CANOPY TREE AND PALM PRUNING:** For this site, canopy trees shall be defined as any large shrub, tree, or palm with foliage above a ten-foot (10’) level.

All canopy trees and palms shall be pruned on a continuous basis to create and maintain a seventeen-foot (17’) canopy clearance over the roadways and a ten-foot (10’) canopy clearance over all pathways. Canopy trees shall be selectively pruned twice per year in April and September so to thin the interior canopy of cross branching and to shape the canopy of the trees. The County’s representative shall approve a professional licensed to prune tress under the direction of a Licensed Landscape Architect, Arborist, Tree Surgeon, or other approved professional shall do the pruning and sharpening. The work shall be performed per ANSI AS300 “Standard Practices for Trees, Shrubs, and other Woody Plant Maintenance” and done in a professional manner in accordance with “Pruning Standards” of the national Arborist Association or accepted local trade standards and practices.

Palms shall be pruned annually during June of each year. The palms shall be pruned to a “Tropical Cut” or to a nine (9) o’clock- three (3) o’clock angle from the horizontal at the base of the palm’s bud or lowest fronds. Approximately seven (7) to (10) ten green fronds shall be left at the head after pruning. The pruning shall include removal of all nuts, seed stalks, brown or dead and lower fronds.

The work shall be done in a professional manner in accordance with acceptable trade standards and practices. The palms shall not be climbed with tree spikes to remove the fronds. The pruning shall be accomplished by the use of a ladder, boom truck or lift. All debris from the pruning shall be removed and the site shall be left on a clean and neat manner.

When the annual or bi-annual heavy pruning work is being performed with the use of a lift or boom truck, it is required that the adjacent traffic or turn lane to the work area, be closed using traffic control devices and signage per the current FDOT traffic control standards and indexes.

1. **FERTILIZATION:** The application of fertilizers shall follow Ordinance No. 2019-18. No Applicator shall apply fertilizers containing nitrogen and/or phosphorus to turf and/or landscape plants during the Prohibited Application Period, or to saturated soils. Follow UF/IFAS guidelines for turfgrass fertilization. Contractor/subcontractor must have valid licenses issued by Florida Department of Agriculture and Consumer Services for Limited Urban Commercial Fertilizer Applicator Certification (FDACS LUFAC). Provide fertilization services four (4) times a year in March, June, September, and December. Only twice (2) a year if using six (6) month application rate. Nitrogen content in any fertilizer must be at a minimum of 50% slow release. Contractor shall ensure that fertilization scheduling does not exceed the fertilizer label rate prescribed and complies with state and local ordinances. It is important to note that local fertilizer regulations may prohibit the use of nitrogen fertilizers during the summer months. Applied at a rate of 1.5 lbs. per 100 square feet. Broadcasted throughout the planting beds and turf areas. All tree pit areas should be fertilized evenly.

No fertilizer ring around trees under any circumstances. If a ring is formed, contractor/subcontractor is required to return to the site and spread the fertilizer correcting the situation at their expense. This may include contractor/subcontractor purchasing additional fertilizer because applied fertilizer may not be able to spread.

Immediately remove fertilizers from curbs and sidewalk areas to avoid staining.

Fertilization Applications

Contractor/subcontractor shall use deflector shields on all application equipment to minimize the inadvertent application of fertilizer in non-plant areas. Contractor shall blow, sweep, or wash back into the landscape any fertilizer deposited on paved or impervious surfaces. Use “Ring of Responsibility” around or along the shoreline of canals, lakes, or waterways.

Ensure fertilizers and other lawn chemicals do not come into direct contact with the water. Apply fertilizer only when plants are actively growing. Clean up spilled fertilizer materials immediately as per University of Florida IFAS recommendations. Store nitrate-based fertilizers separately from solvents, fuels, and pesticides, because nitrate fertilizers are oxidants and can accelerate a fire. After fertilizing (other than when watering restrictions apply), irrigate with at least a quarter inch (1/4”) of water following fertilization to avoid the loss of nitrogen and increase uptake efficiency. If water restrictions apply, the contractor may irrigate as permitted but no more than one-half inch (1/2”) following fertilization.

Do not exceed the annual nitrogen recommendations in the Fertilizer Guidelines for Established Turfgrass Lawns in Three Regions of Florida as provided on the label.

Bed, Tree, Shrub, Palm, Flower, Groundcover Fertilization

Broadcast fertilizer uniformly over all the landscaped areas, and consider root location, fertilization objectives, and plant species when applying fertilizer. In areas where tree or shrub fertilization zones overlap with lawn fertilization zones, the contractor shall fertilize one or the other of the plant types, but not both.

Palm Fertilization

Palms have different nutritional requirements from other landscape plants. They suffer quickly and conspicuously from inadequate mineral nutrition, whether due to insufficient or incorrect fertilization. Division’s Landscape Supervisor will provide the fertilization schedule.

Note: Fertilize palms with a granular slow-release fertilizer three to four times per year. An acceptable formulation is 8-0-12-4 (N, P, K, Mg plus micro-elements), 50% Slow Release.

Turf Fertilization

Treat deficiencies of specific nutrients with applications of the lacking nutrient in accordance with University of Florida IFAS recommendations until deficiencies are corrected, or as directed from Division Landscape Supervisor. Must have prior approval. Adjust fertilizer rates according to health, maturity, and desired growth patterns.

Fertilization for Establishment

During the establishment phase for shrubs, trees, and ground covers, fertilize landscape plants with a slow-release fertilizer as per University of Florida IFAS recommendations. Shrubs and groundcovers shall have the fertilizer blown or fan raked off following the broadcast application. Immediately after the fertilizer is applied, the areas shall be watered.

###### **MULCHING:** Organic Mulch Areas with no mulch or new planting areas shall have mulch placed to provide for a four inch (4”) non-compacted or unsettled depth measured from the existing soil grade. The area to receive the mulch shall be raked level to establish the proper finished grade and have all weeds removed prior to the placement of the mulch. Two inches must be applied to replenish this mulch twice a year, November and during May.

1. **LANE CLOSURE:** Lane closure for median maintenance shall comply with the most current editions

 of the FDOT Design Standards and the Collier County Maintenance of Traffic (MOT) policy.

1. **IRRIGATION SYSTEMS:** The irrigation systems shall be checked and repaired as necessary. Each zone shall be manually turned on at the valve once a week and a thorough inspection conducted to ascertain proper operations of the system. Quick coupling valves, if existing shall be reviewed weekly and operated quarterly to insure proper operation. Maintenance responsibilities will include cleaning and adjustment of heads, nozzles, installation or replacement of risers, repair of minor PVC piping breaks or subsurface piping or restricted sprinkler lines, replacement of damaged valve boxes/lids and adjustment of controller and rain shut off switches for settings and operations. Where required, the Association shall maintain on site reclaimed water irrigation signage.

**SUBSURFACE IRRIGATION SYSTEMS:**

No excavation or mechanical metal edging around plant beds shall be done within the Right-of-way. Mechanical metal blade edging is permitted along the back of curbing.

 Weekly Service Requirements:

1. A visual inspection of the subsurface irrigation systems shall be performed weekly to determine if the systems are functioning normally and if cuts, leaks, piping damage, flooded areas exist, and repair as necessary. This shall also include review and re-setting of the controller and in-ground moisture sensor adjustments or other rain sensing devices as needed.
2. System Computer/Controller
	1. Operate, adjust, and set controller to provide proper operation of the systems.
	2. Diagnose and repair electrical and mechanical malfunctions.
	3. Monitor and adjust the system zones moisture levels based upon moisture sensor readings.
	4. Operate controller on automatic, manual, and single trip operation.
	5. Monitor controller standby battery backup and replace as required.
3. Automatic Control Assemblies and Quick Coupling Valves
	1. Review control valve assembly and by-pass system for proper settings.
	2. Open zone control valve assemblies and quick coupling valve boxes to review valves for leaks; pressure gauge operation; proper settings and are clean of debris or mulch.
4. Pump Sites
	1. Inspect for proper operations.
	2. The Association shall record and provide to the County’s representative the well water flow meter readings for the two well locations on the General Maintenance Report Sheets.
5. Review system water source connections to include water meters, backflow preventers, gate valve points of connection and main lines for proper operation.

Monthly Service Requirements:

1. Automatic Control Valve Assembly

 Manually operate valves, and clean valve assembly filters.

1. Backflow Assembly

 Review assembly for proper operation and clean filter as needed.

1. Quick Coupling Valves

 Review boxes and operate valve.

1. Pump Sites
	1. Once a month, the Association will trouble shoot each pump station, checking amperage draw and document the results for future reference.
	2. Manually run the system to ensure proper coverage and that no sprinkler head and nozzle are spraying onto the roadway. Clean and adjust sprinkler heads and nozzles and irrigation shields to ensure proper coverage.
	3. The Association will check all zone wiring and solenoid conditions through the use of an OHM meter and document the results for future reference.
	4. The Association will clean the strainers filters and inspect them for wear at the Pump Station.
2. Manually run the system with open flush caps and review sprinkler head indicators located at the end of zones.
3. Review pressure gauge readings at control valve assemblies for each zone, as well as gauges located at the end of zones where present to determine the system and porous piping is functioning properly.
4. Check, analyze and adjust flow control devices as required.

Quarterly Service Requirements:

1. Review all subsurface system piping, valve assemblies, wiring, moisture sensors and controllers for overall operation and provide adjustments as required to assure proper operation and irrigation application.

Conventional Pop-up Irrigation Systems:

Weekly Service Requirements:

1. Each median zone shall be manually turned on at the valve to ascertain proper operation of the system.
2. Repair system for any blown-off heads, broken lines or leaks around heads or valves.
3. Check the controller and rain sensing devices for proper operation and settings.
4. The Association shall further adjust all sprinkler heads to ensure that all landscaped areas receive one hundred percent (100%) irrigation coverage.
5. Within all work areas the Association shall review the plant material and turf for dry conditions and if found correct the problem.

Monthly Service Requirements:

1. Manually run the system, clean and adjust sprinkler heads/nozzles and concrete donuts as necessary to ensure proper coverage and that there are no sprinkler heads/nozzles spraying directly onto the roadway.
	1. Each median and side right-of-way zone shall be manually turned on at the valve to ascertain proper operation of the system.
	2. Repair system for any blown-off head, broken lines or leaks around heads or valves.
	3. Check the controllers and rain sensors for proper operation and settings.
	4. The Association shall further adjust all sprinkler heads to ensure that all landscaped areas receive one hundred percent (100%) irrigation coverage.
	5. Within all work areas the Association shall review the plant material and turf for dry conditions and if found correct the problem.

General Service Requirements for Irrigation Systems:

1. Should South Florida Water Management District or other governing agency establish water restrictions, the irrigation systems shall be inspected, and all other controllers set to the mandated hours of operation set by the District or Agency. Subsurface systems are exempt from water restrictions.
2. Replace defective heads or nozzles, install, or replace defective risers and repair minor breaks or restricted sprinkler lines.
3. Replace damaged valve boxes/lids if caused by the Maintenance Association.
4. Inspect, clean, and replace, if necessary, screen/filters within the sprinkler heads.
5. Keep all grass and mulch out of all valve boxes. All valve boxes in sod areas are to be kept at sod level. All valve boxes in plant beds are to be kept two inches (2”) above finished mulch.
6. One hundred percent (100%) irrigation coverage shall be maintained within all irrigated landscaped areas while this Contract is in effect.
7. Notification to the County’s representative is required when acts of vandalism or accidents have occurred to the irrigation system. Photos shall be taken and provided to the County’s representative at no added cost.

Miscellaneous Irrigation Maintenance Responsibilities:

1. Should the temperature be forecast to be below thirty-four (34) degrees, the Association shall be responsible for turning the irrigation system off to protect plants from possible freeze damage.
2. It shall be the Association’s responsibility to notify the County’s representative of any irrigation problems or additional irrigation maintenance needs.
3. The irrigation service personnel must trouble shoot time clocks, i.e., power-in 110 volt and 24-volt fuses, 24 volts output when necessary.
4. The irrigation services personnel must trouble shoot any pump start relay, main fuses, and capacitors when necessary.
5. **BRICK PAVERS:** All median brick paving shall be pressure cleaned twice per year, in April and November, to remove marks, gum and other dirt that may be deposited on the surface areas. Upon finding damaged areas, the Associations shall clean-up debris if present, and or flag off the areas with protective barriers and/or high visibility hazard tape. Damaged areas must be repaired as quickly as possible.
6. **PEST CONTROL:** Trees, Palms, Shrubs, Groundcovers, and Sod must be closely monitored for pests and diseases and must be treated appropriately by a licensed Pest Control Operator approved by the County’s representative.