SECTION 32 93 00 TREES, PLANTS, AND GROUND COVER

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preparation of subsoil and topsoil
- B. Topsoil bedding
- C. New and Relocation of trees, plants, and ground cover
- D. Mulch and fertilizer
- E. Maintenance
- F. Tree Pruning
- 1.2 SCOPE
 - A. The work shall consist of all labor, supplies, equipment and materials necessary to complete the planting of all trees, palms, shrubs and ground covers in the locations shown on the drawings, and all other work associated with and incidental to the landscape planting work as shown on the drawings and specified under this section.
 - B. Not all plant materials and references in this section are necessarily required on all projects; only that indicated or required by drawings and specifications apply.
 - C. All plant material shall be of the specific size and quality as indicated on the drawings. Install, maintain, and water in strict accordance with good horticultural practices.
 - D. The Contractor is responsible for the complete removal of all existing plant material necessary to implement the construction plans.
 - E. Unless noted, the Contractor is responsible for the replacement of any existing lawn or other landscape area, damaged during the construction process to original or better condition.
 - F. The Contractor is responsible for the contract growing of all plant materials indicated on the plans that the Contractor cannot guarantee to be available at the time of the project installation.
 - G. The Contractor is responsible for the complete removal of all non-native vegetation from the site.
 - H. Contractor submitting a proposal for this contract is responsible to inspect the site to acquaint themselves with the site conditions, including but not limited to existing and proposed utilities in area of work.

1.3 REFERENCES

- A. ANSI A300 (part1) Tree Care Operations Tree, Shrub and Other Woody Plant Maintenance -Standard Practices - Pruning
- B. ANSI A 300 (part2) Tree Care Operations Tree, Shrub and Other Woody Plant Maintenance -Standard Practices – Soil Management
- ANSI A300 (part3) Tree Care Operations Tree, Shrub and Other Woody Plant Maintenance: Standard Practices - Part 3 - Tree Support Systems (a. Cabling, Bracing, and Guying) – Supplement Support System
- D. ANSI Z60.1 Nursery Stock
- E. TCIA Tree Care Industry Association *formerly* the NAA (National Arborist Association) Pruning Standards for Shade Trees
- F. State of Florida Standards Nursery Stock
- 1.4 DEFINITIONS
 - A. Weeds Include, but not limited to Crab Grass, Johnson Grass, Poison Ivy, Nut Sedges, Bindweed, Goose Grass, Crowfoot Grass, Torpedo Grass, Spurges, Spreading Dayflower, Guinea Grass, Bull Paspalum, Sandbur, Love Grass, Finger Grass, Paricum Grasses, Foxtail, Smut Grass, Amaranth, Chickweeds, Ragwood, Spanish Needles, Thistle, Horseweed, Dogfennel, Cudweed, Hawksbeard,

Dollarweed, Pepperweed, Beggarweeds, Sida, Oxalis, Pusley, Penneywort, Matchweed, and Punctureweed.

- B. Plants Living trees, shrubs, and ground cover specified in this Section, and per ANSI Z60.1.
- 1.5 SUBMITTALS
 - A. Section 01 77 00 Contract Closeout: Procedures for submittals
 - B. Maintenance Data shall include cutting and trimming method; types, application frequency, and recommended coverage of fertilizer.
 - C. Fertilizer
 - D. Planting soil: If requesting a substitution, provide documentation from a qualified agricultural testing lab supporting the proposed planting soil meet the requirements of the specifications.
 - E. Herbicides
 - F. Water storing polymer
 - G. Melaleuca, Eucalyptus, or Pine Straw mulch. Pine Straw is used only in elementary schools.
 - H. Staking and guying materials.
- 1.6 QUALITY ASSURANCE
 - A. Nursery Qualifications: Company specializing in growing and cultivating the plants with 3-years documented experience.
 - B. Installer Qualifications: Company specializing in installing and planting the plants with 5-years documented experience.
 - C. Tree Pruner Qualifications: Company specializing in pruning trees with proof of Arborist Certification with 3-years documented experience.
 - D. Tree Pruning: NAA Pruning Standards for Shade Trees
 - E. Maintenance Services: Performed by installer
- 1.7 CONTRACTOR SUPERVISION
 - A. The Contractor shall provide a competent superintendent and any necessary assistants on the project when work is in progress.
 - B. Do not change the superintendent during the project without the consent of the Architect unless the superintendent leaves the Contractor's employment.
 - C. The superintendent shall represent the Contractor and in the Contractor's absence, all directions given to him by the Architect shall be binding as if given to the Contractor.
 - D. The Contractor's superintendent shall supervise the Contractor's employees on the job site, be responsible for their actions, and conduct on the job site.
- 1.8 PROTECTION OF WORK AND PROPERTY
 - A. The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Owner's property from injury or loss arising in connection with his work.
 - B. The Contractor is responsible for contacting the necessary entities to determine the locations of all underground utilities on the site.
 - C. The Contractor shall take care to avoid damage to any existing buildings, equipment, piping, pipe coverings, electrical systems, sewers, sidewalks, landscaping, grounds, aboveground or underground installations, or structures of any kind, and shall be responsible for any damage that occurs because of his work.
 - D. Contractor shall adequately protect his work and all adjacent property as required by law.
 - E. Utilities noted on the plans are anticipated locations only.
 - 1. The utilities shown may not include all underground utilities on the site, and the locations indicated may not be as installed.
- 1.9 REGULATORY REQUIREMENTS
 - A. Comply with regulatory agencies for fertilizer and herbicide composition.

- B. Plant Materials: Certified by State Department of Agriculture.
- 1.10 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver, store, protect, and handle products to site under provisions of Section 01 60 00.
 - B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and manufacturer.
 - C. Protect and maintain plant life until planted.
 - D. Deliver plant life materials immediately prior to placement. Keep plants moist.
- 1.11 ENVIRONMENTAL REQUIREMENTS
 - A. Do not install plant life when ambient temperatures may drop below 35° F.
 - B. Do not install plants when wind velocity exceeds 30 mph.
- 1.12 COORDINATION
 - A. Coordinate work under provisions of Section 01 31 00.
 - B. Install plant life after and coordinate with installation of underground irrigation system piping and watering heads.
- 1.13 WARRANTY
 - A. Provide 1-year warranty under provisions of Section 01 77 00.
 - B. Include coverage for one continuous growing season; replace dead or unhealthy plants.
 - C. Replacements: Plants of same size and species as specified, planted in the next growing season, with a new warranty commencing on date of replacement.

1.14 REQUIRED INSPECTIONS

- A. During the planting process, the Contractor shall request the following inspections.
 - 1. Work shall pass required inspections prior to beginning subsequent planting phases.
- B. An inspection shall be requested to review:
 - 1. The quality grade of the trees, root system, and any damage to trunks or limbs caused during the installation process.
 - a. Damage to trees will downgrade the materials in accordance with "Grades and Standards Revised".
 - 2. The finished grade of the tree installation.
 - 3. Remove binding, bagging, and burlap materials on top of the tree ball in accordance with these specifications.
- C. Contractor shall request inspection and receive approval prior to any sodding or mulching work.1. All of the above items may be at a single inspection.
- D. Architect shall verify the installation of the pre and post emergence herbicides prior to beginning the mulching operation.

PART 2 PRODUCTS

2.1 NOMENCLATURE

- A. All plant material shall conform to the names given in Hortus Third, published by the Macmillian Publishing Co., Inc., copyright 1976.
- B. Names of varieties not included therein shall conform to names accepted in the trade.
- 2.2 GRADE STANDARDS:
 - A. All plant material shall be nursery grown, except where specified as collected material, and shall comply with all required inspections, grading standards and plant regulations as set forth by the latest editions of the Florida Department of Agriculture's "Grades and Standards for Nursery Plants, 2nd Edition: February 1998.
 - B. All plant material shall have a growth habit that is normal for that species and shall be sound, healthy, vigorous, and free from insects, plant diseases, and injuries.

- C. Unless otherwise specified, all plant material shall be Florida No. 1 or better until the expiration of the required maintenance period.
- D. Plant materials that show signs of dieback or leaf drop after planting are not acceptable.
- E. Plant material shall not have chlorosis in any foliage.
- 2.3 INSPECTION AND TRANSPORTING
 - A. Movement of nursery stock shall comply with all Federal and State regulations.
- 2.4 MULCH
 - A. Melaleuca Mulch
 - 1. Melaleuca mulch shall be entirely from the wood and bark of the Melaleuca Quinquinerva Tree.
 - 2. It shall not contain more than 10% (by volume) bark.
 - 3. Shreds and chips shall not be larger the $\frac{3}{4}$ " diameter and $\frac{1}{2}$ " in length.
 - 4. Mulch shall be free of weeds, seeds, and any other organic or inorganic material other than Melaleuca wood and bark.
 - B. Eucalyptus Mulch
 - 1. Eucalyptus mulch shall be entirely from Eucalyptus tree heartwood and 100% pure.
 - 2. The source trees shall be plantation grown.
 - C. Pine Straw Mulch
 - 1. Use only at elementary schools.
 - 2. Pine Straw Mulch shall be premium longleaf pine straw (needles).
 - 3. Pine Straw Mulch shall be sourced from plantations and guaranteed to be free of contaminants, pests, or invasive species.
- 2.5 PLANTING SOIL
 - A. Place all plant material, unless otherwise specified with planting soil consisting of approximately 50% sand and 50% muck by volume.
 - B. Planting soil shall be as manufactured by Atlas Peat and Soil, Inc. Mix 5050 or other equivalent manufactured soil mixture.
 - C. If a substitute is proposed, the Contractor shall provide sufficient analytical information from a qualified testing laboratory that the material is at a 50/50 ratio of muck to sand.
 - D. Uniformly mix a water-storing polymer within the planting soil at the rates recommended by the polymer manufacturer.

2.6 PLANT REQUIREMENTS

- A. Balled and Burlapped Plants:
 - 1. Properly protect the root ball and kept moist until planted.
 - 2. Whenever possible, handle the plant only by the earth ball and not by the plant itself.
 - 3. The diameter of the ball must be sufficient to encompass all of the fibrous and feeding root system necessary for the development of the plant.
- B. Container-Grown Plants:
 - 1. Plants that have become "pot bound" are not acceptable.
 - 2. Use a container cutter unless the root ball slips easily and unbroken from the container.
 - 3. Do not remove the plants from the can until immediately before planting.
 - 4. Containerized trees with circling roots are not acceptable.
- C. Collected Plants: Plant material not from active nursery operations shall have, a root ball spread at least 1/3 greater than nursery grown plants and not planted before on site acceptance.
- D. Palms:
 - 1. All palm species except Sabal palmetto shall have roots adequately wrapped before transporting.

- 2. All Sabal palms shall be slicks.
- 3. Sabal palms shall have a hurricane cut.
- 4. Install Sabal palms on site at the earliest opportunity in the construction process.
- 5. Palm trees showing signs of dieback or dead fronds are not acceptable.
- 6. Sabal palms with burn marks are unacceptable.
- 7. Any damaged palm tree will be rejected.
- 8. All Sabal palms shall be from Palm Beach County or other sandy soils.
- 9. All Sabal palms shall be Florida Fancy.
- 10. The balls of all Sabal palms shall be sufficiently large to support the head of the palm.
- 11. The Contractor shall treat all palms as required to prevent infestation by the palmetto weevil.

2.7 FERTILIZER

A. All fertilizer shall be a 18-4-12 mix with the approximate following formulation:

1.	Total nitrogen	18.00%
2.	Ammonia cal nitrogen	2.75%
3.	Water soluble organic nitrogen	11.25%
4.	Water insoluble nitrogen	4.00%
5.	Available phosphoric acid	4.00%
6.	Water soluble potash	12.00%
7.	Chlorine - not more than	2.00%
8.	Total water soluble magnesium	1.32%
9.	Manganese	0.07%
10.	Copper	0.03%
11.	Zinc	0.07%
12.	Iron	1.58%

B. Deliver fertilizer in unopened bags, each carrying the manufacturer's name and the chemical makeup, conforming to all applicable governmental regulations, and in dry condition.

2.8 HERBICIDES:

- A. Post-emergence herbicide
 - 1. The post-emergence herbicide shall be a foliar applied herbicide, which will control a broad range of annual and perennial grass and broad-leafed weeds plus applicable woody brush and tree species.
 - 2. Herbicide shall kill the entire weeds species, including below ground root or rhizome system.
 - 3. The herbicide shall have no residual soil activity.
 - 4. Apply all herbicide according to the manufacturer's recommendations.
- B. Pre-emergence Herbicide:
 - 1. The pre-emergence herbicide shall be a selective pre-emergence herbicide used for the control of annual grasses and broad-leafed weeds in turf and ornamentals.
 - 2. Herbicide shall control weeds by killing the young weed seedlings as they encounter the herbicide during germination.
 - 3. The herbicide shall be in granular form.
- 2.9 WATER STORING POLYMER
 - A. The polymer shall be a super absorbent sodium based polymer with chemically identical partial sizes of .5 mm to 2.8 mm.
 - B. The polymer shall be non-toxic.
 - C. Incorporate the polymer into all planting soil at the rate recommended by the manufacturer.

2.10 WATER

- A. Contractor shall supply and apply all necessary.
- B. All watering shall be by water truck until the irrigation system is in operation.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that prepared subsoil and planters are ready to receive work.
- B. Verify that required underground utilities are available, in proper location, and ready for use.
- 3.2 EXISTING VEGETATION REMOVAL
 - A. The Contractor shall remove all existing vegetation necessary to implement the project construction plans.
- 3.3 REMOVAL OF ALL NON-NATIVE VEGETATION
 - A. The Contractor shall remove all non-native vegetation, as listed in Palm Beach County UDC Article 14.c, from the project site; non-native vegetation shall include, but not be limited to:
 - 1. Melaleuca Melaleuca quinquenervia
 - 2. Australian pine Casuarine spp.
 - 3. Brazilian Pepper Schinus terebinthifolius
 - 4. Queensland umbrella tree Schefflera actinophylla
 - 5. Earleaf Acacia Acacia auriculiformis
 - 6. Air Potato Dioscorea bulbifera
 - 7. Old World climbing fern Lygodium microphyllum
 - 8. Carrotwood Cupaniopsis anacariodes
 - 9. Kudzu Pueria Montana var. lobata
 - 10. Downy rose myrtle Rhodomyrtus tomentosa
 - 11. Love vine Pseudogynoxis chenopdiodes
- 3.4 GRADING OF PLANTING AREAS
 - A. Unless specified, all planting areas bordered by pavement, sidewalk or curb shall have a finished grade (not including mulch) 3" below the adjacent pavement, sidewalk or curb.

3.5 EXCAVATION OF PLANT HOLES

- A. Tree Holes:
 - 1. Tree holes shall be roughly cylindrical in shape with the sides approximately vertical.
 - 2. All holes shall be deep enough to allow for a 6" layer of planting soil under the ball.
 - 3. Center the plants in the holes.
 - 4. Holes to accommodate tree ball sizes less than 24" in diameter shall be at least 18" in diameter greater that the diameter of the ball.
 - 5. Holes to accommodate balls 2' and larger in diameter must be at least 2' in diameter greater that the diameter of the ball.
 - 6. Holes to accommodate balls greater than 5' in diameter must be at least 3' in diameter greater than the diameter of the ball.
- B. Shrub Holes:
 - 1. Shrub holes shall be roughly cylindrical in shape with the sides approximately vertical.
 - 2. All holes shall be deep enough to allow for a 2" layer of planting soil under the ball.
 - 3. Center the plants in the holes.
 - 4. Holes to accommodate shrub balls shall be 8" greater in diameter than the size of the ball of the plant supplied.
- C. Removal of Subsoil: Dispose of excess subsoil removed from planting excavations.
- D. The Contractor is responsible for the complete removal of all shell rock or other road bases that encroach more than 12" into the planting areas.

- 1. Remove or roto-till all compacted soils as required to provide for good soil percolation.
- 2. Fill all voids resulting from such excavations with clean, well draining planting soil.
- E. Locate plant to maintain a clear line of site, after planting, between 3' and 7' above finished grade.
 - 1. Locate plant holes so the separation between the hole centerline and the nearest building or structure is at least equal to the mature height of the plant.

3.6 SETTING OF PLANTS

- A. Plants shall rest on the prepared hole bottom and final grade around the plant shall conform to the surrounding grade.
 - 1. Plants shall be set straight and plumb.
 - 2. Cover the balls of B&B or WB&B plants that cannot be planted immediately with moist soil, mulch, or other protection to prevent drying.
 - 3. Water all plants as necessary before and after planting.
- B. The Contractor should note that there are not individual irrigation bubblers on most of the trees on this project.
 - 1. The Contractor will be responsible for providing hand watering to properly establish all trees and palms, and to maintain them in a healthy condition until the water provided by the irrigation system is sufficient for that purpose.
- C. Cut and remove all metal, wire, rope, nylon, twine or other materials (excluding burlap) from the tops of all root balls.
 - 1. Do not place mulch before an approved inspection verifying the removal of unwanted materials from the top of the root balls, and the installation of the trees at the proper grade.
- D. Plant shrubs so the edge of their mature branch system will be 18" to 24" away from buildings and structures.
- E. Plant trees and palms so that their trunk is separated from any structure by their mature height.

3.7 BACKFILLING

- A. Use all backfill in planting comprised of the specified planting soil combined with the waterstoring polymer.
- B. Firmly tamp and settle the backfill by watering to within 1/3 of the top of the planting hole and thoroughly puddle with water to eliminate all air pockets before bringing backfill up to the finished grade.
- C. There shall be a 6" high water basin, no smaller or larger than the plant hole, constructed around each plant for watering purposes.
- D. Hedge and mass shrub planting should have a dike encompassing the entire grouping of plants.
- E. The soil used to make the dike shall consist of planting soil.
- F. Remove the dike prior to beginning the mulching or sodding operation.
- 3.8 INSTALLATION OF GROUND COVERS
 - A. Sub-grade all areas receiving ground covers to accept a 2" thick layer of clean, weed free, 100% organic pulverized muck.
 - B. Roto-till or hand-spade the muck into the existing soil to a depth of 4".
 - C. Plant the ground cover as specified on the drawings.
- 3.9 FERTILIZING: Fertilize all plant materials at the following rates:
 - A. Trees 4-ounces of the specified fertilizer per tree.
 - B. Shrubs in 3-gallon containers or larger 1-ounce of the specified fertilizer per plant.
 - C. One gallon sized plants or ground covers: 10 lbs of the specified fertilizer per 1,000 sq ft
 - D. Do not apply fertilizer until plants the fourth day after installation and watering.
 - E. Do not apply fertilizer within 4" of the trunk of any plant material.

- F. Water all plant materials immediately following fertilization.
- G. Apply all fertilizer prior to beginning the mulching operation.

3.10 STAKING AND GUYING

- A. The Contractor shall stake all trees and palms.
 - 1. The Contractor is responsible for the replacement or adjustment of all trees, palms or shrubs that fall or lean during the guarantee period, regardless of the reason for the plant material's displacement.
 - 2. The Contractor is responsible for any damage caused by the falling or leaning of trees.
 - 3. Perform all trees staking in a neat and workmanlike manner.
- B. Securely anchor trees as per the tree installation detail on the drawings.
 - 1. Stakes shall be spaced evenly around the trunk of the trees.
 - 2. Contractor may use the recommendations in the current edition of Grades and Standards for Nursery Plants.
 - 3. Do not use wire-guys to stabilize any plants, trees, or shrubs under any conditions.
 - 4. Use of metallic staking material is forbidden.
 - 5. All wooden staking material shall be free of sharp edges or projecting fasteners.
 - a. The minimum allowable staking lumber size shall be 2"x2".
 - 6. Use polyethylene rope, natural rope, or custom manufactured non-metallic guying and strapping materials.
- C. Stake Palms as specified in Grades and Standards for Nursery Plants current edition.
 - 1. Do not use spikes or nails in any Grade of Palm.
- D. The Contractor shall maintain all staking and guying until 1 year after substantial completion.
 - 1. Contractor shall dismantle and remove all staking and guying from the school campus.
 - 2. Contractor may dismantle and remove staking and guying earlier from established, healthy plants at the Contractor's sole discretion.
 - 3. Early removal shall in no way limit the Contractor's warranty obligations.
 - 4. Maintenance of staking and guying shall include monthly inspection of all staking and guying left in place during the 1-year period and adjustment or replacement of any materials that are not as originally installed to support the plant materials.
 - a. Maintenance shall also include repair or replacement of any staking or guying materials that damaged and present sharp edges, which might injure students.
 - 5. Dismantling and removal of staking and guying materials shall include removal of all supports, ground stakes, braces, guy ropes, support banding, banding lumber, or any other support or stabilization device and transport of said items completely away from the school campus to a proper storage or disposal site.

3.11 PRUNING

- A. Provide smooth clean cut of all broken or damaged roots.
- B. Prune the tops of all new or relocated trees in compliance with standard horticultural practices.
- C. The Owner or designated representative shall direct all pruning of plants.
- D. The Contractor is responsible for the initial pruning of all tree and shrubs as directed by the Owner or designated representative.
- E. A certified Arborist shall make all pruning of limbs in excess of 2" in diameter.

3.12 HERBICIDE TREATMENT

- A. Prior to beginning the mulching operation, the Contractor shall apply post-emergence herbicide to all weeds that have appeared within the bed lines.
- B. The Contractor shall wait the required time recommended by the manufacturer before beginning the clearing operation.

- C. Treat all planting and mulch beds with pre-emergence herbicide prior to beginning the mulching operation.
- D. Apply all herbicides in accordance with the manufacturer's recommendations.
- E. The Contractor shall be responsible for the removal of all weeds appearing on the site prior to the final acceptance of the work.

3.13 MULCHING

- A. Within one week after plant installation, apply mulch material in a minimum 1" thick layer over all tree, shrub, and ground cover planting areas, unless otherwise specified.
 - 1. All mulch layers shall be of the specified thickness at the time of the final acceptance of the work.
 - 2. Maintain a 12 inch separation between any mulch bed and all building walls. Contour the soil to create a higher area next to the building and a lower area for the mulch bed.
- B. Place a layer of mulch at least 1" in depth in a circle around all trees located in lawn areas.
 - 1. The circle shall be 18" in diameter larger than the ball of the plant provided.
 - 2. Pull the mulch away so that it is not in direct contact with the trunk of the tree.

3.14 DISPOSAL OF SURPLUS MATERIALS AND SITE CLEANUP

- A. Surplus excavated materials from plant holes shall be properly disposed of off the site.
 - 1. Remove and properly dispose all debris and other objectionable material created through planting operations and landscape construction completely from the site.
- B. Remove all trash and debris form preservation areas.
 - 1. The Contractor is responsible for the removal of existing trash and debris at the start of construction, as well as materials deposited during the construction process.
- C. Remove all rocks and other debris from all planting and lawn areas.

3.15 CONDITIONS OF PLANTING

- A. Maintain all plant material by watering, removing dead branches, resetting plants to proper grade or upright position and any other operation necessary to assure good maintenance and compliance with the drawings and specifications.
- B. The Contractor shall keep all guy-wires tight and all trees staking properly adjusted.
- C. All plants shall remain healthy, vigorous, and undamaged throughout the establishment period.
- 3.16 ESTABLISHMENT PERIOD
 - A. The Contractor is responsible for the proper maintenance, survival, and condition of all plantings from the time of installation until the final acceptance of the landscape and irrigation work by the Owner and the Architect.
 - B. Final acceptance of the landscaping is at "substantial completion" of the entire project.
 - C. Necessary replacement of plants during the guarantee period is the Contractor's responsibility.
 - D. All plantings shall be alive and in good growing condition at the time of final acceptance.
 - E. The rating of each plant according to Florida Grades and Standards shall be equal to or better than that called for on the drawings and specified in this section at the time of final acceptance.

3.17 COMPLETION AND ACCEPTANCE

- A. Completion of work means full compliance and conformity with the provisions expressed or implied in the drawings and specifications, and acceptance of the work by the Owner/Architect.
- B. Upon satisfactory completion of the work, the Architect will perform an inspection of the work to determine if the planting work is ready for acceptance.

3.18 GUARANTEE AND REPLACEMENT

A. Contractor shall guarantee all plant material for a minimum of one year after "Substantial Completion" of project or final acceptance of the landscape and irrigation work by the Owner and Architect, whichever is later.

- B. The guaranteeing of plant material means complete replacement with plant material of the same species, size, quality, and grade as that of the original material.
- C. The Contractor at his expense shall replace plant material not in healthy growing condition or with questionable survival ability at the end of the guarantee period.
- D. During the guarantee period, the Contractor is responsible for immediately replacement of any dead material.

3.19 MAINTENANCE PROVISIONS

- A. The Contractor is responsible for complete maintenance of all landscaping until "Substantial Completion" of the project or final acceptance of the landscape and irrigation work by the Owner and the Architect, whichever is later.
- B. Maintenance shall include, but not be limited to:
 - 1. Water all plant materials as required; provide proper conditions for plant health and growth.
 - 2. The immediate eradication of all harmful plant insects including ants and diseases.
 - 3. Removal of all weeds from the planting beds within one week after their appearance.
 - 4. Pruning of all shrubs and trees as directed by the Owner or his designated representative.
 - 5. Fertilize all plant materials as required, to provide conditions for plant health and growth.
 - 6. Removal of all weeds from clay and warning track areas.
- C. Installation of any plant material with thorns or serrated leaf magins is prohibited.
 - 1. The School District reserves the option to disallow any vegetation that District Staff determines may be a hazard or maintenance problem.

END OF SECTION