

Elm

Landscape Design Guidelines



Heartwood

Prepared by:



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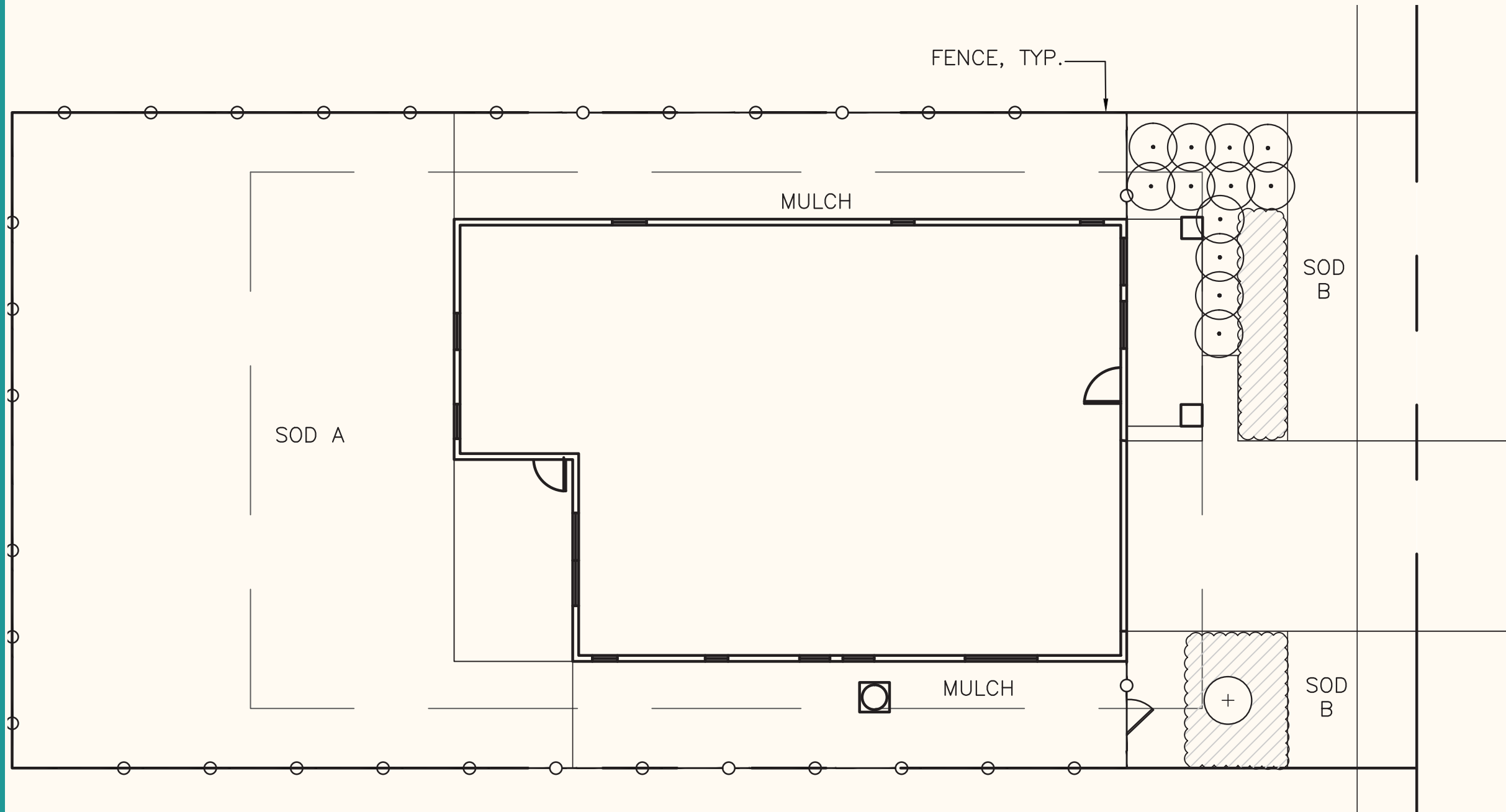


Model Home Elm

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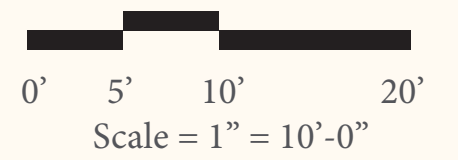
Model Home: Elm

Conceptual Landscape Plan - Base Package



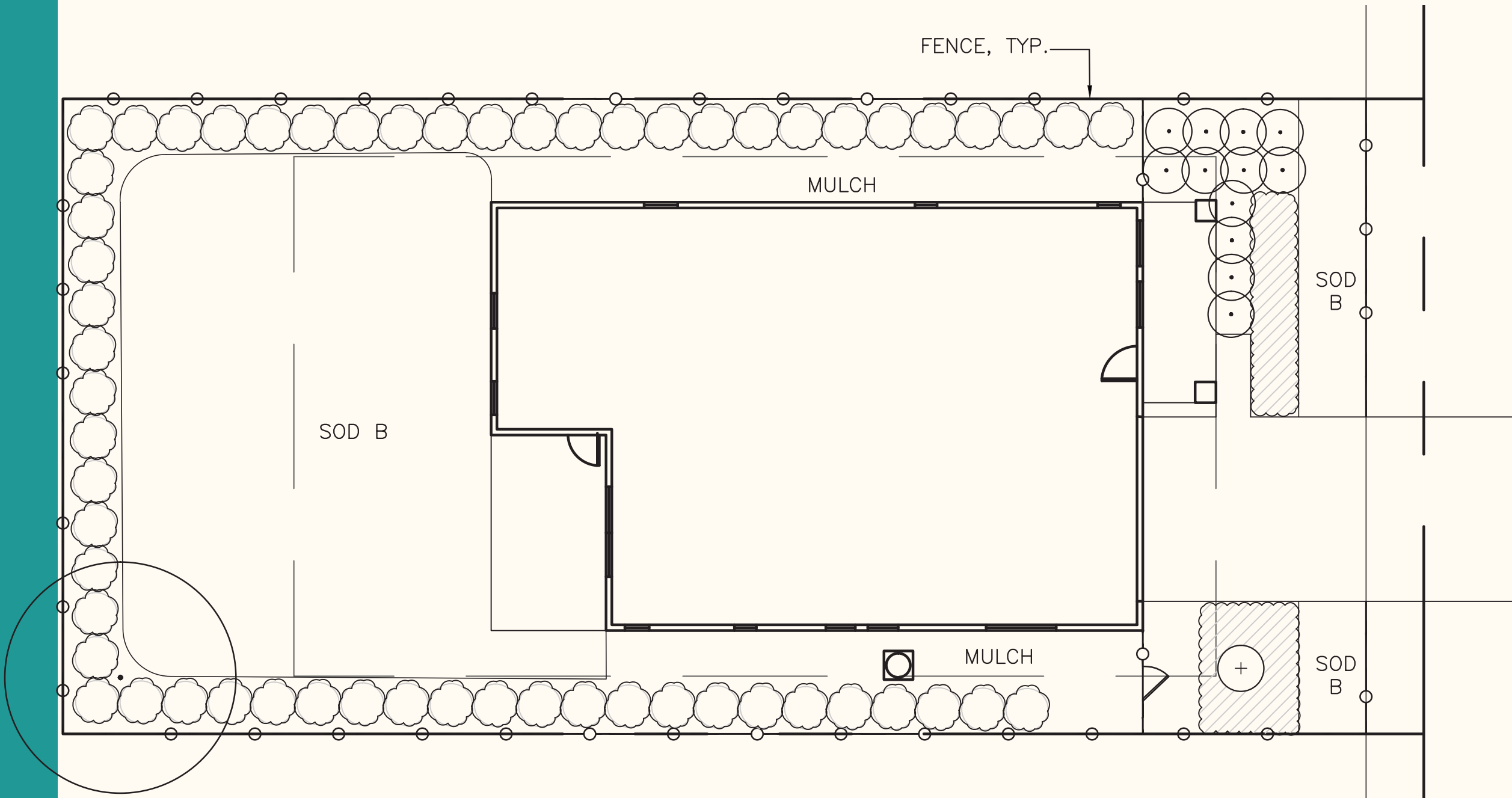
Legend

- Tree
- Palm
- Small Shrub
- Large Shrub
- Hedge
- Groundcover/Perennial



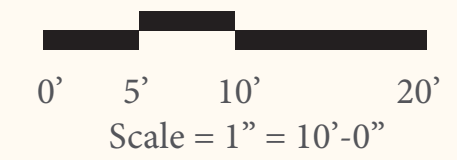
Model Home: Elm

Conceptual Landscape Plan - Upgrade Package



Legend

- Tree
- Palm
- Small Shrub
- Large Shrub
- Hedge
- Groundcover/Perennial



Model Home: Elm

Conceptual Landscape Plan - Plant Palette



Tree

Winged Elm, *Ulmus alata*
 East Palatka Holly, *Ilex x attenuata* 'East Palatka'

Large Shrubs

Japanese Holly, *Ilex crenata*
 Cape Jasmine Gardenia, *Gardenia augusta*

Small Shrubs

Indian Hawthorn, *Rhaphiolepis indica*
 Coontie, *Zamia floridanum*
 Texas Sage, *Leucophyllum frutescens*
 Gallberry, *Tripsacum floridanum*

Hedge

Sadankwa Viburnum, *Viburnum suspensum*
 Dwarf Burford Holly, *Ilex cornuta* 'Dwarf Burford'

General Note:

Please refer to plant list within the Heartwood Design Guideline Section 3.4 Recommended planting, pg. 21-22 for additional plant species.

Groundcovers/Perennials

Purple Love Grass, *Eragrostis spectabilis*
 Asiatic Jasmine, *Trachelospermum asiaticum*
 Powderpuff Mimosa, *Mimosa strigillosa*
 Pentas, *Pentas lanceolata*
 Thyme, *Thymus vulgaris*

Sod

(SOD A) Bahia Grass, *Paspalum notatum* 'Argentine'
 (SOD B) Empire Zoysia, *Zoysia japonica* 'Empire'

Mulch

Pine Straw or Pine Bark



East Palatka Holly



Winged Elm



Japanese Holly



Cape Jasmine Gardenia



Indian Hawthorn



Coontie



Texas Sage



Gallberry



Dwarf Burford Holly



Sadankwa Viburnum



Asiatic Jasmine



Purple Love Grass



Asiatic Jasmine



Powderpuff Mimosa



Pentas



Thyme

General Notes



General Notes

All asphalt, limerock, and construction debris shall be removed from planting beds and sod areas prior to landscape installation. If encountered during construction or installation, these shall be excavated and removed from the site. Planting depth of soil in such areas should be at least 3'. If fill must be added, it must conform to fill requirements in Landscape Specifications Section 2.1

All landscaped areas shall be mulched with 3" thickness of mulch. Mulch shall be pine bark mini nuggets or pine straw mulch.

New trees outside of mulched landscaped beds will be protected from mower and string trimmer damage with 10" of plastic drain tubing.

Leader shoots and main structural limbs of trees shall not be topped or pruned. Trees will be staked as needed. Guylines will be of non-synthetic biodegradable material.

Plant Material

All plant material to be Florida No.1 or better, graded in accordance with the state of Florida Department of Agriculture, Division of Plant Industry's 'Grades and Standards for Nursery Plants,' current edition at the time plans are issued.

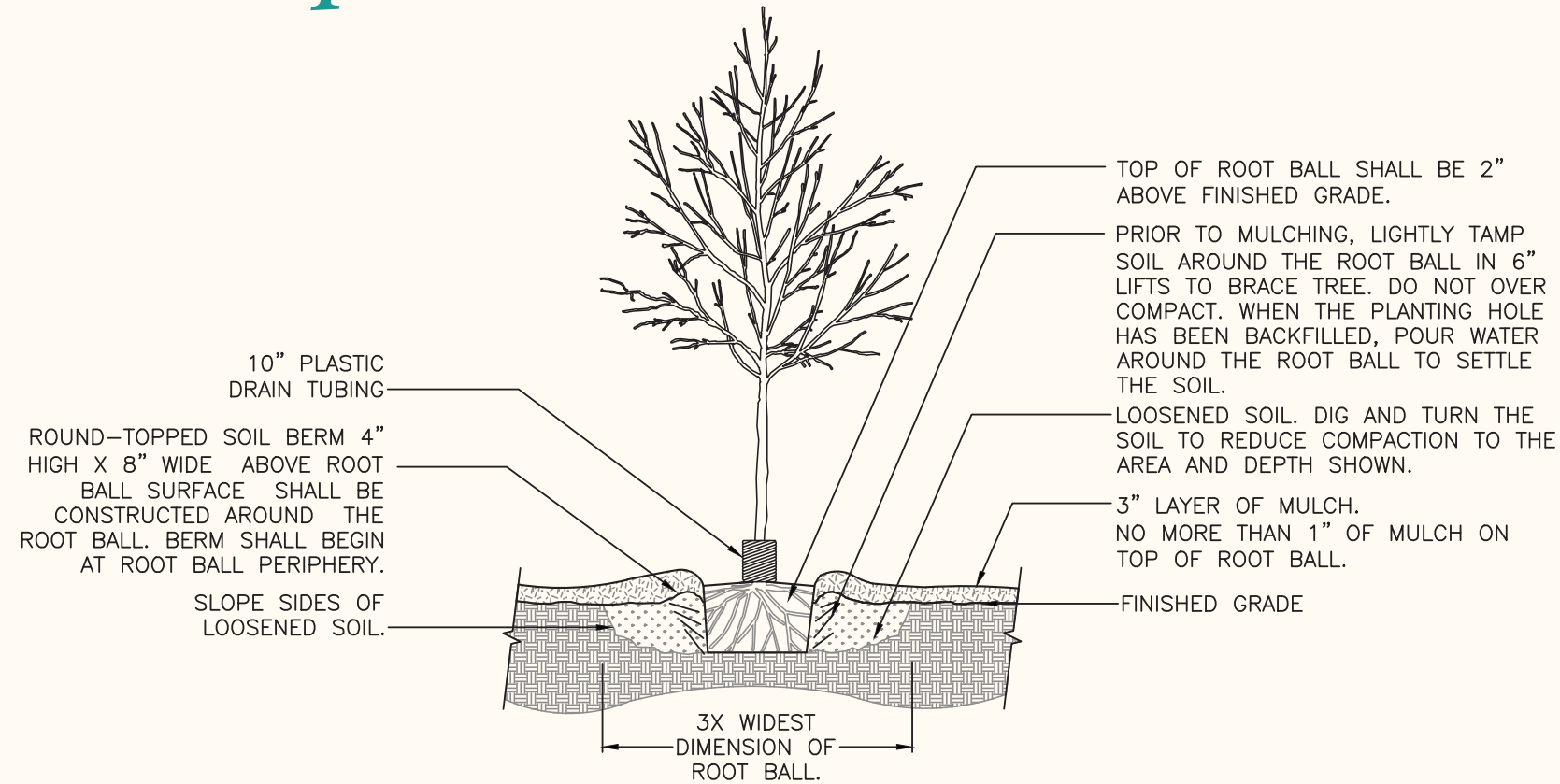
All trees shall be a minimum 15 gallon, 1.5" caliper size. All shrubs shall be a minimum of 3 gallon size. All groundcovers and perennials shall be a minimum of 1 gallon size.

Irrigation

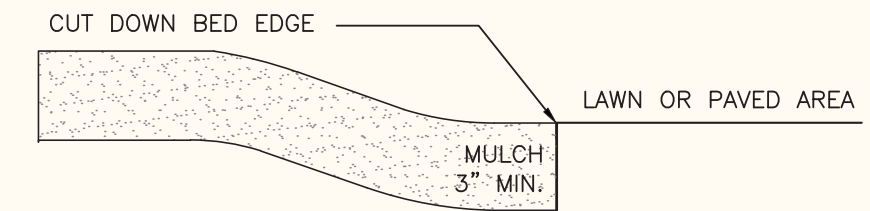
Irrigation to be provided for all Empire Zoysia sod areas. Bahia Grass sod areas not to be irrigated.

Refer to Heartwood Design Guidelines 3.3 Planting Design Considerations, pg. 19 & 3.5 Irrigation and Water Use, pg. 22 for more information on irrigation and landscape standards

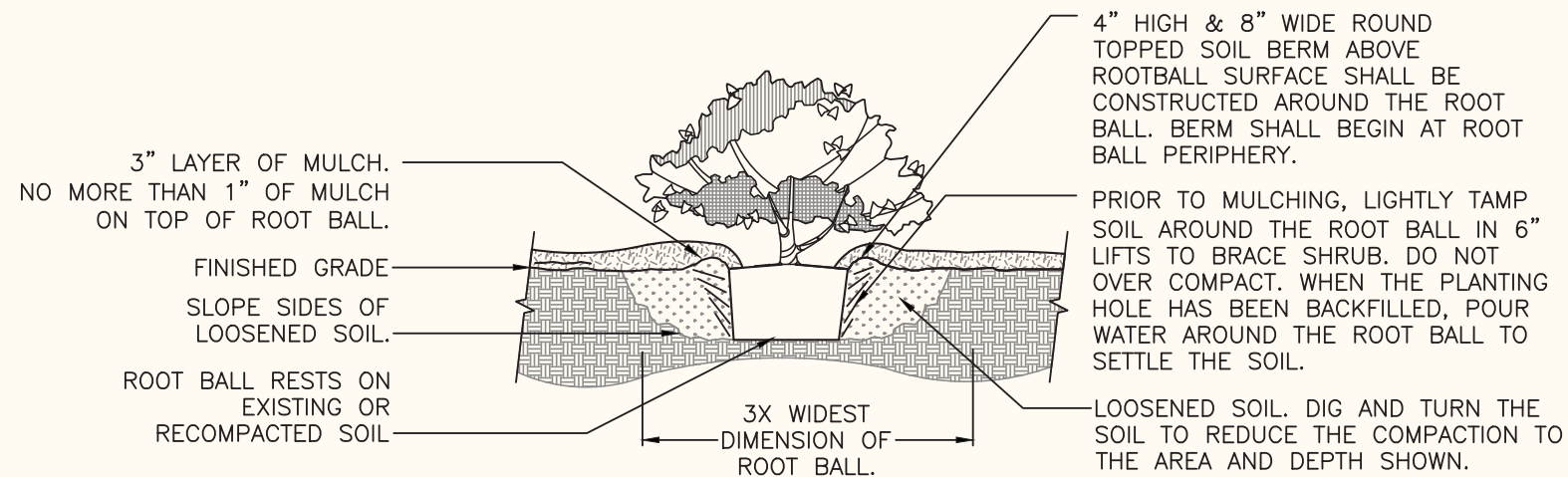
Landscape Details



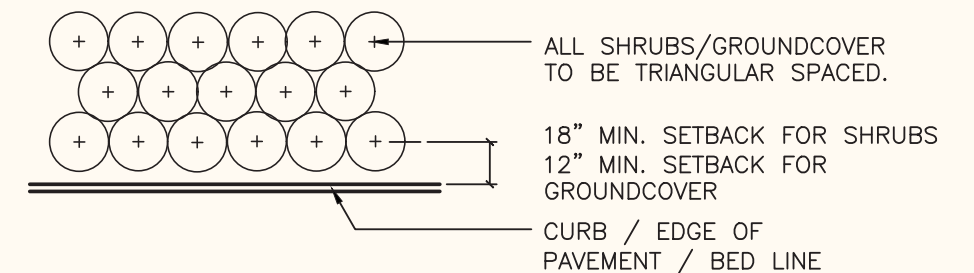
1 TREE PLANTING DETAIL
SCALE: N.T.S.



3 MULCH DETAIL
SCALE: N.T.S.



2 SHRUB PLANTING DETAIL
SCALE: N.T.S.



NOTE: THE PERIMETER OF ALL CURVED PLANTING BEDS SHALL BE PLANTED WITH A ROW OF SHRUBS AS SHOWN IN THE PLANS AND AT THE SPACING SHOWN IN THE PLANT LIST. INTERIOR PORTIONS OF EACH BED SHALL BE PLANTED AT APPROPRIATE SPACING ACCORDING TO THIS PLANT SPACING DETAIL. SHRUBS/GROUNDCOVERS SHALL BE MAINTAINED SO THAT BEDLINES DO NOT BECOME OVERGROWN AND DO NOT OVERLAP ONTO ADJACENT PAVING.

4 SHRUB PLANTING DETAIL
SCALE: N.T.S.

Landscape Specifications



1.0 GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions Contract, including General and Supplementary Conditions and Specifications, apply this section.

1.2 SUMMARY: Includes but not limited to

- A. Trees
- B. Palms
- C. Shrubs
- D. Plants
- E. Groundcover
- F. Lawn
- G. Soil Amendments
- H. Maintenance of Landscape Materials

1.3 QUALITY ASSURANCE:

- A. Installer qualifications: Engage a Florida Certified Landscape Contractor (FCLC) who has completed landscape work similar in material, design, and extent to that indicated for this project and with a record of successful tree and shrub establishment and conforms to the following:
 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the project site during times that tree and shrub planting is in progress.

1.4 SOURCE QUALITY CONTROL:

- A. Do not make substitutions. If specified landscape material is not obtainable, submit proof of non-availability to Owner/Owner's Representative, together with proposal for use of equivalent material listed on the Heartwood Master Plant List (see Heartwood Design Guidelines, Section 3.4. Recommended Planting, Pg. 21-22).

1.5 ANALYSIS AND STANDARDS:

- A. Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

1.6 TREES, PALMS, SHRUBS, AND PLANTS

- A. Provide plant material of quality, size, genus, species, and variety shown and scheduled for landscape work and complying with recommendations and requirements of "Grades and Standards for Nursery Plants," published by the Florida Department of Agriculture and Consumer Services, Division of Plant Industries, current edition at the time the plans are issued. Provide healthy, vigorous stock, grown in recognized nursery in accordance with good horticultural practices and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.

1.7 INSPECTION:

- A. The Owner/Owner's Representative may inspect plant material either at place of growth or at site before planting, for compliance with requirements for genus, species, variety, size, and quality. Owner/Owner's Representative retains the right to further inspect trees, shrubs, and groundcover for size and condition of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during the process of work. Remove rejected trees or shrubs immediately from project site.

1.8 DELIVERY, STORAGE, AND HANDLING:

- A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.
- B. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Sod delivered later than 24 hours from time of cutting, shall not be accepted on the job site. Sod shall be harvested, delivered and installed within this period shall be inspected prior to its installation. Protect sod against drying and breaking of pieces. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- C. Trees and Shrubs: Do not prune prior to delivery unless otherwise approved by the Owner/

Owner's Representative. Do not bend or bind-tie trees or shrubs in such a manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during delivery. Deliver trees and shrubs after preparations for plantings have been completed and plant immediately. If planting is delayed more than six (6) hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture. Do not remove container grown stock from containers until planting time.

1.10 JOB CONDITIONS:

- A. Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate as required. Maintain grade stakes set by others until removal is mutually agreed upon by all parties concerned.
- B. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Owner/Owner's Representative before planting.
- C. Weather: When weather conditions detrimental to plant growth are encountered or anticipated, notify Owner/Owner's Representative before planting.

1.11 SEQUENCING AND SCHEDULING:

- A. Maintenance Period: Maintain all plantings during installation of work and until final acceptance by the Owner/Owner's Representative.
- B. Coordination with Lawns: Plant trees, palms, shrubs, and ground cover after final grades are established and prior to planting of lawns, unless otherwise acceptable to Owner/Owner's Representative. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

2.0 PRODUCTS:

2.1 DEEP FILL:

- A. If required, new fill shall be sandy/loam texture that is fertile, friable, and free of clay lumps, muck, brush, weeds, roots, stumps, stones, asphalt, and other extraneous debris, litter, or toxic material harmful to plant growth. A sandy loam soil is defined as approximately 60% sand, 10% clay, and 30% silt. Soil shall have a range of 3-5% organic content.
- B. Obtain soil from naturally well-drained sites.
- C. Provide finish grade matching surrounding soil.
- D. Soil shall have a pH range of 6.0-7.5

2.2 COMMERCIAL FERTILIZER:

- A. Read and follow all manufacturer's instructions for fertilizer. Apply fertilizer just inside the plant foliage (dripline). Do not apply fertilizer on stems or exposed roots of plant material.
- B. Fertilize all trees at the manufacturer's recommended rate with a 12 month slow release, complete fertilizer of approximately 3:1:2 ratio including minor elements.
- C. Palms and shrubs: fertilize with an 8n-2p2o5-12k2o+4mg with micronutrients. 100% of N, K, and Mg shall be in slow release form and micronutrients shall be in sulfate or chelate (Fe only) form. 5.60 units of slow release nitrogen shall be polymer coated. 5.60-8.40 units of slow release potash shall be polymer coated. Slow release mg shall be prilled (granular) kieserite. Fertilizer shall contain approximately 1.5-2% Mn and Fe (0.1-0.2% for Fe if chelated), plus trace amounts of B (0.15%), Zn (0.15%), and Cu (0.05%).

2.3 PLANT MATERIALS:

- A. Quality: Provide trees, shrubs, groundcover, and other plants of size, genus, species, and variety shown and scheduled for landscape work and complying with Florida No. 1 quality standards of current edition of Grades and Standards for Nursery Plants.

2.4 GRASS MATERIALS:

- A. Sod: Provide sand grown only, strongly rooted sod, not less than two (2) years old, free of weeds and undesirable native grasses, and machine cut to pad thickness of 3/4" inch (plus or minus 1/4" inch), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant). Rolled sod will not

be acceptable. Provide sod of uniform pad sizes with a maximum 5% percent deviation in either length or width. Broken pieces or pads with uneven ends will not be acceptable. Sod pieces or pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10% percent of pad will be rejected.

3.0 EXECUTION:

3.1 PREPARATION:

- A. Lay out individual tree, shrub, and groundcover location and areas for multiple plantings. Outline areas and secure Owner's/Owner's Representative's acceptance before start of planting work. Make minor adjustments as may be required.

3.2 PREPARATION OF PLANTING SOIL FOR TREES AND SHRUBBERY:

- A. Before mixing, clean existing soil of roots, plants, sod, stones, clay, lumps and other extraneous materials harmful or toxic to plant growth.
- B. Mix specified fertilizers with existing soil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- C. For planting groundcover beds mix planting soil either prior to planting or apply on surface of ground and mix thoroughly before planting.

3.3 PREPARATION FOR PLANTING LAWNS:

- A. Preparation of unchanged grades: where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Remove existing grass, vegetation, and turf. Spot spray with approved herbicide if weeds are still present. Do not turn existing vegetation over into soil being prepared for lawns.
- B. Remove high areas and fill depressions. Grade soil to a homogeneous mixture of fine texture, free of lumps, clods, stones, roots, and other extraneous matter.
- C. Allow for sod thickness in areas to be sodded.
- D. Apply specified commercial fertilizer at rates specified and thoroughly mix into upper two (2) inches of topsoil. Delay application of fertilizer if lawn planting will not follow within a few days.
- E. Fine grade lawn areas to smooth, even surfaces with loose, uniformly fine texture. Roll, rake, and drag lawn areas, remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.
- F. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
- G. Restore lawn areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to planting.

3.4 EXCAVATION FOR TREES AND SHRUBS:

- A. Excavation pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.
- B. Fill excavations for trees and shrubs with water and allow water to percolate out prior to planting.

3.5 PLANTING TREES AND SHRUBS:

- A. Set plant material stock on layer of compacted soil, plumb and in center of pit or trench with top of ball at same elevation as adjacent finish landscape grades. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.
- B. Dish top of backfill to allow for mulching.
- C. Mulch pits, trenches, and planted areas. Provide not less than the specified thickness of mulch, and work onto top of backfill and finish level with adjacent finish grades.
- D. Prune, thin out, and shape trees and shrubs in accordance with standard horticultural practice. Prune trees to retain required height and spread. Do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character.
- E. Remove and replace excessively pruned or misformed stock resulting from improper

Landscape Specifications (continued)



pruning.

F. Guy and stake trees immediately after planting, as needed. Contractor is responsible for ensuring trees maintain an upright and plumb position.

G. Remove all nursery ties and staking from trees prior to completion of work.

3.6 SODDING NEW LAWNS:

A. Lay sod within 24 hours from time of stripping.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Avoid damage to subgrade or sod. Anchor sod on slopes with wood pegs to prevent slippage, if needed.

C. On slopes, lay sod perpendicular to the direction of the slope. Peg all sod on slopers over 4:1 if slippage occurs. Any slippage is the Contractor's responsibility.

D. Water sod thoroughly with a fine spray immediately after planting.

3.7 PLANTING GROUND COVER:

A. Triangle space groundcover plants as indicated or scheduled.

B. Dig holes large enough to allow for spreading of roots and backfill with planting soil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plant with wet soils.

3.8 MAINTENANCE - PLANTINGS:

A. Begin maintenance immediately after planting.

B. Maintain trees, shrubs, groundcover, and other plants by pruning, cultivating, watering and weeding as required for healthy growth.

C. Restore planting saucers. Tighten and repair stake and guy wire supports and reset trees and shrubs to proper grades of vertical position as required. Spray as required to keep trees and shrubs free of insects and disease. Site should be weed-free at time of substantial completion. An additional inspection will be made at the end of the maintenance period.

3.9 MAINTENANCE - GRASSING:

D. Maintain lawns by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, gradings, and replanting as required to establish a smooth, acceptable lawn, free of eroded, bare, and/or weedy areas.

3.10 CLEANUP AND PROTECTION:

A. During landscape work, keep pavements clean and work area in an orderly condition.

3.11 TREE AND PLANT PROTECTION:

A. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance period. Treat, repair, or replace damaged landscape work as directed.

B. Trees which are to remain in the construction area shall be protected from damage throughout the construction process by the Contractor.

C. Protect the tops, trunks, and roots of existing trees on the project site that are to remain.

D. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any work is started per details in plans. Remove protection only when authorized by Owner/Owner's Representative.

E. Do not permit heavy equipment or stockpiles within branch spread. Remove interfering branches without injury to trunks. All roots of trees to remain that are immediately adjacent to extensive excavation shall be exposed by hand digging and hand cut or sawn cleanly, avoiding any stripping of bark. Cover all exposed roots immediately to avoid drying out.

3.12 BARRIERS:

A. Preserve and protect existing trees and plants at the site which are designated to remain and those adjacent to the site.

B. Consult with Owner/Owner's Representative and remove agreed upon roots and branches which interfere with construction. Employ an ISA Certified Arborist to remove any necessary branches or roots.

C. Provide temporary barriers per tree barricade detail around each tree as per the drawings.

D. Protect root zones of trees and plants:

1. Do not allow vehicular traffic or parking.

2. Do not store materials or products.

3. Prevent dumping of refuse or chemically injurious materials or liquids.

4. Prevent puddling or continuous running water.

E. Carefully supervise excavating, grading, and filling and subsequent construction operations to prevent damage.

F. Replace or suitably repair trees and plants designated to remain which are damaged or destroyed due to construction operations.

3.13 BARRICADE REMOVAL:

A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by Owner/Owner's Representative.

B. Clean and repair damage caused by installation. Fill and grade the areas of the site to required elevations and slopes, and clean the area.

3.14 INSPECTION AND ACCEPTANCE:

A. When landscape work is completed, including maintenance, Owner/Owner's Representative will, upon request, make an inspection to determine acceptability.

B. Landscape work may be inspected for acceptance in portions as agreeable to Owner/Owner's Representative, provided each portion of the work offered for inspection is complete, including maintenance.

C. When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by Owner/Owner's Representative and found to be acceptable. Remove rejected plants and materials promptly from project site.

END OF SECTION