DOS2018-00007 Lee County ePlan

# WILDBLUE SOUTHWEST

### CODE MINIMUM LANDSCAPE PLANS FOR:

PART OF SECTION 17-20 TOWNSHIP 46 SOUTH, RANGE 26 EAST FORT MYERS, LEE COUNTY, FLORIDA

## TABLE OF CONTENTS

SHEET	DESCRIPTION
CM	REFERENCE PLAN
CM1	CODE MINIMUM LANDSCAPE PLAN
CM2	CODE MINIMUM LANDSCAPE PLAN
CM3	CODE MINIMUM LANDSCAPE PLAN
△CM4	CODE MINIMUM LANDSCAPE PLAN
<sup>∕</sup> 2CM5	CODE MINIMUM LANDSCAPE PLAN
CM6	CODE MINIMUM LANDSCAPE PLAN
CM7	CODE MINIMUM LANDSCAPE PLAN
<sup>△</sup> CM8	CODE MINIMUM LANDSCAPE PLAN
△CM9	CODE MINIMUM LANDSCAPE PLAN
	CODE MINIMUM NOTES AND CALCULATIONS

VEGETATION PERMIT REQUIRED
PRIOR TO ANY SITE WORK
Protective barricades must be constructed and inspected prior to permit issuance. Please contact Division of Environmental Sciences (239) 533-8389.

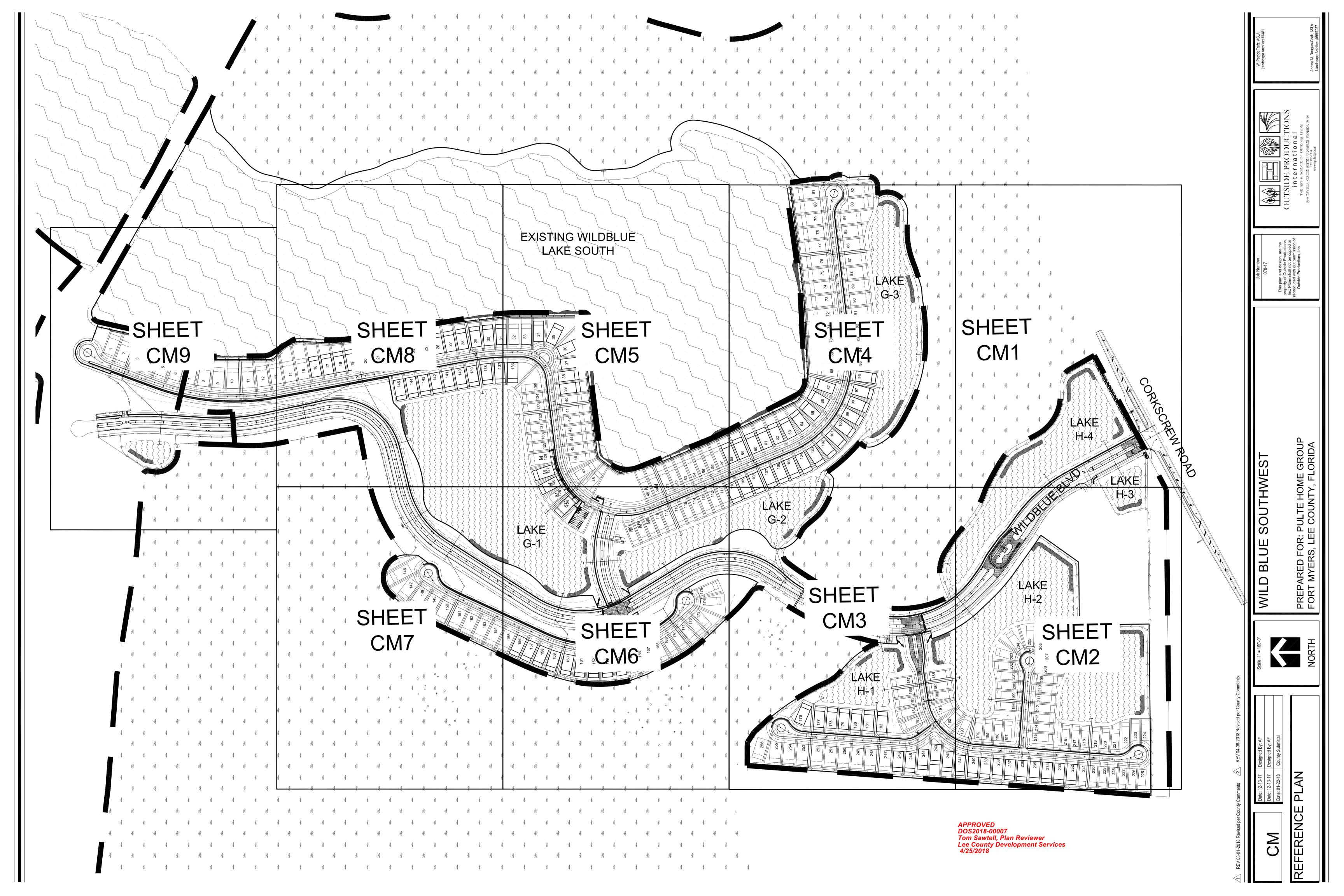
APPROVED
DOS2018-00007
Tom Sawtell, Plan Reviewer
Lee County Development Services
4/25/2018

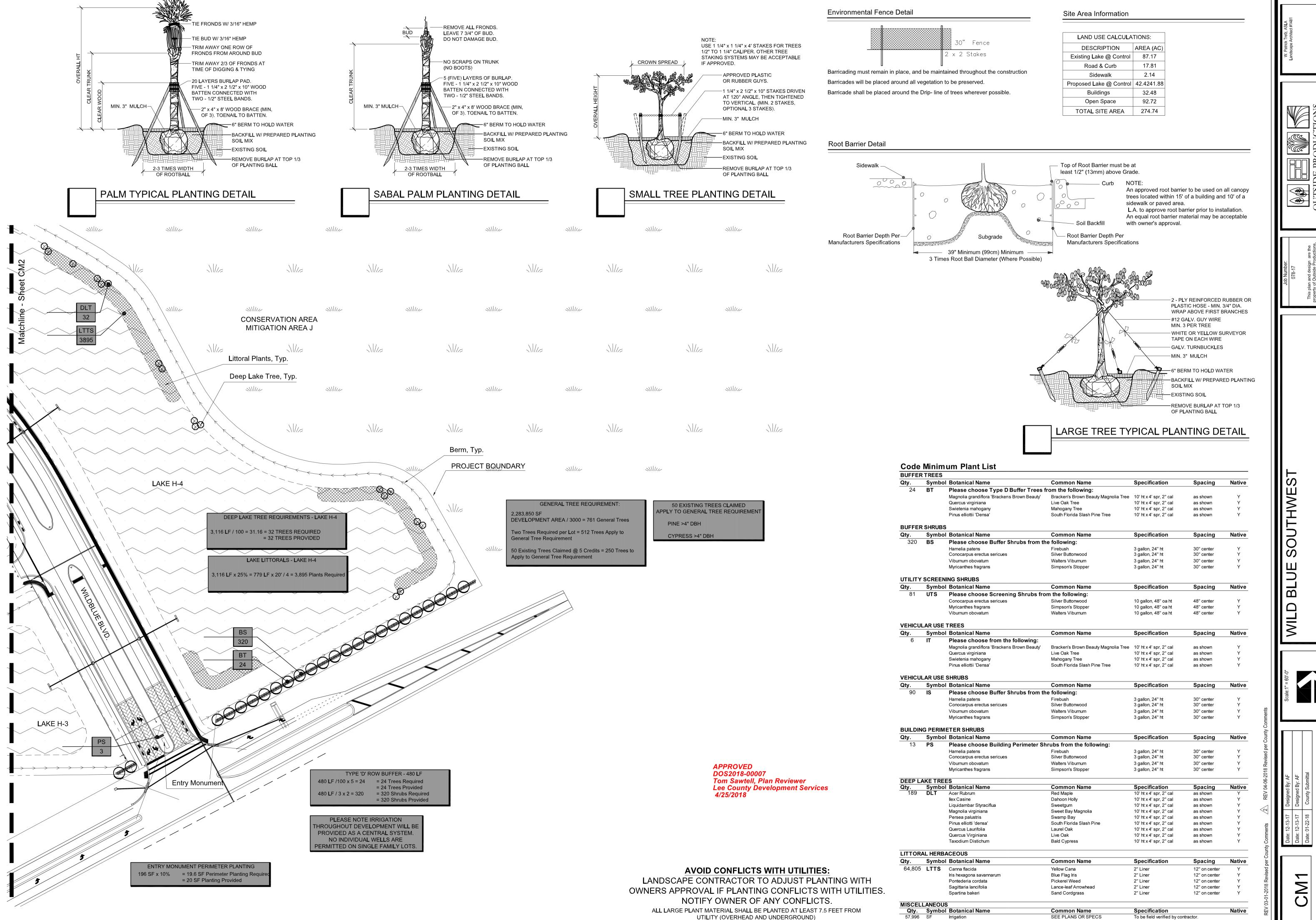
BLUE SOUTHWEST

ined By: AF ined By: AF ty Submittal

Date: 12-13-17 Designed By: AF
Date: 12-13-17 Designed By: AF
Date: 01-22-18 County Submittal

OVER



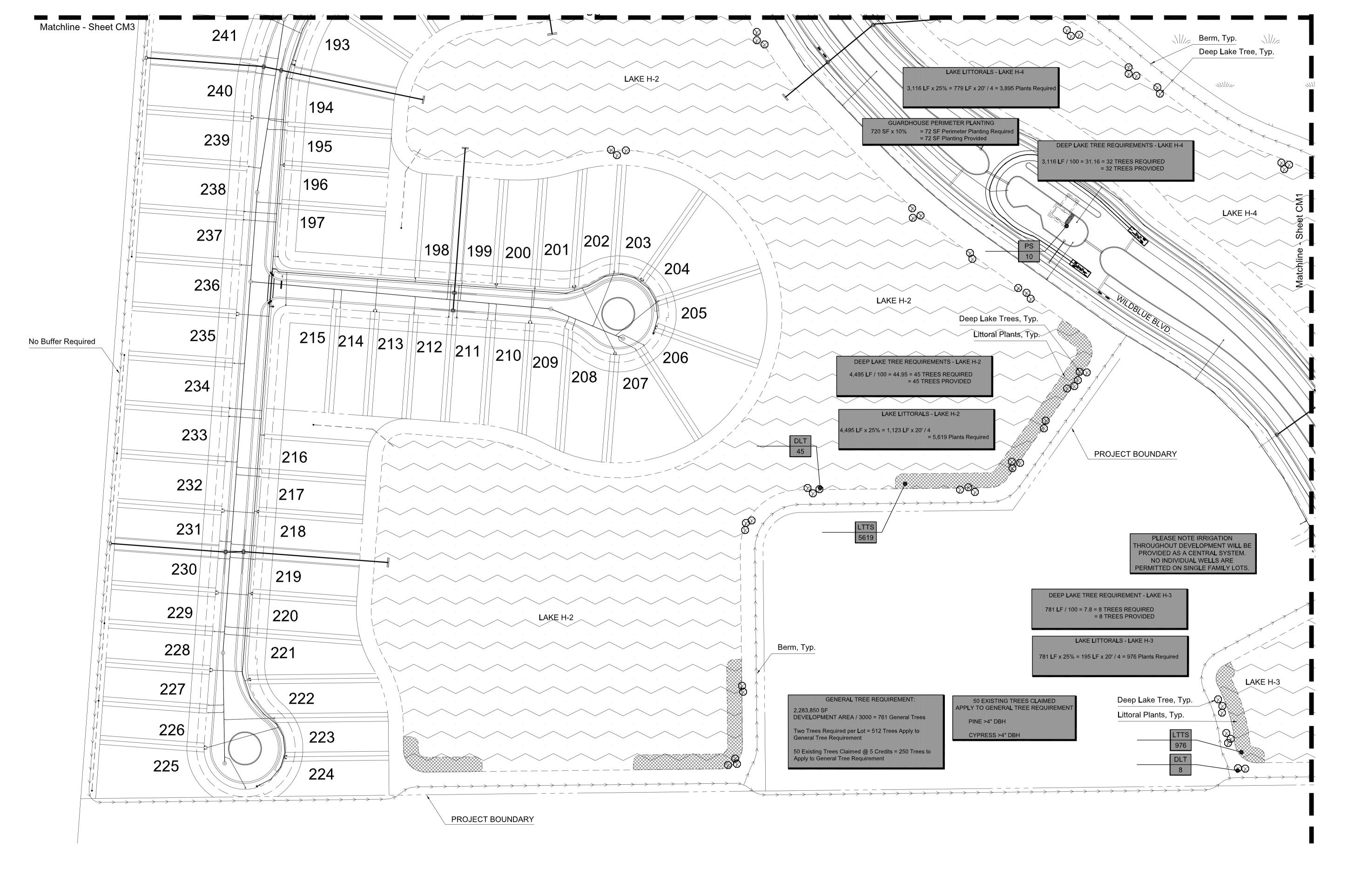


57,996 SF

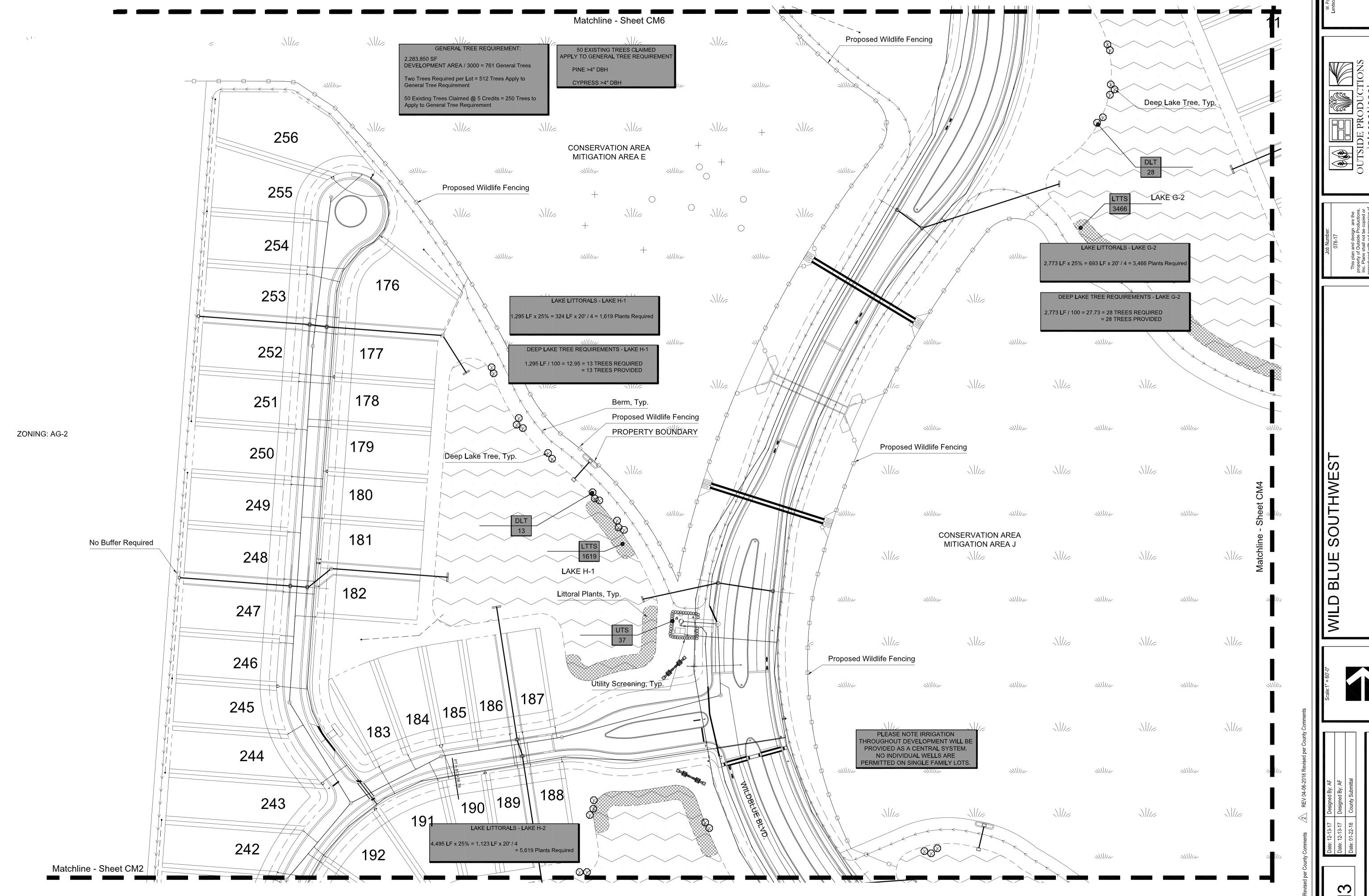
Mulch

2" thick

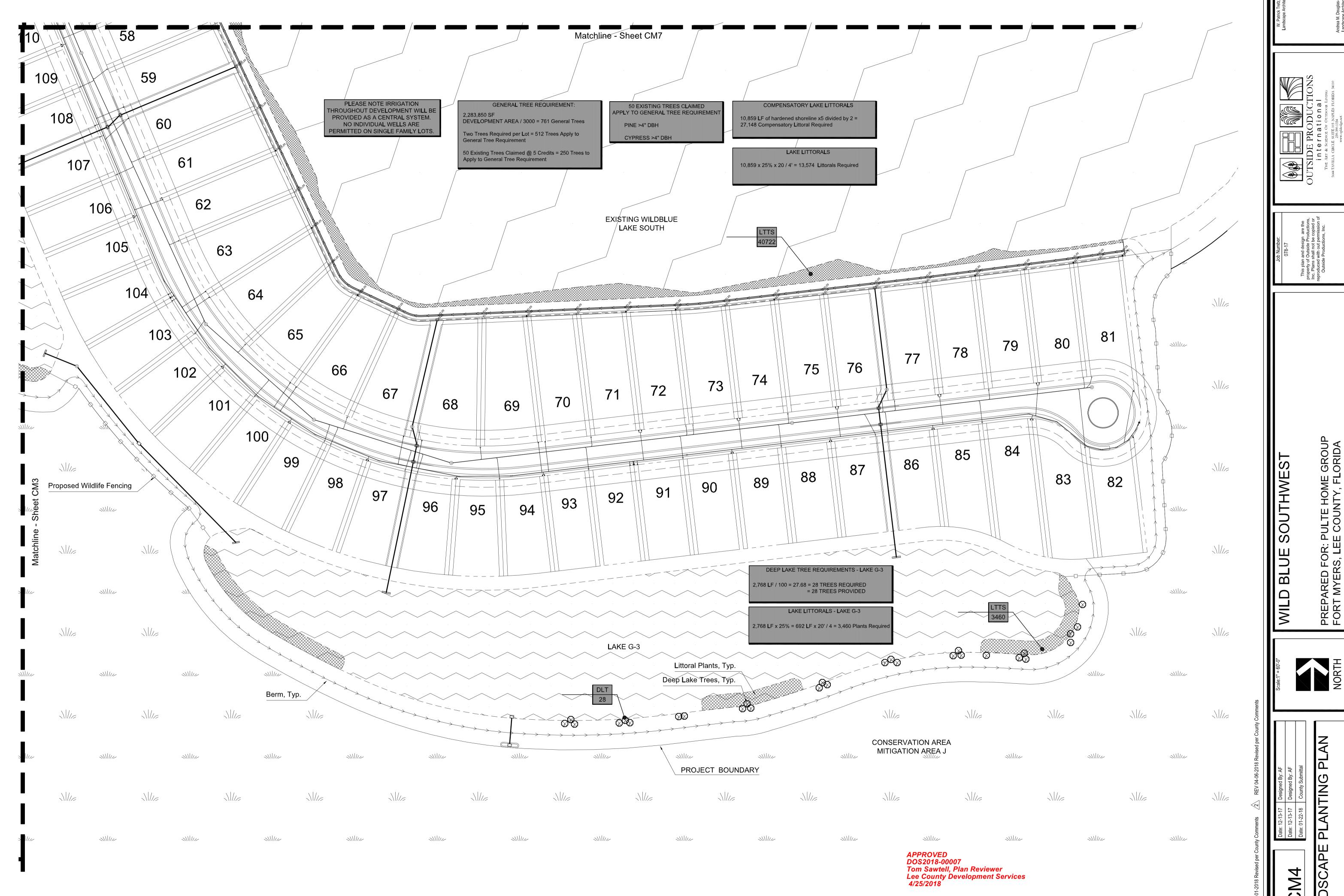
Pine Straw

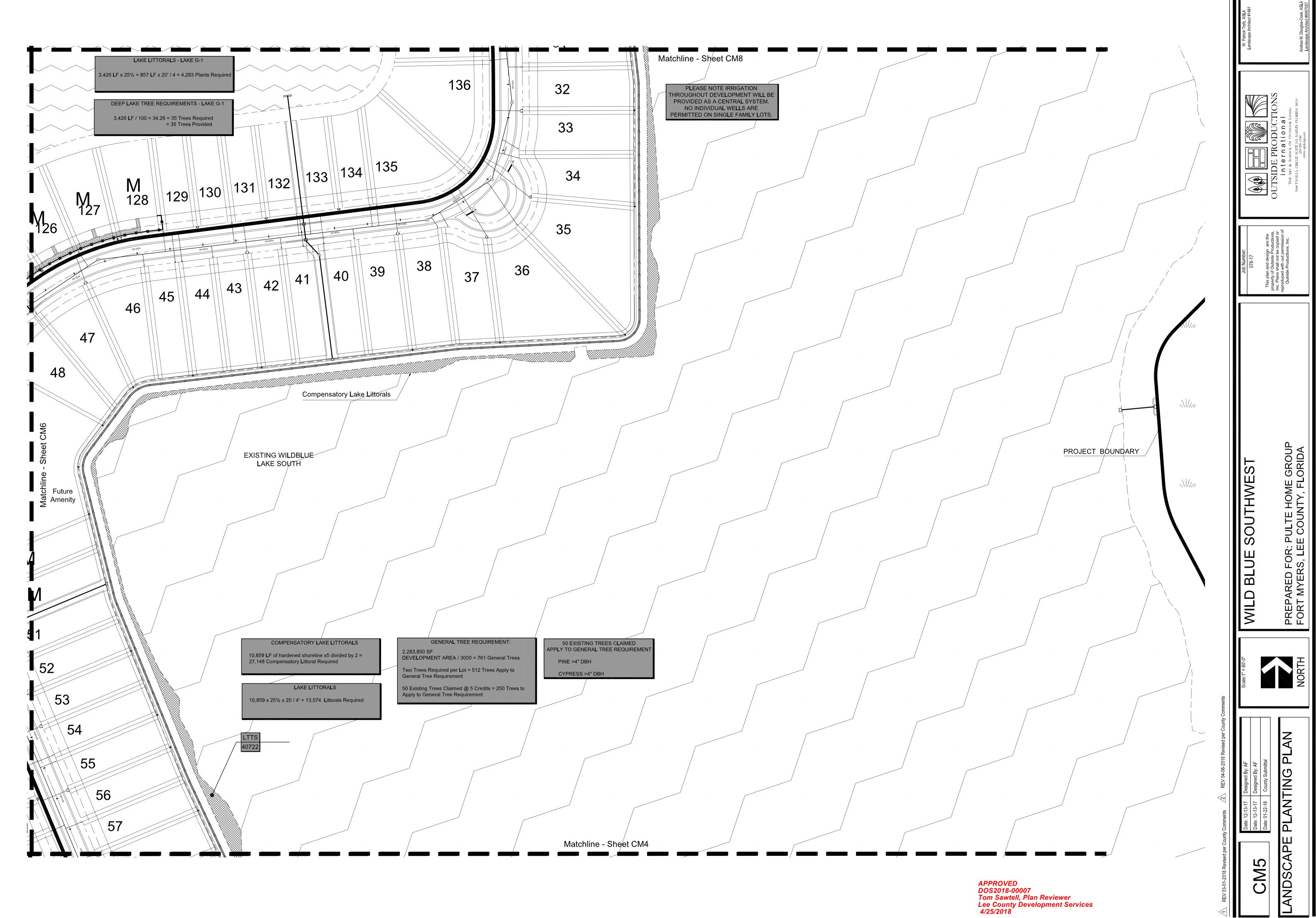


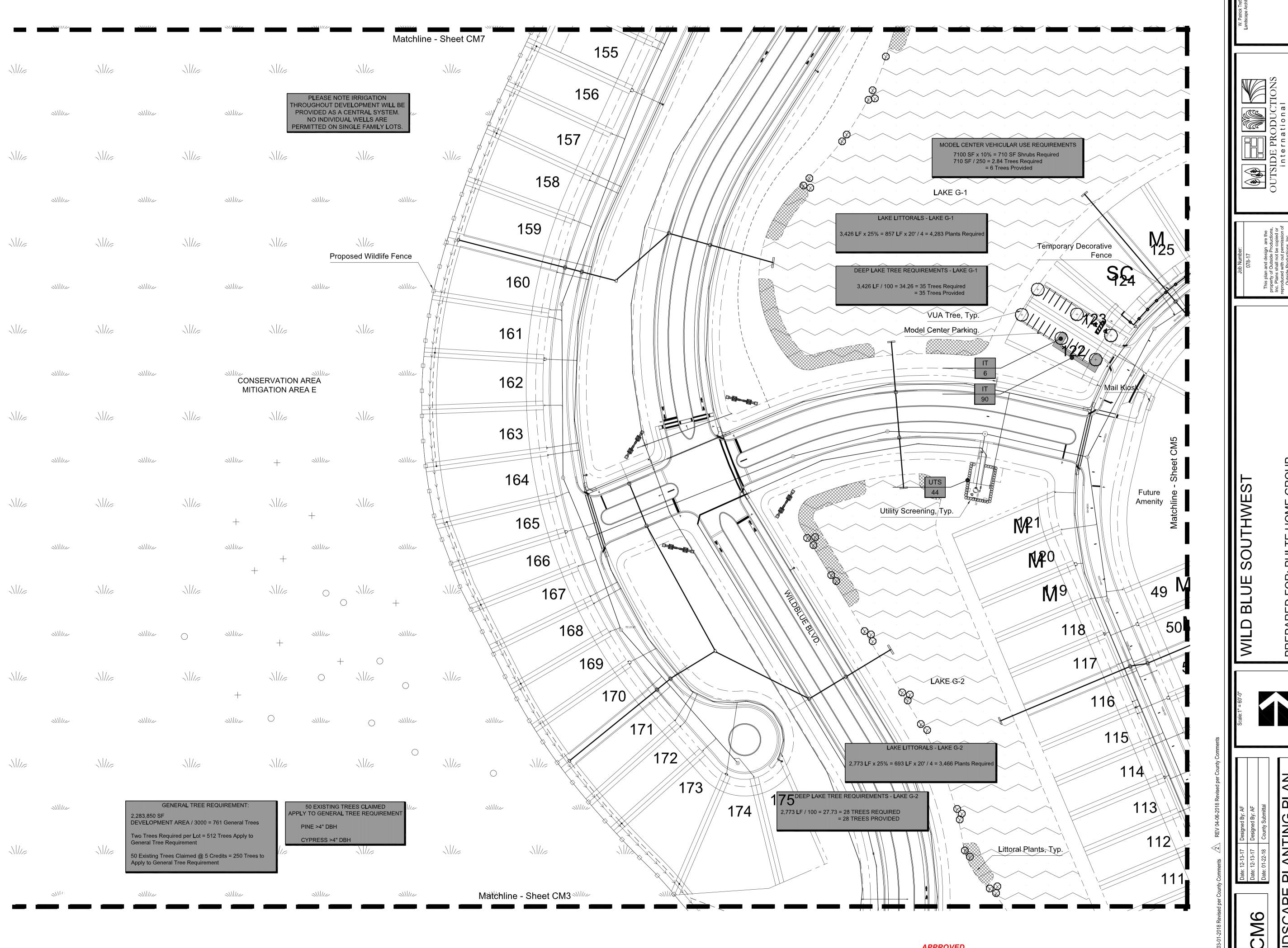
**APPROVED** DOS2018-00007 Tom Sawtell, Plan Reviewer Lee County Development Services 4/25/2018



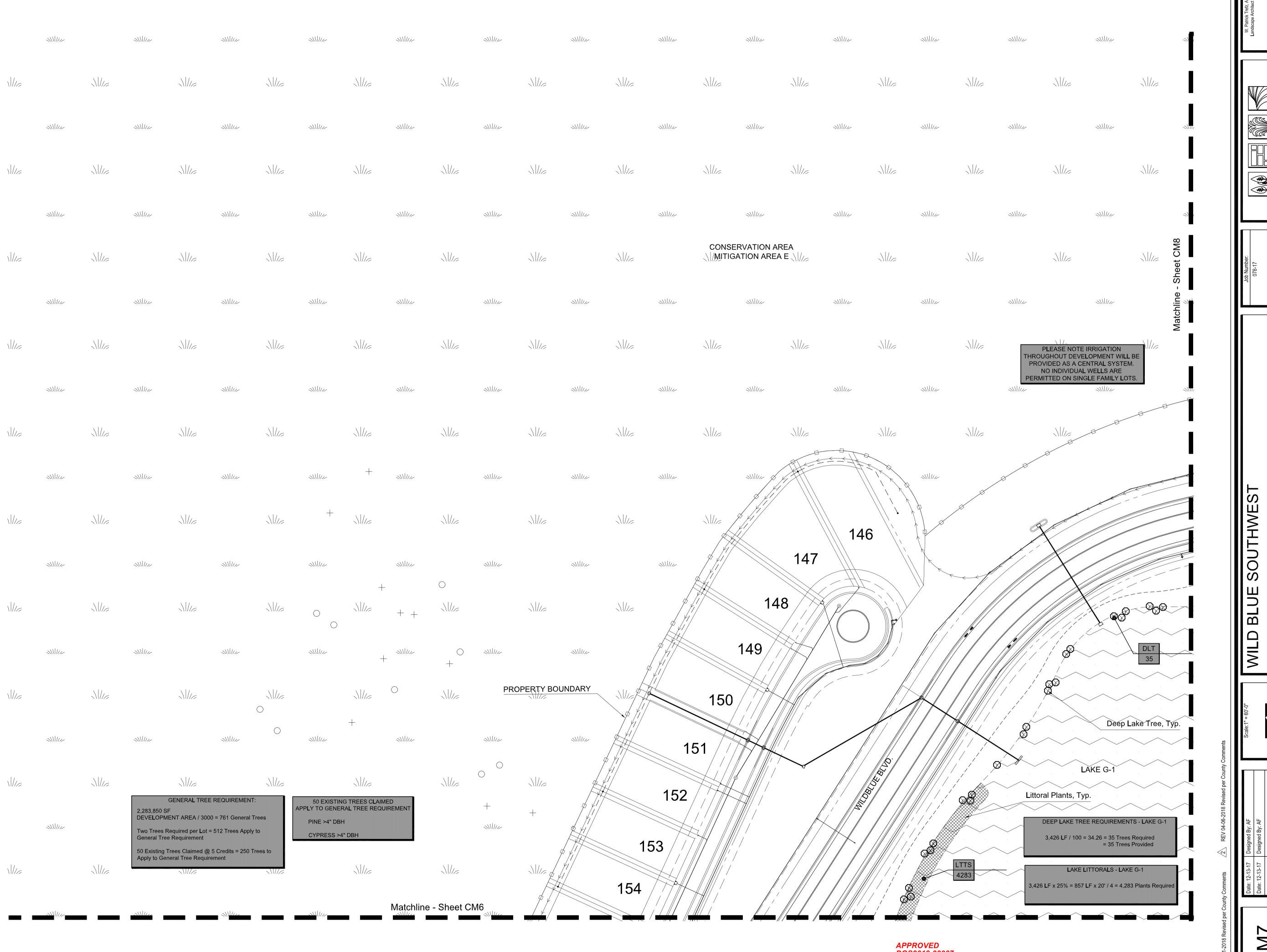
APPROVED
DOS2018-00007
Tom Sawtell, Plan Reviewer
Lee County Development Services
4/25/2018



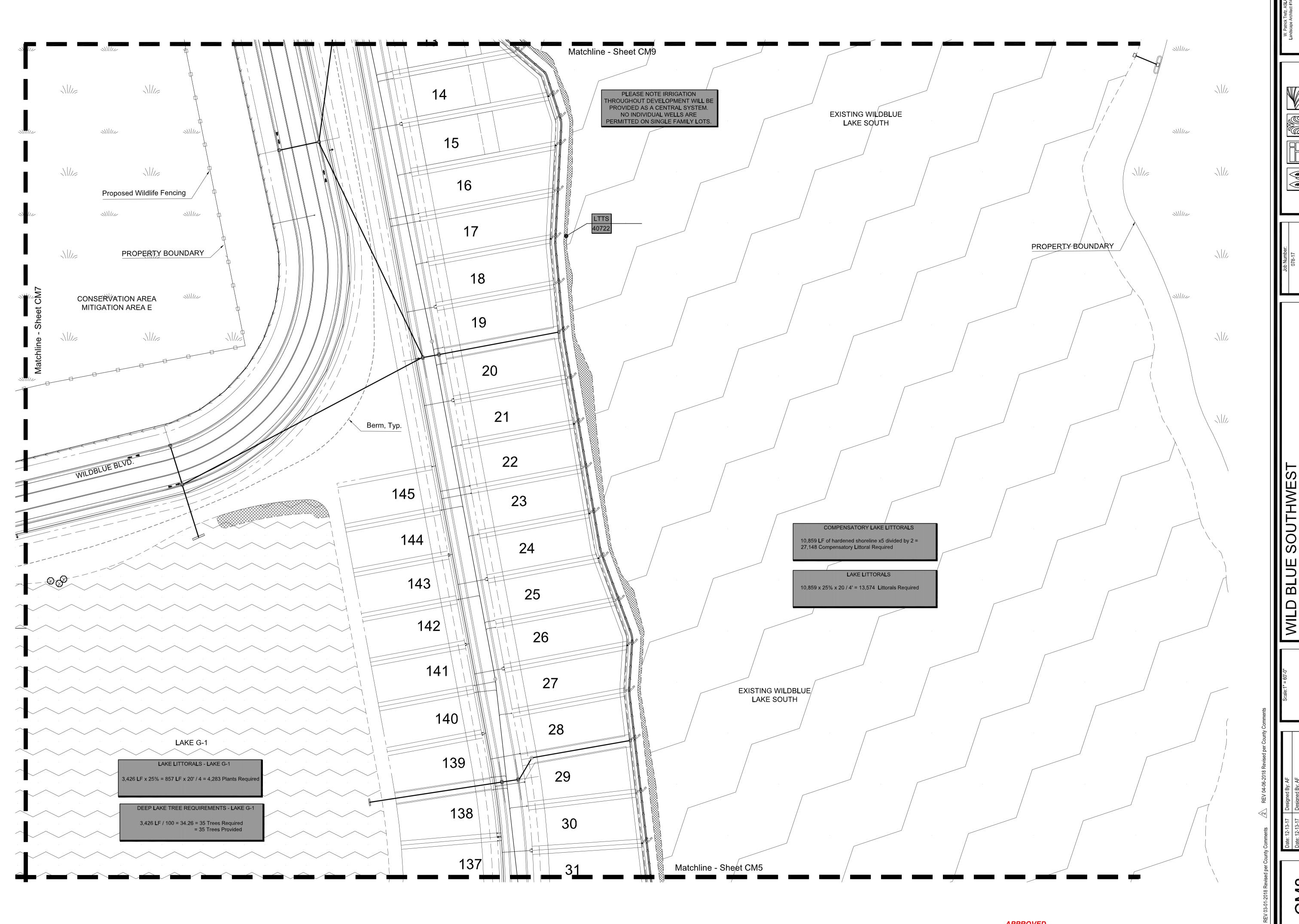




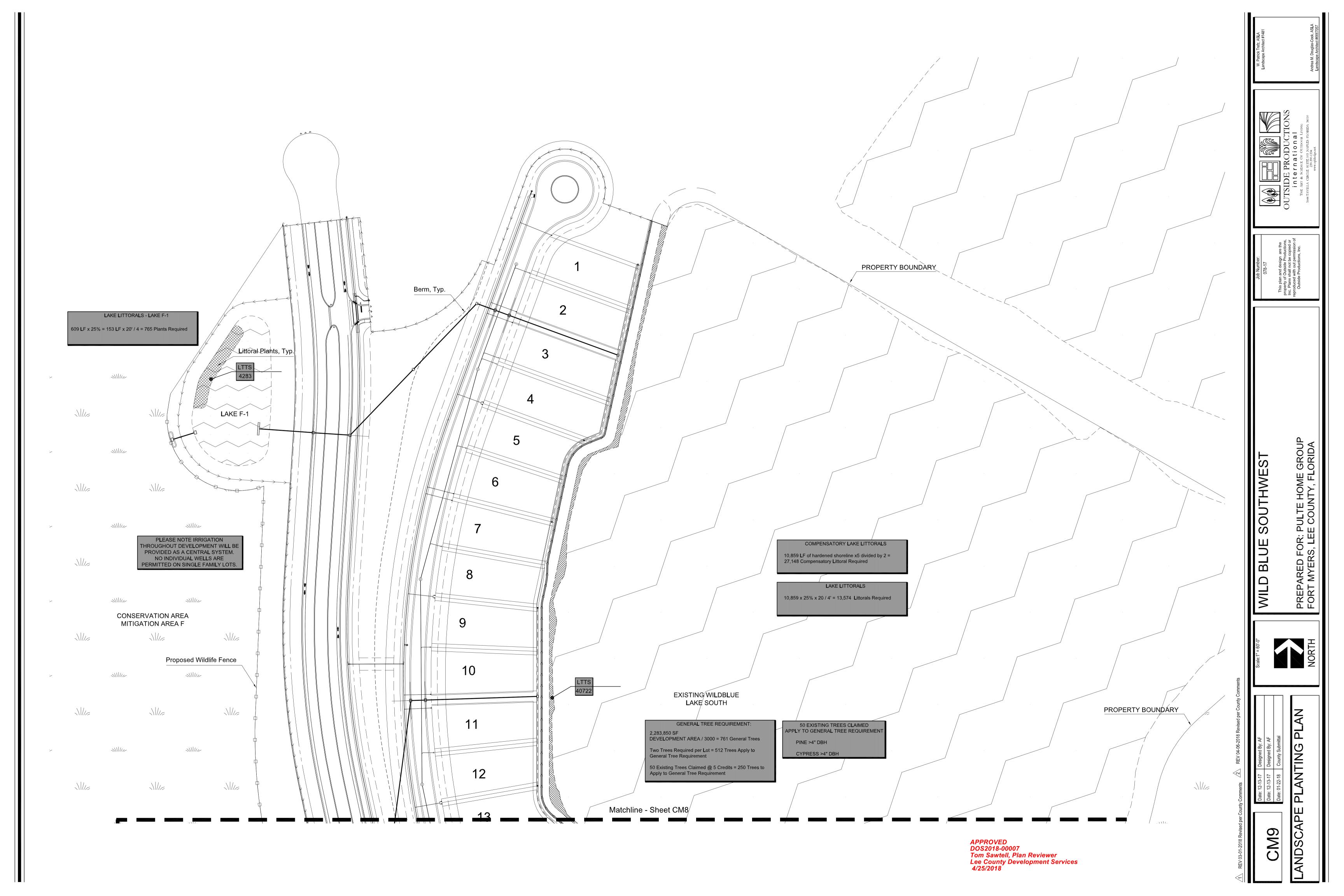
APPROVED DOS2018-00007 Tom Sawtell, Plan Reviewer Lee County Development Services 4/25/2018



APPROVED
DOS2018-00007
Tom Sawtell, Plan Reviewer
Lee County Development Services
4/25/2018



APPROVED
DOS2018-00007
Tom Sawtell, Plan Reviewer
Lee County Development Services



#### Section 10-415. Open space.

(a) Open space calculations. All development must contain the minimum percentage of open space as outlined in the following table below:

Percent of Open Space Required: SEE LAND USE TABULAR ON SHEET CM2

(b) Indigenous native vegetation and trees.

(1) Preservation.

a. Large developments, with existing indigenous native vegetation communities must provide 50 percent of their open space percentage requirement through the onsite preservation of existing native vegetation communities. Refer to section 10-701

b. If the development area does not contain existing indigenous native vegetation communities, but does contain existing indigenous native trees, then 50 percent of their open space percentage requirement must be met through the onsite preservation of existing native trees consistent with subsection 1 through 4 below. Refer to Appendix E and section 34-373(6)(g).

1. Preservation of indigenous tree clusters is preferred over individual tree protection. Reasonable efforts to retain individual trees must be made. It is recognized that site design requirements (e.g. fill) may limit the ability to retain some individual trees, and in that case the county will allow the removal of those trees.

2. Sabal palms may be relocated in a horticulturally correct manner and clustered within open

3. Native trees (four to 15-inch caliper dbh) may be relocated to open space areas when proper horticultural methods (e.g. root pruning; use of antitranspirants) are utilized to insure the survivability of the trees, and a vegetation removal permit is obtained.

4. Effort must be made to preserve heritage trees (live oak, South Florida slash pine, or longleaf pine with minimum 20-inch caliper dbh). If a heritage tree must be removed from a site then a replacement tree with a minimum 20-foot height must be planted within an appropriate open space area.

c. A minimum setback of 20 feet from buildings is required. For indigenous plant communities subject to fire, such as pine flatwoods, palmetto prairie and xeric scrub, a 30-foot setback is required for fire

(2) Salvaging existing native plants. Open space areas must be designed to incorporate as many of the existing large native trees and sabal palms as possible. Irrigation water must be available on the development site and provisions for adequate irrigation provided.

a. Sabal palms. Healthy sabal palms with a minimum eight-foot clear trunk must be salvaged if conditions (e.g., no rock) and sequence of construction allows. If sequence of construction does not allow the on-site relocation of sabal palms, then the sabal palms must be salvaged for an off-site recipient site or sale. The salvage efforts must be coordinated with the division of

environmental sciences staff whether used on-site or otherwise. The number of sabal palms to be relocated or salvaged must be shown on the landscape plan approved as part of the development order. Any sabal palms being relocated must be moved in a horticulturally correct manner per Lee County Extension Services brochure Lee 8/2000A. A 90 percent survival for relocated sabal palms is required. Death of over ten percent of the relocated sabal palms

will require a 1:1 replanting. b. Other trees. Healthy native trees with a minimum caliper of four inches at four and one-half feet above the ground (dbh) may be relocated onsite for five tree credits toward code required landscaping. The trees must be properly prepared for relocation through root pruning or other

horticulturally correct methods approved by the environmental sciences director.

a. For all developments with required open space, except single-family subdivisions with individual lot area of 6,500 square feet or greater and a maximum lot coverage of 45 percent, an incentive to preserve indigenous native upland plant communities or indigenous native trees in large tracts, a scaled open space credit for single contiguous preserve areas will be granted.

b. An additional, maximum ten percent credit will be granted if any of the following are included: 1. Rare and unique uplands as defined by the Lee Plan.

2. Connection to offsite public or private environmental conservation or preserve areas. 3. Upland buffers to natural waterbodies

4. Preservation adjacent to a roadway.

5. Restoration of native shrubs, grasses, and/or groundcover plants with the native tree preservation area. A minimum planting size of one gallon plant, installed on three foot centers (three-foot o.c.). (4) Maintenance. A plan must be submitted for the long term maintenance of vegetation in indigenous open space areas. This indigenous vegetation management plan must include the following criteria:

a. Method and frequency of pruning and trimming. b. Methods to remove and control all exotic and nuisance plants in perpetuity.

c. Debris removal.

d. Protected species management plan conditions.

e. Drafts of educational materials (signage and brochures) to be provided to the residents about the purpose and function of these areas.

f. Monitoring reports, including photos, that narratively document preserve area conditions must be submitted to obtain development order approval; and, again after project construction in order to obtain a certificate of compliance (CC). The CC monitoring report must describe and document ecological restoration activity that has occurred in the preserve areas. If review of the monitoring reports reveals death or significant decline to preserve vegetation, then revision of the management plan and restoration in accord with section 10-423 will be required.

(c) Minimum dimensions.

(1) The minimum average width of open space areas must be ten feet. (2) The minimum area of open space must be 180 square feet.

(3) For projects under ten acres in size, indigenous open space areas must have a minimum average width of 20 feet and minimum area of 400 square feet. For projects over ten acres in size, indigenous open space areas must have a minimum average width of 40 feet and minimum area

of 1,500 square feet. The average minimum width may be reduced to 30 feet when the preserve is

(4) Open space preservation areas must be designed with adequate widths to preserve and allow the continued growth and viability of existing native trees.

(5) Native tree preservation areas must extend to the full drip line of slash pine, three quarter drip line for all canopy type trees, and six feet from the trunk of any native palm, or other protective means, such as retaining walls, must be provided. Except for work related to approved ecological restoration activities, no filling, grading or excavating is allowed in open space preservation areas.

(6) Surface water management systems may overlap with native tree preservation areas only where it can be clearly demonstrated that the effects of water management system construction or operation will not cause death or harm to the preserve tree and indigenous plant community of protected species. Use of open space.

(1) Open space areas must be landscaped in accordance with this division.

(2) The following uses may contribute to the open space requirements provided the minimum dimensions

a. Buffers and landscaped areas in off-street parking areas, except for areas reserved for future parking spaces pursuant to section 34-2017(d);

b. Dry detention areas. c. Existing or proposed bodies of water, including stormwater management areas and areas subject to saltwater inundation, which may be used to offset up to a maximum of 25 percent of the required

d. Active and passive recreation areas such as playgrounds, golf courses, beach frontage, nature trails, bikeways, pedestrian ways, tennis courts, swimming pools and other similar open spaces, as long as not more than 20 percent of the recreational area credited as open space consists of i

e. Outdoor active and passive public use areas such as plazas, atriums, courtyards and other similar public spaces, which may be used to offset up to a maximum of 20 percent of the required open

f. Archaeological sites or zones that are designated as significant historic resources pursuant to

g. Removal of native vegetation from indigenous open space areas by mechanical or chemical means is prohibited unless specified by the indigenous vegetation management plan.

### Section 10-416. Landscape standards.

(a) General. Landscaping for all new developments, except community and regional parks as defined in the Lee Plan, must include, at a minimum, the following number of trees, in addition to the landscaping required for parking and vehicle use areas and buffers. General tree requirements may be reduced through the utilization of larger trees as specified in section 10-420(c)(2) or through use of an alternative landscape betterment plan (see section 10-419). Existing waterbodies within the development area will not be included in the calculation for general tree requirements.

General Tree Calculation:

2,283,850 SF of Development Area / 3000 = 761 Required General Trees 512 Lot Trees Provided + 50 Existing Trees @ 5 Tree Credits = 761 General Trees Provided

(1) Single-family residence developments that are constructed on individual (single) lots. One tree must be provided per 3,000 square feet of development area, which must include a minimum of two trees per single-family lot installed prior to issuance of the certificate of occupancy.

(2) All other residential developments. All other residential developments must provide one tree per 3,000 square feet of development area. (3) Recreational vehicle developments. One tree must be provided per 3,000 square feet of development area.

(4) All other developments. One tree must be provided per each 3,500 square feet of development area. b) Building perimeter plantings. Applicable to this project: YES

**GUARDHOUSE BUILDING PERIMETER:** ENTRY MONUMENT BUILDING PERIMETER 720 SF x 10% = 72 SF SHRUBS REQUIRED

All new development in commercial zoning districts and commercial components of planned development districts and DRIs must provide building perimeter plantings equal to ten percent of the proposed building gross ground level floor area. These planting areas must be located abutting three sides of the building with emphasis on the sides most visible to the public, not including the loading area. The perimeter planting areas must consist of landscape areas, raised planters or planter boxes that are a minimum of five feet wide. These landscape areas must include shrubs and ground cover plants with a minimum of 50 percent coverage of the landscape area at the time of planting. Shrubs must meet the size requirements of section 10-420(d). General trees may be planted within the building perimeter planting areas, especially effective are clusters (three or more) of sabal palms. Turfgrass is discouraged and is limited to ten percent of the landscape area. Water management areas may not be a part of this five-foot planting area. Pedestrian access ways may cross and loading areas may be placed in the perimeter planting area, but may not be used to meet minimum planting area or open space reauirements.

(c) Landscaping of parking and vehicle use areas. The provisions of this section apply to all new off-street parking or other vehicular use areas. Existing landscaping that does not comply with the provisions of this code must be brought into conformity, to the maximum extent possible, when: the vehicular use area is altered or expanded except for restriping of lots/drives, the building square footage is changed, or the structure has been vacant for a period of one year or more and a request for an occupational license to resume business is made. Consistent with the provisions of section 10-104, the director may permit administrative deviations where a conflict exists between the application of this division and the requirements for

the number of off-street parking spaces or area of off-street loading facilities. (1) Vehicular overhang of landscape areas. The front of a vehicle may overhang any landscaped area a maximum of two feet, provided the landscaped area is protected by motor vehicle wheel stops or curbing. Two feet of such landscaped area or walkway may be part of the required depth of each abutting parking space. Walkways must be designed with a minimum of five feet width that is clear of any vehicle overhang.

(2) Internal landscaping. All parking areas must be internally landscaped to provide visual relief and cooling effects and to channelize and define logical areas for pedestrian and vehicular circulation, as follows:

a. Trees must be planted or retained in landscaped areas in parking areas, including landscaped areas reserved for future parking spaces, to provide for canopy coverage when the trees mature. At least one canopy tree or a cluster of three sabal palms must be planted or retained for every 250 square feet of required internal planting area, and no parking space may be more than 200 feet from a tree planted in a permeable island, peninsula or median of 18-foot minimum width. Canopy requirements must be met with existing indigenous native trees whenever such trees are located within the parking area.

b. Landscaped areas on the parking area perimeter or internal islands must equal or exceed a minimum of ten percent of the total paved surface area. Landscaped areas reserved for future parking spaces pursuant to section 34-2017(d) may not be included in this calculation.

MODEL CENTER PARKING VEHICULAR USE REQUIREMENTS 7100 SF x 10% = 710 SF Shrubs Required 710 SF / 250 = 2.84 Trees Required

= 6 Trees Provided

c. The minimum average dimension of any required internal landscaped area must be ten feet for project less than ten acres and 18 feet for projects ten acres or larger.

(d) Buffering adjacent property. Buffering and screening applies to all new development. Existing landscapes that do not comply with the provisions of this section must be brought into conformity to the maximum extent possible when: the vehicular use area is altered or expanded, except for restriping of lots/drives, the building square footage is increased, or there has been a discontinuance of use for a period of one year or more and a request for an occupational license to resume business is made.

= 320Shrubs Provided

Buffer Requirements:

SOUTH BOUNDARY BUFFER - TYPE 'D' ROW BUFFER 480 LF / 100' x 5 = 24 Trees = 24 Trees Required

= 24 Trees Provided 480 LF / 3 x 2 = 320 Shrubs = 320 Shrubs Required

(1) General. A buffering area is required along the entire perimeter of the proposed development whenever the proposed development abuts a different use. The existing use or, where vacant, the permitted use, of the abutting property will determine the type of buffering area required for the proposed development. Buffer areas may not be located on any portion of an existing or dedicated street right-of-way or roadway easement except that buffers may be located within slope easements as long as appropriate planting soils provided in the slope. Variances or deviations from this requirement are prohibited.

(5) Public and quasi-public facilities, including, but not limited to, places of worship, parks, utility facilities, government offices, neighborhood recreational facilities and private schools must provide a type C buffer if, in the opinion of the director, the proposed development will have a significantly adverse impact on adjacent existing residential uses. If roads, drives, or parking areas are located less than 125 feet from an existing single-family residential

or single-family residential lots, a solid wall or combination berm and solid wall not less than eight feet in height must be constructed not less than 25 feet from the abutting property and landscaped (between the wall and the abutting property) with a minimum of five trees and 18 shrubs per 100 lineal feet or a 30-foot wide Type F buffer with the hedge planted a minimum of 20 feet from the abutting property. Where residences will be constructed between the road, drive or parking area and the existing residential subdivision or lots, the wall or wall and berm combination are not required. (10) All freestanding parking areas, whether commercial, public or private, not associated with other development must provide a D type buffer for the right-of-way and C type buffer if they abut single-family residential or multiple-family

#### Section 10-417. Irrigation design standards.

To improve the survivability of required landscaping, cultivated landscape areas must be provided with an automatic irrigation system. All required irrigation systems must be designed to eliminate the application of water to impervious areas, including roads, drives and other vehicle areas. Required irrigation must also be designed to avoid impacts on existing native vegetation.

All new developments that have required landscaping must be irrigated by the use of an automatic irrigation system with controller set to conserve water. Moisture detection devices must be installed in all automatic sprinkler systems to override the sprinkler activation mechanism during periods of increased rainfall. Where existing irrigation systems are modified requiring the acquisition of a permit, automatic activation systems and overriding moisture detection devices must be

#### Section 10-418. Surface water management systems.

Shoreline configuration of surface water management lakes or ponds. Shorelines must be sinuous in configuration to provide increased length and diversity of the littoral zone. Sinuous is defined as serpentine, bending in and out, wavy or

Planted littoral shelf (PLS). The following features are considered sufficient to mimic the function of natural systems, improve water quality and provide habitat for a variety of aquatic species, including wading birds and other waterfowl. a.Size requirements. The PLS shoreline length must be calculated at 25 percent of the total linear feet of the lake at

b.Location criteria. 1. The PLS should be concentrated at one location of the lake, preferably adjacent to a preserve area, to maximize its habitat value and minimize maintenance efforts. The required PLS may be divided and placed in multiple locations as long as no PLS area is smaller than 1,000 square feet. Whenever possible, the PLS must be located away from

residential lots to avoid maintenance and aesthetic conflicts with residential users. 2. The PLS may be located adjacent to control structures and pipe outlets or inlets to maximize water quality benefits and

3.If contained within a lake the PLS must function as a typical freshwater marsh in ponds with slopes from 6(H) to 1(V) to not more than 4(H) to 1(V).

c.Shelf configuration. 1. The PLS must be designed to include a minimum of a 20 foot wide littoral shelf extending waterward of the control elevation at a depth of no greater than two feet below the control elevation.

2.A detailed cross section of the PLS must be depicted on the approved development order plan. 1.Herbaceous plants must be selected based upon the expected water level fluctuations and maximum water depths in which the selected plants will survive. The PLS areas must be planted with at least four different native herbaceous plant

2.Plant calculations. The required number of herbaceous plants is calculated based upon placement spaced two foot on center for the total area encompassed by the PLS. The PLS must be planted with minimum two-inch liner container

The total number of plants for the PLS may be calculated by taking the total linear feet of shoreline multiplied by 25 percent, then multiplied by the 20-foot wide shelf and divided by four to obtain the two-foot on center spacing. 3. Native wetland trees may be substituted for up to 25 percent of the total number of herbaceous plants required. One tree (minimum ten-foot height; 2 inch caliper, with a four-foot spread) may be substituted for 100 herbaceous plants. Trees must meet the minimum standards set forth in section 10-420.

(3) Bulkheads, geo-textile tubes, riprap revetments or other similar hardened shoreline structures. Bulkheads, geo-textile tubes, riprap revetments or other similar hardened shoreline structures may comprise up to 20 percent of an individual lake shoreline. These structures cannot be used adjacent to single-family residential uses. A compensatory littoral zone equal to the linear footage of the shoreline structure must be provided within the same lake meeting the following

a.A five-foot wide littoral shelf planted with herbaceous wetland plants. To calculate the littorals for this shelf design indicate the number of linear feet of shoreline structure multiplied by five feet for the littoral shelf width divided by two to

obtain the required plant quantity; or b.An equivalent littoral shelf design as approved by the Director.

(4) Restoration of existing bank slopes that have eroded over time and no longer meet the minimum littoral design criteria applicable at the time the lakes were excavated will be in accordance with section 10-329(f). LITTORAL PLANTINGS Compensatory Littoral Planting for Existing Blue Lake South

10,859 LF x 25% x 20/4' = 13,574 Littoral Plants Required

10,859 LF x 5 / 2 = 27,148 Littoral Plants Required 1,295 LF Shoreline x 25% = 324 LF x 20' / 4 = 1,619 Plants Required 1,295 LF / 100 = 12.95 = 13 Trees Required General Littoral Planting for Existing Blue Lake South

4,495 LF Shoreline x 25% = 1,123 LF x 20' / 4 = 5,619 Plants Required 4,495 LF / 100 = 44.95 = 45 Trees Required

781 LF Shoreline x 25% = 195 LF x 20' / 4 = 976 Plants Required 781 LF / 100 = 7.81 = 8 Trees Required

LAKE H-4 3,116 LF Shoreline x 25% = 779 LF x 20' / 4 = 3,895 Plants Required 3,118 Lf / 100 = 31.18 = 32 Trees Required

3,426 LF Shoreline x 25% = 857 LF x 20' / 4 = 4,283 Plants Required 3,426 LF / 100 = 34.26 = 35 Trees Required

609 LF Shoreline x 25% = 152 LF x 20' / 4 = 765 Plants Required

LAKE G-2 2,773 LF Shoreline x 25% = 693 LF x 20' / 4 = 3,466 Plants Required 2,773 LF / 100 = 27.73 = 28 Trees Required

2.768 LF Shoreline x 25% = 692 LF x 20' / 4 = 3.460 Plants Required 2,768 LF / 100 = 27.68 = 28 Trees Required LAKE F-1

Section 10-419. Alternate landscape betterment plan.

Applications pursuant to this division are entitled to demonstrate that the intent of this division can be more effectively accomplished through an alternate landscape betterment plan. Alternative, creative designs are encouraged for difficult sites for landscape design, such as "in-fill" and irregularly shaped parcels. The following

(1) The plan may not deviate from the minimum open space requirements of section 10-415.

(2) The plan must be labeled as an alternate landscape betterment plan, and delineate, identify and locate all changes to the requirements of this division.

(3) 100 percent of the required trees installed must be native species. (4) The plan must designate the location of all plant material to be installed.

(5) The proposed alternate landscape betterment plan must exceed the intent of the minimum landscape requirements.

Section 10-420. Plant material standards.

(a) Quality. Plant materials used to meet the requirements of this division must meet the standards for Florida No. 1 or better, as set out in Grades and Standards for Nursery Plants, Parts I and II, Department of Agricultural, State of Florida (as amended). Root ball sizes on all transplanted plant materials must also meet

(b) Native varieties. At least 75 percent of the trees and 50 percent of the shrubs used to fulfill these requirements must be native Florida species. PER ZONING RESOLUTION NUMBER Z-15-024:

#15. The Developer must utilize 100% native vegetation in required buffers #17. The developer must utilize 75% native vegetation for landscaping single-family lots. Local development order

notes must reflect the requirement for 75% native vegetation, and include a native planting list to be shared with the HOA and developers of single-family home sites.

(a) Quality. Plant materials used to meet the requirements of this division must meet the standards for Florida No. 1 or better, as set out in Grades and Standards for Nursery Plants, Parts I and II, Department of Agricultural, State of Florida (as

amended). Root ball sizes on all transplanted plant materials must also meet state standards. (b) Native varieties. At least 75 percent of the trees and 50 percent of the shrubs used to fulfill these requirements must be native Florida species.

(1) Code-required trees must be a minimum of ten feet in height, have a two-inch caliper (at 12 inches above the ground) and a four-foot spread at the time of installation. Palms must have a minimum of ten feet of clear trunk at planting. Trees having an average mature spread or crown less than 20 feet may be substituted by grouping the same so as to create the equivalent of a 20-foot crown spread. Trees adjacent to walkways, bike paths and rights-of-way must be maintained with eight feet of clear

(2) Larger trees substituted to reduce the minimum number of general trees must be no less than four inches in diameter at 12 inches above the ground and no less than 16 feet in height at the time of planting. The general tree requirement cannot be reduced in number by more than 50 percent.

(d) Shrubs and hedges. Shrubs must be a minimum of 24 inches (48 inches for type F buffers) in height, at time of planting. Saw palmettos (Serenoa repens) and coonties (Zamia floridana) may be used as shrubs, provided they are 12 inches in height at time of planting. All shrubs must be a minimum three-gallon container size and be spaced 18 to 36 inches on center. They must be at least 36 inches (60 inches for type F buffers) in height within 12 months of time of planting and maintained in perpetuity at a height of no less than 36 inches (60 inches for

type F buffers). (e) Required hedges must be planted in double staggered rows and maintained so as to form a continuous, unbroken, solid visual screen within a minimum of one year after time of planting.

(f) The height of all trees and shrubs must be measured from the final grade of the project site. (g) Mulch requirements. A two-inch minimum layer, after watering-in, of mulch or other recycled materials must be placed and

maintained around all newly installed trees, shrubs, and groundcover plantings. Each tree must have a ring of mulch no less than 24 inches beyond its trunk in all directions. The use of cypress mulch is strongly discouraged. (h) Invasive exotics. The following highly invasive exotic plants may not be planted, (ie. are prohibited) and must be removed from the development area. Methods to remove and control invasive exotic plants must be included on the development order plans. A statement must also be included on the development order that the development area will be maintained free from invasive exotic plants in perpetuity. For purposes of this subsection, invasive exotic plants include:

Common name Scientific name Common name Scientific name Earleaf acacia Acacia auriculiformis Old World climbing fern Lygodium microphyllum Woman's tongue Albizia lebbeck Melaleuca, paper tree Melaleuca quinquenervia Bishopwood Bischofia javanica Downy rose myrtle Rhodomyrtus tomentosus Australian pines All Casuarina species Chinese tallow Sapium sebiferum Carrotwood Brazilian pepper, Florida holly Schinus terebinthifolius Cupianopsis anacardioides Dalbergia sissoo Solanum viarum Rosewood Tropical soda apple Air potato Dioscorea alata Java plum Syzygium cumini Murray red gum Eucalyptus camaldulensis Rose apple Syzygium jambos Weeping fig Ficus benjamina Cork tree Thespesia populnea Cuban laurel fig Ficus microcarpa Wedelia Wedelia trilobata Japanese Climbing fern Lygodium japonicum

(i) If dry detention areas are planted with native clump grasses in lieu of sod or seeding, then the plants must be a minimum one-gallon container size planted three-foot on center. (i) Credits.

(1) Except for prohibited invasive exotic species as listed above, every consideration must be given to retaining as much of the existing plant material as possible.

(2) Each existing indigenous native tree preserved in place, which has a trunk diameter of four inches or greater measured at four and one-half feet above the ground (dbh) will receive a credit of five trees against the general landscape requirements. Native palms preserved in place that are eight feet or greater from ground level to base of fronds, will receive a credit of three trees. Existing sabal palms, identified on the development order plans that are relocated onsite will be given a two tree credit. Credits for existing trees may not be used to reduce the required parking canopy trees in parking or vehicle use areas. Existing native trees in buffers may be used for credit provided they occur within the required 100-foot buffer segment.

Credits will apply only when the trees are labeled as protected-credit trees. If the protected-credit trees die within three years from the development order certificate of compliance, they must be replaced by the number of credit

(3) Credits will apply where the preserved tree is in a barricaded area at least two-thirds the radius of the crown spread of the tree measured from the trunk center. In no case may this area radius be less than two and one-half feet. For indigenous native pine trees, the barricaded area may be no less than the full crown spread of the tree. unless other measures such as tie-walls or special slope treatment are constructed for additional protection. Prior to the land clearing stage of development, the owner, developer or agent must erect protective barriers that are at minimum made of three-foot high silt fence, three-foot high orange construction fence or approved alternative barricading material. For all native, indigenous open space areas, including shrubs and ground cover, barricades must be erected around the perimeter of the vegetation. The owner, developer or agent may not cause or permit the movement of equipment or the storage of equipment, material, debris or fill to be placed within the required protective barrier. The protected trees must remain alive and healthy at the end of the construction in order for this credit to apply.

#### Section 10-421. Plant installation and maintenance standards.

(a) Installation. Plant materials must be installed in soil conditions that are conducive to the proper growth of the plant material. Limerock located within planting areas must be removed and replaced with native or growing quality soil before planting.

A plant's growth habit must be considered in advance of conflicts that might be created (e.g. views, signage, overhead power lines, lighting, buildings, circulation). Trees may not be placed where they interfere with site drainage, subsurface utilities, or overhead utility lines, or where they will require frequent pruning in order to avoid interference with overhead power lines. All landscape materials must be installed in a recognized horticultural correct manner. At a minimum, the following installation requirements must be met:

(1) All landscape areas must be mulched unless vegetative cover is already established. (2) Trees and shrubs used in buffers must be planted in a minimum width area equal to one-half the required width of the buffer. However, in no case may the planting area be less than five feet in width.

(3) All landscaped areas must be provided protection from encroachment by any type of vehicle. (4) All required plants used in buffers and landscaping must be installed using xeriscape principles. Xeriscape principles include water conservation through drought-tolerant landscaping, the use of appropriate plant material, mulching, and the reduction of turf areas.

(5) Utility or drainage easements may overlap required buffers; however, no code required trees or shrubs may be located in any utility or drainage easement unless a written statement, from the entity holding the beneficial interest in the easement, is submitted specifically stating that the entity has no objection to the landscaping and, that the proposed landscaping will not interfere with the long term maintenance of the infrastructure within easement area. No code required landscaping may be located in anystreet easement or right-of-way. To avoid conflicts with overhead utility lines, only trees less than 20 feet in height at maturity may be used directly adjacent to an overhead line. Variances or deviations from the requirements of this subsection are prohibited (6) Safe sight distance triangles at intersections and vehicle connections. Where an access way intersects a right-of-way or when a property abuts the intersection of two or more rights-of-way, a minimum safe sight distance triangular area must be established. Within this area, vegetation must be planted and maintained in a way that provides unobstructed visibility at a level between 30 inches and eight feet above the crown of the adjacent roadway. Landscaping must be located in accordance with the roadside recovery area provisions of the State of Florida Department of Transportation's Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways (FDOT Green Book) where appropriate.

(8) If a wall or fence is proposed, but not required, then the required buffer plantings must be installed on the exterior side (between the wall and the abutting property or street right-of-way) of the wall or fence. (b) Maintenance of landscaping. The owner is responsible for maintaining the required landscaping in a healthy and vigorous condition at all times. Tree and palm staking must be removed within 12 months after installation. All landscapes must be kept free of refuse, debris, disease, pests, and weeds. Ongoing maintenance to prohibit the

(7) Signage located within or adjacent to landscape buffer area. All trees and shrubs located within landscape

buffer must be located so as not to block the view of signage as shown in Illustration 10-421(a).

establishment of prohibited invasive exotic species is required. (c) Pruning. Vegetation required by this code may only be pruned to promote healthy, uniform, natural growth of the vegetation (except where necessary to promote health, safety, and welfare) and be in accordance with "American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices (Pruning) (A300, Part 1)" by the American National Standard Institute, and "Best Management Practices: Tree Pruning" by the International Society of Arboriculture (ISA) Trees must not be severely pruned to permanently maintain growth at a reduced height or spread. Pruning

must not interfere with the design intent of the original installation. Severely pruned trees must be replaced by the property owner. Replacement trees must meet the tree size requirements of LDC section 10-420. A plant's growth habit must be considered in advance of conflicts which might arise (i.e. views, signage, overhead power lines, lighting, circulation, sidewalks, buildings, and similar conflicts).

#### Section 10-422. Landscape certificate of compliance.

The landscape architect must inspect and certify that all open space area, landscaping and the irrigation system are in substantial compliance with the landscape and irrigation plans approved as part of the development order. An "as built" landscape plan highlighting any changes to the approved plans must be included with the certification. Any changes to an "alternative landscape betterment plan" must be approved by minor change to the development order. The general certificate of compliance procedure outlined in section 10-183 is applicable.

#### Section 10-423. Restoration standards for native vegetation removed without approval.

A restoration plan based on the minimum standards set out in this division will be required if indigenous native vegetation has been removed without permit or approval. Restoration plantings for vegetation other than trees must be nursery grown, containerized, and planted at no less than three feet on center. The number of replacement plantings will be computed by the square footage of the area destroyed. All other restoration criteria as set forth in chapter 14, article V, pertaining to tree protection, will also apply. Restoration plantings for indigenous native trees must be in compliance with the standards set forth in chapter 14, article V.

#### Section 34-1743. Residential project walls.

(a) Definition: For purposes of this section, a residential project fence means a wall or fence erected around a residential subdivision (but not individual lots) or development of ten or more dwelling units.

(b) A residential project fence or wall: (1) May be a maximum height of eight feet around the perimeter of the project upon a finding by the development services director that the fence does not interfere with vehicle visibility requirements (see section 34-3131) at traffic

(2) May include architectural features such as columns, cupolas, fountains, parapets, etc., at a height not to exceed twice the fence or wall height provided they are compatible with the project and abutting properties. (3) Required or optional residential project walls must be landscaped on the exterior side (between the wall and the abutting property or street right-of-way) with a minimum of five trees per 100 lineal feet and shrub hedges, within a

minimum plantable width of seven and one-half feet located on the exterior side of the wall or fence. a. Hedges must be planted and maintained so as to form a 36-inch high continuous visual screen within 1 year after time of planting.

b. Trees adjacent to a right of way must be appropriately sized in mature form so that conflicts with overhead utilities, lighting and signs are avoided. The clustering of trees and use of palms adjacent to the right of way will add design flexibility and reduce conflicts.

(4) Must be constructed to ensure that historic water flow patterns are accommodated and all stormwater from the site is directed to on-site detention/retention areas in accordance with the SFWMD requirements. (5) May not be permitted until proper documents have been recorded providing for the maintenance of the project

#### Section 10-329. Excavation.

(3) Maximum controlled water depth. Excavations for water retention or detention permitted under this section may not penetrate through impervious soil or rock layer that prohibits intermingling of various watery strata. The controlled water depth for water retention or detention excavations may not be greater than 12 feet unless the following criteria are met:

a. Excavation depth may exceed 12 feet, to a maximum of 20 feet, if the water depth does not penetrate any impervious soil or rock layer. For all lakes deeper than 12 feet, a "Deep Lake Management Plan" must be submitted and approved prior to development order issuance. The Deep Lake Management Plan must address long-term management strategies for the lakes greater than 12 feet in depth that include, at a minimum, the following:

1. A destratification system must be installed in any lake that exceeds 12 feet in depth prior to certificate of compliance for the development order. Documentation that the proposed destratification adequately sized and designed for each lake deeper than 12 feet must be submitted prior to development

perimeter, calculated at one tree per 100 feet of lake shoreline measured at control elevation. The tree planting is in addition to other required trees and must be coordinated with lake littoral plant The planting locations proposed to meet the wetland herbaceous plant requirements set forth in section The property-61/10, earnal ustiner codd itional and spin a graph to the the coda tyartof ribe. LakeManageprentding that the laRkamaAlaplamismntexthracyres;padiodinlystpeealtilogethereatestratthealabre systematepecified in the

2. Native shade trees, meeting the specifications of section 10-416(a)(1) must be planted around the

Deep Lake Management Plan, will be maintained for the life of the lake. 4. A post-construction bathymetric survey, sealed by a professional surveyor and mapper, must be submitted prior to certificate of compliance.

> **APPROVED** Lee County Development Services

빌记

10 10

0

192 SF X 10% = 20 SF SHRUBS REQUIRED

DOS2018-00007 Tom Sawtell, Plan Reviewer 4/25/2018