

LANDSCAPE SMARTCODE MODULE

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*The landscape should belong to the people
who see it all the time.*

LeRoi Jones

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Municipality

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LANDSCAPE STANDARDS

This optional Module contains full Landscape Standards for Public Frontages, Private Frontages, Civic Spaces and parking lots. These standards are meant to fully replace existing municipal landscape ordinances for SmartCode jurisdictions. However, they are not intended to replace the Sustainable Urbanism module dealing with tree canopy cover, or the Light Imprint module dealing with stormwater management. They are intended to produce a healthy, xeric, native plant environment, and only mildly enhance local sustainability issues.

Numbering may include an "X" where the order of sections is undetermined. Some sections have full numbers to indicate exactly which existing section of the base SmartCode would accommodate these new subsections. Even in the latter case, there may be renumbering necessary for the final calibration, depending upon what else is added.

Definitions of terms capitalized on the code side (right side) on this Module may be found at the end of the Module.

3.X.2 The requirement to prepare Landscape Plans here combines the Community Scale and the first Layer, which is normally the Lot and Building Scale. This section may be moved to one or more of the Instructions sections of the calibrated code, along with other plan requirements.

3.X LANDSCAPE STANDARDS**3.X.1 INTENT**

A transect-based Landscape Plan provides many aesthetic, ecological, functional and health/safety benefits. The standards of this section promote public health, safety and welfare by establishing minimum standards for the design, construction and maintenance of landscape improvements for Public Frontages and Private Frontages, lots, buildings, Civic Spaces, Thoroughfares and Special Requirements.

a. Aesthetics/Walkability. These standards should enhance the overall aesthetic condition of communities, neighborhoods and the public realm with landscaping by:

- i. coordinating Public Frontages and Private Frontages
- ii. providing spatial definition to the public realm
- iii. providing screening of unsightly places and/or mitigation of conditions that are incongruent with Section 1.3 of this code, including but not limited to the edges of Special Districts.

b. Health/Safety. These standards should enhance comfort, safety and utilization of the public realm by moderating the local microclimate through the application of Trees and landscaping to:

- i. improve air quality
- ii. mitigate noise pollution
- iii. provide seasonal shade, sun and temperature regulation
- iv. reduce reflected light
- v. mitigate wind gusts
- vi. provide a partial barrier between Sidewalks and vehicular lanes
- vii. provide areas for the convenient removal and storage of snow

c. Ecology/Energy. These standards should provide ecological benefits including but not limited to:

- i. conservation of energy used in buildings through strategic shading and wind breaks
- ii. interception of precipitation by vegetative canopies
- iii. percolation of precipitation through pervious landscape areas
- iv. reduction in the insolation of pavements and other hard surfaces associated with urban heat islands through vegetative canopy cover
- v. conservation of soil and prevention of soil erosion through vegetative cover, root growth and wind breaks
- vi. conservation of water through Xeriscape design strategies including but not limited to:
 - the application and maintenance of landscape mulch to retain soil moisture
 - the limiting of Turfgrass areas and reduction of water use, fertilizers and labor associated with their maintenance and upkeep
 - the selection of low-water-use and drought tolerant plants
 - the design and operation of efficient irrigation systems.

3.X.2 LANDSCAPE PLAN REQUIRED

a. Landscape Plans shall be prepared in conjunction with the design development and construction documents for Special Requirements, and the First Layer of Lots

b. Landscape Plans shall contain sufficient information regarding existing and

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proposed landscape elements as needed to meet with the requirements of this code and for approval by the CRC.

c. **Alternative Compliance and Credit**

3.X.3 LANDSCAPE CONSTRUCTION STANDARDS

- a. All plant materials shall meet with the minimum container size, class and other requirements outlined in American Standard for Nursery Stock (ANSI Z60.1-2004) published by the American Nursery and Landscape Association (ANLA)
- b. Open Spaces and Civic Space shall be protected with a temporary construction fence during all Thoroughfare and site work construction activities unless alterations to them are otherwise specified by landscape grading plans.
- c. The soil structure of planting strips shall be protected from compaction with a temporary construction fence. Standards of access, excavation, movement, storage and backfilling of soils in relation to the construction and maintenance of deep utilities and manholes shall be specified.
- d. The topsoil within the construction area's limits of disturbance shall be removed, stored and amended as recommended by a landscape soils test.
- e. Wind erosion shall be mitigated and controlled through dust abatement and similar practices during the period of site work and construction.
- f. Landscape soils that have been compacted during construction activities shall be loosened and aerated to a depth of at least six (6) inches before planting.
- g. Plants shall have normal, well-developed branches and vigorous root systems.
- h. Temporary spray irrigation systems may be used to establish seeded areas for grass and groundcover.
- i. Stormwater detention and retention ponds shall be integrated landscape features, rather than single-purpose flood control and stormwater management ponds.
- j. Stormwater detention and retention ponds shall be planted with appropriate Trees, Shrubs and grasses. Plants in basin areas prone to submersion shall be hydrophilic.

3.X.4 LANDSCAPE MAINTENANCE

- a. All grass and vegetation shall be lightly fertilized to avoid fertilizer pollution to groundwater, streams and ponds.
- b. No disturbed ground shall be left exposed. Turfgrass and other approved and appropriate groundcovers or mulch shall cover all non-paved and non-built developed areas.
- c. It shall be the responsibility of the property owner(s) or his assigned agent(s) to:
 - i. Maintain and keep all screening and fencing in good condition at all times; and
 - ii. Maintain landscaping by keeping Turfgrass lawns properly mowed and edged, plants properly pruned and disease-free, and planting beds mulched, groomed and weeded, except in the T1 zone, the T2 zone, and other areas of naturally occurring vegetation and undergrowth.
 - iii. Replace any required planting(s) that are significantly damaged, missing, infested, disease-ridden, or dead, within one year or the next planting season, whichever occurs first, except in T1, T2 and areas of naturally occurring vegetation and undergrowth.

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3.5 CIVIC ZONES

If the Civic Space Module is used in the calibration, it should be coordinated with this section of the Landscape Module.

3.7 THOROUGHFARE STANDARDS

This section is numbered to replace or continue the same numbering sequence in Section 3.7 of the base code. Subsections (d) and (e) here do not include the canopy height standard that is in the base code because there are more specific canopy height standards in this Module at 3.7.3vii.

3.5 CIVIC ZONES**3.5.1 GENERAL**

f. Landscape plans shall be submitted for existing and proposed landscape elements in compliance with Article 5.11, Table 6B Civic Space Planting Table and Table 6C Public Planting Native Status Table for all Civic Space Zones.

3.5.5 SPECIFIC TO PARKS

a. Turfgrass area and grass fields shall be planted or managed with appropriate low care and drought tolerant grasses that are mown to a high cut height or left uncut to provide a grass meadow.

3.5.6 SPECIFIC TO GREENS

a. Turfgrass area shall be planted or managed with appropriate low care and drought tolerant grasses that are mown to a high cut height.

3.5.7 SPECIFIC TO SQUARES

a. Turfgrass area shall be carefully graded, leveled, and planted with sod.

3.5.8 SPECIFIC TO PLAYING FIELDS

a. Turfgrass recreational fields and high use areas shall be carefully graded, leveled, and sodded or seeded with an appropriate playfield turfgrass mix.

3.7 THOROUGHFARE STANDARDS**3.7.3 PUBLIC FRONTAGES**

a. General to all zones T1, T2, T3, T4, T5, T6

iv. Landscape Plans shall be prepared for existing and proposed landscape elements in conjunction with the design development and construction documents for Thoroughfares.

v. Within the Public Frontages, the prescribed types of Public Planting and Public Lighting shall be as shown in Table 4A, Table 4B, Table 6A and Table 6B. The spacing may be adjusted by Warrant to accommodate specific site conditions.

vi. Proposed Street Tree height and type shall be appropriate for the Frontage conditions, with canopy branching height following the clearance requirements of 3.7.3.vii. Measurements shall be taken at the bottom of the main canopy.

vii. Trees with existing or potential canopy covering sidewalks, driveways, Paths, Plazas, Alleys, Lanes, parking space or Street pavements shall be of a type that, at maturity or with minor pruning at installation, provide a clear height of eight (8) feet for sidewalks and paths, twelve (12) feet for driveways, parking spaces and Streets, and fifteen (15) feet for loading areas, exclusive of Tree grates or planting areas with gravel mulch. Evergreen trees shall be 18 – 24" minimum clear of any sidewalk or pavement edge at the Lot line.

b. Specific to zone T4

ii. The Public Frontage shall include trees planted in a regularly-spaced Allee pattern of single or alternated species.

c. Specific to zones T5, T6

iii. The Public Frontage shall include trees planted in a regularly-spaced Allee pattern of single species. At Retail Frontages, the spacing of the trees may be irregular, to avoid visually obscuring the shopfronts. this code and for approval by the CRC.

ARTICLE 4. CIVIC ZONES

This section is brief because Article 4 is dependent on Article 3 for many standards. The SmartCode is frequently adopted to be available as a "floating zone" for urbanized areas that are as yet unmapped and that will require the use of Article 4 to guide future infill plans. In such cases, all or most of Article 3 should also be included to be available for parcels that meet the minimum acreage standards for its use.

However, if the code is adopted along with its regulating plan (zoning map) and no further community scale planning is intended, then the calibration should only include Article 1, Article 5, and Article 6 plus the Replacement Module for Thoroughfares. That includes the elements of Article 3 and Article 4 that apply to existing urbanism, and a reduced set of Definitions. The Article 3 and Article 4 standards of this Landscape Module should be included within the new Thoroughfare Article.

4.4 CIVIC ZONES**4.4.1 GENERAL**

- d. Landscaping plans shall be submitted in compliance with Article 5.11, Table 6B Civic Space Planting Table and Table 6C Public Planting Native Status Table for all Civic Space Zones.

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ARTICLE 5. LANDSCAPE STANDARDS

This Intent Section is identical to the one in Article 3, in case Article 3 is not included in the calibrated code. If Article 3 remains in the calibration, delete this Intent section from Article 5. See the annotations for Article 3.

5.X LANDSCAPE STANDARDS**5.X.1 INTENT**

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- iii. providing screening of unsightly places and/or mitigation of conditions that are incongruent with Section 1.3 of this code, including but not limited to the edges of Special Districts.

b. Health/Safety. These standards should enhance comfort, safety and utilization of the public realm by moderating the local microclimate through the application of Trees and landscaping to:

- i. improve air quality
- ii. mitigate noise pollution
- iii. provide seasonal shade, sun and temperature regulation
- iv. reduce reflected light
- v. mitigate wind gusts
- vi. provide a partial barrier between Sidewalks and vehicular lanes
- vii. provide areas for the convenient removal and storage of snow

c. Ecology/Energy. These standards should provide ecological benefits including but not limited to:

- i. conservation of energy used in buildings through strategic shading and wind breaks
- ii. interception of precipitation by vegetative canopies
- iii. percolation of precipitation through pervious landscape areas
- iv. reduction in the insolation of pavements and other hard surfaces associated with urban heat islands through vegetative canopy cover
- v. conservation of soil and prevention of soil erosion through vegetative cover, root growth and wind breaks
- vi. conservation of water through Xeriscape design strategies including but not limited to:
 - the application and maintenance of landscape mulch to retain soil moisture
 - the limiting of Turfgrass areas and reduction of water use, fertilizers and labor associated with their maintenance and upkeep
 - the selection of low-water-use and drought tolerant plants
 - the design and operation of efficient irrigation systems.

5.11.1 GENERAL TO ZONES T2, T3, T4, T5, T6**b. Landscape Clearing and Modification****c. Landscape Design Standards**

- i. The spacing and placement of plants shall be adequate and appropriate for the typical size, shape and habit of the plant species at maturity.

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- ii. Proposed Trees and Understory Trees shall be centered horizontally and minimally:
 - 1. Two (2) feet from walkways, curbing, and other impervious pavements when planted in a tree well or continuous planter;
 - 2. Three (3) feet from walkways, curbing and other impervious pavements when planted in a continuous swale;
 - 3. Five (5) feet from street lights, underground utilities, utility meters and service lines, fences, walls and other ground level obstructions;
 - 4. Six (6) feet from porch eaves, and awnings and similar overhead obstructions associated with the ground level of buildings;
 - 5. Eight (8) feet from balconies, verandas, building eaves and cornices, and similar overhead obstructions associated with the upper stories of buildings.
- iii. Proposed Trees shall be a minimum height of ten (10) feet and / or three (3) inches in caliper.
- iv. Proposed Understory Trees shall be a minimum of eight (8) feet in height and/ or two-and-one-half (2-1/2) inches in caliper.
- v. Proposed Shrubs shall be of a five (5) gallon container minimum. Shrubs shall be 18" – 24" minimum clear from any sidewalk or pavement edge at the Lot line.
- vi. Ground vegetation or Shrub plantings with spines, thorns or needles that may present hazards to pedestrians, bicyclists or vehicles are prohibited in the first two (2) feet of the first Layer.
- vii. Bare and exposed ground on the site and / or in landscaped areas shall be covered with live plant materials and/or mulch, with the following exceptions:
 - 1. Naturally occurring dunes, creek beds/ arroyos, rock outcroppings or similar landscape features typically lacking in vegetation.
 - 2. Agricultural fields seasonally tilled for cultivation.
 - 3. Hiking trails and/or traces.
 - 4. Clay or sand surfaces associated with recreation fields and facilities.
- viii. Artificial plants or artificial turf are prohibited, excluding active recreation Sports Fields that are typically subject to intense use and soil compaction which prohibits the establishment of turfgrass, and where paving or grass paving systems will not suffice given the area's purpose and level of use.
- ix. All required Landscape Areas shall be irrigated by an automatic underground irrigation system.
 - 1. Where possible and practical, bubbler, drip irrigation, and soaker hose emitters shall be utilized.
 - 2. Each irrigation system shall be equipped with a meter, backflow preventer and a suitable controller.
- xii. Constructed water features such as fountains, streams and ponds that operate with water recirculation systems shall be designed to prevent seepage and leaks.
- xiii. Buffers and screening elements shall be used to screen parking areas from public view, to screen service yards and other places that are unsightly.

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d. This section contains some of the Landscape Construction Standards that appear in Article 3, because they apply to both the Public Frontage and the first Layer of the Private Lot.

e. This section is identical to the Landscape Maintenance Standards that appear in Article 3, because they apply to both the Public Frontage and the first Layer of the private lot. If the calibration includes both Base Modules (Articles), both sets of standards should remain because different entities may be responsible for them.

5.11.2 These subsections may be added after (a) in this section of the base code.

d. Landscape Construction Standards

- i. All plant materials shall meet with the minimum container size, class and other requirements outlined in [American Standard for Nursery Stock \(ANSI Z60.1-2004\)](#) published by the American Nursery and Landscape Association (ANLA) or other local Nursery Association Standards.
- ii. The soil structure of planting strips shall be protected from compaction with a temporary construction fence. Standards of access, excavation, movement, storage and backfilling of soils in relation to the construction and maintenance of deep utilities and manholes shall be specified.
- iii. The topsoil within the construction area's limits of disturbance shall be removed, stored and amended as recommended by a landscape soils test.
- iv. Wind erosion shall be mitigated and controlled through dust abatement and similar practices during the period of site work and construction.
- v. Landscape soils that have been compacted during construction activities shall be loosened and aerated to a depth of at least six (6) inches before planting.
- vi. Plants shall have normal, well-developed branches and vigorous root systems.
- vii. Temporary spray irrigation systems may be used to establish seeded areas for grass and groundcover.

e. Landscape Maintenance

- i. All grass and vegetation shall be lightly fertilized to avoid fertilizer pollution to groundwater, streams and ponds.
- ii. No disturbed ground shall be left exposed. Turfgrass and other approved and appropriate groundcovers or mulch shall cover all non-paved and non-built developed areas.
- iii. It shall be the responsibility of the property owner(s) or his assigned agent(s) to:
 1. Maintain and keep all screening and fencing in good condition at all times; and
 2. Maintain landscaping by keeping Turfgrass lawns properly mowed and edged, plants properly pruned and disease-free, and planting beds mulched, groomed and weeded, except in T1, T2, and areas of naturally occurring vegetation and undergrowth; and
 3. Replace any required planting(s) which are significantly damaged, removed, infested, disease ridden, or dead within one year or the next planting season, whichever occurs first, except in the T1 zone, the T2 zone and other areas of naturally occurring vegetation and undergrowth.

5.11.2 SPECIFIC TO ZONES T2, T3, T4

- b. The minimum required landscape area shall be [thirty \(30\)](#) percent of the first Layer of the Principal Frontage and the Secondary Frontage. The Article 5b application shall not have less than [twenty \(20\)](#) percent landscaped area for the entire site.
- c. Preservation of on-site existing trees and vegetation is encouraged and may be used to fulfill the landscape requirements.
 - i. The root zones of existing Trees and vegetation to be preserved shall be protected from clearing or construction activities.
 - ii. [Natural Communities and/or areas naturalized vegetation may be exempt](#)

5.11.3 This is a more detailed set of provisions for this section and may replace the entire section.

5.11.4 This is a more detailed set of provisions for this section and may replace the entire section.

from the installation irrigation systems.

- iii. Noxious or invasive plants species identified on the prohibited plant list shall be removed.
- iv. The size and limits of existing vegetation shall be indicated on the landscape plan.
- v. Priority shall be given to preserving and protecting significant Trees that provide screening, buffering, wildlife habitat and/or linkages to wildlife habitat.
 - 1. The applicant may remove mature, healthy, non-invasive Trees only within areas of a lot that are inside the proposed footprint of the primary structure, and only by warrant.
 - 2. The applicant shall replace mature Trees that are removed on the site with Trees of the same or similar species whose combined Caliper dimensions equal that of the Tree removed.
- vi. During construction, the root zone of existing vegetation to be preserved shall be enclosed by a temporary protective fence.
- d. Open spaces and Civic Space shall remain fenced and protected during all adjacent site work and construction activities unless alterations to them are otherwise specified by the plans.
- f. All landscape areas compacted during construction activities shall be retiled and reconditioned to provide an arable topsoil layer that can support the long term health and vitality of landscaping.
- g. The topsoil within the construction area's limits of disturbance shall be removed, stored and amended with organic soil additives as recommended by a landscape soils test prior to being redistributed.

5.11.3 SPECIFIC TO ZONE T3

- a. One (1) Tree shall be planted within the first Layer for every 800 square feet of Landscape Area (per 5.11.3.b), or any portion thereof. (Table 17d)
 - i. Substitutions:
 - 1. One (1) Tree may be substituted for two (2) Understory Trees;
 - 2. One (1) Understory Tree may be substituted for ten (10) Shrubs.
 - ii. Tree Preservation Credit:
 - 1. One (1) Tree may be substituted for an existing Tree to be preserved provided that:
 - It is four (4) Inches DBH or greater;
 - Possesses a healthy and full canopy;
 - Has an unmolested CRZ;
 - Has incurred no damage that would undermine it's long-term vitality and quality.
 - 2. One (1) additional Tree may be substituted for each additional (3) Inches DBH of existing Tree to be preserved in accordance with 5.11.4.a.ii.1 (above).
- b. Trees may be of single or multiple species as shown on Table 6.
- c. Trees shall be naturalistically clustered in conjunction with adjacent street Trees.
- d. Turfgrass shall be permitted by Warrant.

5.11.4 SPECIFIC TO ZONE T4

- a. A minimum of one (1) Understory Tree or ten (10) Shrubs shall be planted within the first Layer for every 500 square feet of first layer Landscape Area. (Table 17d):

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5.11.5 These subsections may be added after (a) and (b) in this section of the base code.

5.11.6 This section may be added after 5.11.5 in the base code.

- i. Next-door Neighbor Tree Credit:
Trees or Understory Trees planted in a next door neighbor's first layer may count lot's first layer Tree may be used to satisfy this requirement.
 - b. Trees, if planted, should match the species of adjacent Street Trees on the Public Frontage, or as shown on Table 6.
 - c. Turfgrass lawn shall be permitted by Warrant.
 - d. Parking spaces shall be broken with landscape islands every twenty (20) spaces.
 - e. The landscape islands shall be distributed throughout the lot and may be combined as a component of a stormwater management plan to facilitate water harvesting. Landscape islands may be omitted for solar panel installations or other shading structures of equal or greater coverage.
 - f. Parking areas that exceed one hundred and twenty (120) spaces shall include a minimum of eight (8) foot wide pedestrian walkway. The pavements of such walkways shall be differentiated from parking area pavement through a change in surface texture, material, style, and/or color.
 - g. Porous paving materials are encouraged in order to increase storm water infiltration on site.
- 5.11.5 **SPECIFIC TO ZONES T5, T6**
- c. Landscape islands in interior parking lots shall only occur at the end of drive aisles. Islands should be the minimum size for healthy growth for the specific species of Tree.
 - d. Porous paving materials **should** be used in order to increase storm water infiltration on site.
- 5.11.6 **SPECIFIC TO SPECIAL DISTRICTS**
- a. Buffers and screening elements shall be used to screen parking areas from public view, to screen service yards and other places that are unsightly, and to buffer between the Special District and the adjacent Transect Zone.
 - i. A Frontage Landscape Buffer, which may also include the Sidewalk, shall be a minimum of **ten (10)** feet in depth, measured from the Frontage Line and running its full width.
 - 1. A minimum of one (1) Tree shall be planted within the first Layer for every **700** square feet of Frontage Landscape Buffer.
 - 2. Fifty (50) percent or more of the Frontage Landscape Buffer must have Shrubs and vegetative cover.
 - ii. An Interior Landscape Buffer located along common property lines shall be required between a SD and an adjacent T-zone.
 - 1. A minimum of one (1) Tree shall be planted within the side and rear setbacks for every **700** square feet of Interior Landscape Buffer.
 - 2. **Fifty (50)** percent of the Interior Landscape Buffer shall be covered with vegetation.
 - iii. Shrubs shall be five (5) gallon container and twenty-four (24) inches height minimum, and of a type that, at maturity, will provide a continuous opaque screen at least thirty-six (36) inches in height.
 - iv. Trees shall be four (4) inches caliper minimum, or in the case of Evergreen Trees, twelve (12) feet minimum height.

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LANDSCAPING TABLES

All the Landscaping Tables need further calibration with the appropriate local species. Spaces left blank would mean that a Variance (public process) would be required for the species or location. These tables currently show which Transect Zones are appropriate in terms of habitat character and design.

TABLE 6A PUBLIC PLANTING

This table must be filled out by the local planning office and/or landscape architect. The guiding principals should be trees that are compatible with the appropriate Thoroughfare types based on size, shape, fruit, growth form, allergenic potential, etc. Particular care should be given to Commercial Streets where the priority should be the signage and visual clarity of the Storefronts.

Municipality

TABLE 6A: Public Planting. This table shows six common types of Street Tree shapes and their appropriateness relative to Thoroughfare type, which are relative to Transect Zones. The local planning office selects species appropriate for the bioregion.

	HW T1	RD T1	ST T3	ST T5	DR T3	DR T5	AV T3	AV T5	CS T5	BV T3	BV T5	Common Name	Botanic Name
	T2	T2	T4		T4	T6	T4	T6	T6	T4	T6		
	T3	T3											
Columnar 	<input type="checkbox"/>	_____	_____										
Oval 	<input type="checkbox"/>	_____	_____										
Rounded 	<input type="checkbox"/>	_____	_____										
Conical 	<input type="checkbox"/>	_____	_____										
Spreading 	<input type="checkbox"/>	_____	_____										
Vase 	<input type="checkbox"/>	_____	_____										
Palm 	<input type="checkbox"/>	_____	_____										

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TABLE 6B CIVIC SPACE PLANING

This table must be filled out by the local planning office and/or landscape architect. The guiding principles should be trees that are compatible with the appropriate spaces based on size, shape, fruit, growth form, allergenic potential, etc.

Municipality

Civic Space Planting. This table the appropriateness of plant materials relative to Civic Space type, which are relative to Transect Zones. The local planning office selects species appropriate for the bioregion.

Botanic Name	Common Name	Park	Green	Square	Plaza	Playground	Sports Fields
a. Trees - Deciduous							
b. Trees - Evergreen							
c. Shrubs							
d. Groundcovers							
e. Grasses							

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TABLE 6C PUBLIC PLANTING NATIVE STATUS

This table may be used if the local planning office chooses to encourage the use of Native Species.

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Public Planting Native Status. This table shows location of Native and Non-native Species within the Transect.

	T1	T2	T3	T4	T5	T6	SD
Native Species - site specific	▪	▪	▪	▪	▪	▪	▪
Native Species	◻	▪	▪	▪	▪	▪	▪
Adventive Species		◻	▪	▪	▪	▪	▪
Exotic Species			◻	▪	▪	▪	▪
Invasive Species							

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ARTICLE 7. DEFINITIONS OF TERMS - LANDSCAPING STANDARDS

Adventive Species: a plant that may be native to the continent or greater bioregion but is found growing outside its natural range; a species not regionally or locally native nor fully established, but locally present or temporarily naturalized.

Caliper: diameter of a Tree trunk. The term "caliper" is used for Trees less than twelve (12) inches in diameter. For Trees less than four (4) inches in diameter, it is measured six (6) inches from the ground. For Trees between four (4) inches and twelve (12) inches in diameter, it is measured twelve (12) inches from the ground.

Critical Root Zone (CRZ): a circular area centered on the trunk of an existing Tree that has a radius of twelve (12) inches to every inch of Diameter at Breast Height (DBH) of the Tree.

Diameter at Breast Height (DBH): a standard method of expressing the diameter or the trunk or bole of a standing (existing) Tree measured 4.5 feet [1.3 m] above ground in existing Tree surveys.

Deciduous: a Tree or Shrub which sheds its foliage at the end of each growing season.

Endangered Plant: any plant species which is in danger of extinction throughout all or a significant part of its range.

Evergreen: a Tree or Shrub whose foliage persists year round. Plants typically associated with the upright conical or pyramidal Tree forms and needle foliage of coniferous Trees (i.e. pine, spruce, fir, etc.), but which may also include plants with broadleaf foliage and rounded or spreading Tree forms (i.e., Yaupon Holly, Live Oak, etc.).

Exotic Species: a plant introduced from another geographic region to an area outside its natural range. For the purpose of this code, this term shall be used primarily to describe conventionally cultivated and hybridized species of non-native plants that are non-invasive and regarded as suitable for and applicable to local landscaping.

Exotic Invasive Species: a noxious exotic plant reproducing outside its natural range and outside cultivation that disrupts naturally occurring plant communities by altering structure, composition, natural processes or habitat quality.

Irrigation System: a permanent underground piping and distribution system designed using industry standard methods to provide efficient irrigation coverage over a landscaped area.

Landscape Area: the area of a lot or parcel exclusive of building footprints, driveway and walkway pavements, and other impervious hardscape areas, and inclusive of ponds, pools and water features.

Mulch: a protective covering consisting of organic materials customarily used in landscaping and placed around plants to retain soil moisture, retard erosion, shield roots from freezing, and inhibit weed growth.

Native Species: a plant occurring within local jurisdictional boundaries prior to foreign contact, according to the best scientific and historical documentation. This includes species that are considered indigenous, occurring in natural associations with habitats that existed prior to significant anthropogenic impacts and alteration

SMARTCODE ANNOTATED

These annotations are advisory only. The SmartCode itself appears only on the right side of each spread.

to the landscape.

Natural Community: a distinct and recurring assemblage of populations of plants, animals, fungi and microorganisms naturally associated with each other and their physical environment.

Shrub: a deciduous or evergreen woody plant with single or multiple trunks or multiple leaders and with a mature height generally not expected to exceed fifteen (15') feet.

Sports Field: Civic Space designed for structured play.

Tree: a woody plant with an expected mature height of thirty feet or more and possessing either a single trunk or multiple trunks. Trees are often described in subcategories by common attributes and the functions they serve, such as:

- i. **Canopy Tree:** a redundant term as all Trees have canopies; analogous to the term Shade Tree.
- ii. **Coniferous Tree:** any Tree with needle leaves and a woody cone fruit.
- iii. **Ornamental Tree:** an Understory Tree planted primarily for its aesthetic value and as a landscape focal point, as opposed to its function of shading or screening even though it may perform all three functions.
- iv. **Shade Tree:** typically a deciduous Tree - rarely an evergreen - planted primarily for its overhead canopy and the quality of the shade it provides.
- v. **Small/ Medium/ Large (Tree or Shrub):** a means of categorizing Trees or Shrubs based upon their canopy or spread at maturity assuming proper maintenance and normal growing conditions and which serves the purpose of allowing for their proper spacing in landscape plans.
- vi. **Street Tree:** a Tree planted that is an element of a Thoroughfare assembly.
- vii. **Specimen Tree:** a particularly impressive or unusual example of a species due to its size, shade, age, or any other trait that epitomizes the character of the species.
- viii. **Understory Tree:** a small to medium sized Tree with an expected mature height less than thirty feet and a canopy which may or may not offer a sufficient clearance height for pedestrians beneath.

Turfgrass: a continuous plant coverage consisting of a grass species that is regularly mowed to maintain a desired height.

Xeriscape: a method of landscaping that emphasizes water conservation, accomplished by following sound horticultural and landscaping practices, such as planning and design, soil improvement, limited turf areas, use of mulches, use of low-water demand plants, efficient irrigation practices and appropriate maintenance.