

# TOWN OF CAVE CREEK



SETTLED 1870 · INCORPORATED 1986

## **TECHNICAL DESIGN GUIDELINE NUMBER 4 - LANDSCAPING**

EFFECTIVE DATE: AUGUST 5, 2008





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## SECTION 1 - INTRODUCTION

### 1.1 **PURPOSE OF DESIGN GUIDELINE:**

#### 1.1.1 **Purpose:**

The purpose of this Technical Design Guideline is to provide guidance on the planning, design, construction and maintenance of landscaping within the Town of Cave Creek (TOCC), Arizona. This guideline applies town-wide to all new development, redevelopment, and major renovation projects.

#### 1.1.2 **Goals:**

1. To provide guidelines that reflect the minimum requirements of the TOCC Codes and Ordinances, as well as other applicable County, State or Federal regulations.
2. To ensure quality and compatible landscaping.
3. To provide guidelines on the use, availability and appropriateness of data.
4. To identify protected native plants located within the TOCC.
5. To provide guidelines on recommended salvage and planting methodologies.
6. To provide guidance on the proper care and maintenance of trees and shrubs within the Town of Cave Creek's multiple-residence and commercial zones and within Medians/Public Rights of Ways.
7. To provide guidelines related to land development issues such as right-of-way planting and management.
8. To provide guidance on agreements, design preparation, and Final Plan preparation.

#### 1.1.3 **Objectives:**

1. That landscape design shall consider foremost the unique qualities as well as common built and natural aesthetic characteristics, of a project's surroundings.
2. That right-of-way (ROW) planting shall conform to established or planned streetscape designs of the Town.
3. That canopy trees shall be used throughout all circulation/parking areas and in association with pedestrian paths and gathering areas to provide shade, reduce heat build-up and minimize glare.
4. That parking areas shall be broken up with landscaping.



5. That a combination of dense landscaping, screening walls, or berming/mounding shall be provided to screen parking facilities, service and loading areas, maintenance areas, storage areas, trash enclosures, utility cabinets, and other similar elements.
6. That plants shall be selectively pruned to maintain an appearance that exhibits the qualities and characteristics of the plant in its natural state.

## **1.2 GENERAL INFORMATION:**

### **1.2.1 Purpose:**

This document is intended to aid landscape architects and designers in developing hardscape, landscape, irrigation and general aesthetic improvements for areas within the TOCC. It recommends plants for special character areas, provides landscape, irrigation, design, and maintenance guidelines and requirements for inspections and as-built submittals.

### **1.2.2 Town of Cave Creek General Plan:**

The Town's 2021 General Plan Vision states, *Cave Creek is focused on maintaining our western heritage that is defined by our passion for open space and low-density residential development. We promote outdoor lifestyles such as equestrian, hiking and biking activities. Dramatic views, trails, open spaces and wildlife habitats are the hallmarks of the quality of life we seek and desire to protect. We also desire to encourage our artistic community.*

The Environmental Planning Element contained within the "Vital Environment" section of the TOCC 2021 General Plan describes the natural resources and environmental quality within the TOCC. It contains goals and objectives aimed at protecting the unique natural setting and conditions of the planning area and maintaining an environmental ethic in future growth. A number of the objectives outlined within the General Plan specifically related to this Technical Design Guideline are as follows:

1. Conserve mountains and hillsides in the planning area by discouraging development on slopes of 15% or greater.
2. Protect and conserve native plant species in accordance with applicable laws.
3. Retain natural character along roadways and avoid disturbance of significant vegetation such as large trees and saguaros to the extent possible during roadway design.
4. Encourage the use of indigenous plants for landscaping; limit the use of exotic plants and turf to small areas immediately adjacent to residences.
5. Proactively support efforts that help to manage the spread of invasive plant species such as globe chamomile, also referred to as stinknet.
6. Encourage the salvage and relocation of significant vegetation.



### **1.2.3 Supporting Documentation:**

This document should be used in conjunction with the most recently adopted Ordinances, Plans and Guidelines as listed below:

1. TOCC Zoning & Subdivision Ordinances
2. TOCC General Plan
3. TOCC Infrastructure Improvements Plan
4. TOCC Technical Design Guideline No. 1 – Grading & Drainage
5. TOCC Technical Design Guideline No. 2 – Transportation
6. TOCC Technical Design Guideline No. 3 - Utilities
7. TOCC Technical Design Guideline No. 5 –Trails
8. Maricopa Association of Governments (MAG) Standard Specifications and Details.

### **1.3 DISCLAIMER:**

No warranty is expressed or implied in the review/approval of salvage and landscape salvage reports and landscape construction plans for development and/or improvement of properties within the Town of Cave Creek. Development Plans are reviewed and approved by the Town for general conformance with the Town's Ordinances, policies and standards. The Town does not assume responsibility or liability for insufficient design and/or improper construction/installation.

Review and approval by the Town does not absolve the owner, developer, design engineer, or contractor of liability for inadequate design, materials failure, poor construction or inadequate maintenance.

The landscape designer/landscape architect has the responsibility to design landscape improvements as well as prepare salvage reports and maintenance schedules that meet the standards of practice for the industry and promote public safety.

Compliance with the regulatory elements, policies, and design standards documented herein, does not imply a guarantee that properties will be free from flood, geologic, and geotechnical related damage and failures. The Town and its officials, employees, and contract reviewers, assume no liability for information, data, or conclusions prepared by private engineers, architects and designers.

The data and information provided herein is offered as minimum guidelines to development regarding plant salvage and landscape design. With the exception of requirements mandated by Town Codes and Ordinances, all guidelines provided are subject to change or variation at the discretion of the Zoning Administrator and/or Town Manager.

The TOCC does not guarantee the accuracy and/or applicability of the standards presented in this manual. The user shall be entirely responsible for the verification of the reasonability of all proposed designs and shall incorporate alternative design methodology when appropriate.



#### **1.4 DEFINITIONS:**

**ADJACENT GRADE:** The elevation of the ground, sidewalk, patio, deck support, or basement entryway immediately next to a structure.

**APPROVAL:** Written notice by the TOCC staff approving the design, progress or completion of work. Copies of which shall be filed in the office of the TOCC Town Arborist and Building Official.

**APPROVED PLAN:** The most current landscape plan which bears the authorized signature of approval of the appropriate TOCC staff member.

**AREA:** An area of a town that has a unique character identifiable as different from surrounding areas because of distinctive architecture, streets, geographic features, culture, landmarks, activities, or land uses.

**BERM** is a mound of earth used as a barrier, an aesthetic feature or for screening.

**BICYCLE LANES:** These are on-street facilities, typically three (3) to five (5) feet wide, designed for a bicycle, created by means of pavement striping.

**BORROW:** Earth material acquired from an offsite location.

**BRUSHING:** The selective removal of vegetation from a proposed development site or other piece of property.

**BUILDING OFFICIAL** is the person, or designee who administers the building/construction codes as adopted by the Town.

**CLEARING OR GRUBBING:** Removal, relocation or demolition of any plant, bush, tree, cacti, earth or rock from a property as preparation for subsequent development and construction.

**COMMERCIAL:** A land use classification that permits facilities for the buying and selling of commodities and services.

**COMMUNITY PARK:** A publicly owned land site with full public access intended to provide recreation opportunities beyond those supplied by neighborhood parks.

**COMPACTION:** The process whereby the in-place density of any earth material is increased by mechanical equipment, hydraulic means or other approved method.

**CONSERVATION:** The preservation, management, and care of natural and cultural resources.

**CONSTRUCTION DOCUMENTS:** The TOCC approved plans, drawings, specifications, and other Instruments of service.

**CONSTRUCTION PHASE:** The period beginning with the issuance of the Construction Notice to Proceed and ending on the date of Final Completion of the Project.

**CONSTRUCTION WORK:** That portion of the work consisting of the provision of labor, materials, equipment and services provided in connection with the construction of a project as described in the Construction Documents.

**CORDONING:** The defining of the area of proposed disturbance or any site work, using orange mesh safety construction fence. This fence shall represent the edge of



construction, no disturbance outside of this fence at anytime during construction shall be allowed. Cordoning shall remain in place for the entire duration of all construction. An inspection and sign off by the Town of Cave Creek Planning Department is required before the subject fence is removed.

If disturbance occurs outside of cordoning without prior approval from the TOCC Planning Department the property owner shall cause the replacement of all damaged or removed plants, and or hardscape with like kind and size plants and/or materials. In addition at a minimum, a reinspection fee will be assessed the permit holder.

**COST OF THE WORK:** Those items of work that are paid for by the TOCC.

**DESERT PAVEMENT:** Any rock or non-living material that would be naturally found on the site prior to disturbance.

**DESIGN MATERIALS:** Any and all documents, shop drawings, electronic information, data, plans, drawings, sketches, illustrations, specifications, descriptions, models and other information developed, prepared, furnished, delivered or required to be delivered to the TOCC under the terms of the Contract Documents.

**DESIGN PHASE:** The period set forth when all design work is complete.

**DESIGN WORK:** That portion of the work consisting of the design services required to be provided in connection with the design of a project as set forth in the Contract Documents.

**DEVELOPMENT 1:** The physical extension and/or construction of urban land uses. Development activities include: subdivision of land; construction or alteration of structures, roads, utilities, and other facilities; grading; and clearing of natural vegetative cover (with the exception of agricultural activities). Routine repair and maintenance activities are exempted.

**DEVELOPMENT 2:** Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, fencing, excavating or drilling also referred to as "disturbance."

**DEVELOPMENT ENVELOPE:** The delineated boundary inside the property limits within which all buildings shall be contained. No buildings of any kind for any purpose are allowed outside of the development envelope.

**EARTH MATERIAL:** Any rock, natural soil or fill, and/or any combination thereof.

**ENGINEERING PLANS:** Plans, profiles, cross-sections, and other required details for the construction of improvements which shall be prepared and bear the seal of a professional engineer or architect, currently registered in the State of Arizona under the appropriate discipline for the type of project which has been designed.

**ENVIRONMENTALLY SENSITIVE AREAS:** Areas that are:

1. **WASH AREAS:** The area within twenty feet (20') from and including the designated FEMA floodway, which has the presence of a channeled drainage way evidenced by a drainage path with or without vegetation.
2. **RIDGE LINE AREAS:** The ridgeline is formed by opposing slopes on a mountain or hill.



3. **PEAK AREAS:** The peak is the top point of a mountain or hill formed by opposing slopes from all sides.
4. **HILLSIDE:** Any land that has a slope of fifteen percent (15%) or more.

**EXCAVATION:** Any act, by which earth, sand, gravel, rock, or other earthen material is cut into, dug, uncovered, displaced or relocated, and shall include the conditions resulting therefrom. In other words, the artificial (e.g. mechanical, manual, blasting, etc.) removal of earth materials.

**EXISTING GRADE:** The original grade or elevation of the existing ground surface prior to excavating, filling, stockpiling, and/or storage.

**EXOTIC SPECIES** – Plants and animals not native to an area.

**FILL:** Deposits of soil, rock, or other materials placed by artificial or mechanical means.

**FINAL INSPECTION:** Field inspection conducted by the TOCC staff prior to project acceptance or release of assurances (if required).

**FINISH GRADE:** The final grade or elevation of the improved or altered surface after grading and construction is completed.

**FLOODPLAIN:** The relatively level land area on at least one side of a continuous elevated landform, regularly subject to flooding. That part of the floodplain subject to a one-percent (1%) chance of flooding in any given year is designated as an "area of special flood hazard" by the Federal Insurance Administration.

**FULL CUT-OFF LIGHT FIXTURE** means the fixture shall be shielded so that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.

**FULLY SHIELDED LIGHT FIXTURE** means that the bulb (light source) is not clearly visible when viewed from an adjacent property or street.

**GENERAL PLAN:** A compendium of Town goals, objectives, and policies regarding its long-term development, in the form of maps and accompanying text.

**GLARE:** Intense and blinding light causing visual discomfort or disability.

**GOAL:** A general, overall, and ultimate purpose, aim, or end toward which the TOCC will direct effort.

**GRADING:** Any excavating or filling to level land or create a slope or combination thereof.

**GRADING PERMIT:** An official document issued by the TOCC Building Department staff authorizing the grading and related site work activity specified by the permit conditions.

**GRUBBING:** The clearing of a majority of the vegetative matter within a certain area.



**HILLSIDE:** All lands where the natural desert terrain of any lot, tract or parcel has a slope of fifteen percent (15%) or greater over a minimum distance of one hundred feet (100').

**HISTORIC TOWN CORE:** Beginning at the intersection of East Cave Creek Road and North Scopa Trail and extending parallel to Cave Creek Road north to the East LaSalle Road alignment and south to the East Skyline Drive alignment; thence west along East Cave Creek Road to its intersection with North Spur Cross Road then extending parallel to North Cave Creek Road west to the North Conestoga Trail alignment and East to the North Basin Road alignment; thence south along North Cave Creek Road to a point 275 feet (+/-) south of East Carriage Drive to its terminus, an area of approximately one and a quarter (+/-) square mile.

**INFRASTRUCTURE:** Services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, and roads.

**ISA:** International Society of Arboriculture.

**LAND DISTURBANCE:** Any human caused alteration of the land surface or indigenous vegetation including all clearing, grubbing, grading, and mining activities.

**LAND USE:** The occupation or utilization of land or water area for any human activity or any purpose defined in the General Plan.

**LANDSCAPE DESIGNER:** The landscape designer or architect responsible for the plan design, construction documentation preparation and landscape cost estimate for a project.

**LANDSCAPE LIGHTING:** Luminaries mounted in or at grade (not exceeding twelve (12) volts) and used solely for landscape rather than any area lighting.

**LUMINAIRE (LIGHT FIXTURE):** A complete lighting unit consisting of one (1) or more electric lamps, the lamp holder, any reflector or lens, ballast (if any), and any other components and accessories.

**MAG:** The Maricopa Association of Governments.

**MAJOR WASH:** The area that has been designated a Federal Floodplain by the Federal Emergency Management Agency (**FEMA**) or any wash having a one-hundred (100) – year peak flow of fifty cubic feet per second (50 cfs) or greater.

**MASTER PLAN:** A plan for a large area that may address land use, landscaping, infrastructure, circulation or service provision.

**MINOR WASH:** A wash or constructed drainage feature having a one hundred (100) – year peak flow of less than fifty cubic feet per second (50 cfs).

**MIXED-USE:** Properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with significant functional interrelationships and a coherent physical design. A "single site" may include contiguous properties.

**NATIVE BUFFER AREA (NBA):** That portion of a lot or parcel which lies outside of the buildable area and/or allowed area of disturbance that must remain as natural desert in accordance with Town regulations.



**NATIVE HABITAT CORRIDOR (NHC):** The area within twelve feet (12') of any property line on a lot or parcel in the Desert Rural Zone that is required to be left in a natural state, except for driveway/utility access, where necessary.

**NATIVE PLANT:** For the purpose of this ordinance a native plant shall be any tree, groundcover, grass, shrub or cactus that would be naturally found on subject property or adjacent properties and that could establish itself without aid of man. Exceptions would be any plant found on the Prohibited Weed list found in Section 18 of this Guideline.

**NOTICE TO PROCEED:** The notice given by the TOCC authorizing work to begin.

**OBTRUSIVE LIGHT:** Spill light that causes glare, annoyance, discomfort, or loss of visual ability (Light Pollution).

**OPEN SPACE:** Any parcel or area of land or water that is improved or unimproved, and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) outdoor recreation, or (3) public health and safety. Open Spaces include functional open space, retention/detention areas and floodways and floodplains. Open space may be publicly or privately owned and maintained.

**PARKS:** Open space lands whose primary purpose is recreation, or passive enjoyment by the public.

**PLANNING AREA:** The area directly addressed by the General Plan. The Town's planning area typically encompassing the existing Town limits, and potentially annexable land which will ultimately form the Town limits at build out, and to which the Town will provide services.

**PLANNING DIRECTOR:** The Town of Cave Creek Planning Director.

**PRIVATE AREA (PA):** Those portions of the buildable area that are shielded from view from adjacent properties, streets, or public spaces behind walls or structures. Private Areas also include "common areas" for commercial, multiple residence, and single residence zones provided these areas are not visible from adjacent properties, streets, or public spaces hidden behind walls or structures.

**PTE:** Public Trail Easement.

**PUE:** Public Utility Easement.

**REGIONAL:** Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad geographic area.

**REVEGETATION:** Establishing native plants at a density similar to existing natural conditions in disturbed or denuded areas.

**REZONING:** An amendment to the Official Zoning Map and/or text of a zoning ordinance to effect a change in the nature, density, or intensity of uses allowed in a zoning district and/or on a designated parcel or land area.

**RIGHT-OF-WAY (ROW):** Publicly owned land occupied or intended to be occupied by certain transportation and public use facilities, such as roadways, railroads, and utility lines.



**RIPARIAN AREAS** - These areas have no universally accepted definition. all definitions have certain common points: 1) These areas are adjacent to a body of water and dependent on perennial and intermittent water; 2) These areas have no clearly defined boundaries; 3) They are transitional zones between aquatic and terrestrial environments and 4) These areas are typically linear in nature.

**RIPARIAN VEGETATION** – Vegetation that is distinct to their upland counterparts because of their density and species. Riparian vegetation receives significantly more amount and sources of water and are more adapted to disturbances, particularly flooding, compared to uplands vegetation.

**SITE:** Any lot or parcel of land, or contiguous combination of lots and parcels under the same ownership, or unified control, where related site work is to be performed. The subject land shall have access to a public or an approved private street.

**SPILL LIGHT** is the amount of light that illuminates beyond the range or primary area that the fixture is intended to light.

**STABILIZED SLOPE:** A slope treated with revegetation or other mitigation measures approved by the TOCC that resist erosion or augment the structural integrity of the slope.

**STRUCTURE:** That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner, which requires location on the ground or is attached to something having location on the ground.

**SUBDIVISION:** The division of a tract of land into four or more defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed.

**TECHNICAL DESIGN GUIDELINE:** A technical advisory supplement to the Town of Cave Creek Zoning and Subdivision Ordinances that provides inclusive information and requirements related to a specific discipline.

**TOWN ARBORIST:** The Town of Cave Creek Town Arborist.

**TOCC:** The Town of Cave Creek, Arizona.

**TOWN COUNCIL:** The Town of Cave Creek Town Council.

**TOWN ENGINEER:** The Town of Cave Creek Engineer.

**TRAILS AND PATHWAYS:** Trails and pathways including on-street bicycle lanes, off-street bicycle trails; pedestrian and equestrian paths and trails; are multiple use non-motorized easements, trailheads, and staging areas within the Town of Cave Creek's jurisdiction.

Trails and pathways may be located within the Town's rights-of-way or can be dedicated to the Town from private property owners. The trails and pathways within the Town provide safe alternative non-motorized transportation access and connectivity to recreation and Town Core areas.



**TRAILS COORDINATOR:** The Town of Cave Creek Trails Coordinator.

**TRANSITIONAL AREA (TA):** That part of the buildable area which lies between the Natural Buffer Area (NBA) and a wall or improvement which is visible from adjacent properties, streets, or public spaces.

**UPLAND PLANT SPECIES** – Species that are rarely found in wetland.

**UTILITY DEPARTMENT:** The Town of Cave Creek Utility Department.

**UTILITY DIRECTOR:** The Town of Cave Creek Utility Department Director.

**WATERCOURSE:** Any lake, river, stream, creek, wash, arroyo, or other body of water or channel having banks and bed through which waters flow at least periodically and any depression serving to give direction to a current of storm water.

**WILDLIFE:** Animals or plants existing in their natural habitat.

**WORK:** The activities specifically identified within the Contract Documents.

**ZONING:** The division of a town or county by legislative regulations into areas, or zones, which specify allowable uses and required development standards for real property within these areas; a program that implements policies of the General Plan.

**ZONING ADMINISTRATOR:** The Zoning Administrator shall be designated at the discretion of the TOCC Town Manager.

### **1.5 STANDARD SPECIFICATIONS & DETAILS:**

The latest MAG Standard Specifications and Standard Details have been adopted by the TOCC. All design and construction must be in accordance with the Uniform Standard Specifications and Details published by the Maricopa Association of Governments and as amended by the TOCC for all ROW projects. Alternate details and specifications may be submitted for review and acceptance by the Planning Department. If accepted, alternate details shall be shown as part of the approved landscape plans.

## **SECTION 2 - LANDSCAPE GUIDELINES**

### **2.1 PURPOSE:**

The purpose of this document is to provide guidance as to the minimum requirements for landscape and re-vegetation projects and related landscape designs for development within the Town of Cave Creek. The main objectives of this Guideline are to:

1. Establish minimum design guidelines that are intended to be used in conjunction with the governing specifications of the appropriate ordinances of the Town of Cave Creek, Maricopa County, and State of Arizona and Federal agencies.
2. Provide guidelines on the use, availability and appropriateness of associated data.
3. Provide guidelines on recommended salvage and planting methodologies.



4. Provide guidance on the proper care and maintenance of trees and shrubs located within the TOCC's Commercial Zones, Streetscape and Medians/Rights-of-Ways (ROW's).
5. Provide guidelines related to Median/ROW planting, irrigation and maintenance.
6. Recommended procedures, classifications and design standards that the project engineer, architect, planner, designer and/or property owner is generally required to use.
7. Design concepts, procedures and technical data are presented herein only as guidelines and are not intended to replace sound landscape design judgment and experience.

## **2.2 CODES, ORDINANCES & REGULATIONS:**

The Town of Cave Creek, as part of its regulatory function, has established Zoning Ordinances and Subdivision Ordinances. The Zoning and Subdivision Ordinances regulate the development and use of private and public land. Long range land use planning is guided through the TOCC General Plan. The Planning Department is responsible for current planning, long range planning and zoning enforcement and administers the Zoning and Subdivision Ordinances. All project related planning and design activities shall comply with the Zoning and Subdivision Ordinances of the Town of Cave Creek. Copies of these ordinances may be obtained from the TOCC and are electronically available at [www.cavecreekaz.gov](http://www.cavecreekaz.gov)

## **2.3 DILIGENCE:**

### **2.3.1 Verification & Compliance:**

It is strongly advised that all designers, architects, developers and property owners verify the need for any landscape improvements necessary to ensure compliance of proposed projects with the adopted TOCC Ordinances and Codes.

### **2.3.2 Available Resources:**

1. The TOCC Planning Department – to obtain existing landscape design requirements (480-488-6600).
2. The TOCC General Plan – Environmental Element – found @ [www.cavecreekaz.gov](http://www.cavecreekaz.gov)
3. The TOCC Town Code.
4. The TOCC Zoning Ordinance & Subdivision Ordinance – found @ [www.cavecreekaz.gov](http://www.cavecreekaz.gov)
5. The Planning Department for information related to Native Plant Inventories, Salvage Reports & Revegetation requirements (480-488-6600).
6. TOCC Technical Design Guideline No. 1 – Grading & Drainage.



7. TOCC Technical Design Guideline No. 2 – Transportation.
8. TOCC Technical Design Guideline No. 3 - Utilities
9. TOCC Technical Design Guideline No. 4 – Landscaping
10. TOCC Technical Design Guideline No. 5 - Trails
11. TOCC Town Council approved Conditions of Approval for a specific project.
12. Town of Cave Creek approved grading and drainage plan for a specific project.
13. Arizona Department of Agriculture Notice of Intent to Clear Land.
14. Arizona Revised Statutes - Title § 3-904.
15. Archived plans for specific properties may be available through the submission of a Public Records Request filed with the Town Clerk [www.cavecreekaz.gov](http://www.cavecreekaz.gov).

**2.3.3 Additional Review Agencies:**

In addition, the US Fish and Wildlife Service, US Forest Service, Arizona Game & Fish Department, Arizona State Historic Preservation Office and Arizona State Land Department have important advisory roles. In order to allow time for permit processing and coordination with the above-referenced agencies, the developer needs to contact the above noted agencies early in the project planning stage for information about potential permits and submittal and notification requirements.

**2.4 PLANT CATEGORIES:**

The Landscape Plan shall identify plants based upon the following categories:

1. Trees
2. Cactus
3. Shrubs
4. Ground cover

**2.5 PLANT LIST:**

The Landscape Plan shall utilize the appropriate plant list for the area being landscaped. Plant density counts are for shrubs and ground covers only. Information related to specific area requirements is contained within the following supporting documentation:

1. Native Habitat Corridor (NHC) - see Sub-section 1.4 - Definitions & Exhibit 1 of this Technical Design Guideline (\*minimum plant density 35 plants/1,000 sq. ft.).



2. Native Buffer Area (NBA) - see Sub-section 1.4 - Definitions & Exhibit 2 of this Technical Design Guideline (\*minimum plant density 20 plants/1,000 sq. ft.).
3. Transitional Area (TA) - see Sub-section 1.4 - Definitions & Exhibit 3 of this Technical Design Guideline
4. Private Area (PA) - see Sub-section 1.4 - Definitions.
5. Reference Exhibit 4 of this Technical Design Guideline for prohibited plant species.

## **2.6 INORGANIC MATERIALS:**

As approved by the Town Arborist/Zoning Administrator.

## **2.7 HARDSCAPE:**

As per the TOCC Zoning Ordinance and as approved by the Town Arborist/Zoning Administrator. Typical Hardscape amenities include but are not limited to the following:

1. Benches
2. Shelters
3. Shade Structures
4. Trash Receptacles
5. Bike Racks
6. Hitching Posts
7. Water Troughs
8. Drinking Fountains
9. Trails & Pathways
10. Decorative Walls
11. Sculpture (art work)

## **2.8 LANDSCAPE LIGHTING:**

### **2.8.1 Low Voltage Lighting**

1. The purpose of this Guideline is to:
  - Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, and enjoyment while preserving the ambiance of the night;
  - Mitigate the degradation of the nighttime visual environment and the night sky;



- Minimize glare and obtrusive light by restricting outdoor lighting that is misdirected, excessive, or unnecessary;
- Conservation of energy and resources to the greatest extent possible;

All outdoor lighting fixtures (luminaries) shall be installed in conformance with this Guideline and with the provisions of the Town of Cave Creek adopted Building Code, Electrical Code, and Zoning Ordinance, as applicable and under permit and inspection, if such is required.

2. Practical Considerations:

The idea that increasing the amount of lighting will result in increased safety and security is a myth. Effective lighting design addresses the amount of light, the location and the hours of usage. Proper engineering and design will serve to reduce the amount of wasted light and energy.

**2.8.2 Low Voltage Requirements For All Zones:**

1. All Low Voltage Lighting requires that a plan be submitted for review and approval by the Town of Cave Creek Planning Department.
2. Landscape Areas:

Parcels located within the Towns various land use designations are subdivided into specific landscape areas.

The maximum number of lighting fixtures per landscape area is as follows:

AREA	NUMBER OF FIXTURES	COMMENTS
NHC	3	ONLY LIGHTS ON EACH SIDE OF DRIVEWAY ENTRANCE WITH ONE ADDITIONAL LIGHT ON THE PARCEL ADDRESS.
NBA	BY REVIEW	ONLY DOWN LIGHTS ALONG DRIVEWAY, PATHWAY OR WALKWAY LEADING TO BUILDING
TA	BY REVIEW	UP LIGHTS, DOWN LIGHTS, WALL WASHING. BOULDERS, ARTWORK ETC.
PA	BY REVIEW	FLOOD LIGHTING OF BUILDING IS PROHIBITED

Figure 2.8-1

3. Maximum Lamp Wattage and Required Luminaire or Lamp Shielding:  
At no time shall an incandescent bulb with wattage greater than 35 watts and fluorescent/LED bulb greater than 5 watts or emit in excess of 375 lumens be allowed.



4. Additional restrictions:

Up lighting or flood lighting of buildings shall not be allowed. Back lighting or grazing may be allowed and is subject to review by the Town of Cave Creek staff.

**2.9 LANDSCAPE PLAN:**

See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**2.10 PERMITS:**

**2.10.1 Permits:**

1. Separate Permits are required for all salvage work as well as outdoor low voltage lighting and landscape work. The cost of permits will be determined at time of permit issuance.
2. All Permit submittals shall be routed through the TOCC Building Department.
3. For information on Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.

**2.10.2 Action on Applications:**

After a Permit application has been submitted, Town staff may take one of the following courses of action:

1. The application may be approved and the permit issued.
2. The application may be approved with conditions, and the permit issued.
3. The application may be reviewed and returned with comments for corrections & resubmittal.
4. The application may be denied, with conditions for approval.
  - a. Action taken on an application may be appealed to the TOCC Board of Adjustment in conformance with the procedures as set forth within the TOCC Zoning Ordinance.

**2.10.3 Submittal Expiration:**

1. Submittals for all salvage work and landscape work that are not acted upon within six (6) months will be purged from the system.
2. All plan review fees are non-refundable.



## **2.11 INSPECTIONS:**

### **2.11.1 TOCC staff will conduct at a minimum the following inspections during the permit review process and the construction of the project:**

#### **1. Field Walk:**

The purpose of the Field Walk is to verify the accuracy of the native plant inventory and to identify other items that may allow for the greatest preservation of protected plant material.

The Field Walk is part of the first review of the landscape plan for multiple-residence and commercial developments, subdivision plats, and miscellaneous projects. For single-residence homes, the Field Walk is an integral part of the Preliminary Site Landscape Inspection.

#### **2. Preliminary Site Landscape Inspection:**

A Preliminary Site Landscape Inspection occurs once a Permit is issued, but prior to any salvage activities. At the time of this inspection, the applicant shall present copies of the approved Landscape Plan and the associated Permit. A permit inspection card, also issued with the Permit, is required to be posted on the site at all times.

#### **3. Nursery Inspection:**

a. The Nursery/Maintenance Inspection is done to assess the results of the native plant relocation process. It takes place approximately one (1) month after the last of the salvageable plants have been placed in the nursery. The plant identification number from the inventory list needs to be clearly marked on the box or plant.

b. A plant viability inspection is required to be passed every six (6) months to keep the nursery permit active. The following items are required at the time of each inspection:

- (1) A list of dead plants with their box size and number.
- (2) A list of plants that may have been planted in the landscape (include box size and number).
- (3) A list of healthy cactus.

#### **4. Final Landscape Inspection:**

The Final Landscape Inspection is to verify the ultimate location of relocated plant material, and should be done in conjunction with the Final Planning Inspection. The Final Landscape Inspection shall be approved before the issuance of the Certificate of Occupancy for a project when applicable.



**5. Scheduling Inspections:**

To schedule your inspections, call the TOCC Inspection Line  
@480-488-7092.

**2.11.2 General Inspection Criteria:**

1. TOCC staff will inspect, at a minimum, the following items before and during construction for compliance with Town approved plans:
  - a. Cordoning & layout
  - b. Native plant tagging
  - c. Compliance with the approved Salvage Plan
  - d. On-site nursery location
  - e. Nursery irrigation system
  - f. Compliance with approved Landscape (revegetation) Plan
  - g. Water meter & backflow preventer & master valve location
  - h. Controller type & location
  - i. Remote control valve type, location & operation
  - j. Source of power (inside enclosure)
  - k. Type of pipe and trench depth
  - l. Laterals and trench depth
  - m. Emitters and flush pits
  - n. Sleeves under asphalt
  - o. Pressure check system
  - p. Backflow preventer & enclosure
  - q. Plant palette and location
  - r. Planting depth
  - s. Tree staking
  - t. Sight Distance & Safety Triangles
  - u. Pre-emergent
  - v. Decomposed granite



**2.11.3 TOCC staff shall conduct, at a minimum, the following inspections for landscape work located within multiple-residence, commercial, subdivision, and streetscape projects after completion of work:**

1. Initial Landscape Walk-through:  
The TOCC Planning Department and/or Town Engineer shall perform an Initial Landscape Walk-Through with the contractor after the Completion of Work and Final Landscape Inspection approval.
2. Landscape Maintenance Period Notification/Completion of Construction:  
The TOCC Planning Department and/or Town Engineer shall issue a Maintenance Landscape Period Notification Letter/Completion of Construction to the permittee. The date on the Landscape Maintenance Period Notification Letter/Completion of Construction shall initiate the required one (1) year warranty period.
3. Final Landscape Walk-through:  
The TOCC Planning Department and/or Town Engineer shall perform a Final Landscape Walk-Through with the permittee at the end of the required one (1) year warranty period.
4. Final Landscape Letter of Acceptance:  
The TOCC Planning Department and/or Town Engineer shall issue a Final Landscape Letter of Acceptance to the permittee upon the verification of the completion of all required landscape work and the verification of the health of all required landscape plantings. The Final Letter of Acceptance terminates the required one (1) year warranty period.

**2.12 FEES:**

**2.12.1 Fees:**

1. Landscape Review Fee: An initial review fee is charged at the time of Building Permit submittal.
2. Permit Fee: At the time a Building Permit is issued a permit fee will be due to the Town. Fees vary by project.
3. Additional Fee Information: Additional information related to the adopted TOCC fee schedule is available on-line at [www.cavecreekaz.gov](http://www.cavecreekaz.gov).
4. Inspection Fee: The initial Field Walk, Preliminary Landscape Site Inspection, Nursery Inspection, and Final Landscape Inspection fees are included as part of the Permit fee total. Any added landscape inspections shall be assessed at a rate of \$100 per inspection.



**2.13 WAIVERS:**

**2.13.1 Waiver Policy:**

Any waiver to the standards and conditions contained herein shall require prior written approval from the appropriate TOCC Official and the Planning Department.

**2.14 FINANCIAL SECURITY:**

See Section 16 – Financial Security of this Technical Design Guideline for Financial Security requirements.



## SECTION 3 – SINGLE-RESIDENCE ZONES

### 3.1 PURPOSE:

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of single-residence development within the TOCC. Per the TOCC Zoning Ordinance the following minimum requirements shall apply to all projects located within the TOCC Desert Rural and Single-Residence zones. **Residential lots within platted subdivisions may have additional restrictions associated with development improvements including landscaping and development envelopes. For more information about a specific residential property contact the TOCC Planning Department @ (480) 488-6600.**

### 3.2 LAND DISTURBANCE:

#### 3.2.1 Maximum Lot Coverage & Lot Disturbance Percentages (\*Non-Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Desert Rural	DR-190	10%	65%
Desert Rural	DR-89	10%	65%
Desert Rural	DR-70	10%	65%
Desert Rural	DR-43	15%	60%

Figure 3.2-1

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Single - Residence	R-35	20%	55%
Single - Residence	R-18	25%	50%

Figure 3.2-2

#### 3.2.2 Maximum Lot Coverage & Lot Disturbance Percentages (\*Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Desert Rural	DR-190	10%	5%
Desert Rural	DR-89	10%	10%
Desert Rural	DR-70	10%	10%
Desert Rural	DR-43	15%	15%

Figure 3.2-3



**Maximum Lot Coverage & Lot Disturbance Percentages (\*Hillside):**

<i>LAND USE</i>	<i>ZONE</i>	<i>MAXIMUM LOT COVERAGE (% of Gross Lot area)</i>	<i>MAXIMUM LOT DISTURBANCE (% of Gross Lot area)</i>
Single - Residence	R-35	20%	20%
Single - Residence	R-18	25%	25%

Figure 3.2-4

\*Note: Reference Sub-Section 1.4 - Definitions of this document for clarification of the criteria use to determine whether a lot, tract or parcel is classified as Hillside.

**3.3 UNDISTURBED AREAS:**

1. All required undisturbed areas shall remain in their natural state.
2. Re-vegetation and/or supplemental vegetation of undisturbed areas is allowed pursuant to a TOCC approved Landscape Plan.
3. Any re-vegetation of required undisturbed areas shall include only those plant materials found within Exhibits 1 & 2 of this Technical Design Guideline.

**3.4 LANDSCAPE REQUIREMENTS:**

**3.4.1 Landscape Plan:**

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**3.4.2 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

**3.4.3 Building Permit:**

A TOCC Building Permit issued by the Town's Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.

**3.4.4 Areas to be Landscaped:**

At a minimum, all cut and fill slopes shall be re-vegetated.



## SECTION 4 – MULTIPLE-RESIDENCE ZONES

### 4.1 PURPOSE:

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of multiple-residence development within the TOCC. Per the TOCC Zoning Ordinance the following minimum requirements shall apply to all projects located within the TOCC Multiple-Residence zones, including but not limited to apartment complexes, town home projects and condominium projects:

### 4.2 LAND DISTURBANCE:

#### 4.2.1 Maximum Lot Coverage & Lot Disturbance Percentages (\*Non-Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Multiple-Residence	MR	50%	0 – 0.99 acre = 25% 1 – 1.99 acre = 20% 2 acres + = 15%

Figure 4.2-1

#### 4.2.2 Maximum Lot Coverage & Lot Disturbance Percentages (\*Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Multiple-Residence	MR	40%	10%

Figure 4.2-2

\*Note: Reference Sub-Section 1.4 - Definitions of this document for clarification of the criteria use to determine whether a lot, tract or parcel is classified as Hillside.

#### 4.2.3 Minimum Undisturbed and Landscaped Percentages:

- The minimum percentage of each Multiple-Residence zoned lot, tract or parcel that shall be left undisturbed is as follows:

##### Undisturbed Area and Landscape Area Percentages

Total Gross Area of Lot , Tract or Parcel	Minimum Required Undisturbed Area	+	Minimum Required Landscaped Area	=	Total Minimum Required Landscaped plus Undisturbed Area
0 – 0.99 acre = 25%	0%	+	25%	=	25%
1 – 1.99 acre = 20%	15%	+	15%	=	30%
2 acres + = 15%	20%	+	15%	=	35%

Figure 4.2-3



**4.3      *UNDISTURBED AREAS:***

1. All required undisturbed areas shall remain in their natural state.
2. Re-vegetation and/or supplemental vegetation of undisturbed areas is allowed pursuant to a TOCC approved Landscape Plan.
3. Any re-vegetation of required undisturbed areas shall include only those plant materials found within Exhibits 1 & 2 of this Technical Design Guideline.

**4.4      *LANDSCAPE REQUIREMENTS:***

**4.4.1    *Landscape Plan:***

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**4.4.2    *Native Plant Inventory and Salvage Plan:***

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

**4.4.3    *Building Permit:***

A TOCC Building Permit issued by the Town's Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.

**4.4.4    *Areas to be Landscaped:***

All surface areas of any Multiple-Residence project that are not required to remain in their natural state or that are designated for buildings, drives, parking or permitted outside storage, shall be landscaped.

**4.4.5    *Parking Areas:***

1. Parking shall be designed around existing vegetation when practicable.
2. It is recommended that planting areas be designed using undisturbed vegetation rather than creating planting islands within the parking lot.
3. A minimum of one (1) tree for every eight (8) required parking spaces, or portion thereof, shall be planted to provide shade.
4. Fifteen (15) gallon trees are the minimum acceptable size. Salvage trees may be used.
5. It is required that planting areas be designed incorporating existing vegetation.

**4.4.6    *Street Frontage Areas:***



Landscaping within street frontage areas, excluding streetscape, shall require:

1. A minimum of one tree per each forty feet (40') of street frontage on each side of the street.
2. Salvage trees are to be used when possible and intermixed with nursery grown trees.
3. Non-salvage trees shall have a minimum twenty-four inch (24") box size.
4. The trunk center of a tree shall be no closer than eight feet (8') from the finished edge of the roadway.

**4.4.7 Other Landscaped Areas:**

All other landscaped areas, including but not limited to public rights-of-way (ROW), shall be landscaped subject to the native plant lists as contained within Exhibits 1, 2, & 3 of this Technical Design Guideline.

1. If a lot, tract or parcel has been previously disturbed, Town staff may choose three (3) 20' x 20' random sample survey plots from the site to be inventoried.
2. The average density, species, and tree size of the plots may become the standard for the design and re-vegetation of the required landscape areas.
3. At a minimum 35 plants per 1,000 square feet (trees and cacti are not included in this count) shall be required or as agreed to by the Town.
4. If the existing site has been disturbed to the point of not allowing for sufficient sampling, Town staff shall determine the nearest site that would be representative of the area.

**4.4.8 Plant Species Selection:**

1. Selection of specific plant species shall be consistent with those native species immediately adjacent to the area to be vegetated.
2. Plants selected for vegetation shall utilize a combination of one (1), five (5) and fifteen (15) gallon nursery grown, container stock.

**4.4.9 Retention Areas:**

1. Retention areas, whenever feasible, shall be designed to replicate natural basins.
2. Contouring should be in a free form, natural layout.
3. Basins shall be designed to hold no more than three feet (3') of water.
4. Reference the TOCC Technical Design Guideline No. 1 – Grading & Drainage for additional technical requirements.
5. All retention basins shall be in conformance with adopted Town Codes.



## SECTION 5 – COMMERCIAL ZONES

### 5.1 PURPOSE:

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of commercial development within the TOCC. Per the TOCC Zoning Ordinance the following minimum requirements shall apply to all projects located within the TOCC Commercial zones:

### 5.2 LAND DISTURBANCE LOT COVERAGE:

#### 5.2.1 Maximum Lot Coverage & Lot Disturbance Percentages (\*Non-Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
General Commercial	GC	60%	0 – 0.99 acre = 25% 1 – 1.99 acre = 20% 2 acres + = 15%
Commercial Core	CC	60%	0 – 0.99 acre = 25% 1 – 1.99 acre = 20% 2 acres + = 15%
Commercial Buffer	CB	60%	0 – 0.99 acre = 25% 1 – 1.99 acre = 20% 2 acres + = 15%

Figure 5.2-1

#### 5.2.2 Maximum Lot Coverage & Lot Disturbance Percentages (\*Hillside):

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
General Commercial	GC	40%	10%
Commercial Core	CC	40%	10%
Commercial Buffer	CB	40%	10%

Figure 5.2-2

\*Note: Reference Sub-Section 1.4 - Definitions of this document for clarification of the criteria use to determine whether a lot, tract or parcel is classified as Hillside.



**5.2.3 Minimum Undisturbed and Landscaped Percentages:**

1. The minimum percentage of each Commercial zoned lot, tract or parcel that shall be left undisturbed is as follows:

**Undisturbed Area and Landscape Area Percentages**

Total Gross Area of Lot , Tract or Parcel	Minimum Required Undisturbed Area	+	Minimum Required Landscaped Area	=	Total Minimum Required Landscaped plus Undisturbed Area
0 – 0.99 acre = 25%	0%	+	25%	=	25%
1 – 1.99 acre = 20%	15%	+	15%	=	30%
2 acres + = 15%	20%	+	15%	=	35%

Figure 5.2-3

**5.3 UNDISTURBED AREAS:**

1. All required undisturbed areas shall remain in their natural state.
2. Re-vegetation and/or supplemental vegetation of undisturbed areas is allowed pursuant to a TOCC approved Landscape Plan.
3. Any re-vegetation of required undisturbed areas shall include only those plant materials found within Exhibits 1 & 2 of this Technical Design Guideline.

**5.4 LANDSCAPE REQUIREMENTS:**

**5.4.1 Landscape Plan:**

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**5.4.2 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

**5.4.3 Building Permit:**

A TOCC Building Permit issued by the Town’s Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.



**5.4.4 Areas to be Landscaped:**

All surface areas of any Commercial project that are not required to remain in their natural state or that are designated for buildings, drives, parking or permitted outside storage, shall be landscaped. The use of landscape and architectural features for screening shall be utilized where adjacent to dissimilar zones (further described 5.4.7).

**5.4.5 Parking Areas:**

1. Parking shall be designed around existing vegetation when practicable.
2. It is recommended that planting areas be designed using undisturbed vegetation rather than creating planting islands within the parking lot.
3. A minimum of one (1) tree for every eight (8) required parking spaces, or portion thereof, shall be planted to provide shade except as may be further required.
4. Twenty-four inch (24") box trees are the minimum acceptable size. Salvage trees may be used.

**5.4.6 Street Frontage Areas:**

Landscaping within street frontage areas, excluding streetscape, shall require:

1. A minimum of one tree per each forty feet (40') of street frontage and on each side of the street.
2. Salvage trees are to be used when possible and intermixed with nursery grown trees.
3. Half of all non-salvage trees may be a minimum twenty-four inch (24") box size, remaining nursery grown trees shall consist of larger box sizes.
4. The trunk center of a tree shall be no closer than eight feet (8') from the finished edge of the roadway.

**5.4.7 Landscape Areas Abutting Residential Zones:**

The use of landscape and/or architectural features for screening shall be utilized where commercial properties abut residential zones.

1. Where practical, subject to the Town's approval, landscaped berms consisting of native trees and shrubs shall be incorporated into the final Grading and Drainage design.

Reference the Commercial Zones requirements as contained within the TOCC Zoning Ordinance for additional regulations.



**5.4.8 Other Landscaped Areas:**

All other landscaped areas, including but not limited to public rights-of-way (ROW), shall be landscaped subject to the native plant lists as contained within Exhibits 1, 2, & 3 of this Technical Design Guideline.

1. If a lot, tract or parcel has been previously disturbed, Town staff may choose three (3) 20' x 20' random sample survey plots from the site to be inventoried.
2. The average density, species, and tree size of the plots may become the standard for the design and re-vegetation of the required landscape areas.
3. At a minimum 35 plants per 1,000 square feet (trees and cacti are not included in this count) shall be required.
4. If the existing site has been disturbed to the point of not allowing for sufficient sampling, Town staff shall determine the nearest site that would be representative of the area.

**5.4.9 Plant Species Selection:**

1. Selection of specific plant species shall be consistent with those native species immediately adjacent to the area to be vegetated.
2. Plants selected for vegetation shall utilize a combination of one (1), five (5) and fifteen (15) gallon nursery grown, container stock.

**5.4.10 Retention Areas:**

1. Retention areas, whenever feasible, shall be designed to replicate natural basins.
2. Contouring should be in a free form, natural layout.
3. Basins shall be designed to hold no more than three feet (3') of water.
4. Reference the TOCC Technical Design Guideline No. 1 – Grading & Drainage for additional technical requirements.
5. All retention basins shall be in conformance with adopted Town Codes.



## SECTION 6 – OPEN SPACE ZONES

### 6.1 **PURPOSE:**

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of open space areas within the TOCC. Per the TOCC Zoning Ordinance the following minimum requirements shall apply to all projects located within the TOCC Open Space zones:

### 6.2 **LAND DISTURBANCE:**

#### 6.2.1 **Maximum Lot Coverage & Lot Disturbance Percentages (\*Non-Hillside):**

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Open Space Conservation	OSC	1%	1%
Open Space Recreation	OSR	2%	2%
Parks & Recreation	PR	4%	2%

Figure 6.2-1

#### 6.2.2 **Maximum Lot Coverage & Lot Disturbance Percentages (\*Hillside):**

LAND USE	ZONE	MAXIMUM LOT COVERAGE (% of Gross Lot area)	MAXIMUM LOT DISTURBANCE (% of Gross Lot area)
Open Space Conservation	OSC	1%	1%
Open Space Recreation	OSR	2%	2%
Parks & Recreation	PR	4%	2%

Figure 6.2-2

\*Note: Reference Sub-Section 1.4 - Definitions of this document for clarification of the criteria use to determine whether a lot, tract or parcel is classified as Hillside.

### 6.3 **UNDISTURBED AREAS:**

1. All required undisturbed areas shall remain in their natural state.
2. Re-vegetation and/or supplemental vegetation of undisturbed areas is allowed pursuant to a TOCC approved Landscape Plan.
3. Any re-vegetation of required undisturbed areas shall include only those plant materials found within Exhibit 1 of this Technical Design Guideline.



**6.4 LANDSCAPE REQUIREMENTS:**

**6.4.1 Landscape Plan:**

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**6.4.2 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

**6.4.3 Building Permit:**

A TOCC Building Permit issued by the Town's Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.

**6.4.4 Areas to be Landscaped:**

All surface areas of any open space area that are not required to remain in their natural state or that are designated for buildings, drives, parking or permitted outside storage, shall be landscaped.

**6.4.5 Parking Areas:**

1. Parking shall be designed around existing vegetation when practicable.
2. It is recommended that planting areas be designed using undisturbed vegetation rather than creating planting islands within the parking lot.
3. A minimum of one (1) tree for every eight (8) required parking spaces, or portion thereof, shall be planted to provide shade.
4. Fifteen (15) gallon trees are the minimum acceptable size. Salvage trees may be used.
5. It is required that planting areas be designed incorporating existing vegetation.

**6.4.6 Other Landscaped Areas:**

All other landscaped areas, including but not limited to public rights-of-way, shall be landscaped subject to the native plant lists as contained within Exhibit 1 of this Technical Design Guideline.

1. If a lot, tract or parcel has been previously disturbed, Town staff may choose three (3) 20' x 20' random sample survey plots from the site to be inventoried.
2. The average density, species, and tree size of the plots may become the standard for the design and re-vegetation of the required landscape areas.



3. At a minimum 35 plants per 1,000 square feet (trees and cacti are not included in this count) shall be required.
4. If the existing site has been disturbed to the point of not allowing for sufficient sampling, Town staff shall determine the nearest site that would be representative of the area.

**6.4.7 Plant Species Selection:**

1. Selection of specific plant species shall be consistent with those native species immediately adjacent to the area to be vegetated.
2. Plants selected for vegetation shall utilize a combination of one (1), five (5) and fifteen (15) gallon nursery grown, container stock.

**6.4.8 Retention Areas:**

1. Retention areas, whenever feasible, shall be designed to replicate natural basins.
2. Contouring should be in a free form, natural layout.
3. Basins shall be designed to hold no more than three (3) feet of water.
4. Reference the TOCC Technical Design Guideline No. 1 – Grading & Drainage for additional technical requirements.
5. Basins eighteen inches (18”) or deeper shall meet pool barrier requirements.



## **SECTION 7 - SUBDIVISIONS**

### **7.1 PURPOSE:**

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of subdivision developments within the TOCC. Per the TOCC Zoning and Subdivision Ordinances the following minimum requirements shall apply to all subdivision projects located within the TOCC.

### **7.2 LANDSCAPE REQUIREMENTS:**

#### **7.2.1 Landscape Plan:**

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

#### **7.2.2 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

#### **7.2.3 Building Permit:**

A TOCC Building Permit issued by the Town's Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.

#### **7.2.4 Areas to be Landscaped:**

All surface areas of any subdivision project that are not required to remain in their natural state or that are designated for buildings, drives, or parking, shall be landscaped.

#### **7.2.5 Parking Areas:**

1. Parking shall be designed around existing vegetation when practicable.
2. It is recommended that planting areas be designed using undisturbed vegetation rather than creating planting islands within the parking lot.
3. A minimum of one (1) tree for every eight (8) required parking spaces, or portion thereof, shall be planted to provide shade.
4. Fifteen (15) gallon trees are the minimum acceptable size. Salvage trees may be used.
5. It is required that planting areas be designed incorporating existing vegetation.



### **7.2.6 Street Frontage Areas:**

Landscaping within street frontage areas shall require:

1. A minimum of one tree per each forty (40) feet of street frontage and on each side of the street.
2. Salvage trees are to be used when possible and intermixed with nursery grown trees.
3. Non-salvage trees shall have a minimum twenty-four (24) inch box size.
4. The trunk center of a tree shall be no closer than eight (8) feet from the finished edge of the roadway.
5. Selection of plant species shall be consistent with those species immediately adjacent to the plants to be planted. Plants shall be a combination of one (1), five (5) and fifteen (15) gallon nursery grown, container stock.

### **7.2.7 Other Landscaped Areas:**

All other landscaped areas, including but not limited to public rights-of-way, shall be landscaped subject to the native plant lists as contained within Exhibits 1, 2, & 3 of this Technical Design Guideline.

1. If a lot, tract or parcel has been previously disturbed, Town staff may choose three (3) 20' x 20' random sample survey plots from the site to be inventoried.
2. The average density, species, and tree size of the plots may become the standard for the design and re-vegetation of the required landscape areas.
3. At a minimum 35 plants per 1,000 square feet (trees and cacti are not included in this count) shall be required.
4. If the existing site has been disturbed to the point of not allowing for sufficient sampling, Town staff shall determine the nearest site that would be representative of the area.
5. Seeding may be used to increase the density of an area to greater than the minimum required thirty-five (35) plants per one thousand (1,000) square feet density.
  - a. Seed mixture must be stated on plans and approved prior to use.
  - b. Considerations may be made on a case by case basis for waiving the planting of container material and allow for seeding in some special locations.
  - c. Any waiver to the standards contained herein shall require prior written approval from the TOCC Town Arborist and/or Zoning Administrator.



**7.2.8 Plant Species Selection:**

1. Selection of specific plant species shall be consistent with those native species immediately adjacent to the area to be vegetated.
2. Plants selected for vegetation shall utilize a combination of one (1), five (5) and fifteen (15) gallon nursery grown, container stock.

**7.2.9 Shrub and Ground Cover Mixture:**

1. There shall be a mixture of shrubs and ground covers at a minimum density of thirty-five (35) plants per one thousand (1,000) square feet. The plant list shall be in accordance with the Exhibits 1 and 2 of this Technical Design Guideline.

**7.2.10 Retention Areas:**

1. Retention areas, whenever feasible, shall be designed to replicate natural basins.
2. Contouring should be in a free form, natural layout.
3. Basins shall be designed to hold no more than three (3) feet of water.
4. Reference the TOCC Technical Design Guideline No. 1 – Grading & Drainage for additional technical requirements.
5. All retention basins shall be in conformance with adopted Town Codes.



## **SECTION 8 – NATIVE PLANT PRESERVATION & SALVAGE**

### **8.1 PURPOSE:**

The purpose of this Section is to provide guidance as to the requirements for the preservation and salvage of native plants located within the TOCC.

#### **8.1.1 Preservation and Salvage of Native Plants:**

The preservation and salvage of native plants as contained within Exhibit 1, of this Technical Design Guideline shall be required as part of any development.

#### **8.1.2 Re-vegetation:**

1. The owner/developer of a lot, tract or parcel shall be required to re-vegetate all disturbed areas of the development site that have been designated to be preserved in a non-disturbed condition.
2. The owner/developer shall use vegetation, from Exhibit 1 of this Technical Design Guideline.
3. Re-vegetation of roadway grading, cut and fill slopes, and utility areas shall be achieved using indigenous materials transplanted from the buildable area of the site, or brought onto the site provided they are in compliance with the appropriate plant list as contained within Exhibit 1 of this Technical Design Guideline.
4. Boulders and natural topping material such as native “desert pavement” are subject to prior written approval by the TOCC Town Arborist and/or Zoning Administrator.
5. The application of native seed may be approved provided that the seed mixture is a representative mixture of plants found within the site. Contact the TOCC Town Arborist and/or Zoning Administrator for prior written approval.
6. Graded or disturbed areas that are to be re-vegetated shall be subject to the following:
  - a. The usage of the same plant species with a similar plant density as present on undisturbed adjacent or nearby sites. Only plants from Exhibit 1 of this Technical Design Guideline shall be utilized.
  - b. A minimum of 35 plants per one thousand (1,000) square feet of area is required. Trees and cacti are not included in this count.



- c. A temporary irrigation system shall be installed to maintain the re-vegetation plant material until it has become established.
- d. Irrigation of the NHC area is not permitted unless needed to establish restored areas as approved by Town staff.

**8.1.3 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be submitted to the TOCC for review and approval as a part of Landscape Plan submittal package. Since specific requirements differ from one land use to the next, be sure to reference the appropriate Section of this Technical Design Guideline when preparing all required plans.

**8.2 SAGUARO CACTUS:**

**8.2.1 Purpose:**

Saguaro Cactus is a protected species within the TOCC and the State of Arizona. No Saguaro shall be destroyed, removed or relocated without a permit.

**8.2.2 Exceptions:**

1. Exceptions as necessary for driveway access and utility easement may be allowed subject to prior approval and permitting by the TOCC Town Arborist and/or Zoning Administrator.
2. Removal or relocation of Saguaro Cactus, on any portion of any lot or parcel within the Town, shall require the issuance of an approved Building Permit from the Town. Contact the State of Arizona for additional statutory requirements.
3. Saguaro Cactus that cannot be relocated on the property may be donated to the TOCC for public landscaping purposes or may be made available for adoption by the public. Contact the TOCC Town Arborist for additional information on native plant adoption.

**8.3 RESTORATION OF NATIVE HABITAT:**

The applicant shall restore all native habitat areas damaged or destroyed during construction, due to any cause or for any reason, to its original natural pre-disturbed condition (including plant density).

**8.4 VISIBLE DISTURBANCE AREAS:**

Visible common areas, exposed cut and fill slopes, publicly viewed landscaped areas, landscaping within close proximity of building pads, loading and vehicular access ways, parking and, pedestrian walks and hard surfaced activity areas shall use native plants transplanted from on-site or supplemented plants from the appropriate plant list as contained within Exhibits 1, 2, & 3 of this Technical Design Guideline.



**8.5 SALVAGED PLANTS:**

Salvaged plants may be maintained in a temporary nursery pending relocation in accordance with the approved landscape plan. All temporary nurseries shall provide automatic drip irrigation systems and fertilizer to promote plant health.

**8.6 SALVAGE METHODOLOGY:**

**8.6.1 Purpose:**

To provide the supporting inventory information and criteria used to justify which plants or groups of plants that will be preserved in place, transplanted or destroyed. Common criteria include, but are not limited to:

1. Plant Health
2. Plant Vigor
3. Bedrock Depth
4. Topography of the Site
5. Density of the Surrounding Vegetation

**8.7 NATIVE PLANT INVENTORY & SALVAGE PLAN SUBMITTAL REQUIREMENTS:**

**8.7.1 Desert Plant Salvage Specialist**

If a contractor is not on the TOCC approved list, they may submit, for review by the Town Arborist, their Plant Salvage and Care Methodology for approval.

**8.7.2 Native Plant Inventory Plan and Salvage Plan Required:**

A Native Plant Inventory & Salvage Plan, prepared by a TOCC approved Desert Plant Salvage Specialist, shall be submitted to the Building Department as part of the Landscape Plan submittal package for the following:

1. Single-Residence Zoned Projects (Desert Plant Salvage Specialist is not required in the Single Residence zones – the property owner may provide the Native Plant Inventory & Salvage Plan)
2. Multiple-Residence Zoned Projects
3. Commercial Zoned Projects
4. Subdivisions
5. Streetscape Projects
6. Medians & Rights-of-Way Projects



**8.7.3. Native Plant Inventory and Salvage Plan Format & Contents:**

1. A minimum scale of 1"= 20'
2. A maximum sheet size of 24" x 36"
3. Salvage Plans shall specify the proposed location and treatment of the following protected native plants:
  - a. Native trees with a minimum three-inch (3") caliper reading or greater (Single Residence Zones are exempt from tree salvage requirements; however, shall comply with remaining requirements of this section).
  - b. All healthy cacti and specimen shrubs which will be disturbed due to development.
  - c. All trees, cacti, ocotillo, and yucca over six-feet (6') in height (tagged and recorded). See Salvage plant list as contained within Exhibit 1 of this Technical Design Guideline.
  - d. Cactus, yucca and ocotillo under six-feet (6') require only gross count of salvageable plants but require salvage.
4. Identify the existing native plants that are to remain in place. (numbered and tagged with White in the field).
5. Identify the existing native plants that are to be relocated to other locations on the site. (numbered and tagged with Red in the field).
6. Identify the existing native plants that are to be destroyed. (numbered and tagged with Blue in the field).
7. Identify the gross count of salvageable cacti less than six-feet (6') in height.
8. Identify the gross count of salvageable native shrubs.
9. Provide a Grading & Drainage Plan and/or Site Plan showing the location of all proposed cuts and fills for the subject project.
10. Identify the location of an on-site temporary holding nursery and the proposed method of irrigation for nursery plants.



## **SECTION 9 – NATIVE PLANT PERMITS**

### **9.1 NATIVE PLANT SALVAGE PERMITS:**

#### **9.1.1 Purpose:**

No protected plant material as defined within this Section may be relocated, removed, or destroyed without a Native Plant Permit. No Native Plant Permit shall be issued unless an application is submitted in conjunction with a TOCC Building Permit. The submittal is separate from any other native plant submittal required for a Zoning Case, Preliminary Plat Case or Final Plat Case. For a Native Plant Permit to be issued, the items identified below shall be submitted to the TOCC. If the applicant takes no action to complete a submittal, it shall be purged from the system after six (6) months. All related review and permit fees are non-refundable.

#### **9.1.2 Submittal Requirements:**

1. **Native Plant Permit Application:** A completed TOCC Native Plant Permit Application, including a narrative, is required.
2. **Required Information:** The following information is required as a part of the permit application:
  - a. Three (3) copies of a Native Plant Salvage Inventory Plan with a project overlay or on a site plan.
  - b. The location of all protected native plants (by tag number) within the construction boundaries.
  - c. The Native Plant Plan shall include and comply with the following:
    - 1) The project name.
    - 2) The scale of the drawing (minimum scale is one-inch (1") equals twenty-feet (20')).
    - 3) A north arrow.
    - 4) A maximum sheet size of 24" x 36"
    - 5) A vicinity map.
    - 6) The adjacent street names.
    - 7) The name, address and phone number of the company performing the inventory.
    - 8) The name, address and phone number of the property owner(s) and developer.



- 9) The name, address and phone number of the projects single point of contact for formal communication.
  - 10) The associated Assessor's Parcel Number.
  - 11) The parcel address.
  - 12) The date the Native Plant Plan was prepared and subsequent amendment dates.
  - 13) The zoning district in which the parcel is located.
  - 14) The associated Building Permit number.
  - 15) The topographic contours of the project site at a minimum of two (2) foot intervals.
  - 16) The identification of natural features such as bedrock and boulder outcroppings located on the project site.
  - 17) General information on the soil types that exist on the project site.
  - 18) Major and Minor wash corridors located on the project site.
  - 19) All existing disturbance to the project site.
  - 20) All existing structures/improvements located on the project site.
  - 21) Location of proposed salvage nursery
- d. An inventory list shall be prepared in a spread sheet format and submitted with the Native Plant Salvage Plan. The inventory list shall include the following:
- 1) The identifying tag number.
  - 2) The species name (list both common and botanical names).
  - 3) The plant size.
  - 4) The general condition of the plant.
  - 5) The salvage status of the plant (remain in place, relocate, or remove).
  - 6) If the plant is noted as non-salvageable state the reason or reasons for the assessment.
- e. Plant measurement is to occur prior to any pruning or branch removal operations, and must take into account the entire base of the tree.
- f. A protected native plant includes trees with a three-inch (3") caliper trunk or larger, and all cactus that are healthy. All native specimen shrubs are to be salvaged.



- g. Cactus, yucca and ocotillo under six-feet (6') require only gross count of salvageable plants but require salvage.
- h. In order to measure the trunk of the tree, it must first be determined whether the tree is single-trunk or a multi-trunk.  

A multi-trunk tree is a tree with more than one (1) trunk, (1 of which is 3 inches (3") or greater in diameter) protruding above grade from a single root ball and being separated by any portion of each.
- i. A cactus is measured from the base at natural grade to the highest vertical point of the plant. The height of all arms is also included in the total. Ocotillos and Yuccas are also measured in this way, except that the flower stalk of the Yucca is not included.
- j. The methodology to be utilized by the contractor shall require prior approval from the Town Arborist.
- k. The applicant shall submit a relocation plan identifying the ultimate use and placement of all salvage plant material, including any proposals for plants to be removed from the project.
- l. Submit the Nursery Plan showing the location & irrigation proposal for the storage of salvaged plants.

**9.1.3 Letter of Authorization:**

- 1. Submit a Letter of Authorization from the property owner(s) or authorized agent identifying a salvage contractor whose methodology has been previously approved by the TOCC.
- 2. For single-family home submittals, the name of the salvage contractor shall be noted on the Native Plant Permit application and may be the home owner.
- 3. A different salvage contractor may not be employed once the Native Plant Permit has been issued.
- 4. If the owner wishes to employ a different salvage contractor, approvals must be granted and a revised permit will need to be issued. The name of the new approved contractor shall appear on the Native Plant Permit before salvage work commences.

**9.1.4 Notice of Intent to Clear Land:**

Submit a copy of the stamped Arizona Department of Agriculture "Notice of Intent to Clear Land" form. To obtain the form contact the Native Plant Section of the Arizona Department of Agriculture @ 602-364-0935, or visit their website @ <https://agriculture.az.gov/plantsproduce/native-plants>



**9.1.5 Notice of Tagging of Plants in the Field:**

1. Submit a Notice of Tagging indicating that all protected plants have been tagged in the field in conformance with the following:
  - a. White tag for plants remaining in place.
  - b. Red tag for plants being relocated/removed.
  - c. Blue tag for plants that are non-salvageable.
2. The independently hired Native Plant Salvage Contractor will be responsible for tagging each plant accordingly.
3. Plants with white tags or no tags will be protected for the duration of the project regardless of salvage status.
4. Tags will be numbered to correspond to the inventory numbering.
5. Construction boundaries, Native Habitat Corridors (NHC), and other undisturbed areas, need to be clearly identified in the field with plastic fencing or other means approved by the Town Arborist.
6. The Town Arborist can be contacted for site inspections by calling the TOCC Inspection Line @ 480-488-7092.

**9.1.6 Native Habitat Corridors:**

Indicate on the Landscape Plan the location of all Native Habitat Corridors (NHC), both natural and revegetated. All NHC's shall be cordoned in the field at the time of the salvage/cordoning inspection. The salvage/cordoning inspection shall be performed before any site disturbance occurs and is conducted with the developers representative and the Town Arborist.

**9.1.7 Prior Approvals:**

1. If a project requires approval from the TOCC Town Council and/or Board of Adjustment, the associated Native Plant Permit shall not be issued until the above mentioned approvals have been finalized.
2. The Native Plant Permit for all single-residence custom homes shall be issued concurrently with the Building Permit.
3. Please note that no Native Plant Permit can be issued unless there is an approved Development Plan for the site.

**9.2 REVIEW CRITERIA:**

**9.2.1 Density/Intensity of Development:** The density/intensity of development for the approved land use has been considered in determining plant retention and salvage. The proposed relocation plan needs to provide reasonable plant salvage, protection, and storage; and ensure consistency with existing neighborhood character.



- 9.2.2. On-Site Natural Amenities:** The site plan has been designed to protect and incorporate significant on-site natural amenities (such as aesthetic, unique, historic, etc.). These relationships promote and enhance the character of the native environment rather than contrast with or domesticate it.
- 9.2.3. Plant Inventory:** The plant inventory and analysis of all protected plants on-site provides a clear comprehensive overview and listing of plant materials, their conditions, and their physical relationships so as to aid the site planning and determination of plant salvageability.
- 9.2.4. Revegetation and Natural Density:** That the conceptual analysis and design of the site revegetation and/or landscaping has been prepared so as to ensure that the character of the project is consistent with the natural density, distribution, and maturity of the vegetation on the adjacent properties. Saguaros, Ocotillos and any other specimen cacti lost during the salvage process shall be replaced with a plant of equal size.
- 9.2.5 Excess Plants:** That the salvaged plants are stored on-site and replanted within landscaped and/or revegetated areas.
- 9.2.6. Incorporation of Plants in a Project:** That the incorporation of plant material into a site design takes into consideration the following:
1. **Conditions where protected plants should remain in place:**
    - a. Along natural washes where exposed roots, erosive soils, and steep slopes often make relocating plants difficult.
    - b. Where dense massing of plant materials provides an aesthetic setting, but individual plants may be unsalvageable.
    - c. In boulder outcroppings where digging out the root ball would be impractical.
    - d. Where unstable soils decrease the ability of the root ball to hold together.
    - e. When large specimen material does not lend itself to relocation.
    - f. When seasonal conditions reduce the salvageability rate to the point of making relocation undesirable.
    - g. When plants occur in a unique grouping or form.
    - h. When plants are located within designated scenic and vista corridors.
    - i. Within land use buffers such as conservation easements or NHC's.



2. **Conditions where protected plants may be salvaged:**
  - a. When retention of protected plant material is impractical due to reasonable construction, physical conditions are good, and plant material falls within the construction boundaries.
3. **Conditions where protected plants may be removed from the site:**
  - a. When the allowable site density is high and there are minimal areas for replacing plant material.
  - b. When conditions yield more plant material than can be relocated on the project.
  - c. Under this condition it is anticipated that part of the native plant plan will include making excess plant material available to other projects, preferably non-profit, within the TOCC.
  - d. Removal of native plants from the project site will require the property owner to meet all applicable State of Arizona requirements.
4. **Conditions where protected plant materials may be destroyed:**
  - a. When the physical condition of a protected plant is poor due to disease, infestation, mutilation, age, or poor natural conditions; and is located within the construction boundaries.
  - b. If a protected plant is involved in a safety issue and cannot be relocated, removed, or protected in place.



## **SECTION 10 - STREETScape**

### **10.1 PURPOSE:**

The purpose of this Section is to provide guidance as to the requirements for landscaping and re-vegetation of designated Streetscape areas within the TOCC.

### **10.2 STREETScape WITHIN THE TOWN CORE:**

#### **10.2.1 Streetscape Boundaries**

The streetscape within the Town Core shall consist of Cave Creek Road from Carriage Drive to Scopa Trail as defined by the Land Use Map found in the Town Core Plan.

#### **10.2.2 Streetscape Within the Town Core Requirements:**

The following requirements shall apply to all properties fronting on Cave Creek Road within the Town Core area:

1. The streetscape design shall maintain the natural character of the streetscape and be compatible with the surrounding natural desert.
2. All areas in the streetscape requiring re-vegetation shall be landscaped with native plants contained within Exhibits 1 & 2 of this Technical Design Guideline.
3. In order to establish a streetscape, an area of fifteen feet (15') shall be required from the edge of any public right-of-way improvement and the improvement on the private parcel. To achieve this requirement, a combination of right-of-way and private easements may be necessary.
4. The private property owner shall be responsible for the maintenance of all frontage landscaping, excluding the landscaping within the adjacent right-of-way.
5. A five foot (5') wide non-vehicular path of Town-approved material or composites, meandering where possible through mature existing vegetation, for pedestrian use. The path material shall match or be compatible with adjacent properties. The path shall meet all ADA and MAG Standards.
6. The path must be clearly defined using Town-approved materials to distinguish the edge of the pathway.
7. The owner/developer shall provide maximum preservation of existing vegetation along with additional landscape plantings, consistent with Exhibits 1 & 2 of this Guideline. Contouring shall buffer the path users from both the roadway traffic, and proposed on-site improvements. The plan may provide path users with access to various points on the site.



8. Provision for streetscape hardscape elements per parcel as determined by Town staff, depending on the scope of the project and the amount of street frontage. These elements shall include one or more of the following:
  - a. Benches and sitting areas
  - b. Shade structures
  - c. Bike racks
  - d. Other hardscape elements such as, but not limited to, lighting and drinking fountains, trash receptacles, etc.
  - e. Hitching posts and watering troughs
9. When existing physical conditions prevent the compliance with these standards, the Town Arborist and/or Zoning Administrator may modify streetscape standards.
10. There shall be two (2) trees for every forty feet (40') of street frontage to be located within the streetscape. One-half of the trees in the streetscape shall be a minimum of twenty-four inches (24") boxed and the rest a minimum of fifteen (15) gallon size. Salvage trees may be used.
11. Shrubs and Ground Covers:
  - a. There shall be a mixture of shrubs and ground covers at a minimum density of 35 plants per 1,000 square feet. The plant palette shall be in accordance with the exhibits one (1) and two (2) of this Guideline.
  - b. One-half of the shrubs in the streetscape shall be a minimum of five (5) gallon and the rest a minimum of one (1) gallon size.
12. Native stone and indigenous decomposed granite are to be the primary inorganic materials used.
13. Retention areas, whenever feasible, shall be designed to replicate natural basins.

**10.3 STREETScape OUTSIDE OF THE TOWN CORE:**

**10.3.1 Streetscape Outside of the Town Core Requirements:**

For all other properties, fronting on Cave Creek Road and/or located outside of the Town Core Area, the following streetscape requirements shall apply:

1. All areas that are highly visible from the right-of-way and adjacent properties are limited to using plants from Exhibits 1, 2 & 3 of this Guideline.



2. Street frontage landscape requirements shall be:
  - a. Two (2) trees for every forty feet (40') of street frontage.
  - b. Twenty-four inch (24") box trees are the minimum acceptable size. Salvage trees may be used.
3. It is required that planting areas be designed incorporating existing vegetation.
4. Shrubs and Ground Covers:
  - a. There shall be a mixture of shrubs and ground covers at a density of thirty-five plants per 1,000 square feet.
  - b. The plant palette shall be in accordance with Exhibits 1 & 2 of this Guideline.
  - c. One-half of the shrubs in the streetscape shall be a minimum of five (5) gallon and the rest a minimum of one (1) gallon size.
5. Non – Vehicular Path:
  - a. A five foot (5') wide path of Town-approved material or composites.
  - b. Meandering where possible through mature existing vegetation, for pedestrian use.
  - c. The path material shall match or be compatible with adjacent properties.
  - d. Path shall meet all ADA and MAG Standards and requirements.
  - e. When curb-gutter-sidewalk installation is required by the Town Engineer, the property owner will provide an alternative stabilized granite or natural earth secondary pathway.



## **SECTION 11 – MEDIANS/RIGHTS-OF-WAY**

### **11.1 PURPOSE:**

The purpose of this Section is to provide guidance as to the requirements for the design of hardscape, landscape, irrigation and general aesthetic improvements for areas within designated Median/Rights-of-Way (“ROW”) areas located in the TOCC. It provides guidelines for the following:

1. Recommended Plants
2. Landscape & Irrigation Design
3. Sight Distance Requirements
4. Inspections
5. As-built Submittals
6. Rights-of-Way Permits

### **11.2 GENERAL INFORMATION:**

All Median/ROW designs shall meet the minimum requirements of MAG Section 430. For additional TOCC requirements contact the TOCC Town Arborist and/or Town Engineer.

### **11.3 MAINTENANCE RESPONSIBILITY:**

1. All tree pruning shall follow the International Society of Arboriculture (ISA) pruning standards. The objective of tree pruning shall be to reduce interference with traffic and to improve line of site issues. At no time will excessive over-pruning or “Disney” pruning be allowed. Shrubs are to be maintained in a natural form – no topiary pruning.
2. Maintenance of landscape medians and ROW’s shall be the responsibility of the developer, property owner, or a homeowners association for a one (1) year period of time (warranty period).
3. For Capital Improvements Projects the maintenance responsibility of the contractor shall be for a period of 90 days after Final Inspection.
4. The above-noted time periods will begin and end following inspections and acceptance of installation by the TOCC Town Arborist and Town Engineer.
5. It is the responsibility of the developer, property owner or contractor to schedule all required inspections.
6. The maintenance responsibility of Medians/ROW’s are to be stated on the final landscape plans submittal. Any deviation from this requirement shall require a written waiver approved by the TOCC Town Arborist and/or Town Engineer.



7. The following notation shall be provided on the final landscape plans submittal:

All landscape areas and materials, including those located in public rights-of-way shall be maintained in a healthy, neat, clean and weed-free condition. This shall be the responsibility of the:

Property Owner, Developer or Homeowner's Association

Figure 11.3-1

#### **11.4 MEDIAN LANDSCAPE GUIDELINES:**

1. Median width is measured from back of median curb to back of median curb (inside to inside).
2. The minimum width for a landscaped median shall be four feet (4').
3. Medians less than four feet (4') in width shall either be stamped concrete or pavers; no plant material shall be allowed.
4. Trees shall be located so that the expected mature tree canopy does not ultimately extend into the street rights-of-way.
5. Take into account the mature tree height and placement of trees to minimize potentially adverse effects on above-ground utilities or signage.
6. Trees shall not be planted within ten feet (10') of an existing private wall.
7. Tree quantities & sizes:
  - a. Trees shall be provided at the rate of two (2) trees per each thirty-five (35) lineal feet of median length.
  - b. The minimum size for trees shall be fifteen (15) gallon with fifty percent (50%) to be provided as mature trees or larger. Salvage trees are acceptable.
8. Mounding shall not be used within median/rights-of-way.
9. Native stone and indigenous decomposed granite are to be the primary inorganic materials used.
10. Decomposed Granite:
  - a. A sample of the proposed decomposed granite shall be submitted to the TOCC Planning Department and Town Engineer prior to the contractor ordering and bringing it onto the site.



- b. Installed at a uniformly distributed minimum depth of two inches (2").
  - c. Size shall be one-half inch (1/2") screened.
  - d. Color shall match adjacent native earth tones and/or materials pre-existing in the area.
- 11. Installation of boulders is not permitted within the TOCC Medians/ROW's.
  - 12. Plant materials used in the median shall be those contained within Exhibit one (1) of this Technical Design Guideline.
  - 13. Hydroseeding mix shall be composed of native species. Contact the TOCC Planning Department for detailed specifications.

**11.5 GENERAL MEDIAN IRRIGATION DESIGN CRITERIA:**

- 1. Reference MAG Section 440.
- 2. **Approved Irrigation System type:** A drip system using rigid laterals.
- 3. **Controllers:** Controllers shall be placed in the center of the median, a minimum of fifty (50) feet before the beginning of a turn bay.
- 4. **Power Source:**
  - a. The contractor is responsible for initiating the account, establishing the service connection and for obtaining all necessary TOCC Building Permits.
  - b. If the power source cannot be placed within the median or the rights-of-way, a Public Utility Easement (PUE) shall be provided. The location of the PUE shall be indicated and noted on the final irrigation plans and also inside or the controller cabinet.
  - c. Solar and/or battery powered valves are allowed pending approval by Town staff. A specification sheet shall be provided.
- 5. **Water Source:**
  - a. Show both the water source and location of the proposed tap on the final irrigation plans.
  - b. Contact the TOCC Utility Department @ 480-488-6600 for information on tapping into TOCC waterlines.
  - c. Reference Technical Design Guideline No. 3 – Utilities of additional details.
  - d. The minimum source pressure required to operate the system shall be noted on the irrigation plans.
  - e. The water meter shall be located within the median area wherever possible.



6. **Remote Control Electric Valves:**
  - a. Valves are to be of brass or PVC construction, and at a minimum size of one inch (1").
  - b. An approved valve shall be of commercial grade. Provide spec sheet.
  - c. Full Port ball valves shall be installed in front of all control valves.
  - d. All direct buried control valve wiring shall be at a minimum of fourteen (14) gauge.
  - e. Master valves shall be installed on all irrigation mainlines.
7. **Back Flow Prevention Devices:**
  - a. Only reduced pressure assemblies shall be used.
  - b. All backflow prevention devices shall have a security enclosure.
  - c. A certified tester, recognized by the TOCC, shall test backflow prevention devices before the Town will accept responsibility for maintaining the system.
8. The irrigation system shall be located entirely within the median. Sleeving from median-to-median is acceptable.
9. The contractor is responsible for initiating the account, having the water meter set and for obtaining all necessary TOCC Building Permits.
10. Trees and shrubs shall be valved separately.
11. The entire irrigation system shall be independent of other users. For example, landscape dedication to the TOCC for maintenance is to have separate power and water from other irrigation systems.
12. Plans will indicate existing and design operating water pressure requirements.
13. **Final Plan Submittal for Irrigation shall show the following details:**
  - a. Controller
  - b. Backflow preventer
  - c. Enclosures
  - d. Control valves
  - e. Wye strainer
  - f. Pressure regulator
  - g. Valve boxes
  - h. Trenching
  - i. Backfill



- j. Flush caps
- k. Emitters
- l. Statement to be provided on Plan: An irrigation as-built is required prior to acceptance by the Town of Cave Creek.

**11.6 SIGHT DISTANCE:**

**11.6.1 General Requirements:**

Any plant material installed in a questionable area (such as safety triangles, sight lines, etc.) shall be identified by the TOCC Town Engineer and removed by the contractor. Sight distance shall be considered for vehicles entering and exiting adjacent properties, as well as for vehicles using abutting roadways.

**11.6.2 Sight Distances & Safety Triangle:**

- 1. To determine sight distances and safety triangle requirements reference the TOCC Technical Design Guideline No. 2 – Transportation.
- 2. The sight line shall be clearly indicated and delineated on the final Landscape Plan submittal.

**11.6.3 Planting Within the Sight Triangle:**

- 1. Shrubs planted within the sight triangle are to have a mature height of not more than eighteen inches (18"). Height will be from edge of pavement, and total height will include the height of any existing mounding.
- 2. Trees planted within the safety triangle are to have a canopy pruned to a height of eight feet (8') or greater upon installation. Height will be from edge of pavement, and total height will include the height of any existing mounding.

**11.7 MEDIAN/ROW LANDSCAPE INSPECTIONS:**

**11.7.1 Pre-construction Meeting:**

- 1. TOCC staff shall arrange a pre-construction meeting with the contractor to review the approved Landscape Plan, MAG requirements, testing, and maintenance responsibility, etc.

**11.7.2 Landscape Inspection Criteria:**

- 1. TOCC staff will inspect the following items before and during construction for compliance with Town approved plans and Town addendums to MAG:
  - a. Water meter & backflow preventer & master valve location.
  - b. Controller type & location.
  - c. Remote control valve type, location & operation.



- d. Source of power (inside enclosure).
- e. Type of pipe and trench depth.
- f. Laterals and trench depth.
- g. Emitters and flush pits.
- h. Sleeves under asphalt.
- i. Pressure check system.
- j. Backflow preventer & enclosure.
- k. Plant palette and location.
- l. Planting depth.
- m. Tree staking.
- n. Sight distance triangles.
- o. Pre-emergent.
- p. Decomposed granite.
- q. An irrigation as-built is required prior to acceptance by the TOCC.

**11.7.3 Initial Landscape Walk-through:**

The TOCC Planning Department & Town Engineer shall perform an Initial Landscape Walk-Through with the contractor after the Completion of Work and prior to Final Landscape Inspection approval.

**11.7.4 Landscape Maintenance Period Notification/ Completion of Work:**

1. The TOCC Planning Department and/or Town Engineer shall issue a Maintenance Period Notification Letter/Completion of Construction to the permittee. The date on the Landscape Maintenance Period Notification letter shall initiate the required one (1) year warranty period.
2. After acceptance by the TOCC Council, staff issues a Final Letter of Acceptance to terminate the required one (1) year warranty period.
3. Upon approval and final acceptance by the TOCC Council, the water meter shall be put in the Town's name.

**11.7.5 Final Landscape Walk-through:**

The TOCC Planning Department and/or Town Engineer shall perform a Final Landscape Walk-Through with the permittee at the end of the required one (1) year warranty period.

**11.7.6. Final Letter of Landscape Acceptance:**

The TOCC Planning Department and/or Town Engineer shall issue a Final Letter of Landscape Acceptance to the TOCC Town Council upon the verification of the completion of all required landscape work and the verification of the health of all required landscape plantings. The Final Letter



of Landscape Acceptance terminates the required one (1) year warranty period.

**11.8 ALTERATIONS & AS-BUILTS:**

1. If field conditions require relocating a water meter, backflow prevention device, controller, valve, or any other major component of the irrigation system as shown on approved plans, contact the TOCC Utility Department @ 480-488-6600 prior to any proposed alteration.
2. The contractor shall provide an accurate set of as-built Mylar drawings to the TOCC Building and Engineering Departments prior to the final acceptance of a system.

**11.9 SPECIFIC AREA DESIGN GUIDELINES:**

In circumstances where a special theme is desired, the TOCC may designate specific design standards to be implemented on selected streets. Contact the TOCC Engineering Department @ 480-488-6600 for more information.

**11.10 TOCC GATEWAYS:**

The TOCC shares common boundaries with several municipalities. When entering the TOCC from a neighboring community, it is helpful for residents and visitors to have a sense of arrival into the Town. Through the use of Town Limits Identification Signs, those entering the TOCC should be able to readily recognize their entrance into the Town. Contact the TOCC Engineering Department @ 480-488-6600 for additional information.



## SECTION 12 – HILLSIDE REQUIREMENTS

### 12.1 PURPOSE:

The purpose of this Section is to allow for the reasonable use and development of hillside areas while promoting the public health, safety, convenience and general welfare of the citizens of the Town of Cave Creek, and maintaining the character, identity, and image of hillside areas.

### 12.2 OBJECTIVES:

The primary objectives of the Hillside Regulations are:

1. All portions of a lot or parcel having a natural slope of fifteen percent (15%) or greater shall be subject to the regulations as set forth in the TOCC Zoning Ordinance.
2. To protect watershed, natural waterways, and to minimize soil erosion;
3. To ensure that all new development is free from adverse drainage conditions;
4. To encourage the preservation of the existing landscape by maximum retention of natural topographic features;
5. To minimize the visual scarring effects of hillside construction.

### 12.3 LAND DISTURBANCE:

Any Building Permit for a structure on a site having a natural slope of fifteen (15) percent or greater will limit the maximum permitted disturbed area of the entire property involved to an amount not to exceed the permitted maximum indicated as follows:

#### Single Residence Zoned Parcels - Maximum Hillside Disturbance %

ZONE	MAXIMUM DISTURBANCE AREA (% of gross lot area)
DR-190	5%
DR-89	10%
DR-70	10%
DR-43	15%
R-35	20%
R-18	25%

Figure 12.3-1



**Multiple Residence Zoned Parcels - Maximum Hillside Disturbance %**

ZONE	MAXIMUM DISTURBANCE AREA (% of gross lot area)
MR	10%

Figure 12.3-2

**Commercial Zoned Parcels - Maximum Hillside Disturbance %**

ZONE	MAXIMUM DISTURBANCE AREA (% of gross lot area)
GC	10%
CC	10%
CB	10%

Figure 12.3-3

**Open Space Zoned Parcels - Maximum Hillside Disturbance %**

ZONE	MAXIMUM DISTURBANCE AREA (% of gross lot area)
OSC	1%
OSR	2%
PR	2%

Figure 12.3-4

**12.4 LANDSCAPE REQUIREMENTS:**

**12.4.1 Landscape Plan:**

A Landscape Plan shall be required. See Section 13 – Landscape Plans of this Technical Design Guideline for Landscape Plan requirements.

**12.4.2 Native Plant Inventory and Salvage Plan:**

A Native Plant Inventory and Salvage Plan shall be required. See Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for Native Plant Inventory and Salvage Plan requirements.

**12.4.3 Building Permit:**

A TOCC Building Permit issued by the Town’s Building Department shall be required for the construction of all structures. The TOCC landscape requirements will constitute a component of the associated Building Permit. For information on Building Permit submittal requirements contact the TOCC Building Department @ 480-488-6622.



#### **12.4.4 Grading Requirements:**

1. There shall be no grading on, or to, any site prior to the issuance of a TOCC Zoning Clearance and a pre-site inspection.
2. Raw spill slopes are prohibited.
3. Rock veneered spill slopes may be allowed provided that:
  - a. The vertical height of the spill slope does not exceed the vertical height of the exposed cut.
  - b. The spill slope does not exceed a one-to-one slope.
  - c. Retaining walls used to limit the height of the spill slope are color treated or veneered to blend in with the surrounding natural colors.
  - d. The maximum depth of fill must not exceed eight feet (8') except beneath the footprint of the main residence.
4. All exposed disturbed area fill shall be contained behind retaining walls or covered with a natural rock veneer and treated with an aging agent and landscaped with indigenous plant material.

#### **12.4.5 Slope Stabilization and Restoration:**

1. Vegetation shall be re-established on all exposed fill slopes, cut slopes, and graded areas
2. All areas, NHC, NBA, TA and PA shall provide a basic ground cover at required densities, which will prevent erosion and permit natural re-vegetation.
3. Exposed cut slopes may be rip-rapped with stone or chemically stain treated with materials which blend with the natural setting subject to prior written approval from the TOCC Town Arborist and/or Zoning Administrator.
4. On slopes greater than 4-1, it may be necessary to add eight inches (8") of clean fill over some areas of treated rip rap and then seeded with a pre-approved seed mix.

#### **12.4.6 Retaining Wall Requirements:**

1. All retaining walls shall be designed by an Arizona Registered Civil Engineer.
2. The finished surfaces of any retaining wall shall be stucco or other material to match building finish or blend into the natural setting.
3. The height of retaining walls shall not exceed eight feet (8') without a minimum four foot (4') wide planter break.



## **SECTION 13 – LANDSCAPE PLANS**

### **13.1 LANDSCAPE PLAN SUBMITTAL REQUIREMENTS:**

#### **13.1.1 Minimum Landscape Plan Submittal Requirements:**

At a minimum the Landscape Plan shall contain and/or comply with the following requirements:

1. Drawn at a minimum scale of 1" = 20'
2. Detail drawings of hardscape elements drawn at a minimum scale of 1" = 10'
3. Maximum sheet size of 24" x 36"
4. Symbols legend
5. North arrow
6. Parcel, lot or tract boundaries
7. Date the Landscape Plan was prepared and subsequent revision dates
8. Name of the property owner
9. Assessor's Parcel Number for the subject parcel
10. Address of the subject parcel
11. Location of the on-site salvage plant nursery
12. Name of the architect or designer who prepared the Landscape Plan
13. Location and accounting for all salvage plant materials
14. Identify and quantify the undisturbed areas and the additional landscaped areas as a percentage of the total site area
15. Cordoning and/or construction fence locations
16. Other hardscape elements such as, but not limited to, lighting and drinking fountains, trash receptacles, etc., as may be required.

#### **13.1.2 Irrigation Plans:**

A complete irrigation design is not required for Single Residence zoned lots, tracts or parcels but is recommended.

1. At a minimum, the location of proposed style of backflow prevention device, including a detail, is required to be shown on a plan.



2. All other landscape zones require a complete irrigation plan, including details. Trees and shrubs shall be on separate irrigation lines and irrigation valves. The plan shall contain the following:
  - a. The proposed location and sizes of back flow preventers
  - b. Clocks
  - c. Valves
  - d. Mainlines
  - e. Lateral lines
  - f. Trees and shrubs shall be on separate irrigation lines and irrigation

**13.1.3 Design Standards:**

Any project specific notes that apply to landscape improvements to the project are required to be notated on each set of Landscape Plans. This includes both on-site and off-site landscape improvements.

**13.1.4 Plan Submittals:**

All Landscape Plan submittals shall be routed through the TOCC Building Department.

**13.1.5 Swimming Pool Requirements:**

A landscape plan is required for all swimming pool permit submittals.

**13.2 SPECIFIC LANDSCAPE PLAN REQUIREMENTS:**

**13.2.1 Specific Requirements for Landscape Plans:**

1. For permitting purposes, include on the cover sheet of the Final Plans the quantities for all items of work within any public rights-of-way (ROW), private street tracts and public utility easements (PUEs).
2. Identify special landscape structures and appurtenances along with their locations shown in profile views.
3. Drawings shall show the relationship between the subject parcel and all adjacent utility lines, easements, rights-of-way and other structural features.
4. Include on the Landscape Plan the legal description of all open space and drainage easements.
5. Prepare a deed of gift for the dedication of any open space or drainage easements to the TOCC. Contact the Town Arborist and/or Town Engineer for additional information.



6. Notate and show in plan view all existing open space and drainage easements located within adjacent tracts, lots or parcels, including Docket, Page and Maricopa County Recorder's Number.
7. All Landscape Plans shall contain the following notes:

**THE CONTRACTOR SHALL VERIFY  
THE  
LOCATION OF THE EXISTING UTILITY  
LINES  
BEFORE PROCEEDING WITH  
CONSTRUCTION.**

Figure 13.2-1

**ALL LANDSCAPE SHALL BE  
COMPLETE AND APPROVED BY  
STAFF PRIOR TO ISSUANCE OF  
CERTIFICATE OF OCCUPANCY.**

Figure 13.2-2

**AT ALL TIMES  
LANDSCAPE PLANS AND  
GRADING AND DRAINAGE PLANS  
SHALL CONCUR.**

Figure 13.2-3



## **SECTION 14 – LANDSCAPE MAINTENANCE**

### **14.1 PURPOSE:**

To achieve the goals and objectives of the TOCC General Plan, landscaping along the frontage of all public rights-of-way (ROW) and within all areas visible from public streets shall comply with the following requirements:

#### **14.1.1 Trees and Cacti:**

1. All street trees shall be maintained to provide for safe vehicular and pedestrian travel while preserving a natural look.
2. At all times the International Society of Arboriculture (ISA) tree pruning standards shall be followed.
3. Power pruning or topiary pruning shall not be allowed.
4. No trees and/or cacti (exceeding eighteen inches (18”) in height shall be allowed within any required street sight triangle.
5. See Technical Design Guideline No. 2 – Transportation for Sight Distance and Safety Triangle requirements.

#### **14.1.2 Shrubs:**

1. Shrubs located inside of any required street Sight Triangle shall be maintained at a maximum height of eighteen inches (18”), above the street surface elevation.
2. See Technical Design Guideline No. 2 – Transportation for Sight Distance and Sight Triangle requirements.
3. All shrubs abutting public streets shall be maintained to provide for safe vehicular and pedestrian travel while preserving a natural look.
4. Topiary pruning shall not be allowed.

#### **14.1.3 Irrigation:**

1. All plants shall be irrigated to maintain a healthy status.
2. For purposes of water conservation, irrigation shall occur during the nighttime hours.
3. The irrigation system shall be inspected and reviewed on a monthly basis to make adjustments of schedule and to ensure water conservation.

#### **14.1.4 Weeds:**

The landscaped areas shall remain free of weeds so as to help prevent the spread of weeds onto neighboring properties and to reduce the risk of wildfire hazards. (See Section 18 – Weeds of this Guideline for additional information).



## **SECTION 15 – REVIEWS & APPROVALS**

### **15.1 SUBMITTAL REQUIREMENTS:**

1. All Landscape Plans shall be submitted to the TOCC Building Department for review and approval processing. All associated plan review fees shall be paid at the time of plan submittal.
2. No Landscape Plans shall be accepted by the TOCC for review by the Town Arborist and/or Zoning Administrator unless accompanied by copy of the accepted Native Plant Inventory and Salvage Plans. Please refer to Section 8 – Native Plant Preservation and Salvage of this Technical Design Guideline for detailed plan requirements.
3. No permits for any landscape construction shall be issued until the owner or developer has provided all the necessary PUE's and public ROW's. The instruments of dedication shall be approved and submitted to the TOCC for recording at the Maricopa County Recorder's Office.
4. All landscape construction documents used for Building Permit purposes shall be prepared by a TOCC approved landscape professional or State of Arizona Registered Landscape Architect.

### **15.2 REVIEW AND PERMIT APPLICATION PROCESS FOR PLANT SALVAGE AND LANDSCAPE INSTALLATION**

1. Commercial Projects, Subdivisions & Multi-Family Residential Project  
*See Exhibit 8 of this Guideline.*

### **15.3 INSPECTION PROCESS FOR PLANT SALVAGE AND LANDSCAPE INSTALLATION**

*See Exhibit 9 of this Guideline.*



## **SECTION 16 – LANDSCAPE FINANCIAL SECURITY**

### **16.1 LANDSCAPE FINANCIAL SECURITIES:**

1. Prior to the issuance of any permits for site work, the applicant shall provide Landscape Financial Security Agreements in a form acceptable to the Town, so as to ensure completion of all work necessary to restore the disturbed, or damaged native habitat.
2. A separate Landscape Financial Security Agreement shall be required for on-site and off-site work.
3. The amount of the Landscape Financial Security, for all required landscaping, shall be based upon a cost estimate prepared by a TOCC approved landscape professional or State of Arizona Registered Landscape Architect.
4. The Landscape Financial Security Agreements shall reflect an amount equal to one hundred and twenty-five (125) percent of the estimated costs.
5. Landscape Financial Security Agreements shall remain in effect for a one (1) year warranty period starting at the date the TOCC Town Arborist and/or Town Engineer issues a Landscape Maintenance Period Notification Letter/ Completion of Construction to the permittee.
6. All Landscape Financial Security Agreements shall be reviewed and recommended by the Planning Department, Town Engineer and Town Attorney, prior to submittal to the TOCC Town Council for final approval.
7. The Town shall release one-hundred (100) percent of the Financial Securities and hold back twenty-five (25) percent for the one (1) year warranty period.
8. The TOCC Town Arborist and/or Town Engineer shall issue a Final Letter of Landscape Acceptance to the Town Council for acceptance upon the verification of the completion of all required landscape work and the verification of the health of all required landscape plantings. The Final Letter of Landscape Acceptance begins the required one (1) year warranty period.
9. The Town shall release the final twenty-five (25) percent of the Landscape Financial Securities upon the completion of the one (1) year warranty period and the subsequent acceptance of the improvements by the TOCC Town Council.
10. Reference the TOCC Subdivision Ordinance for additional, detailed information on the TOCC Financial Securities process and acceptable forms of Landscape Financial Security (found at [www.cavecreekaz.gov](http://www.cavecreekaz.gov)).



## SECTION 17 – RIPARIAN PLANTS

### 17.1 NATIVE PLANTS:

The Town of Cave Creek is unique in its location within the Sonoran Desert in that it has a substantial Riparian Area, “Cave Creek”, that flows through its midst. Found in the “Creek” and some of its major tributaries are a large number of Riparian plants and animals. Not all trees found with in the riparian areas are found in the immediately surrounding upland areas that dominate the majority of the developable sites in our Town. It is the Town’s goal to maintain the integrity of these two distinct areas.

### 17.2 APPROVED RIPARIAN PLANT LIST

The following plants are native to Cave Creek Wash and some of its major tributaries:

Species	Common name	Description
<i>Acacia greggii</i>	Catclaw acacia	Common large shrub
<i>Ambrosia ambrosioides</i>	Canyon bursage	Common shrub
<i>Ambrosia eriocentra</i>	Woolly bursage	Uncommon shrub
<i>Aristolochia watsonii</i>	Southwestern pipevine	Uncommon small vine
<i>Baccharis pteronioides</i>	Yerba-de-pasmo	Uncommon shrub
<i>Baccharis salicifolia</i>	Seepwillow	Common large shrub
<i>Baccharis sarothroides</i>	Desert broom	Common large shrub
<i>Bebbia juncea</i>	Chuckwalla's delight	Common small shrub
<i>Berberis haematocarpa</i>	Red barberry	Rare shrub
<i>Brickellia coulteri</i>	Bricklebush	Common shrub
<i>Bromus carinatus</i>	California brome	Uncommon grass
<i>Calandrinia ciliata</i>	Red maids	Common annual
<i>Camissonia micrantha</i>	Miniature suncup	Common annual
<i>Carlowrightia arizonica</i>	Arizona carlowrightia	Rare small perennial
<i>Celtis pallida</i>	Desert hackberry	Common large shrub
<i>Clematis drummondii</i>	Texas virgin bower	Common perennial vine
<i>Crossosoma bigelovii</i>	Ragged rock flower	Rare small shrub
<i>Dodonaea viscosa</i>	Hop bush	Rare large shrub
<i>Fraxinus velutina</i>	Arizona ash	Common tree
<i>Helianthus annuus</i>	Sunflower	Common annual

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<b>Species</b>	<b>Common name</b>	<b>Description</b>
<i>Hymenoclea monogyra</i>	Burro brush	Common large shrub
<i>Hymenoclea salsola</i>	Cheesebrush	Common small shrub
<i>Juglans major</i>	Arizona walnut	Rare tree
<i>Juncus torreyi</i>	Torrey rush	Common rush
<i>Justicia californica</i>	Chuparosa	Common shrub
<i>Lupinus concinnus</i>	Bajada lupine	Common annual
<i>Lycium exsertum</i>	Tomatillo	Common shrub
<i>Lycium fremontii</i>	Tomatillo	Common shrub
<i>Marah gilensis</i>	Wild cucumber	Common perennial vine
<i>Mimetanthe pilosa</i>	False monkeyflower	Rare annual
<i>Mimulus guttatus</i>	Monkeyflower	Common annual
<i>Muhlenbergia rigens</i>	Deer grass	Common bunch grass
<i>Phragmites australis</i>	Common reed	Uncommon tall grass
<i>Platanus wrightii</i>	Sycamore	Uncommon tree
<i>Pluchea sericea</i>	Arrowweed	Uncommon large shrub
<i>Polanisia dodecandra ssp. trachysperma</i>	Western clammyweed	Common annual
<i>Populus fremontii</i>	Fremont cottonwood	Common tree
<i>Prosopis juliflora var. velutina</i>	Velvet mesquite	Common tree
<i>Rhus ovata</i>	Sugar sumac	Rare large shrub
<i>Rhus trilobata</i>	Skunkbush sumac	Rare shrub
<i>Rumex hymenosepalus</i>	Canaigre, wild rhubarb	Common perennial
<i>Sairocarpus nuttallianus</i>	Nuttall snapdragon	Rare annual
<i>Salix gooddingii</i>	Goodding's willow	Common tree
<i>Sarcostemma cynchooides</i>	Fringed twinevine	Common vine
<i>Schoenoplectus americanus</i>	American bulrush	Common sedge
<i>Senecio flaccidus var. monoensis</i>	Sand wash groundsel	Uncommon annual
<i>Typha dominguensis</i>	Southern cat-tail	Common perennial
<i>Vitis arizonica</i>	Arizona grape	Uncommon vine
<i>Ziziphus obtusifolia</i>	Greythorn	Common shrub

**Figure 17.2 – 1**

The plants found on this list are allowed within all planting areas of developable sites considered Riparian. Trees exceeding the twenty-five foot (25') height restriction found on this list are prohibited on any sites that do not meet the Riparian definition.



## **SECTION 18 – WEEDS**

### **18.1 WEEDS:**

For the use of this Guideline weeds are defined as an invasive plant species that unchecked will spread rapidly and have the potential to adversely affect the natural environment we treasure in the Cave Creek community.

### **18.2 INVASIVE SPECIES:**

An invasive species as defined by the Arizona Invasive Species Advisory Council is: A species that is (1) non-native to the ecosystem under consideration and, (2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

### **18.3 PURPOSE:**

The TOCC and the surrounding areas have a great number of invasive weeds that threaten the natural flora and property values of the residential areas of our town.

These weeds, left unchecked, will create a dangerous fire condition for all areas in the Town.

The control of these weeds is a fundamental component for the management of the natural environment of the Town.

### **18.4 PROHIBITED WEEDS:**

The following weeds shall be removed from all areas within all zones of the TOCC.

***The following plants with an asterisk present the most critical problems within our Town limits.***

Bermudagrass (*Cynodon dactylon*)

\*Buffelgrass (*Pennisetum ciliare*)

Camelthorn, (*Alhagi maurorum*)

Fountain grass (*Pennisetum setaceum*)

\*Globe chamomile aka Stinknet (*Oncosiphon piluliferum*)

\*Malta starthistle (*Centaurea melitensis*)

\*Red brome (*Bromus madritensis* spp. *Rubens*)

Russian knapweed (*Acroptilon repens*)

Russian Thistle, (*Salsola tragus*)

\*Saharan mustard (*Brassica tournefortii*)



**18.5 PREVENTION:**

1. Avoid the disturbance of native soil except as necessary to build a residence and/or accessory structures.
2. Pre-emergent spray
  - a. Used only on previously disturbed areas. Pre-emergent spray shall be avoided where the use of native seed has been introduced or is planned.

**18.6 METHODS OF REMOVAL:**

1. Post Emergent spray
  - a. Most affective when plants are at seedling stage.
2. Mechanical Removal
  - a. Best performed when plant has not set its seeds and is still green.
3. It is critical to hand remove the seed from dried plants. The seeds shall be bagged to avoid the spread of seed.

**18.7 IDENTIFICATION:**

1. Positive identification is critical when eradicating weeds; you must be able to clearly distinguish the difference between a desirable plant and a prohibited weed.
2. The best source of identification of prohibited weeds is the TOCC's web site [www.cavecreekaz.gov](http://www.cavecreekaz.gov)

**18.8 ADDITIONAL INFORMATION <sup>1</sup>**

**Invasive Plants and Wildlands Fires**

The pervasiveness of invasive species in Arizona, and non-native grasses in particular, has the potential to permanently disrupt historic fire regimes. Failure to adequately manage the invasive species-fire relationship could result in severe consequences.

**Increased property loss and public safety risk.** As invasive plants become more dominant in the Arizona landscape, they become difficult, if not impossible, to eliminate. The prevalence of invasive grasses represents a major fire risk, impacting the ability of land managers and response agencies to plan for, manage, and contain fires. Where non-native plants are well established, fuel-loads, particularly around human dwellings in rural communities, may make fire-fighting extremely difficult.

**Increased insurance costs/inability to obtain insurance.** As fires become increasingly severe and frequent due to the presence of invasive grasses, landowners and local governments will see insurance costs rise.

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<sup>1</sup> *The Governors Invasive Species Management Plan*



**Loss of Arizona's unique landscapes and native species.** The loss of Arizona's iconic native species, such as the saguaro cactus and palo verde, is tied to the presence of invasive species. Invasive grasses are common along transportation corridors, and these same places are typically the first to ignite by human-caused fires. Invasive plant-fueled wildland fires have the potential to wipe out large swaths of mature saguaro forests, particularly along popular sight-seeing routes.

**For more information and resources related to invasive weeds, the threats they pose to Cave Creek and tips to reduce their propagation visit [www.cavecreekaz.gov](http://www.cavecreekaz.gov)**



## SECTION 19 – LANDSCAPE EXHIBITS

### EXHIBIT 1 PROTECTED NATIVE PLANT LIST:

**Protected Native Plants:** All plants on the following list shall be inventoried and documented on the salvage report provided with the Native Plant Salvage Plan and the Landscape Plan. The listed plants may be planted anywhere.

**Note:** Salvage of trees and shrubs are excluded on Single-Residential properties.

<b>PROTECTED NATIVE PLANTS (inventory required)</b>	
<b>Plant Type &amp; Salvage Notes</b>	<b>Plant Name</b>
<p><b>Trees:</b></p> <p>(3"+ combined caliper @ natural grade must be inventoried)</p>	Blue Palo Verde ( <i>Cercidium floridum</i> ) Crucifixion Thorn ( <i>Holacantha emoryi</i> ) Desert Hackberry ( <i>Celtis pallida</i> ) Desert Willow ( <i>Chilopsis linearis</i> ) Foothills Palo Verde ( <i>Cercidium microphyllum</i> ) Ironwood ( <i>Olneya tesota</i> ) Mesquite – Native ( <i>Prosopis juliflora</i> )
<p><b>Shrubs:</b></p> <p>(No inventory unless of specimen value or requested by staff. Identification of gross numbers may be sufficient rather than individual tagging.)</p>	Brittle Bush ( <i>Encelia farinose</i> ) Buckwheat ( <i>Eriogonum fasciculatum</i> ) Bursage ( <i>Ambrosia deltoidea</i> , <i>A. ambrosioides</i> ) Cat Claw ( <i>Acacia greggii</i> ) Chuparosa ( <i>Justicia californica</i> ) Creosote Bush ( <i>Larrea tridentata</i> ) Desert Hackberry ( <i>Celtis pallida</i> ) Desert Honeysuckle ( <i>Anisacanthus thurberi</i> ) Desert Spoon ( <i>Dasyiron wheeleri</i> ) Fairy Duster ( <i>Calliandra eriophylla</i> ) Four-winged Saltbush ( <i>Atriplex</i> ) Greythorn ( <i>Ziziphus obtusifolia</i> ) Hop bush ( <i>Dodonaea</i> ) Jojoba ( <i>Simmondsia chinensis</i> ) Milkweed ( <i>Ascleptia subulata</i> ) Mormon Tea ( <i>Ephedra trifurca</i> ) Rock Pea ( <i>Lotus rigidus</i> ) Tomatillo squawberry ( <i>Lycium</i> , 3 species)
<p><b>Cacti &amp; Succulents:</b></p> <p>(All healthy cacti &amp; succulents listed shall be inventoried. Plants under six (6) feet in height do not require a tag. A gross number of each is sufficient.)</p>	Agave Barrel Cactus ( <i>Ferocactus wislizeni</i> ) Cholla/Chain fruit, jumping ( <i>Opuntia fulgida</i> ) Cholla/Christmas ( <i>Opuntia leptocaulis</i> ) Cholla/Pencil Hedgehog ( <i>Echinocereus engelmannii</i> ) Ocotillo ( <i>Fouquieria splendens</i> ) Pincushion, fishhook ( <i>Mammillaria microcarpa</i> ) Prickly Pear ( <i>Opuntia phaeacantha</i> ) Saguaro ( <i>Carnegiea gigantea</i> ) Yucca – Soaptree ( <i>Yucca elata</i> ) Yucca – Banana ( <i>Yucca baccata</i> )

Figure 19 - 1



**EXHIBIT 2 NATIVE HABITAT CORRIDORS & NATURAL BUFFER AREAS  
 PLANT LIST:**

Only the plants listed below shall be planted within the “Native Habitat Corridors” (NHC) and “Natural Buffer Areas” (NBA). The listed plants may also be planted within any of the other designated landscape areas.

<b>NHC &amp; NBA - PLANT LIST</b>	
<b>Plant Type</b>	<b>Plant Name</b>
<b><u>Trees:</u></b>	Desert Hackberry ( <i>Cetis pallida</i> ) Desert Willow ( <i>Chilopsis linearis</i> ) Mesquite – Native ( <i>Prosopis juliflora</i> ) Ironwood ( <i>Oleña tesota</i> ) Blue Palo Verde ( <i>Cercidium floridum</i> ) Foothills Palo Verde ( <i>C. microphyllum</i> ) Crucifixion Thorn ( <i>Holacantha emoryi</i> )
<b><u>Shrubs:</u></b>	Brittle Bush ( <i>Encelia farinose</i> ) Bursage ( <i>Ambrosia deltoidea</i> ) Canyon Ragweed ( <i>Ambrosia ambrosioides</i> ) Cat Claw, devils-claw ( <i>Acacia greggii</i> ) Cheese Weed ( <i>Hymenoclea salsola</i> ) Chuparosa ( <i>Justicia californica</i> ) Creosote Bush ( <i>Larrea tridentata</i> ) Desert Buckwheat ( <i>Eriogonum fasciculatum</i> ) Desert Honeysuckle ( <i>Anisacanthus thurberi</i> ) Desert Lavender ( <i>Hyptis emoryi</i> ) Desert Rock Pea ( <i>Lotus rigidus</i> ) Fairy Duster ( <i>Calliandra eriophylla</i> ) Feather Dalea ( <i>Dalea formosa</i> ) Flat-top buckwheat brush ( <i>Eriogonum fasciculatum</i> ) Four-winged Saltbush ( <i>Atriplex</i> ) Golden Eye ( <i>Viguiera deltoidea</i> ) Grey-thorn ( <i>Ziziphus obtusifolia</i> ) Hackberry ( <i>Celtis pallida</i> ) Hop Bush ( <i>Dodonaea</i> ) Jojoba ( <i>Simmondsia chinensis</i> ) Lycium ( <i>Lycium andersonii</i> ) Milkweed ( <i>Ascleptia subulata</i> ) Mormon Tea ( <i>Ephedra trifurca</i> ) Ratany ( <i>Krameria parifolia</i> ) Turpentine Bush ( <i>Haplopappus laricifolius</i> ) Wolf-berry ( <i>Lycium fremontii</i> )

Figure 19 – 2a



<b><i>NHC &amp; NBA - PLANT LIST (cont.)</i></b>	
<b><i>Plant Type</i></b>	<b><i>Plant Name</i></b>
<b><u>Cacti &amp; Yucca:</u></b>	Barrel Cactus, fishhook ( <i>Ferocactus wislizeni</i> ) Colla/Chain fruit, jumping ( <i>Opuntia fulgida</i> ) Cholla/Christmas ( <i>Opuntia leptocaulis</i> ) Cholla/Teddybear ( <i>Opuntia bigelovii</i> ) Cholla/Staghorn ( <i>Opuntia acanthocarpa</i> ) Hedgehog ( <i>Echinocereus engelmannii</i> ) Ocotillo ( <i>Fouquieria splendens</i> ) Pincushion, fishhook ( <i>Mammillaria microcarpa</i> ) Prickly Pear ( <i>Opuntia phaeacantha</i> ) Saguaro ( <i>Carnegiea gigantea</i> ) Yucca – Soaptree, Spanish bayonet ( <i>Yucca elata</i> ) Yucca – Banana, Blue ( <i>Yucca baccata</i> )
<b><u>Wildflowers &amp; Groundcovers</u></b>	Desert, sand verbena ( <i>Abronia villosa</i> ) Prickle poppy ( <i>Argemone plicanthera</i> ) Desert Marigold ( <i>Baileya multiradiata</i> ) Dyssodia ( <i>Dyssodia porophylloides</i> ) Spreading fleabane ( <i>Engeron divergens</i> ) Lupine ( <i>Lupinus spariiflorus</i> ) Blackfoot daisy ( <i>Melampodium leucanthum</i> ) Owl clover ( <i>Orthocarpus purpurascens</i> ) Desert bell ( <i>Phacelia campanularia</i> ) Paperflower, paper daisy ( <i>Psilostrophe cooperi</i> ) Desert chicory ( <i>Rafinesquia neomexicana</i> ) Bladder sage ( <i>Salazaria mexicana</i> ) Globe mallow, desert ( <i>Sphaeralcea ambigua</i> ) Native verbena ( <i>Verbena gooddingii</i> ) Desert Zinnia, golden ( <i>Zinnia grandiflora</i> )

**Figure 19 – 2b**



**EXHIBIT 3 TRANSITIONAL AREA & PRIVATE AREA PLANT LIST:**

Plants on the following list may only be planted within the Transitional Area (TA) and Private Area (PA) landscape areas. Plants on this list are not suitable for re-vegetating “Native Habitat Corridors” (NHC) and “Natural Buffer Areas” (NBA).

<b>TA &amp; PA- PLANT LIST</b>	
<b>Plant Type</b>	<b>Plant Name</b>
<b>Trees:</b>	Netleaf hackberry ( <i>Celtis reticulata</i> ) Chilian Mesquite ( <i>Prosopis chilensis</i> ) Palo brea, Sonoran ( <i>Cercidium praecox</i> ) Palo banco ( <i>Lysiloma candida</i> ) Fern-of-the-desert ( <i>Lysiloma thornberi</i> )
<b>Shrubs:</b>	Fern acacia, white-ball ( <i>Acacia angustissima</i> ) Leather leaf acacia ( <i>Acacia craspedocarpa</i> ) White brush ( <i>Aloysia lycioides</i> ) Century plants, spanish bayonets ( <i>Agave species</i> ) Desert milkweed ( <i>Asclepia subulata</i> ) Four-wing salt-bush ( <i>Atriplex canescens</i> ) Desert-holly ( <i>Atriplex hymenelytra</i> ) Quail-brush ( <i>Atriplex lentiformis</i> ) Old man salt-bush ( <i>Atriplex nummularia</i> ) Desert salt bush ( <i>Atriplex polycarpa</i> ) Red barberry ( <i>Berberis haematocarpa</i> ) Wooly butterfly , lilac ( <i>Buddleja marrubifolia</i> ) Elephant-tree ( <i>Bursera microphylla</i> ) Elephant-tree ( <i>Bursera fagaroides</i> ) Yellow bird-of-paradise ( <i>Caesalpinia gilliesii</i> ) Mexican bird-of-paradise ( <i>C. pulcherrima</i> ) Fairy duster ( <i>Calliandra californica</i> ) Fairy duster, false-mesquite ( <i>C. eriophylla</i> ) Fairy duster ( <i>C penninsularis</i> ) Crucifixion Thorn ( <i>Canotia holacantha</i> ) Texas cassia ( <i>Cassia biflora</i> ) New Zealand cassia ( <i>C. candoleana</i> ) ( <i>C. circinnata</i> ) ( <i>C. goldmanni</i> ) ( <i>C. leptophylla</i> ) Green feathery cassia ( <i>C. nemophylla</i> ) Silver cassia ( <i>C. philodinea</i> ) ( <i>C. purpussiae</i> ) Sturts cassia ( <i>C. sturtii</i> ) Shrubby cassia ( <i>C. wislizeni</i> )

Figure 19 – 3a





**EXHIBIT 4 PROHIBITED PLANTS:**

The following plants shall not be planted in any zone within the Town of Cave Creek.

1. Any species of tree or shrub whose mature height may reasonably be expected to exceed twenty-five feet (25'), with the exception of those indigenous species, listed in Exhibit one (1), which may naturally exceed twenty-five feet (25') and which are required to be indicated on the salvage report.
2. All Palms (*Palmae*) except for within the "private areas" and whose height may reasonably be expected not to exceed six feet (6').
3. All Pines (*Pinus*), Cypress (*Cupressus*), False Cypress (*Chamaecyparis*), Juniper or Cedar (*Juniperus*)
4. Olive trees (*Olea Europaea*)
5. Mulberry trees (*Morus*)
6. Oleanders (*Nerium oleander*)
7. Thevetia (*Thevetia species*) (**Allowed Only in Private Areas**)
8. Fountain Grass (*Pennisetum setaceum*)
9. Citrus; except for within the "private area" of the single residence zoning districts
10. Grass, except for bear (*Nolina Micocarpa*) and deer grass (*Muhlenbergia rigens*); except for within the "private area" of the single residence zoning districts.
11. Mexican Palo Verde (*Parkinsonia aculeatra*)
12. Desert Broom (*Buccharis sarothroides*)
13. Salt Cedar (*Tamarix chinensis*)
14. African Sumac (*Rhus lancea*)
15. Sissoo Tree (*Dalbergia sissoo*)
16. Fremont Cottonwood (*Populus fremontii*) \*
17. Goodding's Willow (*Salix gooddingii*) \*
18. Arizona Ash (*Fraxinus velutina*) \*
19. Arizona Sycamore (*Platanus wrightii*) \*
20. Arizona Walnut (*Juglans major*) \*

\* **These trees shall be allowed in Riparian Areas ONLY**



**EXHIBIT 5 TREE REPLACEMENT:**

In the event that a tree or group of trees whose health or habitat value is significant but due to site conditions cannot be salvaged, or has not survived the salvage process, the following procedures shall be followed:

1. All attempts shall be made by the applicant to relocate, reroute, or eliminate any structure or roadway that would impact these trees.
2. In the event that #1 cannot be carried out in full, the applicant shall provide documentation, such as photographs, that show the entire area.
3. The area shall be re-vegetated with trees of species and densities directly proportionate to the existing site according to the following scale:

<b>TREE REPLACEMENT TABLE</b>	
<b>Number of Trees Affected</b>	<b>Percentage of Trees to be Replaced by Like Size and Kind</b>
<b>0 - 5</b>	<b>100</b>
<b>5 - 10</b>	<b>90</b>
<b>10 - 20</b>	<b>80</b>
<b>20 - 30</b>	<b>70</b>
<b>30 - 40</b>	<b>60</b>
<b>40 - 50</b>	<b>55</b>
<b>50 or more</b>	<b>50</b>

Figure 19 – 5



**EXHIBIT 6 SIZES & DENSITY:**

Of the remaining trees to be replaced to gain the required densities, the following replacement scale shall be applied:

SIZE AND NUMBER OF REPLACEMENT TREES											
Caliper in Inches	15 gal.	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"
1.0 - 2.0	2 or	1									
1.5 - 4.0	3 or	2 or	1								
2.5 - 5.5	7 or	4 or	3 or	1							
4.0 - 7.5	10 or	5 or	4 or	2 or	1						
6.0 - 9.5		6 or	5 or	4 or	3 or	1					
8.0 - 10.5			5 or	4 or	4 or	3 or	1				
10.0 - 13.5				7 or	5 or	5 or	2 or	1			
12.0 - 15.5					6 or	5 or	2 or	1 or	1		
14.0 - 17.5					7 or	6 or	2 or	2 or	1 or	1	
16.0 - 20.5					8 or	7 or	2 or	2 or	1 or	1 or	1

Figure 19 – 6

Note: Saguaros, Ocotillos and any other specimen cacti shall be replaced with a plant of equal size.



**EXHIBIT 7 RESIDENTIAL LANDSCAPE AREAS:**

# LANDSCAPE AREAS

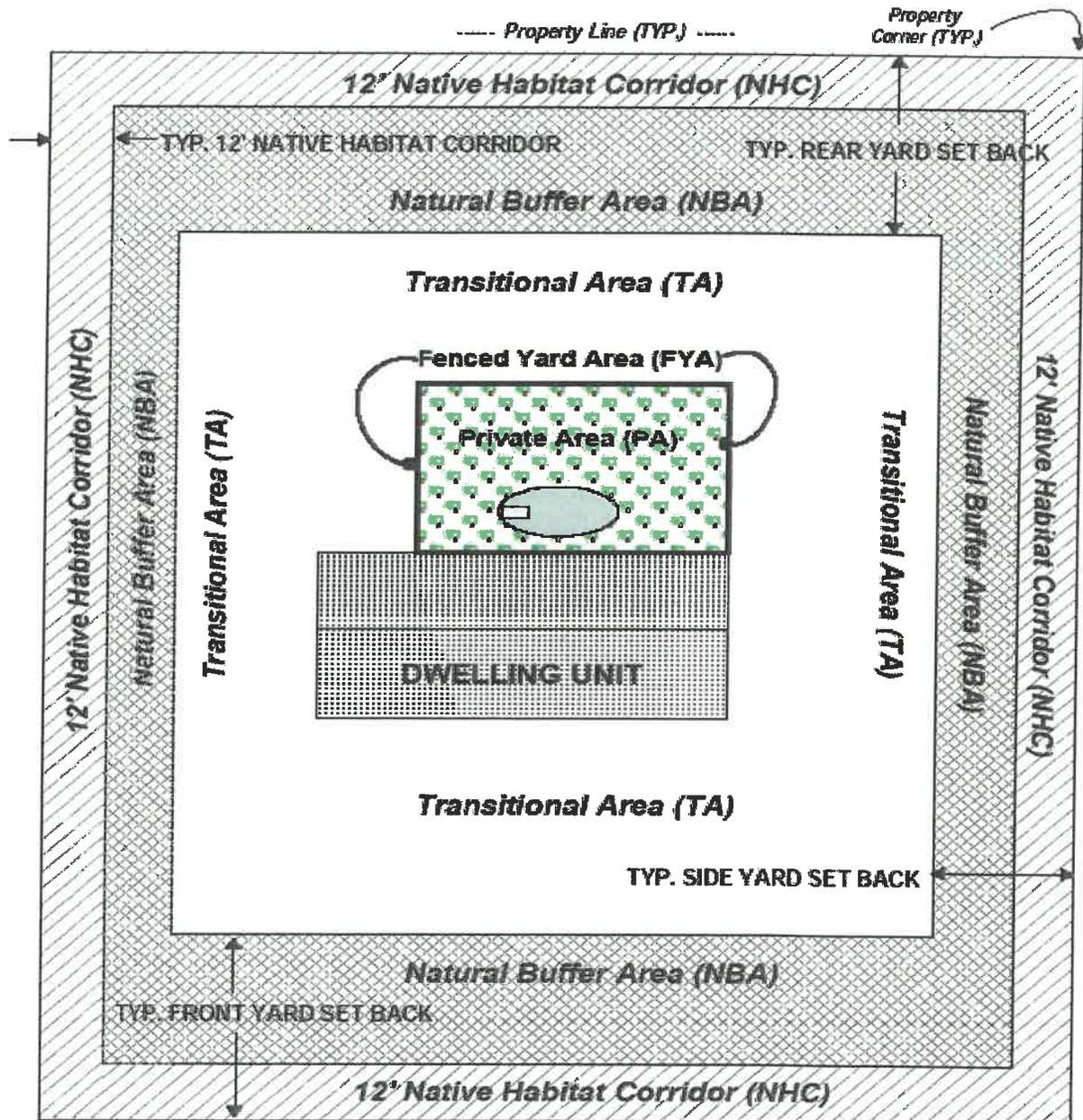


Figure 19 - 7

Note: The 12' Native Habitat Corridor (NHC) applies to Desert Rural (DR) Zones ONLY.



**EXHIBIT 8      *Review and Permit Application Process for Plant Salvage  
and Landscape Installation***

**REVIEW and PERMIT APPLICATION PROCESS FOR PLANT SALVAGE and  
LANDSCAPE INSTALLATION**

**Commercial Projects, Subdivisions & Multifamily Projects**

1.      Submit Salvage Plan and report for review and approval.
2.      Using the approved Salvage Plan, create and submit a Landscape Plan for review and approval.
3.      Using the approved Salvage Plan and Landscape Plan, create and submit a cost estimate for complete salvage, landscape and irrigation installation. Remember that the warranty period of trees, at a minimum, is one (1) year from date of acceptance by The Town of Cave Creek.
4.      Using the approved cost estimate, submit a method of Financial Assurance 125% of the approved cost estimate, for review by The Town of Cave Creek legal department for approval.
5.      When steps one through four have been completed you may apply for a Salvage Permit. (You are required, by the State of Arizona to submit a Notice of Intent to Clear Land to AZ Dept. of Agriculture prior to any site disturbance.)
6.      After a Salvage Permit has been paid for and issued you may start the inspection and salvage process. Please note that a site inspection for cordoning is required and must occur prior to any site disturbance.

This process is provided to you to help you understand and complete this phase of your development project as smoothly and timely as possible. All Town of Cave Creek Ordinances, Council Notice of Decision items or any other requirements, State or Federal shall apply.



**EXHIBIT 9 INSPECTION PROCESS FOR PLANT SALVAGE AND  
LANDSCAPE INSTALLATION**

**INSPECTION PROCESS FOR PLANT SALVAGE and LANDSCAPE  
INSTALLATION**

**PRE – SALVAGE:**

Prior to submitting for a Salvage Permit the applicant must first conduct an inventory of all native plants located within the proposed area of disturbance. The following **site inspections** are required:

**Inventory Plant Tagging:** Plants within the proposed area of disturbance along with the salvage plan and list will be reviewed by the Town's Arborist so as to ensure that the correct number of trees, cactus and shrubs have been tagged, with White (for plants to remain in place), Blue (for plants not salvageable) and Red (for trees, specimen shrubs and cactus over 6 feet tall), and numbered as appropriate. A **site inspection** is required.

**Cordoning (rope off) Area of Disturbance:** A **site inspection** is required to ensure that the proposed area of disturbance shown on the Town approved, Site Plan and field locations are the same and that. An approved cordoning material is in place. An Arizona licensed land surveyor shall set boundary points. This cordoning shall stay intact and in place for the entire project.

**Salvage Nursery Layout:** A **site inspection** is required to ensure that the proposed nursery location shown on the Town approved Site Plan and field locations are the same. This inspection should occur at the same time as Cordoning (roping) inspection.

**Backflow:** Backflow prevention is necessary for the temporary water system in the nursery (a separate permit issued by the Town's Building Department, for the Backflow, is required). A **site inspection** is required and will be performed at the same time as Nursery inspection.

**ACTIVE SALVAGE:**

**Small Cacti:** All cacti, agreed upon for salvage, shall be relocated into the on-site plant nursery prior to the digging of any trees or large cactus. A **site inspection** after these plants are salvaged is required.

**Side Box:** A **site inspection** is required, only if a small cactus inspection was not required or performed, when all required plants have been side boxed and prior to the bottoming process.



**Nursery Final:** A complete list of all plants successfully placed in the on site plant nursery, along with the original approved salvage list, shall be submitted to the Town prior to inspection. Each plant in the nursery, that originally required a tag, shall have said numbered tag attached along with the date it was salvaged indicated on the box.

If the loss of salvage plants is greater than 20% the salvage contractor shall provide the Town of Cave Creek Arborist, in writing, the reason for failure and a replacement plan approved, in writing, by the owner of the project. A **site inspection** is required.

The nursery irrigation system shall be inspected at the same time that the conditions of the plants are evaluated.

This same inspection with a current update including an audit of the nursery shall be required every six months to keep the nursery permit active and valid. This requirement is part of the Building Departments process. The inspection must pass to keep the permit active.

### **PLANTING:**

**Salvage Tree and Large Cactus Staking:** Prior to planting, the location of all salvaged trees and cactus shall be staked in the field along with the tag number of the plant. The locations shall be in agreement with the Town approved Landscape Plans.

**Irrigation:** A Backflow Prevention Device (a separate permit is required by the Town's Building Department) shall be in place. An on site irrigation system shall provide a separate valve for trees and for shrubs. Prior to Final Inspection an As – Built plan shall be submitted to the Planning Department. The irrigation system shall be fully operational at the time of Final Site Inspection. The type of emitter, depth of all pipe, verification of sleeves, location of valves and irrigation controllers shall comply with the approved Landscape Plan and the As – built plan.

**Tree and Plant Completion:** A **site inspection** to verify that the approved Landscape Plan has been followed prior to the placement of ground cover of inert materials is required.

**Final:** It is the applicant's responsibility to ensure that all landscape work agrees with the Town of Cave Creek, Zoning Ordinance Chapter 12 – Native Plant Preservation, Salvage and Landscape Regulations and any Notice of Decision items.

Only after the irrigation As – Built plan has been received and approved along with an approved final **site inspection**, will the project be submitted by the Planning Department to the Town Engineer for acceptance by the Town of Cave Creek.



## **SECTION 20 - RESERVED**



## APPENDIX A

### EDIT TRACKING LOG

EDIT DATE	SECTION AND EDIT
6/15/2021	Various Sections updated with new language from adopted General Plan, Ordinance and Definitions Text Amendments incorporated into Guideline