

# Hill Country Landscape Option Landscape and Irrigation Contractor Specifications

## General

The Hill Country Landscape Option is intended to provide homeowners with a well-designed, resource-efficient landscape. The four major components that increase landscape sustainability are: adequate quantity of high quality **soil**, implementation of efficient **irrigation**, appropriate **plant choice**, and proper **plant placement**. In order to qualify as an LCRA Hill Country Landscape all of the following specifications must be met by the builder and landscape contractor.

## Soil and Mulch

- A. In areas that are to be planted, there shall be no less than **6 inches** of high quality topsoil.
  - a. Topsoil shall be native soil from the site, or fertile, friable, blended sand/loam/compost topsoil. Topsoil shall not be of any admixture of subsoil or slag and shall be free of stones over 1 ½ inches in diameter, lumps, refuse, plants or their roots, sticks, noxious weeds, salts, soil sterilants or other material that is detrimental to plant growth. If topsoil is delivered, it shall be obtained from a well-drained site that is free of flooding. Topsoil shall not be delivered or used while in a muddy condition.
  - b. Non-native topsoil shall contain not less than 25 percent organic matter (compost) that is blended through the soil.
  - c. Topsoil that is added to the site shall be incorporated into existing surface in a two to three-inch scarified transition layer to enable water to drain adequately through the different types of soil. Do not scarify within drip line of existing trees to be retained.
- B. All areas planted with trees, perennials and shrubs shall be finished with a **3 inch deep** layer of high quality organic mulch.
  - a. Wood chip mulch shall be clean wood chips free of soil or man-made debris shredded into coarse pieces ranging in size from 1 inch to 3 inches.
  - b. Rock mulch shall be used in planting beds only as a temporary mulch until full plant coverage is achieved, or as permanent mulch in areas with native shrubs and perennials.

## Irrigation

Automated irrigation systems shall not be required in any new landscape. However, if irrigation is installed it shall meet the guidelines outlined below.

- A. All irrigation systems shall be installed in accordance with state law, Title 2 Texas Water Code, Chapter 34 and Title 30 Texas Administrative Code, Chapter 344 rules, as regulated and enforced by the Texas Commission on Environmental Quality (TCEQ). Irrigation contractors who install the irrigation system must be a TCEQ Licensed Irrigator.
- B. Areas planted with turf shall be on separate zones from areas planted with shrubs and perennials.
- C. All residential automatic irrigation systems are required to have a rain sensor connected to an irrigation controller in order to stop the irrigation cycle during and after a rainfall event. Rain sensors are to be installed in a location where rainfall is unobstructed, such as a rooftop or fence line. We recommend that rain sensors are adjusted at the one-fourth-inch setting.

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- D. Sprinkler irrigation is prohibited in median strips, parking islands and all irregular turfgrass or landscape area less than 10 feet from curb to curb or 10 feet in width. Areas less than 10 feet curb-to-curb or 10 feet in width can be irrigated with low volume irrigation. Low-volume irrigation (subsurface drip irrigation or drip irrigation) shall be installed in long, narrow turf or landscape strips less than 10 feet in width to avoid runoff and overspray onto the hard scape.
- E. All new residential irrigation systems are required to have pressure regulation where static operating pressure exceeds the sprinkler manufacturer's recommended operating range. These may include in-line pressure regulators, flow control valves, or sprinkler devices equipped with pressure regulation stems or nozzles. Extensive misting due to high pressure wastes water.
- F. Irrigation systems are to have a controller that features multiple start times, rain sensor capability, a water budget feature, and a non-volatile memory in case of power outage.
- G. Scheduling recommendations shall be posted inside or immediately near the controller enclosure box for easy reference.
- H. Homeowners shall be provided with a complete irrigation plan (or as-built drawing) that describes the location of each irrigation zone, control valves, and sprinkler devices.
- I. Sprinkler systems shall be designed as to minimize overspray onto the hard scape.
- J. Sprinkler zones located at the bottom of sloped terrain along curbs, sidewalks, driveways, and other hard capes should be equipped with devices that prevent low-head drainage after the sprinkler zone is turned off. In-line check valves already installed will help prevent low-head drainage.

## Plant Choice

- A. No more than 50% of the planting area in the front yard shall be planted in turf.
- B. Plants used must either come from **Attachment A** or be native to the Texas Hill Country region.
- C. Invasive Plants. Invasive plants listed in the August 2004 Edition of the Grow Green Native and Adapted Landscape Plant Guide shall not be used.

## Plant Placement and Spacing

Proper plant placement and spacing is critical to plant health and long-term landscape quality. Plant placement too close to buildings can cause problems with plant disease, as well and insect and structural problems. Proper plant spacing ensures good air flow and room for plants to mature without crowding.

- A. Shade Trees shall be planted no closer than
  - a. 15 feet from any building
  - b. 25 feet from any aboveground utility line
  - c. 10 feet from any paved surface
  - d. 5 feet from underground utilities
- B. Ornamental Trees shall be planted no closer than
  - a. 10 feet from any building
  - b. 10 feet from any paved surface

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- c. 5 feet from underground utilities
- C. Large Evergreen Shrubs: center of plant shall be no closer than
  - a. 5 feet from any building
  - b. 5 feet from any paved surface
  - c. 5 feet from other plants
- D. Large Deciduous Shrubs: center of plant shall be no closer than
  - a. 5 feet from any building
  - b. 5 feet from any paved surface
  - c. 5 feet from other plants
- E. Small Evergreen Shrubs: center of plant shall be no closer than
  - a. 3 feet from any building
  - b. 3 feet from any paved surface
  - c. 3 feet from other plants
- F. Small Deciduous Shrubs: center of plant shall be no closer than
  - a. 3 feet from any building
  - b. 3 feet from any paved surface
  - c. 3 feet from other plants
- G. Evergreen Perennials: center of plant shall be no closer than
  - a. 2 feet from any building
  - b. 2 feet from any paved surface
  - c. 2 feet from other plants
- H. Herbaceous Perennials: center of plant shall be no closer than
  - a. 2 feet from any building
  - b. 2 feet from any paved surface
  - c. 2 feet from other plants
- D. Groundcovers shall be spaced no closer than 1 foot on center.
- E. Shade tolerant plants shall be placed in shaded areas, and plants requiring full sun shall be place in areas receiving at least 6 hours of sun per day.

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## Attachment A

### Acceptable Plants for Hill Country Landscape Option

#### A. Turfgrass

- a. Turf appropriate for sunny areas (more than 6 hours of direct sunlight per day)
  - i. Buffalo
  - ii. Bermuda\*
  - iii. Zoysia japonica\*
- b. Turf appropriate for shaded areas (less than 6 hours of direct sunlight per day)
  - i. Zoysia japonica\* (tolerates light shade)
  - ii. St. Augustine\* (appropriate **only** in shaded areas)

#### B. Trees. Trees shall come from a western seed source such as San Antonio, Austin, Dallas and further west. Trees grown in Houston, Louisiana, and other coastal areas are not acceptable. Trees grown in acid soils from these areas are prone to chlorosis and stunting when planted in our Hill Country soil. Each home shall have no less than 2 trees planted in the front yard, with at least one shade tree. Trees shall be chosen from the following lists:

##### a. Shade Trees

- i. Arizona Cypress\* (*Cupressus arizonica*)
- ii. Bur Oak (*Quercus macrocarpa*)
- iii. Cedar Elm (*Ulmus crassifolia*)
- iv. Chinquapin Oak (*Quercus muhlenbergii*)
- v. Escarpment Live Oak (*Quercus fusiformis*)
- vi. Lacey Oak (*Quercus glaucoides*, *Quercus laceyi*)
- vii. Monterey Oak\* (*Quercus polymorpha*)
- viii. Texas Ash (*Fraxinus texensis*)  
Note: (*Fraxinus velutina* is NOT acceptable)
- ix. Texas Red Oak (*Quercus texana*)

##### b. Ornamental Trees

- i. American Smoke Tree (*Cotinus obovatus*)
- ii. Anacacho Orchid Tree (*Bauhinia congesta*)
- iii. Carolina Buckthorn (*Rhamnus caroliniana*)
- iv. Chitalpa\* (*Chitalpa tashkentensis*)
- v. Crape Myrtle\* (*Lagerstroemia x. hybrida*)
- vi. Desert Willow (*Chilopsis linearis*)
- vii. Escarpment Black Cherry (*Prunus serotina* var. *eximia*)
- viii. Eve's Necklace (*Sophora affinis*)
- ix. Evergreen Sumac (*Rhus sempervirens*)
- x. Goldenball Leadtree (*Leucaena retusa*)
- xi. Kidneywood (*Eysenhardtia texana*)
- xii. Mexican Buckeye (*Ungnadia speciosa*)
- xiii. Mexican Plum (*Prunus mexicana*)
- xiv. Possumhaw Holly (*Ilex decidua*)
- xv. Red Buckeye (*Aesculus pavia*)
- xvi. Rough-Leaf Dogwood (*Cornus drummondii*)
- xvii. Rusty Blackhaw Viburnum (*Viburnum rufidulum*)
- xviii. Texas Mountain Laurel (*Sophora secundiflora*)
- xix. Texas Persimmon (*Diospyros texana*)
- xx. Texas Pistache (*Pistacia texana*)
- xxi. Yaupon Holly (*Ilex vomitoria*)

#### C. Shrubs

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- a. Large Evergreen Shrubs
  - i. Abelia\* (*Abelia grandiflora*)
  - ii. Agarita (*Berberis trifoliata*)
  - iii. Agave (*Agave* sp.)
  - iv. Burford Holly\* (*Ilex cornuta* 'Burfordii')
  - v. Bush Germander (*Teucrium fruticans*)
  - vi. Cenizo/Texas Sage\* (*Leucophyllum frutescens*)
  - vii. Cotoneaster\* (*Cotoneaster* spp.)
  - viii. Primrose Jasmine\* (*Jasminum mesnyi*)
  
- b. Large Deciduous Shrubs
  - i. American Beautyberry (*Callicarpa americana*)
  - ii. Barbados Cherry (*Malpighia glabra*)
  - iii. Butterfly Bush\* (*Buddleja davidii*)
  - iv. Flowering Senna\* (*Cassia corymbosa*)
  - v. Fragrant Sumac (*Rhus aromatica*)
  
- c. Small Evergreen Shrubs
  - i. Basket Grass (*Nolina texana*)
  - ii. Bicolor/Butterfly Iris\* (*Dietes* spp.)
  - iii. Cast Iron Plant\* (*Aspidistra elatior*)
  - iv. Dwarf Chinese Holly\* (*Ilex cornuta* 'Rotunda')
  - v. Dwarf Palmetto (*Sabal minor*)
  - vi. Dwarf Yaupon Holly\* (*Ilex vomitoria* 'Nana')
  - vii. Prickly Pear (*Opuntia* spp.)
  - viii. Red Yucca (*Hesperaloe parviflora*)
  - ix. Soft-leaf Yucca\* (*Yucca recurvifolia*)
  - x. Texas Sotol (*Dasyliirion texanum*)
  - xi. Twist-leaf Yucca (*Yucca rupicola*)
  - xii. Upright Rosemary\* (*Rosmarinus officinalis*)
  
- d. Small Deciduous Shrubs
  - i. Bamboo Muhly (*Muhlenbergia dumosa*)
  - ii. Big Muhly (*Muhlenbergia lindheimeri*)
  - iii. Black Dalea (*Dalea frutescens*)
  - iv. Deer Muhly (*Muhlenbergia rigens*)
  - v. Flame Acanthus (*Anisacanthus quadrifidus* var. *wrightii*)
  - vi. Gulf Muhly (*Muhlenbergia capillaries*)
  - vii. Inland Sea Oats (*Chasmanthium latifolium*)
  - viii. Mexican Feather Grass (*Stipa tenuissima*)
  - ix. Mountain Sage (*Salvia regla*)
  - x. Sideoats Grama (*Bouteloua curtipendula*)
  - xi. Woolly Butterfly Bush\* (*Buddleja marrubiifolia*)
  - xii. Yellow Bells (*Tecoma stans*)
  
- D. Perennials
  - a. Evergreen Perennials
    - i. Autumn Sage/Cherry Sage (*Salvia greggii*)
    - ii. Black-Foot Daisy (*Melampodium leucanthum*)
    - iii. Calylophus (*Calylophus berlandieri*)
    - iv. Columbine (*Aquilegia chrysantha*, *Aquilegia canadensis*)
    - v. Damianita (*Chrysactinia mexicana*)
    - vi. Jerusalem Sage\* (*Phlomis fruticosa*)
    - vii. Rock Penstemon (*Penstemon baccharifolius*)

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viii. Santolina\* (*Santolina chamaecyparissus*)

b. Herbaceous Perennials

- i. Big Red Sage (*Salvia penstemonoides*)
- ii. Hill Country Penstemon (*Penstemon triflers*)
- iii. Lindheimer Senna (*Senna lindheimeriana*)
- iv. Mexican Bush Sage (*Salvia leucantha*)
- v. Missouri Primrose (*Oenothera missouriensis*)
- vi. Prairie Verbena (*Verbena bipinnatifida*)
- vii. Purple Coneflower (*Echinacea purpurea*)
- viii. Rock Rose (*Pavonia lasiopetala*)
- ix. Winecup (*Callirhoe involucrate*)

E. Groundcovers

a. Evergreen Groundcover

- i. Artemisia\* (*Artemisia* 'Powis Castle')
- ii. Asian Jasmine\* (*Trachelospermum asiaticum*)
- iii. Aztec Grass\* (*Ophiopogon intermedius*)
- iv. Creeping Germander\* (*Teucrium cossonii*)
- v. Liriope\* (*Liriope muscari*)
- vi. Meadow Sedge (*Carex perdentata*)
- vii. Monkey Grass\* (*Ophiopogon japonicus*)
- viii. Oregano\* (*Origanum vulgare*)
- ix. Trailing Rosemary\* (*Rosmarinus officinalis* var. *prostratus*)

b. Deciduous Groundcover

- i. Frogfruit (*Phyla incisa*)
- ii. Gregg Dalea (*Dalea greggii*)
- iii. Mountain Pea\* (*Orbexilum* sp. (*nova*))
- iv. Pigeonberry (*Rivina humilis*)

\*non-native