Water Efficiency Standards

HERRIMAN CITY

Herriman City's Water-Efficient Landscaping Requirements

To conserve water, Herriman City has adopted Water Efficiency Standards (WES) that dictate what is and isn't allowed within an outdoor landscape. Outdoor landscapes are now based on Localscapes® design principles that consider Utah's unique climate for functional lawns with decreased maintenance. Please take some time to become familiar with the common elements which make up a Localscape. You can find additional resources such as designs and free classes at ***www.localscapes.com***.

5 elements of a Localscape

1 Central Open Shape

The defining element of a Localscape, the central open shape can be lawn, hardscape, groundcover, gravel, or mulch.

2 Gathering Areas

Hardscape spaces to gather with friends and loved ones—like patios, seating areas, fire pits, and decks. May function as Central Open Space in landscape without lawn.

3 Activity Zones

Areas outside of lawn designed for your favorite activities, like horseshoe pits, trampolines, gardens, and hot tubs.

4 Paths

Connect the previous elements with pathways. Paths are never made from lawn but can be concrete, pavers, stone, or compacted mulch.

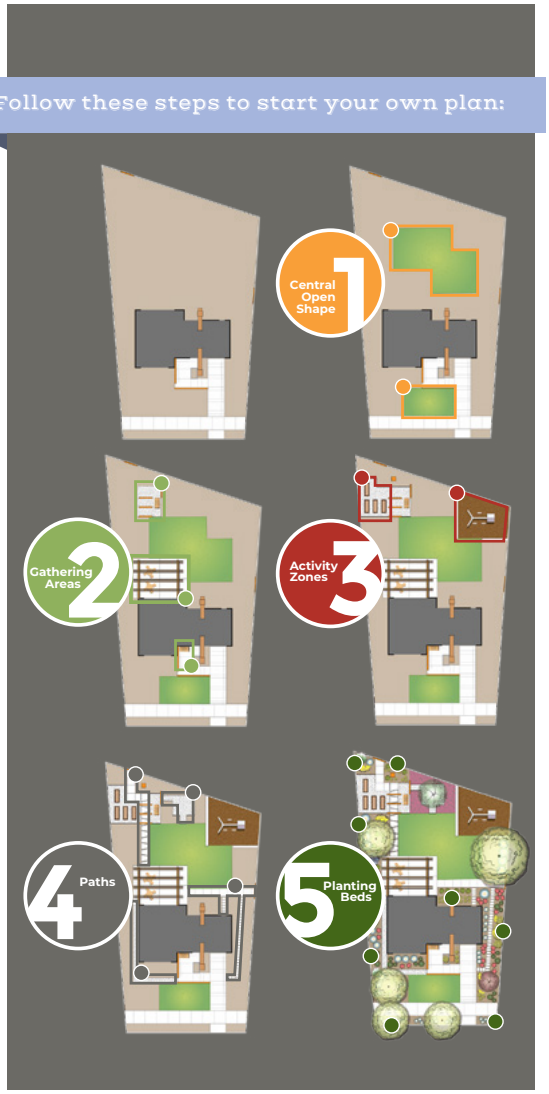
5 Planting Beds

The remaining spaces become the planting beds—the finishing touch to your Localscape.

HERRIMAN CITY

Herriman City's Water Efficiency Standards for residential landscapes are based on Localscapes principles and have been modified as necessary to meet City ordinance requirements.

Follow these steps to start your own plan:



General Landscaping Requirements

The Water Efficiency Standards complement the City's pre-existing landscape ordinances. To simplify both documents, an outlined, combined explanation of both is below. *(City code references are included in parenthesis and italics)*

1: Where is landscaping required?
2: What needs to be included in the landscaping plan?
3: Dos and don'ts of residential landscaping
4: Approved and prohibited trees

1: Where is landscaping required?

For single family dwellings, landscaping is required in the following areas:

- Front yards *(10-23-4B-1)*
- Interior side yards, unless the area is utilized for parking of vehicles or trailers *(10-23-4B-2)*
- Corner lot side yards *(10-23-4B-3)*
- Rear yards visible from the public right-of-way unless a 6' privacy fence is installed *(10-23-4B-4)*
- All park strip areas *(10-23-4B-5)*

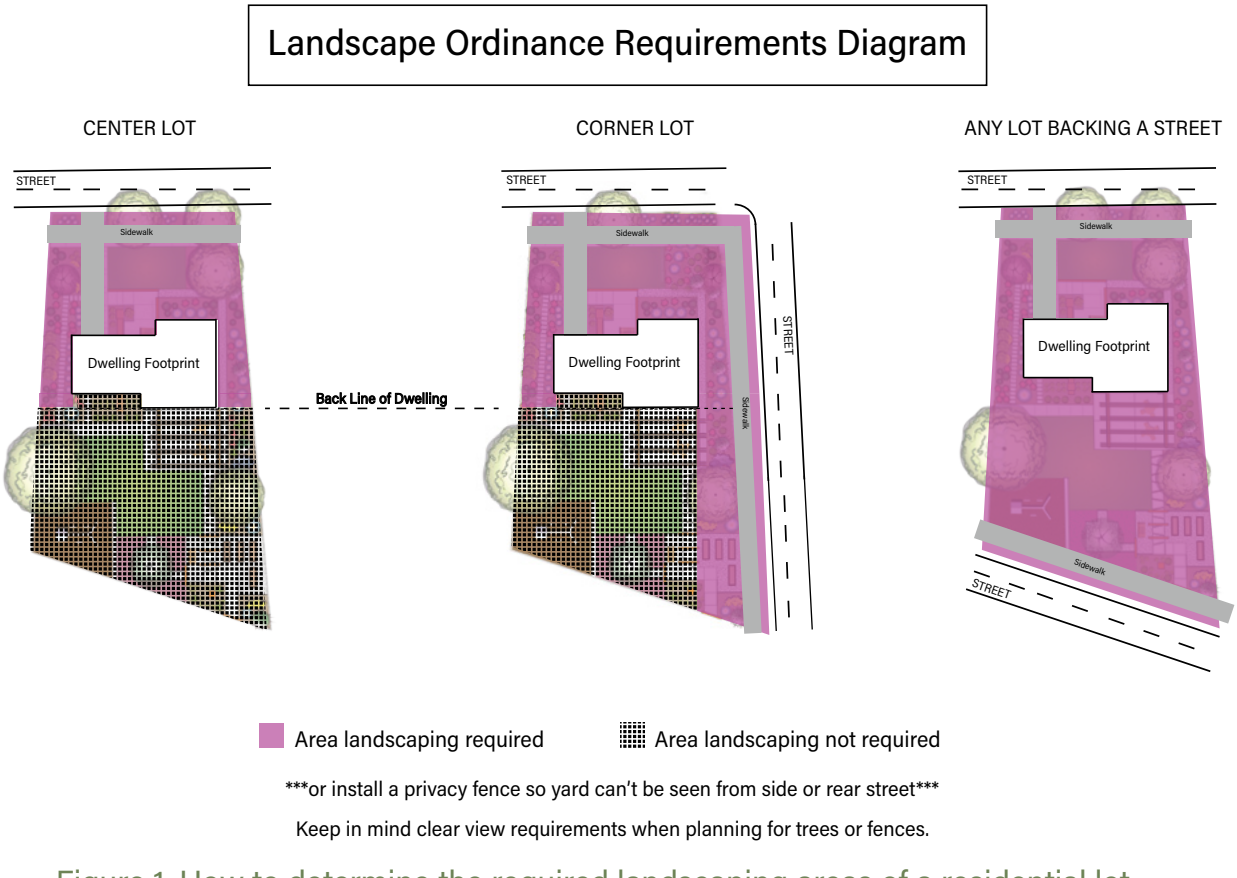


Figure 1. How to determine the required landscaping areas of a residential lot

2: What needs to be included in the landscaping plan?

Landscaping plans need to show the following information before they are approved:

- Landscaping and plant materials (See Figure 2) *(10-23-5B)*
  - Tree and plant list *(10-23-5B-4)*
- Location, spacing, and number of existing and proposed plantings *(10-23-5B-2)*
  - The size of plants is to be shown at two-year maturity
- Separate document displaying irrigation/watering plan OR a clearly visible and outlined acknowledgment displaying the written text of Herriman City ordinance *10-23-7-3a* and *10- 23-7-3b* (see Figure 3) *(10-23-5B-6 & 10-23-5-13)*
- Size, shape, and slope of lawn areas *(10-23-5B)*
- Size, shape, and location of pathways *(10-23-5B-10)*
  - Pathways must also indicate which medium is to be used *(10-23-5B-1)*
- Accurate scale which displays dimensions of all features *(10-23-5-13)*
- Completed landscape requirement table (see Figures 3 and 4 below) *(10-23-5-12)*

A materials schedule shall be shown on all submitted landscape plans

MATERIALS SCHEDULE - EXAMPLE

Symbol	Name/Type	Quantity
	Deciduous Tree	10
	Conifer Tree	2
	Shrub	14
	Flowering Shrub	10
	Ground Cover	40
	Ornamental Grass	7
	Stepping Stones	See Plan

Figure 2. Iconography/symbols used on landscaping plan will be used to represent the type, spacing, and location of the plants or materials which will be installed in the final landscape. They will also be used to estimate percent cover of plant material. Landscaping plans will not be approved without a material legend

** Note: Plant icon size must be to scale, showing their full size at two years' maturity. **

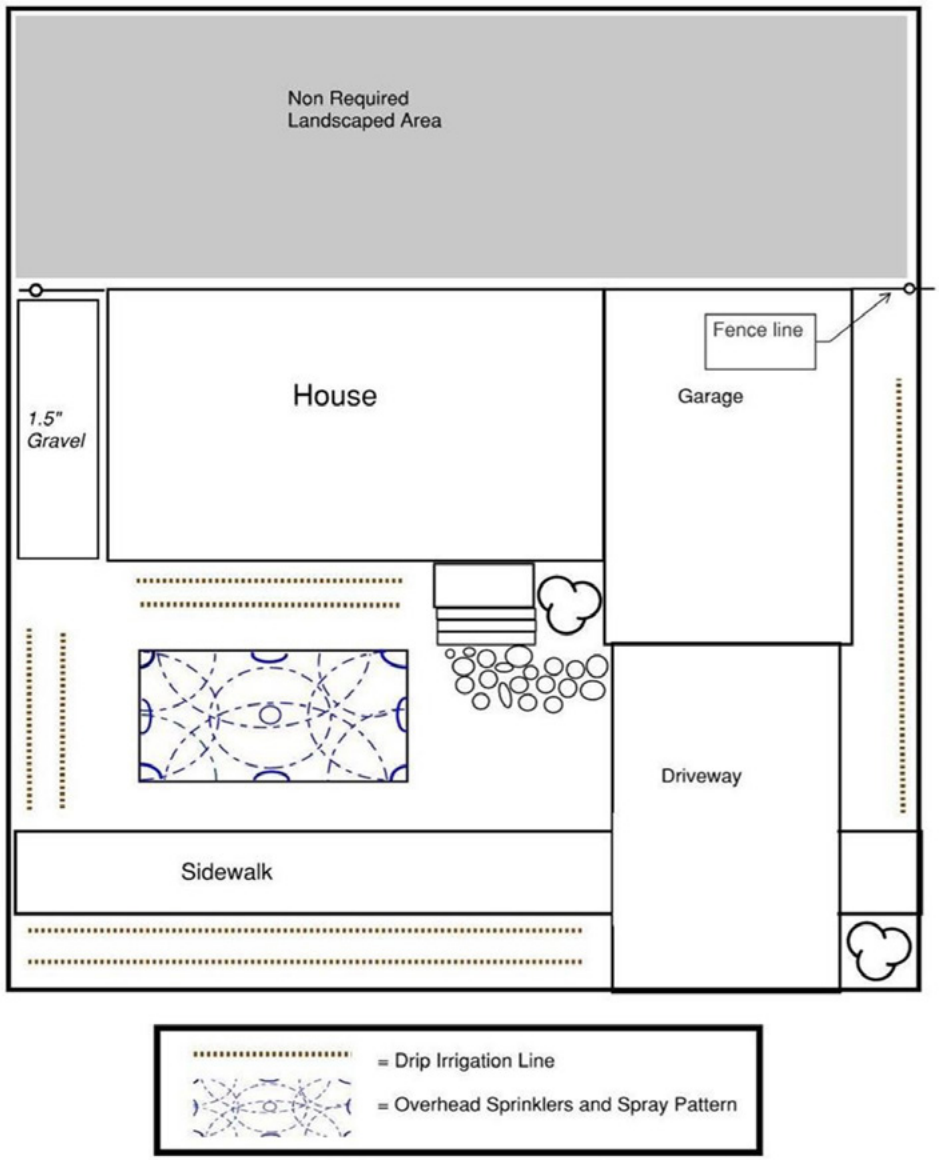


Figure 3: Per Herriman City Ordinance *10-23-7-3* and *10-32-6*, irrigation systems shall be planned and implemented to prevent unnecessary runoff. This means that all irrigation systems used to water lawn areas shall be automatic and include rain sensors. Drip irrigation shall be required around shrubs, trees, and ground cover. **To ensure irrigation system planning takes place, landscape plans must include an irrigation plan of at least this quality with their submitted documents, OR landscaping plans must include a clearly visible box outlining the following statement**:

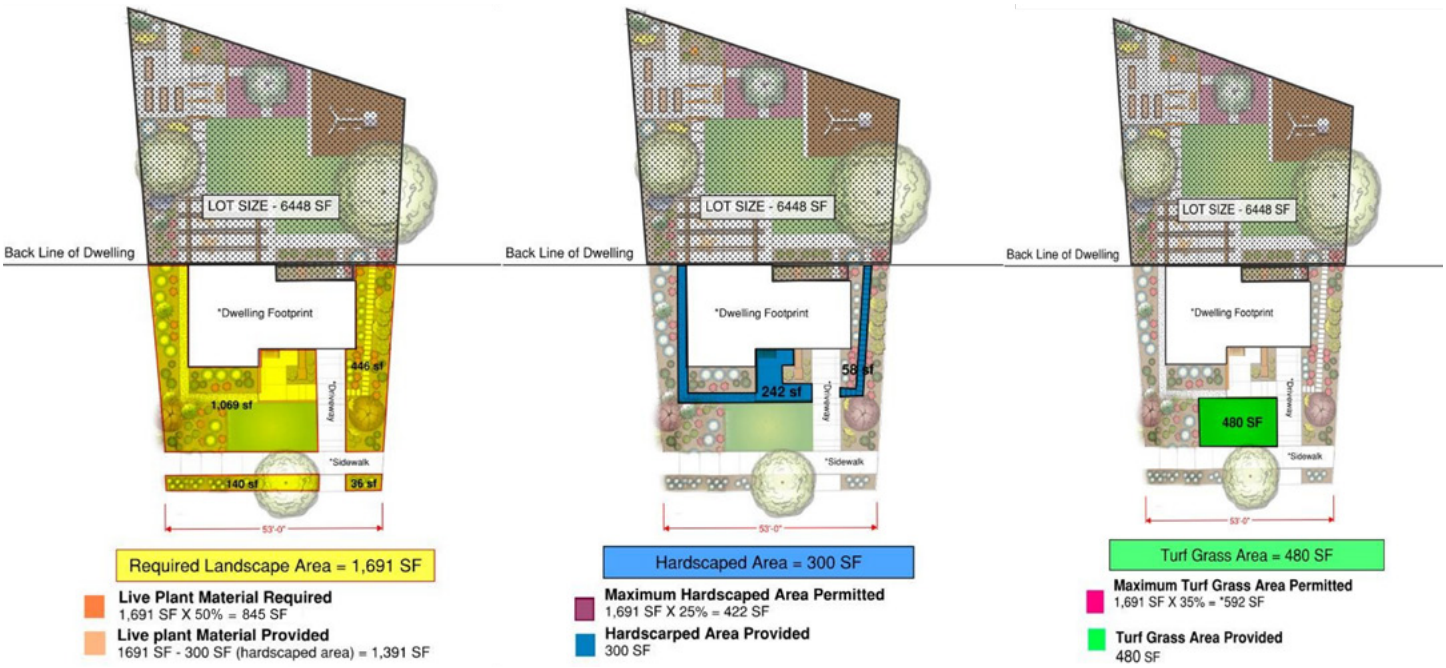
Per Herriman City Ordinance *10-23-7-3*: Irrigation systems shall be automatic and include rain sensors. Systems shall be checked regularly by the owner to assure proper maintenance and efficiency. City inspection at the time of installation shall be required to assure the system is operational and water is not being wasted.

a). The sprinkler system shall be planned and implemented to prevent unnecessary runoff on sidewalks or other impervious surfaces.

b) Drip system irrigation shall be required around shrubs, trees, and ground cover.

How to calculate the landscape areas to complete the landscape table

Landscape Table Example—Interior Lot



Residential landscaping table*	**Required**	**Provided**
Property size	-	6,448 SF
Required landscaping area	1,691 SF	1,691 SF
Live plant material (50% of required landscaped area)	845 SF	1,391 SF
Parking strip street trees (one per 30' of street frontage)	1	1
Maximum permitted	**Maximum**	**Provided**
Hardscaped area (25% of required landscaped area maximum)	422 SF	300 SF
Turf grass (35% of required landscape area) or 250 SF, whichever is greater **	592 SF	480 SF

* This table may be submitted spearately or included on the landscaping plan
** On lots where 35% of the required landscaped area is less than 250 SF, up to 250 SF of turf grass may be installed

Figure 4. How to calculate landscape areas and complete the required residential landscaping table

Property size (acres and sqft)		
Building footprint		
Hardscape % of Property size		
Overall Landscape sqft	Required	Provided
Live plant material sqft	Required	Provided
Trees 1 tree/500 sqft	Required	Provided
Trees in lawn areas	Prohibited	Provided
Parkstrip trees 1 per every 30' of frontage	Required	Provided
Lawn areas less than 8 feet wide	Prohibited	Provided
Lawn areas on slopes greater than 25% or a 4:1	Prohibited	Provided
Residential		
Turf Grass provided	Allowed <35% of the total landscaped area	Provided
Small residential lot exemption when total landscaped area is < 250 sqft	Yes	No
Commercial, Industrial, Institutional and multi-family	Allowed <20% of the total landscaped area	Provided

Figure 5. Example of a blank required landscaping table. This can be found on Herriman City's "Water Efficiency Standards" webpage online or within the WES ordinance text as exhibit A.

3: Dos and don'ts of residential landscaping

Lawn area (turf grass/sod/carpet grass)

- No more than 35% of the total required landscaped area may contain turf grass *(10-32-6 and WES 5G-v)*
- The lawn area must be unobstructed. This means no trees, signs, valve boxes, or plants other than grass in the lawn area. *(10-32-6 and WES 5F)*
- Lawn areas are not allowed on slopes greater the 25%. *(10-32-6 and WES 5F)*
- Lawn areas are not allowed within the park strips. *(10-32-6 and WES 5F)*
- Lawn areas shall not be less than 8' wide at any point so that they may be properly irrigated by overhead sprinklers. *(10-32-6 and WES 5F)*
    - Small residential lots with no back yards, in which the total landscaped area is less than 250', and the front yard dimensions cannot accommodate the minimum 8'wide lawn area requirement of the landscaping requirements in section F, are exempt from the 8' minimum width lawn requirement. *(10-32-6 and WES 5G-vi)*

Planting beds

- Planting Beds/landscaped areas outside lawn area may contain trees, shrubs, vegetative, organic, and inorganic ground cover *(10-23-7-2)*
- All planting beds must have 3-4" of mulch on the surface *(10-32-6 and WES 5D)*
- Planting beds must be irrigated using a drip system *(10-23-7-3b & 10-32-6 and WES 5A)*
- Please show location, type, and size of plants (at two-year maturity) which are to be placed within the planting bed areas. *(10-23-5B-2)*

Irrigation systems

- All irrigation systems shall be appropriate for the designed plant material to achieve the highest water efficiency *(10-32-6 and WES 5A)*
- Overhead sprinkler systems are only allowed within the lawn area *(10-23-7-3 & 10-32-6 and WES 5A)*
- Planting beds will always be irrigated with a drip irrigation system equipped with a pressure regulator, filter, flush-end assembly, and any other appropriate components *(10-32-6 and WES 5A)*
- Lawn and planting beds shall be irrigated on separate irrigation valves *(10-32-6 and WES 5B)*
- Each irrigation valve will irrigate a landscaping with similar site, slope, soil conditions, and plant materials with similar watering needs. *(10-32-6 and WES 5B)*

Trees

- Trees used in residential and commercial areas must be selected from the City's approved tree list (attached) and comply with the City's clear view ordinance (attached) *(10-23-7-3E-iii and Herriman City Engineering Standards 4-19-01, 10-19-18B, 6-2-4A, 7-9-4E)*
- One tree shall be planted in parking strips per every 30' of street frontage. *(10-23-7-E1- b3)*
- Approved trees shall not be planted in lawn areas *(10-32-6 and WES 5F)*

Parking strip

- One tree shall be planted in parking strips per every 30' of street frontage, given clear view compliance. Herriman City rounds up to the nearest tree based on the length of the park strip *(10-23-7-E1-b3)*
  - (Example: If you have 140' of street frontage, the parking strip must contain at least five trees)
- Park strips will always be irrigated using drip system irrigation and are not allowed to contain turf/sod grass. *(10-32-6 and WES 5F and WES 5A)*
- Landscaping rock placed in the park strip must be greater than or equal to 1.5"

Landscaped area not including parking strip

- Depending on lot size, two or more trees are strongly encouraged

Non-live landscaping materials

- Non-live landscaping materials may consist of hard surface improvements such as pools, fountains, waterfalls, streams, decorative boulders and sculptures, or materials such as wood chips, bark, stone, or similar materials *(10-23-7-2B)*
- Decorative paving materials may include bricks, pavers, flagstones, and textured concrete *(10-23-7-2B-1)*
- Untextured concrete, gravel, or lava rocks shall not be used in a required landscaped area *(10-23-7-2B-2)*
- Solid concrete pavement shall only be placed in a parking strip after review and approval by the City Engineer to determine if it would interfere with the public use of the right-of-way or utilities. If allowed, concrete shall be colored decorative stamped concrete based on City approval and shall not be within 24" of the outer edge of any tree trunk at expected maturity. *(Ord. 2019-15, 6- 122019)*
- Asphalt and mulch/bark shall be prohibited in parking strips; except that mulch/bark may be placed around any tree base
- Lava/landscaping rock used in a landscape must adhere to the following size requirements:
  - Within a park strip: size must be greater than or equal to 1.5"
  - Within the interior (outside the park strip): Size must be greater than 0.75". Hardscape is strongly recommended to take up no more than 25% of the required landscaped area

Overall percent cover of required landscaped area

- Required landscaped area excludes building footprint, public sidewalks, private walkways, driveways, and pre-approved areas meant for additional parking. *(10-23-4B)*
- The required landscaped area must have finished landscaping before a Certificate of Occupancy is given *(10-23-10C-1)*
- It is strongly recommended that a maximum of 25% of the required landscaping area contains hardscape (pathways, trails, non-live material, etc.)
- At maturity, landscapes are required to have enough plant material (perennials, shrubs, groundcover etc.) to create at least 50% living plant cover at the ground plane, not including tree canopies. *(10-23-7-A2-a1)*
- Lawn areas shall not exceed the greater of 250 square feet, or 35% of the total landscaped area. *(10-32-6 and WES 5G-v)*

Landscape Ordinance Requirements Diagram

Note: on lots where 35% of the required landscaped area is less than 250 SF, up to 250 SF or turf grass may be installed

Figure 6. Figure displays major elements to keep in mind when designing landscape plan

Please refer to the following sources to help you design your landscaping plan:

Websites

- **Water Efficiency Standards**: *www.herriman.org/water-efficiency-standards*
- **Landscaping ordinances**: *www.herriman.org/ordinances-and-code*
- **Localscapes®**: *www.localscapes.com* (A great local resource for ideas, designs, and courses on water efficient planting)

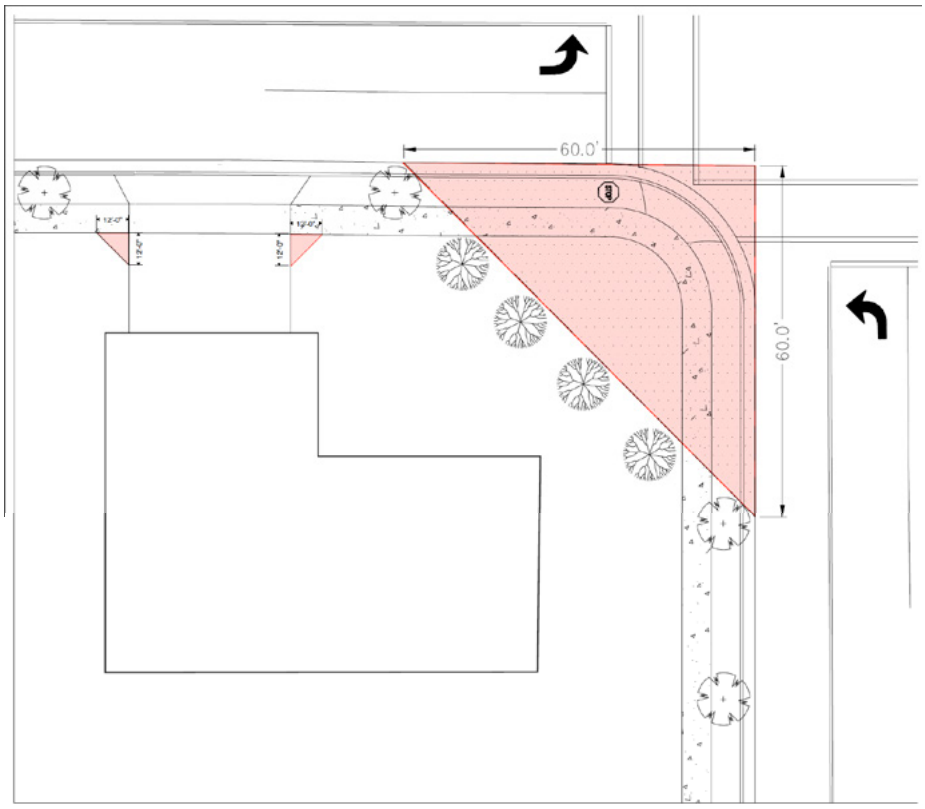
Clear view ordinances

A. Intersecting streets and clear visibility: No obstruction to view in excess of 3′ in height shall be placed on any corner lot within a triangular area measured 60′ from the edge of pavement, as formed below. Where all legs of an intersection contain a road right-of-way width less than 65′, the legs of the clear view triangle can be reduced to 50′. *(Herriman City Engineering Standard 4.19.01)*

B. Driveways: No obstruction to view in excess of 3′ in height shall be placed at any automobile access way within the triangular area formed of points 12′ along the property line and 12′ along the driveway line. *(10-19-18)*

C. Trees, shrubs, signs, vehicles, fences or other obstacles shall not block the view of traffic or street signs, street lights or sight distance of vehicles at intersections or roadways. *(6-2-4A)*

D. Trees that are located within the park strip must be 30′ from any traffic or street sign and must be pruned above the sidewalk 7′ for pedestrian safety and above the road 13′6″ for emergency and maintenance vehicles. *(7-9-45)*



Approved trees

All park strip or parking lot island trees shall be deciduous

Botanical name Common Name

Plantings widths 3-5'

- **Acer campestre** Hedge Maple
- **Acer ginnala** Amur Maple (tree form)
- **Acer tataricum** Tatarian Maple (tree form)
- **Amelanchier x grandifolia** Autumn Brilliance Serviceberry
- **Carpinus betulus** European Hornbeam (Frans Fontaine)
- **Cercis canadensis** Eastern Redbud
- **Chitalpa x tashkentensis** Chitalpa (tree form)
- **Crataegus spp.** Hawthorn (thornless and flowering)
- **Japanese Zelkova** City Sprite
- **Koelreuteria paniculata** Goldenraintree
- **Maackia amurensis** Maackia
- **Malus hybrid** (fireblight resistant varieties)
- **Morus alba** White Mulberry, fruitless
- **Morus rubra** Red Mulberry, fruitless
- **Ostrya virginiana** Hop Hornbeam
- **Quercus robur** fastigiata Columnar English Oak
- **Syringa pekinensis** Chinese Lilac Tree
- **Syringa reticulata** Japanese Tree Lilac
- **Ulmus parvifolia** Lace Bark Elm
- **Zelkova serrata**

Plantings widths 5-10'

- **Acer pseudoplatanus** Sycamore Maple
- **Acer rubrum** Red Maple
- **Acer truncatum x platanoides** (Norwegian Sunset, Urban Sunset)
- **Carpinus betulus** European Hornbeam (Fastigiata)
- **Celtis occidentalis** Common Hackberry
- **Corylus colurna** Turkish Filbert
- **Fagus sylvatica** European Beech
- **Gleditsia triacanthos** (thornless varieties)
- **Ginkgo biloba** Ginkgo Maidenhair
- **Gymnocladus dioicus** Kentucky Coffeetree (fruitless)
- **Maclura pomifera** White Shield, Osage Orange
- **Parrotia persica** Persian Parrotia
- **Quercus bicolor** Swamp Oak
- **Quercus ellipsoidalis cultivars** Northern Pin Oak
- **Quercus macrocarpa** Bur Oak
- **Quercus robur** English Oak
- **Quercus rubra** Northern Red Oak
- **Tilia cordata** Littleleaf Linden
- **Tilia euchlora** Crimean Linden
- **Tilia tomentosa cultivars** Silver Linden

Plantings widths 10'+ (i.e. open space)

- **Acer miyabei** State Street Maple
- **Acer negundo** Sensation
- **Aesculus glabra** Buckeye
- **Aesculus x carnea** Horsechestnut, Red
- **Albizia julibrissin** Mimosa
- **Catalpa speciosa** Northern Catalpa
- **Celtis reticulata** Netleaf Hackberry
- **Cladrastis kentuckea** Yellowwood
- **Cornus mas** Corneliancherry Dogwood
- **Fagus sylvatica** European Beech
- **Liriodendron tulipifera** Tuliptree
- **Quercus alba** White Oak
- **Quercus cerris** Turkey Oak
- **Quercus muehlenbergii** Chinkapin Oak
- **Quercus shumardii** Shumard Oak
- **Tilia americana** American Linden
- **Ulmus americana** Colonial Spirit, Prairie Expedition
- **Ulmus hybrids** like 'Frontier' and 'Accolade'

Conifers

Conifers are best in grouping at development entrances, open spaces, and in non-traditional parking strips at least 20 feet wide.

- **Cedrus atlantica** Glauca Blue Atlas Cedar
- **Cedrus deodara** Karl Fuchs, Kashmir, Shalimar, Deodar Cedar
- **Chamaecyparis nootkatensis** Pendula, Weeping Alaska Cedar
- **Calocedrus decurrens** Incense Cedar
- **Juniperus chinensis cultivars** Chinese Juniper
- **Juniperus scopulorum** Rocky Mountain Juniper
- **Pinus nigra** (cultivars for columnar and dwarf) Austrian Pine
- **Pinus leucodermis 'Heldrechii'** Bosnian Pine
- **Pinus sylvestris (cultivars for columnar and dwarf)** Scotch Pine
- **Pinus strobus** Eastern White Pine
- **Pinus flexilis Vanderwolf's Pyramid** Vanderwolf Pine
- **Juniperus virginiana** Eastern Red Cedar
- **Pinus edulis** Pinyon pine
- **Sequoiadendron giganteum** Giant Sequoia
- **Taxodium distichum** Bald cypress
- **Thuja orientalis** Arborvitae

Prohibited street trees

- **Acer saccharinum** Silver Maple
- **Acer freemanii** Freeman Maple, Autumn Blaze
- **Ailanthus atissima** Tree of Heaven
- **Betula species** Birch
- **Elaegnus angustifolia** Russian Olive
- **Fraxinus species**
- **Populus species**
- **Prunus padus** May Day Tree
- **Pyrus calleryana** Flowering Pear
- **Robinia species**
- **Salix species**
- **Sophora japonica**
- **Ulmus pumila**
- **Ziziphus jujube** Chinese date
- All varieties of fruit- or nut-bearing trees
- All conifer trees
- Thorned trees