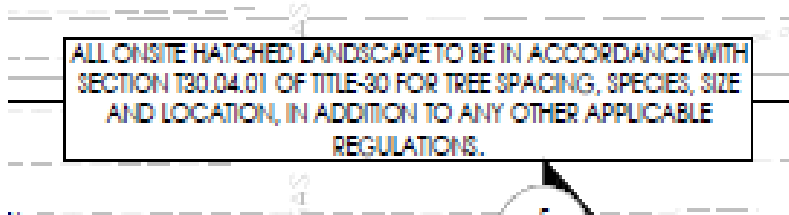




## Department of Comprehensive Planning Landscaping Plan and Installation Guide

If the project meets Title 30 landscaping requirements, a detailed landscape plan is not required. The required landscape strip widths and parking islands must be shown on a plan, but the species type, size and spacing need not be depicted on the plan. A note indicating the planting materials will meet Title 30 requirements will suffice. Please see example below:



If more detailed landscape plans are required due a requested waiver of development standards or condition of approval of a previous land use application, the following information must be illustrated on the plan. Please note, this will be the approved plan for the project, and any changes will require revisions to the plan.

### LANDSCAPE PLAN

- i. A landscape plan shall be submitted as required by the submittal requirements established for each application type.
- ii. A landscape plan may be combined with another application if compliance can be demonstrated in the combined materials.
- iii. The landscape plan shall show, at minimum:
  - (a) Existing trees drawn to scale;
  - (b) Significant trees to be preserved on-site;
  - (c) Any trees to be removed;
  - (d) All trees and vegetation required and proposed to be installed in accordance with this Title;
  - (e) Adequate spatial area for the anticipated size and spread of plant materials at maturity per §30.04.01D.2, Plant Materials;
  - (f) Sight zones, as described in §30.04.08G (trees prohibited)
  - (g) Any required buffer per 30.04.02; and
  - (h) Table as shown below:

|                            |   |                            |   |
|----------------------------|---|----------------------------|---|
| Required Street Trees      | # | Proposed Street Trees      | # |
| Required Parking Lot Trees | # | Proposed Parking Lot Trees | # |

- iv. A landscape plan is not required for attached sidewalks along private streets or internal streets within a subdivision, unless initial development.
- v. Variations to §30.04.01 may be requested with an Alternative Landscape Plan per §30.04.01E.1 subject to Landscape Architect. If an Alternative Landscape Plan does not apply, requests to vary may be considered as described in §30.06.06F, Waiver of Development Standards.

## **ALTERNATIVE LANDSCAPE PLAN**

- (a) An alternative landscape plan may be approved when the proposed landscape design does not meet the requirements of this Title, but proposes innovative, high-quality alternatives that enhance the physical environment of the site and the surrounding area to a greater extent than could otherwise be achieved by these standards.
- (b) The alternative landscape plan shall not be used to alleviate inconveniences, financial burdens, or self-imposed hardships.

### **Allowable Alternatives**

Alternatives from the landscaping standards that may be considered for approval in an alternative landscape plan include, but are not limited to, the following:

- (a) **Variation from Standards to Enhance Water Conservation** A variation from the landscaping standards of this Title may be considered if the alternative enables enhanced water conservation or shading.
- (b) **Modified Planting Rates due to Existing Public Utilities and Infrastructure** A modification in the number, configuration, or location of required trees or shrubs may be considered when the public utility or governing agency provides written notice that the required landscaping would negatively impact the operation of overhead and underground public utilities or create a public safety hazard. This need not be a landscape architect.
- (c) **Reduction in Standards for Significant Tree Protection.** A reduction in the number or spacing of required trees may be considered in exchange for protection of existing significant trees that provide canopy coverage comparable to what would otherwise be achieved through required landscaping. Greater than 6 inches in caliper measured 4.5 ' above ground level.
- (d) If approved under an Alternative Landscape Plan, medium and small trees shall be provided for every 20 and 10 linear feet of street frontage, respectively, landscape architect is not required.

### **Submittal and Review**

Alternative landscape plans proposals shall be prepared and submitted by a registered landscape architect licensed by the State of Nevada, to be reviewed and approved as the landscape plan component of the Design Review approval. Documentation necessary to support the alternative shall be submitted with the alternative landscape plan.

### **Fee-In-Lieu**

- i. Where a development is unable to satisfy all or part of the required landscaping plan and standards of this Title, including where the required number of trees are reduced by an alternative landscape plan per §30.04.01E.1, or when required landscaping is waived per §30.06.06F, Waiver of Development Standards, a fee-in-lieu shall be provided.
- ii. The fee-in-lieu shall be an amount set by the Board and calculated based on the square footage of shortfall of the total required trees, to offset the impacts of not installing the required amount of trees. Shortfall of required trees shall be based on the minimum coverage at maturity for 1 large tree or 2 large trees for a significant tree, or some other reasonably related metric as deemed appropriate by the Board.
- iii. The fee-in-lieu shall be paid to the County Tree Fund to finance the planting of trees prior to issuance of Certificate of Compliance.

## **DEFINITIONS**

**Berm** means soil artificially built up or placed to form a visual barrier or buffer.

**Deep Root Irrigation** the application of water to a depth below a tree's root ball to encourage development of a deep root system which encourages growth downward in restricted planting areas and reduces excess water run-off. (See **Figure 1**)

**Swale** means a depressed portion of land constructed to convey runoff water from one point to another. Swales may be used to prevent water runoff onto sidewalks or streets and detain storm water.

## **REQUIREMENTS**

- A. Purpose.** Provide standard regulations for installing landscaping within unincorporated Clark County.
- B. Applicability.** All landscaping shall conform to the requirements listed within.
- C. Administration.** A Certificate of Compliance stating that required landscape materials have been installed per Title 30 and any imposed conditions of approval on a land use application shall be signed by the property owner, contractor, or Landscape Architect and submitted to the Zoning Administrator prior to final Certificate of Occupancy
- D. Landscape Design Objectives.**
  - 1.** Landscaping shall incorporate water conservation in the design which includes:
    - a.** appropriate soil,
    - b.** soil amendments to absorb and retain water and encourage deep root formation,
    - c.** mulch,
    - d.** drainage,
    - e.** microclimates,
    - f.** groupings of plants with similar water requirements in an irrigation zone.
  - 2. Grading and hydrology** should maximize the use of storm water for on-site irrigation.
  - 3. Visibility.** Landscape plans shall address affected sight visibility concerns, including traffic control sign and device location, sight visibility zones, and adequate spatial considerations for the future size and spread of plant materials at maturity.
  - 4. Preferred Planting Location.** Planting on the south and west sides of buildings provides shade and promotes energy conservation and solar gains.
  - 5. Plant Materials.** All required plants shall be selected from those on the SNRPC/SNWA recommended plant list.
  - 6. Irrigation.** A water conserving irrigation system is required. Drip or similar systems with no over spray shall be used. The use of irrigation systems which utilize reclaimed wastewater is preferred.
  - 7. Maintenance.** Irrigation systems shall be maintained in good operating condition.
  - 8. Swales.** Any landscape area more than 4 feet wide requires a 2-foot-wide minimum swale on each side, unless a berm is used. Swales shall be designed to prevent irrigation water from flowing onto the street or sidewalk. See Figure 2. Detached sidewalks in landscape areas greater than 10 feet wide, shall provide a swale on each side of the sidewalk, unless bermed.
  - 9. Berms.** Generally, any berm used alone or in combination with a low-profile wall should not exceed 1 foot of rise for every 3 feet of linear distance and must be self-stabilizing
  - 10. Storm Water Detention/Retention Basins.** When provided, private on-site detention/retention basins which are not paved or riprapped shall be landscaped if in non-single family residential development to enhance the natural configuration of the basin.

Grading, hydrology and landscape plans should be integrated to make maximum storm water runoff for supplemental on-site irrigation purposes. The regulations and specifications for Stormwater regulations can be found at [https://www.clarkcountynv.gov/government/departments/water\\_quality/stormwater\\_regulatory\\_program.php](https://www.clarkcountynv.gov/government/departments/water_quality/stormwater_regulatory_program.php)

- 11. Ground Cover.** Non-porous materials should not be placed where plants exist.
- 12. Utility Requirements.** If a utility company certifies that trees pose a hazard, tree placement may be modified if site conditions permit or alternatively, those trees shall not be required.
- 13. Irrigation Requirements.** A deep root irrigation system with root shields is required as follows:
  - a.** A minimum 3' deep compacted trench.
  - b. Root Shields** shall be installed in the trench, parallel to curb, sidewalk or wall a minimum 3' deep extending laterally from both sides of tree centerline at least 3' in width. The top of the root shield shall be 2" below sidewalk.
  - c.** An **irrigation pipe** 2 – 4 inches wide by 36 – 48 inches long, made of PVC or suitable material, shall be inserted vertically into the ground at the trunk's base. Small and medium trees require 1 pipe, large trees require at least 2 pipes.
  - d.** Each **irrigation pipe** shall be loosely filled with gravel or rock and may be perforated along the lower half for drainage. Irrigation lines, emitters, and/or bubblers may be placed within each deep root irrigation pipe.
  - e.** Irrigation pipes shall be designed to allow irrigation water to reach a depth of 3 to 4 feet.

**Table 30.02-1: Minimum Plant Specifications**

| Plant Type                                               | Size at Planting, Min. <sup>[1]</sup> | Tree Canopy at Maturity, Min. <sup>[2]</sup> |
|----------------------------------------------------------|---------------------------------------|----------------------------------------------|
| Trees (small)                                            | 1.5-inch caliper                      | Less than 134 sf                             |
| Trees (medium)                                           | 2.5-inch caliper                      | 134 sf or greater                            |
| Trees (large)                                            | 3-inch caliper                        | More than 235 sf and 40 ft tall min.         |
| Evergreen trees                                          | 7 feet tall                           | --                                           |
| Shrubs                                                   | 5 gallons                             | --                                           |
| Groundcover, ornamental grasses, annuals, and perennials | 1 gallon                              | --                                           |
| <b>NOTES</b>                                             |                                       |                                              |

[1] Caliper shall be measured 6 inches above ground level at time of planting.

[1] Tree canopy coverage at maturity is established per the SNWA/SNRPC Regional Plant List.

See the Southern Nevada Water Authority website for further landscape help and information [www.snwa.com](http://www.snwa.com)  
<https://www.snwa.com/conservation/understand-laws-ordinances/index.html>  
<https://www.snwa.com/landscapes/choosing/index.html>

# Post-Construction Stormwater

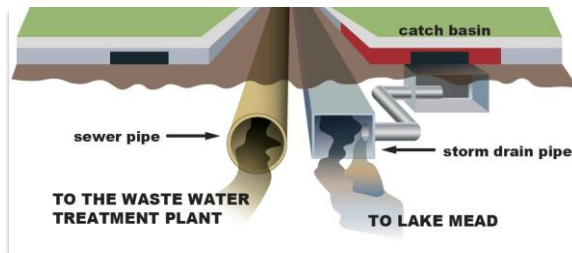
## Best Management Practices (BMPs)



In the Las Vegas Valley, water that falls onto streets, driveways, and other solid surfaces is channeled into the storm drain and flows untreated to Lake Mead. As the water flows across the valley, it picks up litter and pollutants from business activities, vehicles, and the community.

Post-construction BMPs are permanent stormwater controls designed to reduce pollutants by settling, filtering, trapping, or infiltrating contaminants in stormwater runoff. This process helps reduce the amount of pollutants leaving the site and entering the storm drain.

A facility's activities, location, and climate can affect what types of Post-Construction BMPs are installed. Disconnected impervious surfaces that direct stormwater into desert landscaping and rock lined swales are some of the most common types of post-construction BMPs seen around the Las Vegas Valley.



### Disconnected Impervious Surfaces

Any hard surface such as parking lots, streets, sidewalks, etc., is an impervious area. Disconnected impervious areas are designed to direct stormwater runoff from developed areas to vegetated or rock lined areas that are sized and graded to filter pollution.

- ✓ Regularly sweep impervious areas to collect loose debris and solid waste.
- ✓ Use absorbents to immediately clean up spills and properly dispose of absorbents; use drip pans when necessary.
- ✓ Store materials indoors, when possible.
- ✓ Place all liquids stored outdoors on secondary containment pallets or within containment areas.



### Depressed Medians

Depressed medians serve as a means of collecting stormwater run-off from the roads and parking areas. They are beneficial in filtering stormwater runoff as it is collected in the depressed median before being carried to a storm drain.

- ✓ Remove accumulated sediment and debris, re-grade to restore design grades, and re-vegetate when necessary.
- ✓ In the event of a spill, the affected areas should be properly removed and disposed of immediately. The soils and materials should be replaced as soon as possible.



### Landscape Swale

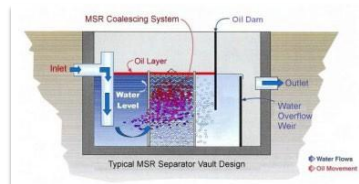
A swale is a low place in a tract of land. The purpose of the swale is to settle out and filter the stormwater before the runoff exists off-site. A swale can be landscaped with rock, vegetation, or a combination of both.

- ✓ Remove accumulated sediment and debris, re-grade to restore design grade and re-vegetate when necessary.
- ✓ Disturbed areas can be stabilized with plants, mulch or rock lining.
- ✓ In the event of a spill, the affected areas should be properly removed and disposed of immediately. The soils and materials should be replaced as soon as possible.

### Separators

There are a variety of separators available depending on what your facility may need. Different separators remove different things. Some can remove oil, insoluble hydrocarbons, grease, floatable materials, sediments, and other such pollutants.

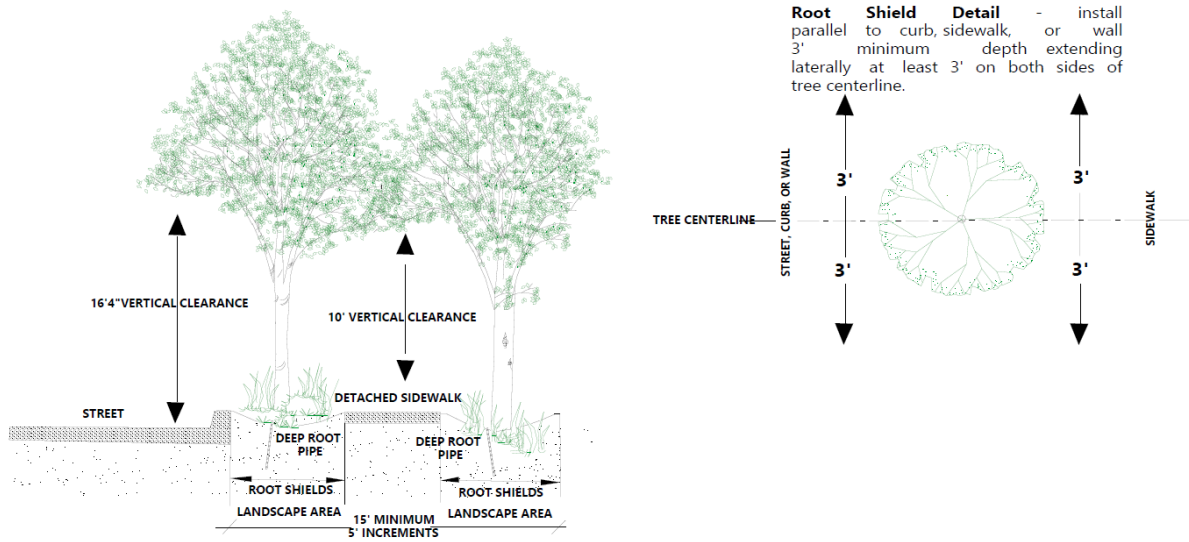
- ✓ Separators should be cleaned regularly to keep accumulated pollutants from escaping during storm events.
- ✓ In and clean separators per manufacturer's recommendation to remove any material that has accumulated and again after a significant storm event.



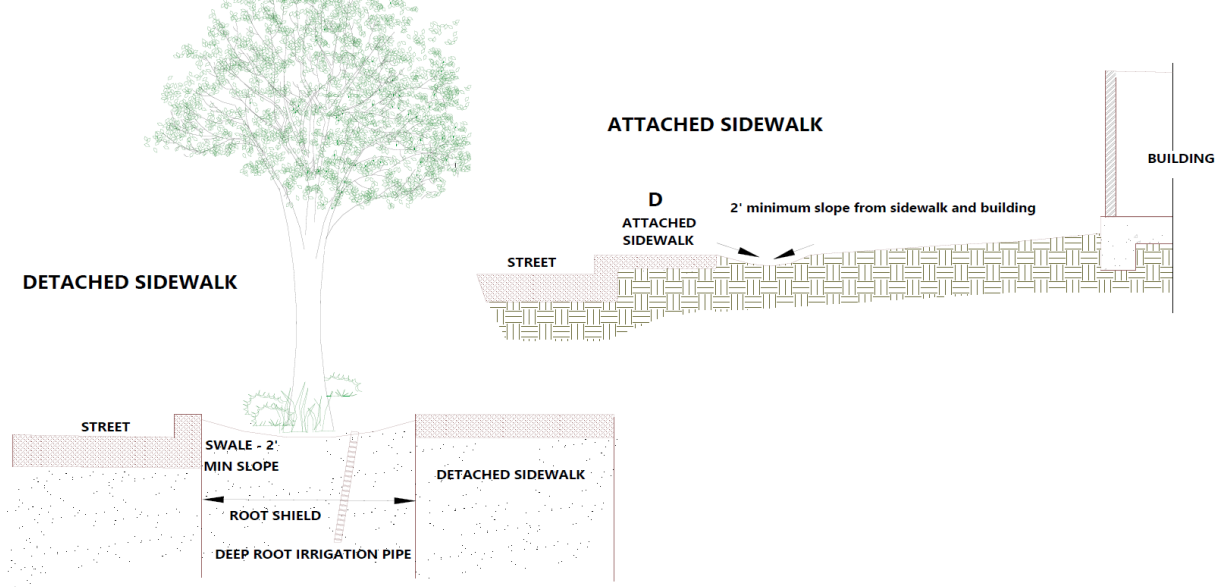
To learn more about stormwater pollution and best management practices, visit our website at [www.clarkcountynv.gov/water-quality](http://www.clarkcountynv.gov/water-quality) or email us at [waterquality@cleanwaterteam.com](mailto:waterquality@cleanwaterteam.com). And for more information on the different types of accepted BMPs and required maintenance, go to: <http://www.ccrfd.org/drainagestandards.htm>



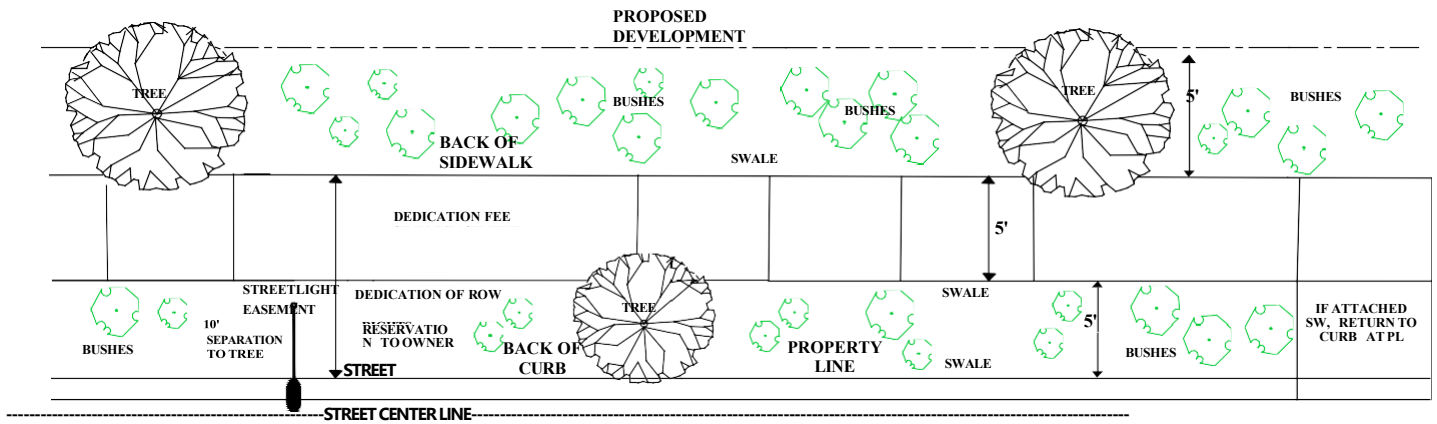
**Figure 1 - Root Shield or Barrier**



**Figure 2 - Swale Design**



**Figure 3 Detached Straight Sidewalk**



**Figure 4 Detached Meandering Sidewalk**

