



# PARKING LOT SHADING GUIDELINES AND MASTER PARKING LOT TREE LIST

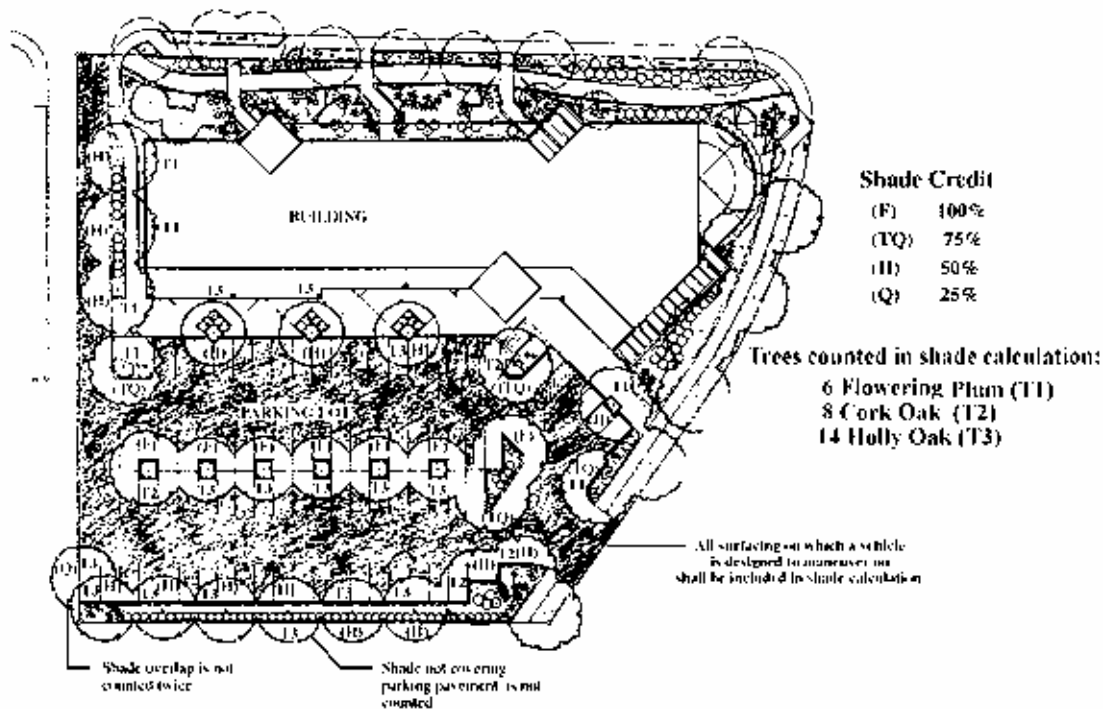
Per Section 40.25.100 (f) of the City of Davis Municipal Code, 50% of the paved parking lot surface shall be shaded with tree canopies within 15 years of acquisition of building permit; development of such canopy shall be in accordance with master parking lot tree list guidelines.

The following guidelines are offered to benefit applicants and designers to ensure adequate compliance with the ordinance.

## Parking Lot Shading Calculation

***Parking Lot Shading Plan:*** A parking lot shading plan shall be submitted with the Design Review application for all new and reconstructed parking lots. The plan shall clearly show all surfaced areas included in the calculation. Trees shall be drawn to scale representing the canopy size at 15 years as listed in the Master Parking Lot Tree List. The percentage of shade for each tree shall be clearly indicated. (refer to example 1)

Example 1:



**Paved Area Calculation:** All surfacing on which a vehicle is designed to maneuver on shall be clearly indicated on the shading plan and the total area calculation noted in the shade calculation table. This includes all parking stalls, loading areas, drives within the property line, and areas for maneuvering. The following are not considered paved parking lot areas and are not required to meet the 50% shading requirement:

- Truck loading in front of overhead doors
- Truck maneuvering and parking areas unconnected to and exclusive of any vehicle parking.
- Surfaced areas for automobile dealerships, lumber yards, and similar facilities that are used for display, sales, service, and vehicle storage. All required parking for these uses is still subject to the 50% shading requirement.

If a site has two or more unconnected parking areas, shade is calculated separately for each area. If they are connected by a joining drive, they are calculated as one lot.

**Shaded Area Calculation:** Shaded parking lot area is determined by using the appropriate percentage of the crown as indicated on the approved shade list. (see attached Master Parking Lot Shade Tree List). Only trees from this list may be used as parking lot shade trees unless otherwise approved by the city’s arborist. It is recommended that the genera of trees be varied throughout the parking lot. Trees shall receive 25 percent, 50 percent, 75 percent or 100 percent shading credit based on their location relative to paved surfaces. Areas where canopies overlap shall not be counted twice.

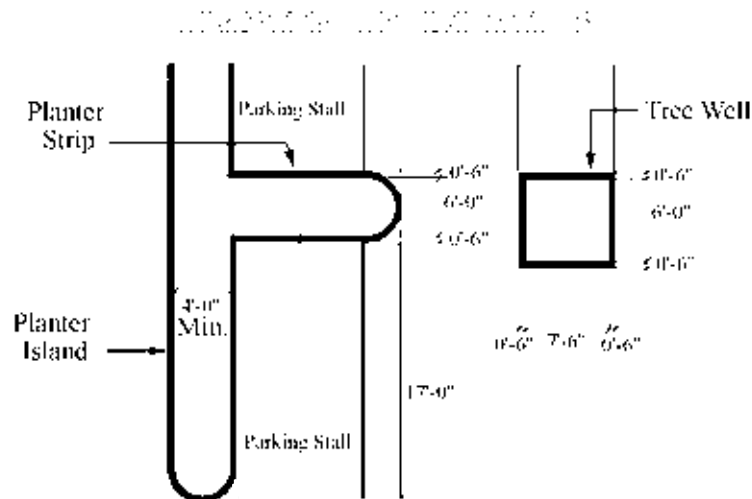
**Shade Calculation Table:** The shading plans shall also include a table identifying the quantity and type of trees used and the percentage of shade credited to each. All trees shall be from the Master Parking Lot Tree List and calculated with the corresponding canopy size. (see table )

**PARKING LOT SHADE CALCULATION TABLE**

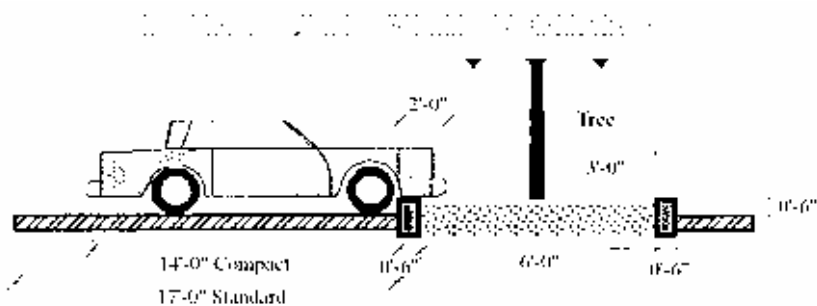
SYM	BOTANICAL NAME / COMMON NAME	FULL S.F.	3/4	HALF S.F.	1/4	TOTAL S.F.
T1	<i>Prunus cerasifera</i> Flowering Plum	1 @ 491	2 @ 368	3 @ 246		1,965
T2	<i>Quercus suber</i> Cork Oak		2 @ 722	6 @ 481		4,330
T3	<i>Platanus acerfolia</i> ‘Yarwood’ London Plane Tree		1 @ 722	12 @ 481	1 @ 240	6,734
<b>Total Tree Shade</b>						<b>13,029 sq.ft.</b>
<b>Total Paved Area</b>						<b>25,430 sq.ft.</b>
<b>Percent Shade</b>						<b>51.2%</b>

## Specifications for Parking Lot Planters

**Minimum Planter Sizes:** A minimum 6'-0" by 6'-0" planting area shall be provided for each tree planted in a tree well or planter strip. A minimum 4'-0" by 8'-0" planting area shall be provided for each tree planted in an island planter. Planter dimensions are measured from the interior side of the curb (see illustrations).



Trees must be planted behind the curb at a distance no less than one half the minimum planter width or otherwise recommended by the city's arborist. A 2'-0" foot overhang for vehicles into the planter area is allowed as long as it does not overhang planter width or otherwise recommended by the city's arborist. A 2'-0" foot overhang into the planter area is allowed as long as it does not overhang within the required parking lot setback area or pedestrian walkway.



**Materials:** Planters shall contain soil, shrubs and/or living ground cover with 4" of bark mulch. Interlocking pavers and decomposed granite may also be utilized in heavily used areas.

## Planting and Irrigation of Parking Lot Shade Trees

**Planting:** Proper planting procedure is essential in achieving the best growth of the tree and shall be utilized. This includes but is not limited to: tree spacing, tree well size, soil composition, irrigation, and maintenance. The entire tree planting area (tree well, island, or strip) shall be excavated to a depth of 5'-0". Planter shall be backfilled with native soil and necessary amendment prior tree planting.

**Irrigation Detail:** All parking lot shade trees shall be irrigated with a minimum (2) deep watering tubes. All deep watering tubes shall be installed as per the city's standard detail for parking lot tree planting and irrigation (see detail below).

### PARKING LOT TREE PLANTING/IRRIGATION STANDARD DETAIL

