

CITY AND COUNTY OF SAN FRANCISCO

SAN FRANCISCO PUBLIC

DIRECTOR'S ORDER NO. 187,246

PURSUANT TO ORDINANCE NO. 165-95, REGULATING THE PLANTING, MAINTENANCE, OR REMOVAL OF TREES AND LANDSCAPE MATERIAL ON PUBLIC SIDEWALK AREAS AND SUPERCEDING ORDER NO. 170,735 AND NO. 169,946.

I. PURPOSE

A. *Objective.* Planting street trees and landscaping in the public right-of-way enhances the physical, ecological, and cultural aspects of the city. Because street trees are the most important organizing element of the streetscape environment, appropriate tree species selection, location and design of the planting site is essential. Proper tree selection and planting will ensure the healthy growth and longevity of trees, enhance streetscape character, maximize environmental benefits, and maximize the City's investment.

B. *Authority.* Article 16 of the Public Works Code authorizes the Director of Public Works to regulate the planting, maintenance, or removal of trees and landscape material on the public sidewalk. This San Francisco Public Works Director's Order provides detailed guidelines regarding tree and landscape plantings in the public right-of-way. These guidelines are intended to provide sufficient information for plan development and submission.

**Please note that all permit applications are reviewed on a case-by-case basis, and Public Works must approve tree and landscape applications before any installation begins.

C. *Relation to Sidewalk Landscape Permit.* Street trees and landscaping are both elements of the city's urban forest. Generally, this Public Works Director's Order provides guidance on placement of street trees and the size and dimensions of tree basins. In many cases, the City encourages tree basins larger than those recommended in this Director's Order so as to allow landscaping and increased permeability within the right-of-way. A sidewalk landscape permit is required for planters, with or without a street tree, that are sized larger than the standard dimensions included in this Director's Order. See Public Works Sidewalk Landscaping Permit Application for guidelines regarding these planters.

D. *Relation to above ground planters.* Public Works generally discourages the placement of above ground planters because they require water for the duration of

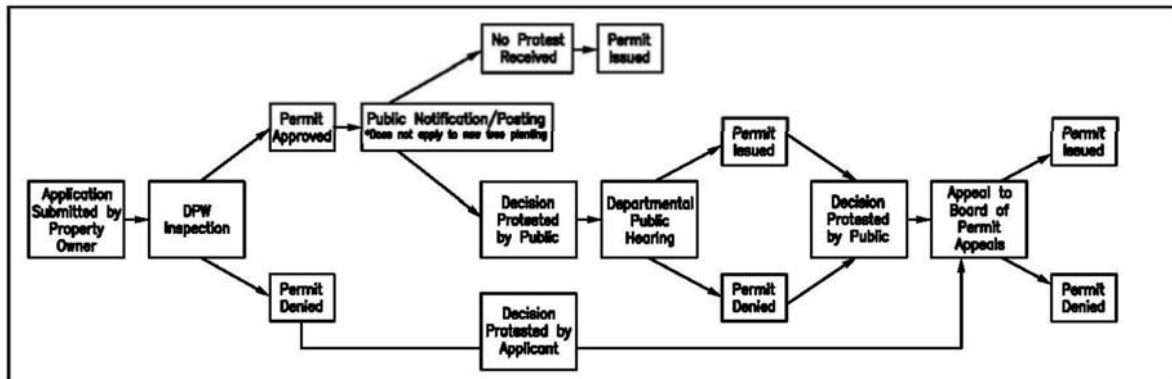
the installation and are never able to become established plants. However Public Works has issued Director’s Order number 179,231 regarding the placement of above ground containers in the public right-of-way.

E. *Relevance to Vision Zero policy.* The City and County of San Francisco has adopted a Vision Zero policy that seeks to eliminate traffic fatalities. One of the purposes of this Director’s Order is to prevent plantings from blocking critical driver safety sight lines or create other safety issues such as blockages of traffic signals and safety signs, as well as reduced crosswalk illumination.

F. *Relevance to Adopted Plans and Documents.* The City and County of San Francisco has adopted and completed a comprehensive list of plans, documents and guidelines for Greening, including but not limited to; The San Francisco Urban Forest Plan; the Better Streets Plan; the Stormwater Design Guidelines, and the Climate Action Plan. The Director’s Order on Planting should support the guidelines and greening policies in these documents to establish and build upon the urban forest of San Francisco by creating a more walkable, livable and sustainable city by cleaning our air and water, calming traffic, improving public health, providing wildlife habitat, and absorbing greenhouse gases.

II. STREET TREE AND LANDSCAPE MATERIAL PERMIT APPLICATION AND APPROVAL PROCESS

A. *Adding or removing a tree.* Contact Public Works, Bureau of Urban Forestry, to request a permit to plant or remove trees or landscape material on a public sidewalk. The application process is summarized in the following flow chart:



A removal permit is required for removal of any tree (alive or dead) in the public right-of-way, and certain protected trees on private property. See Section 810 of Article 16 of the Public Works Code regarding “Significant” and “Landmark” trees. Public Works may not grant all tree removal permit applications. A Public Works certified arborist will evaluate the tree and determine if it is healthy and structurally

sound. In most cases a tree removal permit will not be granted if the tree is healthy and structurally sound.

Public Works will typically approve a removal permit application for tree removal in the following cases:

- i. If the tree is unhealthy, and not likely to recover; or has structural wounds or deficiencies that represent a potential public safety hazard; or if the tree poses another risk to public safety; or if the tree is dead or dying; or
- ii. If the applicant proposes to relocate the existing tree at the same property and Public Works determines the transplant is likely to succeed.

In select cases if the tree proposed for removal can be replaced with a tree (or trees) that matches or exceeds the canopy and trunk diameter of the tree to be removed, Public Works may grant the removal application. The canopy and trunk diameter of the replacement tree(s) must match or exceed that of the tree to be removed at the time of planting.

If Public Works approves a tree removal permit application, a notice is placed on the tree, as described in Sec. 806 (a) of Article 16 of the Public Works Code. Members of the public can appeal the decision and a public hearing will be held by Public Works.

B. Fee schedule for street tree activities:

- i. A street tree removal permit fee, as described in Sec.806. (b)(3) of Article 16 of the Public Works Code, is payable upon submittal of the application. Contact Public Works, Bureau of Urban Forestry for a fee schedule and application.
- ii. An "In Lieu" planting fee is required, as described in Sec.802. (h) of Article 16 of the Public Works Code, for each tree not planted pursuant to Section 806 (d) of the Public Works Code, for existing trees removed without replacement, or for empty tree basins not planted.

C. Enforcement. Pursuant to Sec. 118 of the Public Works Code, violators of this Director's Order may be subject to criminal, civil or administrative penalties.

D. Exceptions. Exceptions due to hardship or unusual circumstances may be submitted for approval to Public Works. Public Works will conduct reviews on a case-by- case basis.

III. SELECTING AN APPROPRIATE TREE SPECIES

Objective. The selection of tree species and their placement in the public right-of-way should be consistent with the City's goals for a particular street. Ceremonial streets, major throughways, commercial streets and other streets important to the city pattern should use formal, consistent planting palettes chosen for their distinct design qualities to provide strong aesthetic character and facilitate place recognition. Neighborhood residential or smaller streets may use a more diverse, less formal planting palette to indicate neighborhood preference and create a rich planting variety. The Public Works Bureau of Urban Forestry may require specific tree species. All species selections must be approved by Public Works prior to planting.

B. *Guidelines.*

- Climate-appropriate trees are required;
- Trees with columnar form are appropriate for narrower planting spaces such as small streets and alleys, narrow medians, or narrow sidewalks with minimal building setback (some columnar species may be inappropriate due to low branching);
- Medium-sized trees with light to medium density foliage are appropriate on neighborhood residential and commercial streets;
- Trees with overarching canopies and medium density foliage are appropriate on wider streets, such as mixed-use streets, throughways and boulevards.

IV. SELECTING AN APPROPRIATE SITE FOR NEW TREES

A. *Spacing.* Street tree spacing should be determined by the expected mature size of the tree. Generally, trees should be planted with the following spacing:

- Small trees (less than 20-foot crown diameter at maturity) should be planted 15 to 20 feet on center;
- Medium trees (20-foot to 35-foot crown diameter at maturity) should be planted 20 to 25 feet on center;
- Large trees (greater than 35' crown diameter at maturity) should be planted 35 feet on center.

B. *Clearances from elements on the sidewalks and medians:*

- i. If other sidewalk elements interfere with a planting site, it is generally preferable to move the tree site a few feet in either direction than to skip a planting site entirely.
- ii. Wherever feasible, when designing a new street or renovating an existing

street, effort should be made to locate or relocate utilities and other elements so that the regular tree spacing listed in Section IV(A) can be attained.

- iii. When adding trees to an existing streetscape, movable site furnishings should be relocated, where feasible, to allow for street tree planting at an appropriate spacing listed above in section IV(A).
- iv. Tree clearance from typical sidewalk furniture:

SIDEWALK FURNISHINGS	CLEARANCE FROM SITE FURNISHINGS*
Utility Boxes & Cabinets	3 Feet
Sewer Vents	5 Feet
Fire Hydrants	5 Feet
Parking Meters	3 Feet
Fire Escapes	10 Feet
Pedestrian Furniture	3 Feet
Utility Poles (excluding street lights, critical safety signs and traffic signals)	5 Feet
Parking Sign	3 Feet
Other traffic control signs	5 Feet
Critical safety signs – as designated by SFMTA (Stop signs, yield signs, pedestrian warning, etc.)	20 feet

*Measurement is from the center of the tree basin to the edge of the utility or furniture. These are general guidelines and not all inclusive. It is the responsibility of the permittee to contact the Underground Service Alert to confirm utility locations.

v. Clearances from parking and traffic signs:

- a) No tree should be planted within 3-feet of an existing parking sign. Consider sign relocation where feasible and approved by the SFMTA.

Permittee is required to pay for the sign relocation costs if the relocation is necessary.

- b) No tree should be planted in such a way that it would block the view of traffic control signs from the intended user on the roadway. Traffic control signs are typically installed above 7 to 8 feet from the ground. Recommended clearance is a minimum 5-foot clearance for all traffic control signs and a minimum 20-foot clearance for critical safety signs as designated by the SFMTA. Consider sign relocation where feasible and approved by the SFMTA. Permittee is required to pay for the sign relocation costs if the relocation is necessary.

vi. *Existing Trees*

- a) Existing street trees will not be removed for the sole purpose of achieving minimum clearances (as specified in this document) from any existing or proposed sidewalk furnishing elements listed above (ie: utility poles, traffic control signs, streetlights, etc).
- b) Existing street trees may need to be removed if they do not meet minimum clearances (as specified in this document) and present a clear conflict (that cannot be mitigated through pruning) with an existing traffic or pedestrian safety element.

vi. *Clearances from street lights:*

SIZE OF TREE* (at maturity)	CLEARANCE FROM STREET LIGHT**
Small	No Closer than 9 Feet
Medium	No Closer than 15 Feet
Large	No Closer than 21 Feet

*Mature size of tree determined as shown in IV(A), and by the Bureau of Urban Forestry

**Distances from center of tree basin/trunk

vii. *Clearances from overhead trolley wires:*

- a) No tree, as measured from the center of the tree basin/trunk, should be planted within 8-feet of an existing overhead trolley wire. Trees planted adjacent to overhead trolley wires should be selected so that mature tree canopy will not interfere with trolley wires. Refer to

California Public Utilities Commission General Order No. 95 (Rules for Overhead Electric Line Construction).

C. Maintaining visibility when planting trees or landscape material adjacent to a street intersection:

Visibility requirements on city streets are guided by the concept of stopping sight distances. These distances are sensitive to the speed that vehicles travel on a street as well as other geometric features of the roadway such as curves and hills. Landscaping and tree planting should not be installed in such a manner as to block the view of conflicting movements of traffic, including pedestrian traffic, nor block the view of traffic control devices such as traffic signs, traffic signals, and other traffic warning devices.

Use the latest CalTrans Highway Design Manual (HDM) to determine the Stopping Sight Distance (SSD) from Table 201.1 Sight Distance Standards. Example of table below.

**Table 201.1
Sight Distance Standards**

Design Speed ⁽¹⁾ (mph)	Stopping ⁽²⁾ (ft)	Passing (ft)
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

In order to provide adequate safety and visibility at intersections, street trees and landscaping adjacent to intersections should be located per the following general guidelines:

- i. Within the 25’ near side and 5’ far side zones, landscape material may be planted up to the crosswalk edge on sidewalks and medians provided that it does not exceed 2 feet high as measured from the street.
- ii. Trees may be planted up to 25’ from the crosswalk edge on sidewalks and medians at the near side of intersections provided the tree is in line

with the remainder of the tree line of the block. No trees may be planted within 25 feet of the approach to any pedestrian crosswalks, such as crosswalks located in the middle of a block.

- iii. Trees and landscaping installed on sidewalk bulbs away from existing tree line of the block must be reviewed for impacts on stopping sight distances and view of traffic control devices prior to approval.
- iv. Trees should not be installed opposite the stem of a T intersection unless such trees can be guaranteed to not block traffic control devices such as signals, overhead street illumination, and pedestrian sight lines.
- v. Trees may be planted no closer than 5' from the crosswalk edge on sidewalks and medians at the far side of intersections.
- vi. Trees may be planted within 25' of the crosswalk edge where there are sidewalk bulbs, provided trees are kept within the tree planting line of the remainder of the block and do not block traffic stopping sight distances.
- vii. Existing trees shall not be subject to removal in order to comply with these guidelines.

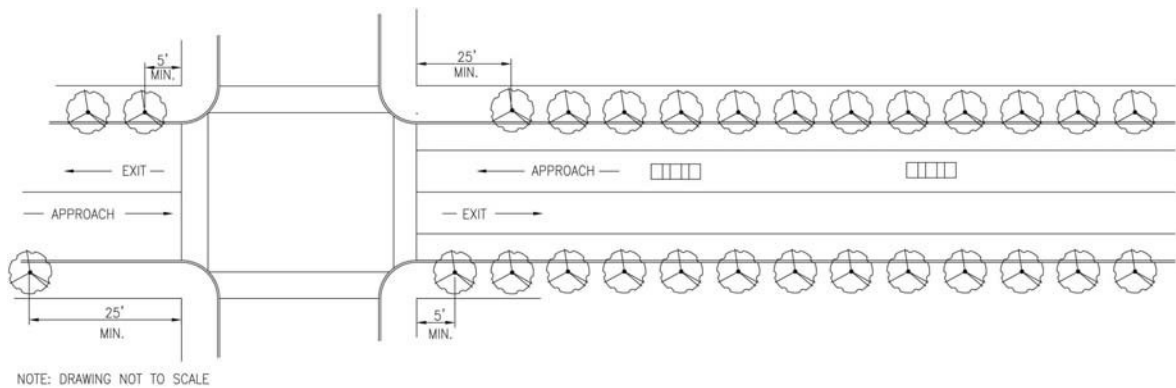


FIGURE 1
TYPICAL INTERSECTION

D. *Planting a tree adjacent to a Bus Zone:*

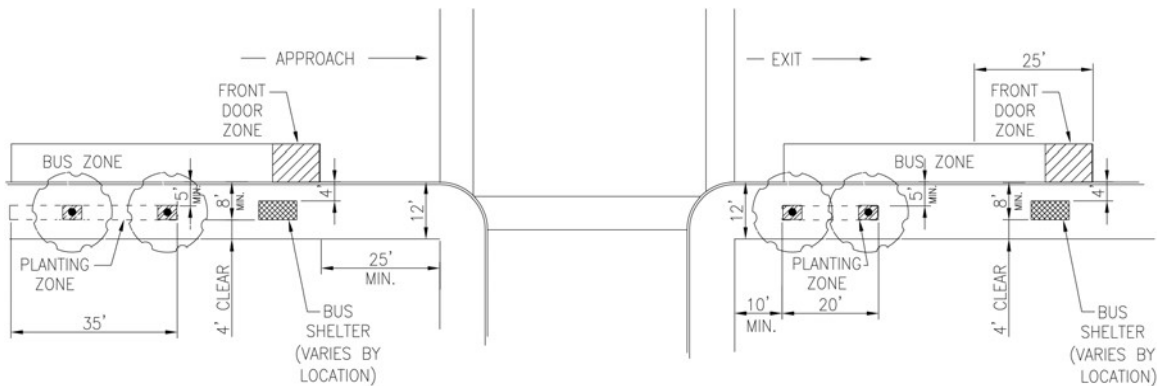
- i. No tree or landscape material should be planted adjacent to a bus zone when the sidewalk, including the curb, is less than 12-feet wide.
- ii. No sidewalk landscape material or planters will be permitted adjacent to a Bus Zone. Exceptions may be considered by Public Works and SFMTA on a case-by-case basis.
- iii. When the sidewalk is greater than or equal to 12-feet wide, including the curb, each site should be reviewed by Public Works and SFMTA on a case-by-case basis. Minimum requirements as follows (please see illustrations on next page):

- a) 8' clear from the face of curb to the edge of the tree basin must be maintained unless otherwise indicated below. This

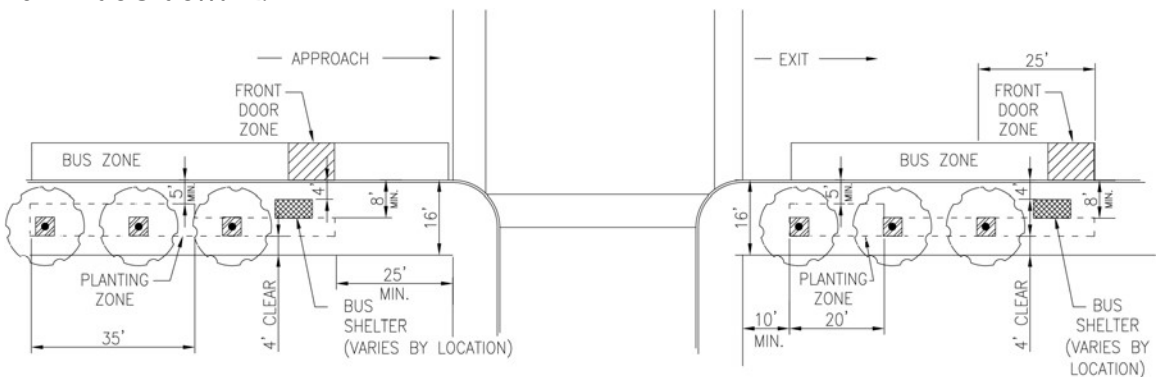
Distance may be reduced to 5' clear from the face of curb to the edge of the tree basin if not interfering with the ADA lift at the front door zone or the rear door.

- b) *Approach-Side Bus Stop.* Within 35' from the rear of the bus zone, trees may be planted as long as the basin edge is set back at least 5' from the curb edge. In remaining bus zone area, trees may be planted if 8' clear from the face of the curb to the edge of the tree basin is maintained. Trees should be set back at least 25' from the inside edge of the crosswalk.
- c) *Exit-Side Bus Stop.* Trees may be planted within 2' from the rear of the bus zone as long as the basin edge is set back at least 5' from the curb edge. In remaining bus zone area, trees may be planted if 8' clear from the face of the curb to the edge of the tree basin is maintained. Trees should not be planted within 10' of the inside edge of the crosswalk.
- d) These requirements are subject to review and change based upon the specific site situation and review by Public Works and SFMTA.

12'-0" Wide Sidewalk:



16'-0" Wide Sidewalk:



- e) Clearances. When planting a tree within a Bus Zone, a minimum of 6' clear from the bus shelter must be maintained. If site furniture or other obstructions are movable, consider relocating obstruction(s) to accommodate tree planting. Consolidating newsracks should also be considered.

E. *Planting a tree or landscaping adjacent to a restricted parking Blue Zone:*

No tree or landscape material should be planted adjacent to a restricted parking Blue Zone when the sidewalk, including the curb, is less than 12' wide. If the sidewalk is wider, trees may be planted so long as 8' is maintained clear as measured from the curb.

V. GUIDELINES FOR NEW TREE BASIN CONSTRUCTION AND DIMENSIONS

A. *Description and Intent.* The tree basin is the sidewalk area removed for tree planting. The size of the tree basin varies based on many site opportunities and constraints. A larger tree basin provides required air and water for tree health, increased stormwater benefit and also allows more area for root growth, both of which are beneficial for the tree. The tree basin size should also be balanced with available sidewalk area and maintenance needs.

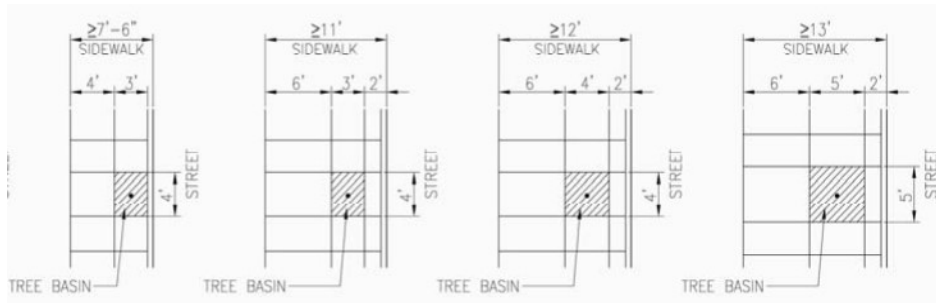
B. *Placement on Sidewalk.*

- i. A street tree should be planted in the center of the tree basin. In no case may new street trees result in an unobstructed sidewalk width of less than four feet. Trees should be placed in alignment with existing trees. In locations where minimum unobstructed sidewalk width will not be impacted, trees should be setback from the curb. Alignment should be approved by Public Works.
- ii. No street tree planting will be allowed in sidewalks with a width less than 7'-6". Exceptions may be granted on a case-by-case basis, as approved by Public Works.

iii. The diagrams below list minimum tree basin standards. It is recognized that larger basins allow for greater tree health, increased water permeability, reduced sidewalk upheaval by tree roots, and greater opportunities for landscaping. Larger basins and/or rectangular basins, where the dimension parallel to the curb is longer, are encouraged but must be reviewed on a case by case basis by the Bureau of Urban Forestry and may require a sidewalk landscaping permit issued by the Bureau of Urban Forestry. *See also Section I(C).*

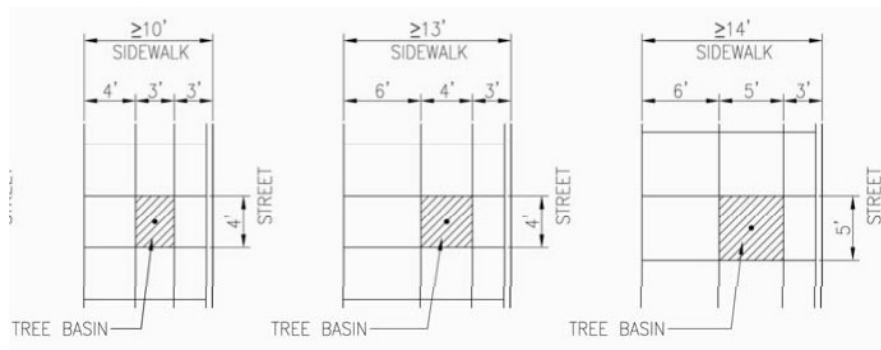
iv. *Tree basins where parallel or no parking exists:*

The diagrams below show standard recommended basin placement for some typical sidewalk widths. Alternate basin sizes and layouts may be approved by Public Works on a case-by-case basis.



v. *Tree basins where perpendicular or angled parking exists:*

In order to prevent the overhang of vehicles from damaging a tree, planters should be recessed from the curb edge such that the tree trunk or center line is located a minimum of 3 feet from the curb edge. It is also possible to locate the tree in alignment with the parking stripe if the above recess is not feasible. Exceptions may be granted on a case by case basis by the Bureau of Urban Forestry.



vi. *Planters where perpendicular or angled parking is proposed.*

Where existing trees have been planted within the first 3 feet in from the curb, parking stalls should be demarcated such that

existing trees align with the parking stripes to avoid conflicts with parking vehicles. Exceptions may be granted on a case by case basis by the Bureau of Urban Forestry and the MTA. This dimension may be reduced where bollards or wheel stops are used to protect the tree.

B. *Tree basin surface and design.*

- i. *Basin surfacing.* Tree basin grade should be maintained at the existing sidewalk grade. Decomposed granite and mulched surfaces may be installed and must be maintained at the existing sidewalk grade. The tree trunk should be centered within the tree basin. Tree grates and other structural basin covers are strongly discouraged, as over time, they can become a tripping hazard and can interfere with the growth of the tree. Soil underneath the rootball should be compacted to approximately 90% of dry density to prevent settlement. Soil around the lower half of the rootball should be compacted to approximately 75% of dry density to prevent rotation of the rootball within the planting hole. Soil around the upper half of the rootball should be only lightly compacted.
- ii. *Tree guards.* Tree guards are generally discouraged but may be appropriate on heavily traveled sidewalks for protection of newly planted trees that are established and no longer require staking. Tree guards must be approved by BUF.
- iii. *Basin railings and edging.* Tree basins may be edged with low planter railings between 6" and 18" in height where sidewalks have a minimum of 4 feet between the tree basin and a building wall. Railings must be continuous, and must be maintained so that they allow for water to percolate into the tree basin but do not fall into the sidewalk and do not contain pointed finials. Railings may be constructed of wood or metal so long as no sharp edges exist. Edging the planting zone with a contrasting material such as cobbles or brick paving is an appropriate design treatment and effectively demarcates the basin edge. Edging must be maintained at grade with the sidewalk, but still allow for water to percolate into the tree basin, as mentioned above.

VI. MAINTENANCE GUIDELINES FOR TREES AND LANDSCAPE MATERIAL ON PUBLIC SIDEWALKS AND MEDIANS

A. Pruning and maintenance guidelines:

- i. On the pedestrian side of the sidewalk, newly planted trees should not

have branches that extend beyond the perimeter of the tree basin below the 80" minimum vertical clearance. An 80" minimum vertical clearance from the lowest branch of a mature tree should be maintained.

- ii. On the vehicular traffic side of the sidewalk, the lowest branch should provide a 14' minimum clearance.
- iii. New tree or new landscape material should not obscure traffic or parking signs/signals or vehicular sightlines.
- iv. Tree foliage should be maintained to provide a minimum 6' clearance from any public streetlight in order to provide adequate lighting for the roadway.
- v. All tree maintenance work shall comply with Pruning Standards for Public Trees in the City & County of San Francisco, available from the Bureau of Urban Forestry. Article 16 of the Public Works Code authorizes Public Works to impose fines and other penalties for excessive pruning.
- vi. The permit holder is responsible for maintaining the trees and/or landscape material in a condition that is safe to pedestrians and vehicular traffic, free of litter and unsightly weeds, and is responsible for maintaining plants with appropriate pruning, watering, and other care as needed, and ensuring that trees and/or landscape material do not encroach into the 4-foot minimum accessible path of travel as described in Section E above.
- vii. Tree basin grade should be maintained flush with the existing sidewalk grade to prevent a tripping hazard.
- viii. Pruning of mature trees around electrical hazards:
 - a. PG&E is responsible for pruning away from high voltage lines. Property owners should contact PG&E if the tree adjacent to their property is potentially impacting high voltage electrical transmission lines.
 - b. If Property owners hire their own arborist they must hire an electrical hazard certified arborist for any pruning around high voltage overhead trolley wires. Tree branches should be maintained to allow at least three feet clearance from these wires.

Director of Public Works
Approved: