City of Marina
AT MONTEREY BAY

CITY OF MARINA
DESIGN GUIDELINES AND STANDARDS

FOR LANDSCAPE, SITE AND PARKING LOT DESIGN, SITE LIGHTING, AND SIGNS

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CONTENTS: PAGE

I. FRAMEWORK FOR GUIDELINES AND STANDARDS 2

II. LANDSCAPE GUIDELINES AND STANDARDS 7

III. SITE AND PARKING LOT GUIDELINES AND STANDARDS 14

IV. EXTERIOR LIGHTING GUIDELINES AND STANDARDS 16

V. SIGN GUIDELINES AND STANDARDS 18

I. FRAMEWORK FOR GUIDELINES AND STANDARDS

Background:

The community of Marina has long had an interest in the creation and the maintenance of an attractive and functional community though the review of new development projects. This interest played a role in the incorporation of the City of Marina in 1975, and shortly thereafter in the adoption and the enforcement of Marina Zoning and Subdivision regulations and the creation of the Marina Planning Commission and the Marina Site and Architectural Design Review Board.

As the new City of Marina embarked upon the review of development projects, the expectations of the community expanded and the City responded through a series of amendments to the Zoning Ordinance and the adoption of various formal and informal policies regarding the physical development of the community. One amendment in 1986 introduced requirements for membership on the Design Review Board regarding professional experience in building or site design or land development, including specific requirements for representation by building design and landscape professionals. In 1989, the Planning Commission adopted by resolution a policy to extend "design review" to larger subdivisions (of 5 or more lots) and development of "percolation" basins.

In response to the requirements of State legislation and concerns about water conservation and the role that the design and maintenance of landscaping had on water conservation, the Design Review Board and the Planning Commission recommended and the City Council adopted "Landscape Guidelines" in 1992, which were later, modified in 1995 to clarify the definition of "landscaped area."

In response to concerns about the quality of landscape designs and the longer-term survivability of installed landscaping plans, an ad-hoc committee was formed in 1997 to make recommendations relative to possible further amendments to the Landscape Guidelines. The committee met several times and accepted a recommendation, which was forwarded to the Tree Committee and the Design Review Board for further review. Substantial modification to the committee's recommendation was made including the inclusion of a "recommended tree list" and an overall statement of City policy regarding landscaping and later the incorporation of additional guidelines generally unrelated to landscaping which were included under the heading of "site and parking lot design guidelines." Further review by the Design Review Board resulted in the expansion of the scope of the draft guidelines to include the design guidelines for exterior lighting and signs.

Purpose of This Document

The purpose of this document is to locate within a single document a complete set of "design guidelines" and "design standards" which represents, to the extent possible, a comprehensive and up to date expression of all City "design policy." Having such a document should help insure the consistent application of City design policy as the Design Review Board, the Planning Commission, and the City Council review various development proposals. To insure that this document remains such a comprehensive and up to date expression of City design policy, this document should be periodically reviewed by the Design Review Board and the Planning Commission and any recommended revisions forwarded to the City Council for adoption by Council resolution.

Applicability of Design Guidelines and Standards:

These guidelines and standards are applicable to:

A. All development projects requiring Design Review Approval as per Section 17.50.010 of the Marina Zoning Ordinance.

B. All signs unless otherwise specified in Chapter 17.59 of the Zoning Ordinance as per Section 17.59.040 of the Marina Zoning Ordinance.

C. Subdivisions creating five (5) or more single family residential lots and all above ground percolation basins as per Resolution of Marina Planning Commission No 89-1.

D. Other projects as the Planning Commission or the City Council may deem appropriate as a condition of approval of a Use Permit, Zoning Amendment, other discretionary City approval, or as an environmental mitigation associated with the required environmental review of any project.

Developers of four lot and smaller single family subdivisions, owners of single family residences and owners of projects developed prior to the requirement of Design Review Approval are encouraged to review these guidelines and incorporate these guidelines in the possible renovation of their site or landscaping which would not have otherwise been required.

These guidelines and standards are intended to apply to physical development within areas designated for urbanized uses and are not intended to apply to the preservation or restoration of natural areas or natural habitat.

These guidelines and standards in this document may be supplemented by more detailed standards relative to a specific geographic area within the community such as the airport. With areas covered by such supplemental standards, standards and guidelines in both documents shall apply. Conflicts, which may exist, shall be resolved in favor of the standards or guidelines in the supplemental document unless the Planning Commission or the City Council determines otherwise during the review of the individual project.

Use, Interpretation Of, and Deviation From These Guidelines:

These Guidelines shall be used primarily by project proponents in the preparation of preliminary and final plans described in Section 17.50.040 of the Zoning Ordinance, by the Planning Staff and the Design Review Board during the review and recommendation upon said preliminary plans, and by the Design Review Board during their review and approval of said final plans. These Guidelines should also be used by the Planning Commission during their review of preliminary plans and action on design review, and by the City Council during consideration of possible appeals of Planning Commission action on design review.

The word "shall" is used to describe the "design standards" in this document and all such standards shall be mandatory unless the Planning Commission or the City Council specifically approves a deviation from

such a standard (or unless the standard itself provides for an alternative). The Planning Commission or City Council in approving any such deviations shall first determine that the proposed deviation rather than the standard itself will actually carry out the intent of this document.

The word "should" is used to describe the "design guidelines" in this document and such guidelines are not mandatory but may be made mandatory by the specific action of the Design Review Board, Planning Commission or City Council as said review body may deem necessary to achieve the intent of this document.

The project proponent should thoroughly review this document prior to the initial submittal of plans for preliminary staff review. Then, as part of the initial submittal, the proponent should identify in writing or graphically all deviations from either guidelines or standards, which the proponent will be seeking. Note that if deviations from (mandatory) standards have not been approved by either the Planning Commission or the City Council at the time of granted development entitlements, the Design Review Board may have no alternative but to deny approval of final project plans and the only alternative would be for the applicant to appeal such a denial to either the Planning Commission or the City Council, at which time perhaps additional required deviations might be approved.

As an alternative to some of the prescriptive requirements in these landscape guidelines and standards specifically regarding water conservation, the applicant may chose to employ the "Model Local Water Efficient Landscape Ordinance" described in Section 65594 of the California Government Code. The use of this model ordinance could be used as the basis for allowing more than 25 percent lawn area or the adjustment of other similar standards and guidelines intended to conserve water.

Procedures and Requirements for Approval of Completed Project

The accomplishment of the Planning Department's approval of project occupancy or final project approval shall comply with the following procedures and requirements:

1. The project proponent shall contact the Planning Staff to arrange for a walk-through for final inspection and approval of project. This contact should be made approximately 48 hours prior to anticipated date of project completion and shall not be made until the landscape contractor can verify that all landscape material including all plant material as specified in approved plans (including genius, species and size) is on the project site and ready for installation. If landscape contractor is unable to obtain specified plant material, the landscape contractor shall contact the landscape designer and discuss various plant material which might be available for substitution. The landscape designer shall contact Planning Staff and review possible optional plant substitutions. The Planning Staff in consultation with the landscape professional on the Design Review Board may approve a substitution and shall convey any approved substitutions to the landscape designer, who in turn shall inform the contractor of any approved substitutions.

2. Upon the receipt of request for inspection and the approval of any planting substitutions following procedures described above, the Planning Staff will immediately contact a Design Review Board member and schedule a site inspection of landscaping to include Planning Staff, said Design Review Board member, the landscape contractor, and owner or his representative. Alternatively, the Design Review Board may delegate the members' role to another similarly experienced

individual. If said Design Review Board member or delegate is not available within a week from the date that the installation was to have been completed, the walk-through inspection may be conducted without such member being present.

3. The site inspection shall confirm that the genus and species, quantities, and sizes of plant material are in agreement with approved plans. The plant material shall be generally grouped and located as shown on approved plans. Locations shall be altered as necessary to avoid conflicts with utilities and other features, which might not have been anticipated at the time the landscape plans were approved. Planning Staff may request the relocation of plant material in the field as may be necessary to avoid such conflicts or to enhance the effectiveness of the screening of utilities which may or may not have been anticipated at the time landscaping plans were approved.

4. The site inspection shall include a complete sequencing of the irrigation system to confirm proper functioning of all stations.

5. If discrepancies between the approved plans cannot be corrected during the site inspection, additional inspections shall be scheduled following procedures outlined above, with the exception that continued participation by a Design Review Board member is not necessary.

6. If discrepancies between the approved plans cannot be corrected or the project representatives are unwilling to make corrections, the applicant shall submit "as-built" or other plans which describe requested amendments and justification for requested amendments to approved plans for additional review by the Design Review Board. The Design Review Board shall be under no obligation to approve modifications to plans which have not been constructed or installed in accordance with initially approved final plans and the Design Review Board shall not approve modifications to plans, which are not in accordance with mandatory standards or are contrary to any conditions of Design Review Approval.

7. If applicant wishes to seek approval of modifications to final plans, which are not consistent with mandatory standards or are contrary to any conditions of Design Review Approval, the applicant must seek approval of necessary approvals from the Planning Commission, or the City Council, if the original Design Review Approval was granted by the City Council on appeal.

8. Following the initial inspection, the Planning Staff may approve the occupancy of only a portion of the project or may approve occupancy of the entire project subject to the submission of performance bonds or other guarantees that the project will be completed in a timely manor. Any such guarantee shall include a cost estimate for the remaining work acceptable to the Planning Staff, equal to a minimum of 150 percent of said estimate and an amount to cover estimated administrative costs, not less than $100.00 and all acceptable to the Planning Director and the Finance Director.

9. Prior to the approval of occupancy, the applicant shall provide a bond or other surety acceptable to the City to guarantee that the installed landscaping shall remain in a healthy and growing condition for a minimum of two years from the date of occupancy approval. The amount of the surety shall be a minimum of 10 percent of the actual or estimated costs of the installation accepted by the Planning Staff. An amount greater than 10 percent may be required by the Planning Staff if more

exotic, less reliable plant material is specified in the approved planting plan. Two years after the approval of occupancy, the applicant shall contact the Planning Department to arrange for an inspection of the landscaping. If or when all landscaping shown on approved plans is in place and is in a healthy and growing condition, the surety shall be returned. If plant material is dead, dying or missing and the applicant does not take steps to restore the landscaping, the City shall have the authority to use the surety for the restoration of the landscaping.

Compliance with Approved Plans Following Project Approval

Section 17.50.050 of the Zoning Ordinance states "all improvements which have received site and architectural design approval shall be constructed substantially in accordance with the approved plans, and no change shall be made subsequently without the review and approval of the Planning Director."

The term "change" in the above ordinance section shall include any modifications to the exterior project appearance including but not limited to; (a) the repainting of any buildings or site improvements which differ from the approved project colors, (b) any building additions or external building modifications whether or not such modifications required a building permit, (c) any change in the configuration of lawn, planting areas, and/or hard surfaced areas as shown on approved site plan, (d) the removal of any plant material shown on approved planting plans without the replacement of said plant material with identical plant material in the same general location, or (e) the trimming of any trees or shrubs in any unnatural forms such as topiaries which were not specifically shown or noted on approved plans.

The Planning Director may approve requested modifications or shall refer any requested modification to the Design Review Board or the Planning Commission where the Planning Director believes the requested modification may not be consistent with the intent of the Planning Commission or the Design Review Board at the time of project approval.

As plant material matures, grows old and dies, compliance with approved plans shall be maintained with the replacement of dead plants with the same plant material or alternate plant material with the approval of the Planning Director. If substantial modifications from the original plans are proposed, the approval of the Design Review Board shall be obtained.

Any changes which occur including dead, dying, damaged or otherwise unacceptable plant material which is not replaced, or the modification of landscaping other than as provided above shall be considered a violation of the Marina Zoning Ordinance and the enforcement or the imposition of penalties for any such violations shall be as provided by Chapter 17.60, Enforcement -- Penalties, of the Zoning Ordinance. Further, if changes occur which are not in accordance with approved plans or the approval of modified plans and the project approval was subject to a requirement to obtain a Use Permit, the Use Permit may be revoked or conditions of Use Permit approval may be modified as provided by Section 17.48.060 of the Zoning Ordinance.

Tree Removals:

The removal of any trees must be in accordance with the terms and conditions of a Tree Removal Permit pursuant to Chapter 12.04, Tree Removal, Preservation and Protection, of the Marina Municipal Code, granted concurrently with other development entitlements pursuant to Section 12.04.060 of said chapter. If

it becomes necessary to remove additional trees anytime after such approvals, a request for the removal of additional trees shall be considered and acted upon by the review body that acted upon the initial tree removal permit granted for the project unless the City Manager under his/her authority determines that some other individual or review body should act upon such additional request.

II. LANDSCAPE GUIDELINES AND STANDARDS

Landscape Policy:

The City of Marina has a unique combination of climate and soil conditions that pose significant challenges and opportunities for the design and maintenance of landscapes. The key conditions that must be considered are sandy excessively drained soils that provide little structural support and lack nutrients; the cool, foggy, windy conditions that often prevail in the city; and the potential for frost damage.

The native landscape in and surrounding the city includes a diverse assemblage of plant species adapted to our unique environment. Use of selected native species in our urban landscape can have benefits in preservation of elements of our area's natural heritage, reduction in the need for irrigation, fertilizer, and pesticides, and add a unique character to our city.

It is the policy of the City of Marina to promote development and maintenance of high quality, attractive, and functional landscapes in the city. In addition, City policies promote the conservation of water retention and planting of trees that can provide functional and attractive structural elements in the landscape. The City also wishes to retain and restore native plant species where appropriate in our urban landscape.

Definitions:

1. For the purpose of these guidelines, "landscaped area" is defined as the area of the parcel less building pad(s), driveway(s) and parking areas together with the area of the street right-of-way abutting said parcel less street paving and sidewalk which is under the jurisdictional authority of the Design Review Board. Examples could include: planted areas, water bodies, patios, decks, walkways, natural areas, and planting strips (the area between the street paving and the public sidewalk).

2. For the purpose of these guidelines, "native" means native to California unless otherwise specified.

3. For the definitions of other terms used in this document the "Model Water Efficient Landscape Ordinance" prepared by the State Department of Water Resources may be consulted.

Performance Objectives:

When reviewing proposed landscape plans as well as site and architectural plans, the Design Review Board will determine that the following issues are addressed:

1. The overall landscape design is functional and attractive.

2. The plant species selection is appropriate for our soil and weather conditions. Plant selection should be accomplished by consultation with experienced landscape designers, landscape architects, area nurseries and/or landscape contractors and the documents referenced in the following section.

3. There is a viable strategy for the maintenance of the landscape. The applicant should provide information about what entity will be responsible for the landscape maintenance, i.e., individual property owners, lot owners' association, or landscape maintenance district. Note that only in rare and unique circumstances will the City accept the creation of a landscape maintenance district.

4. Native flora should be given preference over traditional ornamental species when they can perform similar functions in the landscape. In particular, coast live oak (Quercus agrifolia), the only tree native to the city, should be included in landscape plans whenever feasible.

5. The landscape design provides opportunity for an increasingly attractive project appearance as the flora matures. For example, the planting of smaller, slower growing plant material, such as oak trees, should be added to most landscapes together with larger, faster-growing, and generally short-life plant material with the intent that some of the faster growing/short life plant material will be removed as the landscape matures so as to maintain appropriate forms, plant density, and massing.

6. Tree species that will grow into mature specimens with substantial height and mass should be included in landscape designs. The City encourages planting trees that will form tall canopies, which will moderate wind intensity, add attractiveness to the city, and provide wind protection, which is necessary for more diversified and attractive landscape plantings in the future.

7. Native species used in landscaping shall originate from local sources to protect the genetic integrity of those species in natural areas and shall be raised locally. Exceptions may be made when it can be demonstrated that no adverse impacts will occur.

8. Plant species capable of naturalizing and becoming invasive weed problems in the natural environment shall not be planted. Problem species include some species of ice plant, some species of broom (Genista sp.), and Pampas Grass (Cortaderia selloana).

9. In addition to the forgoing general "performance objectives", the following specific prescriptive guidelines and standards shall be followed when preparing submittals to the Architectural and Site Review Board.

References:

Landscape Trees for Pacific Grove - A Guide to Selection Planting and Care.
Trees of San Francisco - A Guide to Street-Tree Planting and Care.
Sunset Western Garden Book.

Submittal Requirements

A. Staff Review/Preliminary Design Review/Planning Commission Review:

1. Preliminary design of hydro-zones or micro-climates shall be coordinated with a civil engineer and/or architect with special attention devoted to specific areas, i.e., frontage and perimeter areas, parking lot planting medians, and areas impacted by shade from existing or proposed buildings or other similar features.

2. Preliminary plan shall indicate north direction, site location, and size of existing or proposed construction features, easements, setbacks, property lines, and landscaping-irrigation proposals.

3. Submit equipment list and pictures (cuts) of all proposed equipment to be installed in project.

4. Site improvement plan shall indicate all earth mounds/berms, depressions, drainage patterns, swales, and other topographic features. Gradients should be at 24-inch intervals.

5. Preliminary plan(s) shall indicate location, quantity, name, and approximate size of existing trees to be protected for use in the final landscape plan and trees to be removed.

B. Final Design Review

Planting Plan:

1. Landscape plan shall accurately indicate location, name, quantity, and size of features to be retained on the project.

2. Plan shall indicate square footage and gallonage of all water features and anticipated water loss, or use, related to seasonal changes.

3. Show botanical names, common names, species, container size, and quantity of proposed new plants, including ground covers and indicate square footage of area to be planted and spacing of installations.

4. Show name, description, square footage, and quantity of materials not considered flora, i.e., cobbles, boulders, crushed rock, bricks, railroad ties, concrete, mulch, etc.

5. Each plant shall have a nursery-supplied name tag affixed to main stem or branch, identifying the species and variety of plant to facilitate immediate identification during any inspection.

6. Show location and description of screening material for backflow devices, pressure regulating devices or any above-grade irrigation or water- supply devices.

7. Indicate on landscape plan tree-staking detail, water basin sizes, types and quantity of mulches for trees larger than 15-gallon container size, method of guying or supports, and type of warning devices proposed to protect the public.

8. Double staking shall be required for planting material from 15-gallon or large containers. Staking of smaller material may or may not be required depending upon the individual situation, but that the staking of coniferous trees from 5-gallon or smaller containers would ordinarily not be required.

9. All plants selected for planting or installation shall be suited to the climate of the region.

10. A minimum of 65 percent of the total of all landscaped areas shall be landscaped with drought-tolerant plant material requiring minimal irrigation once established and shall be irrigated separately from any areas, which have higher water demands.

11. A maximum of 35 percent of the total of all landscaped areas may be planted or installed with plant material which may require more extensive irrigation once established, including up to a maximum of 25 percent of said total which may be in turf or turf installed in combination with turf block. However, any such turf areas or other higher water use plantings shall be grouped and irrigated separately from more drought-tolerant planting areas. The above 35 percent and 25 percent limitations may be exceeded to allow for increased turf areas associated with golf courses, school recreation areas, cemeteries, or public parks.

12. The use of turf is discouraged except where used for a recreation, to moderate pedestrian traffic or to fulfill an identified aesthetic purpose. When turf is specified, lower-water demand varieties shall be specified.

13. Turf shall not be installed on slopes exceeding 4:1 ratio.

14. Trees shall be placed back of curbs a sufficient distance to avoid damage from vehicles including vehicle front/or rear overhang in parking lots or where trees might interfere with pedestrian ingress or egress.

15. All sites in the area of former Fort Ord shall include a planting palette specifying some native plants. Sites located outside the area of the former Fort Ord should include a planting palette specifying some native plants.

16. Native soil in all planting areas shall be amended to a minimum depth of 6 inches with a minimum of 40 percent organic material. Native soil under portions of planting areas, which are covered exclusively by rocks, gravel or other non-living landscaping material, need not be so amended. Plans shall specify the areas to be amended and depth of amendments and shall describe soil amendments. The description of soil amendments shall include the source of the material (i.e., sawdust, leaves, etc.), whether the material has been composted, and the maximum diameter of material. If proposed plants, existing soil conditions or site conditions dictate the need for different soil amendments, the plan shall clearly show the area where different soil amendments are to be applied or describe the different amendments for each such area.

17. A minimum of two inches (2") of organic mulch (wood chips, shredded bark, etc.) shall be installed in all non-turf areas unless a ground cover planting is specified which will establish a cover before weeds have an opportunity to establish themselves. Organic mulch shall not be used as a substitute for ground cover plantings.

18. Describe a strategy for the control of weeds, including possible use of pre- and post emergent herbicides, weed mats, mulch, etc.

19. In center medians of parking lots and other high pedestrian traffic areas strategies for the protection of plant material shall be employed which shall include some combination of larger plant material, more durable plant material, the installation of temporary or permanent physical barriers (boulders/fences/raised planting areas/etc), and the installation of convenient pedestrian paths through planting areas.

20. No root-bound, kinked, leggy or scraggly plants will be approved for planting. Upon advance request, a representative of Staff will inspect all plants delivered to the project site before installation. Request for such an inspection should be made 24 hours prior to delivery of plants.

21. If rocks are to be used in a landscaping, the rocks shall be of the type and be used in a way, which gives a natural appearance to the landscaping. All boulders should be imported "field" boulders, not "mined" rocks with at least 1/3 of vertical dimension in finished grade. Cobbles should be "river-washed" types, smooth, rounded, and of assorted sizes and colors.

22. Tree plantings within the street rights-of-way, utility easements, or within 10 feet of any public improvement shall be submitted to and approved by the Marina Public Works Department. Such approvals may be dependent upon the selection of alternate tree species, the relocation of trees further back from public improvements or the installation of root guards. Also, the location of trees shall not conflict with the location of any private sewer laterals or any private water connections.

23. Plans should indicate an anticipated time of plant installation and a statement that sources for proposed planting material have been surveyed and that sufficient plant material is available. If there are questions about the availability of some plant material, the plans should include optional plant material.

24. Trees shall be allowed to develop their natural forms and shall not be trimmed as topiaries or other unnatural forms. All tree trimming shall conform to trimming standards as set forth by the International Society of Arboriculture.

Irrigation Plans:

1. Irrigation plans shall indicate location, type, sizes, manufacturer's name, and quantities of equipment to be used.

2. No backfilling of main line irrigation trenches will be allowed until a 24- hour pressure test has been inspected and approved by Staff. Spot- backfilling is allowed to eliminate pipe creep during pressure testing. The applicant shall be responsible for taking the appropriate safety measures to protect pedestrians and vehicles from any open trenches. Examples of such measures may include signage, fencing, or plywood boards covering trenches. Notify Staff of completion of installation of main lines.

3. All supply lines shall be installed 18 inches below finished grade of all hard surfaces. Install in schedule 40 PVC sleeving large enough to accommodate any, or all, piping. Install tracer wire along all main water supply lines.

4. Lateral lines shall be installed a minimum of 12 inches below finished grade.

5. Install emitter valves in appropriate valve boxes set one (1) inch above finished grade in all areas considered non-turf.

6. Install quick-coupler valves in valve box(s) readily identifiable, set at finished grade in turf areas, and three (3) inches above finished grade in non-turf areas and spaced a maximum of 100 feet between stations.

7. All emitter lines shall be installed a minimum of four (4) inches below finished grade. Emitter lines shall **not** be placed on surface and covered only with mulch.

8. Contractor shall supply owner, or his appointee, with a legible copy of all valve sequencing and place a copy within irrigation controller case.

9. Show on landscape plan location of alternate water sources, i.e., reservoirs, holding ponds or tanks, etc. Indicate capacities, pressures at POC (point of connection), and anticipated flow rate.

10. Water shall be applied at a rate that does not exceed the soil absorption rate. Use multiple cycles permitting several short periods of watering to allow for soil absorption, thus eliminating run-off or erosion.

11. For repeat cycles of irrigation, a minimum of one hour shall pass after sequencing of last station prior to application of additional water.

12. Sprinkler nozzles shall not be used in areas less than six (6) feet wide. Bubbler nozzles shall not be used that exceed 1.5 gallons per minute per device.

13. Low precipitation- rate nozzles are suggested for use on slopes exceeding 15 percent.

14. Indicate on landscape plan all hydro-zones or areas requiring special irrigation.

15. Pop-up sprinklers in turf areas shall have a minimum pop-up height of four (4) inches, and in non-turf areas, a minimum pop-up height of six (6) inches.

16. No rigid risers shall be installed along walks, patios, paths, etc., where pedestrian traffic or vehicular traffic will cause damage to risers or irrigation systems.

17. Where extruded curbs surround or separate planting areas from vehicular parking, irrigation extended riser shall not exceed four (4) inches above top of curb.

18. Valves and circuits shall be separated based on water demands of flora. Drip or bubbler nozzles

are required for all tree installations.

19. Sprinkler nozzles shall have matched precipitation rates, for example, Rainbird MPR's, within each circuit.

20. Check valves or SAM (Seal-A-Matic) heads are required where elevation changes between heads may cause erosion or run-off from planted areas or low-head drainage from sprinklers.

21. Overhead sprinklers shall not be used where excessive spray will occur and create "puddling" or over-spray on buildings, walks, fences, vehicles or other non-vegetative materials.

22. All controllers shall have dual or multiple thirty (30) day programming and have a back-up battery power source installed within controller case and shall be located in an area which is readily accessible by landscape maintenance personnel.

23. Watering of landscaped areas shall be accomplished as specified by ordinance of the Marina Coast Water District.

24. Irrigation plans shall indicate calculated Total Water Use per circuit in gallons per minute and for total project per annum.

25. The landscape contractor shall present a legible "As-Built" drawing of the irrigation system to the owner of the project and to Planning Staff. The drawing shall be prepared on the same size paper as the original drawings showing placement of all main supply lines, laterals, valves and other irrigation equipment.

26. The landscape contractor shall present a schedule of controller shut-off due to rain. Installing a rain shut-off device is practical and cost-effective, especially on industrial or commercial projects.

Other Submittals:

1. A one (1) year maintenance schedule, shall be submitted to the project owner and the DRB and shall include required duties, i.e., watering (for existing, newly planted and once established plants), spraying, weed eradication, irrigation repair, tree staking, staking adjustments and removal, replacing dead or dying flora, etc., and other general duties of a professional maintenance contractor.

2. If tree removal requires a Tree Removal Permit, it shall indicate that landscaping will be accomplished in accordance with all requirements of the Tree Removal Permit. Indicate any trees to be removed, the proper names, quantity, sizes, and names of substitutions, and the location of replacements.

3. The landscape designer shall preview all Civil Engineer drawings showing existing or proposed features on the proposed project site, thus eliminating discrepancies in finished landscape plans.

4. Trees and shrubs shall be placed in spaces deemed adequate for future growth, thus eliminating the need for pruning or shaping of flora to conform to restrictive spaces. Refer to Master Tree List in appendix.

III. SITE AND PARKING LOT GUIDELINES AND STANDARDS

Performance Objectives:

1. Site and parking plans shall provide for adequate and safe pedestrian and vehicular traffic.

2. Vehicular routes shall be separated from pedestrian routes to the greatest extent possible. Pedestrian crossings of vehicular routes and facilities shall be limited to the greatest extent possible. Where crossings cannot be avoided, they shall be clearly defined and protected.

3. Pedestrian facilities shall connect building entrances with the sidewalk in the abutting public street and with off-street parking facilities provided on-site.

4. Potentially large expanses of paved areas accommodating automobile parking shall be broken/softened by the introduction of planting areas or alternatively by the use of paving materials such as "turf block." Buildings shall be located as close to the street as practical with as little parking as possible separating buildings from the street.

5. When feasible, protection from the harsh prevailing off-shore winds in Marina shall be created through the proper location of buildings, building openings, and continuous tree rows or hedge rows. These design considerations can create desirable micro-climates that are protected from the winds. Such micro-climates can increase customer and employee comfort and provide the opportunity to enhance the variety and attractiveness of planted areas so protected.

6. Encourage sidewalks in front of building to width that allows some area for the use of tables and chairs for outdoor seating. Site plans shall identify outdoor activities that separate pedestrian walkways. Outdoor activities include seating areas and similar uses.

Zoning Ordinance Standards and Design Criteria:

1. The number and size of parking spaces, parking lot access, turnaround facilities, and the construction of hard surfaces to accommodate off-street parking spaces shall be in accordance with Chapter 17.44 or the Zoning Ordinance.

2. The size of driving isles providing access to standard 9 by 19 foot parking spaces shall be in accordance with the illustration entitled "City of Marina - Parking Requirements" dated 7/11/77, except that the isle width may be reduced slightly together with corresponding increases in the width of the parking spaces as the Planning Staff or the Design Review Board may believe is appropriate to negotiate into and out of the parking spaces.

3. Individual parking spaces or parking spaces at the end of a row of parking spaces shall have an additional one foot of width between a wall or the face of a curb to allow for reasonable pedestrian movement between a parked vehicle and the wall or curb and for additional space necessary for a vehicle to negotiate into and out of any such individual or end parking space.

4. With the exception of the portion of entrance drives in the street right-of-way and the intersections of pedestrian and vehicular traffic, driveways and parking areas shall be surrounded by a six (6) inch concrete curb or alternative approved by the Design Review Board that will separate pedestrian and vehicular movement and will help protect safety of pedestrians, landscape plantings and buildings or other site features which might be damaged by vehicular movements. Further, pedestrian movement should be separated from drives by landscaped strips a minimum width of four (4) feet.

5. Parking stall depth from the face of curb may be reduced to 17.5 feet to accommodate a typical 1.5-foot front vehicle overhang where curb or other possible vertical obstructions do not exceed a height of six (6) inches. Stall depth (to the face of curb) may be reduced to as little as 16.5 feet in certain limited circumstances; i.e., where additional landscaped area might help save an existing tree or provide additional landscaped area which might allow for the planting of a tree or a larger tree species. Reduced parking stall dimensions shall be marked "compact" to delineate those parking areas for compact vehicles.

6. With the exception of sidewalks in a street right-of-way, pedestrian walkways that cross vehicular drives shall be identified by the use of a paving material which is distinct from the paving material for the driveway, both in color and texture, and said crossings should be at 90 degrees.

7. Dead-end parking lots or dead-end portions of parking lots should be avoided. Where this is not possible, adequate vehicular turnaround space shall be provided that does not require the use of adjacent vacant parking spaces.

8. Rows of parking spaces that parallel a continuous landscape-planting strip with a minimum width of four (4) feet shall be limited to twelve (12) continuous parking spaces. Parking spaces that do not abut such a continuous landscaped strip or area shall be limited to eight (8) continuous parking spaces. Such continuous parking rows shall be broken with landscaped planting islands with a minimum width of eight feet. The numbers of continuous parking spaces may be increased or the total square footage of landscaped islands prescribed above may be reduced if portions of parking areas are surfaced in materials such as "turf-block" which are accompanied by the introduction of plant material into the paving surface itself.

9. Any perimeter fencing shall be in accordance with the height limitations of Section 17.06.060 of the Zoning Ordinance and shall be a "good neighbor" design; i.e., have the "structural" side of the fence facing in towards the project site or have an identical appearance on both sides of the fence.

10. Outdoor areas designated for storage of trash shall be completely enclosed in a walled and gated structure of sufficient size to accommodate storage of both trash and recyclable materials. Trash enclosures shall be constructed of durable materials and, with the exception of necessary gates, shall be constructed of masonry or concrete. The design of the enclosures shall incorporate design

features, materials, and colors, or continue the architectural theme from the buildings within the project. A separate person access or other means to encourage main gates to remain closed shall be provided.

11. Storm water collection and percolation should be accomplished and integrated into the landscaping of the project without the need for fencing of any percolation areas, or it shall be accomplished within underground percolation vaults constructed under parking areas, driveways or other non-landscaped areas.

12. Site plans shall include any proposed large backflow devices, above ground electric power transformers, and other similar above- ground utilities. Project design shall include adequate access to these facilities as well as visual screening by devices which are natural in appearances, and by landscape plantings.

13. Project design should anticipate and accommodate the outdoor mechanical, ventilation, communication or other equipment and/or appurtenances without undue visual clutter of such items on roof-tops or the site. Such accommodations should be made by the introduction of parapet walls on buildings or screened service areas, which might be incorporated into the design of trash enclosures. If ground mounted mechanical equipment is not incorporated into trash enclosure, such ground-mounted equipment shall be screened with landscaping to camouflage the equipment

Submittal Requirements:

See "Guidelines for Plan Review Submittals by Staff, Design Review Board and Planning Commission" available as a separately from the Planning Department.

IV. EXTERIOR SITE AND BUILDING LIGHTING GUIDELINES AND STANDARDS

Performance Objectives/Design Criteria:

1. Exterior lighting should accomplish a generally subdued and uniform lighting pattern with a minimum potential for glare with combinations of multiple indirect lighting sources as opposed to fewer, more powerful direct lighting sources.

2. Where direct lighting sources cannot be avoided, such as on pole mounted fixtures in parking lots; diffusers shall be incorporated into the design of the fixture. The lighting source as well as the diffuser shall be mounted above or flush with an opaque fixture housing.

3. General site and parking lot lighting should tend towards warmer color spectrum, which is typical of incandescent and sodium-vapor lighting sources.

4. Light sources which tend towards more white, daylight, or cooler colors of the light spectrum should be limited to locations where a more accurate color rendition is important, such as at

building entrances and exits (for security reasons), the lighting of signs, and the lighting of unique or special buildings or site features.

5. The lighting plan should be considered together with the landscaping plan and the effect of proposed planting, particularly the impact of proposed trees upon the effectiveness of proposed lighting.

6. Landscape plantings and solid fencing at the perimeter of the project site should be incorporated into the design of the lighting plan as an additional means of limiting light related impacts on surrounding property, particularly, light sensitive land uses such as residential areas and native habitat.

7. Energy efficient lighting should be incorporated into project design.

Submittal Requirements

A. Staff Review/Preliminary Design Review/Planning Commission Review:

1. Site plan and building elevations showing the location of all exterior lighting fixtures with a description of the height of any pole mounted fixtures.

2. Indicate and provide a description of the type of light source; i.e., incandescent, fluorescent, sodium vapor, metal halide, neon, etc.), for each exterior light fixture.

3. If neon lighting is proposed, the specific purpose and need for the such lighting shall be defined by the project proponents and the Planning Commission or the City Council on appeal shall prescribe the extent to which neon may be used. If no such description of the use of neon is made, neon shall not be used in the project.

B. Final Design Review:

1. Same as "A" above, plus.

2. Fixture cut sheets for each fixture type proposed.

3. Detailed elevation drawings or photographs showing proposed mounting poles.

4. Photometric study may be required, if concerns are raised relative to security or excessive lighting levels on or off of the site, particularly as they might impact neighboring residential properties or native habitat areas.

V. SIGN GUIDELINES AND STANDARDS

Definitions:

See Section 17.59.150 of the Zoning Ordinance for definitions related to signs.

The "height of a sign" shall be the vertical distance from the average of the lowest and highest points at the finished grade at the base of sign to the topmost point of the sign.

Performance Objectives:

1. See Section 17.59.010 (Purpose and intent) of the Marina Zoning Ordinance.

Zoning Ordinance Standards/Design Criteria:

1. Permitted signs requiring approval by the Design Review Board and Master Sign Programs as defined by the sign regulations of the Zoning Ordinance shall be subject to review and approval by the Design Review Board.

2. The number of signs and the total area of all signs for any business shall conform to the maximum allowable sign numbers and total sign area specified in the Zoning Ordinance.

3. Free standing signs allowed for the identification of shopping centers or industrial (or business) parks shall not exceed the sign area or the maximum height limitations specified in Section 17.59.180 (D) of the Zoning Ordinance, except as follows: freestanding identification signs for shopping center sites of less than five (5) acres shall not exceed a height of ten (10) feet and for sites of less than twenty-five (25) acres shall not exceed a height of fifteen (15) feet. Free standing signs not associated with a shopping center or industrial park as described above shall be limited to a maximum height of seven (7) feet.

4. Any free standing sign allowed for the identification of a shopping center or industrial (or business) park as stated in item #3 above shall be a monument sign as defined by Section 17.59.170 (M) of the Zoning Ordinance; i.e., a low profile freestanding sign incorporating the design and building materials and accenting the architectural theme of buildings within the same development.

5. A lesser size or height than prescribed in items #3 and #4 above may be specified by the Site and Architectural Design Review Board (or the Planning Commission or City Council on appeal) as may be determined necessary to meet the spirit and intent of the Sign regulations of the Zoning Ordinance and as may be necessary to conform with the stated criteria herein.

6. Signs erected during project construction are only allowed during active construction and must be removed following cessation of construction or completion of the project.

7. The illumination of signs shall comply with standards in Section 17.59.130 of the Zoning Ordinance, repeated below verbatim from said section:

a. The use of high intensity, unshielded, or undiffused lights shall not be permitted.
b. Lights or illumination shall be shielded, oriented or diffused so as to eliminate undue glare onto adjacent properties.
c. Lights shall be shielded or diffused in such a manner as to eliminate the possibility of conflict with safe traffic movement.
d. The Site and Architectural Design Review Board, or Planning commission and City Council on appeal, shall retain the right to require reduction in the intensity of illumination after the installation of any illuminated sign if said illumination creates any undue glare, annoyance or hazard.

8. To help eliminate the potential for glare and annoyance associated with internally illuminated or back-lit signs, the background color of such signs shall not be a white or off-white color. The use of white or off-white shall be limited to use as a foreground color or as an accent, except where such a background color is opaque.

9. Flags may be allowed by the Planning Commission as a permitted signs pursuant to Section 17.59.170 (O) of the Zoning Ordinance where the height of the pole does not exceed the allowable height of the district in which flagpole is located or a Use Permit is obtained pursuant to Section 17.06.060(B) of the Zoning Ordinance. In situations where flags are allowed flags shall be limited to national, state, county, and municipal. Flags shall not bear names, color combinations, logos or other information or advertising which is associated with any business. However, in a Business Park or Corporate Campus setting, a corporate flag may be allowed and flown in conjunction with National and State Flags.

10. Banners not exceeding 30 square feet may be displayed only with the approval of Planning Staff for a) advertising the opening of a new business and they shall be removed 30 days after the business is first opened for business; b) or the renting of apartments only while there is at least one vacancy in the apartment complex, and c) for the hiring of employees only while the business on the site is accepting applications for employment.

11. Banners periodically advertising special sales on the site of a business may be displayed only with the approval of a sign program pursuant to Section 17.59.170 (O) of the Zoning Ordinance, which defines the location, size and timing of such displays.

Submittal Requirements

A. Staff Review/Preliminary Design Review/Planning Commission Review:

1. A site plan showing the location and footprint of proposed freestanding signs and building elevations and/or cross section drawings showing the location and approximate dimensions of signs proposed to be attached or mounted to buildings.

2. A description of sign construction materials for each sign and its method of illumination if any; i.e., internal or external and type of light source; i.e., incandescent, fluorescent, sodium vapor, metal halide, neon, etc.

3. If neon is proposed as part of any sign or sign program, the use of neon in such a manner shall be included within a the original construction of the project or a modification of a project which is reviewed and approved as part of the design review of a project as provided by Chapter 17.50 of the Zoning Ordinance. If the use of neon for signs is not described and specifically provided for as part of the design review approval for the project, neon shall not be incorporated into any signage of the site.

B. Final Design Review or Sign Proposals Independent of Design Review Approval:

1. Same as "A" above, plus.

2. Material as stated in Section 17.59.040 of the Zoning Ordinance; i.e., accurate plans, drawings, color boards, examples of materials or other such information specified by the Planning Director showing the size, shape, location, color, materials and physical relationship to the site of the sign and sign structure.

3. Provide accurate scale drawing of sign face showing all sign graphics and dimensions of sign graphics, including all lettering, in relationship to the sign limits and any sign supporting structure.

4. Detailed lighting specifications, including detailed drawings of lighting fixtures and lighting sources. If an external lighting source is proposed, said source shall be accurately located on the site plan and/or building elevation.

5. Photographs of existing signs to remain, showing the relationship to the surrounding site and/or buildings.

design-2002.gdl

SIGN REGULATIONS IN BRIEF

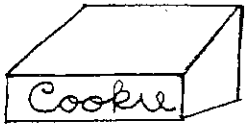
The following are signs which are permitted by the City's Sign Ordinance:

Accessory signs not over 1 sq.ft. no permit req.

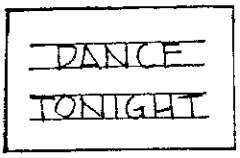
Barber Pole signs permit required

Directional signs no permit required

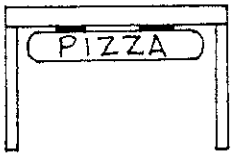
Free standing Signs permit required



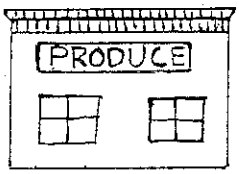
Awning Signs permit req.



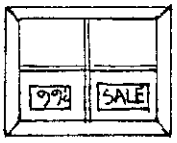
Reader Board sign permit required



Under Canopy signs permit required



Wall signs permit req.



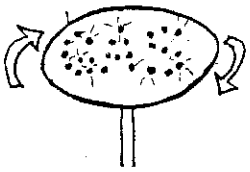
Window signs No permit

Monument sign permit req.

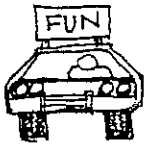
Real Estate not over 12 ¢ no permit

The following are signs which are PROHIBITED by the City's Sign Ordinance:

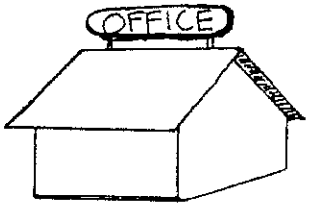
Portable signs



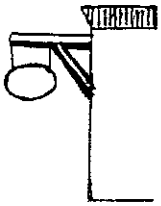
Revolving or Blinking signs



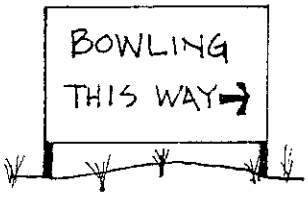
Vehicle signs



Roof Mounted Signs



Projecting signs



Off Site Billboard signs

Characterization signs

Signs not listed in either category must be approved by the Planning Commission

GENERAL REGULATIONS FOR PERMITTED SIGNS WHICH REQUIRE A PERMIT:

SIGN AREA — 1.5 sq. ft. of sign area is permitted per lineal foot of primary building frontage with a maximum square footage of 200 sq. ft.; additionally .5 sq. ft. of sign area is permitted per lineal foot of secondary frontage, with a maximum sqare footage of 25 sq.ft.
Total sign area can be distributed among a total of four signs per business.

Shopping Center Signs	Developments which contain five or more stores are considered Shopping Centers and must have a Master Sign Program approved by the Design Review Board. All sign programs should be designed to be proportional to the stores in the center. Shopping Centers are allowed a single 100 square foot freestanding identification sign which is not counted in the overall sign area allotment. Shopping Centers which contain 25 acres may have two freestanding signs which are 250 square feet in area.
Sign Height for:	
General	There is a 25 foot height limit for general commercial signs, however the Design Review Board can set lower limits on height.
Large Center	There is a 50 foot height limit for Shopping Centers with 25 acres.
Sign Review	All signs which require permits must be approved by the Design Review Board. During this review, the Board may reduce the sizes and heights of proposed signs in order to insure that the signs are proportional to the buildings.

The Planning Commission has also adopted the following policy regarding the display of banners:

That Staff can issue new businesses a permit to display a single 30 square foot Grand Opening Banner for no more than three weeks.

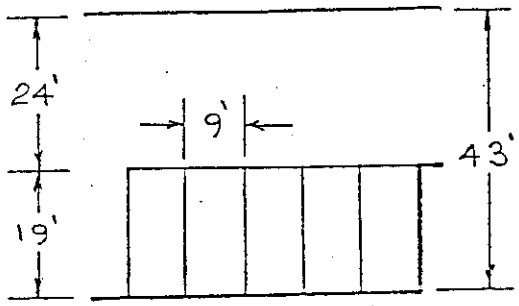
That Staff can issue new apartments a permit to display a single 30 square foot Now Renting Banner for no more than three weeks.

Furthermore, any established business which desires to establish a banner signing program must apply for a sign premit from the Planning Commission and follow the preceding guidelines.

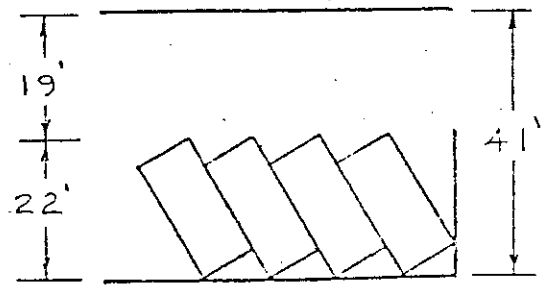
1. Applicants must present the Planning Commission documentation which establishes the size, number and location of all banners to be displayed.
2. Banners will not be allowed to be displayed more than two weeks at a time.
3. Banners will only be allowed to be displayed four times per year.
4. Businesses with Banner Signing Permits must advise the Planning Department two weeks in advance of the banner placement.

CITY OF MARINA - PARKING REQUIREMENTS

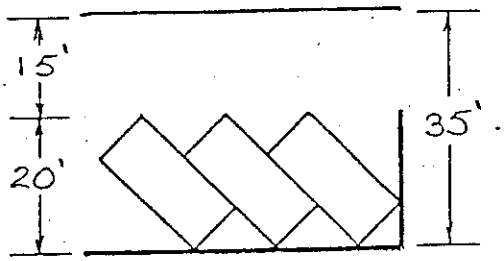
90°



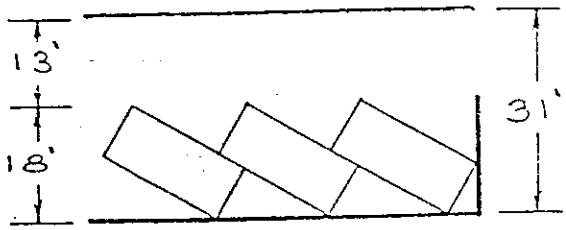
60°



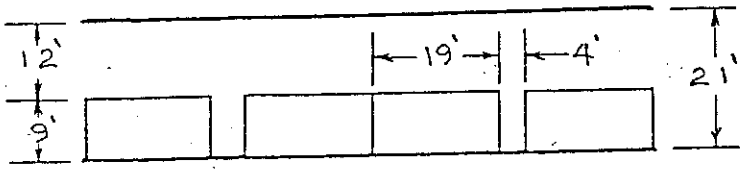
45°



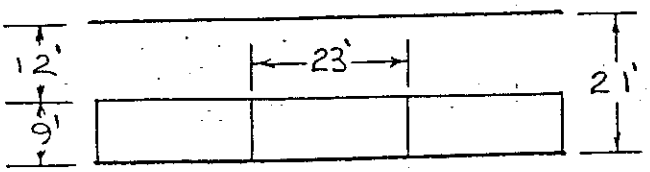
30°



PARALLEL



OR



NOTES:

- End stalls must have adequate backup space.
- Driveways must be 16' wide or 20' wide if commercial.
- Curb cuts at 20' intervals to provide street parking.
- Parking space - 9' x 19'.

7/11/77

Landscape Trees for Pacific Grove

a Guide to
Selection, Planting and Care

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CITY MANAGER
PETER WOODRUFF
ADMIN. SERVICES DIRECTOR
CITY CLERK AND TREASURER
GEORGE C. THACHER
CITY ATTORNEY

Dear Friend:

More than a century ago, the City of Pacific Grove was founded in a forest. Trees grew in profusion - pine, oak, cypress, even redwood. While only remnants of that original forest remain, it has not yet disappeared entirely.

Trees have always been an integral part of Pacific Grove's character, lending charm and a distinctive appearance, setting us apart from other coastal communities. In a time when many of California's cities are losing trees faster than they are being replaced, we must do we all we can to insure that trees will always flourish in Pacific Grove.

To achieve this goal, we ask you - the residents and business people of Pacific Grove - to join the City in helping to restore our urban forest.

This Landscape Tree Guide was developed to provide assistance in choosing and caring for our trees. City staff and committees will use the guide for tree plantings along streets, in parks and in other public places. We hope you will review the more than 40 species listed here and find one or two you would like to plant at your home or business.

Trees are one of our most valuable assets. They make our neighborhoods more livable, creating a buffer from the busy pace of modern life. They contribute towards clean air, soil and water conservation and energy savings. They increase the value of our homes and the economic vitality of our businesses and they provide a habitat for wildlife - including overwintering Monarch butterflies.

Most of all, trees greatly enhance the unique beauty of Pacific Grove. Through our combined efforts, we can insure that it will always be so. Thank you for your active participation.

Sincerely,

Sandra L. Koffman

Sandra L. Koffman
Mayor

Recycled

TABLE OF CONTENTS

Benefits of Trees ..... page 1

Planning ahead - Choosing the Right Tree for the Right Spot ..... page 2

For Further Information ..... page 2

Selection - Pacific Grove Landscape Tree List

Conifers ..... pages 3 & 4

Broadleaf Evergreen Trees ..... pages 3 & 4, 5 & 6, 7 & 8

Deciduous Trees ..... pages 7 & 8

Planting Trees ..... page 9

Maintenance of Newly Planted Trees ..... page 10

Permits and References ..... page 11

BENEFITS OF TREES

The City of Pacific Grove is committed to a policy of maintaining and expanding a diverse population of street trees as an essential component of the urban forest in the City. Benefits of a healthy urban forest include the following:

- **Increased real estate values**
- **Improved air quality**
- **Improved water quality**
- **Saves heating and cooling energy**
- **Reduces noise pollution**
- **Improved aesthetic environment**
- **Improved wildlife habitat**
- **Improved psychological well-being**

In addition, the City aims to increase public participation and involvement in the promotion of a healthy urban forest. The City currently maintains approximately one quarter of Pacific Grove's urban forest. The balance is maintained by the private property owner. Consequently, the individual property owner plays a vital role in the maintenance and development of Pacific Grove's urban forest. This guide is designed to assist the property owner in making informed decisions for the trees on his/her property. It includes information on the selection, planting and maintenance of trees, as well as the permit process and references to tree-related organizations.

PLANNING AHEAD - CHOOSING THE RIGHT TREE FOR THE RIGHT SPOT

Thinking and planning ahead may be the most important step in your effort to help our urban forest. How well you plan may determine whether or not your tree lives and thrives. Here are a few sample questions to consider:

Have I chosen the right tree?

- Will the tree grow well in this climate and soil?
- Did the seed or seedling come from my local area, giving it a better chance to survive?
- Is it the size and shape I want?

Have I chosen the right place to plant it?

- Is anything overhead or around it that might obstruct its growth?
- What kind of human activity takes place here?
- Is there good drainage and room for the roots to expand?

Do I have enough resources to plant and care for the tree?

- How much money will I need?
- What materials and equipment will I need?
- How many people can I get to help?

Do I have permission to plant here?

- What do the city and county ordinances say about who can plant what and where?
- Will my neighbors or whoever share the space agree?

We hope this booklet will help you answer these questions. For more details about planting trees contact the City Forester, your local nursery, or a certified arborist.

FOR FURTHER INFORMATION:

- *Sunset Western Garden Book*: Lane Publishing Co., Menlo Park, CA.; an encyclopedia of plants and a good horticultural guide. It is available at most bookstores.
- *Trees for San Francisco - A Guide to Street-Tree Planting and Care*: Friends of the Urban Forest's street tree photos and information booklet. Call Friends of the Urban Forest at (415)-543-5000 to purchase.

Pacific Grove Landscape Tree List

	Botanical Name Common Name 'Culivated Variety'	Height				Spread			Shape						Density			Growth Rate Per Year			Sun Exposure		
		Small - Up to 15 ft.	Medium - 15 to 30 ft.	Large - 30 to 50 ft.	Very Large - Over 50 ft.	Narrow, under 20 ft.	Average, 20 to 40 ft.	Broad, over 40 ft.	Round	Spreading	Columnar	Oval	Upright	Pyramidal	Open	Medium	Dense	6" Max - Slow	Moderate	1' Min - Rapid	Sun	Sun - Shade	Shade
	CONIFERS																						
1	Cedrus deodora Deodar Cedar			●			●							●			●		●		●		
2	Cupressus macrocarpa Monterey Cypress (Ca. Native)			●				●		●						●				●	●	●	
3	Pinus canariensis Canary Island Pine				●		●				●					●				●	●		
4	Pinus pinea Italian Stone Pine			●				●		●						●			●		●	●	
5	Pinus radiata Monterey Pine (Ca. Native)				●				●							●				●	●	●	
6	Pinus torreyana Torrey Pine (Ca. Native)			●						●						●				●	●		
7	Sequoia sempervirens Coast Redwood (Ca. Native)				●		●							●			●			●	●	●	
	BROADLEAF EVERGREEN TREES																						
8	Acacia melanoxylon Blackwood Acacia				●		●					●					●			●	●	●	●
9	Arbutu unedo Stawberry Tree 'Marina'		●				●		●			●				●			●		●	●	●
10	Callistemon citrinus Lemon Bottlebrush		●			●			●							●			●		●	●	
11	Callistemon viminalis Weeping Bottlebrush		●			●				●					●				●		●	●	
12	Cinnamomum camphora Camphor Tree			●				●	●								●		●		●	●	
13	Eriobotrya deflexa Bronze Loquat		●				●			●							●			●	●	●	
14	Eriobotrya japonica Loquat		●				●			●							●			●	●	●	
15	Eucalyptus ficifolia Red Flowering Gum			●			●		●								●		●		●	●	

Tree Shapes

Round Spreading Columnar Oval Upright Pyramidal

Tolerances					Outstanding Characteristics									Possible Sites				Comments	
Drought	Coastal Conditions	Wind	Oak Root Fungus Resistant	Frost Tolerant to 26° F	Aromatic	Attracts Birds	Attracts Monarch Butterflies	Fruit - Flower	Fall Color	Unusual Leaves	Clean - Neat	Bark	Deer Resistant	Good Under Utilities	Small, Contained Areas	Lawn or Irrigated Areas	Good for Street Tree		
●				●									●					Grey-green, short needles; openly spaced branches; pendulous ends give tree a graceful habit. Needs large space.	1
●	●	●		●	●								●					Needs periodic thinning to limit wind damage. Prune branch ends to strengthen limbs.	2
●			●	●								●	●					Resistant to oak root fungus and pitch canker. Attractive in groups; vertical accent tree for taller buildings; good in narrow spaces.	3
●	●			●									●					Good roadside and large garden tree. Resistat to pine pitch canker.	4
●	●	●	●	●									●					Very fast growing; plant at least 10' from paved surfaces and foundations; plant pitch canker resistant varieties.	5
●		●	●	●									●					Distinctive gray-green, long needles. Resistant to pitch canker. Young trees handsome, old trees striking. Produces pine nuts.	6
			●	●								●	●			●		Likes ample water; needs large space and protection from wind (susceptible to salt burn near ocean).	7
●	●	●	●										●			●	●	Cream-colored flower clusters in spring; 4" seed pods in late summer, drop in fall; disease and pest resistant; requires annual removal of suckers; self sows.	8
●	●	●				●		●				●				●	●	Rosy pink flowers in fall; yellow to orange-red berries in summer & winter attract birds; Red-brown shreddy bark; excellent lawn or raised-bed tree.	9
●	●	●	●		●	●		●					●	●	●		●	Long blooming period; red flowers attract hummingbirds & monarchs; good for small spaces; requires light annual pruning & sidewalk clean-up during flower drop.	10
●	●		●			●		●					●	●	●	●	●	Pendulous branches; flower characteristics and care same as Lemon Bottlebrush; stake & trim to prevent top-heavy growth.	11
●	●			●	●					●								Shiny foliage, dark bark, clusters of tiny yellow flowers in March, followed by blackish fruits; needs good drainage.	12
●				●		●		●		●							●	Large dark green leaves have coppery color when new. Needs good drainage; stake & prune when young. *Eriobotyra x Coppertone* retains copper foliage most of year; stays small, to 15'.	13
●				●		●		●		●						●		Big, leatherey, glossy green leaves show rusty wool beneath; small, dull white flowers borne in fall, fragrant but not showy. Grafted varieties produce 1-2 in. edible orange fruits.	14
●	●		●			●		●		●			●	●		●	●	Striking red to orange flowers cover tree in winter & summer. Requires pruning to avoid branch breakage; flower and seed capsule require clean-up.	15

Note about deer resistance: Although some trees are more resistant to deer browsing than others, hungry deer will nibble nearly any newly planted tree. For best success, protect young trees with wire exclosures.

Pacific Grove Landscape Tree List

	Botanical Name Common Name 'Culivated Variety'	Height				Spread			Shape						Density			Growth Rate Per Year			Sun Exposure		
		Small - Up to 15 ft.	Medium - 15 to 30 ft.	Large - 30 to 50 ft.	Very Large - Over 50 ft.	Narrow, under 20 ft.	Average, 20 to 40 ft.	Broad, over 40 ft.	Round	Spreading	Columnar	Oval	Upright	Pyramidal	Open	Medium	Dense	6" Max - Slow	Moderate	1' Min - Rapid	Sun	Sun - Shade	Shade
	BROADLEAF EVERGREEN TREES																						
16	Eucalyptus nicholii Nichol's Willow-Leafed Peppermint			●							●				●					●	●		
17	Geijera parviflora Australian Willow		●			●						●				●			●		●		
18	Magnolia grandiflora Southern Magnolia 'Russett' 'St. Marys'				●		●		●								●		●		●	●	
19	Lyonothamnus floribundus asplenifolius Fernleaf Catalina Ironwood			●		●						●				●			●		●	●	
20	Maytenus boaria Mayten Tree 'Green Showers'		●			●			●	●						●		●			●	●	
21	Melaleuca quinquenervia Cajeput Tree			●			●				●					●			●		●		
22	Melaleuca styphelioides Rigid Leaf Paperbark Tree			●			●					●				●	●		●		●	●	
23	Meterosideros excelsus New Zealand Christmas Tree			●			●		●								●		●		●	●	
24	Myoporum laetum Myoporum		●			●			●								●			●	●	●	●
25	Olea europaea Olive		●			●			●							●		●			●		
26	Pittosporum undulatum Victorian Box			●			●		●							●			●		●	●	
27	Podocarpus gracilior African Fern Pine		●	●		●			●								●	●			●	●	●
28	Prunus Caroliniana Carolina Laurel Cherry			●			●		●								●		●		●		
29	Quercus agrifolia Coast Live Oak (Calif. Native)			●			●			●							●		●		●		

Tree Shapes

Round Spreading Columnar Oval Upright Pyramidal

Drought	Coastal Conditions	Wind	Oak Root Fungus Resistant	Frost Tolerant to 26° F	Aromatic	Attracts Birds	Attracts Monarch Butterflies	Fruit - Flower	Fall Color	Unusual Leaves	Clean - Neat	Bark	Deer Resistant	Good Under Utilities	Small, Contained Areas	Lawn or Irrigated Areas	Good for Street Tree	Comments	
Tolerances					Outstanding Characteristics									Possible Sites				Comments	
				●	●								●				●	Gracefull, weeping blue-green, fine-textured foliage has peppermint smell when crushed. Too much water can cause chlorosis.	16
●			●	●						●	●			●			●	Has grace of willow; toughness of eucalyptus; deep, non-invasive roots; pest free.	17
			●	●				●		●			●				●	Large white fragrant flowers; large glossy leaves & pods a litter problem. Surface roots lift side-walks. Likes ample water. 'St. Mary's, a smaller, slower growing variety, is ok beneath wires.	18
●	●	●						●		●		●						Tiny white flowers in clusters; Rough, shredding, red-brown bark. Requires annual pruning; Stake & prune when young. Needs good drainage.	19
			●										●			●		Weeping form; delicate, apple-green foliage; needs good drainage & deep initial watering to avoid suckers & voracious surface roots that destroy concrete; Prune to remove suckers.	20
●	●	●		●							●	●	●				●	Peeling, spongy, cream to brown bark; yellowish flowers in summer & fall,1/2" hard brown seed capsules; good for narrow sidewalks; tolerates poor drainage.	21
●		●	●					●		●		●	●			●	●	Pendulous branchlets; lacy, open growth; peeling bark; creamy white flowers summer to fall; brittle wood; tolerates water, good in lawns.	22
●	●	●						●		●			●			●	●	Showy red flowers in early summer; sidewalk cleanup during flower drop; stake & prune when young; good street tree, needs root barrier in narrow site; excellent in windy, salt air.	23
●	●	●		●			●	●		●			●					Attractive multi-trunked tree if staked & pruned; thin to prevent top-heaviness & wind damage; superb for seaside use; not for tailored gardens; some leaf drop at all times; invasive roots.	24
●	●	●				●						●	●	●				Grey-green foliage; insignificant flowers. Dark green to black 1" edible fruit in late fall attracts birds but stains sidewalks. Plant fruitless varieties to avoid fruit drop; requires frequent pruning & removal of suckers.	25
●		●			●			●					●			●	●	Wavy-edged leaves, Fragrant creamy white flowers in early spring open to sticky orange seeds that are messy. Shallow, greedy root system limits other plants.	26
			●								●				●	●	●	Not a pine; irregular form; dark blue-green, glossy narrow leaves; insignificant fruit & flowers; train to single trunk when young; Needs good drainage; disease & pest resistant.	27
●		●		●		●	●	●										Attractive as multistemmed tree; small creamy white flowers in spikes, Feb-April. Half inch black fruit a litter problem over pavement. Does poorly in alkaline soils.	28
●		●		●		●							●				●	Needs considerable space; avoid watering within 4' of base; attracts many native birds.	29

Note about deer resistance: Although some trees are more resistant to deer browsing than others, hungry deer will nibble nearly any newly planted tree. For best success, protect young trees with wire exclosures.

Pacific Grove Landscape Tree List

	Botanical Name Common Name 'Culivated Variety'	Height				Spread			Shape						Density			Growth Rate Per Year			Sun Exposure		
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	BROADLEAF EVERGREEN TREES																						
30	Quercus suber Cork Oak			●				●	●							●		●			●		
31	Schinus terebinthifolius Brazilian Pepper Tree		●			●			●								●		●		●		
32	Ulmus parvifolia Chinese Elm 'Drake'			●				●		●							●	●			●		
	DECIDUOUS TREES																						
33	Aesculus carnea Ruby Horse Chestnut 'Briotii'			●			●		●				●				●		●		●		
34	Fagus sylvatica Copper Beech				●			●						●			●			●	●		
35	Gingko biloba Maidenhair Tree 'Autumn Gold'			●			●		●							●			●		●		
36	Liquidambar styraciflua American Sweet Gum 'Burgundy' 'Festival' 'Palo Alto'			●			●					●				●			●		●		
37	Liriodendron tulipifera Tulip Tree			●		●						●				●				●	●		
38	Magnolia soulangeana Saucer Magnolia		●				●		●								●		●		●	●	●
39	Malus floribunda Japanese Flowering Crabapple		●			●			●	●						●			●			●	
40	Pyrus calleryana Ornamental Flowering Pear			●			●							●		●			●		●		
41	Platanus acerifolia London Plane Tree 'Bloodgood' 'Yarwood'			●			●			●						●				●		●	
42	Prunus cerasifera Flowering Plum 'Krauter Vesuvias' 'Thundercloud'		●			●			●							●			●		●		

Tree Shapes

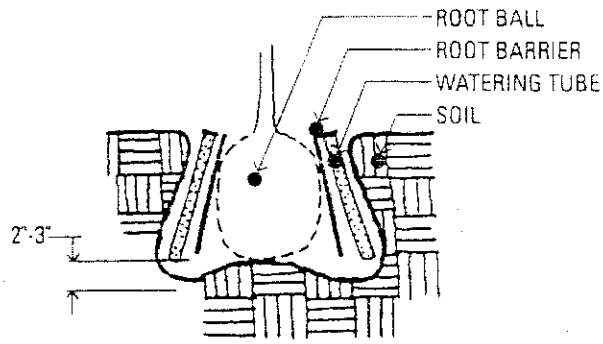
Round Spreading Columnar Oval Upright Pyramidal

Drought	Coastal Conditions	Wind	Oak Root Fungus Resistant	Frost Tolerant to 26° F	Aromatic	Attracts Birds	Attracts Monarch Butterflies	Fruit - Flower	Fall Color	Unusual Leaves	Clean - Neat	Bark	Deer Resistant	Good Under Utilities	Small, Contained Areas	Lawn or Irrigated Areas	Good for Street Tree	Comments	
Tolerances					Outstanding Characteristics									Possible Sites				Comments	
●				●								●	●				●	Trunks with thick, corky bark; very drought tolerant; needs good drainage.	30
●		●		●		●		●							●		●	Bright red berries showy in winter; feed & water infrequently & deeply to discourage surface roots.	31
●			●	●							●						●	Weeping habit; older trees have sheding bark. Aggressive surface roots can damage sidewalks; stake & prune when young.	32
						●		●					●	●		●	●	Showy pink to red flower clusters April-May; requires sidewalk clean-up during flower drop; needs summer watering; susceptible to powdery mildew & leaf spot.	33
									●			●						Beautiful foliage; protect from winds; salts in soil or water stunt growth & turn leaves brown.	34
●										●	●		●	●		●	●	Brilliant yellow leaves in fall, drop all at once; likes well drained soil. Never prune central leader; stake when young; disease & pest resistant; long-lived.	35
●		●	●						●	●			●				●	Maple-like leaves; dependable fall color varies with variety from yellow-orange-red to burgundy; spiny seed capsules, though decorative, drop in winter & require clean-up; surface roots can be nuisance in lawns or parking strips. Disease & pest resistant.	36
			●	●					●	●						●		Bright yellow-green leaves; tulip shaped greenish yellow flowers in late spring; likes well drained soil; susceptible to aphids; good lawn tree.	37
				●				●			●			●		●	●	Large white, pink, or purplish red flowers bloom in winter before leaves come out. Blooms at 3-5 yrs.	38
			●	●		●		●	●					●	●	●		Fine textured foliage; red to pink buds open to white flowers; prune only to build framework and to correct shape; needs summer watering; susceptible to aphids.	39
			●	●				●	●							●		White flowers in early spring; purplish-red fall color; narrow crotches subject to breakage as tree matures.	40
●			●	●				●	●			●	●			●	●	Lobed, maplelike leaves. Bark sheds in striking patches. Brown, ball-like seed clusters hang from branches through winter. Watch for spider mites and scale. 'Bloodgood' somewhat resistant to anthracnose; 'Yarwood' resistant to powdery mildew.	41
				●		●	●	●		●				●	●	●		Pink to white flowers in early spring. Green, red, or purple foliage depending on variety. Susceptible to caterpillars, slugs, aphids and spider mites; some fruit drop; will grow in almost any soil.	42

Note about deer resistance: Although some trees are more resistant to deer browsing than others, hungry deer will nibble nearly any newly planted tree. For best success, protect young trees with wire exclosures.

PLANTING TREES

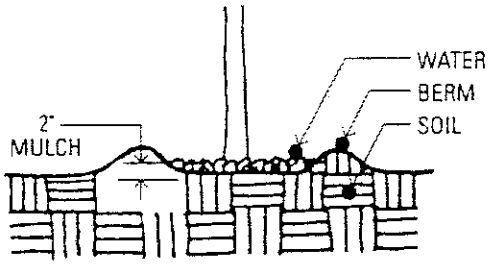
Planting Hole: The planting hole should be excavated 1-2 inches less than the height of the root ball and twice the root ball diameter. Loosen soil at the sides and bottom of the hole. If amendments are added to the backfill soil, they should be composed of slowly decomposing organic matter, thoroughly mixed, and amount to no more than 40% of the overall soil volume. Filling the pit with water and observing the water percolate into the soil will determine whether the soil has adequate drainage. Areas with poor drainage (i.e. very little drainage in 24 hours) should be modified and planted with a species tolerant of wet soil.



Watering Tube: (optional) Placement of a 4" by 24" watering tube should be at the grade of the soil and filled with gravel. This tube allows for water to be delivered to the root zone without surface run-off while encouraging deep roots. The application of water through the tube should be done only after the tree is established, usually within 18 to 24 months. Two tubes can also be installed on opposite sides of the root ball to maximize deep watering. Trees planted on a grade should always have the watering tube installed on the uphill side of the root ball.

Root Barrier: (optional) Root barriers may be utilized when planting in paved areas and near driveways and sidewalks. They are thought to direct roots down in the soil and consequently minimize root growth directly under pavement.

Tree Placement: The tree should be carefully removed from the container to avoid damage to the root ball. Cut any circling roots and remove any matted roots on the surface of the root ball. Orient the tree with the strongest branches facing the prevailing winds.



Backfilling and Mulching: Eliminate air pockets by thoroughly flooding the partially backfilled tree pit. The soil should be firmly packed around the root ball to stabilize the newly planted tree. Fill the basin to grade and construct a berm around the outside of the root ball for watering.

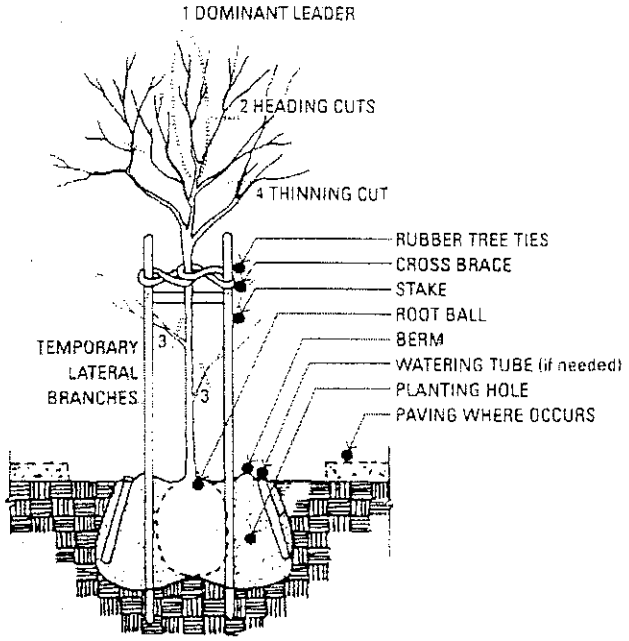
Staking: Two 2" x 8' lodge pole pine stakes should be driven into the ground on appropriate sides of the tree and adjacent to the root ball. A one inch by four inch board nailed between the stakes adds to the stability of the stakes but should be positioned in such a way as to avoid damage to the tree by rubbing. Two rubber tree ties should be nailed to the stakes and wrapped in a figure eight pattern around the tree six inches above the point where the tree, if held by hand, will maintain an upright position. Tie the trunk so that the tree can move at least three inches in each direction. This movement stimulates the growth of the tree.

MAINTENANCE OF NEWLY PLANTED TREES

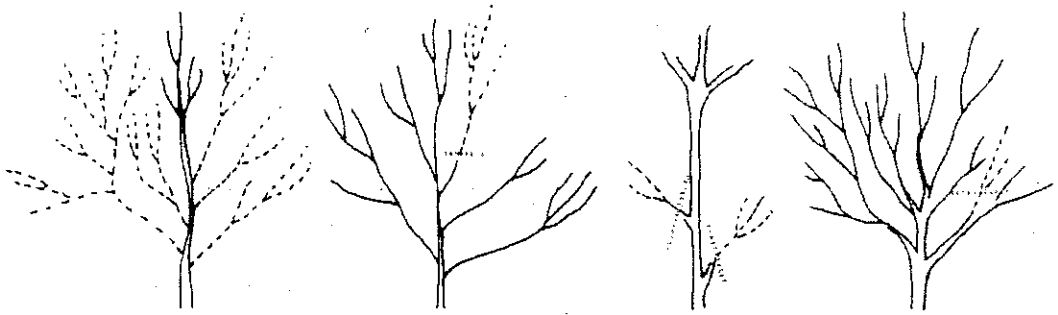
Basin Maintenance: Basin maintenance consists of weed and debris removal, stake and strap adjustment or removal, and sucker removal.

Watering: Deep, infrequent and slow watering directly over the root ball area will promote deep root growth. Depending on soil type, plant requirements and climatic conditions, a newly planted 15 gallon tree should receive about 5 gallons of water each week during the dry season. After 18 to 24 months of watering directly over the root ball, start watering through the watering tube.

Pruning: The most important aspect of young tree pruning is the establishment of a **dominant leader** (1); **pinch** or **head back** (2) branches that are competing with the dominant leader. **Temporary lateral branches** (3) (branches that will not be present on the mature tree) must be left to feed and shade the trunk. These branches, which may also be headed appropriately, should be removed only after the tree is established. Do not allow the temporary branches to block pedestrian access on sidewalks. Pruning should emphasize the plant's natural growth habit and be limited to **thinning cuts** (4) and removal of unsound or poorly attached branches.



Staking: As soon as the tree is established (usually two years,) the stakes should be removed or modified to encourage a strong trunk, deep rooting and sufficient anchorage.



1 DOMINANT LEADER | 2 HEADING CUTS/ PINCHING | 3 TEMPORARY LATERAL BRANCHES | 4 THINNING CUTS

PERMITS

Tree Planting Procedure

Property owners are required to have a permit to plant a street tree in a City easement. No permit is needed to plant trees on private property.

1. Phone 648-3122 for information.
2. Complete form and return to the City Forester at the Department of Public Works.
3. Department inspection: sidewalk marked where tree is to be planted.

Permit approved: Property owner proceeds with planting the tree.
Permit denied: A letter of denial is sent to the property owner.

Tree Removal Procedure

Property owners are required to have a permit to remove street trees. Property owners are required to have a permit to remove any tree on private property which is four inches in diameter at four and one-half feet above the ground.

1. Tree permit applications are available at the Public Works office (648-3122) and at City Hall (648-3100).
2. Completed applications should be returned to the Public Works office.
3. Department inspection: The City Forester will visit your property and inspect the tree(s) within 10 days. Tree(s) will be posted with removal notice for a period of 10 days if City Forester determines public notice is appropriate.

Permit approved: If there are no public objections and the City Forester recommendation concurs, a permit is granted.
Permit denied: If there are public objections, a public hearing is scheduled. Notices are posted and mailed out to those concerned.

Public Hearing: Any person objecting to any determination of the City Forester shall have the right of appeal to the Natural Resources Committee.

Permit approved: Property owner proceeds with removal.
Permit denied: Decision may be appealed to City Council.

REFERENCES

City Agencies:

- City Forester, Department of Public Works - 648-3122
  For questions regarding permits, responsibilities, or professional advice and tree jurisdiction.
- City Hall - 648-3100
  For copy of the Tree Conservation and Protection Ordinance

Prepared by the City of Pacific Grove's
Natural Resources Committee
1998

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gratefully acknowledges the
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