

GUIDELINES FOR LANDFORM GRADING AND PLANTING



CITY OF ORANGE

**DEPARTMENT OF
COMMUNITY DEVELOPMENT**

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PLANNING AND DEVELOPMENT
GUIDELINES FOR
LANDFORM GRADING AND PLANTING

I. STATEMENT OF POLICY

It is the policy of the Orange City Council and Planning Commission to promote hillside development projects that reflect the hillside environment as closely as possible. Toward this end, however, safety shall always remain the most salient issue, and shall never be compromised for aesthetic considerations.

In order to improve the aesthetic quality of hillside development projects, the City Council and the Planning Commission shall encourage the use of site planning techniques and landform grading, when safety considerations permit. When landform grading is not feasible because of safety conflicts, special attention shall be given to landscape materials as an alternative means of creating a natural appearance in the hillsides.

The Hillside Design Criteria encourages the preservation or restoration of significant landforms and grading as well as encourages that man-made slopes be designed and landscaped so that visual harshness, acute angles, and abrupt transitions are eliminated or minimized. Illustrations depicting the treatment of highways, high slopes, slope types, combining slopes, undulating slopes and landscape areas, are included in the guidelines.

The Department of Public Works shall determine when conditions permit or preclude the use of landform grading, and shall approve grading plans on the basis of existing ordinances, policies and guidelines established by the Orange City Council.

The City Council seeks to incorporate landform grading techniques on all slopes visible to the public in the hillside areas of Orange. Primary emphasis for the use of landform grading techniques shall be given to prominent slopes, slopes which are visible from scenic corridors and other major public ways.

II. PROCESS - (ERB PRE-DESIGN MEETINGS ARE ENCOURAGED)

In order to assure that developments in the hillsides are visually compatible with the hillsides, and that specific site concerns and problems are identified at the earliest possible stage, pre-design meetings will be available with appropriate City staff representatives. These meetings are at the option of the developer for each project; they are not essential, but are encouraged to avoid delays at later approval stages. They will be most effective if held during the preparation of the Draft EIR and/or prior to the filing of each subdivision tract map and grading plans for the following types of projects:

1. Projects involving major changes to the existing topography.
2. Large projects with several alternative lot and roadway design possibilities.
3. Projects within known geological problem areas.
4. Projects with potential drainage problems requiring diverters, dissipators, debris basins, etc.
5. Projects needing substantial off-site roadway or utility improvements.

Each city department would reserve the right to determine if a member of their staff should or should not attend or otherwise respond to any scheduled pre-design meeting. Some city departments may respond by written comment only. It must be understood that no commitments will be made by the city departments at the pre-design meeting, nor any assurances given that a project will be approved if designed according to the recommendations provided. Recommendations are given solely to provide direction and convey City goals and objectives. The City is of the opinion that hillside projects will benefit from such pre-design meetings by:

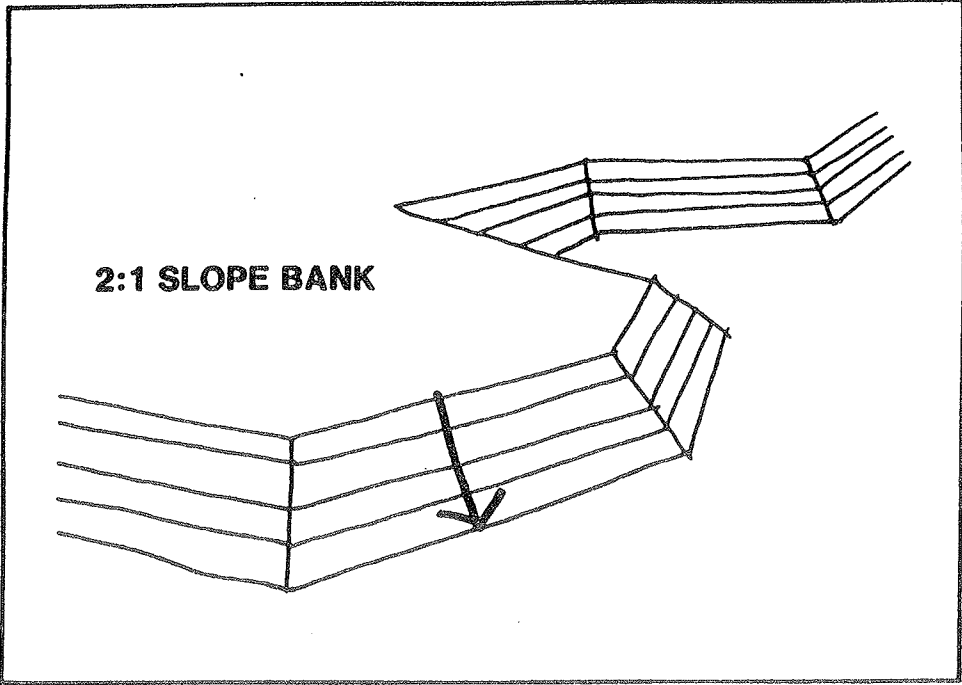
1. Identifying major problem areas early in the design process, to help reduce the chances of such problems causing delays later in the approval process.
2. Identifying which slopes should be considered for landform grading, and, if possible, where geological conditions preclude the use of landform grading.
3. Providing developers with direction from the various city departments as to the City's basic design concepts and concerns prior to the investment of large commitments of time and money in designing a project later found unacceptable to the City.

4. Facilitating the coordination of actions by the involved City agencies.

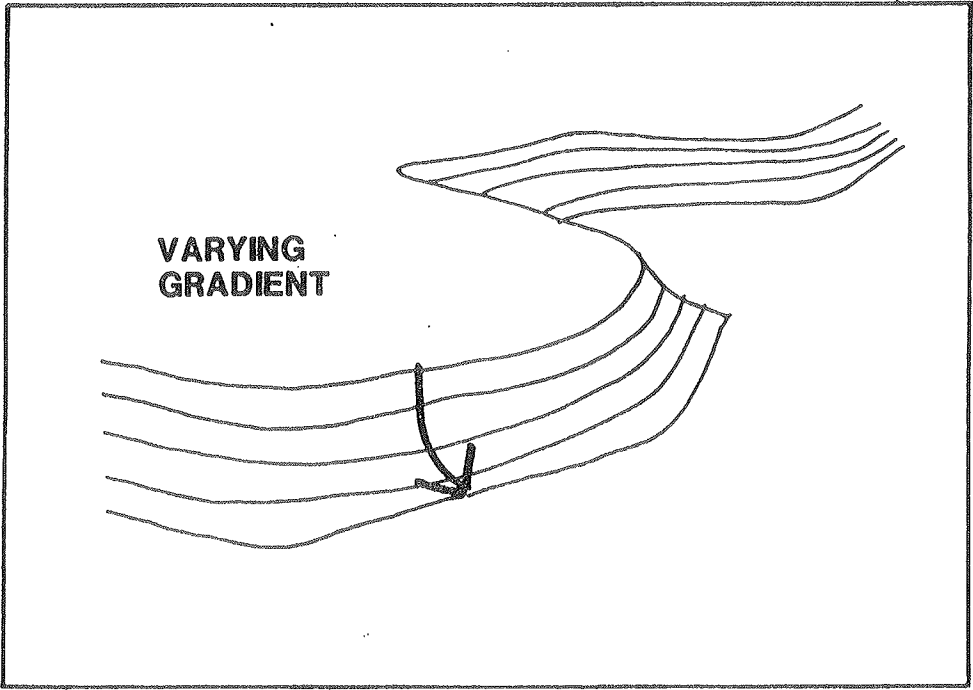
At least three weeks before the proposed meeting date, along with a written request, the City should be provided with copies of the following information if available:

1. Location - outline of project boundaries.
2. Location "key" map showing site and its relationship to surrounding environment, including roads and scenic corridors.
3. Existing and proposed zoning.
4. Proposed density.
5. Proposed street widths and alignment and secondary access.
6. Conceptual layout plan over the existing topography shown in not less than 5-foot contour intervals.
7. Conceptual grading plan with cut and fill areas colored, over the existing topography that is at least at 5-foot contour intervals.
8. Composite site analysis map prepared by or in conjunction with a site planner such as a licensed landscape architect which identifies site features such as significant views, significant ridgelines, mature vegetation, significant topographic character, natural drainage ways, significant rock outcroppings, etc.
9. Design sketches, photographs, site sections or view analysis.
10. Three copies of all available geological and soil information, including the preliminary soils and geology report.
11. Any other pertinent information that may be available such as other environmental data.

The City will reserve the right upon receipt of the above information to determine if a pre-design meeting is justified for each particular project. The response will depend on the

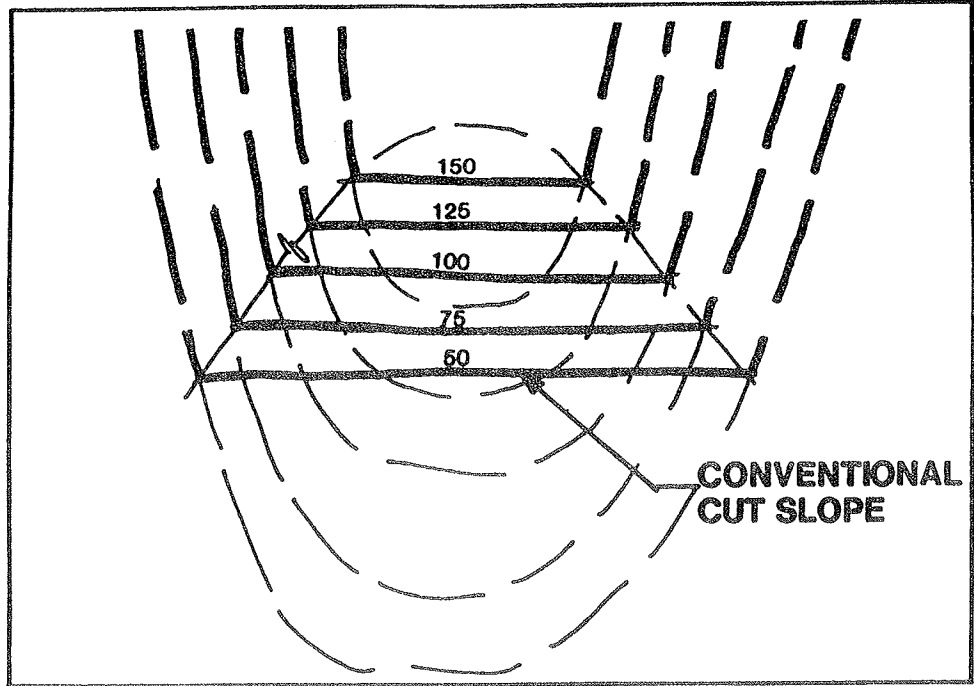


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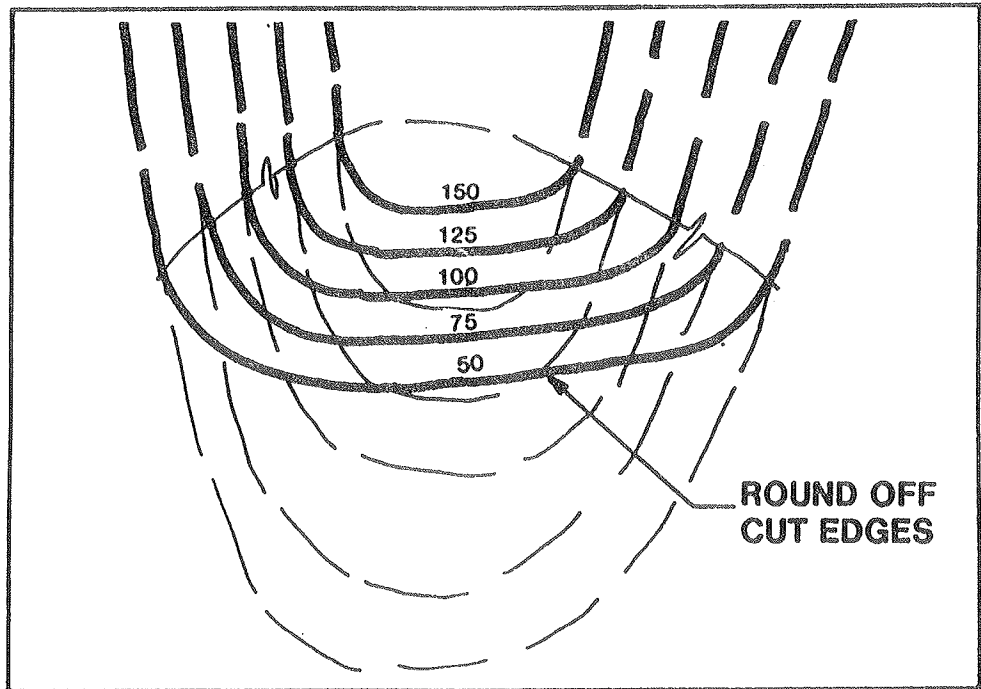


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Exhibit 2

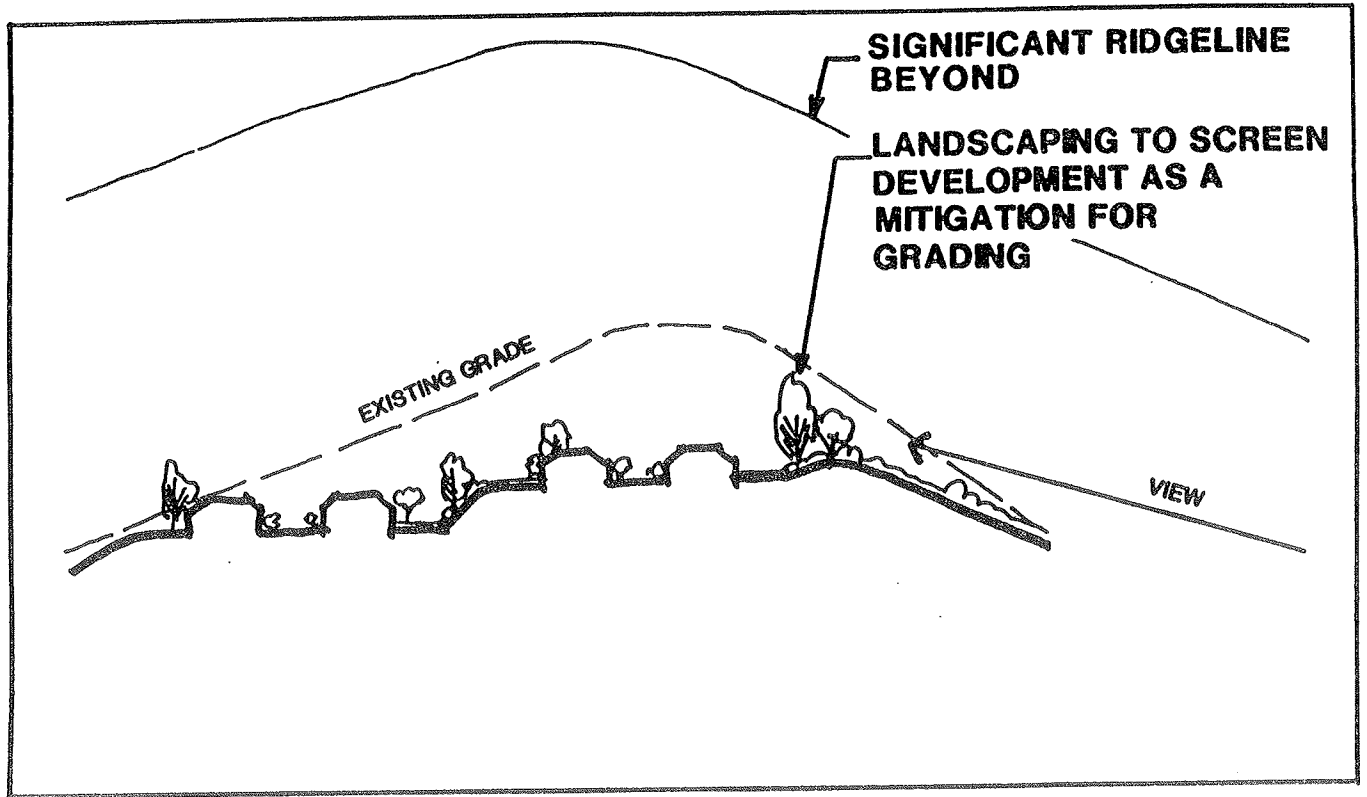


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Exhibit 3



Specific Techniques

1. Ridgeline Preservation

a. Ridgelines Designated for Preservation on the Orange General Plan:

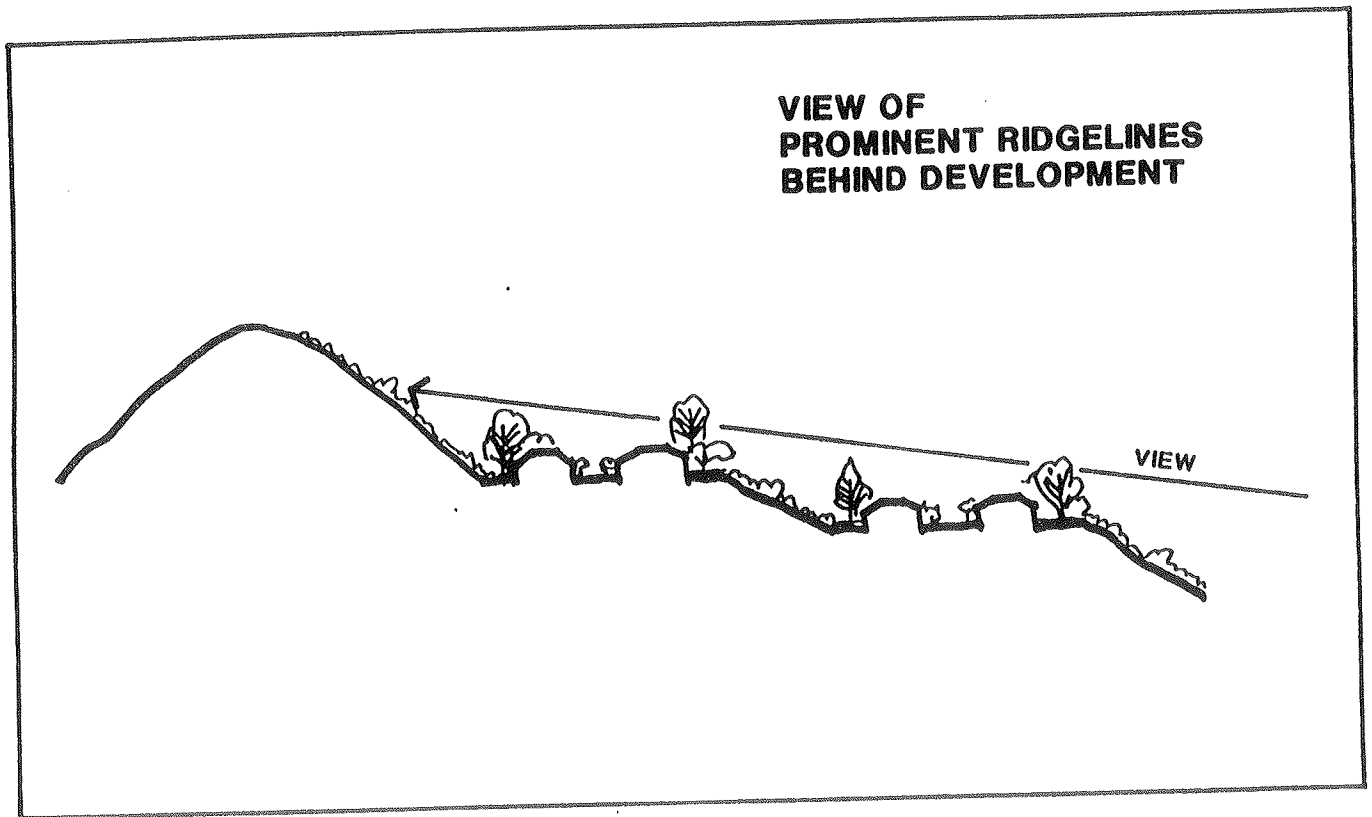
General Policy: Grading or development on any designated ridgeline or significant landform on the General Plan is expressly prohibited. Grading determined by a licensed engineering geologist necessary to ensure the safety and stability of adjacent development areas shall be permitted. See Exhibit No. 4.

Exhibit 4



General Plan designated ridgelines and significant landforms are intended to be preserved and act as a backdrop to protect the natural characteristics and visual amenities of the hillside areas. No structures shall be permitted to extend or be silhouetted above a General Plan designated ridgeline. See Exhibit No. 5.

Exhibit 5

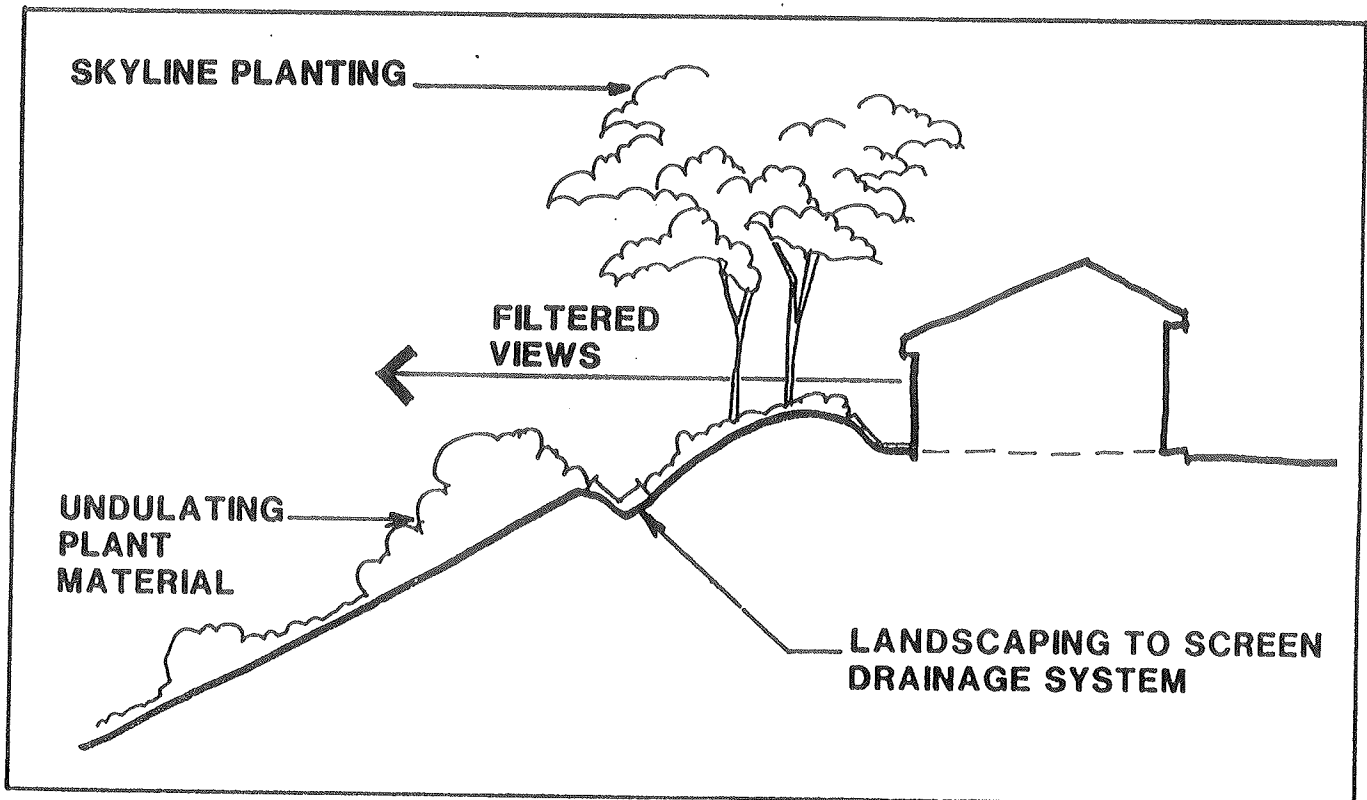


Review Process: Any grading proposed within the limits of the General Plan designated ridgeline shall be referred to the Planning Commission for a determination of General Plan consistency at the Planning Commission hearing on the Tentative Map.

b. Ridgelines Not Specifically Designated for Preservation on the General Plan:

General Policy: Development or grading of undesignated ridgelines may occur in all areas of the General Plan except those areas noted above and those areas designated for Rural Residential zoning and land use. In the event that the only reasonable location for construction or grading affects an undesignated prominent ridgeline within the area designated for Rural Residential land use, all possible measures shall be taken to minimize the amount of grading and to mitigate adverse visual impacts to the surrounding areas. See Exhibit No. 6

Exhibit 6



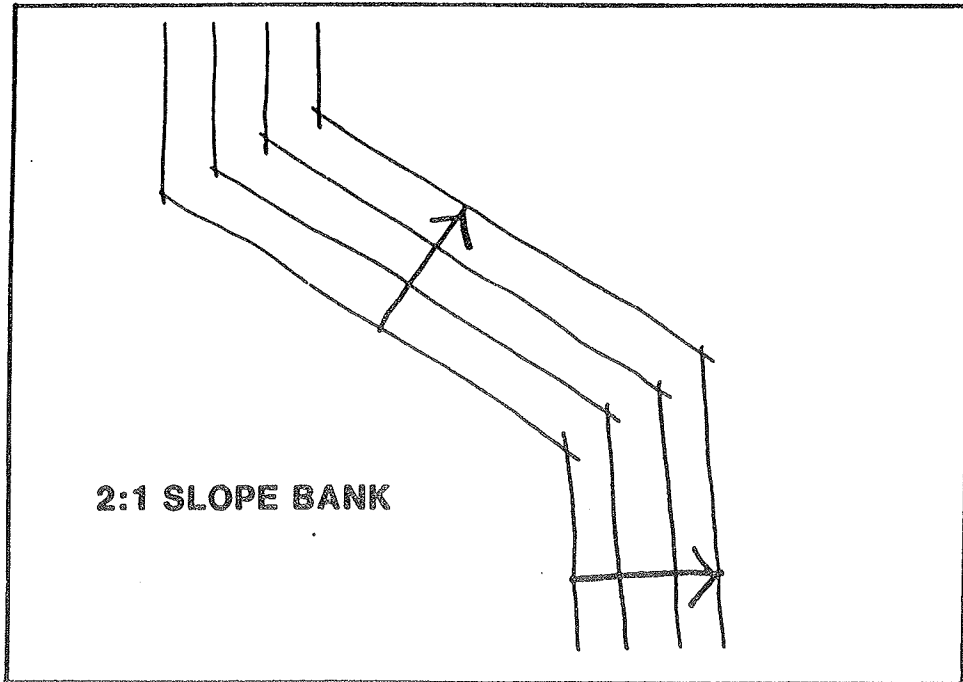
Review Process: Any proposal to grade or develop on a ridgeline designated for Rural Residential land use shall be approved by the Planning Commission. The Planning Commission shall approve said development or grading only upon a finding that the proposed grading or development is the only reasonable treatment for the property and that proposed mitigation measures against adverse visual impacts are satisfactory to meet the spirit and intent of the General Plan and Land Use Codes and policies of the City of Orange.

Burden of Proof: In every event where a proposal is reviewed by the Planning Commission in items A and B above, the burden of proof that said grading or development shall be permitted will be with the applicant. The applicant, in supporting a contention that said grading or development is acceptable, shall submit any view analyses or other exhibits and environmental information as determined by the Planning Commission to be necessary to make the required determination findings.

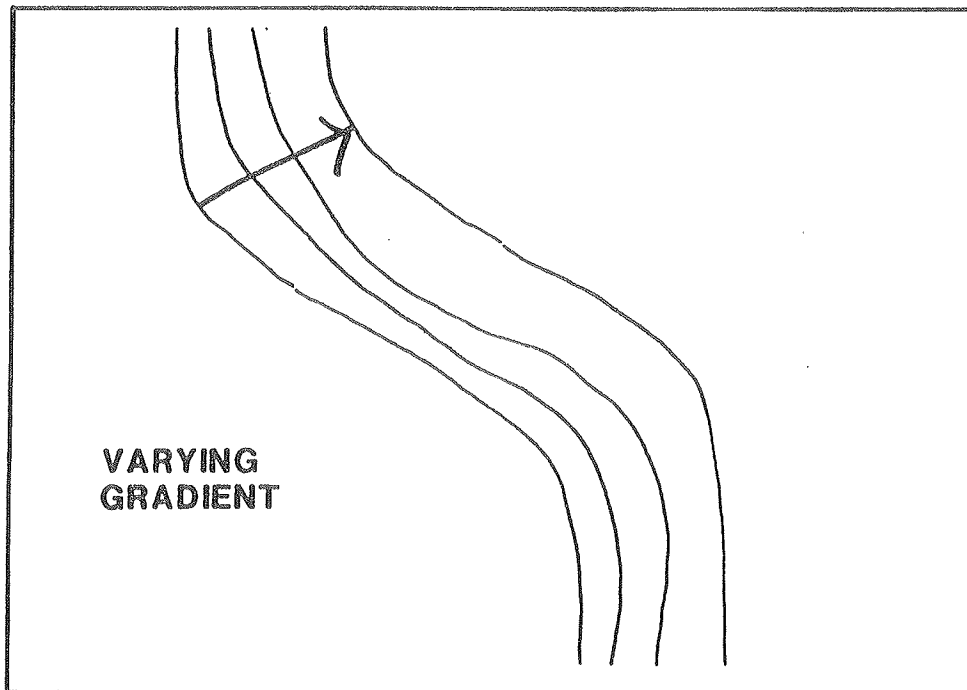
Consistency with the General Plan: In the event that the Planning Commission finds it acceptable for development to take place within a significant ridgeline or landform designated for preservation on the General Plan, said development will first require an amendment to the General Plan to provide for said development unless otherwise determined by the City Council. Where grading within a significant landform is required to ensure the safety and stability of an adjacent development area, said grading shall be considered to be consistent with the General Plan if the proposed contours are in substantial conformance with the natural terrain.

2. Varying Slope Ratios

In order to create graded slopes which are sensitive to surrounding natural hills and to avoid the regularity and linearity of consistent 2:1 slopes, graded hillsides may have a variety of slope ratios. These ratios may vary in both the vertical and horizontal planes. Steeper or flatter gradients may be permitted by the Department of Public Works subject to recommendations of a geotechnical engineer. Exhibits No. 7 and No. 8 are illustrative of varying slope ratios.

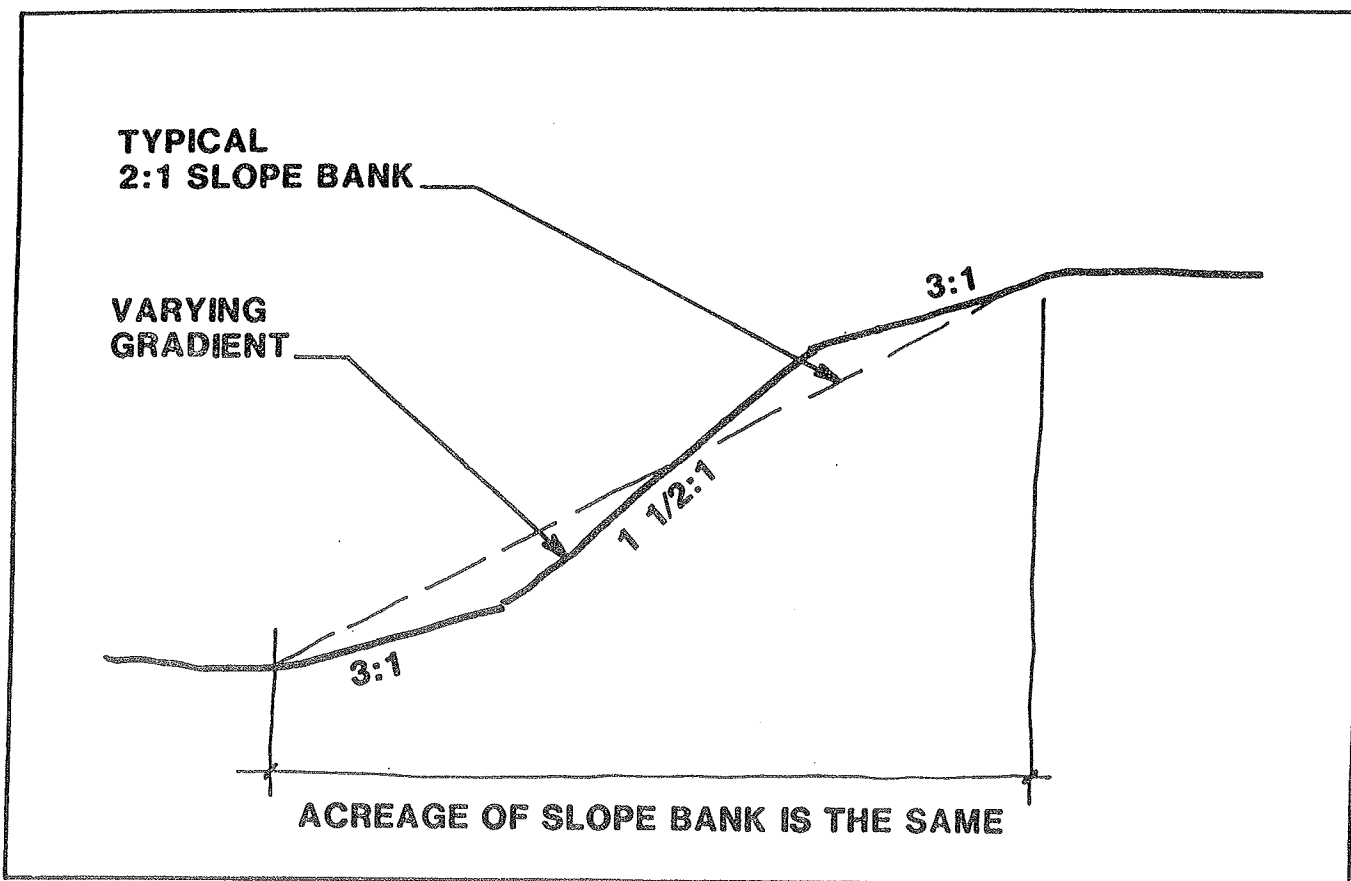


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NOTE: ACREAGE OF VARYING GRADIENT SLOPE BANK NEED NOT EXCEED THE AREA REQUIRED FOR 2:1 SLOPE BANK



CAUTION SHOULD BE GIVEN TO FLATTER SLOPES FACING NORTH BECAUSE OF PONDING AND SHADING CAUSING SLOPE FAILURE

3. Drainage Devices

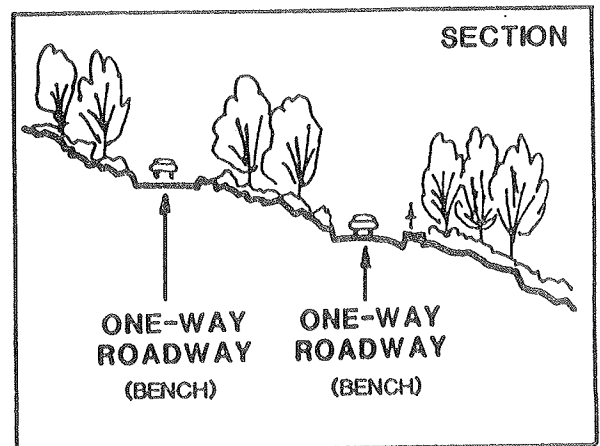
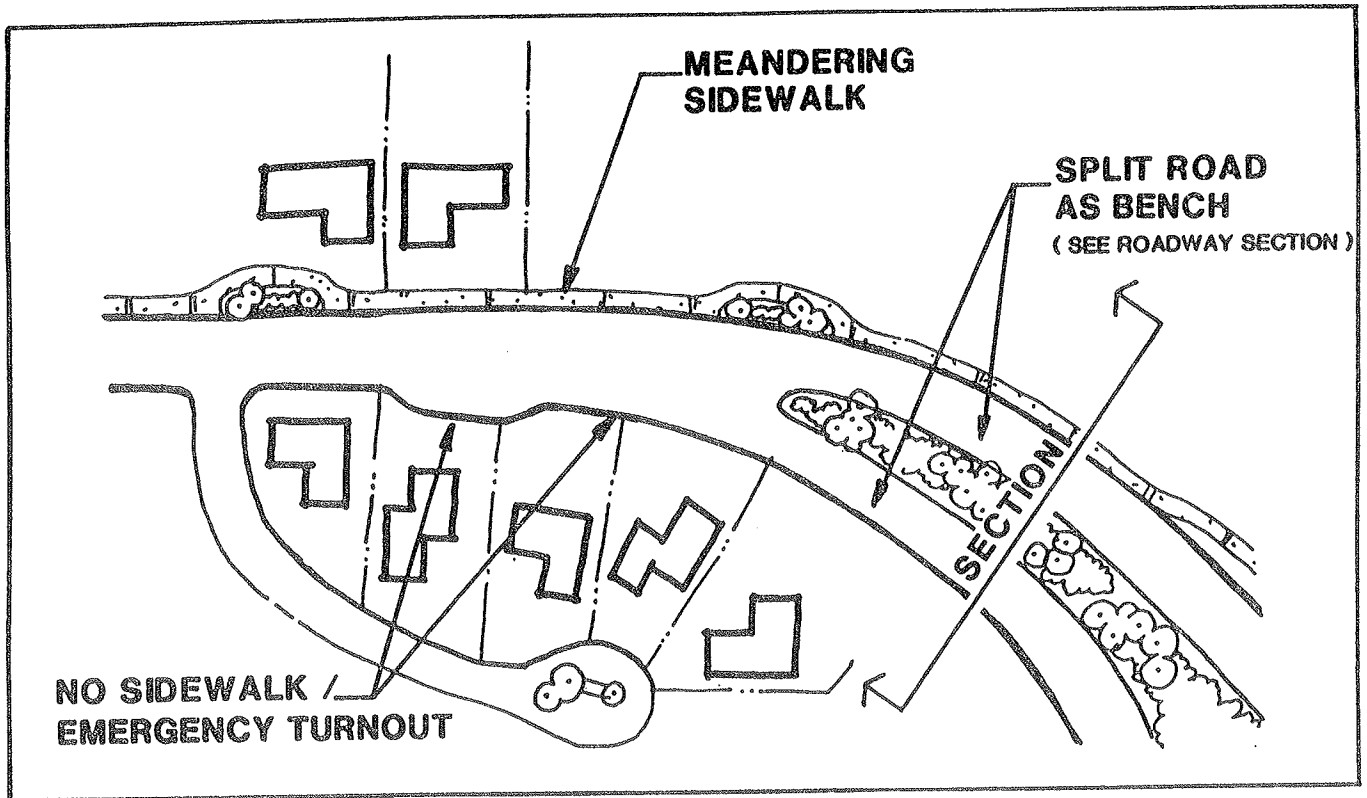
Drainage devices (terrace drains, benches and intervening terraces) should be placed on a graded slope as inconspicuously as possible. Downdrains should be placed in swales. The side of any drain which is visible from the public way should be bermed or screened with plant material so as to conceal the drain as much as possible. Care should be taken so not to impede drainage.

The concrete in any drain which is visible from a public way should be tinted with an appropriate earth tone or treated so as to more closely blend with surrounding materials. Landscape materials should be placed along any drain in a manner which will most effectively conceal the drain from public view and not damage the drain when fully mature. Exhibit No. 6 illustrates the proper placement of drainage devices and appropriate screening.

Drain slope gradients should become steeper as the drain moves down the slope. The Department of Public Works shall approve gradients.

4. Streets and Sidewalks

Exhibit 9



Consideration should be given to split roadways wherever such a technique will reduce grading impacts. Two 22-foot-wide one-way roadways can be designed to simultaneously perform the function of a drainage bench or terrace. See Exhibit No. 9.

Where appropriate, such as where lots do not front on a street, there should be minimal sidewalks. Priority should be given to provide for safe routes for school-age children.

5. Hillside Maintenance Plan

The Park District of the Community Services Department shall have the responsibility administrating and approving hillside maintenance plans.

In order to assure that common drainage facilities, landscape materials, irrigation systems, catch basins, sumps, fire buffer zones and any open space lots not maintained by the City are properly and adequately maintained, the subdivider of each project shall be required to record with the County Recorder, prior to or concurrent with the final map, a declaration of covenants, conditions and restrictions to run with the land providing for the following:

a. The establishment of a property owners association and/or landscape maintenance district shall cause a yearly inspection to be made by a private engineer of all slope areas and drainage devices. Any necessary maintenance and corrective measures will be undertaken by the association. Each future property owner shall automatically become a member of the association and/or landscape maintenance district or organization required above and is automatically subject to a charge of a proportionate share of the cost.

b. A plan or program should be prepared by the landscape architect for the homeowner's association or landscape maintenance district which outlines how to properly maintain the planted areas in order to reduce fire hazard potential, maintain visual quality, control rodents and avoid the higher costs of deferred maintenance. The plan should describe how and where to:

- (1) - Clear thatch.
- (2) - Selectively thin shrubs.
- (3) - Selectively prune trees.
- (4) - Control rodents.
- (5) - Fertilize and eradicate weeds.

(6) - A fire buffer easement (to be measured on a horizontal plane from the level graded portion of the outermost lots) to the satisfaction of the Fire Department The Fire Prevention Division of the Fire Department should be consulted for their assistance.

(7) - Systematically check clock, valves, main and lateral lines, sprinkler heads and all connection points, etc. of the irrigation system as well as watering time lengths for various conditions (to help eliminate problems of over watering).

c. The future owners of affected lots with drainage devices shall be informed in writing by the developer of their responsibility for the maintenance of the devices on their lots. The future owner and all successors will be presented with a copy of the drainage maintenance program for their lots. Any amendment or modification that would defeat the obligation of said association or assessment district as required herein above must be approved in writing by the City of Orange.

d. In the event the property owner's association and/or landscape maintenance district fails to maintain the common property and easements as required by the CC & R's, the individual property owners shall be responsible for their proportional share of the maintenance.

B. PLANT MATERIALS

General

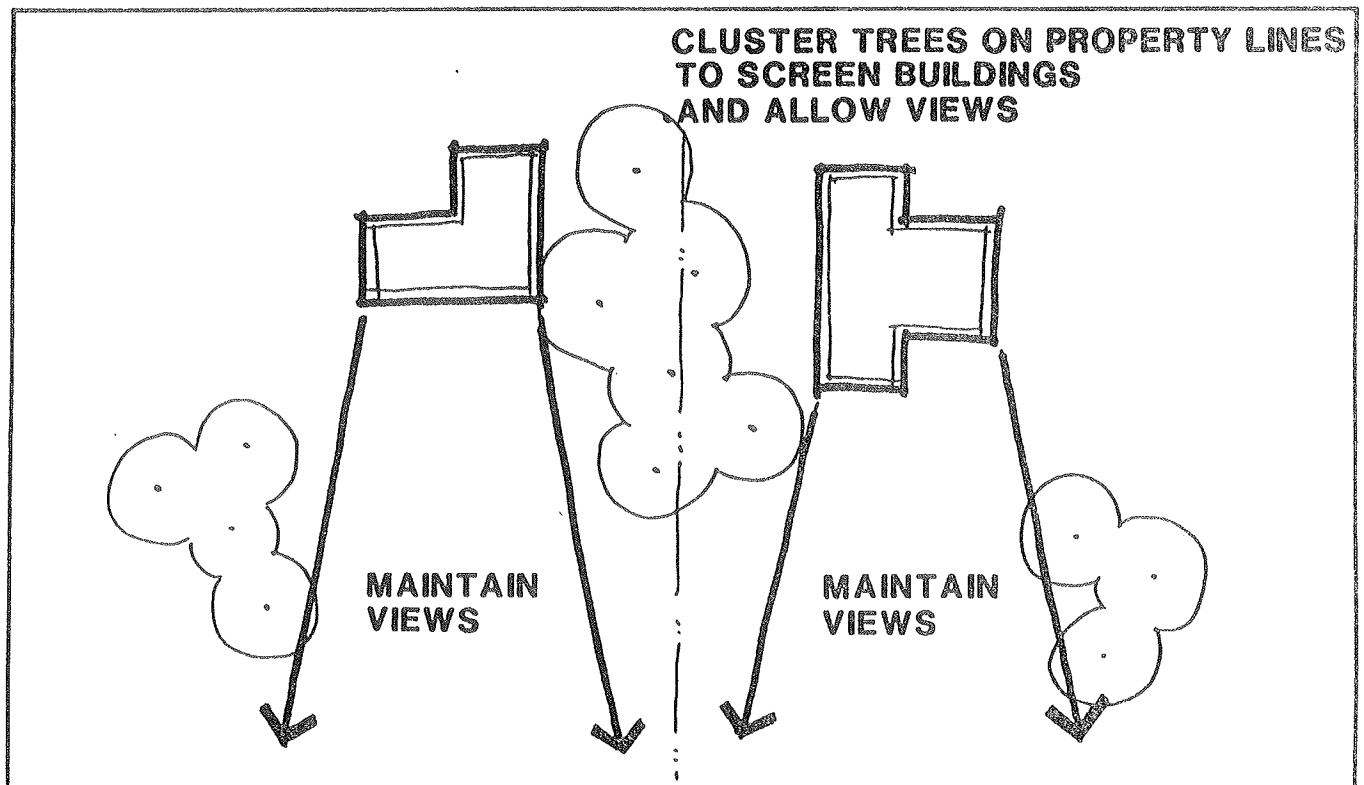
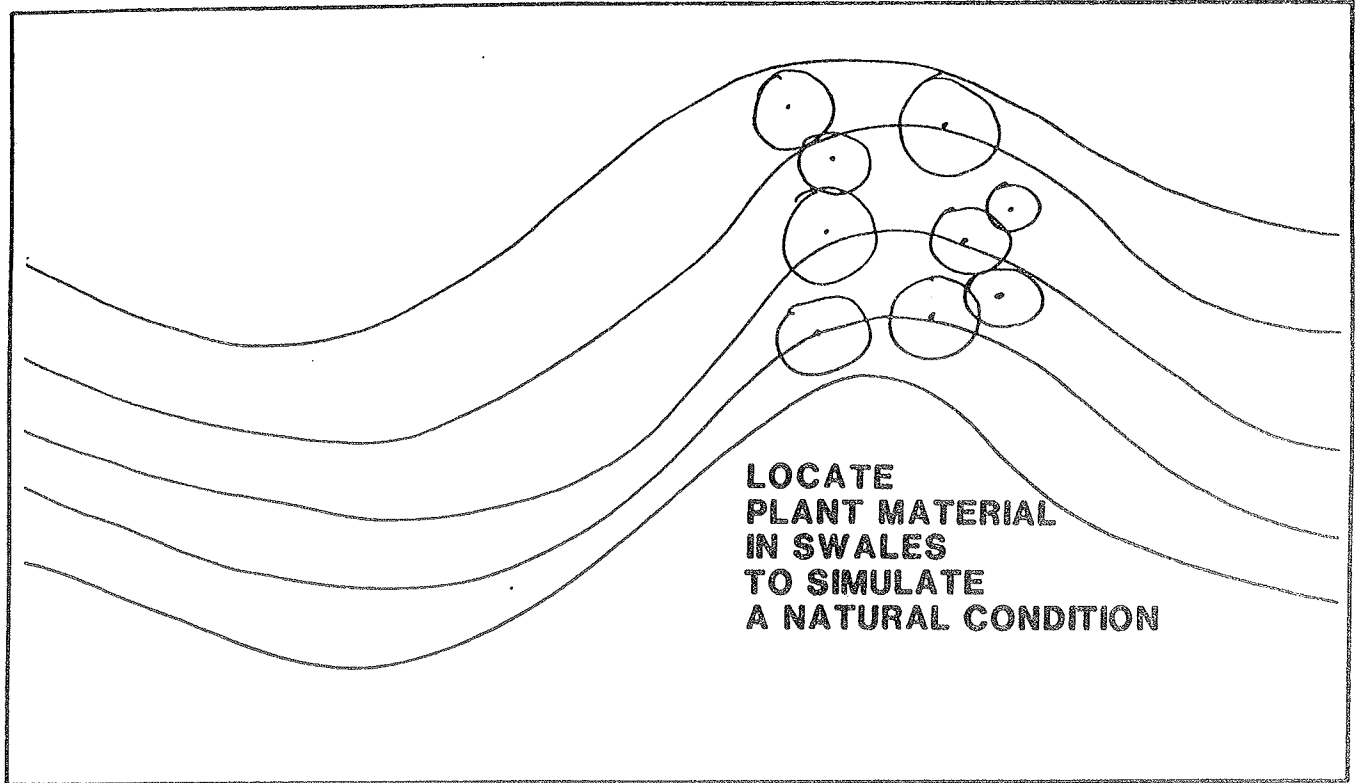
The Park Division of the Community Services Department shall also have the responsibility for administering and approving hillside planting material and irrigation equipment.

When landform planting is utilized in lieu of landform grading, a conceptual planting plan should be submitted at the time a tract map is filed, for evaluation of the design as it relates to the prominent viewpoints. The planting plan should generally identify the common and botanical plant names, indicate foliage color and size at maturity.

1. Planting Guidelines for Landform Graded Slopes

The purpose of landform planting is to reinforce the visual appearance of landform graded slopes or any conventional graded slopes consistent with the characteristics of the surrounding hillsides.

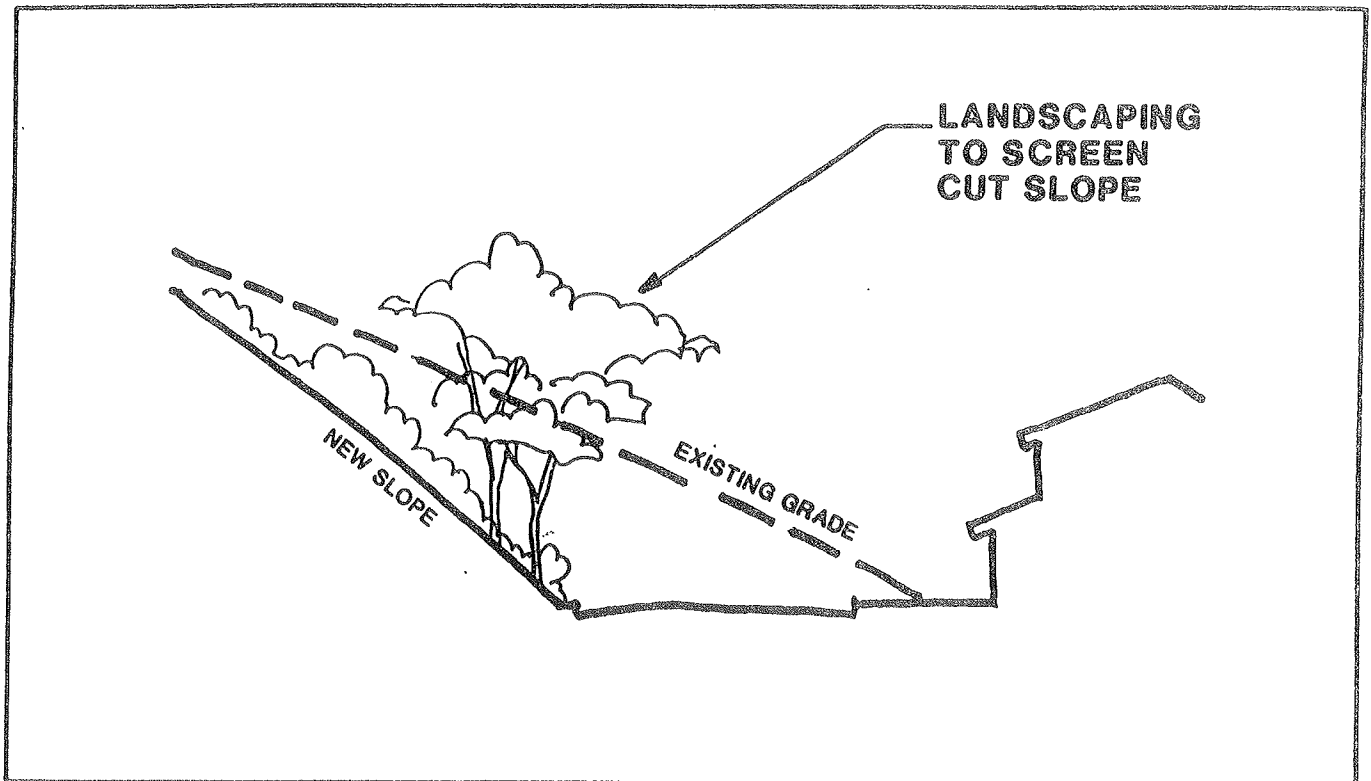
Any required trees to be placed on landform graded slopes should be grouped within swale areas to more closely reflect natural conditions so as not to impede drainage. The swales are areas of greatest moisture concentration, and the portion of hillsides where trees naturally group. The grouping of trees on swales and on property lines should maintain views wherever possible. See Exhibit No. 10 and 11.



2. Landform Planting Guidelines for Conventional Slopes

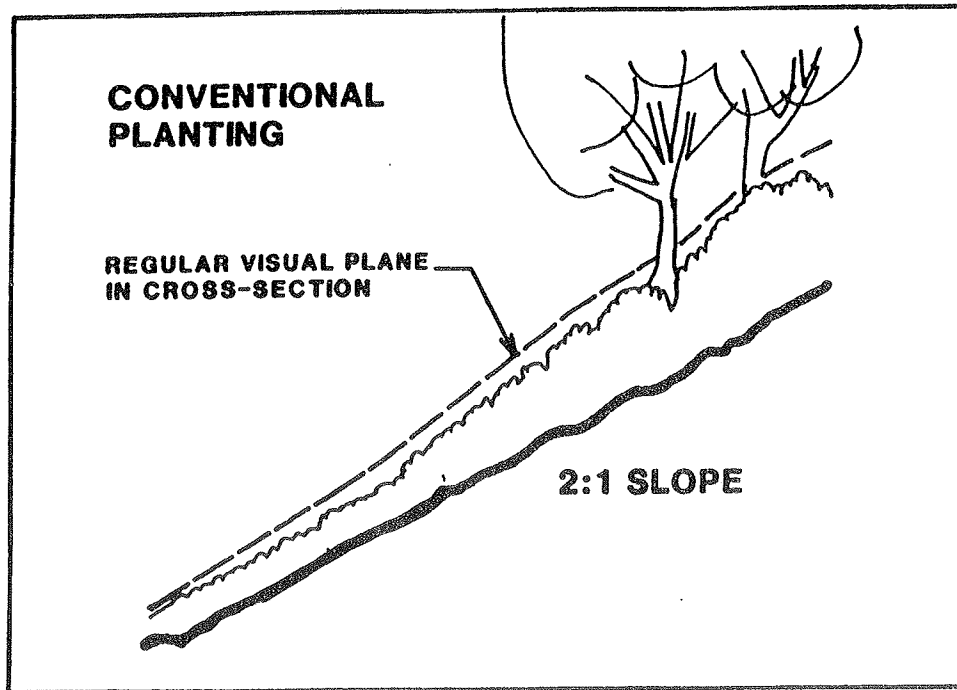
In situations where slopes are to be conventionally graded, a landscape plan shall be designed for the purpose of obscuring the linearity and regularity of the conventional slope.

Exhibit 12

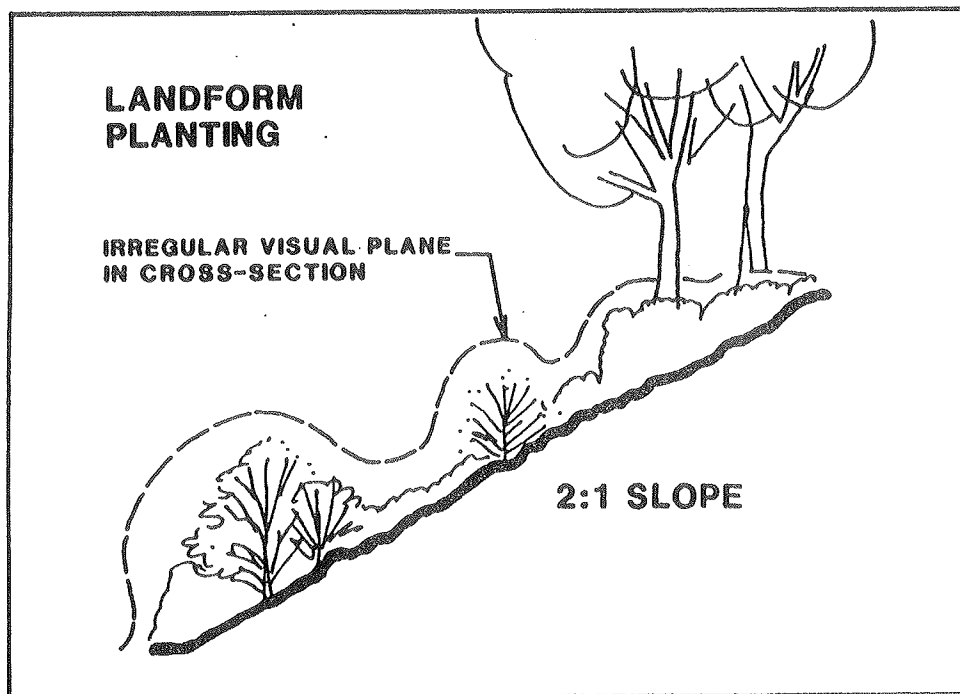


Special landscape design treatment, and landform planting, should be utilized to create a sense of undulation and visual relief along the vertical planes consistent with the characteristics of the surrounding hillsides.

The purpose of landform planting is to enhance landform graded slopes and to provide an alternative whereby conventionally graded slopes are given the appearance of having been landform graded. The placement, selection and design of plant materials should create a visual undulating appearance. See Exhibit No. 13



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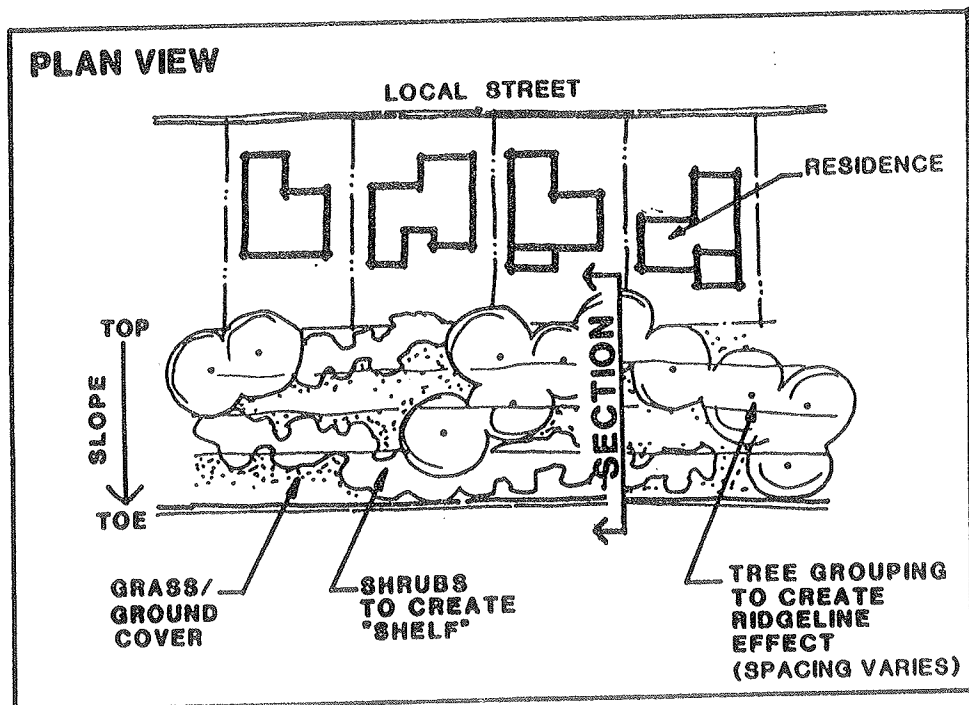


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Horizontal Relief: Plant materials in plan view should be grouped to create the appearance of ridgeline and "shelf" configurations.

Vertical Relief: The pattern and variety of height of plant materials on the slope should create an irregular visual plane in cross-section. See Exhibit No. 14

Exhibit 14



3. Planting and Irrigation

a. Landform planting requirements

The concepts of landform planting require a minor departure from the the uniform spaces planting requirements in order to create a natural effect through cluster locations of selected plants. Accordingly, plant and planting patterns may be varied upon recommendation of a licensed landscaped architect and soils engineer, and approved by the Department.

b. Simulated landform effects

The contoured effects of landform grading may be simulated through the use of landscaping techniques which rely on the location and blending of selected plant varieties of appropriate and varying height needed to create the effects of a curved slope terrain.

c. Irrigation

All graded slopes shall be planted and irrigated in accordance with standards administered by the Community Services Department. On graded slopes where native plants have been recommended, the required slope irrigation system may be modified upon recommendation of a licensed landscape architect and approved by the Department.

4. Special Conditions

a. Rodent control

Due to the increased slope areas created by landform grading, the problem of rodent burrowing and disturbance to slopes becomes more severe. The landscape architect shall investigate various rodent control methods and select the most suitable for use at the project location. The above recommendation shall be submitted to the Community Services Department and the Homeowners Association and/or Landscape Maintenance District in report form and the report filed with the Office of the County Recorder.

b. Root damage

Trees and shrubs located within created swale areas of landform graded slopes shall be planted at a sufficient depth and distance to concrete downdrains to avoid root damage from the mature plants.

~~4. REPORTS FROM BOARDS, COMMITTEES AND COMMISSIONS (Continued)~~

~~MOTION - Smith
SECOND - Beyer
AYES - Smith, Barrera, Mayor Perez, Beyer, Coontz~~

~~Moved to receive and file the report.~~

* * * * *

TAPE 1119
(C2500.G)

5. ADMINISTRATIVE REPORTS

5.1 Planning and Development Guidelines for Landform Grading within the Hill and Canyon Areas in the City of Orange.

The Director of Community Development reported the Draft Planning and Development Guidelines for Landform Grading has been reviewed by Public Works, Community Services, and officials of The Irvine Company, and other interested parties. The Planning Commission held a study session that addressed major considerations regarding landform, General Plan concepts and community issues and concerns to be treated if the proposed guidelines were adopted.

The Department of Community Development recommended Council adopt the guidelines as official policy by resolution.

Council discussion ensued regarding holding a joint study session with the Planning Commission to further refine the policy. The small lot grading as referenced in a memo by Mayor Perez, was discussed. Concerns were expressed regarding landscaping, sizes and types of plants, preservation of the ridges, and soil conditions.

Bob Bennyhoff, 10642 Morada Dr., commented in favor of the recommended guidelines and urged the Council to direct Public Works and Community Services to expedite the grading ordinance.

MOTION - Smith
SECOND - Barrera
AYES - Smith, Barrera, Mayor Perez, Beyer, Coontz

Moved to approve the proposed Planning and Development Guidelines for Landform Grading for use within the existing and future hill and canyon areas of the City of Orange as official City policy by resolution, to include landscaping standards and the small lot sizes.

* * * * *

TAPE 1330
(A2500.0)

~~5.2 Report by Planning Staff regarding waiver of fees for the School Pride Bingo.~~

~~The Administrator of Current Planning reported the Conditional Use Permit was granted to School Pride by the Planning Commission on April 4, 1988, and reviewed the previous bingo applications.~~