

## Chapter 16.56 DESIGN AND IMPROVEMENT STANDARDS

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### **16.56.010 Design and improvement standards—Conformance with requirements—Variance.**

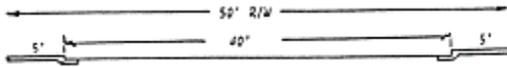
- A. Lot design and improvement standards for site development and subdivisions shall conform generally to the requirements of the zoning provisions, the Standard Specifications and this chapter.
- B. The council or other approval authority shall have the authority to approve a project with lot design and improvement standards at variance with the requirements referred to in this section when the facts and circumstances so warrant. By such approval the special design standards for such project shall prevail. No variance application is required.

(Prior code § 9-1.1610)

### **16.56.020 Street standards.**

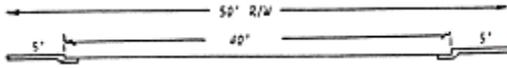
- A. All streets in the R-1-5,000, R-1-10,000, R-M-1, R-M-2, C-R, 1-L and C-H districts shall be constructed in accordance with the following minimum standards:

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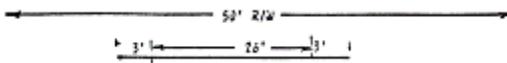
Two-inch asphaltic concrete on a six-inch aggregate, base, concrete improvements.

- B. All streets in the R-1-20,000 district shall be constructed in accordance with the following minimum standards:



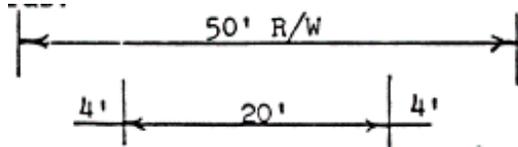
Two-inch asphaltic concrete on a six-inch aggregate base, concrete improvements.

- C. All streets in the one-acre minimum lot size district shall be constructed in accordance with the following minimum standards:



Two-inch asphaltic concrete on a six-inch aggregate base; aggregate base to be thirty-two (32) feet wide.

- D. All streets in the R-1 district larger than one acre lot size and all streets in areas designated A or O shall be constructed in accordance with the following minimum standards:



Two-inch asphaltic concrete on a six-inch aggregate base; aggregate base to be twenty-eight (28) feet wide.

- E. Residential cul-de-sacs shall be constructed within a right-of-way having a minimum diameter of eighty (80) feet and seventy (70) foot diameter street from curb to curb with a sidewalk width of five feet adjacent to the curb or meandering nearby.
- F. As an alternative to the requirements of this section, the city engineer may give consideration to proposals that have larger setbacks and thereby reduce the width of the pavement. The required setback shall be twenty (20) feet with the next considered increment of twenty (20) feet as a minimum before street width reduction. Where one acre and larger parcels are proposed, a five-foot wide unimproved non-auto path shall be provided.
- G. The street standards set forth in this section shall constitute the minimum requirements of the city and may be revised from time to time by resolution of the council or specific project approvals.

(Prior code § 9-1.1615)

**16.56.030 Alignment of streets.**

The alignment of all streets shall conform to those designated on any plan adopted by the council prior to the date of the filing of the tentative map with the planning director or planning and zoning commission. No new street entrance not a direct extension of an existing street may be made within one hundred fifty (150) feet of any existing street as measured between center lines.

(Prior code § 9-1.1620)

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#### **16.56.040 Pavement surfaces.**

All streets shall have an asphaltic-concrete plant-mixed surface. The minimum-thickness of the surface course shall be as determined by the method described in the following section of this chapter.

(Prior code § 9-1.1625)

#### **16.56.050 Structural design of pavement.**

The structural design of the pavement shall be determined in accordance with the method of design described in the Planning Manual of the California Department of Transportation as currently amended. All local streets and their cul-de-sacs shall have a minimum asphalt-concrete surface thickness of two inches and a minimum aggregate base thickness of six inches. The designated city official shall set traffic index criteria and shall review and approve street structural calculations.

(Prior code § 9-1.1630)

#### **16.56.060 Trenching and backfilling.**

Trenching, backfilling and pavement replacement shall conform to the Standard Specifications.

(Prior code § 9-1.1635)

#### **16.56.070 Curbs and gutters.**

Standard portland cement concrete curbs and gutters shall be constructed as required. Vertical face curbs shall be constructed unless otherwise approved for the specific project.

(Prior code § 9-1.1640)

#### **16.56.080 Sidewalks.**

Sidewalks shall be constructed of portland cement concrete with an aggregate base.

(Prior code § 9-1.1645)

#### **16.56.090 Nonvehicular trails.**

Where designated by the city, nonvehicular trails shall be constructed and dedicated to the city, including easements as required.

(Prior code § 9-1.1646)

#### **16.56.100 Ramps for handicapped persons.**

Ramps for handicapped persons shall be provided at each street intersection.

(Prior code § 9-1.1650)

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#### **16.56.110 Private street.**

Private streets, alleys or ways shall not be permitted unless approved by the advisory agency and/or the council and then only under conditions which guarantee the construction and continued maintenance thereof.

(Prior code § 9-1.1655)

#### **16.56.120 Effect of street layout on adjoining property.**

The street layout shall be designed to provide for the future street design of property adjoining the subdivision.

(Prior code § 9-1.1660)

#### **16.56.130 Street names.**

Proposed street names shall not duplicate, nor too closely approximate phonetically, the name of any street in the city or the adjacent area. When streets are continuations of existing streets, the existing names shall be used. Names may be selected from a master street list maintained by the planning director.

(Prior code § 9-1.1665)

#### **16.56.140 Street name signs.**

The subdivider shall install regulatory signs and markings as required by the city engineer.

(Prior code § 9-1.1670)

#### **16.56.150 Traffic signs.**

The subdivider shall install regulatory signs and markings as required by the city engineer.

(Prior code § 9-1.1675)

#### **16.56.160 Mailboxes.**

Mailboxes shall be located at such locations as required by the postal authority and city engineer.

(Prior code § 9-1.1680)

#### **16.56.170 Slope development standards.**

The requirements of this section shall apply to all projects which are required elsewhere by this code to be submitted for site plan and architectural review and all tentative, final and parcel maps, but in either case, only those not industrially or commercially zoned. The requirements of this section shall not apply to lone single-family or lone duplex dwelling units or to any project on industrial or commercially zoned parcels.

Development subject to the standards of this section shall meet the following criteria:

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- A. All newly created lots must have an approved building site on terrain slope of under thirty (30) percent. For purposes of this section, a building site shall be defined as an area sufficient to accommodate main and accessory structures.
- B. Slopes over thirty (30) percent will remain in a natural condition except where the city approves the design and location of driveways and roadways, for which there is no practical alternative location or design.
- C. Deviations to subsections A and B of this section may be approved by the city with no variance required provided that:
  - 1. The applicant provides a detailed engineered grading plan and cross sections of proposed construction on slopes thirty (30) percent or over;
  - 2. The applicant can mitigate potential impacts of construction on slopes of thirty (30) percent or over to the satisfaction of the city. Impacts include loss of trees, recontouring the land, viewshed of ridgelines, fire safety, erosion and soil stability, road slopes and other factors identified during project review; and
  - 3. The applicant shall provide written analysis of both compliance with and deviation from the city hillside development guidelines.
- D. Hillside development guidelines shall be adopted by resolution of the city council.

(Ord. 405 § 1, 1993: prior code § 9-1.1685)

### **Hillside Development Guidelines**

#### **Sec. 1 Statement of purpose.**

The following hillside development guidelines are intended to ensure the appropriate development of hillside areas. The guidelines are for the use, development, or alteration of land in hillside areas. The guidelines are to be utilized to provide direction to encourage development which is sensitive to the unique characteristics common to hillside properties. The purpose for the guidelines is to protect existing hillsides and to encourage innovation, to the extent that the end result is one which respects the hillside and is consistent with the goals and policies of these guidelines. The guidelines shall be used by the planning commission and the city council in evaluating those development proposals. We expect developments will innovate beyond the minimum guidelines herein specified.

The purpose of these guidelines is:

- A. To preserve and protect hillside areas in order to maintain the identity, image and environmental quality of the city of Colfax;
- B. To maintain an environmental equilibrium consistent with the native vegetation, animal life, geology, slopes, and drainage patterns;
- C. To facilitate hillside preservation through appropriate development guidelines of hillside areas. The guidelines are intended to provide direction and encourage development which is sensitive to the unique characteristics common to hillside properties including land form, vegetation and scenic quality among others. Innovation in design is encouraged as long as the end result is one which respects the hillside and is consistent with the purposes expressed in this section and in the goals and objectives of the general plan;
- D. To ensure that development in the hillside areas shall be concentrated in those areas with the least environmental impact and shall be designed to fit the existing land form; consideration should be given to clustered housing.
- E. To preserve significant features of the natural topography, including swales, canyons, knolls, ridgelines, and rock outcrops. Development may necessarily affect natural features by, for

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example, roads crossing ridgelines. Therefore, a major design criterion shall be the minimization of such impacts;

- F. To provide a safe means of ingress and egress for vehicular and pedestrian traffic to and within hillside areas, with minimum disturbance to the natural terrain;
- G. To correlate intensity of development with the steepness of terrain in order to minimize grading, removal of vegetation, land instability and fire hazards;
- H. To provide in hillsides, alternative approaches to conventional flat land development practices by achieving land use patterns and intensities that are consistent with the natural characteristics of hill areas such as slopes, land form, vegetation and scenic quality; and
- I. To encourage the planning, design and development of home sites that provide maximum safety with respect to fire hazards, exposure to geological and geotechnic hazards, drainage, erosion and siltation, and materials of construction; provide the best use of natural terrain; and to prohibit development what will create or increase fire, flood, slide, or other safety hazards to public health, welfare, and safety.
- J. The intention of these guidelines is not necessarily to reduce density, but to insure a viable product, clustering should be considered, any unreasonable density will be questioned.

#### **Sec. 2**

- A. Definitions. The following definitions shall apply to this section:

"Contour" means a line drawn on a plan which connects all points of equal elevation.

"Contour grading" means a grading technique designed to result in earth forms which resemble natural terrain characteristics. Horizontal and vertical curve variations are often used for slope banks. Contour grading does not necessarily minimize the amount of cut and fill occurring.

"Cut" means the mechanical removal of earth material.

"Cut and fill" means the excavating of earth material in one place and depositing of it as fill in an adjacent place.

"Driveway" means a means of access over private property to a single residential unit.

"Effective bulk" means the effective visual bulk of a structure when seen from a distance of from below.

"Elevation" means height or distance above sea level.

"Erosion" means the process by which the soil and rock components of the earth's crust are worn away and removed from one place to another by natural forces such as wind and water.

"Fill" means a deposit of earth material placed by artificial means.

"Finish grade" means the final elevation of the ground surface after development, which is in conformity with the approved plan.

"Grading" means to bring an existing surface to a designed form by excavating, filling, or smoothing operations.

"Hillside" means refers to a parcel of land which contains grades in excess of ten (10) percent.

"Natural slope" means a slope which is not man-made. A natural slope may retain natural vegetation during adjacent grading operations or it may be partially or completely removed and replanted.

"Pad" means a level area created by grading to accommodate development.

"Ridge" means a long, narrow, conspicuous elevation of land.

"Roadway" means a means of access over private property to more than one residential unit.

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"Slope" means an inclined ground surface, the inclination of which is expressed as a ratio of horizontal distance (run) to vertical distance (rise), or change in elevation. The percent of any given slope is determined by dividing the rise by the run, multiplied by one hundred (100).

"Slope, man-made" means a manufactured slope consisting wholly or partially of either cut or filled material.

"Slope transition" means the area where a slope bank meets the natural terrain or a level graded area either vertically or horizontally.

B. Hillside Designation.

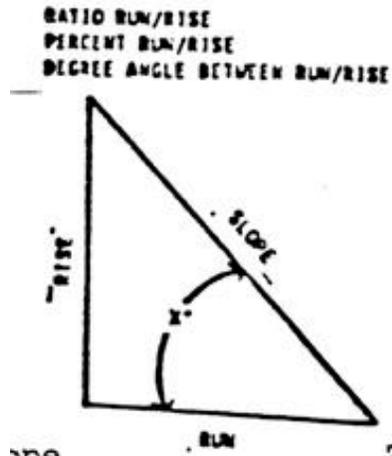
The following are guidelines for hillside slope categories to ensure that development will complement the character and topography of the land. The guidelines for one category may be applied to limited portions of the property in an adjacent category when a project is developed on property in more than one slope category. Clustering should be considered.

Slope Category	% Natural Slope	Site Guidelines
1	10 to 20	Special hillside architectural and design techniques that minimize grading are desired in this slope category. Structures shall conform to the natural topography and natural grade by using techniques such as split level foundations of greater than eighteen (18) inches, stem walls, stacking and clustering. Conventional grading may be considered by the city for limited portions of a project when its plan includes special design features, extensive open space or significant use of green belts.
2	20 to 30	Development within this category shall be restricted to those sites where it can be shown that safety, environmental and aesthetic impacts can be minimized. Use of large lots, variable setbacks and variable building structural techniques such as stepped foundations are expected. Structures shall be designed to minimize the visual impact of their bulk and height. The shape, materials, and colors of structures shall blend with the natural environment. The visual and physical impact of driveways and roadways shall be minimized by eliminating sidewalks, and reducing their widths to the minimum required for emergency access and following natural contours, using grade separations where necessary and otherwise minimizing grading.
3	30 & over	This is an excessive slope conditions and development is extremely limited.

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- C. Density Within Single-Family Residential Zones. The maximum number of residential dwelling units which may be permitted to be constructed on a given parcel of land shall be the calculated base zoning development limit less the number eliminated due to environmental constraints as determined pursuant to these guidelines.



Average % of Slope in Natural Condition	Zoning Density Allowed if No Clustering is Presented
0 - 10%	100%
10.1 - 15%	80%
15.1 - 20%	60%
20.1 - 25%	40%
25.1 - 30%	20%
over 30%	0%

The combined maximum "percentage of base zoning density allowed" shall not reduce total number of units to less than twenty-five (25) percent of maximum base zoning for an individual project.

1. Environmental Constraints. The maximum number of residential dwelling units shall be as determined by environmental assessment, unless such development constraints can be shown to have been eliminated or mitigated to the satisfaction of the planning commission or of the city council on appeal.
2. Exemption. Other provisions of this subsection to the contrary notwithstanding, lots of record as of the date of adoption of these guidelines shall be entitled to a minimum of one dwelling unit, provided that required zoning and land development criteria are met.

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- 3. Administration. These guidelines shall be administered in conjunction with the provisions of Title 9, Chapter 20 of the Colfax Municipal Code. Where a conflict or inconsistency exists, the more restrictive regulation shall apply.
- D. Hillside Development Guidelines. The following hillside development guidelines are intended to ensure the appropriate development of hillside areas. The guidelines are for the use, development, or alteration of land in hillside areas. The guidelines are to be utilized to provide direction to encourage development which is sensitive to the unique characteristics common to hillside properties.

The purpose for the guidelines is to protect existing hillsides and to encourage innovation, to the extent that the end result is one which respects the hillside and is consistent with the goals and policies of these guidelines. The guidelines shall be used by the planning commission and the city council in evaluating those development proposals in which it is proposed to go beyond the minimum density standards herein specified.

**Sec. 3 Application filing requirements.**

For all site development applications requiring planning commission review, the following information shall be submitted for proposed development areas in which topography exceeds ten (10) percent:

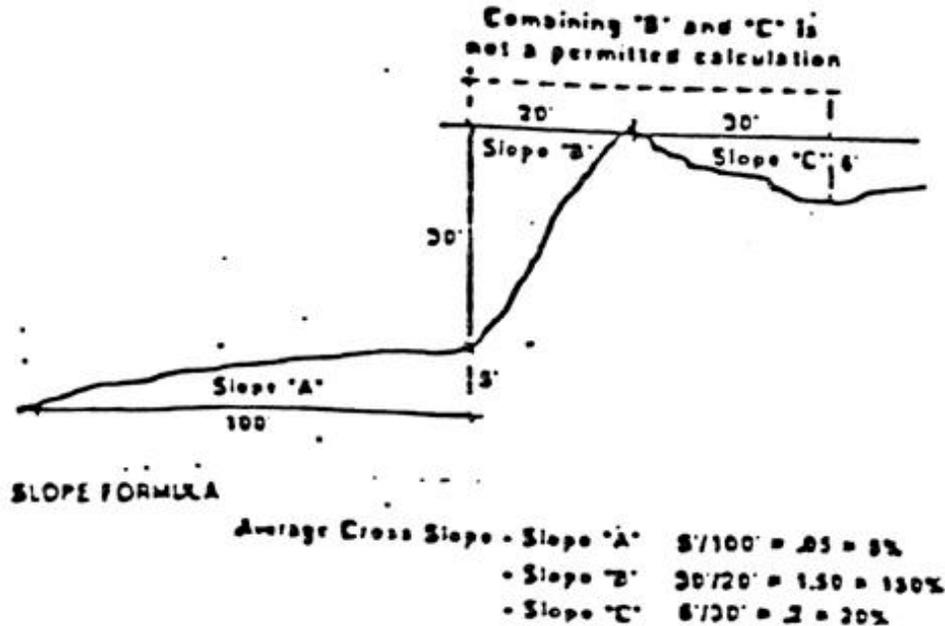
- A. A natural features map, which shall identify all existing slope banks, ridgelines, canyons, natural drainage courses, federally recognized blue line streams, rock outcroppings, and existing vegetation or accomplished by aerial photograph or site visit.
- B. A conceptual grading plan, which shall include the following items in addition to those required by the Municipal Code or as part of the submittal requirements checklist:
  - 1. A legend with appropriate symbols which should include, but not be limited to, the following items: significant retaining walls and curbs and burms, significant trees, spot elevations as identified by paragraph A, pad and finished floor elevations, and change in direction of drainage.
  - 2. A map with proposed fill areas colored in brown and cut areas colored in red.
  - 3. Contours shall be shown for existing and natural land conditions and proposed work. Existing contours shall be depicted with a dashed line with every fifth contour darker, and proposed contours shall be depicted as above except with a solid line. Contours shall be shown according to the following schedule:

Natural Slope	Maximum Interval Feet
0% to 20 %	2
Above 20%	5

- C. A slope analysis map for the purpose of determining the amount and location of land as it exists in its natural state falling into each slope category as specified below. For the slope map, the applicant shall use a base topographical map of the subject site, prepared and signed by a registered civil engineer or licensed land surveyor, which shall have a scale of not less than one inch to one hundred (100) feet and a contour interval may be five feet when the slope is more than twenty (20)

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percent. This base topographical map shall include all adjoining properties within one hundred fifty (150) feet of the site boundaries. Delineate slope bands in the range of to ten (10) percent, ten (10) up to twenty (20) percent, twenty (20) up to thirty (30) percent, thirty (30) percent or greater. Also included shall be a tabulation of the land/area in each slope category specified in acres.



The exact method for computing the percent slope and area of each slope category should be sufficiently described and presented so that a review can be readily made. Also, a heavy, solid line indicating the ten (10) percent grade differential shall be clearly marked on the plan, and an additional copy of the map shall be submitted with the slope percentage categories depicted in contrasting colors.

- D. Provide a sufficient number of slope profiles to clearly illustrate the extent of the proposed grading. A minimum of three slope profiles shall be included with the slope analysis. The slope profiles shall include the greatest topographical relief or differences as possible; more may be requested based on the project.
  - 1. At least two of the slope profiles shall be roughly parallel to each other and roughly perpendicular to existing contour lines.
- E. Both the slope analysis and slope profiles shall be stamped and signed by either a registered landscape architect, civil engineer, or land surveyor indicating the datum, source, and scale of topographic data used in the slope analysis and slope profiles, and attesting to the fact that the slope analysis and slope profiles have been accurately calculated and identified.
- F. Tentative maps and final maps shall accurately depict the building envelope for each lot when required by the planning director or planning commission.
- G. Exceptions to the filing requirements shall be determined by the city planner or planning commission.

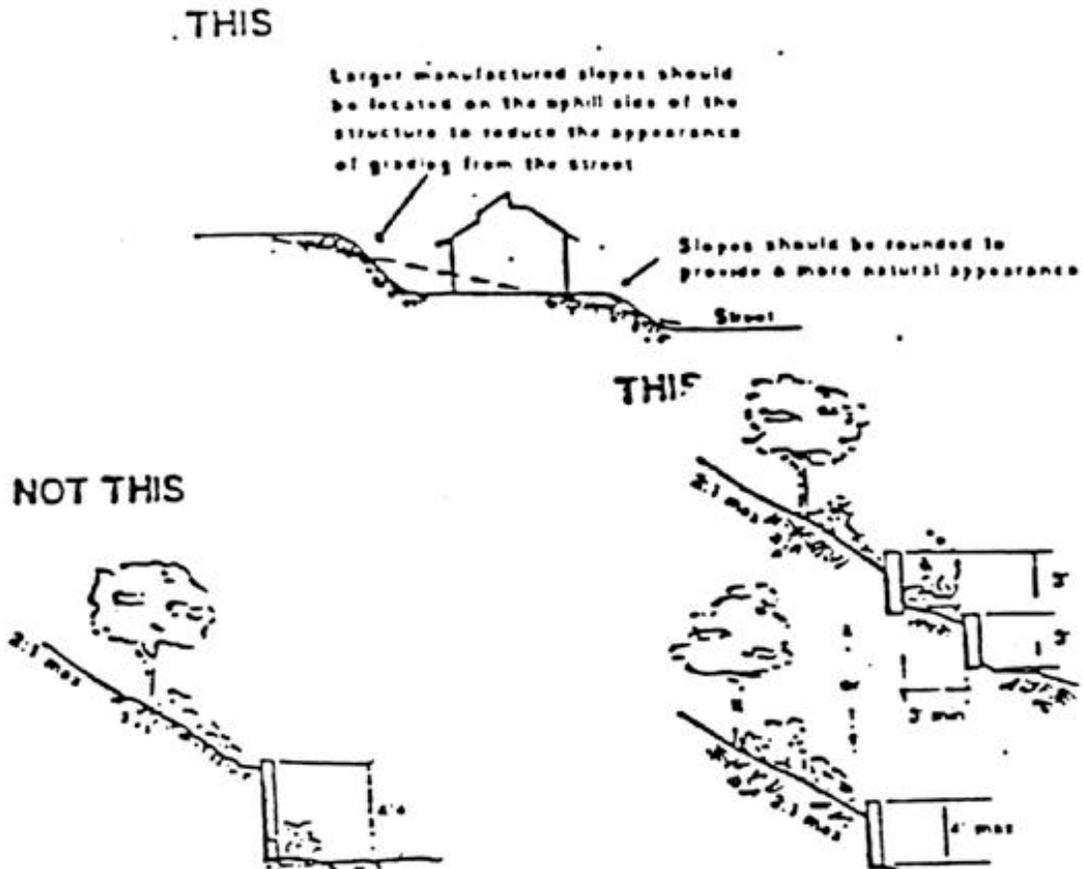
**Sec. 4 Public safety standards.**

- A. Fire Protection Standards.
  - 1. Review plans and obtain comments from fire marshall/fire chief.
- B. Grading. The following standards define basic grading techniques which are consistent with the guidelines and avoid unnecessary cut and fill. Refer also to code sections for site development.

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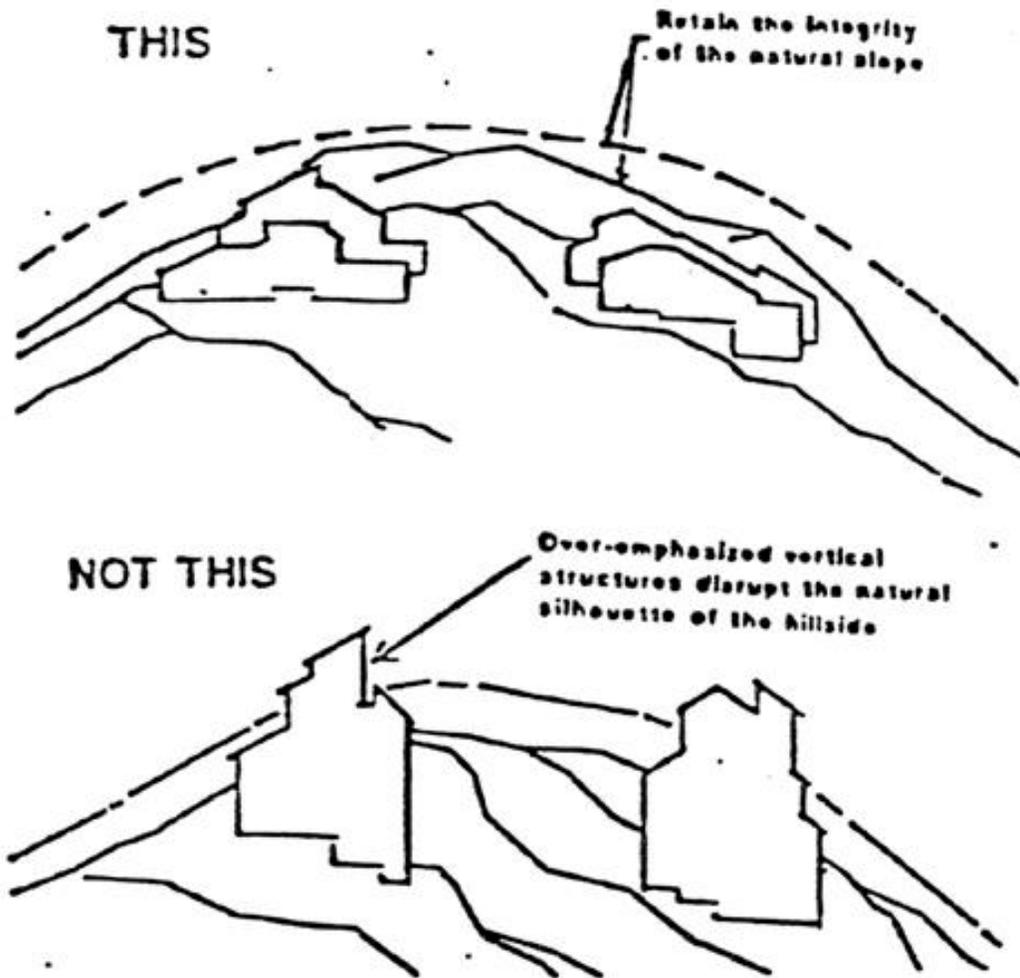
1. Standards.
  - a. Grading shall be phased so that prompt revegetation or construction will control erosion. Where possible, only those areas which will be built on, resurfaced, or landscaped shall be disturbed. Top soil shall be stockpiled during rough grading and used on cut and fill slopes. Revegetation of cut and fill slopes shall occur within three months (weather permitting) to the satisfaction of the city.
  - b. Grading operations shall be planned to avoid the rainy season, October 15 to April 15.
  - c. Cut slopes for purposes of establishing building pads shall not exceed twenty (20) feet in height and fill slopes shall not exceed eight feet in depth at any point on the site.
  - d. Retaining walls associated with lot pads are limited to:
    - i. Upslope (from the structure) walls not to exceed six feet in height. Terraced retaining structures may be utilized which are separated by a minimum of three feet and appropriate landscaping.
    - ii. Downslope (from structures, walls not to exceed three and one-half feet in height. Where an additional retained portion is necessary due to unusual or extreme conditions, (such as lot configuration, steep slope or road design) then the use of terraced retaining structures shall be considered on an individual lot basis. Terraced walls shall not exceed three feet in height and shall be separated by a minimum of three feet and appropriate landscaping. Terracing shall not be used as a typical solution within a development.
    - iii. Retaining walls which are an integral part of the structure shall not exceed eight feet in height. Their visual impact shall be mitigated through contour grading and landscape techniques.
  - e. Contour grading techniques should be used to provide a variety of slope percentage and slope direction in a three dimensional undulating pattern similar to existing, adjacent terrain. Hard edges left by cut and fill operations should be given a rounded appearance that closely resembles the adjacent natural contours.
  - f. Where possible, graded areas should be designed with manufactured slopes located on the uphill side of structures, thereby, hiding the slope behind the structure.



- g. The following factors shall be taken into consideration in the design of a project:
- a. When space and proper drainage requirements can be met with approval by the city engineer, rounding of slope tops and bottoms shall be accomplished.
  - b. When slopes cannot be rounded, vegetation shall be used to alleviate a sharp, angular appearance.
  - c. A rounded and smooth transition shall be made when the planes of man-made and natural slopes intersect.
  - d. When significant landforms are "sliced" for construction, the landforms shall be rounded as much as possible to blend into natural grade.
  - e. Manufactured slope faces shall be varied to avoid excessive "flat-planed" surfaces.
  - h. No manufactured slope shall exceed 30 feet in height between terraces or benches.

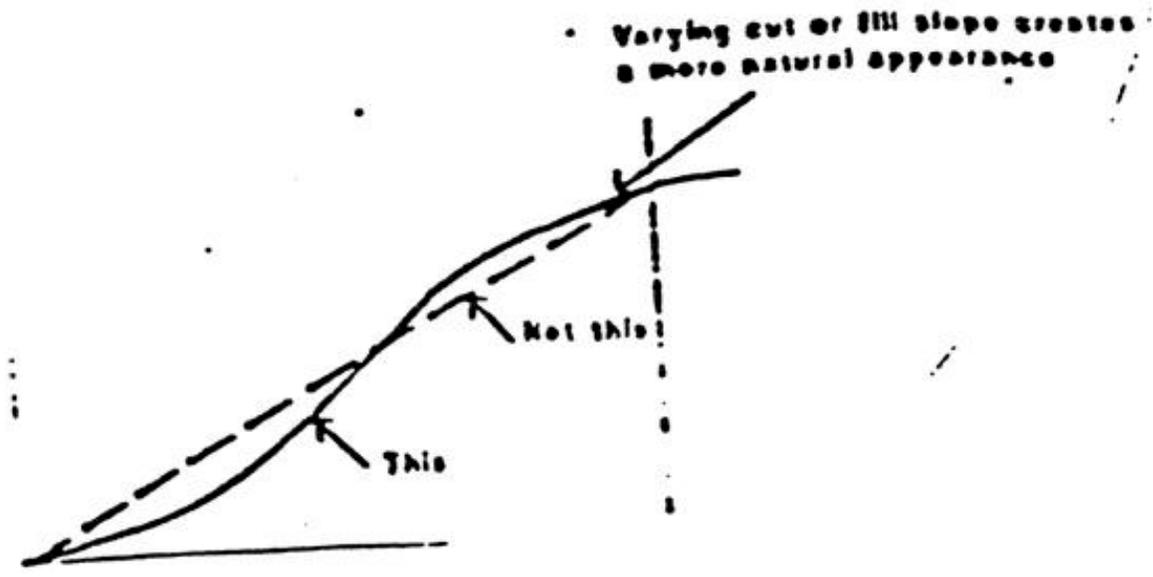
### Examples of Design

- a. Maintain roof lines below crest of ridgelines.

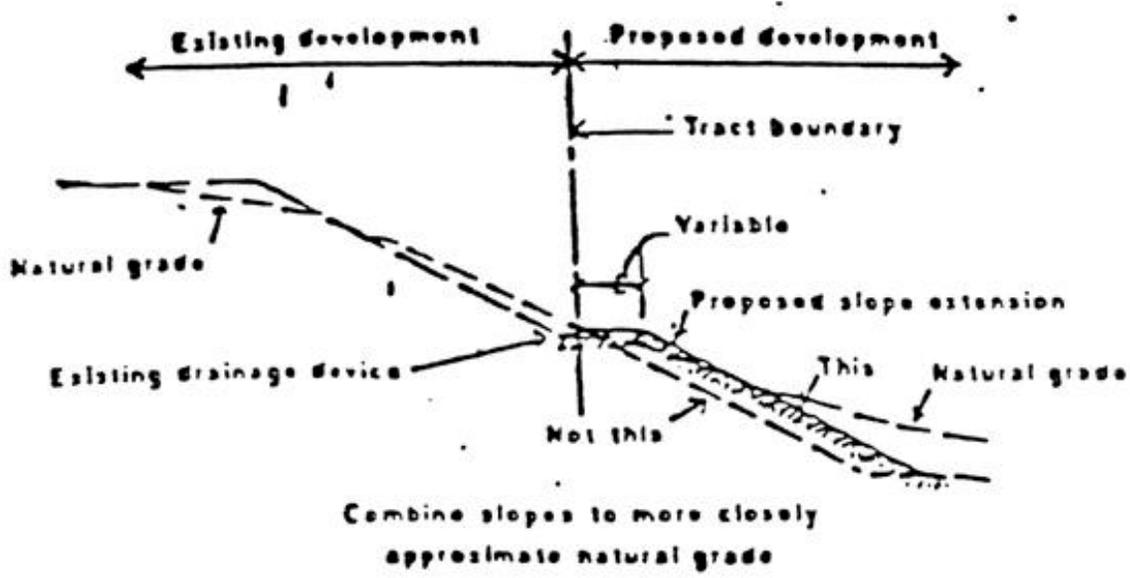


- b. Where cut or fill conditions are created, slopes should be varied rather than left at a constant angle which may be unstable or create an unnatural, rigid, "man-made" appearance.

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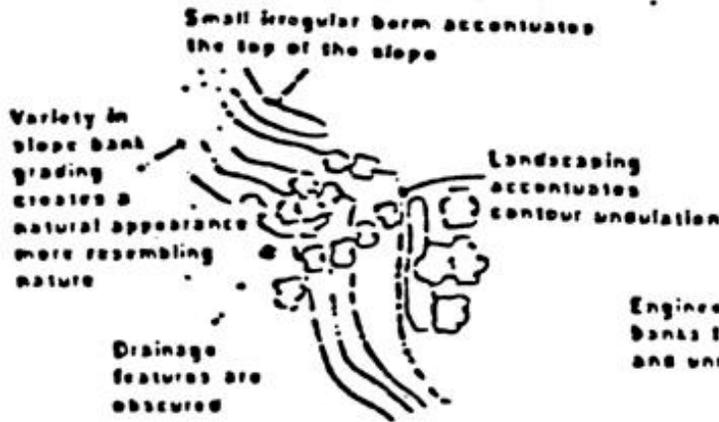
c. The angle of any graded slope should be gradually adjusted to the angle of the natural terrain.



d. Hard edges left by cut and fill operations should be given a rounded appearance that closely resembles the natural contours of the land.

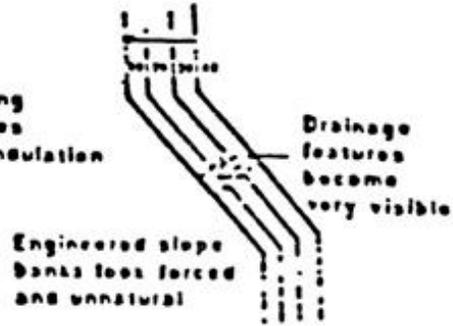
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Use of soil and uneven slopes

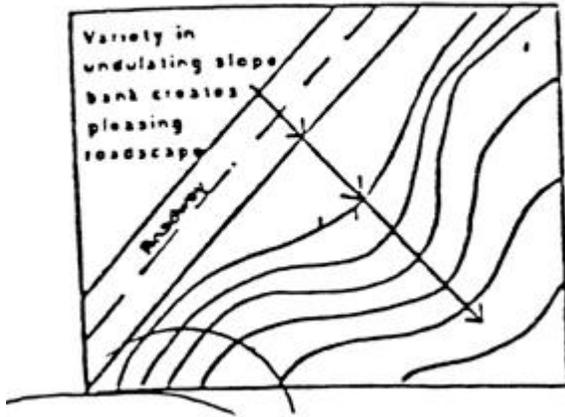
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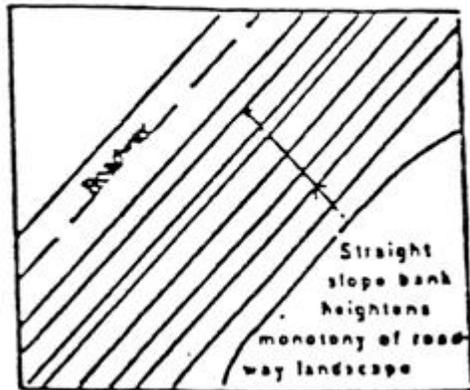
Use of angles and uniform slopes

- d. Manufactured slopes adjacent to roadways should be modulated by sufficient berming, regrading, and landscaping to create visually interesting and pleasing streetscapes.

**THIS**



**NOT THIS**



**Sec. 5 Drainage.**

- A. Where a conflict exists between the provisions of this section and Chapter 70 of the Uniform Building Code, the drainage, soils and geology provisions of Chapter 70 shall prevail, unless in the opinion of the City Engineer, the provisions of this section meet sound engineering standards consistent with the standards of Chapter 70.
- B. Standards.
  - 1. Debris basins, rip rap, and energy dissipating devices shall be provided where necessary to reduce erosion when grading is undertaken. Except for necessary flood control facilities,

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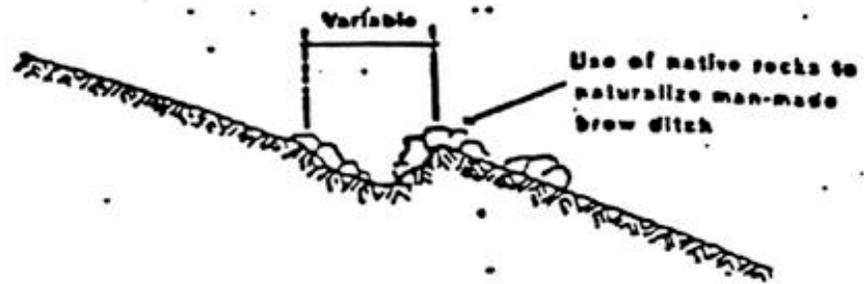
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significant natural drainage courses shall be protected from grading activity. In instances where crossing is required, a natural crossing and bank protection shall be preferred over steel and concrete systems. Where brow ditches are required, they shall be naturalized with plant materials and native rocks.

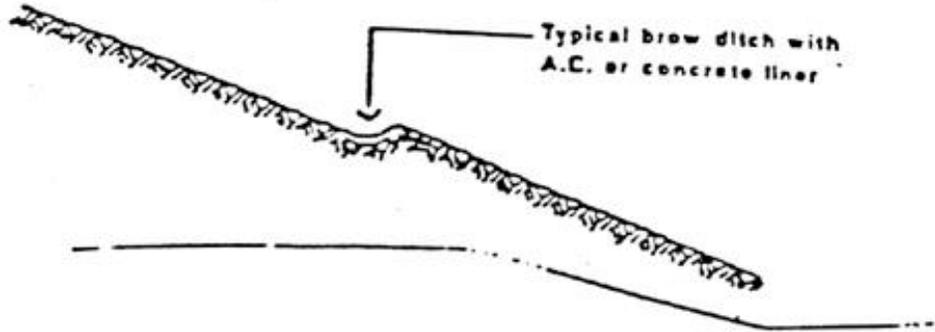
2. Building and grading permits shall not be issued for construction on any site without an approved location for disposal of runoff waters, including but not limited to such facilities as a drainage channel, public street or alley, or private drainage easement.
3. All cuts shall be protected from erosion.
4. The use of cross lot drainage shall be subject to planning commission review and may be approved after demonstration that this method will not adversely affect the proposed lots or adjacent properties, and that it is absolutely required in order to minimize the amount of grading which would result with conventional drainage practices. Where cross lot drainage is utilized, the following shall apply:
  - a. Project Interiors. Drainage facilities may cross lots if an easement is provided and either within an improved, open V-swale gutter, which has a naturalized appearance, or within a closed drainage pipe which shall be a minimum twelve (12) inches in diameter. This drainage shall be conveyed to either a public street or to a drainage easement. If drainage is conveyed to a private easement, it shall be maintained by a homeowners association, otherwise the drainage shall be conveyed to a public easement. The easement width shall be determined on an individual basis and shall be dependent on appropriate hydrologic studies and access requirements.
  - b. Project Boundaries. Onsite drainage shall be conveyed in an improved open V-swale, gutter, which has a naturalized appearance or within an underground pipe in either a private drainage easement, which is to be maintained by a homeowner's association, or it shall be conveyed in a public easement. The easement width shall be dependent on appropriate hydrologic studies and access requirements.

**DESIGN EXAMPLE: BROW DITCH @ TOP OF SLOPE.**

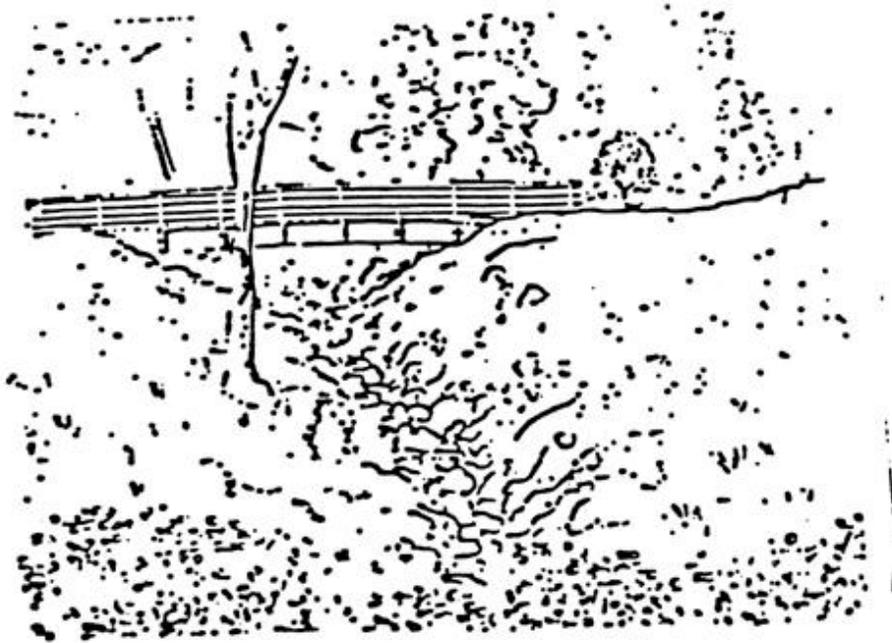
**. THIS**



**NOT THIS**



- C. Where possible, drainage channels should be placed in inconspicuous locations, and more importantly, they should receive a naturalizing treatment including native rock, colored concrete and landscaping, so that the structure appears as an integral part of the environment.



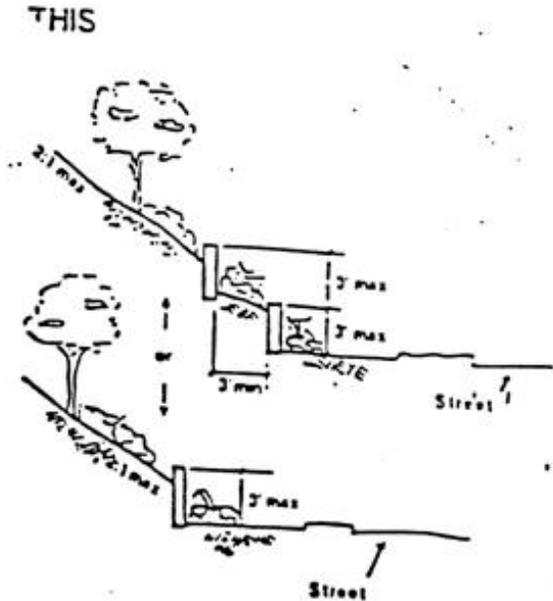
- D. Natural drainage courses should be preserved and enhanced to the extent possible. Rather than filling them in, drainage features should be incorporated as an integral part of the project design.

**Sec. 6 Access and parking.**

A. Standards.

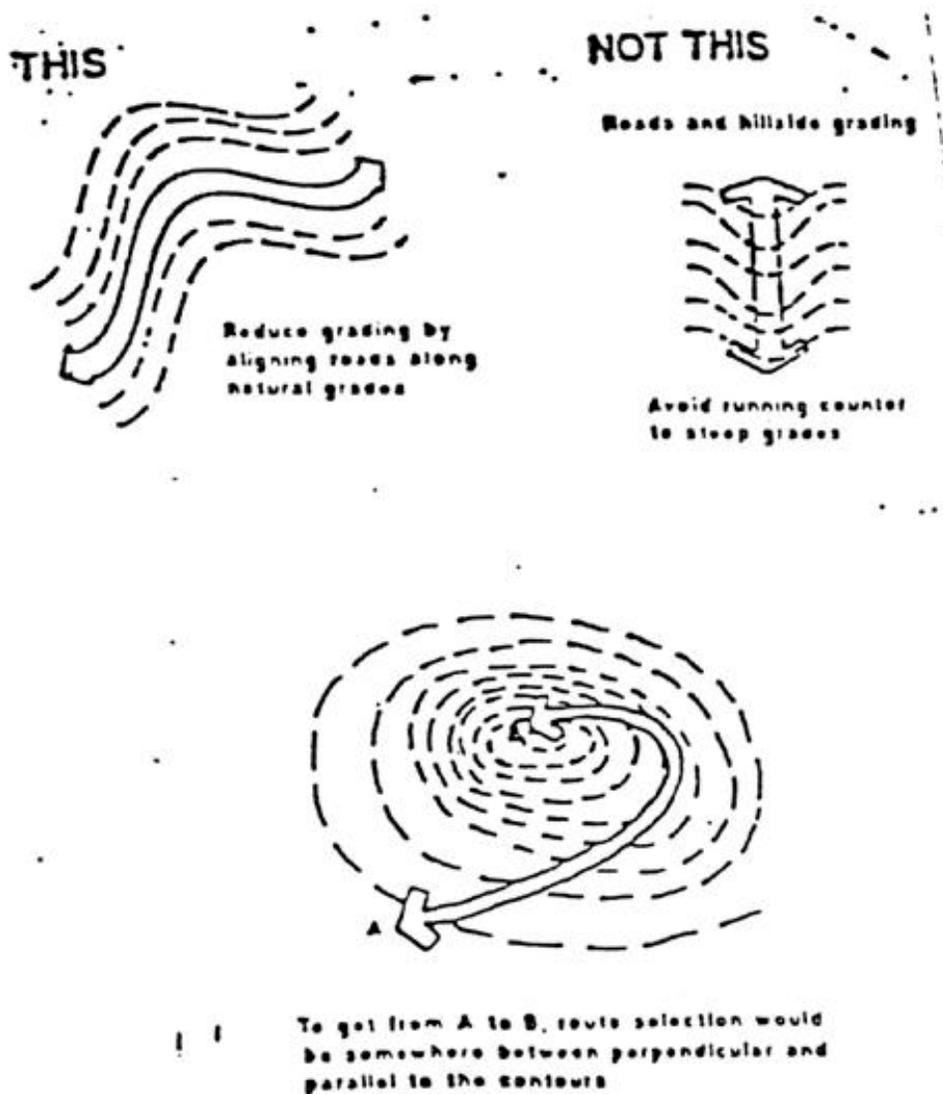
1. Normal driveway slopes should not exceed fifteen (15) percent. Driveway grades up to a maximum of twenty (20) percent may be permitted under severe grading circumstance if approved by the city engineer, and shall be aligned with the natural contours of the land. Proper design considerations shall be employed, including such items as vertical curves and parking landings. In any case, parking landings shall be utilized on all drives over ten (10) percent grade.
2. Grooves for traction shall be incorporated into the construction of driveways with a slope of twenty (20) percent or combine a coarse paving matter into the construction.

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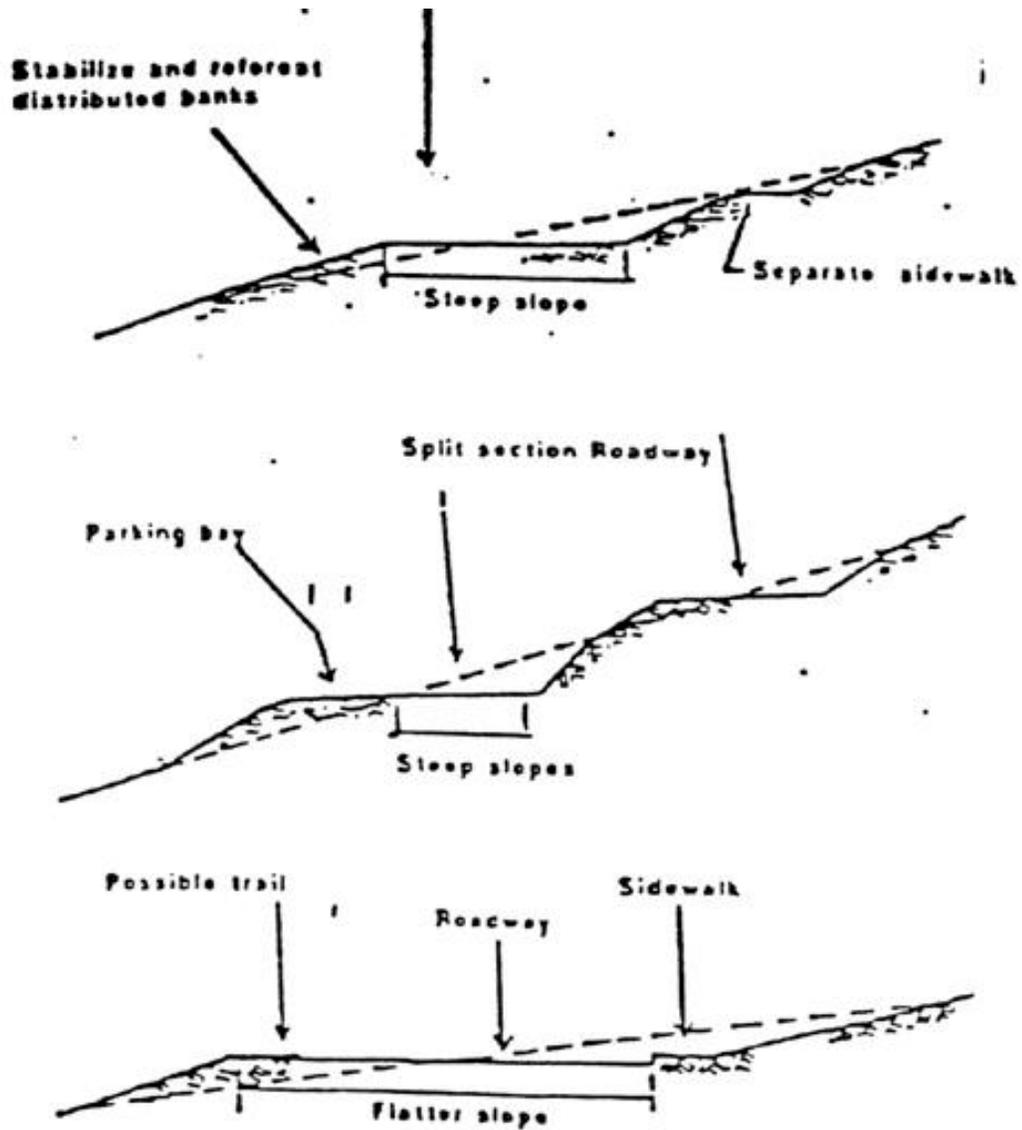
3. Where retaining walls are necessary adjacent to roadways or within street setbacks, they shall be limited to three feet in height in order to avoid obstruction of motorists' and pedestrians' field of view, and to create an aesthetically pleasing streetscape. No more than three, three foot high terraced or stepped retaining wall shall be utilized which are separated by a minimum of three feet and appropriate landscaping. Slopes not greater than fifty (50) percent (or 2:1) will be permitted upon review and approval by the fire marshall.
4. Driveways shall enter public/private streets maintaining adequate line of sight.
5. Cul-de-sacs to a maximum of seven hundred fifty (750) feet in length may be permitted with a maximum of thirty (30) dwelling units, and to a maximum of one thousand (1,000) feet in length with a maximum of twenty (20) dwelling units and shall terminate with a turn around area not less than thirty-five (35) feet in radius to curb face. Interim dead-end roads which will be extended in the future shall not be defined as cul-de-sacs.
6. In major subdivisions with only one primary access, a secondary emergency access shall be provided.
7. All other street improvement standards shall conform to standard plans and specifications for public streets of the city of Colfax, or as approved for each individual project.
8. The planning commission or city council may approve modifications to the above right-of-way design standards provided such modifications are in substantial conformance with the objectives stated in this section, without the need for a variance application.
9. Roadways and driveways, where feasible, should conform to the natural landform. They should not greatly alter the physical and visual character of a hillside by creating large notches in ridgelines or by defining wide straight alignments or by building switch-backs on visually prominent hillside, split sections and parking bays should be utilized in the layout of hillside streets.

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10. Where road construction is permitted in hillside areas, the extent of vegetation disturbance and visual disruption should be minimized by the combined use of retaining structures and regrading to approximate the natural slope. The following techniques should be used where feasible:
  - a. Utilize landform planting in order to create a natural appearance and provide a sense of privacy.
  - b. Reduce the visual and safety impacts by use of terraced retaining walls and landscaping.
  - c. Split roadways increase the amount and appearance of landscaping and the median can be used to handle drainage.

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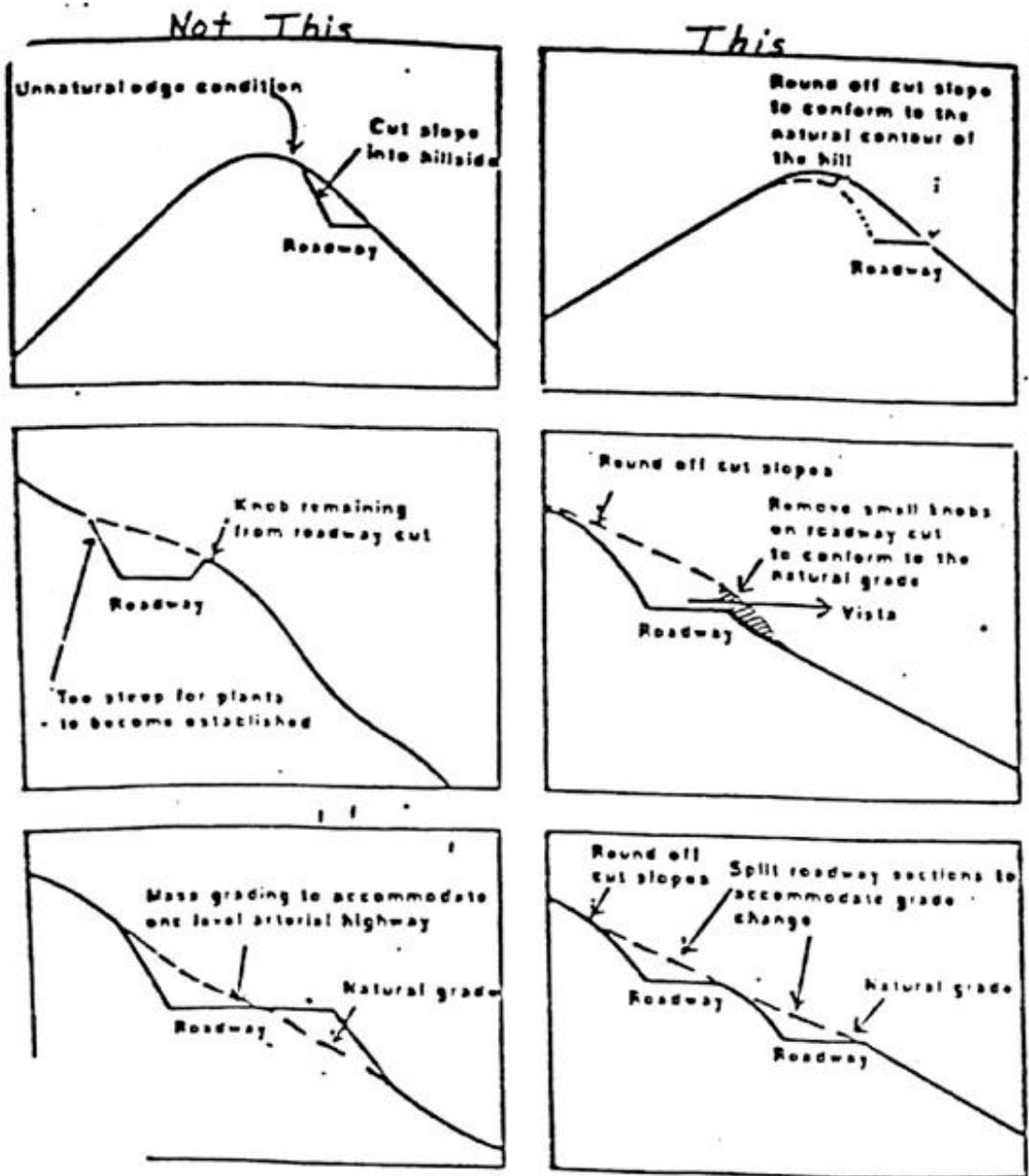


**Sec. 7 Trails.**

A. Trails are encouraged to be an integral part of a hillside area and can provide recreation areas for equestrian, hiking and biking uses. They can also function as a means to take up grade or to convey drainage.

In hillside areas, it is not always necessary to provide full improvements for trails. A more natural experience may be achieved, and the amount of grading required can be reduced, by providing minimal improvements in appropriate areas, such as undevelopable, steep slopes.

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**Sec. 8 Standards.**

A. Standards.

1. The dimensions of a building parallel to the contour lines shall be maximized in order to limit the amount of cutting and filling and to better fit the house to the natural terrain.

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**THIS**

Terraced decks do not increase building bulk

Effective bulk with or without decks



Building correctly fits into the ground and minimizes the effect on the hillside



Use of roof decks, low level decks, and side of building decks

Terracing reduces bulk



Effective bulk



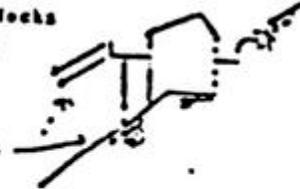
Effective bulk

Smaller overhangs for individual floors or windows help break-up mass and protect against excessive sunlight

**NOT THIS**

Overhanging decks make building seem more massive

Effective bulk



High profile building stands out on the hillside

Avoid decks hanging from the downhill side with long pole supports



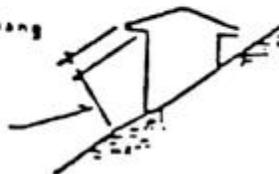
Cantilever makes building appear taller, more monumental

Effective bulk

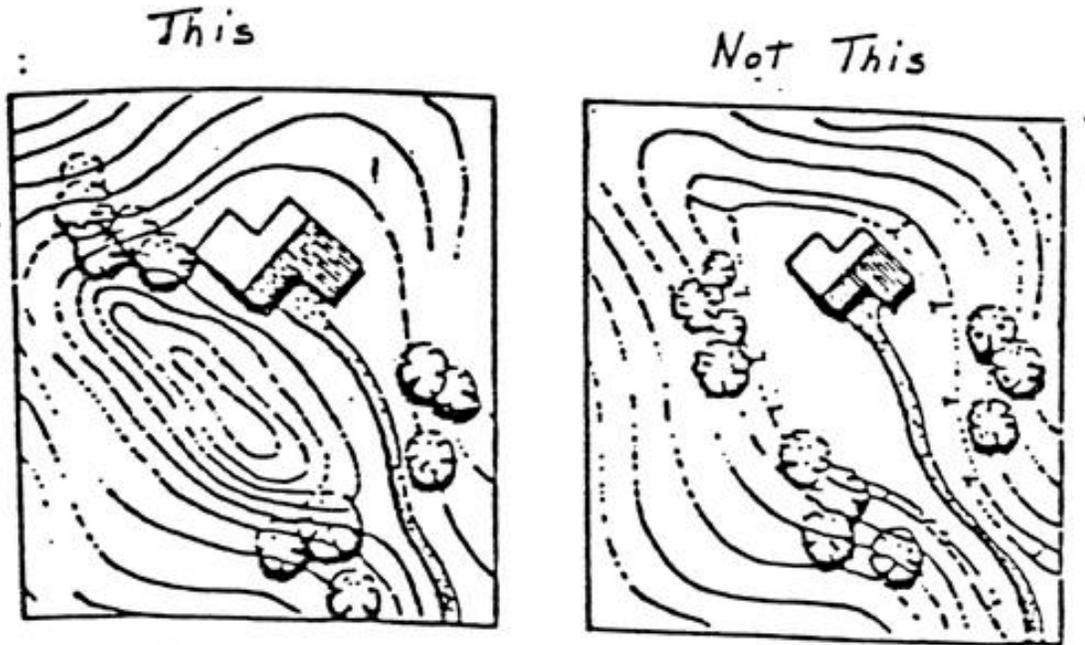


Excessive roof overhang results in additional visual bulk

Effective bulk



2. Design of building sites should be sensitive to the natural terrain. Structures should be located in such a way as to minimize necessary grading and to preserve natural features such as prominent knolls or ridgelines.
3. Views of significant visual features as seen from both within and outside a hillside development should be preserved. The following provisions shall be taken into consideration:
  - a. Dwelling should be oriented to allow view opportunities, although such views may be limited. Residential privacy should not be unreasonably sacrificed.
  - b. Any significant public vista or view corridor as seen from a secondary, collector or major arterial should be protected.
4. Projects should incorporate variable setbacks, multiple orientations and other sit planning techniques to preserve open spaces, protect natural features and offer views to residents.

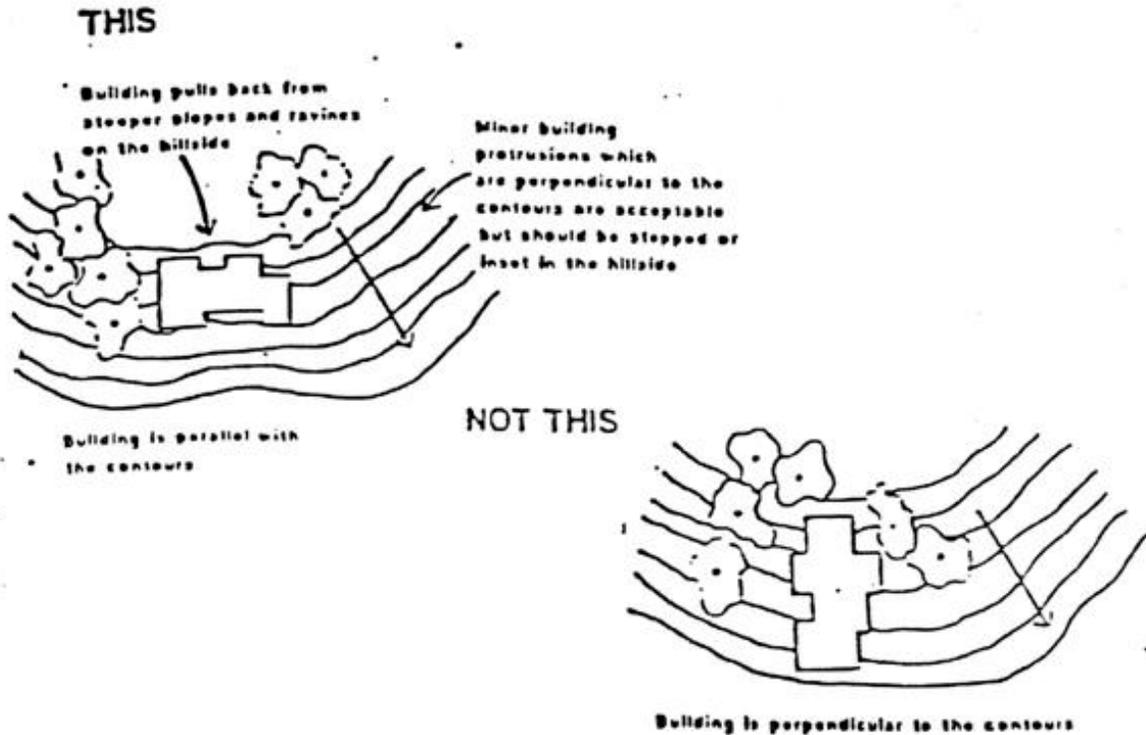


**Sec. 9 Architecture.**

A. Standards.

1. The form, mass and profile of the individual buildings and architectural features should be designed to blend with the natural terrain and preserve the character and profile of the natural slope. Some techniques which may be considered include:
  - a. Split pads, stepped footings and grade separations to permit structure to step up the natural slope.
  - b. Detaching parts of a dwelling such as a garage.
  - c. Avoid the use of gable ends on downhill elevations. The slope of the roof should be oriented in the same direction as the natural slope and should not exceed natural slope contour by twenty (20) percent.
2. Avoid excessive cantilevers on downhill elevations.
3. Excavate underground or utilize below grade rooms to reduce effective bulk and to provide energy efficient and environmentally desirable spaces. However, the visible area of the building shall be minimized through a combined use of regrading and landscaping techniques.
4. Use roofs on lower levels for the deck open space of upper levels.
5. Building materials and color schemes should blend with the natural landscape of earth tones and natural chaparral vegetative growth.
6. To the extent possible, the width of a building measured in the direction of the slope, shall be minimized in order to limit the amount of cutting and filling and to better "fit" the house to the natural terrain.

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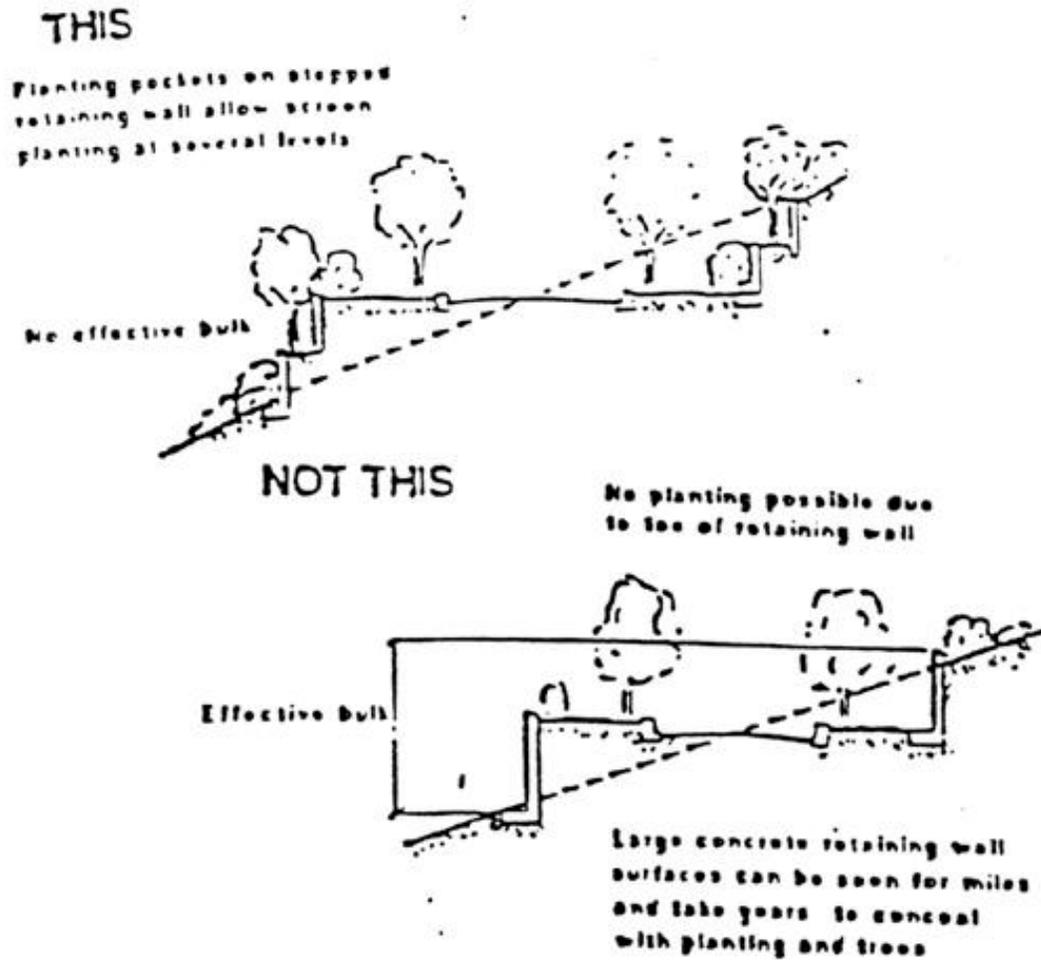


**Sec. 10 Fences and Landscaping.**

A. Standards.

1. Within the front yard (street to structure), walls and fencing, not exceeding six feet in height, visible from roadways or public rights-of-way shall be visually open and non-opaque.
2. Privacy walls and fences, not exceeding six feet in height, are permitted adjacent to structures or in rear yards, in order to provide a private outdoor area. Walls and fences shall be of materials and colors compatible with the structure's facade.
3. Native or naturalized plants or other plant species that blend with the landscape shall be utilized in all areas with required planting.
4. Fire retardant plant materials shall be utilized. Plants selected as ground cover, shrubs or trees shall be from the list as approved by the city.
5. A permanent irrigation system, for purposes of establishing and maintaining required planting, shall be installed on all slopes. The emphasis shall be toward using plant materials that will eventually need minimal irrigation. Water and energy conservation techniques shall be utilized including but not limited to such items as drip irrigation.

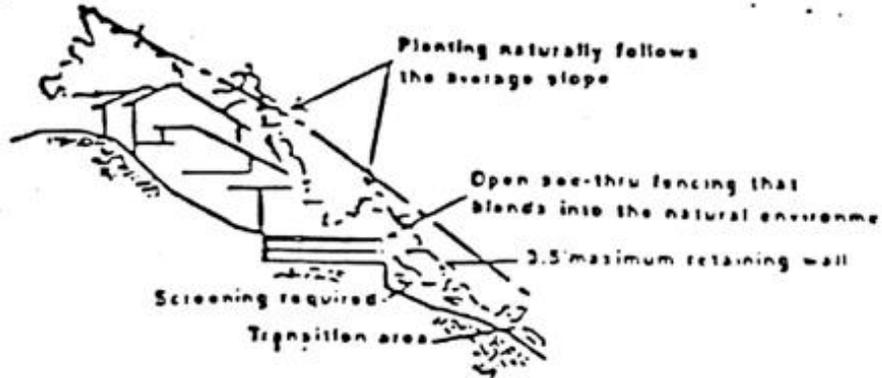
Chapter 16.56 DESIGN AND IMPROVEMENT STANDARDS



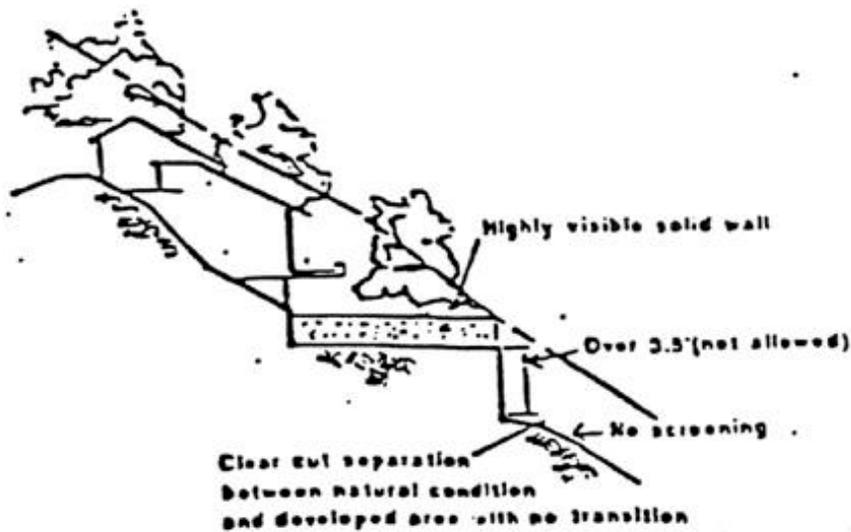
6. Slopes with required planting shall be planted with informal clusters of trees and shrubs to soften and vary the slope plane. Where slopes are 2:1 and five feet or greater in height, jute netting shall be used to help stabilize planting and minimize soil erosion.
7. Native vegetation shall be retained and supplemented within canyons and along natural drainage courses as allowed by state and federal resource agencies (State Department of Fish & Game, U.S. Fish and Wildlife, U.S. Army Corp. of Engineers).

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THIS



NOT THIS



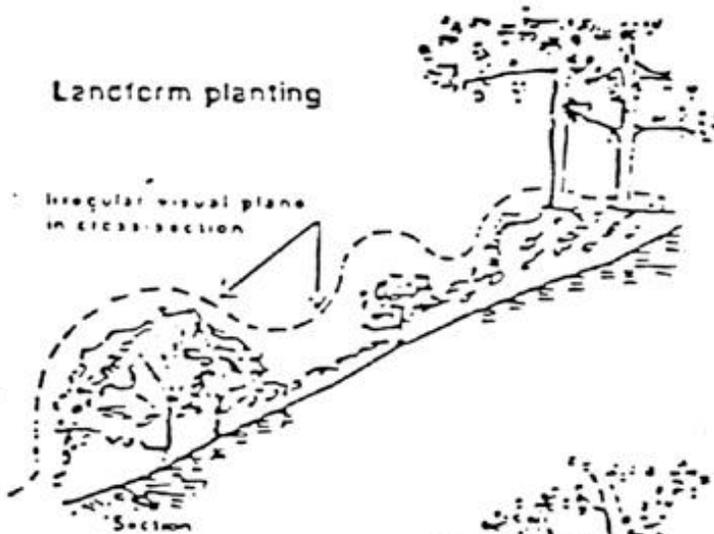
8. Natural landform planting should be used to soften manufactured slopes, reduce impact of development on steep slopes or ridgelines, and provide erosion control.
9. Maintain a "vegetative backdrop" by replanting with approved trees. The vegetation should screen structures to the extent possible at maturity and preserve the appearance of the natural hillside.



10. Natural landform planting should be used to soften manufactured slopes, reduce the impact of development on steep slopes or ridgelines, and provide erosion control.

**THIS**

Landform planting



**NOT THIS**

Conventional planting

