

ATTACHMENT 6

STRIKEOUT/UNDERLINE VERSION

Section 16.08.020 (Residential Districts General Development Standards), Table 16.08-03 (Residential (Single-Family) Zones General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

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TABLE 16.08-3 RESIDENTIAL (SINGLE-FAMILY) ZONES GENERAL DEVELOPMENT STANDARDS						
Development Feature	RR	ER-1	ER-2	ER-3	SF-1	SF-2⁽³⁾
Minimum Parcel Size	2.5 acres ⁽²⁾	1.0 acres	0.5 acres ⁽¹⁾	10,000 sq. ft.	7,200 sq. ft.	4,350 sq. ft.
Density Range	0.1 - 0.4 dus/acre	0.4 - 1.0 dus/acre	1.0 - 2.0 dus/acre	2.0 - 3.0 dus/acre	2.1 - 5.0 dus/acre	5.1 - 10.0 dus/acre
Minimum Parcel Width	100 feet	100 feet	100 feet	70 feet	70 feet	55 feet, 45 feet for parcels less than 5,000 square feet. This parcel width shall be increased to a 50 foot width for every fifth lot on a non-cul-de-sac parcel street frontage.
Minimum Livable Area	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.	1,000 sq. ft.
Setbacks						
Front	20 feet	20 feet	20 feet	20 feet	20 feet	20 feet
Interior	20 feet	20 feet	20 feet	10 feet	10 feet	7.5 feet per side. For parcels less than 5,000 sq. ft. = A minimum of an average of 12 feet overall for the combination on of both interior sides with no side setback of less than 5 feet.
Street Side	20 feet	20 feet	20 feet	20 feet	20 feet	10 feet
Rear	20 feet	20 feet	20 feet	20 feet	20 feet	20 feet
Accessory Structures	Consistent with Section 16.44.150					

Maximum Parcel Coverage	25%	25%	35%	35%	35% for two-story; 45% for single story	50%
Maximum Building Height ⁽⁴⁾	40 feet ⁽⁴⁾	40 feet ⁽⁴⁾	40 feet ⁽⁴⁾	35 feet ⁽⁴⁾	35 feet ⁽⁴⁾	35 feet ⁽⁴⁾
Minimum On-site Landscaping	25% of front yard area					
Small Attached Unit Configuration	Refer to Section 16.16.020 "Planned Residential Development General Standards" for development standards and project review and 16.16.030 "Planned Residential Development Design Standards and Parameters."					
<p>Notes:</p> <p>(1) A forty (40) foot wide buffer shall be provided along Washington Avenue (from Guava to Elm Street) in the public right-of-way. Landscaping to include six-foot high block wall, pedestrian trails and/or sidewalk, and landscaping berms to act as natural buffers. New residential projects will be allowed to access from Washington Avenue with residential lots abutting Washington Avenue are prohibited from taking direct access from Washington Avenue.</p> <p>(2) The minimum parcel area for properties zoned RR can include adjacent area to the centerline of the public street right-of-way.</p> <p>(3) For projects proposing a clustering configuration with detached single-family homes or within small attached unit configurations, please see 16.16.020 "Planned Residential Development General Standards" and 16.16.030 "Planned Residential Development Design Standards and Parameters" for requirements.</p> <p>(4) For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 (Hillside Development) and applicability.</p>						

Section 16.08.020 (Residential Districts General Development Standards), Table 16.08-04 (Residential (Multi-Family) Zones General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

TABLE 16.08-4 RESIDENTIAL (MULTI-FAMILY) ZONES GENERAL DEVELOPMENT STANDARDS				
Development Feature	MF-1⁽⁵⁾	MF-2	MF-3	MF-4
Minimum Parcel Size	5 acres	5 acres	5 acres	5 acres
Minimum Parcel Width	100 feet	100 feet	100 feet	100 feet
Density Range	10.1 - 15 du/acre	15.1 - 18.0 du/acre	18.1-29.0 du-acre	Min. 30 du/acre
Minimum Livable Area	500 sq. ft.	500 sq. ft.	500 sq. ft.	500 sq. ft.
Setbacks				
Street	10 feet	10 feet	10 feet	10 feet
Interior	10 feet	10 feet	10 feet	10 feet
Maximum Parcel Coverage	35%	35%	50%	None
Maximum Height Limit	50 feet	50 feet	60 feet	100 feet
Open Space (per dwelling unit)				
Private Open Space	60 sq. ft./upper floor 100 sq. ft./ground floor	60 sq. ft./upper floor 100 sq. ft./ground floor	All units 50 sq. ft. ⁽²⁾	All units 50 sq. ft. ⁽²⁾
Common Open Space	200 sq. ft.	200 sq. ft.	150 sq. ft. ⁽³⁾	150 sq. ft. ⁽³⁾
Recreational Amenities			For projects containing 25 or more dwelling units, provide one recreational amenity for each 30 dwelling units or fraction thereof ⁽⁴⁾	For projects containing 25 or more dwelling units, provide one recreational amenity for each 30 dwelling units or fraction thereof ⁽⁴⁾
Minimum On-site Landscaping	10% of the site area			
Notes:				
<p>(1) When adjacent to existing single-family residential use or zone, the building setback from the nearest property line shall be 10 feet for the first 25 feet in height, above 25 feet in height the setback shall be 20 feet, and above 50 feet, the setback shall be 30 feet.</p> <p>(2) For stand-alone multi-family residential projects or as part of a mixed-use development, each residential unit shall be provided with at least one area of private open space accessible directly from the living area of the unit, in the form of fenced yard or patio, a deck or balcony at</p>				

a minimum area of 50 square feet. The minimum dimension, width or depth of a balcony shall be 5 feet.

(3) All common open space shall be conveniently located and accessible to all dwelling units on the site. Common open space may include landscaping, pedestrian paths and recreational amenities. In projects containing fewer than 10 units, the common open space shall have a minimum width and depth of 10 feet. In projects containing 10 or more units, the minimum width and depth shall be 20 feet.

(4) One common recreational amenity shall be provided for each 30 units or fraction thereof. The following listed amenities satisfy the above recreational facilities requirements. Recognizing that certain facilities serve more people than others, have a wider interest or appeal, and/or occupy more area, specified items may be counted as two amenities, as noted. In all cases, each square foot of land area devoted to a recreational amenity shall be credited as common open space on a 1:1 basis.

- a. Clubhouse (two)
- b. Swimming Pool (two)
- c. Tennis, Basketball or Racquetball court
- d. Weightlifting facility
- e. Children's playground equipment
- f. Sauna or Jacuzzi
- g. Day Care Facility (two)
- h. Other recreational amenities deemed adequate by the director.

(5) For projects proposing a clustering configuration with detached single-family homes or within small attached unit configurations, please see [16.16.020](#) "Planned Residential Development General Standards" and [16.16.030](#) "Planned Residential Development Design Standards and Parameters" for requirements.

[\(6\) For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 \(Hillside Development\) and applicability.](#)

Section 16.08.030(A)(5) (Single-family Residential Design Standards and Design Features) of the Murrieta Municipal Code is hereby amended in part to read as follows:

16.08.030 Single-family Residential Design Standards and Design Features.

...

“5. Walls.

a. Standard: Walls shall be designed using masonry materials such as split face and slumpstone, with colors that complement the architectural design of adjacent buildings.

b. Standard: Walls adjacent to streets shall run in a continuous plane for more than forty-eight (48) feet without incorporating at least two of the following design features:

- 1) A minimum two-foot change in plane for at least ten feet;
- 2) A minimum eighteen- (18-) inch raised planter for at least ten feet;
- 3) A minimum eighteen- (18-) inch change in height for at least ten feet;
- 4) Use of pilasters at forty-eight (48) foot intervals and at changes in wall planes and

height; or

- 5) A section of open grillwork a minimum four feet in height for at least ten feet.

c. Standard: Refer to Section 16.22.070(F) (Retaining Walls) for retaining wall criteria.”

...

Section 16.08.040(D)(7) (Multi-family Residential Design Standards) of the Murrieta Municipal Code is hereby amended in part to read as follows:

16.08.040 Multi-family Residential Design Standards.

...

“7. Walls.

a. Standard. Walls shall be designed using masonry materials such as split face and slump stone, with colors that complement the architectural design of adjacent buildings.

b. Standard: Walls adjacent to streets shall not run in a continuous plane for more than forty-eight (48) feet without incorporating at least two of the following design features:

- 1) A minimum two-foot change in plane for at least ten feet;
- 2) A minimum eighteen (18) inch raised planter for at least ten feet;
- 3) Use of pilasters at forty-eight (48) foot intervals and at changes in wall planes and height; or
- 4) A section of open grillwork a minimum four feet in height for at least ten feet.

c. Standard: [Refer to Section 16.22.070\(F\) \(Retaining Walls\) for retaining wall criteria.](#)

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Section 16.10.020 (Commercial District General Development Standards), Table 16.10-2 (Commercial Zones General Development Standards Requirements) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.10.020 Commercial District General Development Standards.

TABLE 16.10-2 COMMERCIAL ZONES GENERAL DEVELOPMENT STANDARDS REQUIREMENTS			
Development Feature	NC	CC	RC
Minimum Site Area ⁽¹⁾	None	None	30 acres ⁽²⁾
Setbacks			
Street	15 feet	25 feet	25 feet
Interior (adjacent to commercially zoned properties)	0 or 10 feet	0 or 10 feet	0 or 10 feet
Interior (adjacent to residential zoned properties)	20 feet minimum or equal to the building height, whichever is greater	20 feet minimum or equal to the building height, whichever is greater	20 feet minimum or equal to the building height, whichever is greater
Interior (adjacent to a freeway)	25 feet minimum	25 feet minimum	25 feet minimum
Accessory Structure	Consistent with Section 16.44.150		
Maximum Building Height ⁽⁴⁾	35 feet ⁽⁴⁾	50 feet ⁽⁴⁾	50 feet ⁽⁴⁾
Minimum On-site Landscaping ⁽³⁾	15 percent	20 percent	20 percent
<p>(1) Site area means a parcel or group of parcels, which are considered a unit for purposes of development.</p> <p>(2) Portions of a site may be developed prior to development of the entire site, if it can be demonstrated that the portion does not compromise the overall comprehensive development of the site.</p> <p>(3) See Chapter 16.28, Landscaping Standards for Water Efficient Landscaping.</p> <p>(4) For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 (Hillside Development) and applicability.</p>			

Section 16.11.020 (Office Districts General Development Standards), Table 16.11-2 (Office Districts General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.11.020 Office Districts General Development Standards.

TABLE 16.11-2 OFFICE DISTRICTS GENERAL DEVELOPMENT STANDARDS^{(1) (2)}		
Development Feature	Office	ORP
Required Building Setbacks		
Street Side	25 feet	25 feet
Interior	25 feet	25 feet
Interior (adjacent to residential zoned properties)	Twice Building Height	Twice Building Height
Interior (adjacent to a freeway)	25 feet minimum	25 feet minimum
Building Height		
Maximum Building Height ⁽³⁾⁽⁶⁾	90 feet ⁽⁶⁾	150 feet ⁽⁶⁾
Accessory Structures	Consistent with Section 16.44.150	
Landscaping		
Minimum On-site Landscaping ⁽⁴⁾	20 percent	20 percent
Minimum Parking Area Landscaping Based on Parking Lot Size ⁽⁵⁾		
5 - 24 spaces	5 percent	5 percent
25 - 49 spaces	7.5 percent	7.5 percent
50 spaces plus	10 percent	10 percent
Parking Requirements		
See Chapter 16.34 , Off-Street Parking and Loading Standards		
<p>(1) Portions of a site may be developed prior to development of the entire site, if it can be demonstrated that the portion does not compromise the overall comprehensive development of the site.</p> <p>(2) Development standards may vary for mixed use projects and projects over ten acres in size when comprehensively planned in compliance with Chapter 16.64, Master Development Plans, or Chapter 16.66, Specific Plans.</p> <p>(3) For structures greater than fifty (50) feet in building height and within 500 feet of existing residential homes, a public hearing shall be required, and the review shall include an evaluation of view sheds to maintain views for residential homes and a shadow survey to avoid buildings casting shadows on residential homes.</p> <p>(4) See Chapter 16.28, Landscaping Standards and Water Efficient Landscaping.</p> <p>(5) Minimum required parking lot landscaping area is included in required minimum on-site landscaping area.</p> <p>(6) For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 (Hillside Development) and applicability.</p>		

Section 16.12.020 (Business Park and Industrial Districts General Development Standards), Table 16.12-2 (Business Park and Industrial Zones General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.12.020 Business Park and Industrial Districts General Development Standards.

“

TABLE 16.12-2 BUSINESS PARK AND INDUSTRIAL ZONES GENERAL DEVELOPMENT STANDARDS			
Development Feature	BP	GI	GI-A
Minimum Parcel Size	10,000 square feet	20,000 square feet	10,000 square feet
Minimum Parcel Width	75 feet (minimum average)	75 feet (minimum average)	75 feet (minimum average)
Setbacks Required			
Street	25 feet	25 feet	25 feet
Interior	None	None	10 feet
Interior (adjacent to residential zoned properties)	20 feet minimum or equal to the building height		
Interior (adjacent to a freeway)	25 feet minimum		
Accessory Structures	Same as main structure		
From Residential Areas	50 feet	25 feet	25 feet
Maximum Height Limit ⁽²⁾	50 feet ⁽²⁾	40 feet ⁽²⁾	40 feet ⁽²⁾
Minimum On-site Landscaping ⁽¹⁾	15 percent	5 percent	5 percent
⁽¹⁾ See Chapter 16.28 , Landscaping Standards and Water Efficient Landscaping ⁽²⁾ For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 (Hillside Development) and applicability.			

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Section 16.12.030(A)(4) (Business Park and Industrial Zoning Districts Design Standards) of the Murrieta Municipal Code is hereby amended in part to read as follows:

16.12.030 Business Park and Industrial Zoning Districts Design Standards.

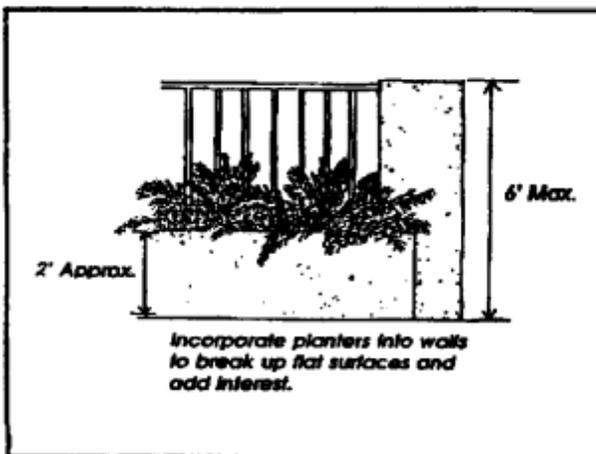
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“4. Screen Walls/Fencing.

a. Standard: If walls are not required for a specific screening or security purpose they shall not be provided. Walls provide hiding places for intruders and surfaces for graffiti. The intent is to keep walls as low as possible while performing their screening and security functions.

b. Standard: When security fencing is required, it shall not include barbed wire or razor wire. Chain link fencing is not allowed along street frontages. Security fencing shall be:

- 1) Masonry pillars with open metal grillwork;
- 2) Short (two-three feet) masonry walls with grillwork on top; and
- 3) Open grillwork or chainlink fence along side and rear property boundaries or used internally on the site if not visible from the public street.

c. Standard: Long expanses of fences and walls shall be offset and architecturally designed to create interest and avoid monotony. Landscape pockets, a minimum of twelve (12) feet wide and four feet deep, shall be provided at forty (40)-foot minimum intervals along the wall. These dimensions may vary somewhat, as long as the overall effect is the same, subject to approval by the director.



Make security fencing attractive

d. Standard: Refer to Section 16.22.070(F) (Retaining Walls) for retaining wall criteria.”

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Section 16.13.020 (Innovation District General Development Standards), Table 16.13-2 (Innovation District General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.13.020 Innovation District General Development Standards.

TABLE 16.13-2 INNOVATION DISTRICT GENERAL DEVELOPMENT STANDARDS ^{(1) (2)}	
Development Feature	Standard
Required Building Setbacks	
Front	10 feet minimum
Rear	10 feet minimum
Street Side ⁽³⁾	10 feet minimum
Interior Side ⁽³⁾	10 feet minimum
From Freeway	100 feet minimum
From Residential Districts	75 feet minimum when adjacent to a residential district
Maximum Building Height ⁽⁴⁾⁽⁷⁾	150 feet ⁽⁴⁾⁽⁷⁾
Minimum Ceiling Heights	14 feet - ground floor 10 feet - above ground floor
Minimum Lot Size	10,000 square feet for 1 and 2 stories, 20,000 square feet for 3 and 4 stories, and 40,000 square feet for 5 or more stories
Required Building Massing Stepbacks	
Floors 3 and Higher	Minimum 10 additional feet from face of second floor below
Accessory Structures	Same as main structure
Public Art Standards	
Minimum Public Art	One percent (1%) of construction costs (capped at \$400,000) to public art for projects where a building permit value exceeds \$5,000,000
Eligible Artworks	Public art located at or near the site; no commercial messages, including designs and logos
Landscaping/Open Space Standards	
Minimum On-site Landscaping/Open Space ⁽⁵⁾	20 percent of the project's lot area. Amenities such as court yards, roof top gardens, outdoor dining, food trucks/vendors spaces, shade structures, plazas, and artwork on-site may count towards landscaping/open space requirements.
Minimum Surface Parking Area Landscaping Standards⁽⁶⁾	
5 - 24 spaces	5 percent of the parking area
25 - 49 spaces	7.5 percent of the parking area
50 spaces plus	10 percent of the parking area
Parking Requirements	

See [Chapter 16.34](#), Off-Street Parking and Loading Standards

- (1) Portions of a site may be developed prior to development of the entire site, if it can be demonstrated that the portion does not compromise the overall comprehensive development of the site.
- (2) Development standards may vary for projects over ten acres in size when comprehensively planned in compliance with [Chapter 16.64](#), Master Development Plans, or [Chapter 16.66](#), Specific Plans.
- (3) Measured from right of way line or property line.
- (4) For structures greater than fifty (50) feet in building height and within 500 feet of existing residential districts, a public hearing shall be required, and the review shall include an evaluation of view sheds to maintain views for residential homes in the residential district and a shadow survey to avoid nonresidential buildings casting shadows on residential homes. No building shall exceed any Federal Aviation Administration (FAA) requirements.
- (5) See [Chapter 16.28](#), Landscaping Standards and Water Efficient Landscaping.
- (6) Minimum required parking lot landscaping area is included in required minimum on-site landscaping/open space area.
- (7) [For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 \(Hillside Development\) and applicability.](#)

Section 16.14.010 (Purpose), Table 16.14-2 (Special Purpose Districts General Development Standards) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.14.010 Purpose.

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TABLE 16.14-2 SPECIAL PURPOSE DISTRICTS GENERAL DEVELOPMENT STANDARDS			
Development Feature	P&R	C&I	OS
Setbacks			
Street	25 feet	25 feet	25 feet
Interior	20 feet	20 feet	20 feet
From Abutting Residential District	15 feet		
Accessory Structures	Same as Primary Structure		
Maximum Height Limit ⁽¹⁾	35 feet ⁽¹⁾	50 feet ⁽¹⁾	35 feet ⁽¹⁾
(1) For structures located within a Hillside Area, see maximum height criteria as provided within Section 16.24 (Hillside Development) and applicability.			

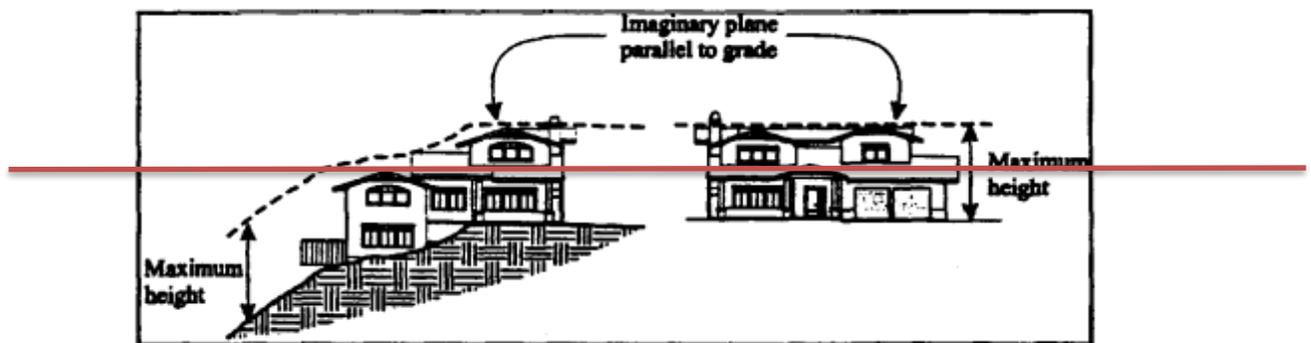
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Section 16.18.080 (Height Measurement and Height Limit Exceptions) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

“All structures shall meet the following standards relating to height, except for fences and walls, which shall comply with [Chapter 16.22](#) (Fences, Hedges, and Walls).

A. Maximum Height. The height of structures shall not exceed the standard established by the applicable zoning district in Article II (Zoning Districts and Allowable Land Uses) or for structures within a Hillside Area under Section 16.24.020.A. In addition, the Mmaximum height for structures on a specific parcel shall be measured as follows: ~~the vertical distance from finish grade to an imaginary plane located the allowed number of feet above and parallel to the finish grade.~~

**FIGURE 3-1
HEIGHT MEASUREMENT**



1. Establishing the high point and low point on the property as reference grade points as follows:

a. A measurement is taken from the lower of existing or proposed grade, 5 feet away from the lowest grade point around the structure in accordance with Figure 16.18-1. This point shall be the low reference grade point. The highest point anywhere on the structure may not exceed the elevation of that low grade point by more than the allowable height plus the grade differential between the low point of structure and high point of structure (excluding items as detailed under Section 16.18.080(B) (Exceptions to Height Limits)), but in such case where the actual grade differential exceeds 10 feet, only a maximum of 10 feet may be added to the maximum allowable height per the zone. The measurement is the difference in elevation between the highest and the lowest adjacent ground elevation surrounding the building.

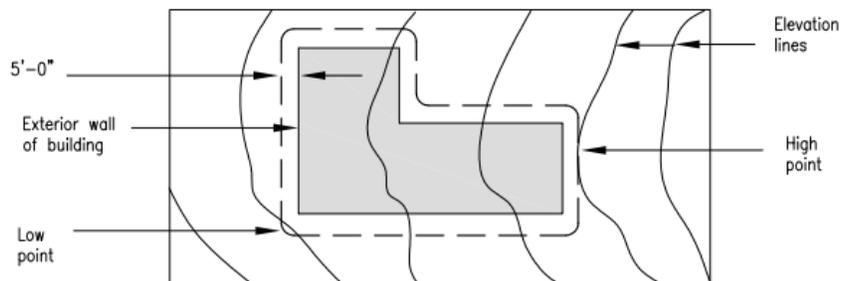
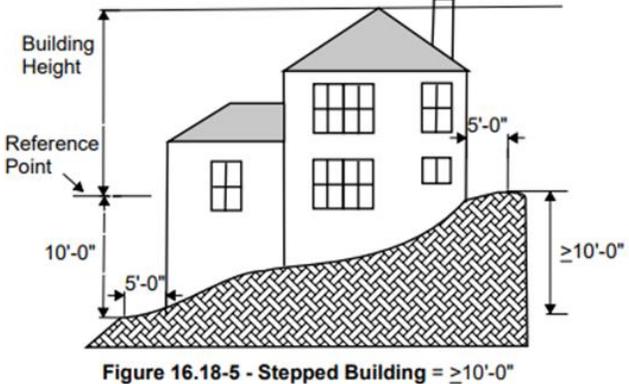
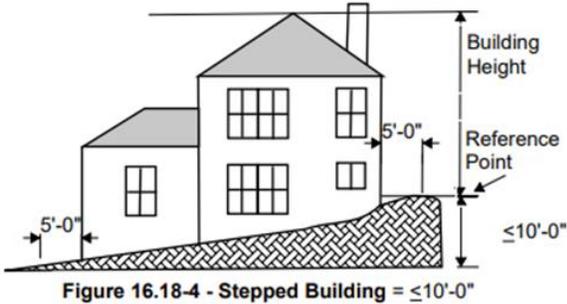
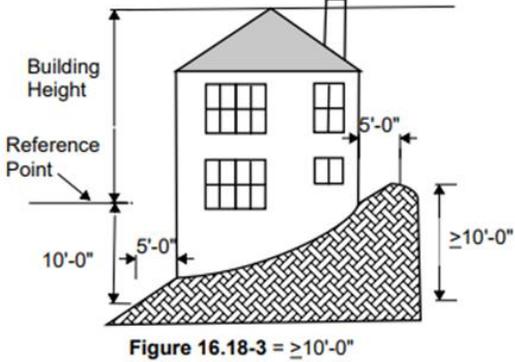
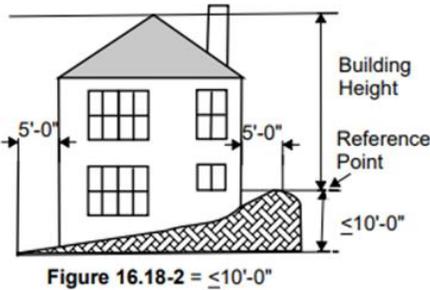


FIGURE 16.18-1
MEASUREMENT LOCATIONS

b. If the difference in elevation is 10 feet or less, the reference grade point is established at the highest adjacent ground elevation. See Figure 16.18-2. If the difference in elevation is greater than 10 feet, the reference grade point is established at 10 feet above the lowest adjacent ground elevation. See Figure 16.18-3. For stepped or terraced buildings, the building height is the overall height as illustrated in Figures 16.18-4 and Figure 16.18-5.

Height Measurement on a Slope



FIGURES 16.18-2, -3, -4, -5
MEASUREMENT CRITERIA

c. For a project with a proposed pad configuration, the height of the structure measured by the vertical distance from the finished grade to the height of the roof line. See Figure 16.18-6.

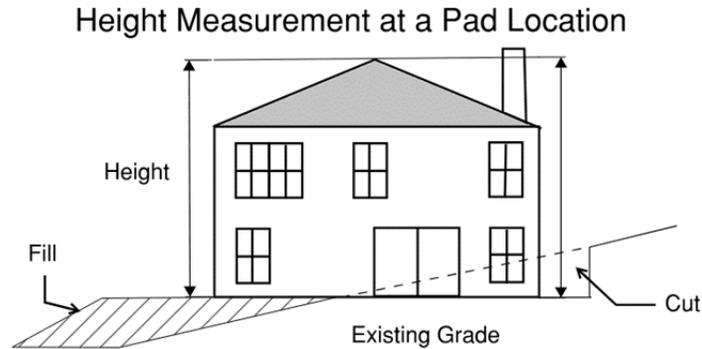


FIGURE 16.18-6
MEASUREMENT WITH PAD CONFIGURATION

~~—B. Structures on Sloping Parcels. Where the average slope of a parcel is greater than one foot rise or fall in 7 feet of distance from the street elevation at the property line, structure height shall be measured in compliance with [Chapter 16.24 \(Hillside Development\)](#).~~

—**CB. Exceptions to Height Limits.** Exceptions to the height limits identified in this development code shall apply in the following manner:

1. Roof-mounted Features. Roof-mounted features including chimneys, cupolas, clock towers, elevator equipment rooms, equipment enclosures, and similar architectural features shall be allowed, up to a maximum of fifteen (15) feet above the allowed structure height. The total square footage of all structures above the heights allowed in the zoning districts shall not occupy more than twenty-five (25) percent of the total roof area of the structure. Greater height or area coverage may be allowed subject to the approval of a minor conditional use permit in compliance with [Chapter 16.52](#).

2. Parapet Walls. Fire or parapet walls may extend up to four feet above the allowable height limit of the structure.

3. Public Assembly, Hotels, Class "A" Office and Public Structures. Places of public assembly including churches, schools, assembly halls, Class "A" office buildings greater than three (3) stories, hotels and other similar structures may exceed the established height limit by one (1) foot for every two (2) feet that the minimum required front, rear and side yard setbacks are increased. The increase in the front, rear and side yard setbacks is determined by averaging the total of the increased building setbacks at the closest point on all sides. The maximum additional height allowed is thirty (30) feet above the height limit established for the applicable zoning district. This exception shall not apply when the site is adjacent to single-family zoned property. This exception may be used in conjunction with the height exception for rooftop equipment.

4. Telecommunications Facilities. Telecommunication facilities, including antennae, poles, towers, and necessary mechanical appurtenances, may be authorized to exceed the height limit established for the applicable zoning district, subject to the approval of a conditional use permit in compliance with [Chapter 16.52](#).

5. **Basement.** A basement is defined as a story that has its floor surface below the adjoining finished grade as both conditioned and unconditioned space per the California Building and Residential Codes.”

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Section 16.18.140(D)(4)(b) (Setback Regulations and Exceptions) of the Murrieta Municipal Code is hereby amended to read in part as follows:

16.18.140 – Setback Regulations and Exceptions

..

4. Setback Requirements for Specific Structures:

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“b. **Retaining Walls.** ~~(Retaining walls up to four feet in height are exempt.)~~ Refer to [Table 16.18-2 \(Retaining Walls – Non-Hillside Areas\)](#) below:

~~1) **Up to Six Feet.** Retaining walls up to six feet in height may be located within a required set-back provided the exposed side of the wall faces into the subject parcel; and~~

~~2) **Over Six Feet.** Retaining walls greater than six feet in height, or where the exposed side of the wall faces out from the subject parcel without regard to height, shall be subject to the same requirements as the main structure in the applicable zoning district.~~

TABLE 16.18-2 RETAINING WALLS - NON-HILLSIDE AREAS	
Criteria	
Facing Outward Within Front or Street-Side Setback	For residential, mixed-use locations, commercial and industrial, retaining walls within a front yard or street-side setback shall not exceed four feet in height.
Facing Inward	Retaining walls up to six feet in height may be located within a required setback provided the exposed side of the wall faces into the subject parcel and shall incorporate landscaping to screen the wall(s).
Line-of-Sight Locations/Visibility Triangles	For any required line-of-sight locations or visibility triangles, a maximum of thirty inches in height shall be permitted.
Six Feet or Greater - Retaining Wall Facing Outward	Retaining walls six feet or greater in height, shall be subject to the same setback requirements as the main structure in the applicable zoning district and shall incorporate landscaping to screen the wall(s).
Required Offset	At twelve feet in height, a retaining wall shall be separated by a minimum of six feet

	horizontally to accommodate landscaping.
Design Criteria	Refer to Section 16.22.070(F) (Retaining Walls).
Retaining Wall(s) within Hillside Areas	Refer to Table 16.24-2 (Retaining Walls – Designated Hillside Areas)

“

Section 16.22.030 (General Height Limitations), Table 3-3 (Maximum Height of Fences, Hedges, and Walls) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

16.22.030 General Height Limitations.

“Fences, hedges and walls may be erected/maintained to the heights shown in Table ~~3-3~~[16.22-1](#).”

**~~TABLE 3-3
MAXIMUM HEIGHT OF FENCES, HEDGES, AND WALLS~~**

**TABLE 16.22-1
MAXIMUM HEIGHT OF FENCES, HEDGES, AND WALLS**

Location	Maximum Height (within Setback Areas)
Rear and side yards (interior and street side)	Six feet*
Front yards	Three feet*
At intersections of streets, alleys and driveways within traffic safety sight areas.	Twenty-four (24) inches

* The director may approve additional height to enclose or screen areas.”

Section 16.22.040 (Exceptions to Height Limitations) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

“16.22.040 Exceptions to Height Limitations – Non-Retaining Walls.

A. Fences and walls otherwise limited to three feet in height, may be allowed up to five feet in height with see-through (e.g., wrought iron or grille work) fencing material;

B. Fences and walls otherwise limited to six feet in height, may be approved up to eight feet in height with see-through (e.g., wrought iron or grille work) fencing material; and

C. Fences and walls may be allowed up to ten feet when the required setbacks are maintained. Heights greater than ten feet may be allowed subject to approval of the director.”

Section 16.22.050 (Measurement of Fence or Wall Height) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

“16.22.050 Measurement of Fence or Wall Height.

Where there is a difference in the ground level between two adjacent parcels ~~of less than two feet~~, the height of a fence or wall constructed along the property line shall be determined by using the finish grade of the highest contiguous parcel. ~~When there is a difference in the ground level between two adjacent parcels of two feet or more, the height of a fence or wall shall be determined by the director.~~”

Section 16.22.060 (Walls Required Between Different Zoning Districts) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

“16.22.060 Walls Required Between Different Zoning Districts.

Walls shall be provided and maintained between different zoning districts as follows:

A. Where a nonresidential or multi-family zoning district abuts a residential zoning district, a solid masonry wall ~~of six~~ feet in height shall be constructed on the zone boundary line. Walls may be constructed higher than six feet if the viewshed is not impeded. ~~This is and~~ subject to the approval of the Director. If retaining areas are proposed at these locations, please refer to the design standards as described under Section 16.22.070(F) (Retaining Walls);

B. Where a Business Park (BP), General Industrial (GI), or General Industrial-A (GIA) ~~IG~~ zoning district abuts another zoning district, a solid masonry wall six feet in height shall be constructed on the zone boundary line. This standard may be applicable at a project location within Innovation District (INN) depending on the proposed site layout and pedestrian and vehicle access. Please see Section 16.13.030 (Innovation District Design Standards) for additional details and criteria;

C. Walls shall be of solid masonry construction and shall be of a decorative design when in view of public rights-of-way subject to approval of the director; and

D. The director may waive or modify requirements for walls between different zoning districts where a solid masonry wall already exists on the contiguous property if the following findings can be made:

1. The existing wall meets or can be modified to conform to the intent of this chapter;
2. Suitable landscaping can be installed adjacent to the existing wall to supplement and enhance the ~~de-sired~~desired physical separation;
3. The existing wall can be protected to prevent vehicle damage, ~~if necessary~~; and
4. Concurrence of the adjacent property owner can be obtained, to modify the existing wall to meet the requirements of this chapter.”

Section 16.22.070 (Special Wall and Fencing Requirements) of the Murrieta Municipal Code is hereby amended in its entirety to read as follows:

“16.22.070 Special Wall and Fencing Requirements.

A. Swimming Pools, Spas and Similar Features. Swimming pools, spas and other similar features shall be fenced in compliance with [Chapter 15.48](#) (Swimming Pool Enclosures) of the municipal code.

B. Outdoor Equipment, Storage and Work Areas. Screening of outdoor uses and equipment and activities shall be provided in compliance with Section [16.18.120](#) (Screening and Buffering).

C. Temporary Fencing. Temporary fencing may be necessary to protect archaeological or historic resources and/or trees during site preparation and construction. Temporary fencing for these purposes shall be subject to the approval of the director.

D. Fence and Wall Design. Perimeter fences/walls adjoining public rights-of-way shall be articulated in compliance with subsection 16.08.030(A)(5)(b) (Walls). The design shall include an appropriate mix of materials and landscaping subject to the approval of the director.

E. Construction Fencing. Active construction sites shall be enclosed with a locked temporary construction fence or similar barrier to prevent ease of access into the site.

F. Retaining Walls.

1. Retaining walls may be allowed to reduce grading, preserve natural features, or increase soil stabilization.

2. Crib walls, keystone, loffelstein walls, and other similar living wall systems are a design option as long as it can be demonstrated on the project plans that the walls are structurally acceptable and provisions are provided for acceptable landscaping. Such wall shall be subject to the following standards:

a. Utilization of a curvilinear slope pattern consistent with the appearance of the natural hillside terrain.

b. Planted with landscape material suitable for the climate and wall exposure relative to the sun.

c. The landscape aesthetic effect to be achieved by the overall development shall be emphasized and considered.

d. The color palette and materials selected for the retaining wall shall blend in with the adjacent hillsides and landscape plant palette.

3. Retaining Walls shall incorporate materials and colors used in an adjacent structures. All materials used to construct the retaining wall(s) shall consist of native stone, poured-in-place concrete, precast concrete block, color treated, textured or veneered to blend in with the surrounding natural colors and textures of the existing landscape and native plant materials.

4. Retaining Walls visible from the public right-of-way shall be designed to provide variation in placement, use of planters, differing materials, and modulation of the wall plane.

5. Retaining Walls shall follow landform grading shapes and contours.

6. Tubular steel or wrought-iron safety fencing may be necessary in conjunction with retaining wall locations. If necessary, these wall locations are to provide for landscape safety maintenance personnel. Construction shall be consistent with the California Building Code and related codes.

7. Refer to Table 16.18-1 (Retaining Walls) and 16.24-2 (Retaining Walls – Designated Hillside Areas) for additional criteria.”

Chapter 16.24 (Hillside Development) is hereby amended in its entirety to read as follows:

“16.24.010 Purpose.

The purpose of this chapter is to provide regulations for the development of areas in the ~~city~~City that, because of their topography, require special consideration to ensure that they are developed in a way that substantially maintains their natural character and environmental and aesthetic values to implement the City’s General Plan, and to provide for the safety, health, and welfare of the public by:

- A. Providing guidelines and standards for development in visually sensitive ~~hillside areas~~Hillside Areas to minimize the ad-verse impacts of ~~grading~~grading and to promote the goals and objectives of the City’s General Plan;
- B. Maintaining an environmental equilibrium consistent with existing vegetation, wildlife, soils, geology, ~~slopes~~slopes, and drainage patterns, and to preserve natural topography and scenic character, including canyons, creeks, knolls, rock outcrops, and ridgelines whenever feasible;
- C. Encouraging development proposals that feature water conservation and aquifer recharge techniques;
- D. Encouraging development proposals that are sensitive to fire, flood, slide, ~~erosion~~erosion, pollution, or other safety hazards;
- E. Encouraging sensitive development through flexible design and innovative arrangement of building sites by utilizing variable lot sizes, clustering, and setback variations;
- F. Utilizing nontraditional design standards for streets and hillside ~~grading~~grading where development quality and public safety are not affected;
- G. Encouraging developments that incorporate desirable existing features of land (e.g., natural vegetation, viewsheds, topographic features);
- H. Protecting significant natural areas for ecologic purposes, educational, and other scientific study purposes; 1. Encouraging the use of drought-tolerant plant material to protect ~~slopes~~slopes from soil ~~erosion~~erosion and slippage, preserve natural watershed, minimize fire hazard, and minimize the scarring and deformation of the natural landscape;
- ~~I~~J. Limiting the impact of ~~cut~~cut ~~slopes~~slopes on adjacent developed and undeveloped properties; and
- ~~J~~K. Providing for appropriate intensity of development (e.g., density, massing, etc.) ~~in hillside areas~~ through a variety of design techniques to ensure that development intensity decreases as ~~slopes~~slopes become steeper (e.g., lot sizes appropriate for steeper topography and separation of structures sufficient to preserve ~~the~~a viewshed).

16.24.020 Applicability.

~~—A. Hillside Area. The standards contained in this chapter apply to uses and structures within areas that have a slope of twenty (20) percent or greater and/or are designated on the significant features map on file with the department.~~

A. Location Consideration for Analysis. Notwithstanding any other provisions of this Code, the standards contained in this chapter apply to uses and structures within Hillside Areas that have a slope twenty-five (25) percent or greater and as designated within the boundaries of a Hillside Overlay Map. Additionally, please refer to 16.02.020 (Exemptions from Land Use Permit Requirements), 16.24.080 (Exceptions) for activities and features exempt from review.

~~B. Basis for Slope Determinations. For the purpose of this chapter, slope shall be computed on the natural slope of the land before grading is commenced, as determined from a topographic map having a scale of not less than one inch equals one hundred (100) feet and a contour interval of not more than five feet.~~Slope determinations shall be based upon citywide contour data as provided on the City's website under the Geographic Information System webpage under Interactive Mapping.

C. Development Plan Permit Required. Hillside developments shall be subject to the approval of a development plan permit in compliance with Chapter 16.56, unless exempt per adopted City policy or State Law (Example: Accessory Dwelling Unit).

~~—D. The development standards, guidelines and provisions of this chapter shall be applied to those portions of land with a predominance of significant natural slopes exceeding twenty-five (25) percent and areas that are integrally contiguous or slopes determined as significant by the director. The provisions of this chapter shall apply to projects relating to subdivisions, permits, uses, structures, specific plans, master development plans, and associated site plans for development review except as specifically exempted by Section 16.02.020.~~

D. The development standards, guidelines and provisions of this chapter shall be applied to those portions of land with a predominance of *natural slopes* exceeding twenty-five (25) percent or greater and areas that are integrally contiguous. The provisions of this chapter shall apply to projects relating to subdivisions, permits, uses, structures, specific plans, master development plans, and associated site plans for development review except as specifically exempted by Section 16.02.020 (Exemptions from Land Use Permit Requirements), and 16.24.080 (Exceptions).

16.24.030 Definitions.

For the purposes of this chapter the following definitions shall apply:

City. The City of Murrieta, state of California, referred to in this development code as the "City."

City Engineer. The director of Public Works/City Engineer of the city or their duly delegated representative.

City Manager. The official employed by an elected council to direct the administration of the City. See Chapter 2.08 "City Manager"

Clearing. The removal of vegetation (grass, brush, trees, and similar plant types) by hand or mechanical means (~~e.g. also known as~~ brushing, ~~and/or~~ grubbing).

Cluster Development. A concept where structures are grouped on certain portions of a site, frequently of different shapes and sizes, surrounded by large expanses of open space.

Contour. A line drawn on a plan that connects points of equal elevation.

Cut. ~~The mechanical removal of earth material.~~ An act by which soil, sand, gravel, or rock is cut into, dug, quarried, uncovered, removed, or relocated, and shall include the conditions resulting therefrom.

Daylight Line. The line between the finished grade and natural terrain drawn by connecting points where pro-posed contours meet existing contours.

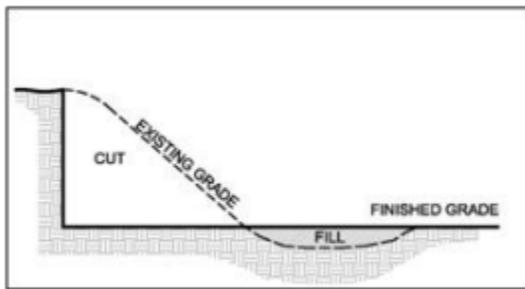
Director. See Section 16.46.050 "Director."

Elevation. Height or distance above mean sea level.

Erosion. 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 (e.g., ~~as wind, and~~ water)

Fill. A ~~deposit of earth material placed by artificial means.~~ deposit of soil, sand, gravel, rock, or other material placed by artificial means.

Finished Grade. The final elevation of the ground surface after development, that is in conformance with ~~the~~ approved plans.



Grading. To bring an existing surface to a designed form by excavating, filling, or landforming operations ~~in excess of fifty (50) cubic yards.~~

Contour Grading. A grading concept designed to result in earth shaping forms that resembles natural terrain characteristics. ~~Horizontal and vertical curve variations are often used for slope banks.~~

Conventional Grading. A grading concept that results in simple, straight forward, cut and fill lines and even planed slopes slopes. ~~This is the most basic type of grading often resulting in an "engineered or man-made" appearance attributable to a lack of curvilinear or natural appearing shapes.~~

Landform Grading. A grading method that replicates the irregular shapes of the natural ground surface slopes. Landform graded land surfaces slopes are characterized by continuous series of concave and convex forms interspersed with mounds that blend into profiles, nonlinearity in plan

view, varying slope gradients, and significant transition zones, between man-made and natural land surfacesslopes.

Hillside Area. ~~Land with an average rise or fall of twenty-five (25) percent or greater or a vertical rise of thirty (30) feet or more~~ Means those areas specifically designated on a Hillside Overlay Map as adopted by the City Council under Section 16.24.100.

Mass Grading. The movement of large quantities of earth over large areas. Disruption of the majority of the on-site surface terrain resulting in a successive pad/terrace configuration. ~~Modification or elimination of natural landforms may result.~~

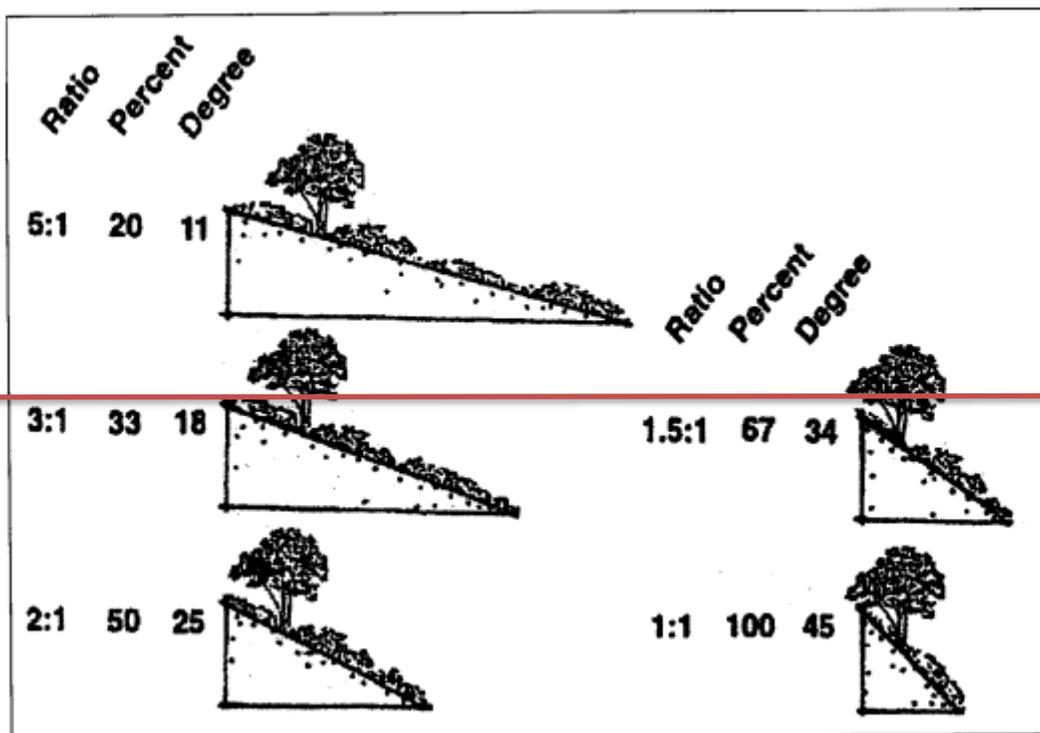
Minimal Grading. A grading concept designed to minimize excavation and filling. Allows the movement of earth for projects (e.g., as individual building foundations, driveways, local roads, and utility excavation). The concept is associated with roads conforming closely to natural contours and with structures being built on natural terrain.

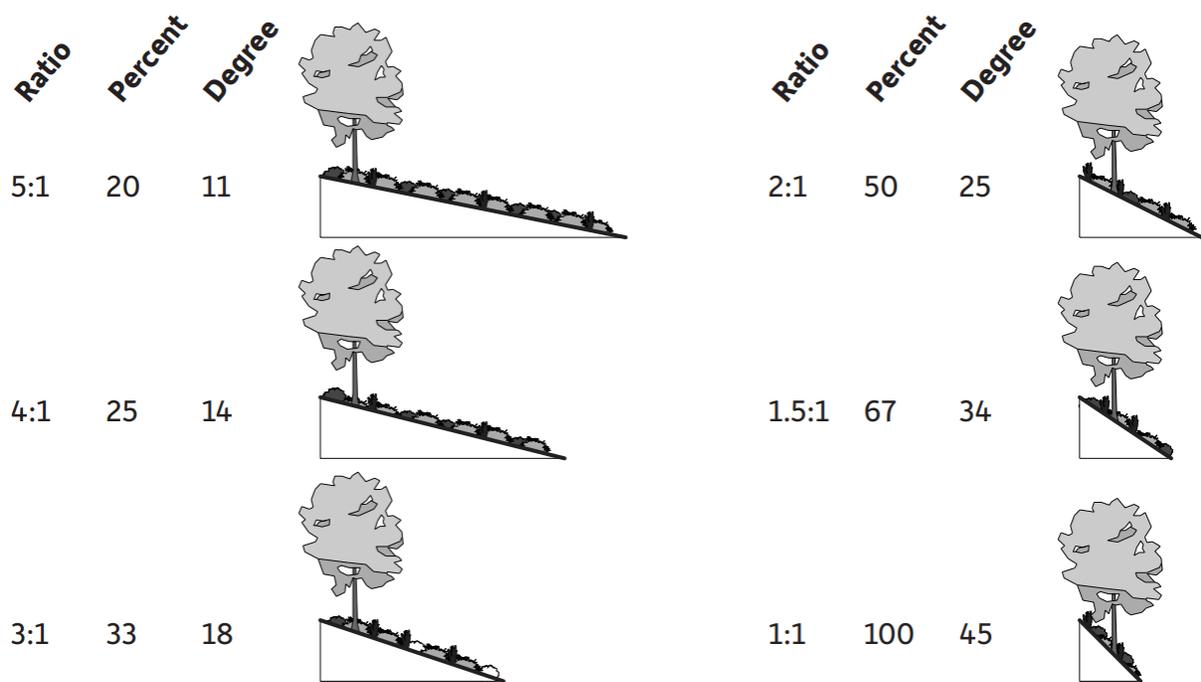
Pad. A level area created by grading to accommodate development.

Prominent Ridge. A ridge or hill location that is visible from Interstate 15, Interstate 215, or from an arterial or secondary street, that forms part of the skyline or is seen as a distinct edge against a backdrop of land and has been identified on a "Prominent Ridgelines" Map adopted by the City Council. Refer to Section 16.24.110.

~~Ridge. An extended, narrow, conspicuous elevation of land generally between valleys.~~

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





Slope, Average. The method of determining average natural slope of land using the following equation:

$$\frac{I \times L \times .0023}{A}$$

I = Contour interval in feet.

L = Combined length in feet of contour lines measured on the project site.

.0023 = A constant that converts square feet into acres and expresses slope in percent.

A = Project site area in acres.

Slope, Man-made. A manufactured slope consisting wholly or partially of either cut or filled material. Slope, Natural. A slope that is not man-made.

Slope, Significant Natural. A slope that is not man-made that exceeds twenty-five (25) percent and a vertical rise of thirty (30) feet or more.

Slope Ratio. The relationship of a slope's horizontal length to vertical height, with the height specified as one (e.g. 2:1).

Slope Transition. The area where a slope plane changes to meet the natural terrain or a level graded area either vertically or horizontally.

16.24.040 Application Submittal Requirements.

Applications for development ~~within the hillside overlay zoning district~~ shall comply with the submittal requirements of this chapter. When a development project is a specific plan or master development plan, the submittal requirements shall be incorporated in the appropriate sections

of the corresponding documents. If adequate detailed studies are provided with the specific plan and/or master development plan, subsequent implementing development applications shall be reviewed for substantial conformance with these plans.

Application filing requirements are as follows:

A. ~~A~~ Natural Features Map. This map shall identify slope banks, ridgelines, canyons, natural drainage courses, United States Geological Survey (U.S.G.S.) blue-line streams, rock outcroppings, sensitive ~~biotic~~biological habitats, cultural resources, and other natural features for the purposes of project review and California Environmental Quality Act (CEQA) analysis~~determined to be worthy of consideration for preservation.~~

~~**B. A Conceptual Grading Plan.** A conceptual grading plan shall be submitted at a minimum scale of one inch to two hundred (200) feet (this scale may be adjusted with the approval of the department). The plan shall include the following items:~~

~~— 1. A legend with appropriate symbols indicating high point, low point, spot elevations, pad and finished floor elevations, top of wall, top of curb, change in direction of drainage, and planned drainage improvements;~~

~~— 2. A separate map with proposed fill areas and cut areas, depths of these areas clearly shown in five-foot topographic lines. Quantities of each cut and fill area shall be clearly marked and calculated as a percentage of the total site area. The fill and cut areas shall be either colored green and red, respectively, cross-hatched, or screened to delineate the separate areas;~~

~~— 3. Contours for existing and proposed land conditions. 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 at minimum intervals of five feet of change in elevation, with two-foot contours in the flatter areas (if using Riverside County flood control district topographic maps, a four-foot interval may be used); and~~

~~— 4. Additional information as required to assist department review of the project.~~

B. Overall Conceptual Grading Plan. An overall conceptual *grading* plan shall be submitted at a minimum scale of one (1) inch equals twenty (20) feet. The plan shall include the following items:

1. A legend with symbols identifying the following, but not limited to: high point, low point, spot elevations, pad, top of wall, top of footing, top of curb, top of ground surface on both sides of a retaining wall, and planned drainage improvements;

2. A separate map shall be provided with proposed *cut* and *fill* areas, depths of these identified areas shown in five-foot topographic lines. Quantities of each *cut* and *fill* area shall be identified and calculated as a percentage of the total site area. The *cut* and *fill* areas shall be either colored green and red, cross-hatched, or screened to delineate each respective area;

3. *Contours* for existing and proposed topographic conditions shall be provided within submitted plan exhibits. Existing *contours* shall be depicted with continuous screened lines and proposed *contours* shall be depicted as above except with a solid line. *Contours* shall be shown at minimum intervals of two feet of change in elevation. Elevations of less than two feet shall be depicted with spot elevations; and

4. Additional information as required to assist with review of the project.

C. Drainage Map. A conceptual drainage and flood control facilities map describing planned drainage improvements. The map shall utilize ~~city~~City standards or an acceptable alternate as determined by the City Engineer or their designee~~city engineer~~.

~~—D.—Slope Analysis Map.~~ A slope analysis map for the purpose of determining the ~~quantity~~ amount and location of land as it exists in its natural state and for calculating average slope categories. A base topographical map ~~for~~of the site shall be prepared and shall have a scale of not less than one inch to ~~one~~two hundred (100/200) feet. The base topographical map shall include adjoining properties within one hundred (100) feet of the site boundaries to portray the site's context. Slope bands in contrasting colors shall be delineated in the range of zero to twenty five (0—25) percent, twenty six to fifty (26—50) percent, and fifty (50) percent or greater. A tabulation of the land area by slope percentage shall also be provided. A heavy solid line indicating the twenty five (25) percent grade differential shall be clearly marked on the plan.

~~The exact method for computing the percent slope and area of each slope category shall be sufficiently de-scribed and presented so that a review can be readily made. A heavy solid line indicating the twenty five (25) percent grade differential shall be clearly marked on the plan. An eight and one-half by eleven (8 1/2 x 11) inch legible acetate reduction of the slope analysis with appropriate legend shall also be provided.~~

D.E. Slope Profile Drawings. ~~A sufficient number of slope profiles shall be provided to clearly illustrate the ex- tent of the proposed grading.~~ A minimum of four ~~e~~Cross-section slope profiles shall be included with the slope analysis. Additional profiles may be required as determined by the ~~city engineer~~City Engineer or their designee. The slope profiles shall:

1. Be drawn at the same scale and indexed, or keyed, to the slope analysis map, ~~grading~~grading plan, and project site map. Both vertical and horizontal scales shall be indicated;
2. Show existing and proposed topography, structures, and infrastructure. Proposed topography, structures, and infrastructures shall be drawn with a thin, solid line. Existing topography and features shall be drawn with a dashed line;
3. Extend at a minimum of ~~least~~ one hundred (100) feet outside the project site boundary to clearly show the impact on adjacent property. Additional distance may be necessary to determine off-site terrain and features;
4. Be drawn along those portions of the subject site where:
 - a. The greatest portion of the site where alteration of existing topography is proposed;
 - b. The most intensive ~~or massive~~portion of the site where development is proposed (e.g. where structures are proposed);
 - ~~c. The is most visible from surrounding land uses; and~~
 - dc. Where proposed grading~~grading will~~would potentially impact existing natural drainage conditions.

5. At least two of the slope profiles shall be roughly parallel to each other and roughly perpendicular to existing ~~contour~~ contour lines. At least one other slope profile shall be roughly at a ninety (90) degree angle to the other slope profiles and existing contour lines.

F. Indicate Source of Data. ~~Both the slope analysis and slope profiles shall~~ Indicate the datum, source, date, and scale ~~of topographic data used in the slope analysis and slope profiles.~~

G. Geotechnical Report. A geotechnical and soils report, shall be prepared by a registered geotechnical engineer to City standards and provided in sufficient detail to substantiate and support the design concepts presented in the application ~~as submitted~~. Additional environmental technical studies and investigations, including, but not limited to, hydrologic, seismic, access/circulation, cultural, tribal cultural, and biological resources ~~biota research~~ may ~~also~~ be required to help in the determination of the buildable area of a subject site for consistency with project review and for California Environmental Quality Act (CEQA) analysis.

H. Objective Design Guidelines. Objective D design guidelines shall be provided for projects that are to be reviewed by the Planning C commission. Otherwise, illustrative building elevations ~~elevations~~ showing all sides of the structure shall be provided.

~~I. No Grading Proposed. In the event that no grading is proposed, (e.g., custom lot subdivision) a statement to that effect shall be filed with a plan that shows possible future house plotting, pad grading, driveway design, and septic system location for each parcel proposed. The plan shall be prepared on a topographic map drawn at a scale of one inch to two hundred (200) feet.~~

I. No Grading Permit Required. See 16.24.080 (Exceptions) for applicability.

J. Additional Information. The following items may be required if determined necessary by the ~~director~~ City Engineer or their designee to aid in the analysis of the proposed project:

1. A line of sight or view analysis;
2. Photographic and/or computer generated graphic renderings;
3. A topographic model and/or large scale detailed partial model; or
4. Other illustrative techniques determined necessary to aid in review of the project.

~~K. Exceptions to the filing requirements shall be determined by the director~~

16.24.050 Project Review Procedures.

~~Projects within designated hillside areas shall be subject to review and approval by the director or the commission in compliance with the provisions of this chapter.~~

A. Director Approval. The *Director* shall approve, approve with conditions, or deny development proposal applications pursuant to the authority as referenced under Table 4-1 "Approval Authority and Public Hearing Requirements." ~~when the following conditions apply:~~

~~1. Development plan permits;~~

~~—2. Extensions of time; or~~

~~—3. Building permit reviews.~~

B. Planning Commission Approval. The Planning Commission shall approve, approve with conditions, or deny development proposal applications pursuant to the authority as referenced under Table 4-1 “Approval Authority and Public Hearing Requirements.” ~~-when one or more of the following conditions apply:~~

~~—1. When padded building sites are proposed; or~~

~~—2. Proposals referred to the commission by the director.~~

C. Modification of Requirements. The Planning Commission may modify or waive a development standard:

1. When an improved or more environmentally sensitive design will/would result. Further, where it can be demonstrated that imposing the objective hillside development standards would either render a parcel unbuildable and create a loss of its reasonable economic use, or place an undue restriction on the improvement of the property, development consistent with the City’s General Plan shall be allowed subject to approval by the Planning Commission, if the following findings can be made:

a. The site is physically suitable for the design and siting of the proposed development. The proposed development will result in minimum disturbance of environmentally sensitive areas;

b. The ~~grading~~grading proposed in connection with the development ~~would~~ will not result in soil ~~erosion~~erosion, silting of lower ~~slopes~~slopes, flooding, severe scarring, ~~or create~~ other geological instability conditions, or a fire hazard condition that would affect the public’s health, safety and general welfare for the City, as determined by the ~~city engineer~~City Engineer or their designee;

~~—c. The proposed development retains the visual quality of the site, the aesthetic qualities of the area, and the neighborhood characteristics by utilizing proper structural scale and character, varied architectural treatments, and appropriate plant materials; and~~

16.24.060 Hillside Development Standards.

The following are minimum standards and shall apply to a use, development, or alteration of land in compliance with Section 16.24.020 (Applicability). These standards are supplemented by the provisions of the development guidelines contained in Section 16.24.070 (Hillside Development Guidelines) of this chapter.

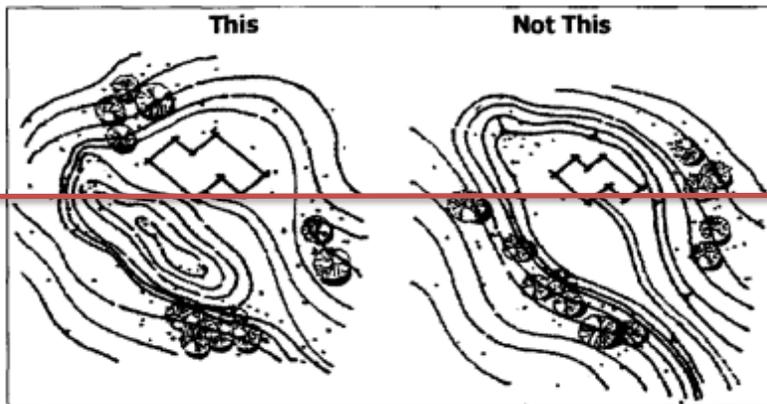
A. Hillside Slope Categories. The following ~~descriptions~~categories serve as guidelines ~~general standards~~ for determining the applicability of hillside ~~slope~~conditions at a subject site ~~categories to ensure that development will compliment the overall character of the landform.~~

**TABLE 16.24-1
HILLSIDE DEVELOPMENT STANDARDS**

% Natural Slope Category	Standards
Under Up to 25%	This is not considered a hillside condition <u>and the provisions of the Chapter shall not apply.</u>
Over 25% but less than up to 50%	This is a hillside condition. Development within this slope category is limited to the less visually prominent slopes <u>slopes of a subject site</u> , and then only where it can be shown <u>demonstrated</u> that grading <u>grading</u> , vegetation removal, safety, and environmental and aesthetic, and other environmental impacts are <u>can be</u> minimized. Potential <u>Impacts</u> of from site access and roadways shall be minimized by following natural contours <u>contours</u> or using grade separations. Proposed s <u>Structure(s)</u> shall blend with the natural landform through their shape, material, and <u>utilization of naturally occurring</u> color(s). Special hillside architectural and design techniques are required, which may include the use of larger lots, variable setbacks, and variable building structural techniques and clustering. Padded building sites may be considered in some instances. Where this occurs, the commission may consider padded building sites adjacent to special features when it is found that grading of padded building sites will create a better relationship between the special feature(s) and the building sites.
50% and over ⁽¹⁾	This is an excessive slope condition and development is prohibited. ⁽¹⁾ <u>This applies to the property as a whole.</u>

B. Site Design.

1. Projects ~~located in hillside areas~~ shall incorporate clustering, variable setbacks, multiple orientations, and other site planning techniques to preserve open spaces, protect natural features, and offer views to residents.



2. When clustering techniques are ~~utilized~~ used, ~~the~~ minimum lot sizes may be decreased to five thousand (5,000) square feet when it is necessary to preserve sensitive lands (e.g., hillsides, creeks, habitat areas, etc.). Lots may be allowed smaller than five thousand (5,000) square feet, but not smaller than four thousand (4,000) square feet, for up to twenty (20) percent of the total approved lots and only under an approved specific plan when ~~absolutely~~ necessary

to preserve sensitive and ~~hillside areas~~Hillside Areas. Lots under five ~~thousand~~thou sand (5,000) square feet are prohibited in slope areas of twenty-five (25) percent or greater.

C. Driveways and Roadways.

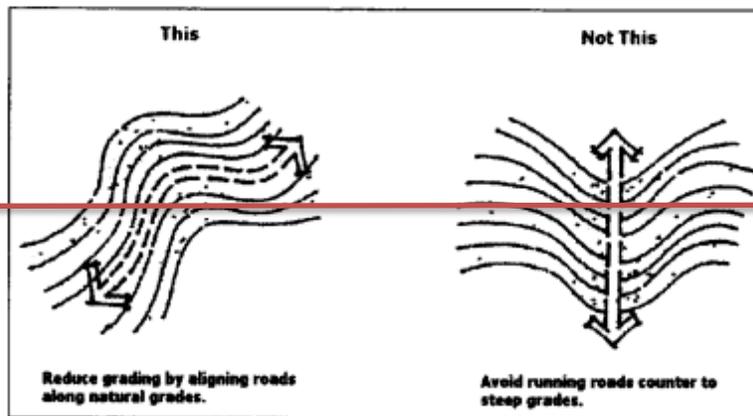
1. -Driveways shall be designed in a manner as to when a vehicle is entering a public/ and/or private streets, ~~maintaining~~ adequate sight distance shall be maintained as determined by the ~~city engineer~~City Engineer or their designee.

2. Driveways shall not be located within three feet of a side property line. Exceptions to this standard may be considered based on lot size, percentage of slope, ~~appropriate~~ drainage facilities and use as a common ~~(joint)~~ driveway by the City Engineer or their designee.

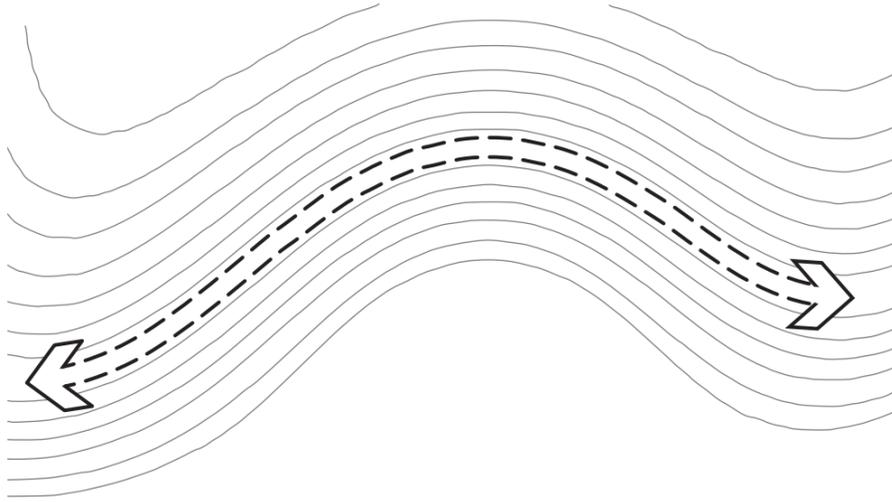
3. Only ~~slopes~~slopes less than fifty (50) percent (2:1) shall be ~~allowed~~permitted adjacent to driveways.

4. Driveway grades above fifteen (15) percent may only be considered by the City Engineer or their designee when driveways are aligned with the natural ~~contours~~contours of the land, and are necessary to achieve ~~effective~~ site design, and safety considerations ~~are met~~ to the satisfaction of the building and safety official, City Engineer or designee, and fire code official. ~~building and safety official, city engineer, and the fire department. Proper d~~Design considerations shall be employed, including the use of vertical curves. On proposed driveways ~~that may be approved~~ with a slope greater than fifteen (15) percent, a coarse, all-weather paving material (e.g. asphalt or concrete), or grooves for traction, shall be incorporated into the design~~construction~~.

5. Roadways shall conform to the natural landform. Significant alterations to the physical and visual character of a hillside shall be avoided by eliminating large notches in ridgelines and wide straight alignments. Modified or reduced ~~width road~~road width sections and split sections shall be considered in the layout of hillside streets to reduce ~~grading~~grading and ~~cuts~~cuts in topography while allowing access for fire trucks and other emergency vehicles.

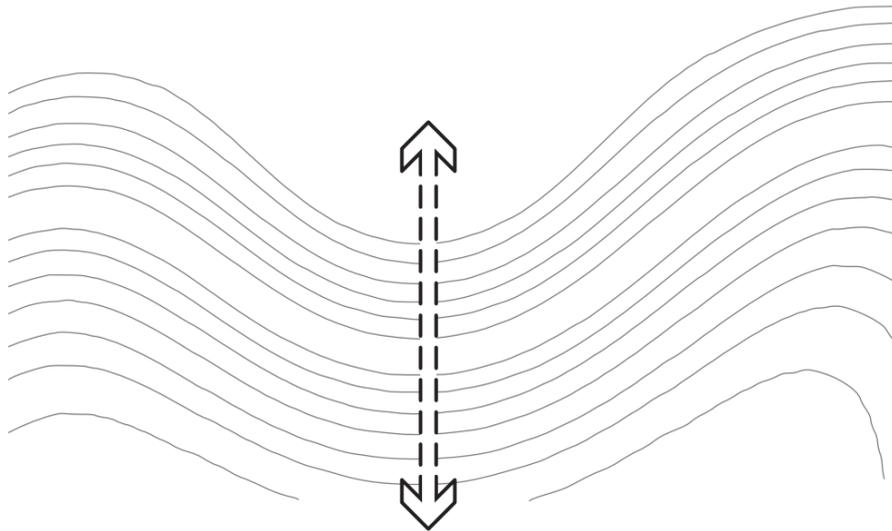


This



Reduce grading by aligning roads along natural grades

Not This

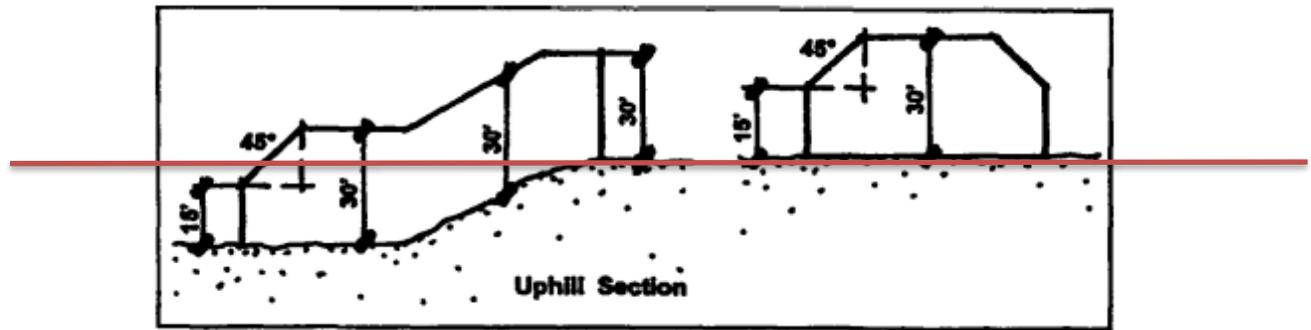


Avoid running roads counter to steep grades

FIGURE 16.24-1
ROADWAY PLACEMENT

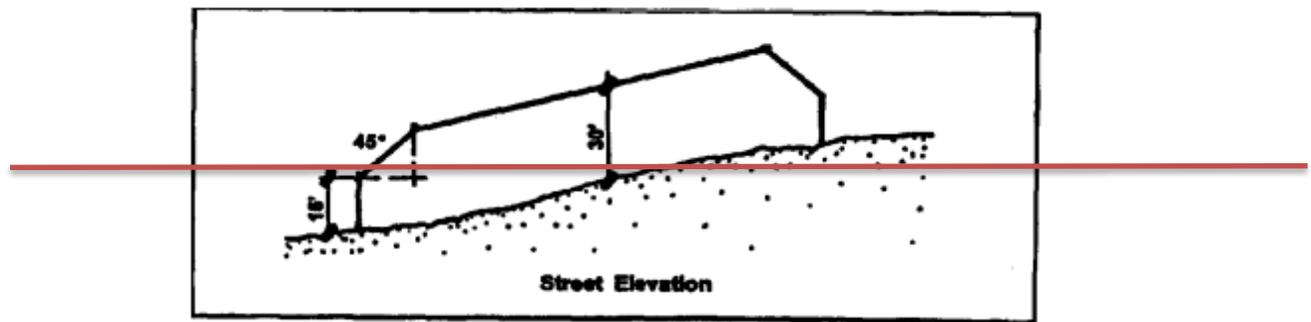
6. Where road construction is proposed ~~in hillside areas~~, the standards shall be consistent with those identified for high fire hazard areas, [the California Fire Code](#), and with [City design standards](#).

7. The extent of vegetation and visual disruption shall be minimized by the combined use of retaining structures and regrading to approximate natural ~~slopes~~[slopes](#). The view along a street front ~~age shall be buffered with~~[provide a pleasant appearance with a sense of open space](#)



**FIGURE 3-5
BUILDING ENVELOPE FOR UPHILL LOT**

~~c. **Cross Slope Lot.** The maximum structure height shall be thirty (30) feet, measured from finished grade at the maximum front setback line extending towards the rear of the lot. The maximum height at the side setbacks shall be fifteen (15) feet extending up towards the center of the lot at a forty five (45-) degree angle to a maximum of thirty (30) feet as measured from finished grade.~~



**FIGURE 3-6
BUILDING ENVELOPE FOR CROSS LOT SLOPE**

~~d. **Architectural Projections Allowed.** Architectural projections and variations in roof design are encouraged. Projections above the maximum height limits for architectural features may be allowed subject to approval by the ~~director~~ Director.~~

2. ~~In steeper terrain,~~ Reduction of front yard setbacks may be considered in order to minimize rear yard grading.

~~3. Architectural treatments shall be provided on all sides of a structure. Elements of the architectural treatment used on the front facade shall be repeated on all sides of a structure with additional emphasis on those elevations visible from public rights-of-way.~~

~~34. Building materials and color schemes shall blend with the natural landscape. Colors shall be of earth tones and the value (lightness or darkness) of the specific hue shall be as close to that of the immediately surrounding landscape as possible as demonstrated on the project plans. Where exterior stucco is used, it shall have a final coat of integrated color in a muted earth tone. Contrasting color accents shall be kept to a minimum.~~

45. Treated wood or materials of a wood-like appearance, having the necessary fire retardant characteristics, are ~~encouraged for a design option for~~ exterior surfaces. Use of other natural materials (e.g., river rock) ~~is a design option as well~~ ~~also strongly encouraged~~. The reflectivity of exposed surfaces (walls, roofs, windows, frames, and paved surfaces) shall be mitigated ~~with the incorporation of~~ ~~by~~ overhangs, trellises, planting, and similar features.

56. Exterior lighting shall be located and shielded ~~so as to not impact adjacent property owners in terms of glare and privacy~~ in compliance with Section [16.18.100](#) (Lighting).

E. Walls and Fences.

<u>TABLE 16.24-2</u> <u>RETAINING WALLS – DESIGNATED HILLSIDE OVERLAY AREAS</u>	
<u>Criteria</u>	
<u>Up to Three Feet Within Front or Street-Side Setback</u>	<u>Walls within the required front yard or street-side setback shall not exceed three feet in height, shall be separated by a minimum of three feet, and shall incorporate landscaping to screen the wall(s).</u>
<u>Line-of-Sight Locations/Visibility Triangles</u>	<u>For any required line-of-sight locations, or visibility triangles, a maximum of thirty inches in height shall be permitted.</u>
<u>Up to Six Feet.</u>	<u>Where multiple terraced retaining walls are designed to retain larger slopes, they shall not exceed six feet in height. Refer to Figure 16.24-2.</u>
<u>Over Six Feet</u>	<u>Prohibited</u>
<u>Over Six Feet and as Part of Structure.</u>	<u>Walls that are an integral part of the primary structure may exceed six feet in height; however, their visual impact shall be mitigated through <i>contour grading</i> and landscape treatment. Refer to Figure 16.24-3.</u>
<u>Required Offset</u>	<u>At six feet in height, a retaining wall shall be separated by a minimum of six feet horizontally. Refer to Figure 16.24-2.</u>
<u>Design Criteria</u>	<u>Refer to Section 16.22.070.F (Retaining Walls).</u>

—1. Retaining walls, not exceeding six feet in height, may be allowed to reduce grading, preserve natural features, or increase soil stabilization. Within the required front yard setback, individual retaining walls shall not exceed three feet in height.

—2. Where multiple (terraced) walls are designed to retain larger slopes they shall not exceed six feet in height and shall be separated by a minimum of six feet horizontally. A maximum of two walls shall be placed together. Walls within the required front yard setback shall not exceed three feet in height and shall be separated by a minimum of three feet and shall incorporate landscaping to screen the wall(s).

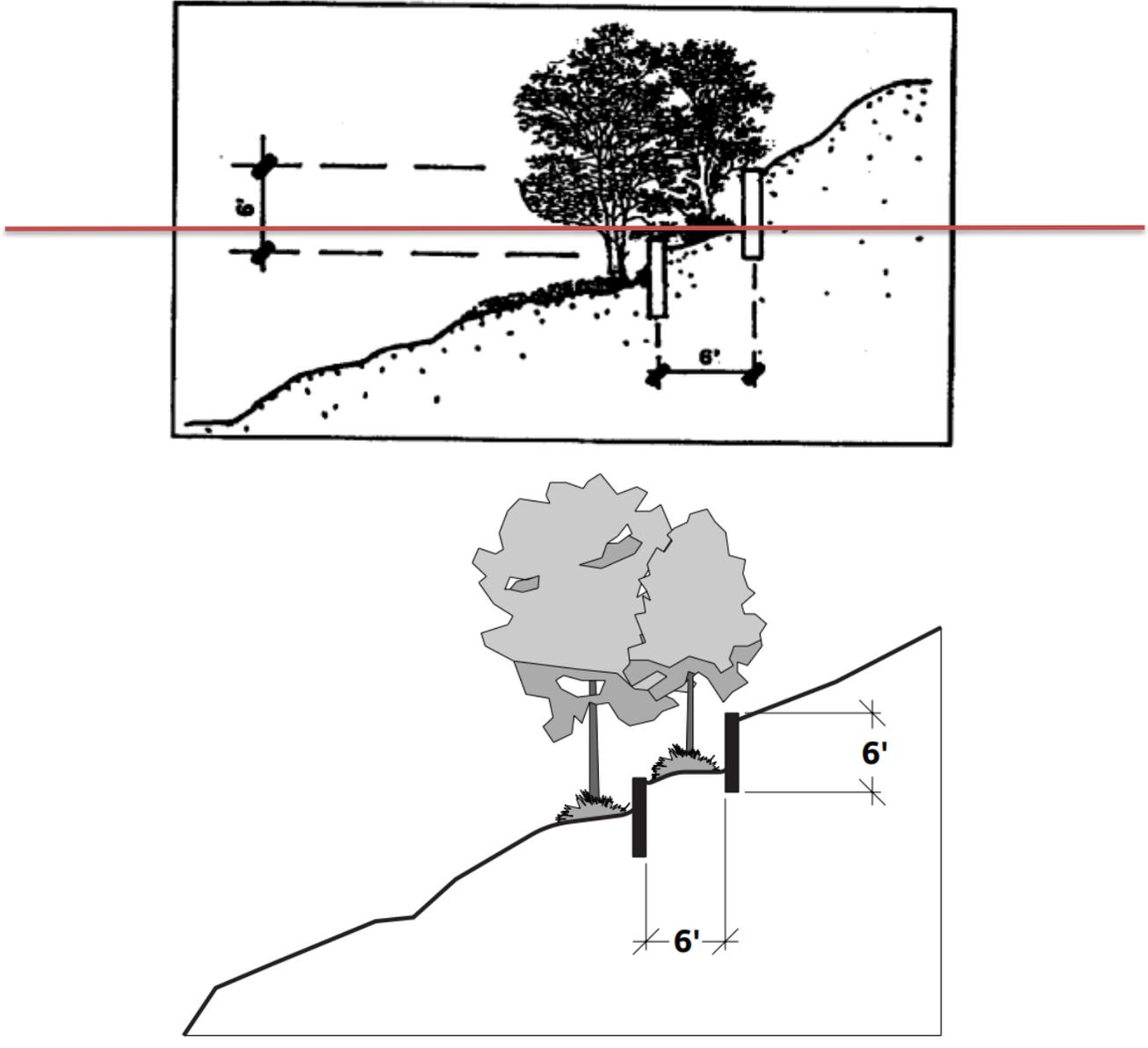


FIGURE 3-716.24-2
HEIGHT OF RETAINING WALLS

~~3. Walls that are an integral part of the primary structure may exceed six feet in height; however, their visual impact shall be mitigated through contour grading and landscape treatment.~~

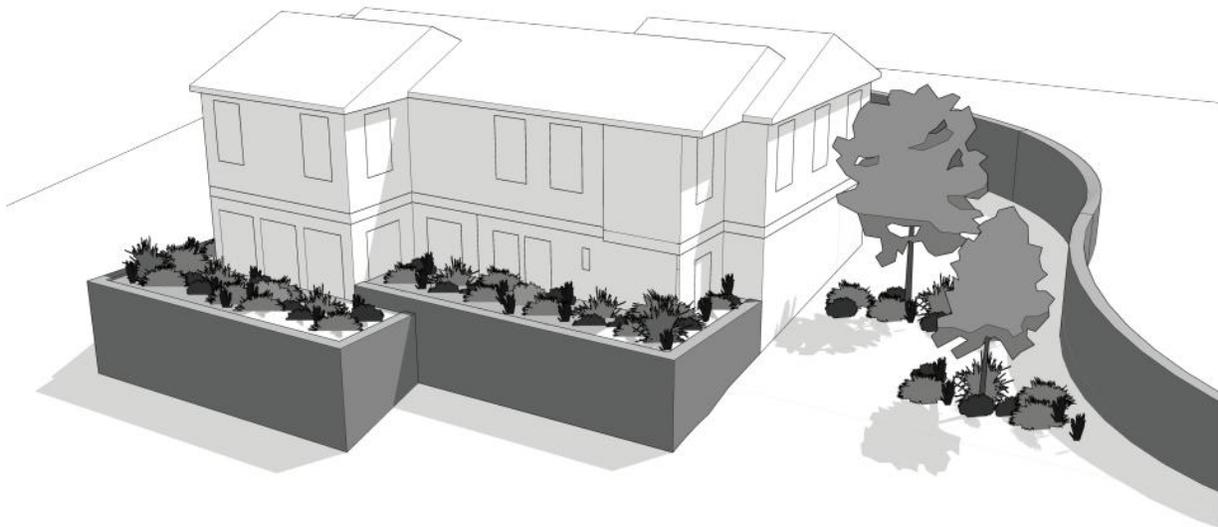
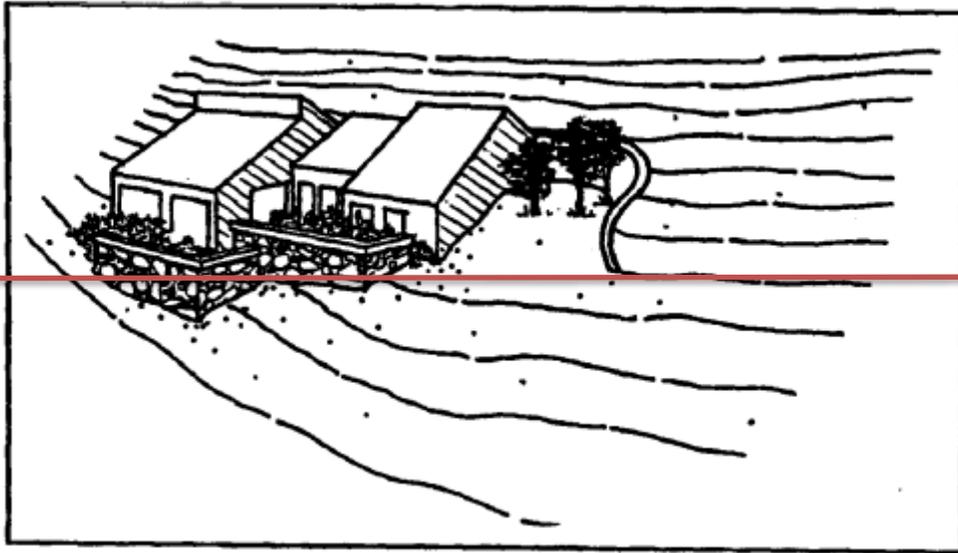


FIGURE 3-816.24-3
RETAINING WALL AS PART OF PRIMARY STRUCTURE

~~14. Refer to Section 16.22.070.F (Retaining Walls) for additional criteria. Crib walls may be approved on a case-by-case basis if it can be demonstrated that excessive height is not being created and provisions for extensive landscaping are incorporated.~~

~~5. Walls and fences shall incorporate materials and colors used in an adjacent structures. Naturally occurring materials (e.g., river rock, flagstone, etc.) shall be used whenever possible.~~

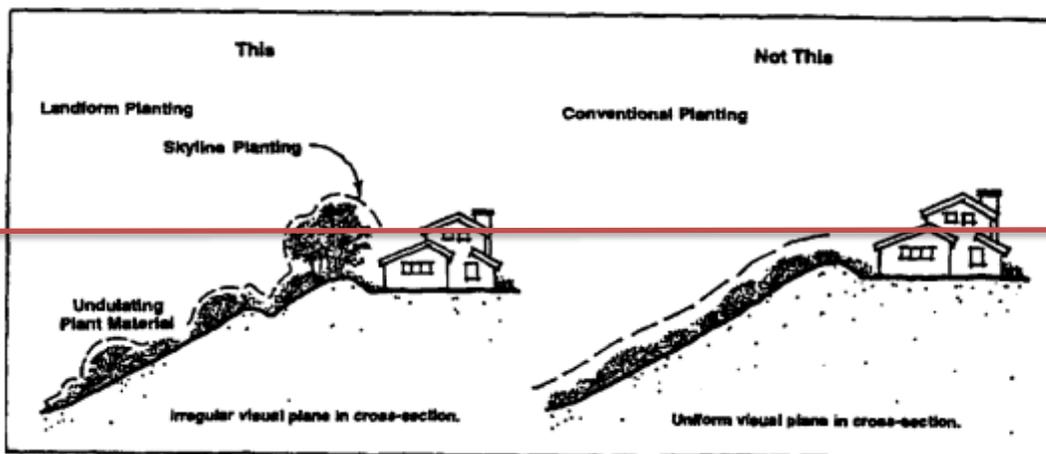
~~—6. Walls and fencing visible from the public right-of-way shall be designed to incorporate visual interest through variation in placement, use of planters, differing materials, and modulation of the wall plane.~~

~~—7. Walls and fences shall follow landform grading shapes and contours.~~

~~F. E.~~ **Landscaping.** Revegetation in hillside areas shall reflect the visual patterns found naturally in local canyons and valleys. The landscaping as viewed from urban areas and arterial roadway system shall mask and screen man-made structures.

1. Indigenous, or naturalized plants that blend naturally with the landscape shall be utilized in areas where planting is required. Plant selections shall be deep-rooting, drought tolerant, and fire resistive.

2. Natural landform planting shall be used to soften manufactured slopes, reduce the impact of development on steep slopes or ridgelines, and provide erosion control. These landscape techniques shall serve to reintroduce landscape patterns that occur naturally ~~in the hillsides.~~



This

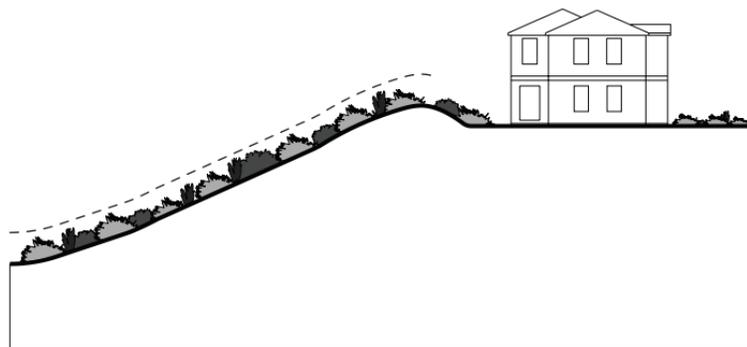
Landform Planting



Irregular visual plane in cross-section

Not This

Conventional Planting



Uniform visual plane in cross-section

FIGURE 16.24-4
NATURAL LANDFORM PLANTING

~~3. A "vegetative backdrop" shall be maintained by replanting with native trees or the same vegetation that was removed. The vegetation should screen structures to the extent possible at maturity and preserve the appearance of the natural skyline.~~

3. A "vegetative backdrop" shall be maintained by replanting the site with native trees and/or providing the same vegetation that was removed consistent with City landscaping standards. As demonstrated on the project plans, the proposed vegetation shall be sized and

spaced appropriately to screen structures for growth of the species at maturity and to preserve the appearance of the natural skyline.

4. The surface of graded or disturbed slopes with three feet or greater vertical height shall be protected against damage by erosion through the planting of deep rooted ground cover as demonstrated on the project plans. Slopes exceeding eight feet in vertical height shall be planted with ground cover and a combination ~~of~~ shrubs and trees that have a high "root-to-shoot" ratio. The size of shrubs and trees shall be determined based on the individual project area as deemed appropriate by the department and/or ~~commission~~ Planning Commission.

5. Jute mesh or an equivalent shall be required when planting occurs between August fifteenth and April fifteenth, and when determined, as necessary, by a soils engineer and/or licensed landscape architect. Jute mesh shall be used in combination with required plantings, as outlined in the Slope Landscaping guidelines available on the City of Murrieta website for optimal long-term slope stabilization.

6. Indigenous, native vegetation shall be retained and supplemented within canyons and along natural drainage courses where grading does not occur, provided that it conforms with fuel modification and tire prevention plans.

~~—7.— Common open areas and front and side yards adjacent to a street shall be adequately landscaped and irrigated. The areas shall be provided with native plant materials that blend with the natural character of the surrounding landscape.~~

7. Common open areas and front and side yards adjacent to a street shall be landscaped and irrigated consistent with City landscaping and fire protection standards. These areas shall be provided with native plant materials that blend with the natural character of the surrounding landscape.

~~—8.— In order to protect slopes from soil erosion and slippage and to facilitate revegetation, an automatic irrigation system shall be installed on slopes with planting. Design and operation of the irrigation system shall respect the special conditions that exist in hillside situations specific to maintaining slope stabilization and integrity. In all cases, the emphasis shall be toward using plant materials that may eventually not need to be irrigated: therefore, temporary irrigation systems may be used as approved by the city's landscape architect and city engineer. Water and energy conservation techniques shall be utilized (e.g., drip irrigation, alluvial rockscape, etc.) Where irrigation systems are installed above ground, ultraviolet light resistant, brown line or other approved color, shall be used.~~

8. In order to protect slopes from soil erosion and failure, and to facilitate revegetation, an automatic irrigation system shall be installed on slopes with planting. Design and operation of the irrigation system shall respect the special conditions that exist in hillside situations specific to maintaining slope stabilization and integrity. In all cases, the emphasis shall be toward using plant materials that may eventually not need to be irrigated: therefore, temporary irrigation systems may be used as approved by the city's landscape architect and city engineer. Water and energy conservation techniques shall be utilized (e.g., drip irrigation, alluvial rockscape, etc.) Where irrigation systems are installed above ground, ultraviolet light resistant, brown line or other approved color, shall be used.

~~—9.— A permanent fuel modification area shall be required around development projects that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. The fuel modification area shall be maintained by its owners, a homeowners' association, or other public nonprofit agency or conveyed in a public easement. Adequate provisions shall be made for the continual maintenance of these areas and the fire chief may require brush, vegetation, or debris to be removed and cleared consistent with the provisions of Chapter 8.32 of the municipal code. Where feasible, fuel modification areas shall be designated as common open space rather than private open space. The recommended width of the fuel modification area shall be based on applicable building and fire codes and the recommendations of the fire chief with consideration given to:~~

- ~~— a. A worst-case Santa Ana wind condition;~~
- ~~— b. The natural ungraded slope of the land within the project and in the areas adjacent to the project;~~
- ~~— c. Fuel loading;~~
- ~~— d. Access to the project by fire suppression equipment and access directly to the fuel modified area, and egress out of the project in case of evacuation;~~
- ~~— e. The on-site availability of water that can be used for fire fighting purposes with regard to fire flows, water pressure, and duration;~~
- ~~— f. "Built-in" fire protection within structures (i.e., sprinklers etc.);~~
- ~~— g. Soil erosion and sediment control measures; and~~
- ~~— h. The fire department fuel modification policy document.~~

~~—10.— Fuel modification areas shall also incorporate soil erosion and sediment control measures to alleviate permanent scarring and accelerated erosion.~~

9. A permanent fuel modification area shall be required around projects that are located within high or very-high fire severity zone, adjacent to a high or very-high fire severity zone, or exposed to hazardous fire areas for the purpose of fire protection. The fuel modification area shall be maintained by its owners, a homeowners' association, or other public nonprofit agency, or conveyed within a public easement. Adequate provisions shall be made for the continual maintenance of these areas and the fire code official may require brush, vegetation, combustible item(s), or debris to be removed, cleared, and maintained, consistent with the provisions of Chapter 8.32 of the Municipal Code. Where feasible, fuel modification areas shall be designated as common open space rather than private open space. The recommended width of the fuel modification area shall be based on applicable building and fire codes and the recommendations of the fire code official with consideration given to:

- a. A worst-case Santa Ana wind condition;
- b. The natural ungraded slope of the land within the project and in the areas adjacent to the project;
- c. Fuel load;
- d. All weather access to the project by fire suppression equipment and personnel, access directly to the fuel modified area, and egress out of the project area in case of evacuation;

e. The on-site availability of water that can be used for firefighting purposes with regard to fire flows, water pressure, and duration;

f. "Built-in" fire protection within structures (i.e., sprinklers etc.);

g. Soil erosion and sediment control measures;

h. The fire department fuel modification policy and the Wild Urban Interface Undesirable Plants & Trees list;

i. Fuel modification zones for landscaping as outlined by the California Department of Forestry and Fire Protection.

10. Fuel modification areas shall also incorporate soil erosion and sediment control measures to alleviate permanent scarring and accelerated erosion.

G. Grading.

1. ~~Grading~~Grading shall not take place on natural ~~slopes~~slopes that exceed fifty (50) percent.

2. ~~Slopes~~Slopes created by ~~grading~~grading of the site shall not exceed fifty (50) percent or 2:1, ~~without Slopes exceeding 2:1, but less than, or equal to 1.5:1, may be considered upon additional analysis by a licensed geotechnical engineer. a soils report and stabilization study indicating a greater permissible slope.~~ ~~Slopes~~Slopes shall not exceed thirty (30) feet in height between terraces or benches, except that the Planning Commission may permit ~~slopes~~slopes exceeding these dimensions where the ~~slopes~~slopes will result in a natural appearance and will not create geological or ~~erosion~~erosion hazards. The soils report and stabilization study shall ~~will~~ be subject to third party review prior to approval by the ~~city~~City. ~~Refer to the hillside development guidelines (16.24.070) for methods to accomplish this standard.~~

~~3. Structures shall not visually impair ridgeline silhouettes. Structures are not permitted closer to a prominent ridge than fifty (50) feet measured vertically on a cross-section or one hundred fifty (150) feet horizontally on a topographic map, whichever is more restrictive. Exceptions to this requirement for public facilities, utilities, and infrastructure necessary to serve the public health, safety, and welfare may be considered by the commission~~

3. In order to help address visual impacts at *Prominent Ridgelines*, use of the combination of natural occurring vegetation (trees/shrubs) and proposed landscaping shall be implemented to screen proposed structures at these locations. Additionally, any required Fuel Modification Zone and California Fire Code standards shall be considered in the design of this screening method blending with the terrain and existing vegetation.

4. ~~Clearing~~Clearing and/ or grubbing, excavation, ~~or~~and other earth disturbances shall not be ~~permitted~~initiated on ~~hillside areas~~hillside areas prior to the issuance of a ~~grading~~grading permit, with the exception of county/state authorized soils remediation operations, drill holes, and exploratory trenches for the collection of geologic and soil data or for weed abatement activities. Trenches are to be ~~properly~~ backfilled and ~~in addition,~~ erosion~~erosion~~ treatment provided where ~~slopes~~slopes exceed twenty-five (25) percent.

5. Manufactured ~~cut~~cut and ~~fill~~fill slopes exceeding ten feet in height which ~~will~~would be either exposed to public view, or are adjacent to environmentally sensitive areas, shall be ~~landform~~landform or ~~contour~~contour graded, where physically feasible, so that their ultimate appearance will resemble a natural slope. This will include ~~slopes~~slopes along adjacent to streets and highways, ~~slopes~~slopes, adjacent to parks, schools, open spaces, and other public facilities and other prominent ~~slopes~~slopes. ~~Refer to the hillside development guidelines (16.24.070) for methods to accomplish this standard.~~

6. ~~Landform~~Landform ~~grading~~grading shall be used where zero to twenty-five (0-25) percent (~~non~~non-hillside) ~~slopes~~slopes intersect with twenty-five to fifty (25-50) percent (hillside) ~~slopes~~slopes. Proper transitioning from manufactured ~~slopes~~slopes created by ~~conventional~~conventional ~~grading~~grading methods to natural ~~slopes~~slopes shall be achieved gradually and naturally through the use of radii or irregular curvilinear shapes that will blend into the adjoining topography tangentially and not create abrupt changes.

7. ~~Fill~~Fill ~~slopes~~slopes shall not be placed perpendicular across a canyon. Straight line ~~cut~~cut of ~~fill~~fill slopes shall not be made to appear like a dam. The terminus of the ~~fill~~fill shall, instead, be concave in shape to restore the ~~can~~can-~~yon~~yon appearance. This concave configuration shall be in combination with the use of substantially flatter ~~slope ratios~~slope ratios (4:1, 3.5:1, 3:1+) at or near the center of this indentation. Symmetrical or unsymmetrical concave configurations shall be used depending upon the adjoining or underlying topographic characteristics.

8. Minimal radius rounding at the edges of ~~cut~~cut and ~~fill~~fill slopes is not ~~an~~an acceptable ~~method~~method. ~~Proper~~Proper transitioning from manufactured ~~slopes~~slopes to natural ~~slopes~~slopes shall be achieved gradually and naturally through the use of radii or irregular curvilinear shapes that will blend into the adjoining topography tangentially and not create abrupt changes.

9. In the planning, design, and development of public utilities and infrastructure, every reasonable effort ~~as demonstrated~~as demonstrated shall be made to minimize ~~grading~~grading impacts ~~and~~and ~~incorporates a design that follows~~incorporates a design that follows ~~harmonize with~~harmonize with the natural ~~contours~~contours and character of the land.

10. Side yard ~~slopes~~slopes and ~~low (less than twenty (20) feet in height)~~low (less than twenty (20) feet in height) rear yard ~~slopes~~slopes (less than twenty (20) feet in height) whose view is blocked by future structures need not have landform design applied.

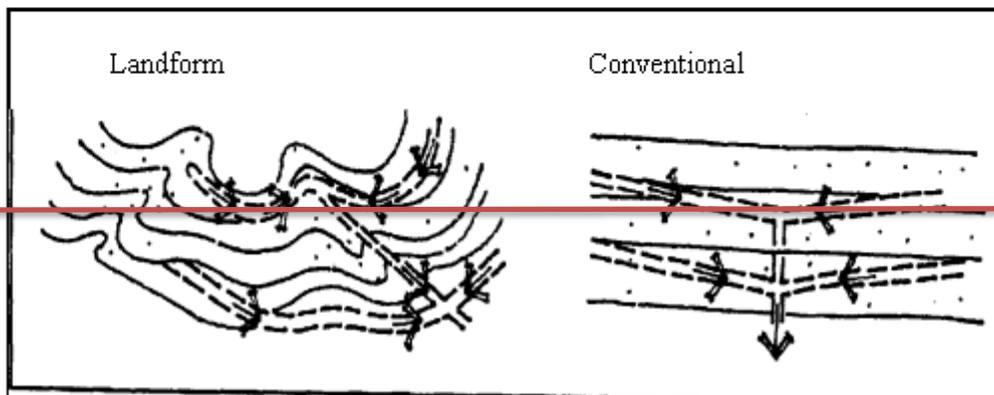
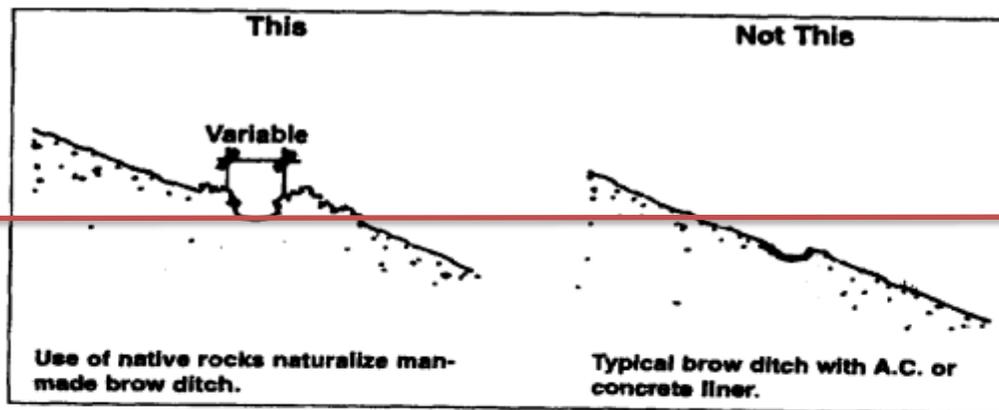
11. ~~Grading~~Grading shall be phased so that prompt revegetation or construction will control ~~erosion~~erosion. Where possible, ~~only~~only those areas that will be built on, resurfaced, or landscaped shall be disturbed. Top soil shall be stockpiled during ~~the~~the rough ~~grading~~grading ~~phase~~phase and ~~used~~used on ~~pads~~pads or revegetated habitat areas, upon the recommendation of the soils engineer. ~~Refer to the hillside development guidelines for methods to accomplish this standard.~~

12. Applicable requirements of the ~~city~~City and state shall be complied with in conjunction with ~~the latest a~~the latest a National Pollution Discharge Elimination System (NPDES) permit prior to the issuance of a ~~grading~~grading permit. ~~This ,which~~This ,which may include, but is not limited to, a ~~Grading~~Grading ~~Plan, an~~Plan, an ~~Erosion~~Erosion Control Plan, Best Management Plan (~~During Construction and Post-Construction Phases~~), (~~including Notice of Intent to be filed with the state Water Resources Control Board~~) and Construction Monitoring Program.

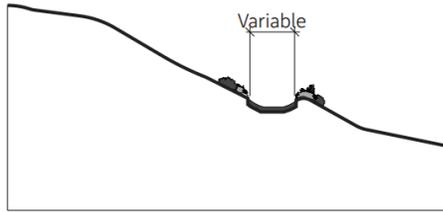
H. Drainage.

1. Debris basins, energy dissipating devices, and down drains shall be provided, where necessary, to reduce ~~erosion~~ ~~erosion~~ when ~~grading~~ ~~grading~~ is undertaken in the ~~hillside~~ ~~areas~~ ~~hillside areas~~. Natural drainage courses ~~should~~ ~~shall~~ be retained where health and safety ~~can be maintained~~ ~~are not jeopardized~~. Drainage courses retained in a natural state shall be protected from ~~grading~~ ~~grading~~ activity. In instances where a crossing is required, a natural crossing and bank protection shall be ~~a preferred~~ ~~design option~~ over steel and concrete systems. Where drainage structures are required, they shall be naturalized with coloration, plant materials, native rocks and/or concealment with ~~grading~~ ~~grading~~ techniques.

2. Drainage channels, slope drainage devices, interceptor drains, and terrace drains ~~should~~ ~~shall~~ be placed in less visible locations as demonstrated on the project plans and evaluated for erosion. Down drains shall be hidden in swales diagonally or curvilinear across a slope face. In this manner they will be built into the overall landform of the slope. They ~~should~~ ~~shall~~ also receive a naturalizing treatment, which may include native rock, colored concrete, and/or landscaping so that the structure appears as an integral part of the environment. In all cases, a concrete liner shall be used in addition to a naturalizing treatment as demonstrated on the project plans and evaluated for erosion.

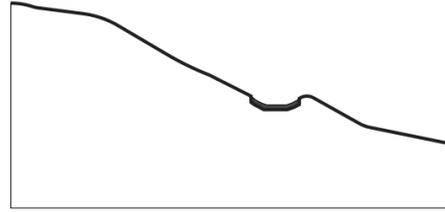


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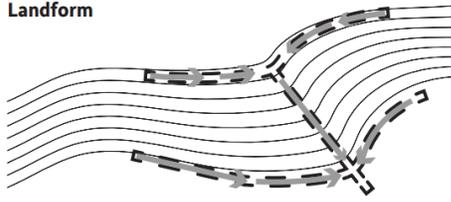
Use of native rocks naturalize manmade brow ditch

Not This



Typical brow ditch with A.C. or concrete liner

Landform



Conventional

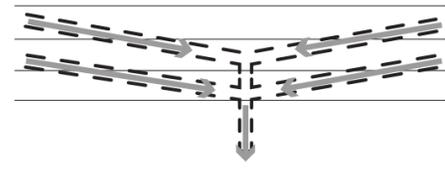


FIGURE 16.24-5
NATURALIZED VERSUS CONVENTIONAL LANDFORMING

3. Cross lot drainage usage shall be minimized. In situations where this is not possible using conventional design, optional techniques (e.g., single loaded streets, reduced densities, etc.) shall be considered. Use of cross lot drainage may be considered only after ~~demonstration~~ demonstrating 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~~ grading which would result with conventional drainage practices.

4. Where cross lot drainage is utilized, the following shall apply:

a. Project Interiors. One lot may drain across one other lot if a maintenance easement is provided within either an improved, open "V"-swale gutter which has a naturalized appearance, or within a closed drainage pipe that shall be a minimum twelve (12) inches in diameter. This drainage shall be conveyed ~~to~~ to either to a public street or to a drainage easement. If drainage is conveyed to a private easement, it shall be maintained by its owners or a Homeowners' Association; otherwise, the ~~drain-age~~ 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. Irrigation lines shall be placed above swales to minimize the impacts in the event of a system failure. When irrigation lines cross an open "V"-swale they shall be placed into a galvanized pipe, which is to be clamped to the soil on both sides of the swale subject to the review of the ~~City Engineer~~ director or designee.

b. Project Boundaries. On-site 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, that is to be maintained by its owners or a homeowners' association, or it shall be conveyed in a public easement. The easement width shall be a minimum ~~often~~ of ten feet. A greater width may be determined necessary on an individual basis and shall be dependent on appropriate hydrologic studies and access requirements.

I. Public Safety.

1. Residential developments shall be constructed in a manner so as to reduce the potential for spread of ~~brushfires~~wildfires as follows:
 - a. In the case of a conflict where more restrictive provisions are contained in the adopted and/or locally adopted versions of the California Building Code, ~~uniform building code~~ or in the California Fire Code ~~uniform fire code~~, the more restrictive provisions shall apply.
 - b. Roofs shall be covered with noncombustible materials (e.g., clay tile, concrete shake, tile, or similar materials). Open ends shall be stopped in order to prevent bird nests, or other combustible material, lodging within the roof and to prevent entry of flames.
 - c. Exterior walls and fences shall be surfaced with noncombustible or flame resistive materials. Alternate surface materials may be approved subject to the approval of the fire code official ~~chief~~ and Building Official. Except as otherwise provided herein, exterior walls shall extend to the ground.
 - d. Balconies, patio roofs, eaves and other similar overhangs shall be of noncombustible or flame resistive materials.
 - e. Plastic webbing, split or whole bamboo, reed or straw-like materials, corrugated plastic or fiberglass materials, and similar flammable materials are not permitted for use on patio covers.
 - f. Vents for attics and underfloor areas shall be designed and located to minimize the likelihood of spreading of fire.
 - g. Chimneys shall be provided with approved spark arresters.
2. Adequate water supply and pressure for proposed development shall be required in compliance with the adopted California Fire Code ~~department Standards~~.
3. The fire code official ~~chief~~ shall require brush, vegetation, or combustible debris to be removed and cleared within ten feet on each side of every roadway and access drive, and may enter upon private property to do so. This requirement shall not apply to single specimens of trees, ornamental shrubbery, or cultivated groundcover provided they do not form a means of readily transmitting fire.
4. If the fire code official ~~chief~~ determines in a specific case that difficult terrain, danger of erosion ~~erosion~~, or other unusual circumstances make strict compliance with the clearance of vegetation undesirable or impractical, he or she may suspend enforcement thereof and require reasonable alternative measures designed to advance the purposes of this chapter.
5. Site design shall provide for all-weather equipment access to publicly maintained slope areas for maintenance and emergency purposes. Secondary access shall be provided, or a reasonable alternative method may be considered by the fire code official to ensure public safety.
6. Structures and facilities shall be restricted in geologically hazardous areas.

7. Special construction features shall be required in the design of structures where site investigations ~~con-firm~~confirm potential geologic hazards.

8. Development not on public sewers shall be permitted only after site specific investigations have been conducted that demonstrate the soils are suitable for on-site wastewater disposal and the disposal of wastewater will not degrade the subsurface water quality.

9. Due to the hazard associated with saturated soils in areas of steep ~~slopes~~slopes, irrigation systems in critical areas that have the potential for failure in the judgement of the ~~city engineer~~City Engineer or designee shall be required to be equipped with potentiometers to make sure that the systems will not operate when there is sufficient moisture in the soil.

16.24.070 Hillside Development Guidelines.

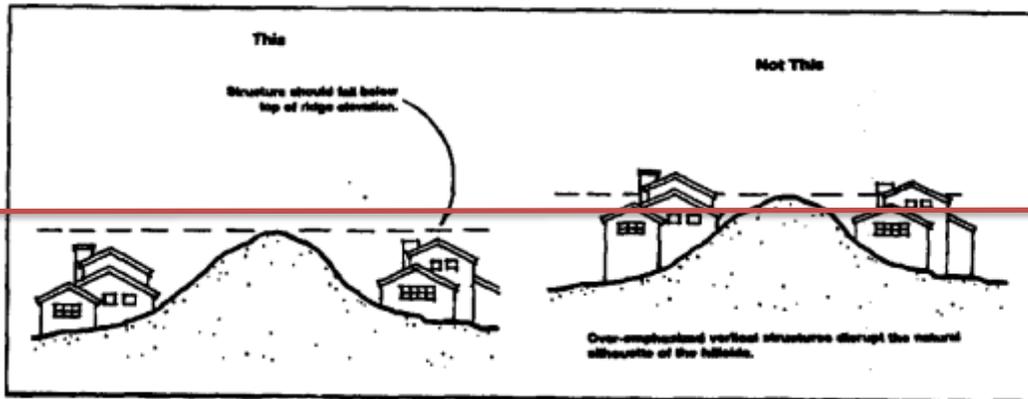
The hillside development guidelines are intended to illustrate and amplify the appropriate development concepts for ~~designated hillside areas~~Hillside Areas. The guidelines are not intended to be an exhaustive list of standards, but rather policy statements, to encourage development that is sensitive to the unique characteristics common to hillside properties. The guidelines allow for flexibility and they encourage creativity, especially where a specific plan is prepared. ~~However~~How-ever, the objective development standards provided in Section 16.24.060 shall be considered as a "benchmark" against which hillside development proposals will be reviewed for compliance with the purposes of this chapter.

The guideline's purpose is to allow for innovative or alternate methods of design in ~~hillside area~~Hillside Areas. Innovation is encouraged as long as the end result is one that respects the natural character of the hillside and is consistent with the purposes of this chapter and the goals, objectives and policies of the City's General Plan.

Conformance with the guidelines ~~will~~shall be incorporated in the preparation and approval of subdivisions and individual site developments. During the application review process, the ~~city~~City will evaluate the consistency of the proposal with the purposes of this chapter. Prior to the start of the design effort, it is recommended that the project design team members read the City's General Plan and become familiar with its policies.

A. Site Design.

1. Design of building sites ~~should~~shall be sensitive to the natural terrain. Structures ~~should~~shall be located in a way that minimizes ~~grading~~grading and preserves natural features (e.g., prominent knolls, ridgelines, etc.)

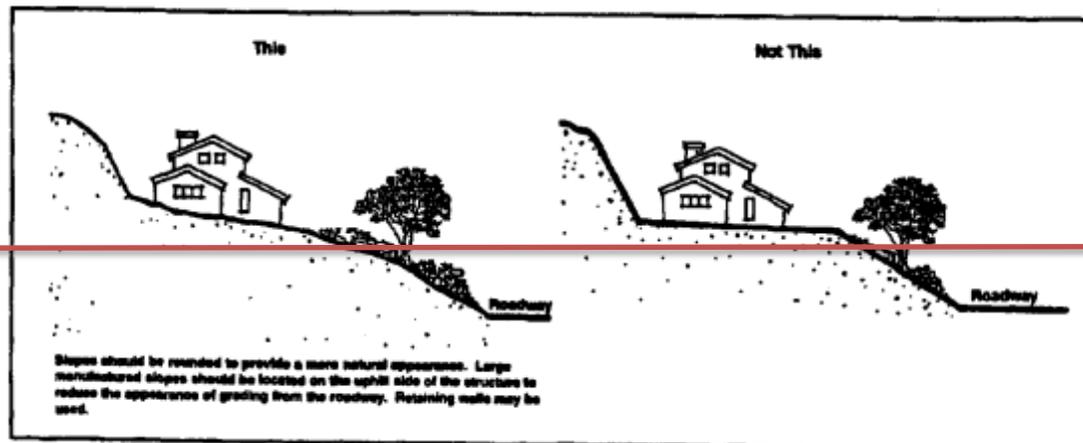


2. Preserve views of significant visual features. [See Section 16.24.110 “Prominent Ridgelines Map.”](#) ~~the hillside overlay zone map as seen from both within and outside a hillside development. When designing lots and plotting homes, the following provisions should be considered:~~

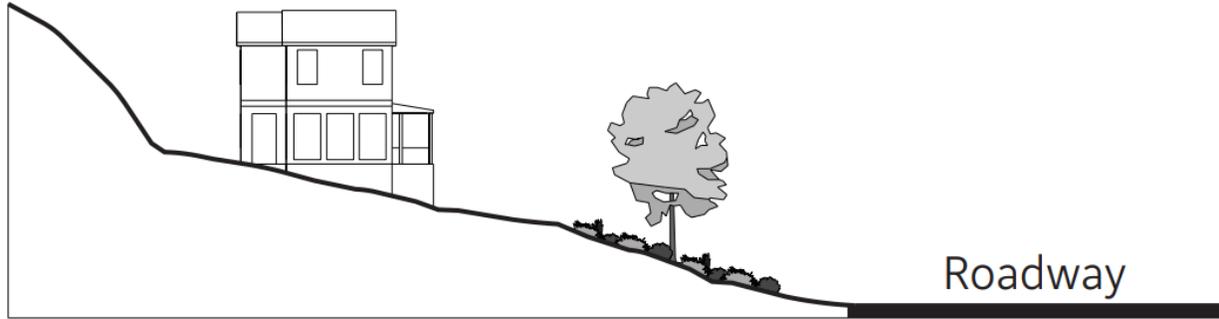
~~— a. Dwellings should be oriented to allow view opportunities, even though views may be limited. Residential privacy should not be unreasonably sacrificed; and~~

~~— b. A significant public vista, skyline, open space corridor, or vertical open space corridor as seen from an interstate, an arterial, or a secondary street should be a major design element in the site planning process.~~

3. Where possible, graded areas should be designed with manufactured slopes located on the uphill side of structures.



This



Slopes should be rounded to provide a more natural appearance. Large manufactured slopes should be located on the uphill side of the structure to reduce the appearance of grading from the roadway. Retaining walls may be used.

Not This

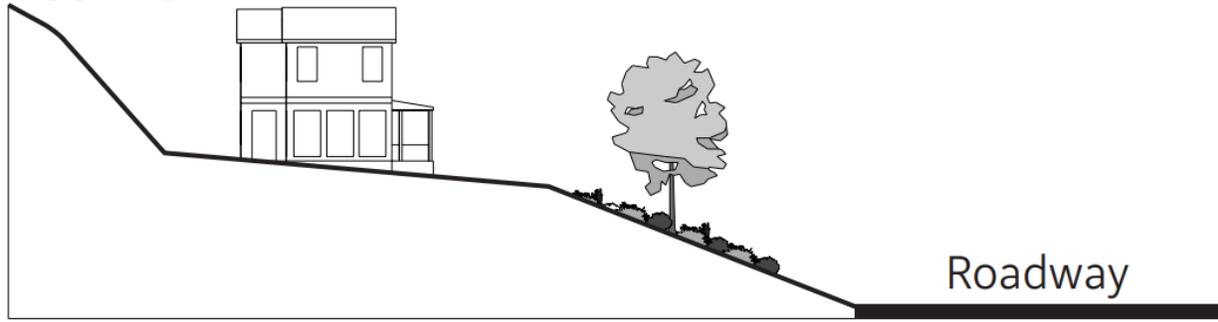
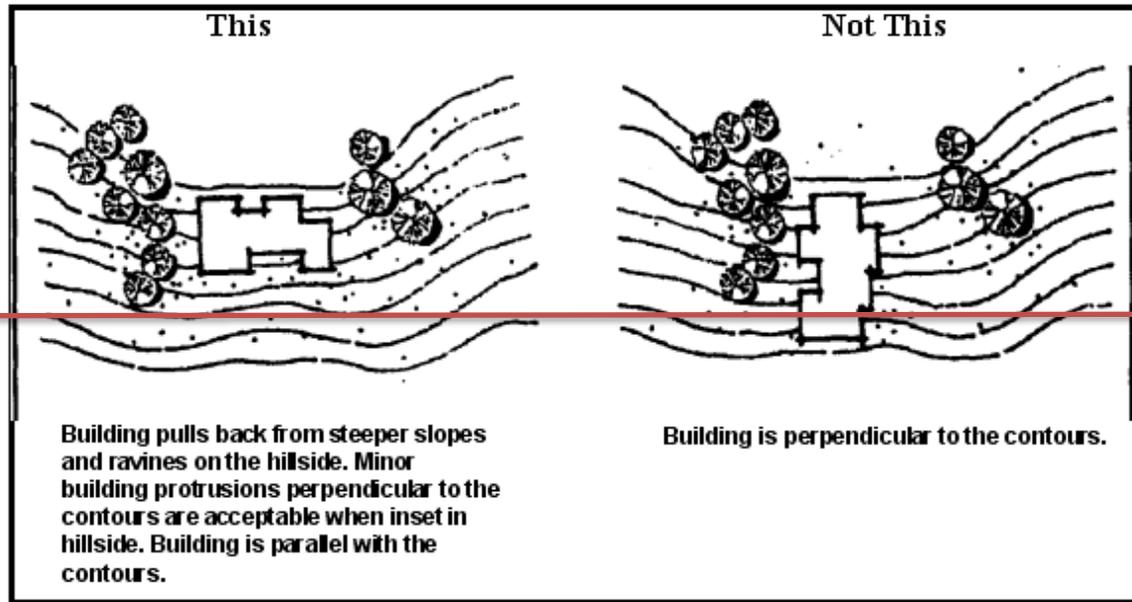
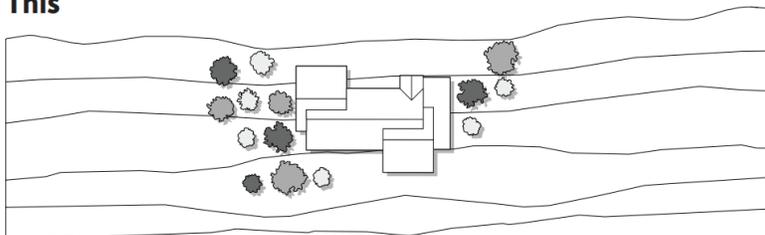


FIGURE 16.24-6
EXHIBIT 2 - BUILDING PLACEMENT AT A SITE

4. To the extent possible, the width of a building, measured in the direction of the slope, ~~should~~shall be minimized ~~in order to limit the amount of cutting and tilling and to better "fit" the house to the natural terrain.~~ The degree of slope will dictate how this is accomplished and shall be demonstrated on the project plans (See Figure 16.24-6 "Exhibit 3 - Building Placement at a Site."

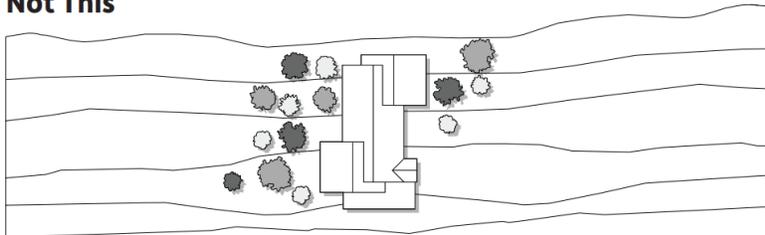


This



Building pulls back from steeper slopes and ravines on the hillside. Minor building protrusions perpendicular to the contours are acceptable when inset in hillside. Building is parallel with the contours.

Not This



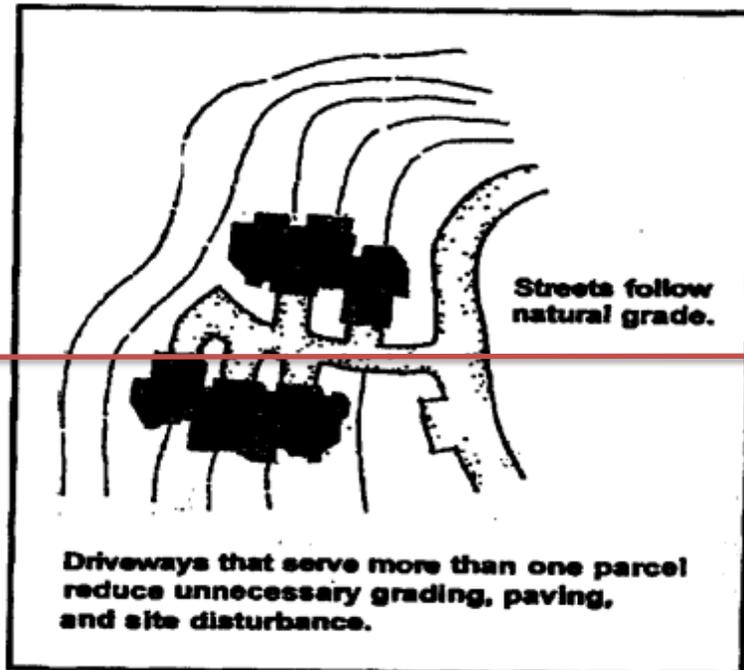
Building is perpendicular to the contours.

FIGURE 16.24-6
EXHIBIT 3 - BUILDING PLACEMENT AT A SITE

5. Clustering of development is encouraged ~~in hillside areas regardless of size. This is particularly important in environmentally sensitive areas in order to reduce the potential for fire hazard, erosion and excess runoff, and to preserve existing natural features and open space.~~

B. Driveways and Roadways.

1. Driveways that serve more than one parcel are encouraged as a method of reducing ~~unnecessary grading~~ grading, paving, and site disturbance.



Driveways that serve more than one parcel reduce unnecessary grading, paving, and site disturbance.

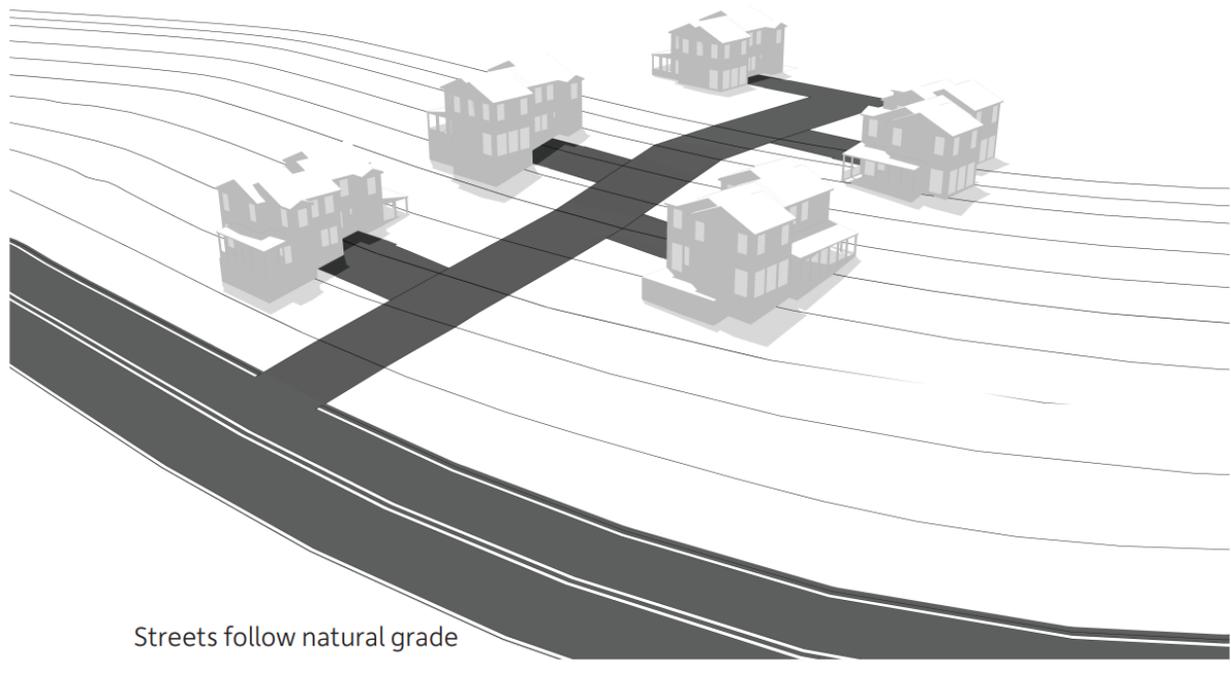
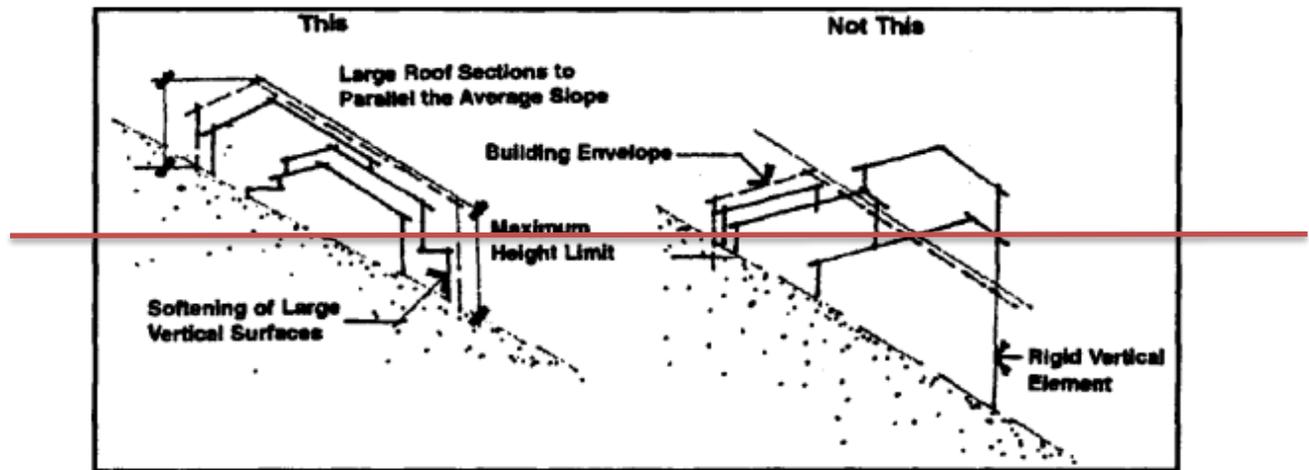


FIGURE 16.24-7
ROADWAY PLACEMENT AT A SITE

C. Architecture.

1. The form, mass, and profile of the individual buildings and architectural features ~~shall~~should be designed to blend with the natural terrain and preserve the character and profile of the natural slope. Techniques ~~that should be considered~~ to accomplish this include:

- a. Detaching the garage from the residence;
- b. Integrating retaining walls into garage walls on sloping lots to reduce ~~grading~~grading and minimize visibility of walls; and
- c. Including architectural enrichments and variations in roof massing. Roofs ~~should~~ have ~~shall incorporate~~ low profiles (for example 3:12 slope) to minimize their visual impact. On sloping land, the roof pitch ~~should~~shall follow the slope of the hill-side, instead of being perpendicular to the hillside or opposing hillside slope. ~~Care should be taken to avoid the use of gabled ends on downhill elevations.~~ Gabled ends shall not be used on downhill elevations. Upper stories ~~should~~shall not be cantilevered out of the opposite direction of the hillside slope.



2. The design of the structure ~~should~~shall give consideration to the lot's size and configuration in order to avoid the appearance of ~~overbuilding~~building scale and to minimize the blocking of views as demonstrated on the project plans. For example, within a development, the majority of the units should not be designed with minimum setback to minimum setback. See additional criteria as provided under Section 16.08.030 "Single-family Residential Design Standards and Design Features" and Section 16.08.040 "Multi-family Residential Design Standards".

~~— 3. Large expanses of a single material on walls, roofs, or paving areas should be avoided. Create interesting, small scale patterns by breaking up building mass, varying building materials, and through design and placement of windows and doors. Building plans and elevations should be varied throughout a development to avoid a monotonous "cookie-cutter" look.~~

D. Walls and Fences.

~~— 1. Walls and fences can be used to define a sense of place and create an attractive appearance. However, walls should not dominate a view, and their height should be limited adjacent to a street or trail or within a rear yard. Extensive landscaping should be used to~~

~~reduce the visual impact of walls. In addition, street front walls should incorporate varying design and natural materials. The use of open view fencing is encouraged, so long as adequate public safety and residential privacy are maintained.~~

1. In Hillside Areas with slopes greater than 25 percent and in order to maximize view opportunities, fencing on sloped areas shall incorporate the use wrought-iron, tubular steel, plexi-glass (for noise attenuation or aesthetics), or similar materials consistent with the maximum height criteria as provided under Section 16.22 "Fences, Hedges, and Walls." Masonry walls may be provided at locations that contain refuse and recycling enclosures, playgrounds, or similar.

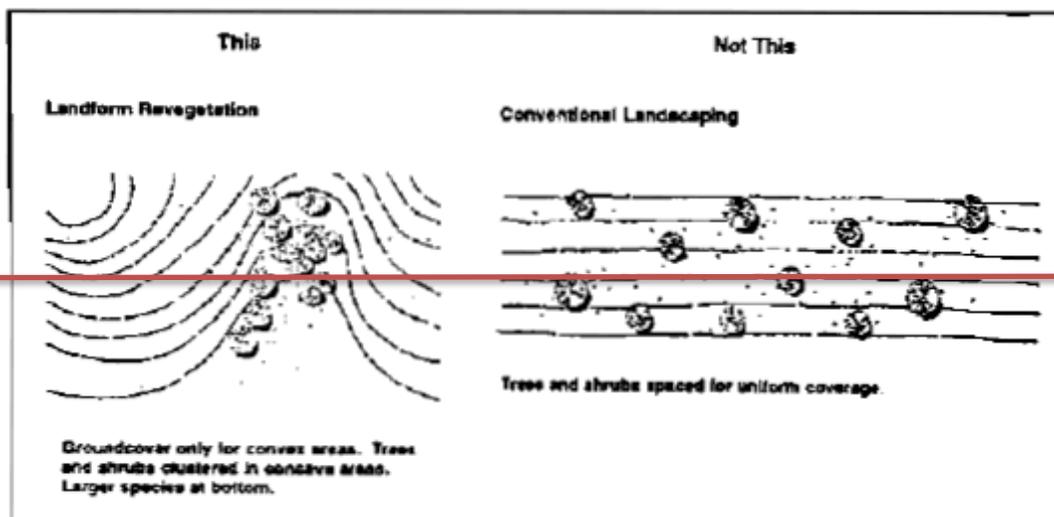
2. When possible, walls and fences ~~should~~shall be designed as an integral part of the building in order to minimize the visual impact on surrounding areas.

~~—3. Visually obtrusive solid fencing should be avoided in highly visible areas (unless required for sound attenuation), with the preference being for open (wrought iron) fencing.~~

E. Landscaping.

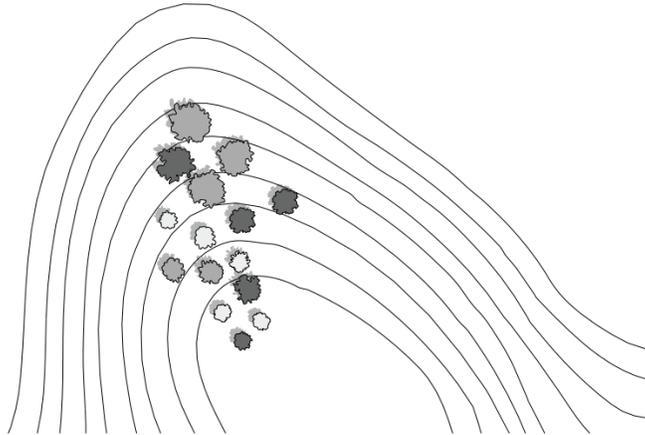
1. Street trees ~~should~~shall be provided in select areas to enhance the natural character of the areas and to create a more rural appearance. Street tree species selection, and spacing of trees, ~~should~~shall be sensitive to the context in which they are planted. Species selection shall be considered to minimize potential impacts to infrastructure~~should also be respectful of potential impact on infra-structure~~ improvements (i.e. root damage to streets, sidewalks, etc.).

2. ~~Slopes~~Slopes ~~should~~shall be designed with informal clusters of trees and shrubs to soften and vary the slope planes, consistent with ~~landform~~landform ~~grading~~grading concepts.



This

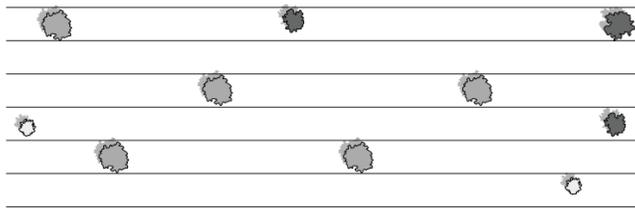
Landform Revegetation



Groundcover only for convex areas. Trees and shrubs clustered in concave areas. Larger species at bottom.

Not This

Conventional Landscaping



Trees and shrubs spaced for uniform coverage.

FIGURE 16.24-8
BUILDING ENVELOPE ON SLOPE

F. Grading.

There are three distinct types of **grading** proposed in these guidelines, each with a unique quality, **and** each with an individual and appropriate application **as determined by the City Engineer or designee**. Larger sites will most likely incorporate all three concepts in various parts of the plan.

1. Minimal Grading. This is typically used for large lot single family homes, custom homes with variable foundations that conform to the existing **slopes**, and other uses that utilize

the least amount of ~~grading~~grading in order to get the facility and structures built. This technique embraces the following concepts:

a. ~~Grading~~Grading ~~should~~shall be limited to individual flat graded pad areas for residential building sites. ~~Grading~~Grading ~~should~~shall be limited to only the required building areas and adjacent outdoor amenities in steep ~~hillside areas~~hillside areas;

b. Foundation systems that require little or no ~~grading~~grading are encouraged, forcing the architecture to ~~con-form~~conform to the land rather than the land to conform to the dwelling:

~~——c. Roadways, driveways, and individual building pads should be designed to conform with the contours and to attempt to daylight in the center of the road or building pad to ensure a minimum cut and fill situation; and~~

c. Cut and fill lines delineating the grading activity whereby cut areas adjoin next to fill areas shall be situated outside of areas where differential settlement is not desirable (e.g., roadways, building pads, driveways, etc.).

d. The balancing of ~~grading~~grading is the concept to ~~minimizes~~ the ~~amount~~volume of cubic yards of earth excavated and filled.

2. Contour Grading. This concept results in post-development landforms that exhibit many of the characteristics present within natural landforms. ~~Contour~~Contour ~~grading~~grading is typically used in situations where conventional, terraced, ~~grading~~grading with benches and ~~slopes~~slopes might be used but a "softened" ~~grading~~grading look is desired. This would be desirable for areas that are limited in public view (i.e. concealed rear yards). Typically, ~~contour~~contour ~~grading~~grading can reduce required ~~cut~~cut and ~~fill~~fill volumes as compared with traditional, terraced, ~~grading~~grading. The design elements associated with this type of ~~grading~~grading include: (See Figure ~~3-9~~16.24-9 "Contour Grading")

a. The use of horizontal and vertical curve variations for slope banks creating a curvilinear pattern;

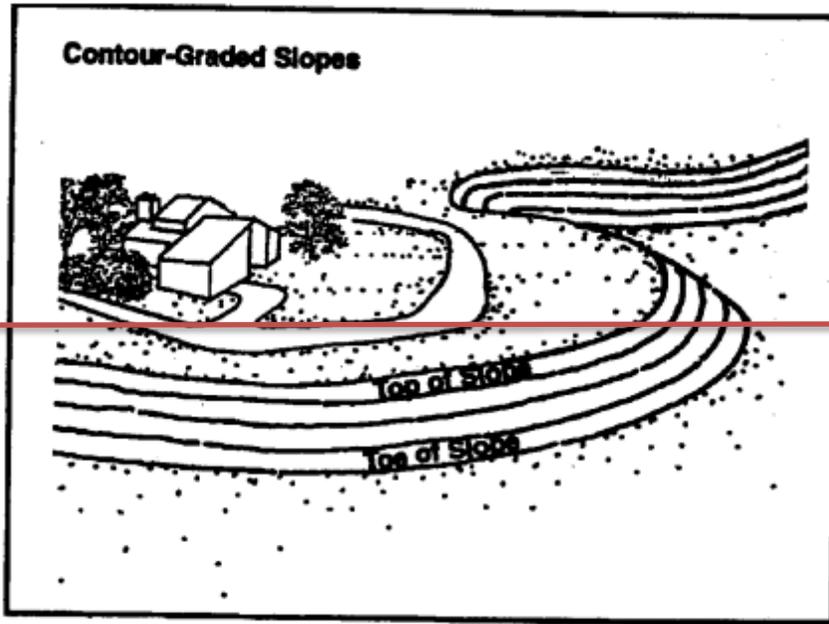
b. Post-development landforms that exhibit natural terrain characteristics (without the heavy modeling effects of ~~landform~~landform ~~grading~~grading);

c. A general rounding of ~~slopes~~slopes at slope intersections and transition zones with natural grade;

d. ~~Pad~~Pad configurations that are curvilinear; and

e. ~~Slopes~~Slopes that are designed with ~~contour~~contour ~~grading~~grading techniques (e.g., the location of ~~slopes~~slopes behind structure (not in side yards), ~~slopes~~slopes in hidden locations, or ~~slopes~~slopes less than ten feet in height).

FIGURE 3-9 CONTOUR GRADING



Contour-graded slopes

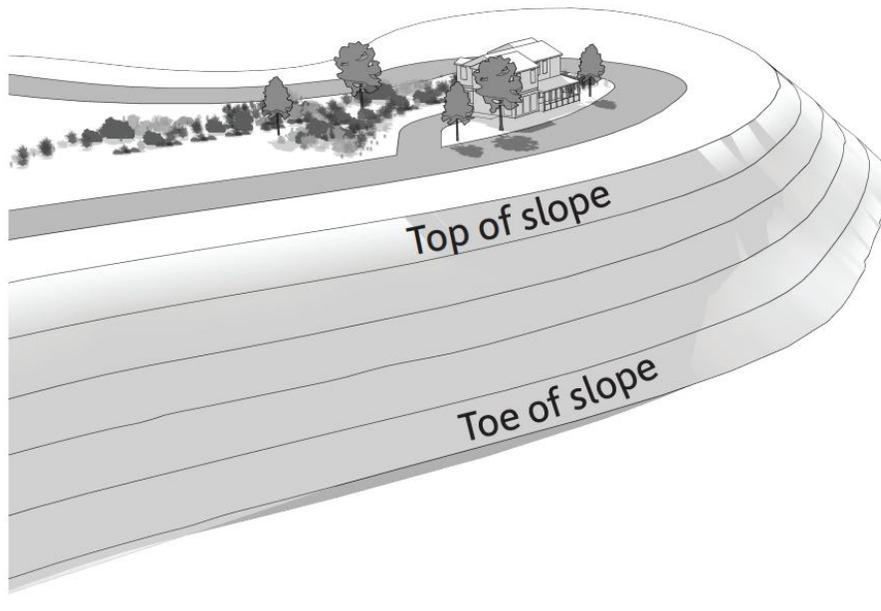
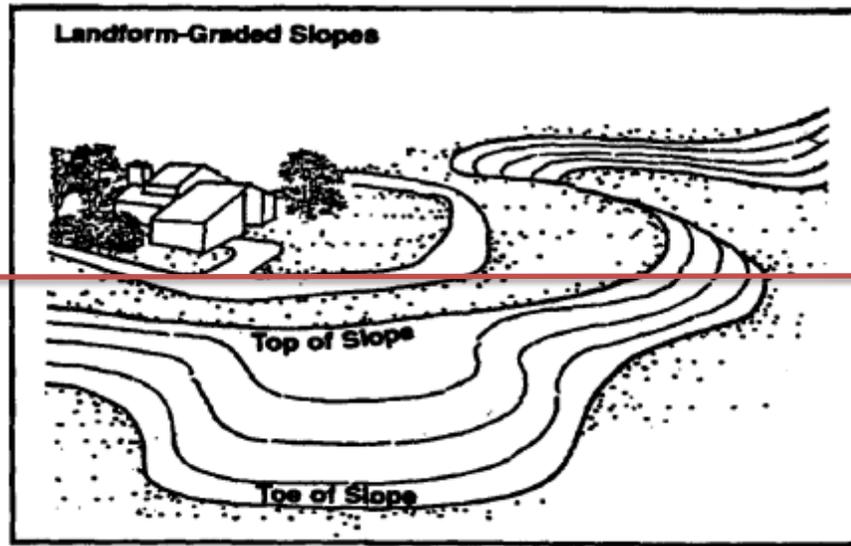
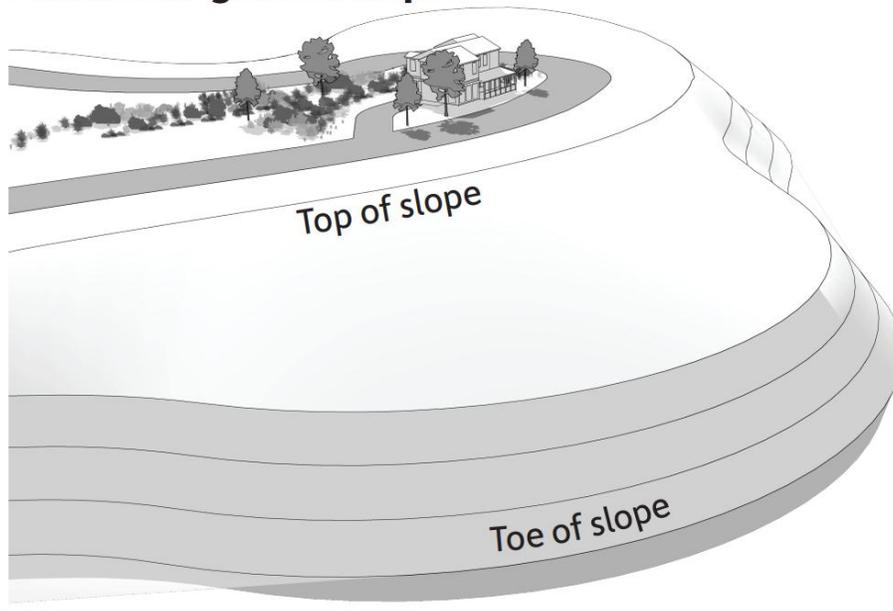


FIGURE 16.24-9
CONTOUR GRADING

**FIGURE 3-10
LANDFORM GRADING**



Landform-graded slopes



**FIGURE 16.24-10
LANDFORM GRADING**

3. **Landform Grading.** Graded ~~slopes~~slopes in this category will replicate the irregular shapes of natural ~~slopes~~slopes. ~~Landform~~Landform ~~grading~~grading techniques ~~should~~shall be used whenever ~~slopes~~slopes are created that will be open to public view. ~~This is particularly true for slopes that exceed ten feet in height.~~

The intent of these ~~grading~~grading guidelines, is to incorporate the basic principles of the ~~landform~~landform ~~grading~~grading concept as the preferred method in the design and construction of hillside development projects. ~~so that they will be in harmony with the natural~~

~~topography and reflect natural plant distribution patterns.~~ (See Figure 3-10 16.24-10 (Landform Grading))

~~Landform~~ Landform grading grading techniques ~~embrace~~ shall incorporate the following ~~concepts~~ features:

a. Land plans ~~should~~ shall flow with the natural topography rather than against it. This means that street ~~pat-terns~~ patterns and building ~~pad~~ pad configurations shall follow the underlying topographic features rather than cutting across them;

b. Landform graded ~~slopes~~ slopes are characterized by a continuous series of concave and convex forms interspersed with mounds that blend into profiles with varying slope gradients and with significant transition zones between ~~man-made~~ man-made and natural ~~slopes~~ slopes;

c. ~~Pad configurations are irregular.~~ Slope ~~down-drain~~ drainage devices shall either be placed to follow the natural topographic lines of the ~~slopes~~ slopes, or ~~shall be tucked away~~ located in special S swale and berm combinations in order to conceal the drains from view. Exposed segments in visible areas, as determined by the City Engineer, shall be ~~are~~ treated with natural rock ~~for a more aesthetically pleasing appearance~~;

d. ~~The~~ This technique ~~should~~ shall be used wherever possible to provide for a variety of ~~both~~ slope percentage, slope direction, and topographical detailing in a three-dimensional, undulating ~~;~~ pattern similar to existing terrain ~~;~~ and

e. Manufactured ~~cut/cut~~ and ~~fill/fill~~ ~~slopes~~ slopes ~~exceeding~~ in excess of ten feet in height that will be either exposed to permanent public view, or are adjacent to environmentally sensitive areas, ~~should~~ shall be designed with features characteristic ~~of~~ natural ~~slopes~~ slopes. This design shall be implemented, where physically feasible as determined by the City Engineer, so that ~~their~~ the ultimate appearance will resemble a natural slope. This ~~will include~~ is applicable to, but not limited to, ~~slopes~~ slopes along streets, ~~and~~ highways, adjacent to parks, schools, open spaces, ~~other~~ public facilities, and other prominent and visible ~~slopes~~ slopes.

4. The following ~~basic~~ grading grading guidelines and techniques serve to implement preferred ~~landform~~ landform ~~grading~~ grading techniques and to help avoid unnecessary ~~eliminate~~ or minimize ~~cut/cut~~ and ~~fill/fill~~:

a. ~~Cuts~~ Cuts. When convex shaped natural features. (e.g., protruding minor landforms) are ~~cut/cut~~, the residual landform ~~should~~ shall be in a form to maintain positive and resemble the original slope. ~~not be a flat slope face, but rather should be restored to resemble the original. This will require more than just rounding at the edges but, in effect, reconfiguring it so the final result will give the appearance of a protruding ridgeline.~~

b. Use of variable ~~slope ratios~~ slope ratios. ~~Because Landform grading designs require the use of variable slope ratios at greater than 2:1 and may create valleys or concave indentations on building pad areas, they may result in loss of usable area. In addition, engineering and construction costs may increase. Be cause of this, segments of a cut or fill slopes may be designed with variable slope ratios less than 2:1, but not less than 1.5:1 within the following guidelines and subject to third party review at the applicant's expense: Because landform grading designs require the use of variable slope ratios, this may result in loss of usable area near building pads. Therefore, only cut slopes may be steeper than 2:1, but not steeper than 1.5:1 and shall meet the following guidelines:~~

1) A geotechnical engineer shall certify that ~~slopes~~slopes will meet standard stability requirements;

2) A licensed landscape architect shall certify the plantability of the slopes, with an emphasis on the slopes steeper than 2:1; and

3) The overall ratio from top to toe will be 2:1 or flatter; and

4) Ratios flatter than 2:1 will also be used in the slope design.

c. ~~Grading~~Grading operations ~~should be planned~~shall occur to avoid the rainy season, October fifteenth (15th) to April fifteenth (~~15th~~5th). ~~Grading~~Grading permits shall only be issued when a plan for ~~erosion~~erosion control and ~~silt retention~~sediment control has been approved by the ~~city~~City without regard to time of year. Additionally, those projects also requiring a Storm Water Pollution Prevention Plan (SWPPP) shall obtain approval of the SWPPP prior to any grading permit issuance.

d. ~~A r~~Rounded and smooth transitions ~~should be made~~shall occur where ~~when the planes of man-made~~man-made and natural ~~slopes~~slopes intersect. Where ~~cut~~cut or ~~fill~~fill conditions are created, ~~slopes~~slopes ~~should~~shall be varied, ~~rather than left at a constant angle or create an unnatural, rigid, "engineered" appearance.~~The angle of a graded ~~slopes~~slope ~~should~~shall be gradually adjusted to the angle of the natural terrain.

e. Manufactured ~~slopes~~slopes adjacent to roadways shall be consistent with the ~~landform~~landform ~~grading~~grading and revegetation techniques, ~~where physically feasible to create visually interesting and pleasing streetscapes. The higher the slope becomes, the more important the modeling effect of landform grading becomes.~~

~~f. Top of slope berms shall be used to eliminate the possibility of drainage sheet flow over the slope that would potentially cause an unstable condition. Tops of slopes should be rounded in conformance with landform grading techniques, or increased in size to reduce the visual impact of the back of a home.~~

f. Slopes shall implement drainage measures as detailed within Sub-article 11 of the City of Murrieta Grading Manual.

G.G. Drainage.

1. Natural drainage courses ~~shall~~should be preserved and enhanced to the ~~extent possible~~maximum extent practicable. ~~Rather than filling them in, drainage features should be incorporated as an integral part of the project design in order to enhance the overall quality and aesthetics of a site, to provide attractive open space vistas, and to preserve the natural character of the site. Encourage the use of natural drainage courses as natural boundaries between neighborhoods.~~Rather than eliminate existing natural drainage features and courses, preservation of existing natural drainage features and courses is encouraged. Moreover, the National Pollutant Discharge Elimination System (NPDES) Permit requires this of all projects, to the maximum extent practicable.

2. ~~Storm drainage runoff resulting from project development should be minimized. Where possible, flood control plans for storm water should encourage the detention of water for percolation in to the ground water to conserve it for future uses and to mitigate downstream flooding.~~The NPDES Permit also requires project's stormwater runoff to be retained onsite via infiltration to the maximum extent practicable under California law. Runoff not retained onsite

shall be conveyed offsite per general standards and practices, to the satisfaction of the *City Engineer*.

16.24.080 Exceptions.

A. No Grading Permit Required. A grading permit is not required if the project meets the criteria as provided under Section 15.52.040 (Permit Exceptions). Additionally, flatwork, pools, or spas, which results in the disturbance of 50 cubic yards or less, does not require a grading permit. For the purpose of this section, flatwork is hardscaping (such as concrete or pavers) for patios, walkways, etc. All other activities resulting in the disturbance of 50 cubic yards or less (excluding those areas that are identified within Section 16.24.060(G) (Grading)), shall require the applicant to provide a statement to that effect, which shall be filed with the City Engineer including the following information: parcel boundaries, pad elevations, on or off-site existing grade elevations, vehicular access to and from the project site with both private and public roadways, existing utilities, and, if applicable, septic system location(s). The plan may be prepared on a topographic map drawn at a scale as large as one (1) inch to one-hundred (100) feet subject to the satisfaction of *City Engineer*.

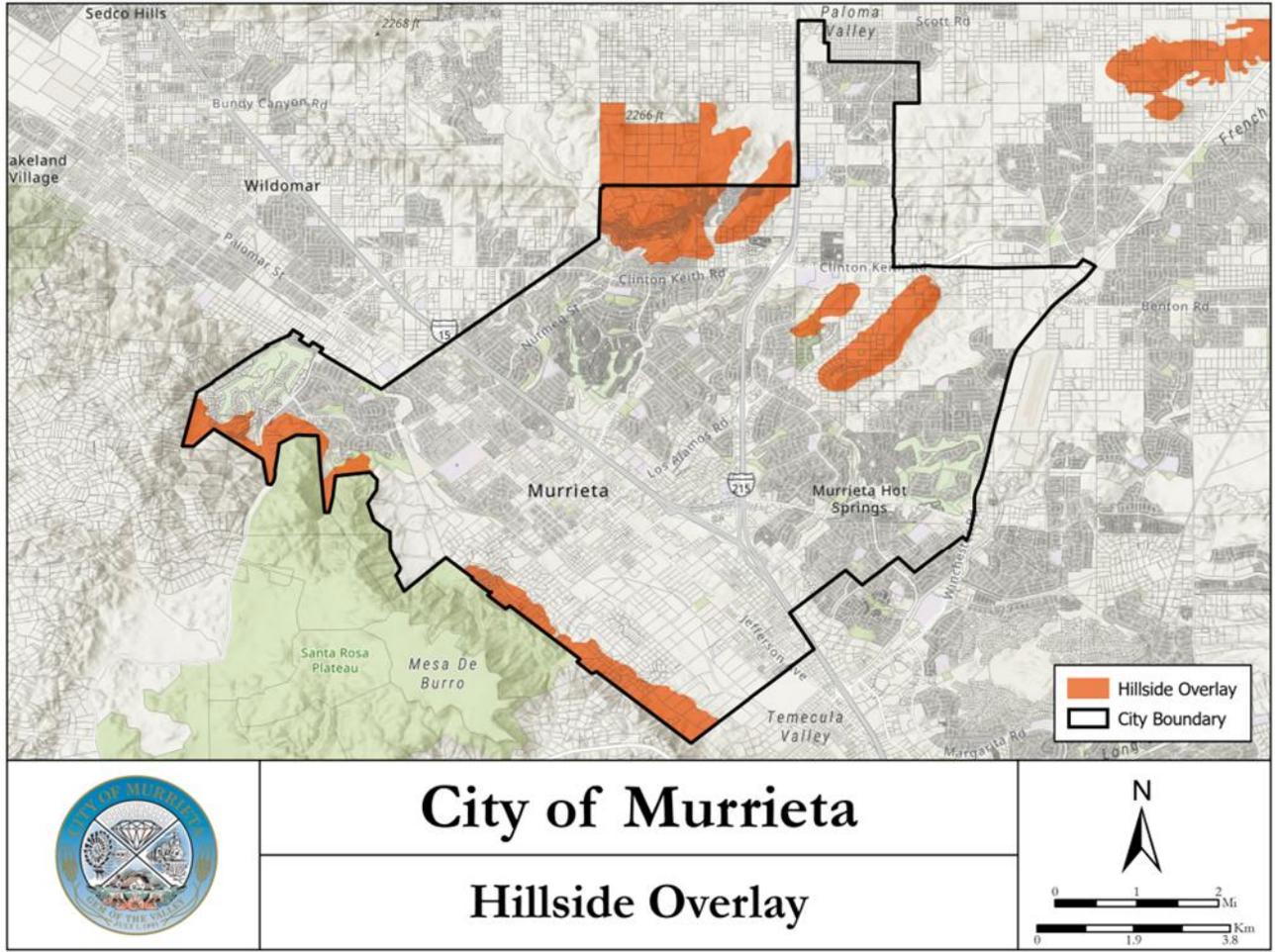
B. Residential Accessory Structures and Accessory Dwelling Units. This Chapter shall not apply to development of residential accessory structures and accessory dwelling units on parcels with existing development approvals when the new construction:

1. Requires the removal of no more than 50 cubic yards of soil;
2. Does not require the use of a retaining wall;
3. Meets the criteria as described within Section 16.44.150 (Residential Accessory Uses and Structures) and Section 16.44.160 (Accessory Dwelling Units); and,
- 4 . Satisfies the criteria as identified within Section 16.24.060(G).

16.24.090 (Reserved).

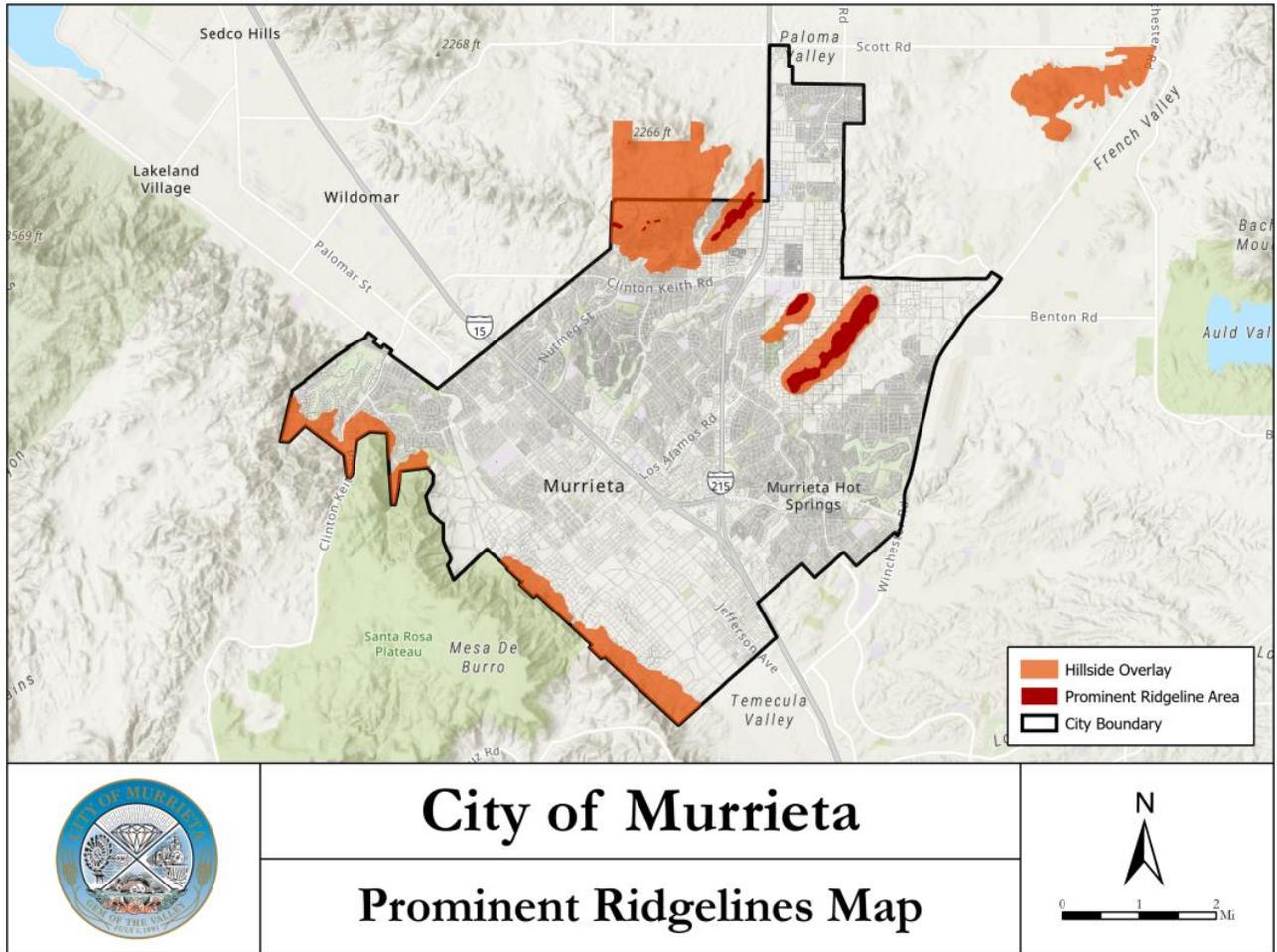
Reserved for future updates

16.24.100 Hillside Overlay Map.



[A. Refer to the City's online Geographic Information System \(GIS\) as an additional mapping resource for project review.](#)

16.24.110 Prominent Ridgelines Map.



A. Refer to the City's online Geographic Information System (GIS) as an additional mapping resource for project review.

Section 16.28.080 (Landscaping Standards) is hereby amended in its entirety to read as follows:

“16.28.080 Landscape Standards.

Landscape areas and materials shall be designed, installed, and maintained in compliance with the following:

A. General Design Standards. The following features shall be incorporated into the design of the proposed landscape and shown on required landscape plans:

1. Landscaping shall be planned as an integral part of the overall project design and not simply located in excess space after parking areas and structures have been planned;
2. Pedestrian access to sidewalks and structures shall be considered in the design of all landscaped areas;
3. Landscape planting shall be provided for all adjacent public rights-of-way, in compliance with [Chapter 16.108](#) (Improvements);
4. With the exception of single-family residential units, landscape adjacent to driveways and parking areas shall be protected from vehicle damage through the provision of minimum six (6) inch high concrete curbs or other types of barriers as approved by the director;
5. Landscaped areas shall not be less than five (5) feet in width, except where determined by the director;
6. Concrete strips, a minimum of four (4) inches in width, shall be provided to separate all turf areas from other landscaped areas, except for single-family residential landscape projects;
7. Permeable surfaces shall be used wherever permissible in place of impervious paving, to encourage on-site water infiltration and support water conservation measures. Permeable surfaces shall be identified on plans; and
8. Protective tree grates shall be provided for trees planted in pedestrian areas, except for single-family residential landscape projects and as determined by the director.

B. Plant Materials. Plant materials shall be selected and installed to comply with the following requirements:

1. A mix of plant materials shall be provided in compliance with the following table ([Table 3-5](#) ~~16.28-2~~). Calculations documenting the required mix shall be shown on the landscape plan;

Table 3-5 TABLE 16.28-2 MINIMUM REQUIRED MIX OF PLANT MATERIALS	
Plant Material	Minimum Required Percentage
Trees	
Twenty-four (24) inch box	35%*
Fifteen- (15)-gallon	65%
Shrubs	

Five- (5-) gallon	<u>70%</u>
One- (1-) gallon (herbaceous only) with city approval	<u>30%</u>
Groundcover	
Coverage within two (2) years	100%
A greater percentage of specimen trees may be utilized with a corresponding reduction in the number of fifteen- (15-) gallon trees subject to the review of the director.	

2. Trees for shade shall be provided for buildings/structures, as well as for parking lots and open space areas. These trees can be deciduous or evergreen and are to be incorporated to provide natural cooling opportunities for the purpose of energy and water conservation;

3. Trees shall be planted in areas of public view adjacent to and along structures, at an equivalent of at least one (1) tree per thirty (30) linear feet of structure. Other areas shall provide trees at a ratio of one (1) tree for each three hundred (300) square feet of landscaped area. The clustering of trees is encouraged;

4. Mature specimen trees in thirty-six (36) inch and forty-eight (48) inch boxes shall be provided for large projects in sufficient quantity subject to the approval of the Director, to provide variety and emphasis at main focal areas;

5. All trees shall be staked or guyed (on a case-by-case basis) subject to the review of the director and in compliance with city standards;

6. Trees and shrubs shall be planted so that at maturity they do not interfere with service lines and traffic safety sight areas;

7. Trees and shrubs shall be planted and maintained in a manner that protects the basic rights of adjacent property owners, particularly the right to solar access;

8. Trees planted near public sidewalks or curbs shall be of a species and installed in a manner that prevents physical damage to sidewalks, curbs, gutters and other public improvements; and

9. Groundcover shall be of live plant material. Limited quantities of gravel, colored rock, bark, and similar materials may be used in combination with a living groundcover.”