4.5 Hillside Considerations

This section primarily addresses residential development as it is the most common building type in hillside areas. Many of the guidelines, however, are also applicable to Commercial or Office development. Applicants/designers, staff and review bodies should use their judgement in application of these guidelines to nonresidential projects in hillside locations.

Fig. 4.5.1 These homes in Oakmont which are well below the ridgeline and heavily landscaped are a good example of how to develop on a hillside.

I. GOALS

A. To allow for limited hillside development that is sensitive to site features.
Note- see Hillside Residential District in the Zoning Code for definition of Hillside Development- generally when average slope exceeds 10%. This is the preferred zoning for hillside areas as it incorporates many of the mechanisms that address hillside considerations.

B. To preserve vistas of ridge lines, particularly to avoid structures silhouetted above the ridgelines.

C. To protect native vegetation on hillsides, particularly on ridgelines.

D. To promote development that is designed specifically for hillsides as opposed to re-contouring the hillside to accommodate existing flat land building designs.

E. To minimize grading on hillsides.

Fig. 4.5.2 This home in Oakmont illustrates how down hill landscaping can screen the lower portionof a hillside home, and trees above the house provide a back drop.

Fig. 4.5.3 Placing homes on top of a ridge, silhouetted against the sky like these homes, is discouraged.

Fig. 4.5.4 These hillside homes are placed well below the ridge, and preserve the view of the ridge.

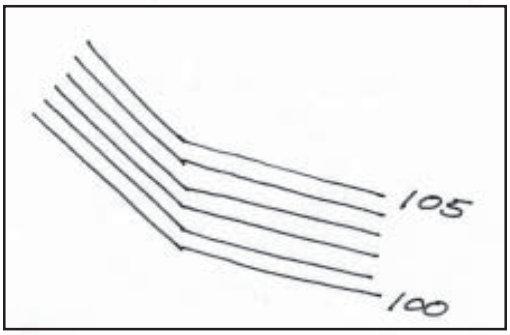

Fig. 4.5.5 When grading is necessary, rigid contouring like this looks man made and should be avoided.

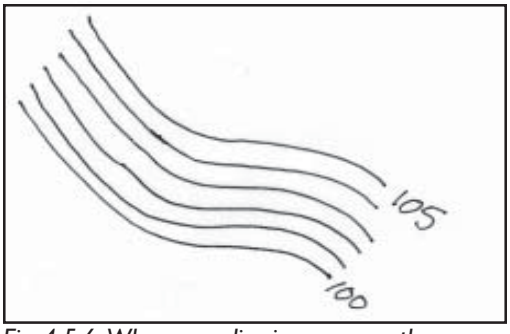

Fig. 4.5.6 When regrading is necessary, the contours should be rounded and undulate to appear natural.

II. SITE DEVELOPMENT GUIDELINES

Note: If a proposed project involves the issue of zoning, the RH zone category is recommended. If a PC or PD district is being proposed, it is recommended that the text of the RH zone is incorporated in the Policy Statement. The RH zone includes many provisions that address hillside considerations and has proven effective in producing developments that respect the hillside terrain. Examples include: Bennett Valley Heights and Fairview Estates.

A. VIEW IMPACTS

1. Preserve surrounding ridgetops as a back drop to the City. Keep the tops of structures in hillside development below the perceived skyline.

2. Views of nearby hillsides are to remain uncluttered by houses obtrusively placed in visually sensitive open areas and on highly visible ridgetops.

B. GRADING

1. Minimize grading. Utilize retaining walls to reduce long cut and fill slopes.
   Excessive grading threatens existing vegetation and tree cover. Limiting site grading reduces soil erosion. This in turn protects the City's creeks and their sensitive riparian habitat and wildlife. Minimized grading also prevents potential visual impacts to scenic hillsides.

2. Avoid grading to create benched or terraced hillside sites. Grading on sloping terrain for the purpose of accommodating houses designed for flat land conditions will not be a basis for an acceptable hillside site plan.

3. Limit grading for house construction in hillsides to driveways, garage pads and understructure areas. House foundations should step with the terrain to minimize grading and to protect trees in the vicinity of the house.

4. Use slope rounding methods at the top and toe of cut and fill slopes to simulate natural topographical conditions.

5. Avoid grading in creek or ravine areas which should be used as natural drainage ways. The placement of storm drain conduit in steep natural drainage ways should be avoided as the substantial grading would result in heavy scaring, probable heavy tree loss and long term visual damage. Public storm drain outlets and bridge structures crossing creeks and ravine areas are allowed provided that the design of these structures incorporate measures to minimize grading impacts.

6. Cut and fill slopes should generally not exceed a 2:1 gradient (horizontal: vertical)
   Cut or fill slopes greater than 2:1 require approval of both the City's Community Development Department, Engineering Division as well as an approval with grading requirements from the applicant's Geotechnical Engineer.

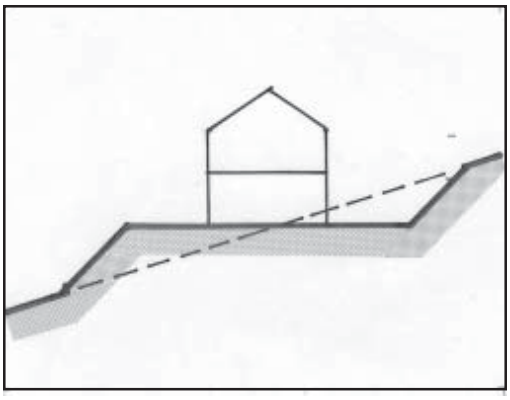

Fig. 4.5.7 Grading hillsides to create flat pads in order to construct flat land home designs is to be avoided.

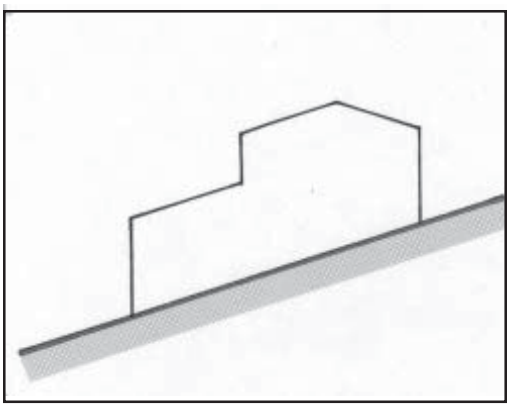

Fig. 4.5.8 Homes on hillsides should be split-level, following the slope. Grading should be minimized.

C. BUILDING PLACEMENT

1. Establish building setback lines to protect existing vegetation, major rock outcroppings and drainage flows. Avoid steep slopes and unstable areas.

2. Place buildings to take advantage of existing vegetation in the foreground and in the background. *Vegetation below structures help to screen the view of buildings from below. Vegetation above structures provide a backdrop and prevent buildings from silhouetting above ridgelines. See Figures 4.5.10 and 4.5.11.*

3. For lots with slopes in excess of 10 percent, provide a minimum side yard setback of 15 feet to allow for adequate drainage. When adjacent to streets that have gradients of more than 5 percent, provide a minimum side yard setback of 10 feet.

4. Shared common driveways are encouraged to minimize grading on hillsides.

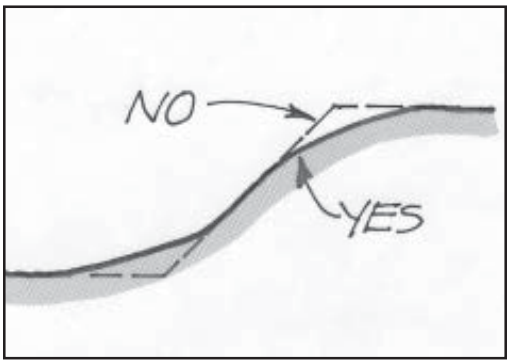

Fig. 4.5.9 When grading is required, round the top and the toe of the slope to produce a more natural condition.

D. STREETS

1. Use the narrowest road available, consistent with emergency vehicle needs, to minimize grading.

2. Design street alignments to minimize large cut and fill grading. The use of retaining walls and designing street alignments to work with existing slopes can reduce grading impacts.

3. Design street alignments, utilities and drainage improvements to promote retention of trees and other important site features.

4. Design minor street cut and fill slopes so they do not exceed a 2:1 (horizontal: vertical) gradient. *See B.6 above.*

5. Design subdivisions with lotting patterns that locate houses where access from the street will result in minimum grading for driveways and garage pads.

6. To provide ample parking, off-street parking can be balanced with on-street parking. A desirable goal would be 4-6 parking spaces per house accommodated in garages, parking spaces next to driveways and on-street spaces.

Fig. 4.5.10 Landscaping and a terrace soften this house from downill views.

E. LANDSCAPING/ EROSION CONTROL

1. Utilize landscaping to screen structures from the downhill direction. This is particularly important when tall pony walls occur on the downhill side.

2. Plant cut and fill slopes to stabilize the slope and control erosion as well as add visual and environmental enhancement.

3. Provide a variety of plants to control erosion on new slopes. Grasses, shrubs and trees used should be compatible with the native vegetation of the site.

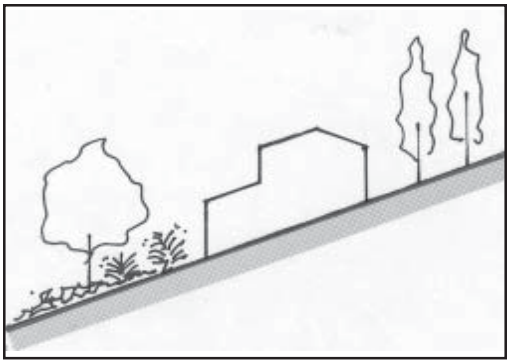

Fig. 4.5.11 Landscaping on the downhill side of homes is effective at screening tall "pony walls" from the downhill side. Trees planted above the house will provide a backdrop from the downhill side over time.

F. FIRE PROTECTION

Hillsides are often high fire hazard areas and in such cases means should be provided to mitigate such hazards as discussed below. Additional information can be obtained from the Santa Rosa Fire Department, 543-3500. Refer to the map of High Fire Hazard Zones and accompanying requirements in the Appendix.

1. Remove brush around structures.
2. Fuel modification zone planting is an effective way to reduce hillside fire hazards.
3. Place irrigated greenbelt areas around houses to serve as a fuel modification zone.
4. Consider utilizing building materials that are fire resistive.
5. Consider limiting large roof overhangs on structures.
6. Consider sprinklering structures even if not required by the Building Code.

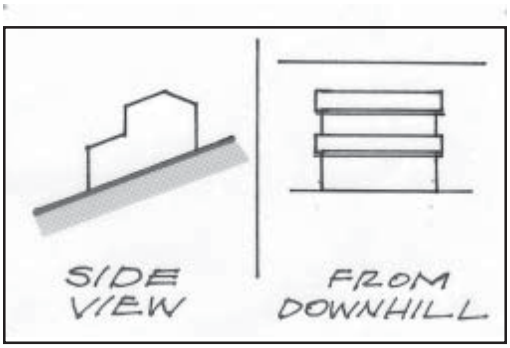

Fig. 4.5.12 Orienting roof ridges parallel to the ridge of the hill and setting roof slopes that approximate the slope of the hill helps to blend homes into the hillside.

III. BUILDING DESIGN GUIDELINES

A. HILLSIDE DESIGN

1. Design buildings to fit the topography.
   Re-contouring the hillside to accommodate existing flat land designs is discouraged.
2. To minimize grading on hillsides step floor levels to follow the hillside.
3. Consider setting a portion of the structure into the hillside (for example garages) with the use of retaining walls to reduce the profile of the home.
4. Design roof pitches to approximate the slope of the hillside, i.e., a 30% slope equates to a 4 in 12 pitch.

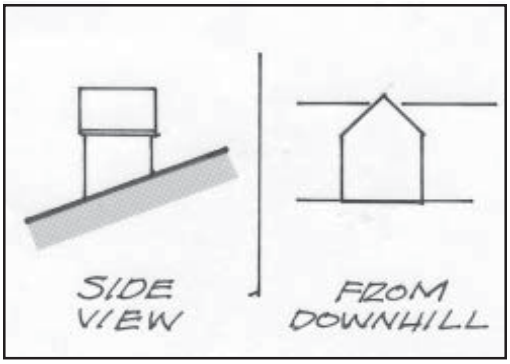

Fig. 4.5.13 Orienting roof ridges perpendicular to the ridge presents the gable end of the home to downhill views. Steeper roof pitches create more vertical height. Both of these approaches make a home more visually obtrusive on a hillside.

Fig. 4.5.14 This home in Nielsen Ranch is big, boxy, and does not step down the hillside. This results in very tall, downhill "pony" walls, below the lower floor. This type of design is discouraged.

Fig. 4.5.15 These homes in Fountaingrove are based on a pre-determined floor plan developed for a flat site. The result is tall "pony" walls on the downhill side, and a very awkward relationship between the living spaces and the very small backyards.

Fig. 4.5.16 This home in Fountaingrove, like Fig. 4.5.15, was not designed for a sloped site. Additionally, in both cases, the light colored stucco makes the homes even more visable from below.

5. Orient roof ridges perpendicular to the direction of the slope (or parallel to the ridgeline). See Figures 4.5.12 and 4.5.13.

6. As slope steepness increases, architectural innovation should substitute for grading solutions in the design of hillside structures.

7. Use roofing and siding colors that blend in with the natural color palette of the surrounding site. *Darker colors are generally more appropriate in visually sensitive hillside locations as lighter colors reflect more light and stand out more.*