

To: Fellow Planning Commissioners

From: Art Lachenbruch

Subject: The proposed ordinance changes and regulation of development intensity

The general plan is designed to provide a community in which homes are distributed throughout a countryside setting in which natural drainage features and many wildlife habitats are preserved intact. A general concern has been expressed widely by citizens, and by elected and appointed officials responsible for implementing the general plan, that with present development trends you won't be able to "see the countryside for the development." To the extent that these trends are allowed to continue, the general plan will be violated; some additional regulation is evidently required. The question we must address is what do we regulate to achieve the desired purpose and what is the objective basis for such regulation. Commissioner Dochnal has asked, "are we trying to get houses that we can see past or are we trying to get smaller houses?" I think the answer is that both things would help us in achieving our objective, but simply telling the developers that these were our aims would not lead to effective regulation. It has been suggested by Commissioner Carico that we simply increase the minimum lot size. This also would probably help achieve our objectives, but I think it could be unfair to people who want to live in a house of modest size which can be placed in an unobtrusive manner on minimum lots permitted by our present zoning.

The general problem seems to relate to development intensity by which we mean the average amount of development per acre of countryside. An elaborately developed home site with tennis court, swimming pool, parking areas, large house, and large patio placed on a lot of minimum size would cause substantial disruption to the natural setting. That same development placed on a lot proportionally larger than the minimum would not result in this undesirable impact (provided the large structures were adequately set back from property lines). The development of a home site (that is the building of structures, the grading, and the paving) has two effects that can result in the disruption of a natural setting: 1) the direct visual impact of the unnatural structures, and 2) the disruption of natural processes in the neighborhood of the structure and elsewhere in the town due to the disturbance of the natural water balance. The off-site hydrologic effects are more subtle and cumulative, and they may manifest themselves over a broad area. Consequently there is no means of assigning accountability to an individual developer for these impacts, and it is necessary to regulate development practices rather than the overall effects to be achieved.

The proposed ordinance revisions are an attempt to impose regulations that will limit the intensity of the development in such a way as to avoid complete domination of the natural setting by the modifications. This requires that the buildings be spaced out so that we can see past them to the terrain on which they lie (increased cul-de-sac right-of-ways, three-dimensional building envelope) and that where very large homes with extensive auxiliary structures and paving are to be built, more than the minimum amount of land should be devoted to them (impermeable surface ordinance, height envelope). None of these regulations would impose a serious restriction on development following the patterns that are traditional in the community, but they impose limits on the extreme trends that we have faced in the last few years.

The rationale for the impermeable surface constraint requires further comment. The general plan requires that the natural drainage courses, (rills, swales, canyons, and creeks) be used to accommodate the surface run-off as they have for ~~tens of~~ thousands of years in the past. These drainage courses provide a central part of the natural setting of the community and the most important habitats and travel ways for the large and small mammals and birds that live there. As the percentage of the community covered with roof tops and paving increases, a greater percentage of the rain will run off promptly and less will soak into the ground to replenish the water table. The additional prompt run-off imposes a burden on the drainage channels; they have not evolved to accommodate it, and excess erosion can result. This would either prohibit the use of these channels for carrying the stronger surface drainage, or destroy the natural habitats and scenic backdrops they provide. As more rain water runs off, less soaks in, and the ground water table drops. It is this ground water, however, that supplies the late spring and fall flow in the major drainage courses, and the summer flow in perennial streams like Adobe Creek. As the ground water table drops, the bank-flow into these streams will diminish, and so will the water available to streamside biotic communities, disrupting these habitats. The net result of the two factors combined is that the same amount of water must pass from the hillside where it is supplied by rain to the ocean, but much greater loads are imposed on the channels during the rainy season and much drier conditions would occur in the season when it does not rain. The increased loads cause increased erosion and sedimentation, modifying the configuration of channels, and the greater seasonal variation in flow causes further disruption of habitats (where year-round water sources dry up, the range of wildlife will be altered). These effects are particularly important in the hilly portions that lie "upstream" from the major drainage ways. A given amount of run-off in such hillside locations has much greater disruptive effect than the same amount in the more gently sloping portions of town. Thus 15,000 square feet of impermeable surface on one acre of hilly terrain is worse than 15,000 square feet on one acre in flatter terrain. The impermeable surface restriction tries to accommodate this effect without prohibiting the construction of large estates. However, if a home requiring 15,000 square feet of impermeable surface in a region where the slope is 5% or 10% could be constructed on one acre (one "lot-unit" at that slope); the corresponding acreage required to achieve no greater disruption in a region with 30% slope is about 3½ acres (two slope-density units at 1.75 acre each). The ordinance still permits substantial development on a lot constituting only one development unit (1.75 acre) in 30% terrain, namely, 7,500 square feet. If, however, a 15,000 square-foot development is desired in 30% terrain, the ordinance would keep the overall impact of development unchanged by requiring the larger acreage for that 30% lot.

In establishing the limits on impermeable surface for different slopes, we have tried to take advantage of a large body of experience that has developed over the past 40 years in the fields of soil conservation and hydrology, and to accommodate patterns of development that have become established in our community since its incorporation. The proposed limits range downward from 15,000 square feet for each slope-density lot-unit in 10% terrain (i.e., for each acre, because a lot-unit for 10% slope is one acre) to 7,500 square feet for each lot-unit at 30% (a lot-unit is 1.75 acres at 30%). For lots with an average slope greater than 30%, the 7,500 square-foot minimum per lot-unit would still apply; i.e., for 40% terrain we would allow 7,500 square feet for each 2.8 acres in the lot (one lot-unit is 2.8 acre at 40%). Thus if someone

note Numerical examples adjusted ⁻² to code as of Jan 2001

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wanted 11,250 square feet of impervious surface on a 30% lot, he would have to devote at least 1½ lot-units or 2.63 acres to that development. It is important that this is a very modest restriction; such a regulation would have affected only those few existing homes with the most extremely intense development. Any lot that complies with the slope-density ordinance (and therefore contains at least one slope-density lot-unit) would be allowed at least 7,500 square feet of impermeable surface; if the slope were less than 30%, it would be allowed more. According to our experience in the town, 7,500 square feet is ample for a large house, swimming pool, large patio and parking area. It could not accommodate a tennis court, however. In general, the ordinance would have the effect of requiring tennis-court lots to be larger than the minimum size if the average slope exceeded 10% or so. Lots that contained less than the average area required by slope density would have their development restricted accordingly; they would not be permitted as much impermeable surface as lots that comply.

The ordinance change requiring larger setbacks for high parts of a structure is not unrelated to the ordinance regulating impermeable surface. John Carlson's analysis has shown us that this setback regulation would have affected only relatively small parts of a few of the most obtrusive structures in the town at present; even most Tudor houses with high gables, eaves, and towers would not have been seriously constrained. However, some would have been moved back 3 to 15 feet from the setback lines. If this could not be accomplished without violating other setbacks, it would be a signal that the house is inappropriate for the lot, and more acreage should be devoted to it. If it could be set back 3 to 15 feet and still comply, this might seem to be a small adjustment; however, it represents a 10%-50% increase in setback and its effect on the visual impact would not be negligible.

With the impermeable surface regulations in effect, we can anticipate a trend toward putting two stories beneath all of the roof to get as much living area as possible for a given amount of impermeable roof surface. We might also anticipate a trend toward placing these multi-story structures close to the set-back lines to make room for tennis courts on minimum lots. Under these conditions, the set-back height limit will become more important to permit us to "see past these houses."

Our liberalized definition of building height for below-grade portions of houses is also an important part of the package in this connection. It encourages the designer to get multi-story living space beneath a given square foot of impermeable roof with no additional visual impact by building "down" instead of "up."

In summary, the proposed ordinance changes for 1) definition of building height, 2) greater set backs for high parts of structures, 3) minimum right-of-ways, and 4) limits to impervious surface constitute a package designed to limit the intensity of development so that some minimum amount of natural terrain remains intact and visible, thereby providing the setting for our community that is mandated by the general plan. The constraints are modest (perhaps too much so) and would not materially alter previously established development patterns in the town. Their general thrust is that if development much more extensive than the community norm is desired, then a lot larger than the community's minimum should be devoted to that development so that the overall development intensity is not severely affected.

The constraints are set forth in terms of unambiguous regulations that can be taken into consideration by subdividers before they commit themselves to lot design, and by prospective buyers before they commit themselves to purchase property.