



**TOWN OF PORTOLA VALLEY**  
**REGULAR PLANNING COMMISSION MEETING**  
**765 Portola Road, Portola Valley, CA 94028**  
**Wednesday, March 17, 2010 – 7:30 p.m.**  
**Council Chambers (Historic Schoolhouse)**

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**ASSISTANCE FOR PERSONS WITH DISABILITIES**

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Planning Technician at 650-851-1700 ext. 211. Notification 48 hours prior to the meeting will enable the Town to make reasonable arrangements to ensure accessibility to this meeting.

**AVAILABILITY OF INFORMATION**

Copies of all agenda reports and supporting data are available for viewing and inspection at Town Hall and at the Portola Valley branch of the San Mateo County Library located at Corte Madera School, Alpine Road and Indian Crossing.

**PUBLIC HEARINGS**

Public Hearings provide the general public and interested parties an opportunity to provide testimony on these items. If you challenge a proposed action(s) in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing(s) described later in this agenda, or in written correspondence delivered to the Planning Commission at, or prior to, the Public Hearing(s).

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**AGENDA**

**Call to Order, Roll Call**

Commissioners McIntosh, Von Feldt, Zaffaroni, Chairperson Gilbert, and Vice-Chairperson McKitterick

**Oral Communications**

Persons wishing to address the Commission on any subject, not on the agenda, may do so now. Please note, however, the Commission is not able to undertake extended discussion or action tonight on items not on the agenda.

Regular Agenda

1. *Public Hearing:* Review of Proposed Site Development Permit X9H-611 for New Residence and Site Improvements, 2 Buck Meadow Drive, Toor *continued to 04/07/10 meeting*
2. *Public Hearing: Review of Proposed Site Development Permit X9H-610 for New Residence and Site Improvements, 295 Golden Oak Drive, Corman*
3. *Public Hearing: Request for Modification to Town's Geologic and Ground Movement Potential Maps, Miller, 3350 Alpine Road*
4. *Continued Preliminary Review of the Town's Geologic and Ground Movement Potential Maps, Related to Zoning Provisions and Land Use Policies.*

Commission, Staff, Committee Reports and Recommendations

Approval of Minutes: March 3, 2010

Adjournment

**Any writing or documents provided to a majority of the Town Council or Commissions regarding any item on this agenda will be made available for public inspection at Town Hall located 765 Portola Road, Portola Valley, CA during normal business hours.**

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This Notice is posted in compliance with the Government Code of the State of California.

Date: March 12, 2010

Carol Borck  
Planning Technician

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# MEMORANDUM

## TOWN OF PORTOLA VALLEY

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**TO:** Planning Commission  
**FROM:** Tom Vlastic, Deputy Town Planner  
**DATE:** March 11, 2010  
**RE:** Site Development Permit Request X9H-610, Corman

### Location

1. Address: 295 Golden Oak Drive
2. Assessor's parcel number: 079-102-020
3. Zoning District: R-E/1A/SD-1a (Residential Estate, 1.0-acre minimum parcel area, slope density requirements)

### Request, Background, Project Overview, ASCC Actions

This request is for approval of a site development permit application for approximately 1,432 cubic yards of grading (counted pursuant to the provisions of the site development ordinance), which is to be completed for residential redevelopment of the subject 1.13-acre Alpine Hills property (see attached vicinity maps). On February 8, 2010, at a special site meeting, the planning commission conducted a preliminary review of the application with the ASCC. The ASCC completed preliminary review of the request at its evening 2/8 meeting, and at its February 22, 2010 meeting approved the architectural review portion of the request. The ASCC also found the grading proposals acceptable as proposed.

The following enclosed plans describe the grading, drainage and landscaping elements of the project that are the focus of planning commission site development permit consideration:

- Sheet C-2, Grading and Drainage Plan, SMP Engineers, February 4, 2010
- Sheet C-3, Cross Sections, SMP Engineers, February 4, 2010
- Sheet L-1, Landscape Planting Plan (north side of parcel), Stoecker and Northway Architects, Incorporated, February 22, 2010
- Sheet L-2, Landscape Planting Plan (south side of parcel), Stoecker and Northway Architects, Incorporated, December 23, 2009

The full set of architectural plans, as approved by the ASCC on February 22, 2010, are listed in the attached minutes of the ASCC meeting, but are not included with this report. A few sheets showing the house elevations are attached for reference. A full set of the architectural plans will be available for information at the March 17<sup>th</sup> public hearing. Further,

anyone wanting to review the complete architectural plan set can do so at the Planning Department at Portola Valley Town Hall.

Also enclosed is a copy of the proposed *Septic System Plan* dated February 2, 2010, prepared by S.R. Hartsell, RHES. This plan is discussed below under "status of request for exemption from requirement to connect to the sanitary sewer."

For the most part, the project is described and evaluated in the following attached documents:

February 5, 2010 staff report with attachments prepared for February 8, 2010 Planning Commission and ASCC preliminary review meeting. The attachments include the letter from the project architect received 1/7/10 describing the proposed project design and concentration of floor area.

Minutes of February 8, 2010 preliminary review meeting on the project

February 19, 2010 staff report with attachments prepared for February 22, 2010 ASCC preliminary meeting. The attachments include the February 18, 2010 letter from the project architect explaining the plan adjustments made in response to the input received at the preliminary review meeting.

Minutes of February 22, 2010 ASCC meeting on the project

Also attached are the review reports from the various members of the site development committee. These are specifically identified and discussed below.

### Site Description

1. **Area:** 1.13 acres.
2. **Present use of site:** Single family residential.
3. **Topography:** For the most part level to gently sloping.
4. **Ground cover:** Primarily exotic materials including a number of old pine and eucalyptus trees, most of which are to be removed.
5. **Geology:** The property is classified **Sbr** on the town's map of land movement potential, considered the most stable slope category. Additional data on site geology is presented in the attached January 13, 2010 report from the town geologist.
6. **Relationship to earthquake faults:** The property is approximately 6.600 feet northeast of the San Andreas Fault Zone.
7. **Characteristics of site drainage:** The site drains primarily to the north and northwest.

### Ordinance Requirements

Section 7303.C. of the Site Development Ordinance requires that plans for grading in excess of 1,000 cubic yards come before the planning commission for approval. Further, Section 7300.A.6) requires a site development permit when certain tree removal is proposed. The ordinance requires that the plans be reviewed by the *Site Development Committee*, consisting of the town engineer, town planner, town geologist, health officer, fire marshal, members of the architectural and site control commission (ASCC), the conservation committee, and trails committee. The reviews and recommendations of committee members are to be transmitted to the planning commission and applicant in a report prepared by the town planner. The specifications for grading and other aspects of site development are contained in the site development ordinance.

### **Status of Request for Exemption from Requirement to Connect to the Sanitary Sewer**

As the planning commission was informed during the preliminary review site meeting, pursuant to the provisions of the Plumbing Code, if a site is being considered for redevelopment, as proposed with this project, and is within 200 feet of the sewer, the new project must connect to the sanitary sewer. The subject site is within 200 feet of sewer line in Golden Oak Drive and therefore, under the Plumbing Code, is required to connect to the sewer.

The applicant is seeking town council exemption from the sewer connection requirement, but this matter has yet to be presented to the council for deliberation. One of the key questions that was being evaluated was whether or not a septic system to San Mateo County Health Department standards could even be designed for the site. The question was complicated by initial drainage plan concerns discussed in the attached January 13, 2010 report from the town geologist.

Eventually, the enclosed revised February 4, 2010 grading and drainage plan was prepared and the enclosed February 2, 1010 Septic System Plan. These have been considered by the health officer and town geologist including evaluation at a March 5, 2010 site meeting with the project engineer, geologist, and septic system consultants. By attached report dated March 9, 2010, the town geologist has found the revised plans acceptable. Also, by attached email dated March 10, 2010, Health Officer Stan Low has found the revised plans acceptable.

The above review, therefore, has concluded that it is feasible to install a septic system on the site that would conform to County Health Department design standards. The revised drainage plan and the septic plan essentially work with the basic design provisions, including scope and character of earth movement, as considered by the planning commission and ASCC at the February 8<sup>th</sup> preliminary review meeting. Thus the project could proceed as proposed with either an on site septic system or connection to the sanitary sewer.

The above comments, however, do not take into account the full range of issues that the town council would need to consider to grant the desired exemption from sewer connection. Thus, at this point the key data for planning commission consideration is that the site, grading and drainage plans would work with either a sewer connection or the proposed septic plan.

We have also discussed the proposed planting plan with the project architect relative to the issue of septic v. sewer. He has advised that since the septic leach lines are relatively deep, and due to the scope of the lines, he is not concerned with excessive moisture. Further, the plantings would be adjusted to avoid being directly in conflict with the leach lines and, as noted on the landscape plan, the plant materials would also be adjusted to better match the site's soil conditions and environment, with more sun exposure, after the extensive pine and eucalyptus tree removal has been completed as was discussed at the 2/8 site meeting.

Also, with respect to the landscape plan, as noted in the attached minutes of the 2/22 ASCC meeting, a final detailed landscape is to be provided to the satisfaction of a designated ASCC member prior to release of any building permit. If a septic system is permitted, then the plan should clarify how the plantings have been adjusted to be in harmony with the septic design.

## Site Development Committee Plan Review, Evaluation and Recommendations

Pursuant to the requirements of the site development ordinance, project plans have been circulated for staff and committee review. The following reports and comments have been received.

1. **ASCC.** As noted above, and in the attached materials, the ASCC conditionally approved the architectural review part of this project at its February 22, 2010 meeting. In doing so, the ASCC considered the few landscape issues noted by planning commission and ASCC members during the 2/8 site meeting and approved the revised landscape plan that includes notes to address the rear yard plant materials and "wetter" soil environment, and also preservation of existing natives mixed with the scrub materials to be removed in the rear area.

At the 2/8 site meeting, planning commissioners present found the plans and grading proposals generally acceptable with the few comments noted regarding landscaping and clearing of scrub materials. Commissioner Gilbert also wondered about the proposed concentration of floor area. The ASCC is by zoning ordinance authorized to consider and grant relief from the 85% limit and did so as explained in the attached 2/22 meeting materials. Specifically, the ASCC action referenced the clarifications relative to the design as set forth in the minutes of the regular, evening February 8<sup>th</sup> ASCC meeting (refer to pages 5 and 6 of the minutes). The ASCC considered these design clarifications, the site conditions and relationships to adjoining properties, and the proposed site plan. With these considerations, the ASCC concluded that the project is superior to an alternative that could have more basement area and grading for the desired bedroom spaces, or a larger guest house, or an additional detached accessory structure. Further, the ASCC and neighbors appreciated the design that maintains a very low, single story profile to respect the views from the neighboring houses and related active yard areas at higher elevations to the west and east.

2. **Public Works Director.** By memo dated February 1, 2010 (copy attached), the Public Works Director has found the project conditionally acceptable. Most of the conditions are relatively standard project requirements. It is also noted, however, that item #1 in the report raised specific issues with the original drainage plan. The public works director has advised that he has reviewed the revised drainage plan, including additional site inspections and that the plan, for the most part, resolves the issues noted in item #1 of the 2/1/10 report. He noted, however, that he would prefer that the outfall energy dissipator be moved somewhat to the south and further away from the rear property line.
3. **Town Geologist.** By memo dated March 9, 2010, the town geologist has found the project revised grading and drainage plans conditionally acceptable.
4. **Fire Marshal.** The fire marshal has reviewed the proposal and by memo dated January 11, 2010 (copy attached) found the proposal conditionally acceptable.
5. **Town Planner.** As has been the case with most site development permits, our plan concerns were developed and addressed primarily through the ASCC review process. Further, the plan proposals, including floor area, impervious surface area, building setbacks and heights conform to requirements of the zoning ordinance as evaluated in the attached staff reports.

6. **Trails Committee.** The trails committee has advised that there are no public trails along the Golden Oak Drive right of way or in the immediate vicinity of this property.
7. **Conservation Committee.** The conservation committee by attached memo dated January 28, 2010 identified lighting concerns and also a question regarding the scope of impervious surface area. Also, it was suggested that all mature pines be removed. The comments of the conservation committee were considered by the ASCC in completing action on the project. As noted in the attached project description and ASCC review materials, adjustments to the lighting plans were required and most of the pines on the site are being removed. The few to remain are for some screening and to help provide a sense of separation between residential improvements on adjoining properties.

As to the scope of impervious surface (IS) area, while the plan does make use of virtually all of the permitted IS, it does not exceed the IS limit. Further, over 2,500 sf of the IS would be compacted decomposed granite for the driveway, which has some ability to retain runoff, at least in comparison to asphalt or concrete. Further, the design concentrates the patios and terrace areas close to the house. In any case, the ASCC considered the design and found it fully appropriate and, again, the project does conform to the town's IS limit.

### **Environmental Impact**

The project is categorically exempt from filing an environmental impact report pursuant to Section 15303.(a) of the CEQA guidelines. This section exempts construction of new single-family residences when not in conjunction with the construction of two or more such units.

### **Recommendations for Action**

Unless information presented at the public hearing leads to other determinations, the following actions are recommended:

1. **Environmental Impact.** Move to find the site development permit project categorically exempt pursuant to Section 15303.(a) of the CEQA guidelines.
2. **Site Development Permit.** Move to approve the site development permit application as shown on the plans and materials referenced under "request" of this memo subject to the following conditions:
  - a. All conditions of the ASCC architectural approval granted on February 22, 2010 shall be adhered to as provided for in the ASCC action. Further, with respect to the final landscape plan condition, if the project is permitted to use an on site septic system, the final plan shall clarify how the plantings have been adjusted to be in harmony with the septic design.
  - b. The requirements of the public works director as set forth in his February 1, 2010 memorandum shall be adhered to. In addition, in preparing the final drainage plan, consideration shall be given to moving the outfall energy dissipator somewhat to the south and further away from the rear property line.
  - c. The requirements of the town geologist set forth in his March 9, 2010 memorandum shall be adhered to.

- d. The requirements of the Fire Marshal set forth in her January 11, 2010 memorandum shall be adhered to.
- e. The requirements of the Health Officer as set forth in his March 10, 2010 email shall be adhered to.
- f. All finish contours shall be blended with the existing site contours to result in as natural appearing finish slope condition as reasonably possible to the satisfaction of the public works director and planning staff.

TCV

attachments

encl.

cc.	Planning Manager	Town Manager	Fire Marshal
	Town Attorney	ASCC	
	Mayor	Applicant	
	Town Council Liaison	Town Geologist	





# MEMORANDUM

## TOWN OF PORTOLA VALLEY

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**TO:** Planning Commission

**FROM:** Leslie Lambert, Planning Manager

**DATE:** March 9, 2010

**RE:** Request for Modification to Town's Geologic and Ground Movement Potential Maps, Miller, 3350 Alpine Road

### Request and Planning Commission Action

Pursuant to Town Resolution No. 2279-2006 (i.e., formerly Resolution No. 500), the applicant has submitted a request to modify the Town's Geologic and Ground Movement Potential Maps as they apply to the 2.96-acre parcel located at 3350 Alpine Road. As required by Resolution No. 2279-2006, an Engineering Geologic and Geotechnical Investigation was performed by Murray Engineers, Inc. dated December 23, 2009, on behalf of the applicant. This investigation was reviewed by the Town Geologist and by attached letter report dated February 18, 2010, he supports the requested map changes recommended by Murray Engineers. With the review and recommendation by the Town Geologist, the Planning Commission is requested to approve the map modifications as proposed and direct that the Geologic and Ground Movement Potential Maps be updated and that the map modification data be placed in the parcel file for the subject property.

### Evaluation and Proposed Modifications

On August 24, 2009, the ASCC conditionally approved a proposed addition of 1,340 sf to the existing single story, 2660 sf Ranch style residence. The proposed additions include a new three-car garage to replace the existing garage to be demolished, a new dining room and new master bath. Also proposed is a small, 300 sf second story office.

The Murray Engineers investigated evaluated the subsurface conditions in the proposed addition areas on the north, west and south sides of the residence, as well as an evaluation of the landslide deposit and Ms zone that is mapped at and above the western (uphill) side of the residence. Based upon engineering geologic reconnaissance and mapping, aerial photograph review, review of prior geologic and geotechnical reports, subsurface exploration, and review of the Town's Geologic and Ground Movement Potential Maps, it is Murray Engineers opinion that there appears to be significant geologic evidence to support modification to the town's Geologic and Ground Movement Potential Maps to more accurately reflect the site conditions. Specifically, it is Murray Engineers recommendation that the active landslide shown on the Town's Geologic map be removed and the Ms zone shown on the Ground Movement Potential Map be reclassified to a Ps zone.

The Town Geologist has reviewed and provide the attached letter report dated February 18, 2010. The Town Geologist conducted a site inspection of the subject property and concurred with the findings in the evaluation provided by Murray Engineers, concluding that the information provided supports the requested map modifications to both the Geologic Map and Ground Movement Potential Map as follows:

- a. Elimination of the entire Active Landslide (Als) that currently extends across 3 residential properties including 3350 Alpine Road.
- b. Removal of the "Ms" zone associated with the above noted Als replacement with a "Ps" zone indicating the potential for future shallow slope instability.

With the Murray Engineers data is it also possible to modify portions of the adjacent parcels to the west. The Town Geologist advises that the maps be changed to amend all parcels affected. This includes parcels located at 200 Alamos Road (Cagan) and 128 Westridge Drive (Walz). Staff has informed both Cagan and Walz of the proposed map modifications.

The Town Geologist will be present at the hearing to discuss the investigation and conclusions provided in his letter of February 18, 2010.

#### Recommendation

It is recommended that the Planning Commission approve the requested map modification upon the recommendation of the Town Geologist. Again, this will allow for the Town Geologic and Ground Movement Potential Maps to be updated and for data on the map changes to be placed into the parcel file for the subject property. In addition to the map modifications, the approval will allow the house addition project to proceed.

cc: Dr. Martin Miller  
Murray Engineers, Inc.  
Mr. and Mrs. Cagan  
Mr. and Mrs. Walz  
Town Geologist  
Town Planner



# MEMORANDUM

## TOWN OF PORTOLA VALLEY

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**TO** : Planning Commission

**FROM** : George Mader, Town Planner

**DATE** : 3/11/10

**RE** : Continued Preliminary Review of Revised Geologic and Ground Movement Potential Maps, Related Zoning Provisions and Land Use Policies

### Recommendation

It is recommended that the planning commission consider the responses in this memo to issues raised at the 3/3/10 planning commission meeting and provide direction.

### Background

At the 3/3/10 meeting, the commission discussed three topics, as follows:

1. Should any buildings be permitted within fault setbacks?
2. What constraints should be placed on remodels and additions to buildings within fault setbacks?
3. Can the confusion caused by providing for fault setbacks on both sides of a fault on one hand, and providing for fault setbacks from the center line of a fault trace on the other hand be solved?

Each of these questions is discussed below.

### Discussion

1. Should any buildings be permitted within fault setbacks?

The commission decided that buildings should not be allowed in fault setbacks. A question then arose as to the definition of a building. That definition is found in Section 18.040.070 of the zoning ordinance and reads as follows:

“Building,” means a roofed structure built for the support, shelter or enclosure of persons, animals, chattels, or property of any kind. When a structure is divided into separate parts by unpierced walls extending from the ground to the roof or when the parts of a structure are joined only by a breezeway each such part is a separate building.

The first sentence of the definition makes it clear that a roofed structure would in all instances be defined as a building.

The commission also discussed what types of structures that are not buildings would be permitted within fault setbacks. Examples would include: swimming pools, tennis courts, fences, walls, enclosed dog runs, benches, tables, ornamental garden structures, etc. would be permitted since they are not buildings.

Finally, the commission decided there should be an exception that would allow non-habitable buildings within fault setbacks under exceptional circumstances. It is suggested that exceptions to the exclusion of non-habitable buildings from fault setbacks would be permitted if the non-habitable building meets the same provisions of Section 2, b. (on pages 3 - 4 of this memo) that pertain to building additions.

A definition of non-habitable building will then be needed. Section 18.02.210 of the zoning ordinance provides the following definition: "Habitable room' means a room or enclosed floor space arranged for living, eating or sleeping purposes, not including bath or toilet rooms, laundries, pantries, floyers (sic) or communication corridors." This definition was taken from the building code. One option would be to provide that a non-habitable building is one that does not include habitable rooms. This definition is not of much help however, since it only defines a room, not a structure.

When this problem was discussed before, we noted that utilities make a building habitable and include water, electricity, heat (gas or electric), and sewage disposal. Use of these utilities require features such as a stove, refrigerator, heater, water heater, a sink with running water and a toilet. Of course, even if a building lacks these features, a person can still sleep in the building and use the building during the day. Such a building could house an artist's studio, a woodshop, a stable, or any other of a variety of uses such.

Another reference, found in Resolution No. 2009-377 that pertains to Chapter 7A of the building code, cites several exceptions for buildings that do not have to meet the requirements of the chapter. These are found in Section 3. of the ordinance and are:

- a) A one-story detached accessory building used as a tool or storage shed, playhouse, or similar use provided the floor area does not exceed 120 square feet.
- b) An ornamental landscape structure (e.g. trellis, gazebo) with a projected roof area that does not exceed 120 square feet and that is not attached to a non-exempt structure.
- c) An animal shade structure with a projected roof area that does not exceed 120 square feet.
- d) An agricultural building, that is defined as a non-residential structure designed and constructed to house farm implements, hay, grain poultry, livestock or other horticulture products. "Agricultural building" shall include green houses.

If non-habitable buildings were to be defined, the definition should be added to the definition section of the zoning ordinance and the implications of this addition considered in the context of the entire zoning ordinance. A more direct approach for the purposes at hand, might be to include the following provision: "Exceptions to the

provisions of (insert section number) may be permitted for the following non-habitable buildings that do not exceed 120 square feet and are used as: a tool shed, an ornamental garden structure, an animal shade structure, an agricultural building or for a similar use.”

2. What constraints should be placed on remodels and additions to buildings within fault setbacks?

The first question the commission discussed was what measurement should be used in determining how much change to permit without having to meet normal fault setback requirements. The commission discussed the definition of “new building” found in Chapter 7A of the building code and the 50% of a building’s value rule found in the zoning ordinance. The commission found the “new building” definition as not sufficiently precise and understandable for use by property owners. Also, the definition while appropriate for purposes of reducing fire hazard does not include the significant infrastructure in a building. Inasmuch as the 50% rule has been in the zoning ordinance since the ordinance was first adopted in 1964, and that Leslie Lambert, Planning Manager, could not remember when administration of the 50% rule had posed a problem, the commission considered the rule to be acceptable.

When applying the 50% rule, those parts of a project that are considered seismic upgrades would be excluded from the 50% limitation.

With respect to remodeling, that is when changes are made internally in a building, the commission would allow such changes up to 50% of the building’s value prior to remodeling provided the remodeling includes specific provisions for increasing the building’s resistance to seismic forces and that the plans be approved by the town geologist in addition to the building inspector.

With respect to additions, the commission was concerned about the potential increase in occupancy of the building as well as the larger investment that would be at risk. There are perhaps three possible situations: 1) the addition is entirely within the fault setback, 2) the addition is partially within the fault setback, 3) the addition is outside of the fault setback but attached to a building within the fault setback. The objective should be to reduce risk while allowing for some expansion of a building. Following are possible policies with respect to these situations. In all cases, staff may refer such an application to the planning commission for action.

- a. The addition is outside of the fault setback but attached to a building within the fault setback.

The connection between the two buildings should be designed so that fault movement under the building within the setback will likely not result in fault caused damage to the addition. The addition should conform to building code standards in effect at the time of permit approval.

- b. The addition is entirely within the fault setback, or is partially within the fault setback.

The planning commission may allow additions within a fault setback under the following circumstances:

- 1) Locations conforming with required fault setbacks do not provide a significantly

greater amount of safety from fault offset or other geologic hazards than a location within the fault setback; or

- 2) There is no location for an addition that conforms to the fault setback, required side or rear yards, or such yards as might be modified by approval of a variance.

In the event a lesser setback is authorized by 1) or 2) above, the amount of setback reduction shall be determined by the planning commission upon submission of such geologic information as the town may require and as advised by the town geologist. The reduction shall be the minimum necessary to allow the addition. A geologic and engineering study shall be submitted by the applicant that demonstrates the addition will not be over a fault trace and that measures are specified to minimize the risk of collapse from fault rupture. The addition shall conform to the building code and site development codes in effect at the time of permit approval.

3. Can the confusion caused by providing for fault setbacks on both sides of a fault on one hand, and providing for fault setbacks from the centerline of a fault trace on the other hand be solved?

I have discussed this with Ted Sayre and he concurs that we can in each case stipulate that the measurement be made from the centerline of the trace. As a practical matter, where the trace has been mapped in detail, then the centerline would be measured from the center of the mapped trace.

I also discussed with Ted the comparative safety of requiring a setback from the centerline of an inferred trace as opposed to requiring a setback from the centerline of an en-echelon trace. Ted believes it is difficult to make a direct comparison. In each case there are unknowns. In the case of an inferred fault, the fault could rupture anywhere within the fault setbacks. In the case of an en-echelon trace, the width of ruptured ground can vary. While often the individual en-echelon ruptures are on the order of 40 feet, they tend to "feather out" at the edges and hence the width of the area of concern can exceed the 40-foot width. Current geologic knowledge does not allow for a precise direct comparison. Ted will be at the meeting to discuss this matter further.

### Recommendations

It is recommended that the commission consider the three questions addressed in this memo. When concurrence is reached, we will combine the results along with prior comments on the revised geologic and ground movement potential maps, related zoning provisions and land use policies into complete documents and set the items for public hearing before the planning commission. We will also complete CEQA documentation for the several items.

cc. Leslie Lambert  
Sandy Sloan  
Steve Toben  
John Richards  
Angela Howard