

**TOWN OF WOODSIDE  
Planning Commission Meeting**

September 21, 2016  
Minutes

The meeting of the Woodside Planning Commission was called to order on September 21, 2016, at 6:07 P.M. in Independence Hall. The Pledge of Allegiance was recited.

ROLL CALL

Present: Chair Kutay, Vice Chair Huberty; Commissioners Calia, Fender, and Rosekrans

Absent: Commissioners Hobson and Voelke

Staff: Jackie Young, Planning Director  
Jean Savaree, Town Attorney  
Ted Sayre, Town Geologist  
Sean Rose, Town Engineer  
Joanne Kurz, Building Official  
Sage Schaan, Principal Planner  
Sean Mullin, Associate Planner  
Corinne Jones, Assistant Planner  
Jennifer Li, Deputy Town Clerk

CALLS FOR CHANGES TO THE AGENDA

Director Young noted a number of desk items:

- Regarding Agenda Item No. 1, 110 Stadler: there is a copy of a section from the WMC that deals with the 200' setback requirement from Skyline Boulevard, from which the applicant is seeking a Variance.
- Regarding Agenda Item No. 2, Geologic Map Update:
  - A copy of a section from the WMC dealing with fault setbacks;
  - Two correspondences from Commissioner Fender:
    - Regarding his views on geotechnical peer review and risk analysis; and,
    - An informational request for peer review statistics and cost.
  - Two e-mails from Planner Mullin relaying each communication with a resident regarding the item, and summarizing their discussion;
  - A narrative prepared by the Town Geologist, who will be presenting the science behind the map changes; and,
  - Two large ledger-size sheets (Hazard Zone Map and Implementation Matrix) that were adopted for implementation by the Town Council in 2013.

PUBLIC COMMUNICATION

None.

PUBLIC HEARING

1. Vladimir Alexanyan and Stephan Fitch  
110 Stadler Drive

ASRB2016-0022; VARI2016-0001  
Planner: Corinne Jones, Assistant Planner

Review and approval, conditional approval, or denial of a project requiring a Variance to reduce the 200-foot setback from the Skyline Boulevard right-of-way, in order to construct a one-story single-family residence (located within the Skyline Boulevard setback); fencing (located within the Skyline Boulevard setback); and, associated landscaping and landscape lighting on an undeveloped lot.

### DISCUSSION

Corinne Jones, Assistant Planner, presented the staff report. She noted a materials sample board at the front of the room.

Vice Chair Huberty asked about the proposed sport court that was mentioned in the arborist report. It's not shown on any of the drawings.

Planner Jones said the arborist has updated the report from a report done for a previous owner. The sport court is not proposed by the new owner.

Vice Chair Huberty asked why the house is not proposed 14' closer to Stadler Drive instead of Skyline Boulevard to make the 100' setback from Skyline Boulevard.

Planner Jones said deferred the question to the applicant. The WMC allows the ASRB to reduce the setback to 100' if it's found that the structure would not be visible from the driving surface of Skyline Boulevard. This entire site is visible from the road in any case, so the ASRB was not able to make that finding.

Chair Kutay said the vegetation is not dense enough to reduce visibility because it's not permanent.

Planner Jones said that's true, however, the ASRB cannot consider vegetation as screening.

Commissioner Fender asked if consideration was made to encroach into the 50' setback where there isn't much going on up there, and houses seem to encroach on that as opposed to encroaching more into the Skyline setback.

Planner Jones said the intent was to apply for one Variance. She doesn't know if they considered the 50' setback as well. They were trying to keep proposed development consistent with surrounding lots and have at least 50' setbacks.

Chair Kutay said it also helps to keep the house design more parallel rather than having protrusions. They're asking for a Setback Exception only from Skyline Boulevard, rather than Exceptions for a bit here and a bit there.

Commissioner Calia asked if the Variance will affect the utility and equestrian easements.

Planner Jones said no. It maintains all easements.

Chair Kutay invited the applicant to speak.

Eric Staten, project architect, apologized for not being able to show his presentation through his computer; however, he has renderings on his ipad. The plantings shown aren't representative. He passed the ipad around for the Commission to get a general sense of how the house works with the site. They sited the house in the proposed location because they wanted to integrate the house into the landscape. They didn't want to build one big box. They wanted to break the house up into a series of volumes that reduce the overall mass, keep it subordinate with the landscape, and keep with the scale and character of development around it. It allows each room of the house views of the surrounding nature. In between each section, there are smaller gardens which are visible from each room and help give a sense of integration into the landscape, which they would not get if they had blocked it all into a single mass to maximize the amount of setbacks. The different design iterations resulted in lengthening the house by six feet. They needed to keep the emergency generator, which will meet the sound requirements, inside the setback. If they pushed that up, it would violate the Stadler Drive setback. Stadler Drive has more daytime pedestrian and neighborhood traffic than Skyline Boulevard. Keeping it private from that was why they didn't pull the house closer to Stadler Drive. They aren't able to screen the house with landscaping. The houses along the road are roughly the same distance away. That's also why the openings facing Stadler Drive are smaller than the openings facing Skyline Boulevard. The Variance they're asking for is for the Great Room. That's the maximum distance the house protrudes forward. Looking at the other setbacks, the gallery that connects these sections together is over 100' from Skyline Boulevard.

Commissioner Fender asked about the traffic concern. It appears the only access to Stadler Drive is either from Skyline Boulevard through an easement (so probably not much traffic there), or up the other way through Skywood Way.

Mr. Staten said he's talking about pedestrian traffic rather than automobile traffic.

Commissioner Fender asked if he would include bicyclists in "traffic". They would be on Skyline Boulevard.

Mr. Staten said sure, but bicyclists are faster and further away. The design architecturally feels right. The setback from Stadler Drive is enough to give separation without getting too close to Skyline Boulevard.

Chair Kutay asked if the proposed plants are drought tolerant.

Mr. Staten said yes. They are drought tolerant, native, and deer resistant. It's meant to blend into the landscape. The fencing is specifically sited around as many trees as they could keep. The intent of the site is to be in the forest. There are multiple views of the trees from the house. They're trying to preserve as many trees as possible.

Vice Chair Huberty said the Fire District used to own this parcel. Does anyone know if it used to be a possible location for a fire station?

Mr. Staten said he doesn't think so. He's not sure.

Commissioner Rosekrans said it's a handsome project. The spaces in between, and the various massing elements are just as important as the mass itself. He hopes their client takes notice of what some of the adjacent houses do regarding fire protection. In some of the renderings, it appears some of the houses have taken advantage of that. The architecture is very fitting for Woodside.

Vice Chair Huberty said there is reference in the narrative about the Fire Department requiring a new fire hydrant. He knows there is one close by. Are they requesting a new one or closer one? That one is not 500' away from the driveway.

Planner Jones said the Fire District included their standard Conditions of Approval. They require a fire hydrant to be within 500' of the front door. The existing fire hydrant is within that distance. At the Building Permit stage, the applicant will need to call out the distance and location of the hydrant on the plan.

Chair Kutay asked about the vertical elements shown on the design at the front of house. How will that be achieved? What is the material?

Mr. Staten said it's a shadow. He directed attention to the hardi board on the sample board. The siding creates a shadow line. The ASRB preferred a vertically oriented material.

Vice Chair Huberty motioned to open public hearing. Commissioner Fender seconded.

Chair Kutay noted no one wished to speak. Chair Kutay closed the public hearing.

#### COMMISSIONER DISCUSSION

Commissioner Rosekrans said he can make the findings. It's a nice project.

Vice Chair Huberty noted that during the ASRB meeting of September 12, 2016, it was mentioned that the Woodside Fire Protection District required a "new fire hydrant within 500' of the front door." Was that a standard Condition of Approval? Why did they say "new"?

Planner Jones said during Conceptual Design Review, the existing fire hydrant wasn't shown on the plans.

Vice Chair Huberty said he can make the findings. He's concerned that a future owner may want a sports court, and the only logical place for it would be closer to Skyline Boulevard. He wonders if a restriction could be added to the resolution preventing any further Site Development related to adding a sports court and lights. Otherwise, he has no concerns with the five findings. There are definitely site constraints. He doesn't think they're being granted a special privilege. The neighbor's house would be even closer to Skyline Boulevard than this would be. He doesn't see any detriment to the public. The fact that it is so close to the commercial district at Skyline helps alleviate the shock factor of the house that is suddenly in the middle of nowhere. It generally meets the purpose and objectives of the General Plan.

Planner Schaan clarified that any sports court and fences would need to return to the Planning Commission for a Variance. Sport courts are considered structures that wouldn't meet the setbacks.

Commissioner Calia agreed that he can make findings. It's an elegant solution to a challenging site. It's a unique set of circumstances. He appreciated the work done to preserve the trees and blend into the foliage.

Commissioner Fender said he struggled with the proposal a bit. It diminishes from the scenic view, which is a goal of the WMC. He's not saying WMC is right or wrong. On the other hand, it's close to the commercial district. Not much can be done about the flat lot. They could have made the house smaller. It

would have diminished the overall appearance of the small lot near the road. He can make the findings even with those reservations, although he isn't overly enthusiastic about it.

Chair Kutay said she can make the findings. It's a great project. It will blend with the natural environment. She doesn't think the Commission is granting any special privileges. There are other neighbors in narrower setbacks than this house is proposed to be. She likes the design of the house. It's not a large mass. She likes the way the mass is broken into sections. It will be a great addition to the community.

### ACTION

The Planning Commission adopted Resolution 2016-022, approved VARI2016-0001, subject to the following Conditions of Approval:

- I. Prior to issuance of a Building Permit, the applicant shall:
  - a. Submit a Staging Plan delineating all material storage areas, loading areas, construction parking, and construction restrooms. The proposed construction staging may not occur in any public right-of-way unless approved by the Public Works Department, in any private right-of-way, in any access easement, trails, and in areas where it may harm any protected trees, within a stream corridor, within areas required to remain in Natural State, or on slopes in excess of 35%.
  - b. Submit a Tree Protection and Limit of Grading Fencing Plans. The Plan shall include fencing around the dripline of Significant Trees insofar as is practical. The Plan shall show all protection measures to be followed, and tree protection fencing to remain in place for the duration of the project. Permits for construction within the drip line of any Significant Trees shall include: provisions for hand trenching within the drip line; construction approved tree wells to protect against fill; prohibition of grading, cuts, and fills within four feet of a tree base-
  - c. Submit an Erosion Control Plan subject to the satisfaction of the Town Engineer.
  - d. Submit plans showing the location of all utility meters, mechanical equipment, and any required waterline backflow preventer, which shall be in a location that complies with the Municipal Code.
  - e. Submit a complete Landscape Documentation Package including a checklist identifying all of the items listed in Section 492.3 of the State's Water Efficient Landscape Ordinance (WELO) if the project is subject to WELO. All required items shall be submitted with the Landscape Documentation Package, most notably, the Grading, Landscape, and Irrigation Plans must include the required compliance statements and/or signatures.
  - f. Revise the plans to show all proposed improvements located on the subject property and not within the public right-of-way.
  - g. Submit plans which include all existing Paved Area and Surface Coverage that is to remain (i.e. Skywood Way) included in the calculation of proposed Paved Area and Surface Coverage.
  - h. For each piece of noise generating equipment that is proposed (i.e. generator and A/C heat pump), provide documentation (manufacturer's specifications, a sound attenuating shroud etc.) showing that the noise level will not exceed 55dB(A), at the property lines.
  - i. Redesign the driveway where the curve widening in place of the 40-foot radius does not exceed 25 feet in width per WMC §151.44.B.
  - j. Submit plans which comply with all Conditions of Approval listed in the Fire District's plan check letter, dated June 14, 2016.

- k. Revise the drainage design and/or septic design so discharges from the downspouts that are located less than 12 feet upslope from the leach fields will not cross the leach fields per WMC§151.43.
  - l. Provide drainage calculations by civil engineer of record for new impervious surface and concentrated flows based on 25 year storm event, 1 hour duration. Show that post construction run-off does not exceed preconstruction run-off for both scenarios. Design of detention system may be required. For rainfall intensities visit NOAA Atlas at: <http://www.weather.gov/oh/hdsc/noaaatlas2.htm>
  - m. For all projects with 1 acre or more of disturbed area, applicants must file a Notice of Intent (NOI) with the State Water Resources Control Board to obtain coverage under the State Construction General Permit, and must prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). Note: Completion of this checklist does not imply certification of the adequacy of the SWPPP by the Town.
    - i. A copy of the project's NOI and SWPPP shall be submitted to the engineering department prior to the issuance of the Building Permit. WDID# \_\_\_\_\_
    - ii. A copy of the project's NOI and SWPPP shall be kept on-site and made available for review by the Town Engineer upon request.
    - iii. A responsible professional of record (a duly authorized professional) shall provide certification showing the total area disturbed.
  - n. Provide a geotechnical report and a letter from the Geotechnical Engineer of record stating that they have reviewed the grading and drainage plans and foundation plans and specifications and that the plans conform to the intent of their recommendations within the report.
- II. During construction, the following shall occur:
- a. All construction staging and construction parking shall be located onsite and shall not be located within any right-of-way, ingress/egress easement, access route for other parcels, or within any stream corridor, area with slopes in excess of 35%, area designated to meet the Town's Natural State requirements, any areas where it may harm protected trees, trails, or within any other environmentally sensitive area.
  - b. Signs shall be placed on all tree protection fencing indicating that machinery, vehicles, and materials shall not be stored within the fenced areas. Work shall only occur within the fenced areas under the supervision of a certified arborist.
  - c. All tree protection fencing shall remain in place for the duration of the project. Construction within the drip line of any Significant Trees shall follow provisions for hand trenching within the drip line; construction of approved tree wells to protect against fill; prohibition of grading, cuts, and fills within four feet of a tree base.
  - d. The locations of all structures that are within 20 feet of a required setback shall be certified by a licensed land surveyor.
  - e. The plate heights, and overall heights of all structures shall be certified by a licensed land surveyor and accompanying by a Site Plan with the structures identifying the locations of the certified heights. Prior to certifying the heights, the surveyor shall meet with Planning Department staff to identify the plate height and overall height locations that should be certified.
  - f. A sign shall be posted in a location readable from the roadway stating the permitted hours of construction pursuant to WMC§151.55(B), and a contact name and phone number for the contractor. The sign shall be posted and maintained for the duration of the project, and shall be removed upon approval of the final inspection of all permits onsite.

- g. The applicant shall hydro-seed and install the approved landscaping during the wetter months to the extent feasible as a water conservation measure.
  - h. The Project is to be completed per approved plan. Any deviation from the approved plans requires review and approval of a revision by the Town prior to any revised work taking place.
  - i. The applicant shall be responsible for compliance with requirements of all other applicable regulatory agencies, including but not limited to State Water Resources Control Board, Regional Water Quality Control Board, California Department of Fish and Wildlife, Army Corps of Engineers, US Fish and Wildlife, OSHA, EPA and Caltrans.
  - j. The applicant shall prepare brush outs of proposed exterior colors for review and approval by Planning staff on-site, before application.
- III. Prior to final inspection, the following shall occur:
- a. Submit a Soil Management Report pursuant to Section 492.5 of the State's Water Efficient Landscape Ordinance. The Soil Management Report shall include an analysis of laboratory tested samples related to:
    - i. Soil texture
    - ii. Infiltration rate
    - iii. pH
    - iv. Total soluble salt
    - v. Sodium
    - vi. Percent organic matter
  - b. All landscaping shall be installed per the approved plan. The applicant shall submit a Certificate of Completion pursuant to Section 492.9 of the State's Water Efficient Landscape Ordinance.
  - c. All approved exterior light fixtures shall be installed. The bulb or light source shall be located entirely behind a non-translucent surface. No additional lights or alternate fixtures shall be installed without first being reviewed and approved by the Town.
  - d. All graded or disturbed areas shall be properly compacted and planted with native grasses or approved planting to reduce potential erosion.
  - e. All paved areas, including gravel/rock areas, shall be installed pursuant to the approved plans. No changes in the size or location of paved areas shall be made without first obtaining review and approval by the Town.
  - f. All exterior finishes, colors, and materials approved by the Planning Commission shall be used. Any changes may require further review, as determined by the Planning Director.
  - g. All waterline backflow preventers located within required setbacks shall be installed in accordance with WMC §153.050(B). The device shall meet the required location, height, color, and screening requirements.
  - h. All construction debris and trailers shall be removed from the site.

Motion: Chair Kutay/ Second: Commissioner Rosekrans  
Ayes: Chair Kutay, Vice Chair Huberty; Commissioners Calia, Fender, and Rosekrans  
Noes: None  
Absent: Commissioners Hobson and Voelke  
Abstain: None

The motion carried.

2. Updates to Geologic Hazard and Fault information in the General Plan, Natural Hazards and Safety Element; and WMC Chapters 151 and 153

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Town-wide

Planner: Jackie Young, Planning Director

Review for recommendation to the Town Council of a General Plan Amendment to update the Geologic Hazard Zones Map, the Fault Zones Map, and associated text in the Natural Hazards and Safety Element (GPAM2016-0001), and associated text changes in WMC Chapters 151 and 153 (ZOAM2016-0002); and accept a new Town Geologic Map prepared by the Town Geologist.

Pursuant to standard Town-wide notification procedures, this item was noticed in the San Mateo Times, and the Almanac. Additionally, affected property owner notification was done. The refined locations of fault zones, and their associated required setbacks, will result in approximately 125 parcels being removed from regulation (e.g., the requirement for a geologic report and possible trenching investigation) and approximately 40 parcels added. Staff therefore specifically noticed both the properties removed from mapped fault and fault setback areas, and those added to mapped fault and fault setback areas. These notices were mailed to the property owner of record on the San Mateo County Assessor's roll.

### DISCUSSION

Commissioner Rosekrans recused himself as required by State law because of a real property conflict.

Jackie Young, Planning Director, presented the staff report. She introduced the staff present tonight:

- Ted Sayre, Town Geologist, who has compiled four decades of information (i.e., geotechnical reports and on-site trenching data);
- Sean Rose, Town Engineer; and,
- Joanne Kurz, Town Building Official.

Director Young explained how the Hazard Zone Map and Table currently exist in the General Plan and how it has been updated:

- The current Geologic Hazards Map in the General Plan (adopted January 2012) lists four potential zone hazard areas (A, B1, B2, and B3).
- The Potential Hazards Table (NH1) lists the hazard type (e.g., fault rupture, flooding, land sliding, etc.), and the geographic hazard unit lists whether it occurs or does not occur in that zone.
- The Fault Zone Map (NH2) includes the faults mapped by the State. They're very general in nature. It also shows the Alquist Priolo Special Study Zones.
- The ledger-sized map was used by the Town Council in reviewing peer review for geotechnical reports, which is a separate issue from the discussion tonight. The map has been around for years. Rather than being described now in geographic areas, the Town Geologist has noted Geologic Hazard Zones as:
  - F: Potential fault rupture areas;
  - S: Potential slope instability;
  - E: Potentially expansive bedrock; and,
  - A: More standard geotechnical conditions.
- The table has been simplified. Rather than a matrix with 'yes' or 'no' based on specific hazards, it generally defines the type of hazard that may be in these areas.
- The updated Fault Zone Map (NH2) reflects specific geotechnical and trenching information. The result of this study and plotting of that information has resulted in refining the location of the San Andreas Fault, removal of the Cañada fault, and the location of the Hermit Fault based

on site specific reports and investigations. This map also shows the required setbacks from a fault, which is 125' from either side of the outside of that fault. Town Geologist Sayre is going to go into more detail of what type of requirements that spurs.

- As a result of this mapping, there were 125 properties that were removed from the fault setback areas. There were 40 properties that came into the setback areas. If a property was already in a fault setback area and remained in a setback area, they were not given specific notice.
- She noted the minor changes to the WMC, Chapters 151 and 153.
- Within the General Plan Natural Hazards and Safety Element, the Town Geologist:
  - Proposed to add a definition of “Geologically Hazardous Area”;
  - Corrected the fault setback to 125' as it was incorrectly stated as 100';
  - Removed a reference to being no mapping of soils and bedrock;
  - Replaced Map NH1 and Table NH1;
  - Added language to recognize the new Geologic Map; and,
  - Added the fault setback zones to either side of the fault on the maps. One area that was previously mapped as a fault was removed. The reference to expansive soils was changed to expansive earth materials as Woodside has both expansive soils and expansive bedrock (e.g., Whiskey Hill formation).
- The Geologic Map is meant to be a living map that exists outside of the General Plan so that any additional geotechnical information submitted to the Town can further refine the Map. It includes fault zones, landslide deposits, bedrock units, and more. The Map would be available online as well as at the Development Services counter.
- She noted the desk items:
  - A copy of the WMC section regarding the 125' fault setback requirement from a fault. The Town Geologist will discuss more about when that applies, when it can be removed, and when it can be reduced.
  - Two e-mails from Planner Mullin. He noted 22 residents who visited the counter. Some people were referred to the Town Geologist, who gave them specific trenching data used to connect these lines together. There were residents asking about the implications of these changes. They asked what methodology was used. They asked whether such mapping needs to be disclosed on property disclosures, and how it may or may not affect property values.
  - The Town Geologist narrative explains the science behind geologic mapping.
  - There is a ledger-sized copy of the Geologic Hazard Zones and implementation matrix for geologic peer review. That was adopted by the Town Council in 2013. Commissioner Fender has been conferring with staff on a number of questions. He has a special interest in how geotechnical peer review is done in Town, how risk analysis is done, and he submitted an information request. Unfortunately, staff received the request 24 hours ago, and was not able to gather the data on peer review statistics and costs. Staff has explored that with the Town's permitting software system and accounting system. Gathering that data would be labor intensive. The map and matrix shows the current practice of implementing geotechnical peer review in Town. What is before the Planning Commission this evening is an update to the General Plan mapping to reflect the most current science. It impacts the Town residents because it increases the costs of preparing geotechnical reports. The Town's most frequent customers and most frequent geotechnical consultants are aware of this mapping because they were involved as well in the process. They were invited by the previous Town Engineer, Paul Nagengast, to review and comment on this. Other consultants who do not frequently work in Town would search through the records on microfilm and Laserfiche, looking for reports on adjacent parcels to aid them in preparing these reports. That work then gets billed to the clients. Staff is doing the residents a favor by updating the map so that it reduces the time and costs of doing these geotechnical investigations. The geotechnical peer review that

Commissioner Fender is interested in its implementation, which lives outside of the General Plan. What is on the agenda for this evening is an update to the General Plan mapping so that it reflects current science. If the Commission wishes to have the Town Council to explore implementation, please let her know after the consideration of this item. She discussed the Town Council work plan.

Ted Sayre, Town Geologist, said he has spoken to about five or six residents in Town about changes to the map (i.e., fault trace alignments) and how it may affect their properties. He invites anyone else who is concerned to contact him. He can pull the local fault investigation reports that help define where the trace may or may not be. He is happy to explain the methodology they have gone through in terms of having a basis to change the lines on the Town Map. There were a number of questions regarding methodology. He said:

- On the screen is a parcel map showing Woodside Road and Kings Mountain Road. It turns out that the largest changes to the alignment of the San Andreas Fault are in the vicinity of Kings Mountain Road near the intersection with Josselyn Lane.
- The next image is the parcel map superimposed with the old Town Geologic Map. One of the problems with the prior Geologic Map was that it was in black and white, and there was an abundance of information. It was hard to tell what it meant. There were fold axes and other geologic symbols that it became almost unusable. Part of the process was to create a map that was user friendly and clear about the fault trace locations and associated setback requirements.
- Another tool utilized with the map update was lidar imaging provided by USGS. It strips vegetation cover from the ground surface. We are able to see a bare earth image that is of great benefit in terms of mapping fault alignments and lineation features. This was used to check known fault locations. Often, we could trace from where a fault was found in an exploratory trench, and we could see a lineation going off across the countryside in the lidar imaging.
- Focusing more closely into the Kings Mountain Road and Josselyn Lane vicinity, he showed the alignment of the San Andreas Fault as indicated on the prior Geologic Map. The 1906 rupture of the San Andreas Fault was shown to the left of Josselyn Lane. That has changed quite a bit on the revised map based on trenching data.
- On the next image, he showed small lines where fault exploration trenches had been completed in this portion of Town. Typically, these were two- to three-foot wide trenches, excavated down to a depth of 10'-14'. The side walls were carefully cleaned, and geologists logged the exposures. They noted fault gauges, offset bedding, or other features that indicated faults. They were able to detect where stratigraphy was not off-set by faulting. They showed places where there was no faulting and positively identified areas where there was faulting in the trenches.
- They pulled from Stanford Library some original mapping of the 1906 rupture through the Town. The mapping was done by J.C. Branner, a Stanford professor, after 1906 rupture. The rupture is different. It is east of the intersection of Josselyn Lane and Kings Mountain Road rather than the west. When these trenches were excavated, they found the fault trace from the 1906 rupture. Part of the map update is relocating these traces that were initially incorrectly mapped to the alignment that actually broke in 1906. The other trenches demonstrated a lack of faulting. We knew we had a good basis to shift the fault line.
- He showed the result of the mapping. Now the trace goes along the east side. They were able to eliminate other traces.
- The Hermit Fault is another fault in the State Special Studies Zone. Not only are there faults on this map, we tried to show in stipples around these fault traces where the fault setbacks are. The solid line represents a fault's known location based on well-defined data that delineates the alignment of the fault. They were able to apply, per WMC, a 50' fault setback for known fault locations. Where the fault is not as well-defined, then a 125' setback is applied from the fault trace. Another part of their data collection was to look at the actual trenches done, and see what

the width of faulted ground was in these exploratory trenches. It ranged from about 20' to 75', and averaged out to 48'. They rounded that up to 50'. The fault setback actually includes a 50' wide fault zone where it is inferred, and 125' setback on either side of that 50' rupture zone. That's the same with the known location. There is a 50' rupture zone and 50' setbacks on either side. That is explained in the map. There are two colors of traces. Red is the 1906 rupture and others, and the blue represents other traces of San Andreas that are not documented to have ruptured in 1906 but are still considered active fault traces.

- He showed a close up of Josselyn Lane and Kings Mountain Road with fault setbacks displayed. There are wider setbacks along an inferred trace and narrower setbacks along a well-defined trace.
- He showed previous mapping of the Cañada and Hermit faults. The map has been in effect since 1992. The Cañada Fault was trenched again. None of the locations indicated fault traces. They found positive evidence that no fault trace existed along that alignment. There was good scientific basis to remove the Cañada fault trace from the Town Map as an active feature. That was also the conclusion of the previous Town Geologist, Bob Wright.
- The Hermit Fault was found in two properties on either side of Raymundo Drive. It has been shown further south to not be located where it's currently indicated on the Town Geologic Map. We have used trenching data to bump the fault trace a little bit to the west. Some consultants specifically concluded that the fault trace should be located further west based on their trenching results.

Tina Conway, 170 Olive Hill Lane, said that her property is being pointed to on the map. Trenching work done in 1997 showed no evidence of a fault. Her neighbor at 164 Olive Hill Lane trenched three times on her property and reached the same conclusion.

Town Geologist Sayre said that Ms. Conway is correct that all these trenches did not find evidence of a fault trace. On Raymundo Drive, to the north, he has a report where a consultant has identified the Hermit Fault on a property, and specifically called it the Hermit based on trenching data. There was some dispute about whether that was really the Hermit Fault, or whether that may have been the toe of a landslide. He has looked into evidence of whether there actually is a landslide that could explain the sheer surfaces that were found in that trench. There was no landsliding evident that could explain the sheering. His evaluation is that what they found at that site north of Raymundo Drive was actually a fault trace. We don't know if that is an active fault trace. That is still an open question. The State defines an active fault trace as one that has broken ground within last 11,000 years. We don't know whether the Hermit Fault really falls in that category yet. As more data is collected, it may be found that the Hermit is actually not an active fault trace; however, we don't know that yet.

A member from the public asked when that will be.

Town Geologist Sayre said it could be data that is collected from future fault investigations that actually do some carbon 14 dating to indicate whether the layers that are unbroken are old enough to indicate lack of faulting for 11,000 years.

A member from the public asked if that work should be done before moving lines around.

Town Geologist Sayre said that he's trying to show where the best science available suggests where the fault is and is not. It's still an open question whether the fault is an active feature. The State has zoned it as an active fault. The area to the north is in the State Special Study Zone associated with these fault traces. Ever since he has been with the Town, the focus has been trenching the Cañada Fault. Finally, enough data was collected to remove the mapping of the Cañada Fault. He talked to the State Geologist

about whether there is adequate basis to remove the Cañada Fault from the State maps and Town maps. They didn't object to the available data to remove the Cañada Fault as an active feature.

A member from the public asked who put it on the maps in the first place.

Town Geologist Sayre said that is a good question. He knows it was placed there around 1992. He believes it was based on State mapping because at least the northern alignments were associated with the State Special Study Zone.

A member from the public said it seems wishy-washy to randomly do a trench and draw a line. It seems more or less where the trench was, yet it seems no one knows where the fault is.

A member from the public asked where the Hermit Fault was found.

Town Geologist Sayre said it was found to the north and south of Raymundo Drive on two properties. Geomorphically, it's expressed near the toe of the slope. It's believed to be a thrust fault, not strike-slip fault. That's based on micro-seismic earthquakes that define the fault plane. There is a hill that rolls down into a flatter valley floor. Many believe that the toe of that hill is the geomorphic expression of the Hermit thrust. He doesn't know whether that is correct or not because it has never been exactly found at that break in slope. It should indicate presence of Santa Clara bedrock materials thrust over Whiskey Hill formation; however, that is not confirmed by trenching data.

Adolph Rosekrans, 980 Runnymede Road, said he was unaware there would be a presentation like this. The staff report was deficient in methodology. When he did the trench for his accessory living quarters in 2005, it cost \$5,000 for trenching, and \$20,000 for the consultant. It's not insignificant to dig those trenches. Those maps could have some bearing on the property value. He has been told by a real estate broker that there are certain buyers who refuse to buy a parcel that had an earthquake fault on it. He doesn't know how prevalent that is.

Town Geologist Sayre said he heard someone mention that there was a study where some of the investigation was not done to current standards. Some geophysical methods were used with borings on properties to the south of Raymundo Drive where the Hermit was supposedly found again. Currently, the typical standard for identifying faults is fault trenching, and not combining borings with the geophysical method. There is some uncertainty about whether we actually have another known location of the Hermit fault immediately south of Raymundo Drive. We have a report that indicates fault alignment and fault setbacks; however, that work would not be consistent with current standards. The new depiction of faults in this vicinity is elimination of the Cañada Fault, and a new alignment of the Hermit Fault.

A member from the public asked if it was shifted west because they found a fault trace there or did not find a fault trace where it was.

Town Geologist Sayre said this alignment was trenched, and they found good evidence for no faulting. It was the recommendation from consultants working on the properties nearby that it should be moved to the west towards the break in slope. That is the likely expression of the fault trace.

A member from the public said, but no fault trench has been done to say that there is a fault there. It was moved because it wasn't found where previously mapped.

Town Geologist Sayre said that's correct.

A member of the public said that doesn't make sense.

Town Geologist Sayre said the geomorphic expression of the fault is a toe of slope or thrust fault that is elevated ground to the west against the flat plain to the east. His suspicion is that with time, if this fault does exist, it will probably tightly hug that change in slope. The updated correction is in the right direction. It is possible that further studies may find the fault, or find where it is not. He talked to someone who was very interested in trenching for the fault and seeing if they could find it because the setback encroaches into their property. Trenching hasn't been done before because it was a bit further to the east. There may be a fault investigation that provides good, current scientific data about that feature.

A member from the public asked: at whose expense?

Town Geologist Sayre said the work is usually funded by private residents so they can complete a desired project and move forward.

Per Alftin, 173 Raymundo Drive, asked how many properties would a geologist have to trench to determine what is what? There has been no findings south of his property. Would he be the one who does the trench to resolve what the Town is dealing with?

A member from the public asked: then where would it go? You move it from one side to the other. Take it off the map?

A member from the public asked if there is enough data to remove the Hermit fault.

A member from the public asked how many trenches would need to be dug to remove the Hermit fault.

Town Geologist Sayre said we would need one trench that finds the fault, and shows it isn't an active feature. If we had that data, then it can be removed as an active feature, and there would be no setback associated with it.

Mr. Alftin said the previous owner of 166 Raymundo Drive trenched the area approximately eight years ago. There was a verbal discussion in the field when the trench was being done between Bob Wright and the consultant geologist. They concluded in the field that there was no active fault. The report came back. There was some wording in the report where Bob Wright did not feel comfortable enough signing off on this fault. There should be something considered by that. He is interested in involving Bob Wright at this point because Mr. Wright was the previous Town Geologist.

Ms. Conway quoted Bob Wright in a 170 Olive Hill Lane report, "The Hermit Fault may not occur in the site vicinity, and may eventually be removed from the Town Geologic Map."

Town Geologist Sayre said that's a distinct possibility that it "may not occur" and "may be removed" from the map.

Ms. Conway said that was back in 1997, and now we're talking about not removing it but actually adding it based on not finding it. She's confused.

Mr. Rosekrans said according to the map, the fault goes right through the second trench they dug for his caretaker building. That occurred about five or six years ago. He wonders if they were aware of that trench.

Town Geologist Sayre asked if it pertains to the Hermit Fault.

Mr. Rosekrans said yes.

Town Geologist Sayre suggested meeting with Mr. Rosekrans, and looking at that study to see if this is violating some trench data that we have.

Mr. Alftin asked what their findings were at the time.

Mr. Rosekrans said he doesn't remember the findings; however, the Town let them build the building.

A member from the public said: before you move anything, it sounds like you need more data.

A member from the public said: many people thought there would be definite reason why it was moved.

Town Geologist Sayre said: unfortunately, the only data about finding the Hermit Fault is up near Raymundo Drive, and to the south of there was the basis for mapping the fault as geomorphic expression. Areas have been trenched along the previous alignment, and the fault was found not to exist on that previous alignment.

Commissioner Calia said he knows there is reliance on trenching data when done in connection with a project to determine the possibility of building a structure. He asked if all trenching data was done by consultants or privately.

Town Geologist Sayre said those were all privately funded trenching studies.

Commissioner Calia asked if the State does anything to determine where the fault lines are.

Town Geologist Sayre said fault lines, initially in 1970s, were based on aerial photographs, geomorphic features indicated typically associated with faulting. They had no trench data at all when the initial Town Map was created. Now we have more data about the San Andreas where we have a few data points about the Hermit. It's possible there are reports that are not currently in the Town's archives, so he may not be aware of certain studies. He would be very interested in seeing that.

Mr. Rosekrans said he has copies.

Commissioner Calia said any scientist would want to see the data to form a basis for doing any kind of scientific analysis. There are probably a number of contractors doing fault trenching. Is there a way of finding and aggregating the data so that instead of drawing assumptions based on morphology, it's based on actual trenching data, which sounds like it's the data that considered reliable for determining where a fault line is? Is there any way to try to solicit that from what's probably a limited universe of sources of that data?

Town Geologist Sayre said he thought the Town files have captured all the studies that have been done; however, now, he's hearing about one that apparently is not in the Town's files. There may be some out there that were not formally submitted.

Chair Kutay said she is also confused. She thought there was technology more precise than trenching. She's hearing that because it wasn't found in one location, it was moved to another location.

Town Geologist Sayre said the movement of the fault trace was based on geomorphic expression, or where geologists conclude that the most likely place for the fault is when evaluating the ground surface. They haven't trenched that location that appears to be a break in slope where a fault might be located. Part of their effort is to try to put a line on the map at that position so that it can be verified in the future. We're going to find a fault there or find that it doesn't exist and start building a basis to remove it from the Town map.

A member from the public said: it seems like before you put anything on the maps, you ought to have some data behind it rather than saying, "it might be over there."

Town Geologist Sayre said the Cañada and Hermit faults were mapped by the State, and designated active by the State. They believed they had sufficient data from the geomorphic expression to map fault traces, and to designate active fault features. Part of the reason for that is this micro-seismic activity. The Hermit fault has micro-seismic activity at depth (i.e., small earthquakes along a fault plane). Geophysically, from epicenter locations, they can define the dip of the fault, the location of the fault; however, not at the precision of a property. They know there is some feature in this part of Town that is storing up strain, and may break as a brittle failure in the future. They don't know when that might occur. Part of it is we're at a plate junction (i.e., between the Pacific Plate and the North American Plate). The San Andreas Fault is a plate boundary fault. The plates don't always slip parallel to each other. There is converging motion to the Pacific Plate against the North American Plate. That typically is explained as the reason why we have thrust faults on the east of the San Andreas Fault because they are taking that collision or compression force that comes from the plate motion that isn't exactly parallel to each other.

Commissioner Fender asked if the science is sufficiently developed to actually establish confidence intervals or any statistics on both locations and likelihood of occurrence.

Town Geologist Sayre said with some faults like the San Andreas, yes. We know when the last six major ground rupture events have occurred on the San Andreas. Those have all been dated. We also know the average recurrence interval between those ruptures is about 240 years.

Commissioner Fender asked if there is 95% confidence interval it will occur in 240 years.

Town Geologist Sayre said, plus or minus 40 years.

Commissioner Fender said, then a 50% confidence interval.

Town Geologist Sayre said some traces like the San Andreas Fault has a lot of data about how they have broken in the past and the recurrence interval. There is nothing available on the Hermit fault of that level of understanding.

A member from the public said, *if* there is a Hermit fault.

Town Geologist Sayre said yes, but the micro-seismic activities indicate there is some fault there. Even if it's accumulating strain, we don't know whether it would rupture within 11,000 years and fit an active fault definition.

A member from the public said that Town Geologist Sayre mentioned that the Hermit fault may be on an angle.

Town Geologist Sayre said that is correct. The San Andreas is a vertical fault. The Hermit thrust is believed to be descending into the ground 30 to 40 degrees off the horizontal to the southwest.

A member from the public said you're winging it by placing the Hermit fault line there.

Town Geologist Sayre said the basis for placing it is largely this geomorphic expression. There are hills to the west of the fault trace which are composed of Santa Clara bedrock, and those abruptly come up against either Whiskey Hill bedrock or Franciscan bedrock. There is a juxtaposition of two different types of bedrock along where the fault should be, and a change from rolling hillsides to a flat valley floor.

Commissioner Calia said: if the Hermit fault is angled into the ground in contrast to San Andreas, which is vertical, that means it would have real width to it presumably. These fault lines are finely drawn through the map. In reality, the fault would be much wider in what you would consider, assuming it is an actual fault. The area of the active fault would have a surface area that is much larger, right?

Town Geologist Sayre said it's likely wider at the ground surface than the San Andreas. This is called a thrust fault system. It parallels the San Andreas. It goes down through Portola Valley, Los Altos Hills, Cupertino, and Los Gatos. This front-range faulting and thrust faulting has been found in many locations. The fault width zone can be wider. That's one reason why he's more comfortable keeping it as an inferred fault with 125' setbacks on each side so that there is a 300' wide zone associated with this fault that we really don't know much about yet. It is erring on the side of caution for protection and avoiding construction of new residences in this zone that may have life safety issues.

Vice Chair Huberty asked if Cal Water has started their water main replacement project on Cañada Road.

Director Young said yes, they have.

Vice Chair Huberty said it may help to have Cal Water dig a little deeper to investigate the fault. He doesn't know how deep those water mains are placed. It may be practical to have a geologist out there while they are trenching for the new water main, and find out if there is anything there. It's a good opportunity to take a look.

Mr. Rosekrans said that is assuming all faults go all the way to the surface. He can live with the imprecise science. These faults have been there for years. As long as we keep working on it, and coming up with the best answers that we can, that's all we can do. When's the next earthquake?

Chair Kutay said Town Geologist Sayre said activity is expected every 240 years.

Town Geologist Sayre said that's the average recurrence interval between major ground rupturing events along the San Andreas on the Peninsula. The last one was 1906.

Mr. Alftin asked if it would help to have the soils report from the Runnymede project done five years ago in making a determination. It's not fair to homeowners on Olive Hill Lane who have recently built beautiful homes, and have findings of no evidence of the Hermit Fault. Now you're putting a tag on their property that it is on the fault line.

Town Geologist Sayre said the ground in this vicinity has been in the State Special Study Zone for decades.

Mr. Alftin asked if all the geologists who wrote the reports are wrong in stating that they didn't find anything.

Ms. Conway said Mr. Wright said the fault may not occur in the site vicinity, and may eventually be removed from the Town Geologic Map.

Town Geologist Sayre said he would agree with that statement from Mr. Wright. Mr. Wright is not being definitive though. He's saying "it may not occur" and "may be removed." He would agree with that. We just need the data to be conclusive about it.

Ms. Conway said she's now in a fault setback zone whereas when she trenched, no fault traces were found.

Town Geologist Sayre said he would be happy to look at the specific data related to her property and evaluate what was found and was reasonable to reach those conclusions that were presented. From all the fault studies he has seen in this vicinity, the conclusions reflected on this map come out of the hard data that has been collected. He would be happy to look at any specific study or property.

A member from the public asked how many data points it takes to change things.

Town Geologist Sayre said the thing about the Cañada trace is there was a specific delineation on the ground. There was good data that it did not exist there, and there was not another location nearby that had any sort of lineation or suggestion that the fault may be east or west. That's quite a bit different from the Hermit Fault where we've trenched some places on flat ground where it had been previously mapped, and found not to exist. The bedrock type exposed in trenching is suggesting the Hermit Fault to be to the west near a break in slope, which would be an obvious position for the fault. The suggestion is to put the fault where the data is suggesting it is and where the geomorphology is suggesting it is. We don't know conclusively it is there. It's more likely where we have shifted it than where it was before. In fact, we have conclusive data that it was not located where it was before.

A member from the public asked if there is a master list of all the trenches that have been done and their conclusions rather than having each property owner come in individually to discuss their property.

Town Geologist Sayre directed attention to the display board. He pinned up an example of the data compilation done for the map update. The sheet is at a scale of 1"=100'. It shows particular fault trenches, properties, where the fault was found, the width of the found fault in a trench, and how that was projected between data points to obtain the final alignment of the fault that is on the draft map. He has many of these individual sheets that cover the fault traces in Town. It shows all the source data that was used. He's hearing there are some studies he has not seen. Maybe there is some data that is in dispute. He's happy to listen to all of that, and consider whether it impacts the alignments that have been indicated.

A member from the public asked if the inferred fault is where the flat land goes towards the hill.

Town Geologist Sayre said that would be the geomorphic expression of the fault. Since it's a thrust, it has elevated that wedge of ground that is forming the hills against the flat ground. The descending fault plane would be at the toe of the hill going off to the southwest. It was shifted from flat ground to near the toe of the slope. That was partially based on recommendations from a number of investigations.

A member from the public said you keep talking about suggested. When do we get facts and data to know the actual?

Town Geologist Sayre said these faults were initially mapped based on aerial photo interpretation and geomorphic features. Ever since they were put on the map, people are now actually trenching ground that is impacted by the line that was drawn. We're finding out that some of these trenches actually show a fault where it was initially mapped. Other trenches show that there is no fault at all where it was previously mapped. We're trying to use that trench or fault investigation data to refine these alignments of the fault trace. We may get to a point in time where we have enough data, as we had for the Cañada fault, to say we know that there is no active feature where the fault trace is mapped. He doesn't know if we'll actually get there for the Hermit Fault. That's a possibility.

A member from the public asked what the process is to get there.

Town Geologist Sayre said right now, it's based on privately funded fault investigations that are usually done to support specific construction projects. That data is submitted to the Town. The data is compiled, and we see if we can reach conclusions about fault trace alignments from that data.

Mr. Alftin asked if there are permit and permit fees for digging trenches.

Joanne Kurz, Building Official, said it requires a Site Development Permit. It's a lower rate. She referred to the fee schedule.

A member from the public said it should be free if we're going to use the data for the Town maps.

Ms. Kurz said she does not determine the fees. That would be up to the Town Council.

Director Young asked Town Geologist Sayre to explain how trenching is done and what's looked for. Also, after it is trenched, how you put it back.

Town Geologist Sayre said a backhoe is used to excavate a two- to three-foot wide, 10-14' deep, trench. That excavation is shored with hydraulic shores. Geologists can then safely enter the trench, and clean the side walls. They can look for stratigraphic layers, fault gauge, and evidence of previous offsets or lack of evidence of previous offsets. From collecting that data in the trench, they can reach conclusions about whether the trench has crossed an active fault or not.

A member from the public asked if that is normally done on the "shadow line" of the building.

Town Geologist Sayre said that's correct. They are strategically placed so they "shadow" the footprint of a structure along the alignment of the fault trace, so you don't have to trench right beneath where you want to build. You can trench off to the side.

A member from the public said even if someone doesn't have an active building project, if their home is now in an area that has a 300' blue line going through it, it would impact the property value and future use of the existing home.

A member from the public asked how you contribute to an extended area, but not an area that actually matters.

Town Geologist Sayre said if you would like to proceed with a project within the fault setback zone, but not actually across the fault trace, there is an option to demonstrate that where you want to build is free of faulting.

A member from the public said it's not about building. It's about the assurance that it is a real fault that actually should be affecting our property or not. Most people present tonight are here about that. How do we deal with that?

Town Geologist Sayre said to gain conclusions about whether there really is an active fault that causes a hazard to this area, we need scientific ground, exposure, and trench data.

A member from the public said, as taxpayers, we hope you would do that before you move the line. Get the scientific data; do the trenching. Don't arbitrarily move it and affect all these different properties.

Town Geologist Sayre said the previous maps that were prepared back in the 1970's were based on no trench data. They had to locate the hazards that potentially impacted upcoming construction within the Town. They did it with the best available tools at that time (e.g., air photo analysis, on the ground searching for geomorphic features that are associated with faults). There is a quite variety of those. There are lineations, sag ponds, cut-off scarp ridges, and other series of geomorphic features associated with fault lines. They use that sort of data to plot the alignment of the fault traces. That's the best we have along the Hermit Fault. We don't have the in-ground trenching data that is definitive about the activity of the fault or its exact position.

A member from the public said you should have concrete information before impacting your residents.

Town Geologist Sayre said the map that shows the Cañada and Hermit faults were created in the 1990's by the State when they created the Special Study Zones in this area. It wasn't the Town that created the fault mapping or Special Study Zone. That was not created to abuse property owners. They created the map because they were concerned about a hazard. They had geophysical and earthquake data that suggested that they had an active feature in this vicinity. They responded to that. They mapped the ground and looked at the aerial photos. That's why they mapped the fault traces. The next level is to do in-ground investigation and either confirm or deny their suspicions based on what they see at the surface.

Director Young said Town Geologist Sayre said he has enough definitive trenching data to remove the Cañada fault. He has been in communication with the State to remove that, and they were receptive to that. The Hermit Fault, regardless of whether it is on the Town map or not, is on the State map. Regarding property values, disclosures, insurance, etc., they are going to look at that State map.

A member from the public asked when the State maps come out. This is the first they have ever heard of them. How does the State and the Town connect?

A member from the public asked if the State had asked the Town to move the line.

Director Young said no. The work has actually been going on for decades. The Town Council and previous Town Geologist, Bob Wright, were collecting geotechnical and trenching data for many decades. It has been compiled, and has been a Town Council work plan item for a long time because when trenching was done, we found data points along the line where that fault did not occur. Town Geologist Sayre has enough data to approach the State, and update the State map. The Town's original map was based on the State map. Likewise, Town Geologist Sayre has the data points to support the more original 1906 recordation from Stanford of the San Andreas Fault line. Regarding the Hermit Fault,

there are some points along the way and other points along the south where trenching has yet to be completed. The Hermit Fault is on the State map. Town Geologist Sayre is trying to make this data more precise for the residents. It's not just a line drawn in an inferred location based on aerial information and geomorphic features, but based on actual trenching data.

A member from the public said some of the trenching is 278' long. Joe Crosby and Associates excavated a 100' trench. Hallenbeck excavated a 140' trench in 1991. Earth Investigations did boring and test pits in 1996. Her trench was 77' long. When we're talking about moving things, there is a certain data point of a certain width already.

Town Geologist Sayre said he's trying to respect all existing data. In a perfect world, if we found a fault trace, then we wouldn't have a 300' wide swath of impacted fault setback. We would narrow it down to 50' on either side of the identified trace. It would benefit many properties if we can show it is not there or inactive. If we find it, then the total width of the fault setbacks would be cut in half.

Mr. Alftin said there are new homes up and down Olive Hill Lane, which means there should be new data available to figure that out. There is construction all the way from Cañada Road and Alameda de Las Pulgas. How come there is not enough data to find the fault?

Town Geologist Sayre said he would be happy to sit down with Mr. Alftin to show all the data found in that vicinity. Mr. Alftin can see the database they are working with. He can explain what the thinking is. There just isn't enough data on the Hermit Fault. He wishes there was.

Commissioner Fender said Town Geologist Sayre said "err on side of caution" in making the 300' versus 50' setback. There's judgment you are making there, in terms a sense of caution due to lack of knowledge. Is that typical? It seems backwards. If you don't know, why make it bigger?

Town Geologist Sayre said with the initial mapping, the State established the Special Study Zones which were 660' on either side of the map fault traces. That was their level of caution and comfort associated with the fault traces. We're not talking about observing 660' on each side, or a 1,200' wide zone. We're talking about the Town's required inferred fault setback of 125' on either side.

Commissioner Fender said when establishing setbacks, he can see the State having a concern for a high consequence area (e.g., hospital, key road or infrastructure). Woodside is predominately single-family homes. How does that come into the judgments made on establishing these faults and consequences thereof?

Town Geologist Sayre said he wasn't with the Town when the 50' and 125' setback distances were established. He's not sure what discussions took place at that time. There was a technical report done by another Stanford professor, Bill Dickenson, who talked about expression of fault traces through the Town and the width of apparent fault rupture zones in the Town based on geomorphic features. However, Mr. Dickenson wasn't working from trench data. He was working from surface expression of faults. Some of that thinking must have been part of that basis for the Town adopting 50' and 125' setback distances. Beyond that, he can't tell him about how that relates to perceived risk management at that time.

Commissioner Fender asked: what about now? When you say you want to err on the side of caution that is a risk judgment. How do we make that judgment for a single-family dwelling versus the State stating 600' is required for hospitals? How is that established in Woodside?

Town Geologist Sayre said his comment about erring on the side of the caution was related to the discussion about thrust faults and the potential for them to have a wider rupture zone than a vertical strike-slip fault. That's why he's more comfortable with the inferred nature of the current Hermit thrust since we don't have a basis for plotting it as known because it has an associated 300' wide no-build zone that actually fits well with the thrust fault character.

Commissioner Calia asked if there was micro-seismic activity with what was the Cañada Fault. It sounds like there are a number of data sources (e.g., trench data, geomorphic, and micro-seismic). He may be missing categories of information that go into that determination. To what extent was there micro-seismic data associated with the Cañada Fault that didn't carry into today in terms of leaving that in place today?

Town Geologist Sayre said his understanding of the initial mapping was they thought it was strike-slip fault rather than a thrust fault; however, they never saw the expression of either a thrust fault or a vertical fault in the micro-seismic record that's associated with the Cañada Fault. He has never heard of anyone talk about the micro-seismic record associated with the Cañada Fault. We may be at the resolution of these geophysical or epicenter location abilities because the fault traces are relatively close. The thinking that there was another strike-slip fault to the east of the Hermit Fault, which is a thrust fault, doesn't work scientifically because of the plate convergence and the need for a major strike slip offset (something that accumulates a converging motion). It fits well with a strike-slip fault to the west, and a thrust fault to the east.

Commissioner Calia said other than trenching data, are there other sources that can be drawn upon that would increase your level of confidence about where the line is being drawn.

Town Geologist Sayre said he has seen many geophysical surveys done across these front-range faults; however, they lose the fault as it comes up through weaker, near-surface material. They don't have the resolution to plot a line on a map that would go through one property or another. He's not aware of a superior method than trenching to locate these fault traces.

Commissioner Calia said in absence of trenching data, are there other sources of data that would allow for a higher degree of confidence in where the line is being drawn, realizing that there is a fair amount of art and science. Is there data, in the absence of trenching, where it seems there is lacking there that would allow for greater precision or higher confidence interval of where the line is?

Town Geologist Sayre said if we knew more about the fault (i.e., that it really juxtaposes Santa Clara bedrock materials against Franciscan material), then we might be able to use exploratory borings to identify where that bedrock type changes. Through that method, we might see a change in bedrock formation type. We really don't even have the characterization of the fault to say what those two materials would be on either side.

Commissioner Calia asked: if a property owner isn't enthusiastic about a deep and long trench through their property to investigate this, are there things short of that would still provide relevant data that would help place a fault with a greater degree of confidence beyond existing data? Are there things that could be communicated to property owners that either in connection with projects they're doing or something short of trenching that could be useful in trying to get a greater sense of confidence about where faults are placed?

Town Geologist Sayre said he has seen research-level studies utilizing shallower fault trenches in combination with geo-probe where they collect a continuous sample in a 2"-diameter tube that is shoved into the ground below the base of the trench. It provides much deeper data. Those methods get expensive.

They're almost as expensive, if not more, than the trenching option. He doesn't know of a less expensive method for obtaining data.

Mr. Alftin said there is Town-owned property adjacent to 166 Raymundo Drive. The Town can spend their money trenching there. If you want to get more determination of the location, the Town could pick up that piece.

A member from the public asked if there is a "golden zone", the one spot that will give you certainty that it does or does not exist.

Town Geologist Sayre said the Town has not given him the charge to identify the "golden spot". He suspects that with effort, you could identify a site that would have a greater probability of giving you an answer. It may be completely unrelated to any one's desired project. There may not be funding for it. There are probably locations that are much higher probability for giving you the answer than other locations. You could probably pick one that would have the best apparent chance for giving you an answer. He cannot guarantee on the probability.

Commissioner Fender said we've been talking a lot about earthquake hazards; however, the changes proposed tonight are also for other hazards. He wants a clarification of the scope of changes. Table NH1 is not just for seismic hazards, is that correct?

Town Geologist Sayre said that's correct. The Town Geologist Map has existing landslides mapped on it. Our update of the Town Geologic Map was not focused on remapping the landslides within the Town. It was specifically focused on looking at the fault traces within Town, and creating a map that was more legible and usable by the public.

Commissioner Fender said, however, at the same time, you have made additional changes.

Town Geologist Sayre said the large ledger-sized map is a separate figure. He provided background on why it exists. When he joined the Town, all projects (e.g., hot tubs, trellises, gazebos) were being routed through the Town Geologist. In his experience reviewing for 15 communities in Bay Area, the Town Geologist is not usually charged with peer reviewing minor structures. There was a need to pare down what required peer review. He suggested preparing a very simple map that helps pare down what is actually sent for peer review. This was the map that had an attached "yes" and "no" matrix for various types of projects of whether they would be peer reviewed or not.

Commissioner Fender said he's trying to understand the scope of changes the Commission is trying to work on. It obviously affected a number of residents, property values, and whether they can develop their property or not. They're predominately focused on seismic changes of the map. He wants to clarify that we also are talking about changes to language in the General Plan. Is that correct?

Town Geologist Sayre said the ledger-sized map was reviewed and adopted by the Town Council in 2013. That doesn't constitute a change to the policy. It was implementation methodology.

Commissioner Fender asked if Table NH1 is a new table.

Town Geologist Sayre said it's the same zones that are indicated on the ledger-sized sheet.

Chair Kutay said the zones have changed. The areas of Expansive Bedrock have changed. The definitions are the same right?

Director Young said the new table was expressed a bit differently. The General Plan is a general document. It is not an implementing document. She showed the previous Table NH1. On the left-hand column, there is a list of potential hazards (e.g., erosion, expansive soils, ground rupture, flooding, land sliding). There were four zones in Town. This was prepared by the previous Town Geologist, who indicated whether those typically did or did not (i.e., could potentially) occur in those four zones. For example, A is the valley floor. Those are predominately flat lots, and have a lower potential for erosion.

Commissioner Fender said he understands the changes. If we're addressing this resolution, it's not just for seismic issues, it's for geological zones. We've changed the language from "potential" to "Geologic Hazards."

Director Young noted that the Town Council adopted the Geologic Hazard Zone Map for implementation in 2013. Regarding the language, "Geologic Hazard Zones" is the updated title of NH1. The previous table had the descriptor "potential". Commissioner Fender had a concern of having that expressed in the title. It's still in the column, and described in the paragraphs before and after. Is Commissioner Fender recommending that we change the title of Table NH1?

Commissioner Fender said it would be helpful. "Potential" is different than a specific "Geologic Hazard Map." He was wondering about the intent in making that change.

Director Young said the title of the table matches the title of the map. If Commissioner Fender feels the repetition is insufficient, it can be added to the title.

Commissioner Fender said we can let this go. He asked about faulting. The map shows the entire fault area in a blue color. Are there any areas in the blue line to have a higher likelihood than another place on the blue line to have an occurrence of fault or slope instability?

Town Geologist Sayre said the blue area encompasses the fault traces themselves, which have the highest hazard associated with them, and they also include the fault setbacks. The entire blue zone is associated with the fault rupture hazard. It's basically a no construction zone.

Commissioner Fender asked: if we were to assign a likelihood of occurrence, would we say there was 0% likelihood or 100%?

Town Geologist Sayre said for a fault hazard within the blue area, in some places, it's more definitive that we know exactly where it is. For the San Andreas Fault, we know exactly that it's an active fault trace.

Commissioner Fender asked if that is 75% then.

Director Young said it depends on where you are in the timeline based on frequency data.

Commissioner Fender asked: for each of the different geologic hazard zones, what is the likelihood of occurrence at any given location?

Town Geologist Sayre said we don't have a gradation. Those are broad brush General Plan designations.

Commissioner Fender said, so there is no way to say it's 100% in lot A and 0% at lot B.

Town Geologist Sayre said it wasn't the intent of this map.

Director Young said the intent of the map was to express potential hazards. She's hearing his question of gradation of probability of hazards existing within those zones. There absolutely is. One of the examples discussed earlier on the phone today is the Western Hills. That is identified for potential landslide instability; however, you could say that the project that the Planning Commission reviewed tonight on Stadler Drive is flat.

Commissioner Fender said it's 0% on the map, but same color on the map.

Director Young said we can add an explanation in the General Plan that the probability of the hazard existing in the zone exists with different degrees of probability.

Commissioner Fender said that would be helpful; as well as with the fault zone. We're affecting many people by picking those. It would be helpful to include any differential or judgment information. In the staff report, on Page 116, near the bottom, Town Geologist Sayre removed the statement that said "no detailed map of potentially expansive soils is presently available." Why did he remove it?

Town Geologist Sayre said because we do not have one. Part of the issue is that the expansive bedrock conditions in the Town are limited in area; however, the expansive soil conditions in Town are much broader than expansive bedrock, and have not been mapped separately than the expansive bedrock. We do not have a map that delineates expansive soils differently than the expansive bedrock.

Commissioner Fender said what you potentially would do is eliminate the word "and". In other ways, it says "potentially expansive soils and bedrock." You are saying that we do have the bedrock maps but not the expansive soil maps. You could have left in the bedrock. And then, you say, "for this reason, site specific soil investigations are required for most parcels." Do you believe that is true?

Town Geologist Sayre said it doesn't completely follow logic. Site specific soil investigations are required for most parcels but not specifically for that reason. It would be correct to cross out "for this reason."

Commissioner Fender said on Page 133, under Number 1 it says "all proposed development shall be reviewed against the geotechnical and geological reports...responsive to the information on requirements map NH2." He asked why.

Town Geologist Sayre said his only edit to that paragraph was to correctly title the map the "Hazards Zones Map", since there was a specific title for the NH1 map. He did not change anything else.

Commissioner Fender referred to Page 111, the geological hazard zones, and asked why definitions are being added. Why does it help us?

Town Geologist Sayre said the term "geologically hazardous areas" is used in various places in the WMC, and in this text; however, there was no definition in the General Plan. The definition is taken from the WMC.

Commissioner Fender asked how "geologically hazardous area" differs from "zone"?

Town Geologist Sayre said “area” is the term that has been used in various areas of the WMC. It could be either one. In some instances “geologically hazardous” is used rather than saying “area” or “zone.” He was trying to be consistent.

Chair Kutay asked if any members of the public wished to speak before moving on to Commissioner Discussion.

A member from the public asked what the next step in the process is.

Director Young said the Planning Commission recommends to the Town Council on General Plan amendments and on zone changes. The Town Council takes the action. The purview of the Planning Commission with this type of review is to send a recommendation to the Town Council, and it will be heard by the Town Council. The Planning Commission may or may not ask for more information, or they may send their recommendation to the Town Council to include additional information. There will be another meeting with the Town Council, in which residents previously noticed will be notified of that meeting as well.

#### COMMISSIONER DISCUSSION

Commissioner Calia said part of what the Commission is being asked to do is to make recommended changes to the General Plan to bring wording into conformance with the reclassification of the hazard zones that they already looked at in 2013. He’s uncomfortable with where the fault lines ended up. He does not know how feasible it would be to get more data to determine the location of the Hermit Fault line and the size of the setback around it. He doesn’t get a good idea from this discussion on how to do that. We need to somehow get more data to be comfortable about the fault location, and he doesn’t have a good impression on how to achieve that. Maybe there is good data out there to identify the location of the Hermit Fault. Before making a recommendation that embraces the map, he wants more data for the precise location of the Hermit Fault. There are probably not an infinite number of sources. Over the years, property owners have done projects and there are a small number of contractors that have dug trenches and collected data. Is there is a comprehensive and systematic way to collect that type of data? He doesn’t have any ideas other than solicit a number of homeowners and contractors who have done this. There seems to be gaps in information. He’d like to see if there is a way to fill it.

Commissioner Fender said all of the technical information for these maps is paid for by the residents, and the associated high costs bothers him. They contribute to more geotechnical investigation whenever they build something new. Woodside is made primarily of single-family residences, not commercial developments such as hospitals and higher risk-associated facilities. We are not taking that into account, and our assessment of what these consequences are. What is the likelihood and what are the consequences? Consequences due to the loss of a road or other key infrastructure are more substantial than a loss of a single-family residence (not to say that loss of life is not important). When looking at the grand scheme of things, a risk-likelihood consequence methodology is applied to a Town that only has one consequence. Planning documents take into account all of those other risks in the analysis. He’s troubled that it is affecting residents in that regard, and people are paying a lot of money for geotechnical review to build a single-family home. He is in favor of trying to fix the underlying issues associated with the General Plan and with the implementation documents. Right now, residents who want to get their Building Permit need a peer review for their project and a geotechnical survey. They are important in these fault zones. Essentially, the whole community is affected by this requirement and we’ve overregulated ourselves. That is something he would like to see fixed. Maybe we need to focus our energy on substantial seismic hazardous areas rather than doing all this geological work on sites that

shouldn't be required to do it in normal circumstances. He is not in favor with moving forward with the resolution, and has prepared an alternate resolution with some recommendations to the Town Council.

Vice Chair Huberty commended Town Geologist Sayre for all of his great work. He is troubled by the Hermit Fault being moved without data to justify/support moving it other than the fact that where the current line is has no data to support it. He can understand the frustration of residents who is left with the financial impact on their property. Somehow, the Town and in conjunction with affected residents should come up with a solution to investigate or abandon Hermit Fault. There are hints that it exists, and speculation on how severe a threat it is. There is some geomorphic expression in the land, and he understands land movements create mountains; however, the Town has to help with this somehow. If there is land the Town owns, then we can probably devise an ideal spot to dig. Let's dig and find out. How much could that possibly cost compared to troubling a bunch of residents with \$25,000 - \$30,000 surveys up and down the Town, hoping to find something some day? Rather than spending \$500,000, we can do it once, and find this thing and rename it something besides Hermit. More support is needed to change the map. Otherwise, there isn't enough science to justify the change. Everyone knows there is an earthquake hazard in California. It's affected all kinds of people in all kinds of places. When it affects people's finances, it's important to look at.

Chair Kutay thanked Town Geologist Sayre for the work he put into the report. She agreed with her fellow Commissioners that more information is needed before deciding to move parcels into a geologic hazard zone. That would put too much financial burden on the homeowners. She is not convinced that the Town is justified to make this change. She doesn't know what she can recommend; however, the burden shouldn't be on the residents to figure out where the fault zone is. If the Town is going to make this change and move parcels into the geologic hazard zone, then we need more information that is more scientific than saying if fault is not in point "A", then it must be in point "B". She was not convinced by that methodology.

Commissioner Calia said he understands that the Town Geologist is doing what he can with the data that he has. The point the Commission is making is that generating or finding additional data hasn't been taken into account to try to enhance the quality of evaluation. It sounds like the Commission is in favor of doing that. There are always going to be some limits to the amount of data and what that tells us. It's about arriving to a degree of confidence when identifying fault locations because of the affects it has on residents. We need to do whatever we can to enhance the level of confidence before we take steps that could have these sorts of ramifications. He doesn't know how easy it would be to do that. He doesn't know what creative solutions the Town Council might come up with to facilitate this. It would be an important next step to get it as precise as we can.

Commissioner Fender said it makes a lot of sense to use judgment to select high probability spots where we can do a rifle type of investigation rather than an arbitrary shotgun approach. It comes down to who is going to pay for it. That's a tough issue.

Commissioner Calia said we should proceed with reasonable alacrity. Based on what he understands, the old map, and where that old fault was identified was incorrect. Leaving it as it is isn't good either. There are safety implications for that as well. We want to gather more information that would be useful to ensure a more precise location, and give the Town Geologist the tools to do that. That should be a priority.

Director Young said Planner Mullin pulled the map for the properties that were added and removed. Of the 40 properties that came into the zone that were not previously in the zone, 19 of them were brought in due to the precise mapping of the San Andreas Fault. 21 properties brought in were due to the mapping of

the Hermit Fault. She's hearing that the Planning Commission wants to recommend to the Town Council that more in-depth analysis be done. It's great that the Cañada Fault could be removed because there is sufficient evidence, and 125 properties have benefited from that; however, 21 properties are coming in due to shifting of the Hermit Fault based on investigations that can at least say that the line shown by the State is inaccurate.

Commissioner Fender asked how many properties remained in the fault setback zone.

Director Young said that can be provided later.

### ACTION

The Planning Commission recommended that the item be forwarded to the Town Council, with the following work completed:

1. Revise the proposed edits to the Natural Hazards and Safety Element to:
  - a. Change the title to Table NH1 to include the word 'potential'; and,
  - b. Include text which refers to the potential ranges of degree of hazards.
2. Staff and the Town Geologist to gather more potential trenching data on the Hermit Fault (possible reports missing for 980 Runnymede, and 164 and 170 Olive Hill); and work on a proposal to confirm the location of the Hermit Fault, e.g. trench Town property – resident talk about the Town bearing the cost for this determination.
3. Provide more details on which properties remain in the fault setback zone, are removed from the zone, and are placed in the zone. *[It was verified that 19 come in due to the San Andreas fault relocation, and 21 come in due to the Hermit fault relocation.]*

Motion: Vice Chair Huberty/ Second: Commissioner Calia  
 Ayes: Chair Kutay, Vice Chair Huberty, and Commissioner Calia  
 Noes: Commissioner Fender  
 Absent: Commissioners Hobson, Rosekrans, and Voelke  
 Abstain: None

The motion carried.

Director Young invited Commissioner Fender to explain his dissenting vote.

Town Attorney Savaree said that will provide the Town Council with the entire reasoning of the Planning Commission.

Commissioner Fender passed around a document outlining why he is not supporting the motion.

Commissioner Calia said he doesn't know if the additional work would end up affecting Commissioner Fender's suggestions. He's imagining that armed with additional information and further analysis, some of what is proposed to be changed in the General Plan, and some of the things we're tabling for today, may look different. He wonders if that might overtake their comments.

Commissioner Fender said the point he was trying to make is some changes are not just for seismic hazards. It's broader. Particularly Table NH1 feeds into the hazard analysis done in Tables NH3, NH4, and NH5. Those tables have problems with them. If we adopt this with Table NH1 as proposed, it's saying we accept the rest as true and correct. He does not agreed with that at all.

Director Young said Commissioner Fender’s submittal will be included with the information provided to the Town Council. This item will be noticed again. The next meeting will be before the Town Council after staff has done more investigation. She asked for the geotechnical reports from Runnymede Road and Olive Hill Lane. She expressed appreciation for everyone’s helpful comments.

3. Development Review Process Improvements

Town-wide

Planner: Jackie Young, Planning Director

Review of the September 13, 2016, staff report to the Town Council reporting on: (1) a six-month review of adopted Ordinance 2015-566, which amended the Woodside Municipal Code Chapter 153, Zoning, Section 153.220-153.231, Architectural and Site Review, and related Municipal Code sections, to streamline the process and procedures for architectural and site review; and (2) staff-recommended development review (Planning, Building and Engineering) process improvements which are on-going, underway, and in response to the feedback received from the recent customer satisfaction survey.

DISCUSSION

Chair Kutay asked if the Commission would like to take a break before discussing the item.

Director Young said the Commission needs to take a vote in order to continue the meeting after 9 p.m.

Vice Chair Huberty stated he is okay to continue the meeting.

Commissioner Rosekrans said he prefers not to discuss the item tonight.

Commissioner Calia asked if anyone from the public was present for Agenda Item No. 3.

There was no one from the public present for Agenda Item No. 3.

Director Young said it may be beneficial to continue the item to a time when there are more Commissioners present.

ACTION

The Planning Commission moved the item to a date certain of October 5, 2016.

Chair Kutay adjourned the meeting at 9:00 p.m.