

**TOWN OF MORAGA PLANNING COMMISSION  
MEETING AGENDA  
Monday, August 2, 2010  
7:30 PM**

**Moraga Library Meeting Room at  
1500 Saint Mary's Road, Moraga California 94556**

*All documents relating to the following agenda items are available for public review in the Planning Department of the Town of Moraga at 329 Rheem Blvd. between the hours of 9 to 12, Monday, Tuesday and Thursday (other times by appointment). Staff reports will normally be available on the Monday afternoon one week preceding the meeting. It is recommended that you contact the Planning Department at 925-888-7040 for availability.*

**I. CALL TO ORDER AND ROLL CALL**

**Planning Commission**

- A. Driver, Levenfeld, Obsitnik, Richards, Socolich, Whitley, Wykle
- B. Conflict of Interest

**II. ADOPTION OF MEETING AGENDA**

**III. PUBLIC COMMENTS**

*This part of the agenda is to receive public comments on matters that are not on this agenda. Comments received will not be acted upon at this meeting and may be referred to a subcommittee for response. Comments should not exceed three minutes.*

**IV. ADOPTION OF THE CONSENT CALENDAR**

*Items on the Consent Calendar are believed by staff to be non-controversial. Staff believes that the proposed action is consistent with the commission's instructions. A single motion may adopt all items on the Consent Calendar. If any commissioner or member of the public questions any item, it should be removed from the Consent Calendar and placed in part IX of the Regular Agenda.*

- A. July 19, 2010 Minutes

**V. PUBLIC HEARINGS**

*Opening remarks by an applicant shall not exceed ten minutes. Comments by others shall not exceed three minutes. The purpose of a public hearing is to supply the Planning Commission with information that it cannot otherwise obtain. Because of the length of time that the Planning Commission meetings frequently consume, please limit testimony and presentation to the supplying of factual information. In fairness to the Commission and others in attendance, please avoid redundant, superfluous or otherwise inappropriate questions or testimony.*

**GRADING and HDP 01-10 Mr. and Mrs. Robert White (Owner/Applicant), 32 Buckingham Drive:** Application for a hillside development permit and grading permit to grade a hillside with a slope greater than 25% including an approximately 50 cubic yard excavation for an in-ground storage building and related improvements. In accordance with Moraga Municipal Code Section 14.16.020, the Planning Commission shall make a recommendation to the Town Council regarding the proposed application. The work that is the subject of this application including the hillside excavation and partial storage room construction was commenced without the benefit of any Town approvals. The Town will evaluate the proposed application as if the work had not been started. This application will receive no special consideration because it was started without permits. The property is zoned 3 dwelling units per acre. APN: 256-203-012.

**VI. ROUTINE & OTHER MATTERS**

*The following items do not require a public hearing, although the Chair or staff will indicate why each item is on the agenda. Public participation will be limited and the Commission may decide to reschedule the item as a public hearing. Discussion of administrative matters, such as adoption of findings, may be limited to the Planning Commission.*

**VII. COMMUNICATIONS – None**

**VIII. REPORTS**

**A. Planning Commission**

1. Jim Obsitnik, Chair
2. Russell Driver, Vice Chair
3. Stacia Levenfeld
4. Dick Socolich
5. Bruce Whitley
6. Tom Richards
7. Roger Wykle

**B. Staff**

1. Update on Town Council actions and future agenda items.

**IX. ADJOURNMENT**

To a regular meeting of the Planning Commission on **Monday, August 16, 2010** at 7:30 P.M. at the Moraga Library Meeting Room, 1500 Saint Mary's Road, Moraga, California. Notices of Planning Commission meetings are posted at 2100 Donald Drive, the Moraga Commons, and the Moraga Public Library.

**NOTICE: If you challenge a town's zoning, planning or other decision in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Planning Commission at or prior, to the public hearing. Judging review of any town administrative decision may be had only if petition is filed with the court not later than the 90<sup>th</sup> day following the date upon which the decision becomes final. Judicial review of environmental determinations may be subject to a shorter time period for litigation, in certain cases 30 days following the date of final decision.**

The Town of Moraga will provide special assistance for disabled citizens upon at least 24 hours advance notice to the Planning Department (888-7040). If you need sign language assistance or written material printed in a larger font or taped, advance notice is necessary. All meeting rooms are accessible to disabled.

Copies of all staff reports and documents subject to disclosure that relate to each item of business referred to on the agenda are available for public inspection the 5<sup>th</sup> day before each regularly scheduled Planning Commission meeting at the Planning Department, located at 329 Rheem Boulevard, Moraga, CA. Any documents subject to disclosure that are provided to all, or a majority of all, of the members of the Town Council regarding any item on this agenda after the agenda has been distributed will also be made available for inspection at 329 Rheem Boulevard, Moraga, CA during regular business hours.

**TOWN OF MORAGA  
PLANNING COMMISSION MEETING**

Moraga Library Meeting Room  
1500 Saint Mary's Road  
Moraga, CA 94556

July 19, 2010

7:30 P.M.

**MINUTES**

**I. CALL TO ORDER**

Vice Chairman Driver called the Regular Meeting of the Planning Commission to order at 7:30 P.M.

**ROLL CALL**

Present: Commissioners Levenfeld, Richards, Socolich, Whitley, Driver  
Absent: Commissioner Wykle, Chair Obsitnik  
Staff: Lori Salamack, Planning Director

B. Conflict of Interest

There was no reported conflict of interest.

**II. ADOPTION OF MEETING AGENDA**

On motion by Commissioner Whitley, seconded by Commissioner Levenfeld and carried unanimously to adopt the meeting agenda, as shown.

**III. PUBLIC COMMENTS**

There were no comments from the public.

**IV. ADOPTION OF THE CONSENT CALENDAR**

**A. June 21, 2010 Minutes**

On motion by Commissioner Socolich, seconded by Commissioner Richards and carried unanimously to adopt the Consent Calendar, as shown.

**V. PUBLIC HEARINGS**

**A. CUP 09-10 Moraga Country Club HOA (Applicant) Terry and Linda Gong (Owner) Moraga Swim and Tennis Club, 1161 Larch Avenue:**

Conditional use permit for a temporary swim, snack, fitness and administrative use of the existing swim club. No tennis use is proposed at this location. APN 258-600-001.

Planning Director Lori Salamack presented the application for a conditional use permit for a temporary swim, snack, fitness and administrative use of the existing swim club. No tennis use was proposed at this location. She reported that on January 4, 2010 the Planning Commission had approved a conditional use permit to allow the demolition of the existing clubhouse at 1600 St. Andrews Drive and construction of a new clubhouse in the same location. Due to the proximity of the pool and the clubhouse, it would not be possible to allow the operation of the swimming pool at the Moraga Country Club during the clubhouse construction. The demolition of the clubhouse had been planned for September 2010. The proposed conditional use permit would allow the use of the existing swim facility for swim, snacks, fitness and administrative purposes while the new clubhouse was under construction. No tennis use of the property had been proposed by the applicant but it may be possible to use the tennis courts for parking, if necessary.

A conditional use permit had also been required to allow the temporary use because the subject property is in the Moraga Open Space Ordinance (MOSO), a recreational use is a conditional use in MOSO and the prior swimming use of the property expired when it had been discontinued for a period of more than one year.

The project is categorically exempt from the California Environmental Quality Act (CEQA) under Section 15301, Existing Facilities. A public hearing notice had been mailed to property owners within 300 feet of the proposed project site on July 9, 2010. Staff had received no written comments or telephone calls on the application. The Moraga Country Club had held a meeting on the proposal and staff was unaware of any issues that had been raised by the neighbors.

The draft resolution called for a 21-month temporary use until April 30, 2012. The time limit would allow ample time for the completion of the construction but only one summer swim season without further Town approval. If construction were to be significantly delayed, it was recommended that the application come back to the Town for further consideration. A condition of approval was also recommended for the hours of operation from 6:00 A.M. to 9:00 P.M. weekdays and 8:00 A.M. to 9:00 P.M. on the weekends.

Ms. Salamack recommended that the Planning Commission adopt the draft resolution, subject to conditions with any changes as necessary.

Commissioner Whitley understood that the former Moraga Swim and Tennis Club (MSTC) had a smaller facility than the current use and understood there were parking restrictions. He asked whether or not that use pre-dated the incorporation of the Town and the imposition of any parking standards.

Ms. Salamack explained that staff had not reviewed that issue although it had been reviewed as part of the residential subdivision application where there had been approximately 60 parking spaces. Discussions had been held with the Moraga Country Club where the tennis courts may be utilized for parking.

#### PUBLIC HEARING OPENED

Frank Melon, General Manager, Moraga Country Club, explained that they had printed out 20 to 30 letters that had been distributed to the neighborhood to solicit comments from the residents. He acknowledged that there had been comments on traffic and as a result the Chief of Police had been invited to attend a meeting of the Moraga Country Club where issues with respect to speeding on Larch Avenue had been discussed. He affirmed that there were no plans to use the tennis courts. The goal was to have the new clubhouse and improvements to the swimming pool completed by November 2011. He acknowledged that the largest mitigated use was swim meets which would not be held. The swim club would be used by lap swimmers and children. He reiterated that there would be no swim meets.

Given the layout of the clubhouse, Mr. Melon explained that the parking lot was at a distance from the swimming pool and some of the fencing at the tennis courts would be removed with parking up to the tennis courts, essentially doubling the parking. He noted that he had also agreed to pay for a radar cart to be stationed at all times to address the speed of traffic on Larch Avenue. He emphasized that the use would be temporary. He noted that Moraga Country Club had been a good neighbor for many years.

Mr. Melon added that four to five people in their accounting division would also work out of offices as part of the temporary use of the existing swim club facility. Efforts would be made to ensure the property was not attractive to vandalism. He characterized the proposal as an effort to allow neighborhood children and the swim program to continue using the pool.

Commissioner Whitley inquired of the number of swimmers who would participate during the National Swim Championships, to which Linda Gong, the property owner of the Moraga Swim and Tennis Club stated that during the peak periods approximately 150 swimmers had participated in the National Championship events.

Commissioner Socolich clarified with Mr. Melon the intent that the temporary use would be for members only and would not be open to the public, which would be monitored by staff. He added that their swim and tennis members were not separated with the goal not to be open to the general public.

Commissioner Socolich recommended a condition that the facility would be for the use of Moraga Country Club members only.

Commissioner Richards asked whether not guests would be permitted to use the facility, to which Mr. Melon affirmed that guests were permitted at a fee to the member of the Moraga Country Club.

Clay Serrahn, 1160 Larch Avenue, Moraga, whose home was located directly across from the location of the existing swim club, expressed concern with parking and traffic. He questioned how many vehicles the tennis courts could accommodate and suggested that overflow parking would occur in the residential areas as it had in the past. He asked the Moraga Country Club to impress its membership to respect the residential neighborhood. He was pleased that the Moraga Police Department would improve its enforcement of the posted speed along Larch Avenue and he urged the club members to also respect the posted speed.

Karen Mendonca, 1160 Larch Avenue, Moraga, emphasized for the record that on-street parking in the neighborhood had been an issue in the past and needed to be addressed. She urged that all on-street parking be discouraged with parking only within the Moraga Country Club. She emphasized the problems with speeding along Larch Avenue, past efforts to install stop signs in the neighborhood which while well supported ultimately had not been recommended by the Traffic and Safety Advisory Committee (TSAC). Neighbors had done everything they could to keep the street safe with Larch Avenue oftentimes used as a shortcut from surrounding neighborhoods. She asked the Planning Commission to consider a stop sign coming out of the driveway to the club.

Robert West, 1179 Larch Avenue, Moraga, agreed with the comments. He also noted that Larch Avenue was in a deteriorated condition which was something the Planning Commission should be aware. He agreed that a stop sign out of the driveway to the club would be a service to the residential neighborhood. He otherwise questioned the fact that the Moraga Country Club had not reached out to its neighbors and he questioned how parking would be arranged at the tennis courts. In addition, he questioned whether or not lights in the tennis courts would be adequate for evening parking. Further, he suggested that 60 parking spaces would be ample for the swim members particularly absent any swim meets. He questioned the proposed signage given that MTSC would not be using the temporary facility and swim meets would not be held.

Linda Gong, 1217 Larch Avenue, Moraga, the property owner, expressed her appreciation for all of the comments. She clarified that the club had been built in 1973 which pre-dated the Town's incorporation when there were no parking restrictions. She commented on the efforts to subdivide the property at which time they would appear again before the Planning Commission.

Ms. Gong noted that the Moraga Country Club had approached them about their plans for improvements. As a member of the Moraga Country Club and a resident of Larch Avenue, she was aware of the comments regarding parking. She acknowledged that overflow parking occurred at the club during swim meets or large family events. Otherwise vehicles only used the area for drop-off and pick-ups and it was rare that vehicles would park on the road leading to the club. She added that the tennis courts would include access at the corner court where it would not be difficult to remove fencing and arrange parking. The tennis courts included 1,000 watt bulbs with plenty of lighting. She recognized that as motorists exited the entrance to the club, they must be careful. She was unaware of any accidents in that area. She was confident that the Country Club would do everything it could to ensure that the area was safe.

#### PUBLIC HEARING CLOSED

Vice Chairman Driver acknowledged a request for additional conditions that the existing swim club was to be used for members and guests only and that no swim meets were to be held.

Commissioner Socolich supported additional conditions as proposed.

Commissioner Richards was uncertain the additional conditions would be necessary.

Commissioner Levenfeld was also uncertain that the additional conditions were necessary although she would support them if included.

Vice Chairman Driver reiterated the recommendation for two additional conditions:

- i There shall be no swim meets with other teams held at this facility; and
- i The facility is restricted to Moraga Country Club members and their guests only.

In response to Commissioner Whitley, Mr. Melon clarified that the radar cart would have a two to three day charge and may not be placed on a daily basis although the intent was that it be placed on-site as often as it could be used.

Commissioner Whitley was not concerned with traffic either increasing or decreasing as a result of the use of the Moraga Country Club. He noted that Moraga was designed to be semi-rural consistent with the General Plan's intent to keep the community in a semi-rural character with semi-permanent signs. A speed sign was not in keeping with that intent.

Commissioner Whitley acknowledged the concerns with the speed on Larch Avenue but expressed concern with the parking of a neon-sign on one of the Town's streets.

Vice Chairman Driver was comforted that the radar cart would not be operated by a diesel generator. He acknowledged the concerns with traffic, speed and safety, which in his opinion outweighed the aesthetic concerns even if the device was placed for at least a year's time.

An unidentified speaker from the audience understood that the radar cart would not be placed in one location and would be moved around. He suggested that the neighborhood would appreciate its presence.

Commissioner Levenfeld would support the radar cart if placed for safety reasons on a temporary basis since it would not be a permanent structure.

Ms. Mendonca suggested that given the history of the neighborhood, many residents were likely not present since they were tired of telling the Town there was a problem. Anything that could be done to increase safety was the right thing to do and showed the Town's commitment to make the street safe.

Mr. Melon further commented that there were ten current members of the Moraga Country Club who resided on Larch Avenue. In an effort to keep all their members pleased while also being a good neighbor, he was confident there would be no on-street parking. He emphasized that the tennis courts consisted of approximately 60,000 square feet which was ample for potential parking.

On motion by Commissioner Whitley, seconded by Commissioner Socolich to adopt Resolution next in number to approve CUP 09-10 for the Moraga Country Club HOA at 1161 Larch Avenue, subject to the findings and conditions, as shown, and as amended with additional conditions, as follows:

3. There shall be no swim meets with other teams held at this facility; and
4. The use of the facility shall be restricted to Moraga Country Club members and their guests only.

The motion carried by the following vote:

Ayes:	Commissioners Levenfeld, Richards, Socolich, Whitley, Driver
Noes:	None
Abstain:	None
Absent:	Commissioner Wykle, Chair Obsitnik

Ms. Salamack advised that there was a ten day right of appeal for anyone wishing to appeal the decision of the Planning Commission to the Town Council by submitting a statement and through the payment of an appeal fee, through the Planning Department.

**VI. ROUTINE & OTHER MATTERS**

A. None

**VII. COMMUNICATIONS**

A. None

**VIII. REPORTS**

**A.** Planning Commission

There were no reports.

**B.** Staff

1. Update on Town Council actions and future agenda items.

Ms. Salamack reported that the August 2 Planning Commission meeting would include a Hillside Development Permit with a recommendation to the Town Council for grading activity that had occurred absent a permit for property located on Buckingham Drive. If the application was approved, a variance may also be required for the property, which would have to be brought back for Planning Commission consideration at a future meeting. Staff also planned to bring forward a draft ordinance for the California Green New Building Code which would have to be adopted by the Town Council to be effective in January 2011. Given the Town's Design Guidelines had a green building component, the draft ordinance would also be brought before the Planning Commission and the Design Review Board (DRB) in the fall.

In addition Ms. Salamack advised that staff planned to complete the Hetfield Estates Environmental Impact Report (EIR) in late summer early or fall with public hearings to be scheduled before the Planning Commission. Further, she reported on a recent article in About Town on the substantial increase in construction activity in the Town regarding administrative design review applications. She reported that the Town was presently at a level that was typical for the year.

**XII. ADJOURNMENT**

On motion by Commissioner Socolich, seconded by Commissioner Levenfeld to adjourn the Planning Commission meeting at approximately 8:18 P.M. to a regular meeting of the Planning Commission on Tuesday, August 2, 2010 at 7:30 P.M. at the Moraga Library Meeting Room, 1500 Saint Mary's Road, Moraga, California.

A Certified Correct Minutes Copy

Secretary of the Planning Commission



Meeting Date: August 2, 2010

**TOWN OF MORAGA**

**STAFF REPORT**

**To: Town of Moraga Planning Commission**

**From: Lori Salamack, Planning Director**

**Subject: GRADING and HDP 01-10 Mr. and Mrs. Robert White (Owner/Applicant), 32 Buckingham Drive: Application for a hillside development permit and grading permit to grade a hillside with a slope greater than 25% including an approximately 50 cubic yard excavation for an in-ground storage building and related improvements. In accordance with Moraga Municipal Code Section 14.16.020, the Planning Commission shall make a recommendation to the Town Council regarding the proposed application. The work that is the subject of this application including the hillside excavation and partial storage room construction was commenced without the benefit of any Town approvals. The Town will evaluate the proposed application as if the work had not been started. This application will receive no special consideration because it was started without permits. The property is zoned 3 dwelling units per acre. APN: 256-203-012.**

**Request**

Review the proposed project and make a recommendation to the Town Council for approval or disapproval or approval with conditions.

**Public Notice and Correspondence**

A public notice was mailed to the property owners within 300 feet of the proposed project site on July 23, 2010. A copy of the notice, mailing list and area of notice map is attached as **EXHIBIT A**.

**Background**

In May 2009, town staff became aware of grading being done without a permit at 32 Buckingham. Upon investigation, it was determined that a permit was required both for the grading and for the alteration of the hillside. The current application is the result of approximately 14 months of working with the applicant to have the necessary documents submitted for consideration by the Town. Attached in **EXHIBIT B** is the correspondence between the applicants' soil engineer and the town's peer review consultant. According to the June 14, 2010 letter from Cal Engineering and Geology all

1 of the technical issues identified in the May 3, 2010 comment letter have been satisfied.  
2 The revised plans dated May 25, 2010 have also been corrected to be consistent with  
3 the comment letter.

4  
5 **CEQA Compliance**

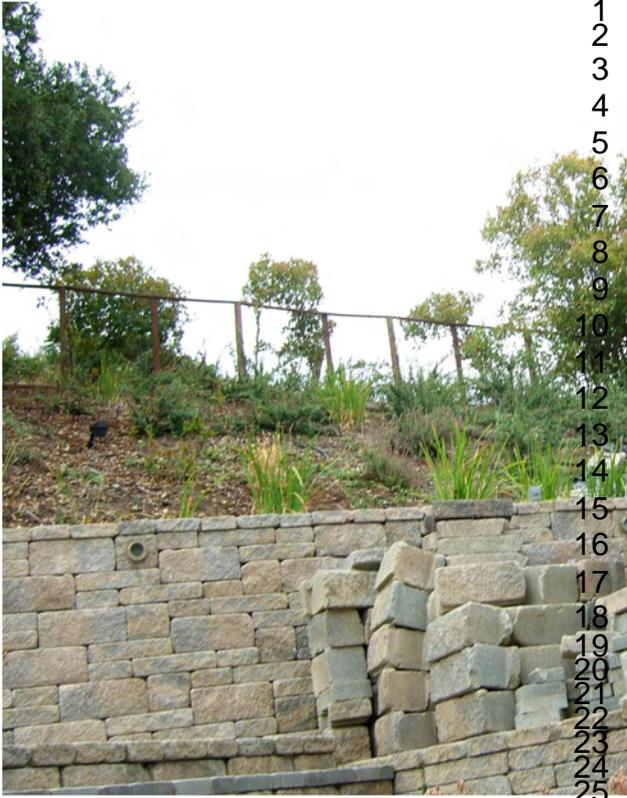
6 The project is categorically exempt in accordance with CEQA Section 15303 small  
7 structures.

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9 **Discussion**

10 Photograph of the stopped construction are provided below.



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15 The existing rear yard retaining walls were constructed in 2006 following an approval  
16 from the Design Review Board. As in this case, the 2006 walls were originally  
17 commenced without the necessary town approvals. A copy of the 2006 Design Review  
18 Board staff report is attached as **EXHIBIT C**.



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In this case, the project requires both a hillside development permit and a grading permit. Town Council action is required on the grading permit because it is proposed on a slope in excess of 25%. The fact that substantial work has already been done on this project without a permit does not change the required findings for this application. The factors to be considered in the issuance of a hillside development permit are discussed in **EXHIBIT D**.

In addition, the findings required for approval of the grading permit are discussed in **EXHIBIT E**.

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**Recommendation**

Consider the application and provide direction to staff for the preparation of a resolution recommending approval or disapproval by the Town Council **EXHIBIT F**.

**Exhibits:**

- A. Public Notice Map, Notice List and Public Hearing Notice
- B. Peer review comment letter and response
- C. 2006 Design Review Board staff report
- D. Hillside Development Permit consideration
- E. Grading determinations
- F. Draft resolution
- G. Plans

# **Exhibit A**

Public Notice, Notice List and Public Hearing Notice

# PUBLIC MEETING



**YOU ARE HEREBY NOTIFIED THAT** on Monday, August 2, 2010, at 7:30 p.m., in the meeting room at the Moraga Library, 1500 Saint Mary's Road, Moraga, California 94556, the Planning Commission of the Town of Moraga will hold a public meeting to consider and make a recommendation to the Town Council on the following application:

**GRADING and HDP 01-10 Mr. and Mrs. Robert White (Owner/Applicant), 32**

**Buckingham Drive:** Application for a hillside development permit and grading permit to grade a hillside with a slope greater than 25% including an approximately 50 cubic yard excavation for an in-ground storage building and related improvements. In accordance with Moraga Municipal Code Section 14.16.020, the Planning Commission shall make a recommendation to the Town Council regarding the proposed application. The work that is the subject of this application including the hillside excavation and partial storage room construction was commenced without the benefit of any Town approvals. The Town will evaluate the proposed application as if the work had not been started. This application will receive no special consideration because it was started without permits. The property is zoned 3 dwelling units per acre. APN: 256-203-012.

**Owner / Applicant**

Mr. and Mrs. Robert White  
32 Buckingham  
Moraga, CA 94556

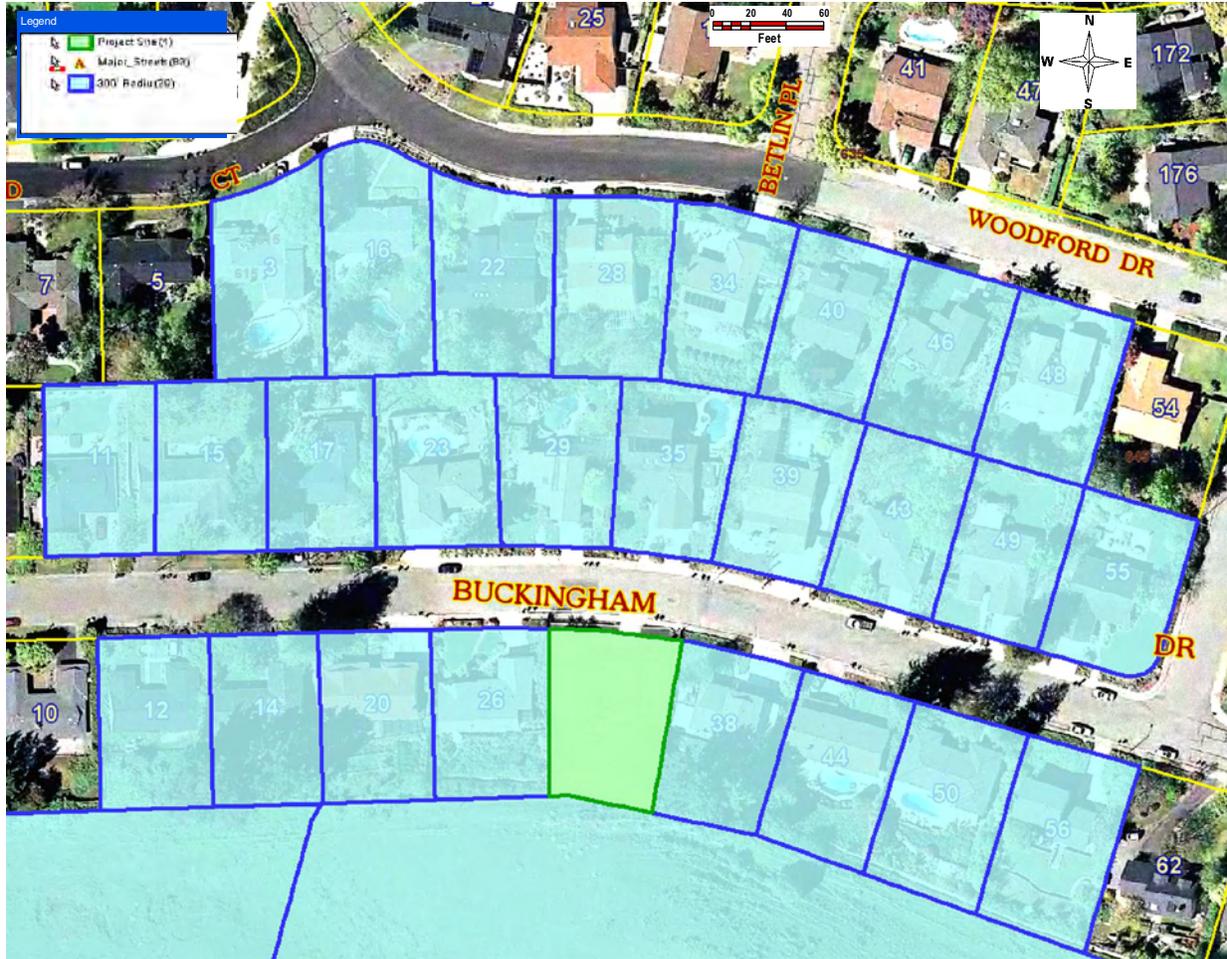
The plans for this project are available for public review at the Moraga Planning Department, 329 Rheem Blvd, during normal business hours (Monday through Friday from 8 am to noon and 1 to 5 pm). Comments regarding the proposed project can be submitted in writing or orally at the public meeting. Written comments submitted to the Planning Department will be given to the Planning Commission on the night of the meeting. For additional information, contact the Planning Department at (925) 888-7040.

Lori Salamack, Planning Director

# VICINITY MAP AND AREA OF NOTICE

## 32 Buckingham Drive - White Residence

File Number: HDP-01-2010



**HDP-01-10**  
Mailed Public Notice

**32 Buckingham Drive**  
**Mailing List**

**Hillside Development**  
**Permit**

APN	NAME	ADDRESS	CITY & ZIP
256203011	Rudolph H & Eldene L Mortensen	PO BOX 6401	MORAGA , CA 94570 6401
256024006	Laura M Diaz	12 BUCKINGHAM DR	MORAGA, CA 94556 2407
256024007	James C Philip	14 BUCKINGHAM DR	MORAGA, CA 94556 2407
256203014	Joel Chiu	88 MOSS BRIDGE LN	ORINDA , CA 94563
256203012	Robert A & Claudia E White	32 BUCKINGHAM DR	MORAGA, CA 94556 2407
256203013	Frank Yun Quan Pan	26 BUCKINGHAM DR	MORAGA, CA 94556 2407
256030002	Rheem Valley Properties Llc	190 N WIDGET LN, Apt.#101	WALNUT CREEK, CA 94598 2440
256203008	Sandra K North	56 BUCKINGHAM DR	MORAGA, CA 94556 2407
256203009	Mohsen Pazooki	50 BUCKINGHAM DR	MORAGA, CA 94556 2407
256203010	Anthony C Carpentieri	44 BUCKINGHAM DR	MORAGA, CA 94556 2407
256204007	Alan B & Carmen G Mould	9756 WESTBURY CIR	HIGHLANDS RANCH , CO 80129 6930
256204006	Elaine E Sellers	49 BUCKINGHAM DR	MORAGA, CA 94556 2406
256204005	James F Woidat	43 BUCKINGHAM DR	MORAGA, CA 94556 2406
256204004	Sarah Weingarten	39 BUCKINGHAM DR	MORAGA, CA 94556 2406
256023021	Olst Eric & Jessica Van	11 BUCKINGHAM DR	MORAGA, CA 94556 2406
256023020	Douglas C & Cynthia A Redinger	15 BUCKINGHAM DR	MORAGA, CA 94556 2406
256204003	Wesley E Jones	35 BUCKINGHAM DR	MORAGA, CA 94556 2406
256023019	Jaroslav & Eva Gryko	17 BUCKINGHAM DR	MORAGA, CA 94556 2406
256204002	William I Levyn	PO BOX 6567	MORAGA , CA 94570
256204001	Wayne L & Susan Q Chan	23 BUCKINGHAM DR	MORAGA, CA 94556 2406
256204009	Michael H Rose	48 WOODFORD DR	MORAGA, CA 94556 2429
256204010	Thomas B & Judith Gosnell	46 WOODFORD DR	MORAGA, CA 94556 2429
256204011	Xinli Yang	40 WOODFORD DR	MORAGA, CA 94556 2429
256204012	Richard E & Paula J Bonitz	34 WOODFORD DR	MORAGA, CA 94556 2429
256204013	Ascencion Jr Portillo	28 WOODFORD DR	MORAGA, CA 94556 2429
256204014	Rodger G & Karen Ng Lum	22 WOODFORD DR	MORAGA, CA 94556 2429
256023017	Brian P Ahearn	3 CAMELFORD CT	MORAGA, CA 94556 2408
256023018	Dean B & Diane Y Thomas	16 WOODFORD DR	MORAGA, CA 94556 2429

## **Exhibit B**

Peer Review Comment Letter and Response

**Friar Associates, Incorporated . Engineers . Consultants**  
**Soils . Foundations . Geology . Geotechnology**

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2656 Nicholson Street, San Leandro, CA 94577  
Tel: (510) 351-3930 Fax: (510) 351-1020

December 16, 2009  
Project 1678

Mr. Robert White  
32 Buckingham Drive  
Moraga, CA 94556

Dear Mr. White:

Report Update  
Geotechnical Investigation  
New Retaining Wall Structure  
32 Buckingham Drive  
Moraga, California

**Introduction**

As requested, we have reviewed the geotechnical investigation report prepared for the planned retaining wall structure in the backyard area of the subject residence. The residence is located on the south side of Buckingham Drive, a short distance east of the intersection of Buckingham Drive with Moraga Way in Moraga, California.

**Proposed Construction**

You plan to construct a structure that will be used partially for storage and partially as an improvement in the backyard area. Based on the information we obtained from a site reconnaissance visit and meetings we have had with you at the residence, the structure will have mainly reinforced concrete walls, a concrete slab-on-grade floor and a concrete roofing.

**Information Provided**

We were provided with a November 2005, geotechnical investigation report prepared by Peters & Ross.

**Scope Of Work**

Our scope of work was to make a site reconnaissance visit to check the existing conditions and to review the geotechnical investigation report by Peters & Ross to provide geotechnical information for the planned construction in accordance with current California Building Code.

December 16, 2009  
Project 1678

**Site Conditions**

The site for the proposed construction is located in the backyard area of the residence and the southwest of the existing building. There is a ground elevation difference of between eight and ten feet between the north part of the project site and the south end. At the time of our site visit, bedrock had been exposed at a cut face of the slope behind the existing building.

**Seismic Considerations**

This project site is located within the seismically active San Francisco Bay region but outside of any of the Alquist-Priolo Earthquake Fault Zones.

Type A and Type B faults close to the site are listed in the table below.

TABLE 1 - TYPES A AND B FAULTS CLOSE TO THE SITE*				
Fault	Type	Maximum Moment Magnitude	Slip Rate (mm/yr)	Distance (miles/km)
San Andreas (Peninsular)	A	7.9	24	>/31
Hayward (Total Length)	A	7.1	9	4.9/8
Calaveras (North of Calaveras Reservoir)	B	6.8	6	4.9/8
Concord-Green Valley	B	6.9	6	8.2/13.5

\*California Division Of Mines And Geology (California Geologic Survey)

Seismic hazards can be divided into two general categories, hazards due to ground rupture and hazards due to ground shaking. Since no active faults are known to cross this property, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote.

Should a major earthquake occur with an epicentral location close to the site, ground shaking at the site will undoubtedly be severe, as it will for other property in the general area. Even under the influence of severe ground shaking, the soils that underlie the area proposed for development are unlikely to liquefy.

The following general site seismic parameters may be used for design in accordance with the 2007 California Building Code:

Site Class: C

Site Coordinates: Latitude = 37.86, Longitude = -122.12

December 16, 2009  
Project 1678

**Spectral Response Accelerations SMs and SM1**

$$SMs = F_a \times S_s \text{ and } SM1 = F_v \times S1$$

For Site Class C with  $F_a = 1.0$  and  $F_v = 1.3$

Period (sec)	$S_a$ (g)
0.2	1.500 (SMs, Site Class C)
1.0	0.780 (SM1, Site Class C)

**Design Spectral Response Accelerations SDs and SD1**

$$SDs = 2/3 \times SMs \text{ and } SD1 = 2/3 \times SM1$$

For Site Class C with  $F_a = 1.0$  and  $F_v = 1.3$

Period (sec)	$S_a$ (g)
0.2	1.000 (SDs, Site Class C)
1.0	0.520 (SD1, Site Class C)

**Recommendations**

Site grading is expected to involve mainly excavation. The area of the backyard to be built on or paved should be cleared of debris and other unsuitable materials. The site surface should be stripped to remove organic-laden topsoil. Soils containing more than 2% by weight of organic matter should be considered organic. Any subsurface structure including old utility lines and buried pipes such as, electrical lines, landscape pipes and storm drains that may exist at the proposed construction site should be excavated out, removed and hauled off-site or relocated away from the area proposed for construction. The resulting depressions from these operations should be backfilled with structural fill.

**Foundation Design Criteria**

Continuous, reinforced concrete foundations may be designed to impose pressures on foundation soils up to 2500 pounds per square foot from dead plus normal live loading. Continuous foundations should be at least 15 inches wide and should be embedded at least 12 inches below rough pad grade or adjacent finished grade, whichever is lower.

Interior isolated foundations, such as may support column loads, may be designed to impose pressures on foundation soils up to 2500 pounds per square foot from dead plus normal live loading. Interior foundations should be embedded at least 36 inches below rough pad grade and

December 16, 2009  
Project 1678

should be at least 48 inches in smallest dimension.

The allowable soil pressures given above may be increased by one-third when evaluating the effects of short-term wind or seismic loadings

### **Concrete Slabs-On-Grade**

Concrete floor slabs should be constructed on compacted soil subgrades. To minimize floor dampness, a section of capillary break material at least five inches thick and covered with a membrane vapor barrier should be placed between the floor slab and the compacted soil subgrade. The capillary break should be a free-draining material, such as 3/8" pea gravel or a permeable aggregate complying with CALTRANS Standard Specifications, Section 68, Class 1, Type A or Type B. A protective cushion of sand or capillary break material at least two inches thick should be placed between the membrane vapor barrier and the floor slab.

If floor dampness is not objectionable, concrete slabs may be constructed directly on a minimum six-inch thick compacted aggregate base over the water-conditioned and compacted soil subgrade. The aggregate base material should be compacted to at least 93 percent of the maximum dry density as determined by ASTM Test Method D1557-91.

### **Retaining Walls**

The retaining walls should be designed using at-rest lateral pressures. The following parameters may be used in the design calculations for the reinforced concrete retaining walls.

1. The average bulk density of material placed on the backfill side of the wall will be 120 pcf.
2. The vertical plane extending down from the ground surface to the bottom of the heel of the wall will be subject to pressure that increases linearly with depth as follows.

<u>Condition</u>	<u>Slope Behind Wall (degrees)</u>	<u>Design Pressure</u>
Active, drained	0	45 pcf
At-rest, drained	0	55 pcf
Short-term, active, drained	0	50 pcf

The above values are for non-seismic conditions.

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Project 1678

3. The effects of earthquakes may be simulated by applying a horizontal line load surcharge to the stem of the wall at a rate of  $10H^2$  lb/horizontal foot of wall, where H is the height of the surface of the backfill above the base of the wall. This surcharge should be applied at a height of 0.6H above the base of the wall. The seismic surcharge load may not be applied to retaining walls that are outside of the proposed buildings.
4. A coefficient of "friction" of 0.35 may be used to calculate the ultimate resistance to horizontal sliding of the wall base over the ground beneath the base.
5. An equivalent fluid pressure of 300 psf/ft may be used to calculate the ultimate passive resistance to lateral movement of the ground in front of the toe of the wall and in front of any "key" beneath the toe or stem of the wall.
6. 2500 psf may be used as the maximum allowable bearing pressure for the ground beneath the toe of the wall. This value is for non-seismic conditions and may be increased to 3325 psf when considering additional loads on the wall resulting from earthquakes.

A zone of drainage material at least 12 inches wide should be placed on the backfill side of walls designed for drained condition. This zone should extend up the back of the wall to about 18 inches down from the proposed ground surface above. The upper 12 inches or so of material above the drainage material should consist of native, clayey soil.

The drainage material and the clayey soil cap should be placed in layers about six inches thick and moderately compacted by hand-operated equipment to eliminate voids and to minimize post-construction settlement. Heavy compaction should not be applied; otherwise, the design pressure on the wall may be exceeded.

The drainage material should consist of either Class 2 Permeable Material complying with Section 68 of the CALTRANS Standard Specifications, latest edition, or 3/4 to 1 1/2 inch clean, durable coarse aggregate. If the coarse aggregate is chosen as the drainage material, it should be separated from all adjacent soil by a filter fabric approved by the project Engineer.

Any water that may accumulate in the drainage material should be collected and discharged by a 4-inch-diameter, perforated pipe placed "holes down" near the bottom of the drainage material. The perforated pipe should have holes no larger than 1/4-inch diameter.

### **Surface Drainage**

Surface drainage gradients should be planned to prevent ponding and to promote drainage of surface water away from top of slopes, building foundations, slabs, edges of pavements and sidewalks, and toward suitable collection and discharge facilities.

December 16, 2009  
Project 1678

Water seepage or the spread of extensive root systems into the soil subgrades of foundations, slabs, or pavements, could cause differential movements and consequent distress in these structural elements. This potential risk should be given due consideration in the design and construction of landscaping.

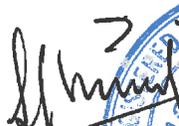
**Limitations**

The recommendations contained in this letter/report are based on certain information and data that have been provided to us. Any change in that information and data will render our recommendations invalid unless we are commissioned to review the change and to make any necessary modifications and/or additions to our recommendations.

Our recommendations have been made in accordance with the principles and practices generally employed by the geotechnical engineering profession. This is in lieu of all other warranties, express or implied.

Sincerely,

**FRIAR ASSOCIATES, INCORPORATED**

  
John H. Friar  
CE 52281  
Copies: Addressee (1)





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3 May 2010

Town of Moraga  
329 Rheem Boulevard  
Moraga, California 94556  
Attention: Richard Chamberlain

RECEIVED

MAY 5 - 2010

MORAGA PLANNING DEPT.

RE: Geologic and Geotechnical Review  
Geotechnical Report and Project Plans  
Proposed Improvements to the White Property  
32 Buckingham Drive  
Moraga, California

Dear Mr. Chamberlain:

At your request, we have completed our review of the geotechnical report and project plans for the proposed improvements to the backyard area of the White property located at 32 Buckingham Drive in Moraga, California. The geotechnical report was prepared by Friar Associate, Inc (FAI) and is titled *Report Update Geotechnical Investigation, New Retaining Wall Structure 32 Buckingham Drive, Moraga, California*. The plans for the project were prepared by ArchGraph Design (AD) and titled "The Whites Backyard Improvement, 32 Buckingham Drive, Moraga, CA 94556."

Our review of the proposed project has included the examination of the above referenced documents for pertinent information regarding the technical feasibility of the project. We have previously reviewed a geotechnical report and project plans by Peters & Ross for the existing retaining walls in the backyard area of the White property. Our review comments pertaining to the geotechnical report and project plans are contained in our letter of 1 December 2005.

### **Proposed Project**

We understand that the proposed project will consist of the construction of a new enclosed storage structure. The new structure will consist of poured in-place concrete retaining walls with a concrete slab roof. The roof will be landscaped with sod and contain a perimeter rail. A segmental block retaining wall will be constructed above the new storage structure. The level building pad for the proposed improvements will be created by excavating into the toe of the steeply inclined slope in the backyard area of the property.

### **Site Observations**

As part of our work we observed the backyard area of the White property. We noted that the storage structure was partially completed. The floor and side walls had been poured and reinforcing steel for the roof was present. We observed outcrops of sandstone bedrock at the toe of the slope adjacent to the side walls of the storage room and in the back and side cuts into the hillside. These sandstone outcrops suggest that it is likely that the entire structure is founded on competent bedrock materials.

## **REVIEW OF THE FAI REPORT AND AD PLANS**

### **FAI Report**

Our review of the FAI report indicates that it is generally complete. In our opinion, it accurately describes the site conditions and contains appropriate recommendations for the known site conditions. However, there are a few items for which we request additional information and/or clarification. These items are as follows.

- Item 1.** Page 4 of the FAI report provides the recommended geotechnical design parameters for the reinforced concrete retaining walls. The provided parameters are for level back slope conditions. As the retaining walls for the storage structure will have sloping conditions above the walls, it is recommended that geotechnical design parameters be provided for the sloping conditions above the walls. Another consideration is if restrained earth pressure may be more appropriate since the walls have been constructed and may brace each other.

The project plans indicate that a masonry retaining wall will be constructed above the rear retaining wall of the storage structure. The FAI report does not provide geotechnical design parameters for retaining walls constructed in a tiered or "stacked" condition. It is recommended that FAI provide geotechnical design parameters for "stacked" retaining walls.

- Item 2.** It is recommended that FAI review the project plans by AD and the structural calculations for the proposed improvements for conformance with the recommendations of their geotechnical report. This review should be documented in writing.

### **AD Plans**

- Item 3.** The AD plans do not specifically reference the geotechnical report by FAI and it is not clear if recommendations contained in the FAI report was used to design the project. General Note "B. FOUNDATIONS" indicates that a geotechnical report was not prepared for this site. However, detail 18 on Sheet Sd1 references a geotechnical report for the project. This apparent conflict should be resolved and the plans revised accordingly.

It is also recommended that the project geotechnical report be referenced on the project plans and that the proposed improvements be designed in conformance with the recommendations of the FAI report.

- Item 4.** Page 5 and 6 contain recommendations for surface and subsurface drainage. Our review of the plans indicates that all of these recommendations are not fully incorporated in the project plans. It is recommended that the plans be revised to be in conformance with the FAI report. The plans should show all surface and subsurface drainage facilities, the slope of the subdrain pipes and surface drainage ditches, and the discharge locations of these facilities.

- Item 5.** Sheet SN. Note 1 in Section C. Concrete refers to cast-in-place concrete piers. Our review of the project plans indicates that piers will not be used at the site and the FAI report does not contain recommendations for concrete piers. It is recommended that the note be revised to omit references to concrete piers.
- Item 6.** Review of the plans indicates that elevations and/or relative elevations are not shown on the plan sheets. It is recommended that the plans be revised to show elevations and/or relative elevations of the proposed improvements.
- Item 7.** The information shown on Section A-A on Sheet S4 conflicts with the information shown on Details 3 and 6 on Sheet SD1. Specifically, the footings and the connection between the masonry wall and the 12 inch thick roof slab are different. It is recommended that the discrepancy between the details be cleared up.
- Item 8.** The under slab measures for Concrete Slabs-on-Grade provided on page 4 of the FAI report do not appear to have been incorporated into the details shown on Sheet SD1. It is recommended that the conflict between the FAI report and the project plans be corrected.
- Item 9.** Sheet S1 shows a 37 percent slope above the location of the proposed storage facility. This conflicts with the slope shown above the masonry retaining wall in Detail 6 of Sheet SD1. It is recommended that this discrepancy be corrected and that the retaining walls be designed for the actual site conditions.

### CLOSURE

This review has been performed by request of the Town of Moraga. Our role has been to provide technical advice to assist the Town in its discretionary permit decisions, and we are afforded the same protection under state law. Our services have been limited to the review of the documents listed above and a visual review of the property. We have no control over the future construction on this property and make no representations regarding its future conditions.

We trust this report provides you with the information you require. We appreciate the opportunity to be of service to you. If you have any questions, please feel free to give us a call. We have employed accepted geotechnical engineering and engineering geologic procedures, and our professional opinions and conclusions are made in accordance with generally accepted geotechnical engineering and engineering geology principles and practices. This standard is in lieu of all warranties, either expressed or implied.

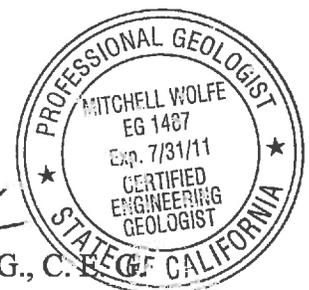
Yours truly,

CAL ENGINEERING & GEOLOGY, INC.

  
Mark Myers, P.E., G.E.  
Senior Engineer



  
Mitchell Wolfe, P.G., C.E.  
Principal Geologist



**Friar Associates, Incorporated . Engineers . Consultants**  
**Soils . Foundations . Geology . Geotechnology**

2656 Nicholson Street, San Leandro, CA 94577  
Tel: (510) 351-3930 Fax: (510) 351-1020

May 25, 2010  
Project 1678

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JUN 2 2010

**MORAGA PLANNING DEPT.**

Mr. Robert White  
32 Buckingham Drive  
Moraga, CA 94556

Dear Mr. White:

Response To Comments  
New Retaining Wall Structure  
32 Buckingham Drive  
Moraga, California

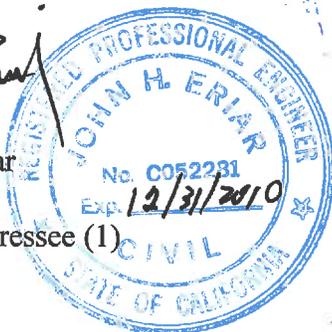
We are submitting this letter in response to the May 3, 2010 letter prepared by Cal Engineering & Geology, the consultants to the Town of Moraga with regards to the backyard retaining wall at the subject residence. The residence is located on the south side of Buckingham Drive, a short distance east of the intersection of Buckingham Drive with Moraga Way in Moraga, California.

To account for sloping background behind any retaining wall an active lateral pressure of 60 pounds per cubic foot equivalent fluid pressure may be assumed for the design of retaining walls (reinforced concrete, masonry and "stack" walls). The parameters provided in our report update letter dated December 116, 2009, may also be used for the design of all retaining walls with level backfill. Other parameters provided in the referenced report update letter may also be used in the design of any retaining wall.

Sincerely,

**FRIAR ASSOCIATES, INCORPORATED**

  
John H. Friar  
CE 52281  
Copies: Addressee (1)



Title :  
Dsgnr:  
Description :

Job #  
Date: 7:52PM, 27 MAY 10

CI

Scope :

Rev: 560100  
User: KW-0604948, Ver 5.6.1, 25-Oct-2002  
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## Restrained Retaining Wall Design

Page 1

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**Description** Basement Wall 8'-0" Max. Height

Criteria	Soil Data	Footing Strengths & Dimensions
Retained Height = 13.00 ft	Allow Soil Bearing = 2,500.0 psf	f'c = 2,500 psi Fy = 60,000 psi
Wall height above soil = 0.50 ft	Equivalent Fluid Pressure Method	Min. As % = 0.0018
Total Wall Height = 13.50 ft	Heel Active Pressure = 60.0	Toe Width = 3.50 ft
	Toe Active Pressure = 60.0	Heel Width = 0.67
Top Support Height = 8.00 ft	Passive Pressure = 300.0	Total Footing Width = 4.17
	Water height over heel = 0.0 ft	Footing Thickness = 12.00 in
Slope Behind Wall = 1.30 : 1	Footing  Soil Friction = 0.350	Key Width = 0.00 in
Height of Soil over Toe = 0.00 in	Soil height to ignore for passive pressure = 12.00 in	Key Depth = 0.00 in
Soil Density = 110.00 pcf		Key Distance from Toe = 0.00 ft
Wind on Stem = 0.0 psf		Cover @ Top = 3.00 in @ Btm. = 3.00 in

Design Summary	Concrete Stem Construction
Total Bearing Load = 1,909 lbs	Thickness = 8.00 in Fy = 60,000 psi
...resultant ecc. = 9.68 in	Wall Weight = 96.7 pcf f'c = 2,500 psi
Soil Pressure @ Toe = 997 psf OK	Stem is FIXED to top of footing
Soil Pressure @ Heel = 0 psf OK	
Allowable = 2,500 psf	
Soil Pressure Less Than Allowable	
ACI Factored @ Toe = 1,395 psf	
ACI Factored @ Heel = 0 psf	
Footing Shear @ Toe = 18.8 psi OK	
Footing Shear @ Heel = 0.0 psi OK	
Allowable = 85.0 psi	
Reaction at Top = 2,268.4 lbs	
Reaction at Bottom = 3,611.6 lbs	

**Sliding Calcs** Slab Resists All Sliding !  
Lateral Sliding Force = 3,611.6 lbs

Footing Design Results		
	Toe	Heel
Factored Pressure =	1,395	0 psf
Mu' : Upward =	0	0 ft-#
Mu' : Downward =	0	0 ft-#
Mu: Design =	997	0 ft-#
Actual 1-Way Shear =	18.80	0.00 psi
Allow 1-Way Shear =	85.00	0.00 psi

	@ Top Support	Mmax Between Top & Base	@ Base of Wall
Design height =	8.00 ft	4.31 ft	0.00 ft
Rebar Size =	# 6	# 6	# 6
Rebar Spacing =	12.00 in	12.00 in	12.00 in
Rebar Placed at =	Center	Center	Center
Rebar Depth 'd' =	4.00 in	4.00 in	4.00 in
Design Data			
fb/FB + fa/Fa =	0.308	0.446	0.943
Mu....Actual =	2,125.0 ft-#	3,073.5 ft-#	6,499.2 ft-#
Mn * Phi....Allowable =	6,892.0 ft-#	6,892.0 ft-#	6,892.0 ft-#
Shear Force @ this height =	0.0 lbs		4,762.8 lbs
Shear....Actual =	0.00 psi		99.22 psi
Shear....Allowable =	85.00 psi		85.00 psi
Rebar Lap Required =	28.08 in	28.08 in	
Rebar embedment into footing =			6.00 in

**Other Acceptable Sizes & Spacings:**

Toe: # 5 @ 12.00 in -or- Not req'd, Mu < S \* Fr  
Heel: # 5 @ 12.00 in -or- Not req'd, Mu < S \* Fr  
Key: No key defined -or- No key defined

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JUN 2 2010

MORAGA PLANNING DEPT.



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## Restrained Retaining Wall Design

Page 2  
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Description      Basement Wall 8'-0" Max. Height

### Summary of Forces on Footing : Slab RESISTS sliding, stem is FIXED at footing

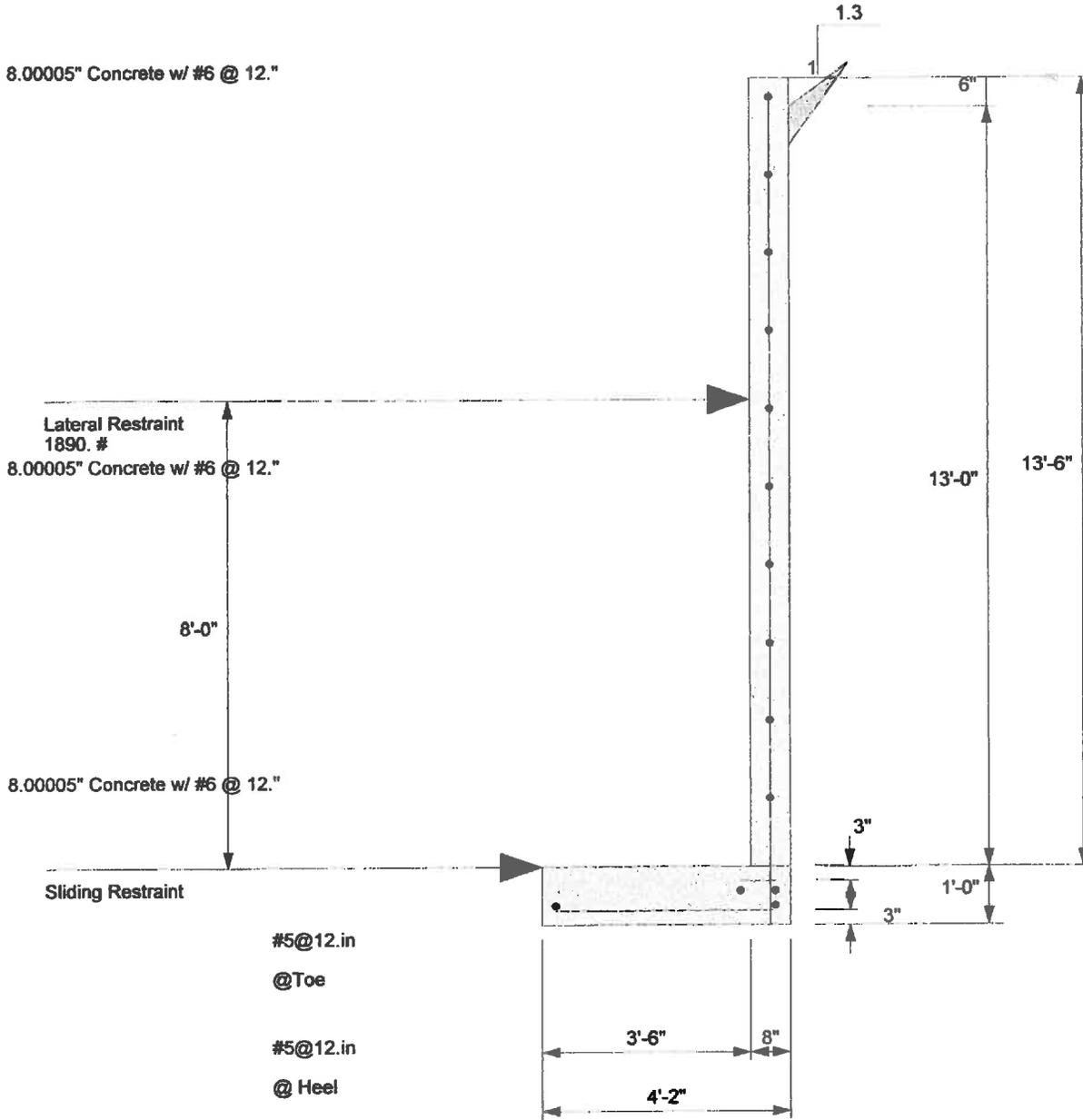
Forces acting on footing for soil pressure

>>> Sliding Forces are restrained by the adjacent slab

#### Load & Moment Summary For Footing : For Soil Pressure Calcs

Moment @ Top of Footing Applied from Stem	=		=	-3,823.1 ft-#
Surcharge Over Heel	=	lbs	ft	ft-#
Axial Dead Load on Stem	=	lbs	ft	ft-#
Soil Over Toe	=	lbs	ft	ft-#
Surcharge Over Toe	=	lbs	ft	ft-#
Stem Weight	=	1,305.0 lbs	3.83 ft	5,002.5 ft-#
Soil Over Heel	=	lbs	4.17 ft	ft-#
Footing Weight	=	604.2 lbs	2.08 ft	1,258.7 ft-#
Total Vertical Force	=	1,909.2 lbs	Base Moment =	2,438.1 ft-#

Soil Pressure Resulting Moment =                      1,539.3ft-#



## Cantilevered Retaining Wall Design

**Description** High Retaining Wall 4'-0" Max. Heigh Sliding resisted by Concrete Slab

### Criteria

Retained Height	=	4.00 ft
Wall height above soil	=	0.50 ft
Slope Behind Wall	=	1.25 : 1
Height of Soil over Toe	=	0.00 in
Soil Density	=	110.00 pcf
Wind on Stem	=	0.0 psf

### Soil Data

Allow Soil Bearing	=	2,500.0 psf
Equivalent Fluid Pressure Method		
Heel Active Pressure	=	60.0
Toe Active Pressure	=	60.0
Passive Pressure	=	300.0
Water height over heel	=	0.0 ft
Footing  Soil Friction	=	0.350
Soil height to ignore for passive pressure	=	0.00 in

### Footing Strengths & Dimensions

f <sub>c</sub>	=	2,500 psi	F <sub>y</sub>	=	60,000 psi
Min. As %	=			=	0.0018
Toe Width	=	2.00 ft			
Heel Width	=	1.00			
Total Footing Width	=	3.00			
Footing Thickness	=	12.00 in			
Key Width	=	0.00 in			
Key Depth	=	0.00 in			
Key Distance from Toe	=	0.00 ft			
Cover @ Top	=	3.00 in	@ Btm.	=	3.00 in

### Design Summary

Total Bearing Load	=	1,645 lbs
...resultant ecc.	=	0.39 in
Soil Pressure @ Toe	=	512 psf OK
Soil Pressure @ Heel	=	584 psf OK
Allowable	=	2,500 psf
Soil Pressure Less Than Allowable		
ACI Factored @ Toe	=	427 psf
ACI Factored @ Heel	=	487 psf
Footing Shear @ Toe	=	4.6 psi OK
Footing Shear @ Heel	=	13.8 psi OK
Allowable	=	85.0 psi
Wall Stability Ratios		
Overturning	=	2.73 OK
Sliding	=	0.87 UNSTABLE!
Sliding Calcs (Vertical Component Used)		
Lateral Sliding Force	=	832.1 lbs
less 100% Passive Force	=	- 150.0 lbs
less 100% Friction Force	=	- 575.6 lbs
Added Force Req'd	=	106.5 lbs NG
...for 1.5 : 1 Stability	=	522.6 lbs NG

### Stem Construction

Design height	ft =	0.00	Stem OK
Wall Material Above "Ht"	=	Masonry	
Thickness	=	8.00	
Rebar Size	=	# 5	
Rebar Spacing	=	8.00	
Rebar Placed at	=	Edge	
Design Data			
fb/FB + fa/Fa	=	0.486	
Total Force @ Section	lbs =	480.0	
Moment....Actual	ft-# =	640.0	
Moment....Allowable	=	1,317.2	
Shear....Actual	psi =	8.9	
Shear....Allowable	psi =	19.4	
Bar Develop ABOVE Ht.	in =	30.00	
Bar Lap/Hook BELOW Ht.	in =	6.00	
Wall Weight	=	84.0	
Rebar Depth 'd'	in =	5.25	

### Top Stem

Masonry Data			
f <sub>m</sub>	psi =	1,500	
F <sub>s</sub>	psi =	24,000	
Solid Grouting	=	Yes	
Special Inspection	=	No	
Modular Ratio 'n'	=	25.78	
Short Term Factor	=	1.000	
Equiv. Solid Thick.	in =	7.60	
Masonry Block Type	=	Normal Weight	

### Footing Design Results

	Toe	Heel
Factored Pressure	= 427	487 psf
Mu' : Upward	= 1,036	0 ft-#
Mu' : Downward	= 493	482 ft-#
Mu: Design	= 544	482 ft-#
Actual 1-Way Shear	= 4.65	13.85 psi
Allow 1-Way Shear	= 85.00	85.00 psi
Toe Reinforcing	= # 5 @ 12.00 in	
Heel Reinforcing	= # 5 @ 12.00 in	
Key Reinforcing	= None Spec'd	

Concrete Data		
f <sub>c</sub>	psi =	
F <sub>y</sub>	psi =	
Other Acceptable Sizes & Spacings		
Toe: Not req'd, Mu < S * Fr		
Heel: Not req'd, Mu < S * Fr		
Key: No key defined		

Title :  
 Dsgnr:  
 Description :

Job #  
 Date: 7:59PM, 27 MAY 10

C5

Scope :

Rev: 560100  
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### Cantilevered Retaining Wall Design

Page 2  
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**Description** High Retaining Wall 4'-0" Max. Heigh Sliding resisted by Concrete Slab

#### Summary of Overturning & Resisting Forces & Moments

Item	.....OVERTURNING.....			.....RESISTING.....			
	Force lbs	Distance ft	Moment ft-#	Force lbs	Distance ft	Moment ft-#	
Heel Active Pressure =	832.1	1.76	1,460.9	Soil Over Heel =	146.7	2.83	415.6
Toe Active Pressure =				Sloped Soil Over Heel =	4.9	2.89	14.1
Surcharge Over Toe =				Surcharge Over Heel =			
Adjacent Footing Load =				Adjacent Footing Load =			
Added Lateral Load =				Axial Dead Load on Stem =		0.00	
Load @ Stem Above Soil =				Soil Over Toe =			
SeismicLoad =				Surcharge Over Toe =			
				Stem Weight(s) =	378.0	2.33	882.0
<b>Total =</b>	<b>832.1</b>	<b>O.T.M. =</b>	<b>1,460.9</b>	Earth @ Stem Transitions =			
<b>Resisting/Overturning Ratio =</b>			<b>2.73</b>	Footing Weight =	450.0	1.50	675.0
Vertical Loads used for Soil Pressure =	1,644.5	lbs		Key Weight =			
Vertical component of active pressure used for soil pressure				Vert. Component =	665.0	3.00	1,994.9
				<b>Total =</b>	<b>1,644.5</b>	<b>lbs R.M. =</b>	<b>3,981.6</b>





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14 June 2010

Town of Moraga  
329 Rheem Boulevard  
Moraga, California 94556  
Attention: Richard Chamberlain

RE: Second Geologic and Geotechnical Review  
Geotechnical Report and Project Plans  
Proposed Improvements to the White Property  
32 Buckingham Drive  
Moraga, California

Dear Mr. Chamberlain:

At your request, we completed a review of the geotechnical report and project plans for the proposed improvements to the backyard area of the White property located at 32 Buckingham Drive in Moraga, California. Our review letter was titled, *Geologic and Geotechnical Review, Geotechnical Report and Project Plans, Proposed Improvements to the White Property, 32 Buckingham Drive, Moraga, California* and dated 3 May 2010.

Following the receipt of our comments, the White's consultant, Friar Associates, Incorporated prepared and submitted the following additional documents which were received by the Town of Moraga Planning Department on 2 June 2010:

- Letter titled, *Response to Comments, New Retaining Wall Structure 32 Buckingham Drive, Moraga, California*, dated May 25, 2010;
- Two retaining wall calculations prepared and stamped by John Friar dated 27 May 2010; and
- Revised plan sheets with a revision date of 25 May 2010. The plans for the project were prepared by ArchGraph Design (AD) and titled "The Whites Backyard Improvement, 32 Buckingham Drive, Moraga, CA 94556."

Our review at this time has been to determine if the responses address the comments contained in our 3 May 2010 letter. Previous work completed by Cal Engineering & Geology on behalf of the Town of Moraga has included review of the last submittal and review of a geotechnical report and project plans by Peters & Ross for the existing retaining walls in the backyard area of the White property. Our review comments pertaining to the geotechnical report and project plans are contained in our letter of 1 December 2005.

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**REVIEW OF FAI LETTER, CALCULATIONS, AND REVISED PLANS**

Our 3 May 2010 review of the FAI report indicated that it was generally complete. We did, however, have 9 items for which we requested additional information and/or clarification. On 2 June 2010, the Town received a submittal intended to address the item included in our review letter. The submittals provided do adequately address the comments of our letter. To assist the Town, we have included our original comments and a description of the changes made to address the comments.

***Item 1.***

*Page 4 of the FAI report provides the recommended geotechnical design parameters for the reinforced concrete retaining walls. The provided parameters are for level back slope conditions. As the retaining walls for the storage structure will have sloping conditions above the walls, it is recommended that geotechnical design parameters be provided for the sloping conditions above the walls. Another consideration is if restrained earth pressure may be more appropriate since the walls have been constructed and may brace each other.*

*The project plans indicate that a masonry retaining wall will be constructed above the rear retaining wall of the storage structure. The FAI report does not provide geotechnical design parameters for retaining walls constructed in a tiered or "stacked" condition. It is recommended that FAI provide geotechnical design parameters for "stacked" retaining walls.*

**Item 1 Status:**

**Satisfied.** The May 25, 2010 FAI letter recommends using an active equivalent fluid pressure of 60 pcf and includes calculations signed by the geotechnical consultant.

***Item 2.***

*It is recommended that FAI review the project plans by AD and the structural calculations for the proposed improvements for conformance with the recommendations of their geotechnical report. This review should be documented in writing.*

**Item 2 Status:**

**Satisfied.** The May 25, 2010 FAI letter recommends using an active equivalent fluid pressure of 60 pcf and includes calculations signed by the geotechnical consultant.

**AD Plans**

***Item 3.***

*The AD plans do not specifically reference the geotechnical report by FAI and it is not clear if recommendations contained in the FAI report was used to design the project. General Note "B. FOUNDATIONS" indicates that a geotechnical report was not prepared for this site. However, detail 18 on Sheet Sd1 references a geotechnical report for the project. This apparent conflict should be resolved and the plans revised accordingly.*

*It is also recommended that the project geotechnical report be referenced on the project plans and that the proposed improvements be designed in conformance with the recommendations of the FAI report.*

**Item 3 Status:** **Satisfied.** The May 25, 2010 plans now reference the geotechnical update report prepared by FAI.

**Item 4.** *Page 5 and 6 contain recommendations for surface and subsurface drainage. Our review of the plans indicates that all of these recommendations are not fully incorporated in the project plans. It is recommended that the plans be revised to be in conformance with the FAI report. The plans should show all surface and subsurface drainage facilities, the slope of the subdrain pipes and surface drainage ditches, and the discharge locations of these facilities.*

**Item 4 Status:** **Satisfied.** The May 25, 2010 plans show the retaining wall drains to be tied into the drain system of the existing walls to remain which about the new construction. Surface drainage is shown to flow around the new improvements.

**Item 5.** *Sheet SN. Note 1 in Section C. Concrete refers to cast-in-place concrete piers. Our review of the project plans indicates that piers will not be used at the site and the FAI report does not contain recommendations for concrete piers. It is recommended that the note be revised to omit references to concrete piers.*

**Item 5 Status:** **Satisfied.** The note referring to piers has been removed on the plans dated May 25, 2010.

**Item 6.** *Review of the plans indicates that elevations and/or relative elevations are not shown on the plan sheets. It is recommended that the plans be revised to show elevations and/or relative elevations of the proposed improvements.*

**Item 6 Status:** **Satisfied.** Sheet S3 of the May 25, 2010 plans include relative elevations.

**Item 7.** *The information shown on Section A-A on Sheet S4 conflicts with the information shown on Details 3 and 6 on Sheet SDI. Specifically, the footings and the connection between the masonry wall and the 12 inch thick roof slab are different. It is recommended that the discrepancy between the details be cleared up.*

**Item 7 Status:** **Satisfied.** The May 25, 2010 plans show the masonry wall to be founded on the concrete slab. There is still a small discrepancy in the bottom footing where Section A-A shows a slight heel but the details (1 and 3 on SD1) do not show the heel. The revised calculations do not appear to require the heel. We are considering the comment satisfied since the presence of a heel would not have a negative consequence on the retaining wall.

**Item 8.** *The under slab measures for Concrete Slabs-on-Grade provided on page 4 of the FAI report do not appear to have been incorporated into the details shown on Sheet SD1. It is recommended that the conflict between the FAI report and the project plans be corrected.*

**Item 8 Status:** **Satisfied.** Under slab measures have been added to the plans dated May 25, 2010.

**Item 9.** *Sheet S1 shows a 37 percent slope above the location of the proposed storage facility. This conflicts with the slope shown above the masonry retaining wall in Detail 6 of Sheet SD1. It is recommended that this discrepancy be corrected and that the retaining walls be designed for the actual site conditions.*

**Item 9 Status:** **Satisfied.** Detail 6 has been revised to reflect the 37 degree slope (1.3H:1V).

## CLOSURE

This review has been performed by request of the Town of Moraga. Our role has been to provide technical advice to assist the Town in its discretionary permit decisions, and we are afforded the same protection under state law. Our services have been limited to the review of the documents listed above and a visual review of the property. We have no control over the future construction on this property and make no representations regarding its future conditions.

We trust this report provides you with the information you require. We appreciate the opportunity to be of service to you. If you have any questions, please feel free to give us a call. We have employed accepted geotechnical engineering and engineering geologic procedures, and our professional opinions and conclusions are made in accordance with generally accepted geotechnical engineering and engineering geology principles and practices. This standard is in lieu of all warranties, either expressed or implied.

Yours truly,

CAL ENGINEERING & GEOLOGY, INC.



Mark Myers, P.E., G.E.  
Senior Engineer



Mitchell Wolfe, P.G., C. E. G.  
Principal Geologist

# **Exhibit C**

2006 Design Review Board Staff Report

# DESIGN REVIEW BOARD STAFF REPORT

**MEETING DATE:** December 12, 2005      **REPORT WRITTEN:** December 5, 2005

**ITEM NUMBER:** V.B. -- DESIGN REVIEW

**FILE NUMBER:** **DRB-29-2005 – Robert White (Applicant & Owner), 32 Buckingham Drive** Design review application and Hillside Development Permit for construction of two 5-foot high retaining walls in the rear yard behind the existing home at 32 Buckingham Drive. The lower wall will be about 15-feet behind the house and in approximate alignment with an existing 30-inch high wood retaining wall. The upper wall will be located 10-feet further into the hill behind the lower wall. A 10-foot by 25-foot patio will be located between the two retaining walls. The property is zoned 3 DUA (Three dwelling units per acre). (APN 256-203-012)

**ZONING:** Three-Dwelling Units per Acre

**CEQA STATUS:** Categorically Exempt under Guidelines Section 15303(e): Construction of small facilities or structures, including but not limited to (e): garages, carports, patios, swimming pools and fences. Grading on slopes steeper than 10% is not exempt under Section 15304 (a): however, in this case the grading took place prior to any approvals by the Town and the proposed plan under consideration is intended to mitigate the cut that was made into the hill. The Hillside Development Permit requires consideration of many of the same factors that would be otherwise discussed in an initial study.

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## APPLICATION SUMMARY:

This application requires DRB consideration because the proposed grading and retaining walls are located on an area of the parcel with a slope that is greater than 20% and a hillside development permit is required in accordance with Moraga Municipal Code Section 8.136.050 (c).

## PUBLIC NOTICE AND MAILING LIST:

As required by MMC Section 8.72.130A1, written notice of the application for design review (DRB Agenda) was mailed to all property owners and residents within three hundred (300) feet of the subject property on Thursday, December 1, 2005. A copy of the area of notice map and notice address list is attached as **EXHIBIT A**.

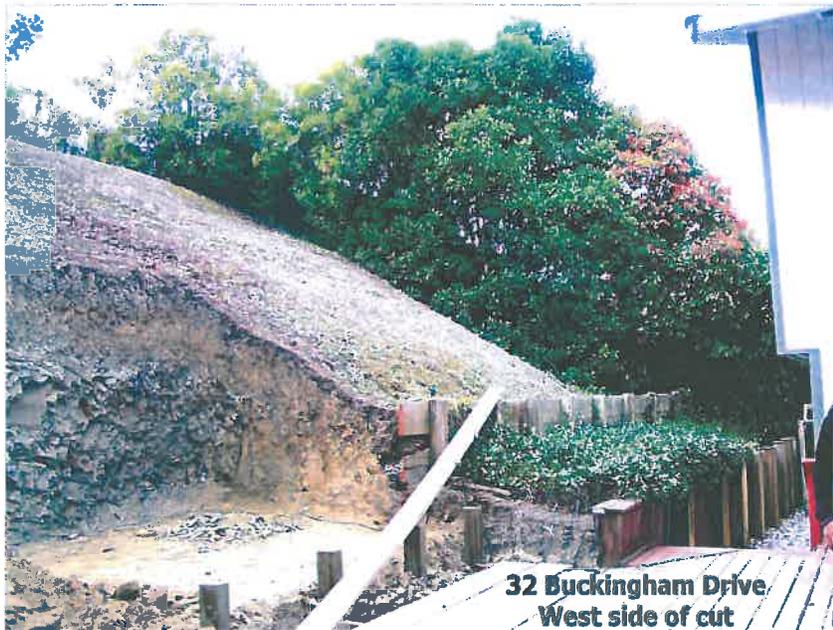
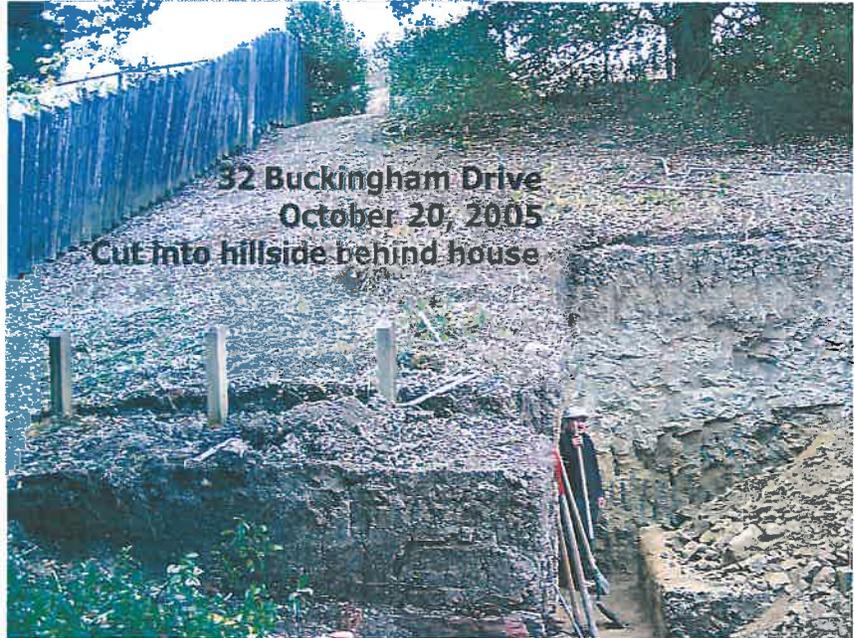
## BACKGROUND:

On October 20, 2005, staff was advised of a grading job that was underway at 32 Buckingham Drive without a permit. Upon investigation, staff found that a deep cut approximately 12-feet high had been excavated into the hill behind the existing home (see picture on page 2). On October 24, 2005 staff, including the Town Engineer, Jill Mercurio,

and Mitch Wolfe from Cal Engineering and Geology (CE&G) met with Robert White, the owner of the property, and his geotechnical consultants, Peter Mundy and Patrick Drumm, to discuss the grading situation and the procedures necessary to obtain a grading permit.

The owner explained that he was replacing a deck that had been on the hillside and had intended to extend his lower deck into the cut area. Staff advised that approval of a 12-foot high retaining wall would be a problem because of the precedent that it would establish.

Mr. White was advised that he should either backfill and restore the previous slope or consider a pair of retaining walls with a terrace in between the walls. He was also advised that he would need Design Review Board approval for walls higher than 5-feet. It was determined at the meeting that the average pre-development slope of the property was less than 25% and would not require Town Council approval. However, the slope of the hill where the cut was made exceeded 20% and required a hillside development permit. Staff was very concerned with possible slope failure and erosion, since it was the beginning of the winter storm season.



Prior to the excavation, there were two wooden retaining walls, which are shown in the photograph to the left. Staff authorized the owner to proceed with construction of a 5-foot high retaining wall at the approximate location of the previous wood wall at the toe of the slope, so that the vertical cut slope could be back-filled to a depth of 5-feet to help buttress the cut. At the meeting, the geotechnical engineers at the meeting confirmed that the hill was predominantly sandstone and the cut was not creating a significant risk of a landslide.

## **HILLSIDE DEVELOPMENT PLAN REVIEW:**

The factors to be considered under Moraga Municipal Code Section 8.136.070 for a Hillside Development Permit are listed in **EXHIBIT B** with staff discussion of each factor. In staff's opinion, the project will have no significant impacts to the factors in Section 8.136.070.

## **DESIGN ASPECTS TO BE CONSIDERED:**

Planning Commission Resolution 16-01 requires the design aspects listed below to be considered for projects in single family residential districts. The applicable design aspects are in bold italic type and are discussed in detail in **EXHIBIT C**.

1. Maximum height, lot coverage and setbacks.
2. Overall mass and bulk of structures.
- 3. *Special features of the project, such as fences, walls, and screens.***
4. Effective concealment and sound attenuation of exposed mechanical and electrical equipment.
5. Colors and materials on the exterior face of the building or structures, striving for a limited number of colors and materials for each project.
6. Avoidance of repetition of identical entities whenever possible.
7. Harmonious relationship with existing and proposed adjoining developments, avoiding both excessive variety and monotonous repetition, but allowing similarity of style, if warranted.
8. Pleasing landscaping which incorporates existing landscaping and terrain as a complement to the structure, using plants which thrive in the Moraga climate and which are large enough in size to be effective.
9. Compliance with Chapter 8.132 (scenic corridors).
- 10. *Impact on neighboring properties.***
- 11. *Impact on public safety.***
- 12. *Harmony with the general plan, design review guidelines and floor area ratio guidelines.***

## **APPLICABLE TOWN DESIGN GUIDELINES:**

The applicable design guidelines have been listed in **EXHIBIT D** with staff discussion of each guideline. In staff's opinion, the project complies with the design guidelines, even though it would have been better to have lower retaining walls if the deep cut had not already been made into the hill.

## **REQUIRED FINDINGS FOR DESIGN REVIEW APPROVAL:**

Planning Commission Resolution 16-01 lists four findings that need to be made in order for the DRB to approve an application in a single family residential zone. Staff has suggested findings for approval in a draft memorandum for Design Review Board action. To disapprove an application for design review, a finding must be made as to why one or more of the standards under PC Res. 16-01 cannot be satisfied.

**PERMIT STREAMLING ACT:**

This application was submitted on November 29, 2005. The Geotechnical Peer Review of this application was not completed until December 1, 2005. This project must be determined or deemed complete or incomplete by December 29, 2005. This application must either be approved or disapproved by the Town by May 29, 2006, unless both the Town and the applicant agree to a one time 90-day extension.

**RECOMMENDATION:**

Staff recommends approval and adoption of the draft action memorandum, which is attached as **EXHIBIT F**

Report prepared by: Richard Chamberlain, Senior Planner

**ATTACHMENTS**

- EXHIBIT A – Area of Notice Map and Notice Address List
- EXHIBIT B – Hillside Development Permit Factors under MMC Section 8.136.070
- EXHIBIT C – Design Aspects under Planning Commission Resolution 16-01
- EXHIBIT D – Applicable Design Guidelines
- EXHIBIT E – Peer Review Letter dated December 1, 2005 from CE&G
- EXHIBIT F – Draft Action Memorandum
- EXHIBIT G – Project Plans

# EXHIBIT B

## FACTORS TO BE CONSIDERED IN ACCORDANCE WITH MORAGA MUNICIPAL CODE SECTION 8.136.070 FOR A HILLSIDE DEVELOPMENT PERMIT FOR 32 BUCKINGHAM DRIVE

Moraga Municipal Code Section 8.136.070 requires the reviewing body to consider the following factors:

1. Slope

Chapter 8.136 of the Moraga Municipal Code (MMC) applies to any project with a slope of 20% or greater. The original slope of the hill (Section A-A on the site plan and section drawing) was approximately 50%. As stated previously, there were two wooden retaining walls near the bottom of the slope prior to the excavation into the hill.

2. Soil Instability

The property owner's geotechnical consultants, Peters and Ross, submitted a report on the project on November 11, 2005. The full report from Peters and Ross will be brought to the meeting. They found the hillside to have 3 to 4 feet of dark clay materials over 1 to 2 feet of weathered bedrock that is underlain by massive competent sandstone bedrock. The conclusion of their report was that the site was suitable for the construction of the segmental retaining wall and their primary concern was for the expansive soils. The Peters and Ross report was sent for peer review to Cal Engineering and Geology (CE&G) on November 15, 2005. A copy of CE&G's peer review letter is attached as **EXHIBIT E**. CE&G recommended two minor additions to the plans as follows:

1. Add the specifications for the footing concrete or for the grout for the masonry blocks for the upper retaining wall.
2. Consider increasing the length of the geogrid reinforcement for the lower wall to a minimum of 4 feet.

3. Drainage

The area of the proposed work is located in the rear yard along and just below the existing cut slope. Runoff from the hillside above the cut slope is collected by a concrete "V-ditch" that is in generally good condition. Pending completion of the work on the two retaining walls, the owner has installed plastic sheeting over the slope between the "V-ditch" and the cut into the hillside to minimize the amount of water on the slope. The additional impervious surface area from the new 10-foot by 25-foot patio to be constructed on the terrace between the two walls will need to be drained to a vegetated area prior to discharge into any storm drainage pipe. The drainage plans will require review by the Town Engineer.

4. Soil Characteristics

The Peters and Ross report states that there are a number of methods available for reducing the adverse effects of expansive soils, including deepening of foundations to develop support below the zone of significant seasonal moisture change and providing drainage and landscaping to minimize seasonal moisture fluctuations in the top soil. They also recommended drilled pier foundations be used to support the proposed wall. It is

presumed that this recommendation applies only to the rear masonry wall and not the segmental wall lower down the slope. They also recommend that the backfilling will be with aggregate base materials compacted to at least 90% relative compaction.

5. Seismic Factors

The site is not located within an Earthquake Fault Zone as established by the State for active faults. However, the site is located about 8 km northeast of the Hayward fault. In addition, the site is also about 8 km west northwest of the Calaveras fault and about 13.5 km southwest of the Concord-Green Valley fault. Each of these faults are capable of producing earthquakes that would cause moderate to strong ground shaking at the subject site. The structural calculations for the retaining walls was included in Appendix A of the Peters and Ross report.

6. Existing and Future Residential Development

The subject parcel is surrounded on the east, west and north sides by single-family residential development and is zoned Three Dwelling Units per Acre (3-DUA). Current site development standards indicate that no more than one residence can be developed on the subject parcel. The property on the south side above the cut into the hill is zoned OS-M (Open Space – MOSO). Future development of the open space parcel would be restricted in areas where the average slope exceeds a 20% slope, therefore development in close proximity to the property at 32 Buckingham Drive is not very likely.

7. View Shed

This project at 32 Buckingham Drive is located at the toe of an existing slope and will not affect any views that are presently available to other residences along Buckingham Drive or from any other residences in the vicinity. The proposed cut is in the center of the lot behind the existing house and cannot be seen from the street at all.

8. Noise

The noise generated by the project will be short-term in nature. Short-term impacts are due to noise generated by equipment during the construction. Construction activities are not expected to result in noise levels exceeding the Town's standards. The Town's Noise Ordinance limits construction activities to between the hours of 8:00 a.m. and 5:00 p.m.

9. Potential traffic congestion

This project will not impact traffic in the area.

10. Fire risk

This project will pose no additional fire risk.

11. Wildlife

The existing excavation into the hill did not require the removal of any mature native trees, dense scrub or well-developed riparian habitat, which typically provide important cover for wildlife. There is a large oak tree further up the hill in the back yard of this parcel, but it is not impacted by the proposed retaining walls.

12. Dust

The excavation was previously done. There could be some additional dust when the backfilling of the lower 5-foot segmental wall is done. Dust emissions would vary depending on the level of activity, the type of construction activity and weather conditions. The closest sensitive receptors for air pollutants are the residences on the east and west

sides, adjacent to the project site. Construction dust impacts can be mitigated through appropriate dust control practices and through compliance with the Town's standard construction conditions.

13. Glare

This project will have no affect on glare, since the retaining walls cannot be seen from off-site and the concrete block construction is not a highly reflective material.

14. Impact on Existing Vegetation

This project will not have a significant impact on existing vegetation.

15. Additional factors to be considered by the Town in reviewing a Hillside Development Permit include the following:

a. Minimum Lot Area

MMC Section 8.136.060 states that the minimum lot area shall not be less than that prescribed by the General Plan. However, the required lot areas may be increased above the minimum when the reviewing body finds that it is necessary to do so because of the slope in order to assure that there will be a suitable building site for the approved type of residential building. In determining whether it is necessary to increase the lot area required above the minimum prescribed by the General Plan, the reviewing body shall apply the standards set forth in Section 8.136.070. As a rule, larger lots should be on steeper slopes and smaller lots should be on flatter land.

*Comment: This is an existing lot and the construction of the two retaining walls will not change the density of development on the property.*

b. Appropriate Living Space

MMC Section 8.136.070 B requires that the site plan shall provide an appropriate living space consistent with the site's constraints.

*Comment: The proposed retaining walls and new 10-foot by 25-foot patio will increase the outdoor living space on the site. The existing interior living space will not be changed.*

c. Location of Building Sites Adjacent to Steep Slopes

MMC Section 8.136.070 C requires a building site, which is on a steep slope, to be located at the lowest possible elevation on the site. MMC Section 8.136.070 D, requires residential development adjacent to a steep downslope to be designed so that the principal and accessory structures blend with the topography.

*Comment: This existing home is located at the lowest possible elevation on the site and will not be changed as a result of the proposed retaining walls. The home is not adjacent to a steep downslope and is developed upon a graded pad at the toe of the hill. The proposed patio is on a terrace above the primary building pad in order to minimize the height of the retaining walls and step the "development" up the hill.*

d. Additional Restrictions or Requirements

MMC Section 8.136.08 states that the Planning Commission may impose additional restrictions on a parcel of hillside land if it finds that the parcel requires protection because of its prominence and location or determines that there may be exceptional hazards to its development. These additional restrictions or requirements must be consistent with the purposes of the Zoning Ordinance. The Design Review Board should consider the concerns of affected neighbors and add any additional restrictions or requirements consistent with the purposes of the Zoning Ordinance.

# Town of Moraga

PLANNING DEPARTMENT  
2100 Donald Drive  
MORAGA, CA 94566

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## DESIGN REVIEW BOARD ACTION MEMORANDUM

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On January 9, 2006 the Town of Moraga Design Review Board considered the application described below:

**DRB-29-2005 – Robert White (Applicant & Owner), 32 Buckingham Drive** Design review application and Hillside Development Permit for construction of two 5-foot high retaining walls in the rear yard behind the existing home at 32 Buckingham Drive. The lower wall will be about 15-feet behind the house and in approximate alignment with an existing 30-inch high wood retaining wall. The upper wall will be located 10-feet further into the hill behind the lower wall. A 10-foot by 25-foot patio will be located between the two retaining walls. The property is zoned 3 DUA (Three dwelling units per acre). (APN 256-203-012)

### DESIGN REVIEW BOARD ACTION:

DESIGN REVIEW BOARD APPROVAL is hereby granted in accordance with the following findings required by Planning Commission Resolution 16-01, and subject to the conditions listed below:

#### **Findings:**

1. The proposed improvement conforms to good design as set forth in the Town of Moraga Design Guidelines, and in general contributes to the character and image of the town as a place of beauty, spaciousness, balance, taste, fitness, broad vistas, and high quality for the following reasons:
  - a. The new 5-foot high retaining walls will create a terrace on the slope behind the existing home to provide more useable exterior space in the rear yard, but will not substantially decrease the amount of natural hillside behind the home.
  - b. Although the grading and retaining walls are a departure from the natural topography of the slope, the project is well hidden behind the home and will not alter the view or character of the hillside as seen from neighboring properties.
  - c. The retaining wall heights comply with the Moraga Design Guidelines.
2. The proposed improvement will not have a substantial adverse affect on neighboring properties or the community due to poor planning; neglect of proper design standards; or the existence of building and structures unsuitable to and incompatible with the character of the neighborhood and the character of the community because the

proposed retaining walls and patio are behind the home and cannot be seen from neighboring properties.

3. The proposed improvement will not lower property values; discourage the maintenance and improvement of surrounding properties; or preclude the most appropriate development of other properties in the vicinity because the improvement will have no visual or economic impact on the adjacent homes.
4. The proposed retaining walls will not impair the public health, safety or welfare because they have been designed in accordance with the specification in a site specific Geotechnical Report, which has been reviewed by the Town's Geotechnical Peer Review consultant and the structural design of the retaining walls will be reviewed by the County Building Department and will be built in accordance with the California Building Code and should have no adverse health or safety impacts on the community.

**Conditions:**

1. The plans submitted for a building permit for the retaining walls and patio shall be substantially in accordance with the plans approved by the Design Review Board on December 12, 2005 and stamped "Approved by Town of Moraga", except that handrails may be required by the Building Department on top of the retaining walls. The maximum height of the guardrails and retaining walls shall not exceed 8-feet in total height.
2. The construction of the retaining walls shall follow the recommendations in the Peters and Ross geotechnical report dated November 10, 2005 with the additional recommendations from Cal Engineering and Geology dated December 1, 2005 as follows:
  1. Add the specifications for the footing concrete or for the grout for the masonry blocks for the upper retaining wall.
  2. Consider increasing the length of the geogrid reinforcement for the lower wall to a minimum of 4 feet.
3. The additional impervious surface area from the new 10-foot by 25-foot patio to be constructed on the terrace between the two walls shall be drained to a vegetated area prior to discharge into any storm drainage pipe. The drainage plans shall be submitted to the Town Engineer for review and approval prior to release of the building permit.
4. The hours of construction shall be from 8:00 a.m. to 5:00 p.m. in accordance with the Town of Moraga Noise Ordinance. Although work is not prohibited on weekends, it would be appreciated by your neighbors if you schedule loud construction activities, such as jack hammers or other equipment using compressed air, to weekdays.

5. Any additional grading or excavation necessary to construct the retaining walls shall be conducted under the direct supervision of the project Geotechnical Engineer.
6. Since the work will be completed during the winter storm season (October 15 to April 15), an Erosion Control Plan shall be submitted for the project site in accordance with Moraga's Storm Water Management Plan. The Erosion Control Plan is subject to review and approval by the Town Engineer, prior to the issuance of the building permit.
7. Erosion control facilities must be maintained after every storm and as needed in between storms, and replaced whenever necessary. Any sediment reaching detention basins or settlement ponds shall be periodically cleaned out to avoid spilling over into catch basins and storm drains. The erosion control measures shall be inspected periodically throughout the winter by the Town.
8. All disturbed areas shall be replanted with plants and groundcovers and protected from both wind and water erosion upon completion of the grading for the project.
9. The applicant and their contractors shall be responsible for preventing spills of any debris or construction materials on Town streets. If any spills of debris occur, then the applicant will be held responsible for the immediate cleanup of the spill and repair of any damage that may have been done to the street. The correction of the problem shall be made to the satisfaction of the Town Engineer.
10. If there is no appeal, Design Review Board approval will be valid for one year from the date of approval. You must obtain a building permit for construction of your project within one year or you may request an extension of design review approval for one additional year. The request must be in writing to the Planning Director and should show good cause as to why the design approval should be extended.

Design Review Board Action can be appealed to the Planning Commission within 10 calendar days after the date of the decision. If you have any questions regarding the action of the Board, please contact the Moraga Planning Department at (925) 376-5200.

# **Exhibit D**

Hillside Development Permit Consideration

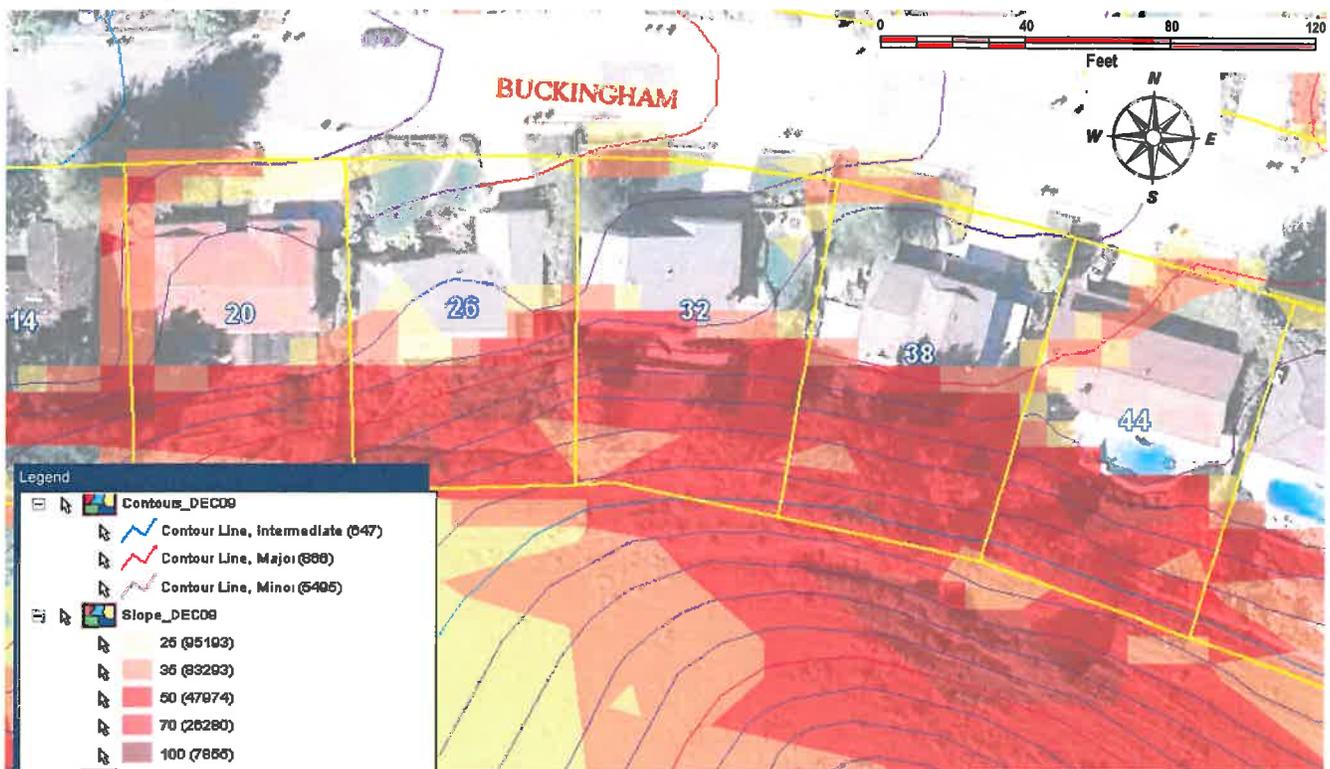
# EXHIBIT D

## FACTORS TO BE CONSIDERED IN ACCORDANCE WITH MORAGA MUNICIPAL CODE SECTION 8.136.070 FOR A HILLSIDE DEVELOPMENT PERMIT FOR 32 BUCKINGHAM DRIVE

### 1. Slope

Chapter 8.136 of the Moraga Municipal Code (MMC) applies to any project with a slope of 20% or greater. The average slope of the hill above the home at 32 Buckingham Drive is between 35% and 50% as shown on the GIS Aerial Photo and topography map below:

Slope Map in vicinity of 32 Buckingham Drive



The average slope in the area for the excavation of the retaining wall and proposed storage building was calculated as 37% by the assistant Town Engineer. A hillside development permit would be required in any case because MMC Section 8.136.020-A-1 does not specify an “average” slope and most of the hillside is over a 20% slope.

### 2. Soil Instability

The applicant submitted a review of a Geotechnical Investigation Report prepared by John Friar dated December 16, 2009, which is attached to the staff report in **EXHIBIT B**. The report was peer reviewed by Cal Engineering and Geology in their letter dated May 5, 2010. In response to the May 5<sup>th</sup> letter, the plans were revised and additional information

provided by Friar in a letter dated June 2, 2010. On June 14, 2010, Cal Engineering and Geology confirmed that all issues in the May 5<sup>th</sup> letter were satisfactorily addressed.

**3. Drainage**

Preliminary drainage plans have been provided in the revised plan set dated May 25, 2010.

**4. Soil Characteristics**

According to the Friar letter, the unpermitted excavation has resulted in the exposure of bedrock at the cut face of the slope behind the existing building.

**5. Seismic Factors**

The Hayward Fault is located about 5 miles west-southwest of the project site. No active faults cross the site and it is not located within an Alquist Priolo Special Studies Zone or known Earthquake Fault Zone. The potential for ground rupture at the site is considered very unlikely. Page 3 of the Friar letter includes the CBC Seismic design parameters recommended for the project.

**6. Existing and Future Residential Development**

The proposed retaining walls and storage building are within 9 feet of an existing residential structure at 32 Buckingham Drive. The steep topography of the hillside above the project site and the open space zoning would make additional residential development highly unlikely on the vacant land south of the property.

**7. View Shed**

The retaining walls and proposed storage building would be effectively screened from view by the existing home at 32 Buckingham Drive and by existing fencing on the property.

**8. Noise**

Although the proposed storage building has been partially built, there could be additional noise generated during completion of the project, if the grading is approved. These construction related noise impacts will be short-term in nature and are not expected to result in noise levels exceeding the Town's standards. The Town's Noise Ordinance limits construction activities to between the hours of 8:00 a.m. and 5:00 p.m.

**9. Potential traffic congestion**

This project will not impact traffic in the area since it is located at the rear of the applicant's property. Most of the excavation work has already been completed, albeit without the required permits.

**10. Fire risk**

The applicant will need approval from the MOFD prior to release of the grading and building permit.

## **11. Wildlife**

No mature native trees, dense scrub or riparian areas, which provide important habitats for wildlife, will be removed for this project. The grading for the storage building is not expected to have any significant impact on wildlife on the project site.

## **12. Dust**

The majority of the grading and excavation work has already been done. Appropriate dust control mitigation measures should be implemented during an additional grading required, either for completion of the project or for restoration of the hillside if the grading is not approved. The completed project would not generate any dust.

## **12. Glare**

This project will have no affect on glare, since the retaining walls and storage building are located behind the existing home and no glass windows or door are proposed on the building.

## **13. Impact on Existing Vegetation**

This project will not have any impact on existing vegetation. The existing grasses on the hillside where the grading for the retaining walls has been done are introduced pasture grasses that are not native to the area. There are no shrubs, bushes or trees in the area where the excavation has been made.

## **15. Additional factors to be considered**

### **a. Minimum Lot Area**

*Comment: The lot area is not being changed and is not a factor for this application.*

### **b. Appropriate Living Space**

*Comment: The proposed patio roof on top of the storage building will add a small amount of outdoor living space in the rear yard. The existing property has very little useable level yard area at the rear of the home.*

### **c. Location of Building Sites Adjacent to Steep Slopes**

*Comment: The proposed storage building has been cut deep into the steep hillside behind the home. If the floor elevation of the building had been raised to the level behind the first retaining wall closest to the home, then the cut into the steep slope could have been reduced. This alternative could have eliminated the necessity for the additional retaining wall at the rear on top of the storage building.*

### **d. Additional Restrictions or Requirements**

*Comment: The Planning Commission should consider any concerns of affected neighbors and include any appropriate recommendations to address any visual or aesthetic concerns.*

# **Exhibit E**

## Grading Determinations

## GRADING DETERMINATIONS

### FINDINGS REQUIRED FOR APPROVAL OF THE GRADING PERMIT

According to Moraga Municipal Code Section 14.16.030, a grading permit may be granted only after a determination that the grading is:

- A. Consistent with the town design guidelines;
- B. Consistent with the regulations and restrictions of this chapter;
- C. Not detrimental to public safety;
- D. Not detrimental to stormwater runoff;
- E. Consistent with the requirements of Chapter 8.136 of the Moraga Municipal Code (hillside development);
- F. Natural contour grading;
- G. Minimizes soil displacement;
- H. Minimizes the use of retaining walls;
- I. The minimum amount of grading possible on the site; and
- J. Not inconsistent with the General Plan.

The following information is provided to assist the Planning Commission in making the above determinations:

1. **Consistency with the Town of Moraga Design Guidelines.** Following (in *italics*) are relevant Town design guidelines.

*RH6 Hillside grading shall blend with natural slopes and be contoured to achieve a natural appearance. The use of retaining walls and other man-made grading features to mitigate geologic hazards should be avoided.*

*ID10.3 When the pre-development slope is greater than or equal to 20%, development shall be avoided, but may be permitted if supported by site-specific analysis. When grading land with a slope of 20% or more, soil displacement and retaining wall use shall be minimized by using contour grading techniques. In MOSO areas, development shall be prohibited on slopes with an average gradient of 20% or greater. Design shall be consistent with Moraga Municipal Code Title 14.*

*ID10.4 Land with a pre-development average slope of 25% or greater within the development area shall not be graded except as authorized by the Town Council and only where it can be shown that a minimum amount of grading is proposed in the spirit of, and not incompatible with, the intention and purpose of the Moraga General Plan. No new residential structures may be placed on after-graded average slopes of 25% or steeper within the development area except that this provision shall not apply to new residential structures on existing lots that were either legally created after March 1, 1951 or specifically approved by the Town Council after April 15, 2002.*

*ID10.5 Cut slopes should be placed behind buildings or other structures where they will be screened.*

*ID10.6 Preserve the natural topography of the land, especially at the horizon:*

- Round off graded slopes, in a manner that conforms to the natural contours of the land and to the surrounding terrain. Sharp angles produced by earth moving, specifically at the top and toe of graded slopes shall be avoided.*
- Slopes shall be contour graded to achieve a natural appearance.*
- Slopes shall be blended with the contours of contiguous properties and create a smooth transition.*
- Grading shall minimize scars due to cuts, fills, and drainage benches on natural slopes.*

*Neither cuts nor fills shall result in slopes steeper than 3:1 (horizontal to vertical), except where natural slopes are steeper. Where steeper slopes are unavoidable, special mitigation measures shall be incorporated into the design construction and maintenance of the slopes.*

*ID11.5 Retaining walls should be built a minimum of three feet from a property line.*

**2. Consistency with the regulations and restrictions of chapter 14.16 and Title 14 (Grading Ordinance).**

The Planning Commission will make a determination with respect to the consistency of the proposed project with the regulations and restrictions of chapter 14.16. The information in *italics* is provided with respect to consistency with Title 14:

- 14.48.011-Excavations: Maximum Gradient: Cut slopes shall not be steeper than 3:1 vertical except in conform areas where natural slopes are greater.

*The pre-existing slope in the area of construction was 37%. The proposed plan does not change the slope of the areas above the retaining walls, but does create an area 2'8" wide adjacent to the western*

*property line where the slope is roughly 34% (beginning with a 51" retaining wall and rising to the 9' height of the cut at the back of the structure. The slopes generally conform in a north-to-south direction, but do not conform with respect to the creation of a retaining wall on the western property line.*

- 14.48.014-Excavations-Setbacks: A. Excavations shall be set back from property lines a minimum distance equal to 1/5<sup>th</sup> the height of the slope, a minimum of 3' and a maximum of 10'. B. Excavations shall be setback from existing structures in accordance with subsection A.

*The proposed plan creates a cut of 9' into the hillside within 2 feet of the presumed property line (as evidenced by the existing fence). The height of the slope in this case may be interpreted as the height of the rear slope at the property boundary which is approximately 670'. The house is located at approximately 640' for a slope height of 30'. The setback requirement of this section would require a minimum of 3 foot clearance to the real property line, and a maximum of 9'. The excavation is a minimum of 7' behind the existing residence. Recognizing the potential that the existing fence is not actually on the property line, the plan does not appear to conform to the excavation setback requirements for the side property line, but does conform with the structure setback.*

- 14.48.023-Fills-Compaction: All fills shall be compacted throughout their full extent to a minimum of ninety (90) percent relative compaction.

*The proposed plan indicates requirement for 90% relative compaction for the fill area between the structure and the western property line. The plan conforms to the compaction requirement.*

- 14.48.026-Fills-Conformance to existing terrain: Fill slopes shall be tapered into the existing terrain at the toe and shall be rounded off at the top.

*The proposed plan creates a small 2'8" wide fill area between the proposed structure and the western property line that begins as a 51" stacked block retaining wall and rises to the 9' cut at approximately the same north-south slope as the pre-construction slope. The fill area is separated from the adjacent property on the western side with a new stacked block retaining wall. The plan is not consistent with the requirement for tapering into the existing north-south slope, and does not*

*conform with existing terrain with respect to the retaining wall at the property line.*

- 14.48.027-Fills-Slope Location and Setback: Fill slopes shall be set back from property lines, watercourses and structures as follows: A. The property line of any proposed or existing site or parcel located within the grading project shall be located a minimum of 1 foot from the top of the slope; B. Fill slopes shall be set back a minimum of 3' plus  $1/5^{\text{th}}$  the vertical height of the slope from the property line with a maximum of twenty feet; C. Buildings and structures shall be set back from the toe or the top of fill slopes a minimum of 4' plus  $1/5^{\text{th}}$  of the vertical height of the slope with a maximum of 20'.

*The proposed plan creates a filled area directly adjacent to the western property line and separated from the adjacent property with a stacked block retaining wall. The rear property line for the project property is approximately 48' beyond the grading project site and the top of the filled slope. As noted above, the filled slope is directly adjacent to the property line and does not meet the requirement of 3' plus  $1/5^{\text{th}}$  the height of the slope. The existing residence is located more than 9' away from the toe of the proposed filled slope. The filled slope plan conforms with all but the proximity to the adjacent property line.*

**C. Not detrimental to public safety;**

With the exceptions noted above, the proposed plan, due to the proximity of the excavation to the neighbor's property, may pose increased risk above those presented by projects consistent with the regulations within section 14.16.030. However, the applicant is working with a licensed civil engineer to design the project which has also been reviewed by the Town's geo-technical consultant.

**D. Not detrimental to stormwater runoff;**

The proposed plan has been updated to ensure that both surface and sub-surface stormwater will be diverted away from structures and not pose an erosion or flooding risk. The plan has been reviewed by the Town's Engineering department and is consistent with the Town's guidelines for safely channeling stormwater.

**E. Consistent with the requirements of Chapter 8.136 of this code;**

See EXHIBIT D for a discussion of the Hillside Development Permit considerations.

**F. Natural contour grading;**

The proposed plan retains the natural contour of the hillside above the excavated portion of the slope, and creates several flat areas above retaining walls at the rear of the residence.

**G. Minimizes soil displacement;**

The proposed plan reflects excavation to create an 11'x15.2' room recessed into the hillside at the same grade of the residence. If the dimensions or elevation of the room were changed, the extent of excavation and soil removal could be reduced. Raising the floor of the storage room to the level of the existing retaining wall could significantly reduce the soil displacement and disturbance along the western property line.

**H. Minimizes the use of retaining walls;**

The proposed plan removes approximately 20 feet of two existing retaining walls, one 42 inches high and the second 30 inches high and replaces them with a 9' (8' plus 1' thick) structure. Along the side of this structure, the plan creates another 51 inch high wall between the structure and the property line and then a retaining wall from that wall along the property line to the back of the structure. If the dimensions and the elevation of the structure were modified, the plan would require less retaining wall length and height.

**I. The minimum amount of grading possible on the site;**

The proposed plan does not minimize grading on the site. The design of the project requires excavating the hillside to provide an entrance for the structure at the same level as the residence. Much of the rest of the rear yard is terraced with retaining walls. If the structure had been positioned with the floor of the structure at the level of one of the retaining walls, it would reduce the amount of grading required.

**J. Not inconsistent with the general plan;**

The following general plan policies relate to the proposed application:

- LU1.8 Slope Restrictions. The soil characteristics in Moraga are prone to landslide conditions which can cause damage to property, injury to persons, public cost and inconvenience; therefore, development shall be avoided on slopes of 20 percent or steeper, but may be permitted if supported by site-specific analysis. No new residential structures may be placed on after-graded average slopes of 25 percent or steeper within the development area, except that this provision shall not apply to new residential structures on existing lots that were either legally created after March 1, 1951 or specifically approved by the Town Council after April 15, 2002. All new non-MOSO lots shall contain an appropriate development area with an average after-graded slope of less than 25%. Grading on any non-MOSO land with an average predevelopment slope of 25% or more within the proposed development area shall be prohibited unless formally approved by the Town Council where it can be supported by site-specific analysis and shown that a minimum amount of grading is proposed in the spirit of and not incompatible with all other policies of the General Plan.
- CD1.5 Ridgelines and Hillside Areas. Protect ridgelines from development. In hillside areas, require new developments to conform to the site's natural setting, retaining the character of existing landforms preserving significant native vegetation and with respect to ridgelines, encourage location of building sites so that visual impacts are minimized. When grading land with an average slope of 20% or more, require 'natural contour' grading to minimize soil displacement and use of retainer walls. Design buildings and other improvements in accordance with the natural setting, maintaining a low profile and providing dense native landscaping to blend hillside structures with the natural setting.
- PS4.10 Grading. Grading for any purpose whatsoever may be permitted only in accordance with an approved development plan that is found to be geologically safe and aesthetically consistent with the Town's Design Guidelines. Land with a predevelopment average slope of 25% or greater within the development area shall not be graded except at the specific direction of the Town Council and only where it can be shown that a minimum amount of grading is proposed in the spirit of, and not incompatible with, the intention and purpose of all other policies of the General Plan. The Town shall develop an average slope limit beyond which grading shall be prohibited unless grading is required for landslide repair or slope stabilization.

# **Exhibit F**

Draft Resolution

## BEFORE THE TOWN OF MORAGA PLANNING COMMISSION

**In the Matter of:**

Recommendation to the Town Council for )  
(approval or disapproval) of a hillside )  
development permit and a grading permit for )  
retaining walls and a storage building at 32 )  
Buckingham. (APN 256-203-012) )

**Resolution No. XX-2010**

File No. GP-01-10

Adoption Date: August 2, 2010

Recommendation to Town Council  
(not appealable)

**WHEREAS**, on April 14, 2010, an application for a grading permit and hillside development permit was filed by Robert and Claudia White for the grading and excavation of the hillside at 32 Buckingham; and

**WHEREAS**, on April 21, 2009, the geotechnical investigation and plans reviewed by John Friar were sent to the Town's geotechnical peer review consultant, Cal Engineering and Geology (CE&G) for review; and

**WHEREAS**, on May 5, 2010, the Town received the geotechnical peer review report from CE&G which noted the need for additional information; and

**WHEREAS**, on June 2, 2010, the Town received revised plans and a response to the May 5<sup>th</sup> CE&E comment letter; and

**WHEREAS**, on June 14, 2010, the Town received confirmation from CE&G that all of the issues identified in their May 5<sup>th</sup> letter had been satisfied; and

**WHEREAS**, on July 23, 2010 notices were mailed to residents within 300 feet of the subject property for the Planning Commission Public meeting scheduled on August 2, 2010 to consider a recommendation to the Town Council in accordance with Moraga Municipal Code (MMC) Chapter 14.16; and

**WHEREAS**, on August 2, 2010 the Planning Commission held a public meeting to consider the application.

**NOW, THEREFORE, BE IT RESOLVED**, that the Planning Commission of the Town of Moraga hereby recommends (approval or disapproval) of the hillside development permit and grading permit for the rear yard construction at 32 Buckingham, with the following findings and subject to the conditions of approval listed herein:

**PART 1 – FINDINGS BASED ON MMC SECTION 14.16.030:**

1. The grading is consistent with the town design guidelines because
2. The grading is consistent with the regulations and restrictions of chapter 14.16 of the Municipal Code in that

3. The grading is not detrimental to public safety because
4. The grading is not detrimental to storm water runoff because
5. The grading is consistent with the requirements of chapter 8.136 of this code because
6. The grading is proposed to be natural contour grading because
7. The grading minimizes soil displacement because
8. The grading minimizes the use of retaining walls because
9. The grading is the minimum amount of grading possible on the site because
10. The grading is not inconsistent with the General Plan because

**PART II – RECOMMENDED CONDITIONS OF APPROVAL:**  
(if recommended for approval, list necessary conditions)

**PASSED AND ADOPTED** by the Planning Commission of the Town of Moraga on August 2, 2010 by the following vote:

**AYES:**

**NOES:**

**ABSTAIN:**

**ABSENT:**

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Jim Obsitnik, Chair

ATTEST:

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Lori Salamack, Planning Director

# Exhibit G

Plans