

Statement by J.F. DeMouthe, Acting County Geologist

Summary of events & conditions at 604 - 608 Larchmont, unincorporated Colma

The lots at 604 and 606 Larchmont were developed concurrently, under two separate building permits, following the County's prescribed permitting process. The applicant obtained the services of a licensed engineer, who provided the County with data and recommendations, on which the design and construction of those two houses were based. The steepness of the hillside, the loose condition of the surficial materials, and the presence of shallow groundwater in the area prompted County staff to require special drainage measures, including the construction of a storm drain down to the street below.

At the time of the permitting and subsequent construction, the County had no reason to doubt that the applicant's consultant was following normal standards of practice in his investigation and observations. After the construction, however, this consultant lost his license, was sued for fraud (over projects outside San Mateo County), and has since left the country. It has been found since then that his work on this and other projects was substandard, and that work he claimed to have accomplished was never done.

During the winter of 2005-2006, a slope failure occurred beneath and around the house at 606 Larchmont. This landslide developed fairly quickly, with a steep headscarp (top) between the house and the sidewalk at the top of the hill. The entire slope below the house moved, and a toe bulge developed on the property at the bottom of the hill, on MacArthur Drive. The house moved almost straight down, but is still intact. Due to the slight rotational movement of the landslide, any further movement of the house will probably cause it to tip back toward Larchmont.

The three houses directly below 604, 606, and 608 Larchmont, which are on MacArthur Drive, were evacuated until it could be determined that the landslide was no longer moving. In the late spring of 2006, residents were allowed to return to the two side houses, since the landslide did not encroach onto those properties. The house directly below 606 Larchmont remains yellow-tagged, and the owner of the uphill property has since purchased it.

At this time, at the end of the dry season, the landslide has not moved for about six months. It is anticipated, however, that once it begins to rain, water will again saturate the loose soils on this hill and movement will continue.

Water comes onto these properties from two sources. Rain soaks into the hillside soils and any unpaved areas around the houses. Roof drainage from both houses is collected in a closed pipe system that is directed along an easement to MacArthur Drive below. During very heavy rain, surface water sometimes flows onto the properties from the cul-de-sac, despite the presence of a normal curb and gutter. The second source of water is in the ground, flowing from the uplands to the south (Daly City proper).

Gravity and the lubricating effects of rain and groundwater are the driving forces affecting this hillside. It is strongly recommended that the owner of these properties be encouraged to "winterize" the slope as described in the preliminary report from Earth Investigations Consultants. This should be done regardless of whether the house at 606 is demolished or not.

In addition to the recommendations made in that report, County staff would also suggest the following measures:

- place sand bags along the curb on Larchmont adjacent to the properties at 604 and 606
- curve the ends of the proposed debris fence at the bottom of the hill up, particularly on the 604 property, in order to protect the occupied sites below
- present a contingency plan in case the existing storm drain on the slope is found to be unusable

Given the steepness of the slope, the evidence of substantial slope movement during the 2005-2006 winter rains, the fact that no repairs have yet to be made to the slide area, and the uncertainty that the proposed winterization plan will be effective in arresting further slope movement, there is a substantial though unquantifiable risk of future slope movement that could impact properties and persons located below the slide area.

J.F. DeMouthe
Acting County Geologist
November 2, 2006

Statement by J.E. DeMourthe, Acting County Geologist

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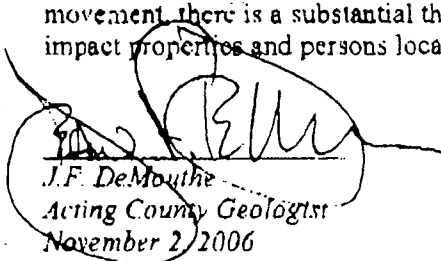
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In addition to the recommendations made in that report, County staff would also suggest the following measures:

- place sand bags along the curb on Larchmont adjacent to the properties at 604 and 606
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Given the steepness of the slope, the evidence of substantial slope movement during the 2005-2006 winter rains, the fact that no repairs have yet to be made to the slide area, and the uncertainty that the proposed winterization plan will be effective in arresting further slope movement, there is a substantial though unquantifiable risk of future slope movement that could impact properties and persons located below the slide area.



J.F. DeMouthe
Acting County Geologist
November 2, 2006

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LARCHMONT SLOPE FAILURE BACKGROUND

On April 3, 2006 at 9:10 p.m. Building Inspector, Gary Fitzer was contacted by County Dispatch who indicated there was a possible slope failure occurring at 606 Larchmont Drive in the Broadmoor area. After phone conversations with Lisa Grote, Director of Community Development, Brian Molver of OES and Geoffrey Balton, Colma Fire District Fire Chief, he responded to the call and arrived at the scene at approximately 11:00 p.m.

A cursory inspection of the site revealed fissures between the street and the structure at 606 Larchmont Drive. The structure also showed signs of distress; i.e. racking of the rear deck, shear cracks in the garage, and shear cracks in the foundation grade beams. Because of the extent of damage visible during this cursory inspection, the structure was posted with an "Unsafe to Enter" Red Tag.

Because of darkness, it was not possible to perform a complete site evaluation. However, as a precautionary measure, three downhill properties on Mac Arthur Drive were ask to voluntarily evacuate their homes until a more complete site evaluation could occur.

The slope failure continued to move for several weeks, resulting in the structure eventually moving down slope approximately 10 feet horizontally and 8 feet vertically. By April 11, 2006 the slope failure was so unstable and un-predictable that 663, 667, and 671 Mac Arthur Drive were officially evacuated and the structures posted with yellow tags that allowed only "limited entry during daylight hours" to obtain personal items. Two of the three households were provided with temporary housing through the Human Services Agency. The third property owner chose to stay with relatives.

Also affected by the slope failure were the two properties on each side of 606 Larchmont. 604 Larchmont was a home that was under construction by the same developer. The slope failure encroached onto that parcel, but not to the extent that damage occurred to the structure. 608 Larchmont is an occupied duplex home. The westerly side scarp of the slope failure encroached onto this property up to the foundation and also severely damaged the lower deck in the rear yard. However, the structure did not show signs of distress and remains occupied to this day. Staff continues to monitor this structure and will make regular site visits when the winter rains begin. If further failure occurs, it may be necessary to yellow tag this structure also.

After the rains of April stopped and the slope and structure stopped moving a site visit was conducted by County Geologist, Jean DeMouthe and William Cameron, Building Inspection Manager on May 4, 2006. At that time it was determined that the immediate danger to 663 and 671 Mac Arthur no longer existed to the point that these structures could once again be occupied. The yellow tags on those two structures were officially removed on May 8, 2006. The property at 667 Mac Arthur, which is located directly

below 606 Larchmont, remains yellow tagged. The toe of the slope failure encroaches onto this property and poses a danger to any persons who occupy the structure.

If the slide reactivates as a result of the winter rains, there is a substantial likelihood that there will be additional failure of the structure at 606 Larchmont.



William J. Cameron
Building Inspection Manager
County of San Mateo

Date: 11-6-06

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