

City of Brisbane

Agenda Report

TO: Honorable Mayor and City Council

FROM: Director of Public Works/City Engineer via City Manager

SUBJECT: Geotechnical Study for 30 Residential-Unit Complex proposed at 3710-3760 Bayshore Boulevard (continued from February 2, 2009 meeting)

DATE: March 2, 2009

City Council Goals:

To encourage community involvement and participation. (#15)

Purpose:

To afford Council the opportunity to directly question the City Engineer on the presentation presented by the project applicant on February 2, 2009.

Recommendation:

Based on personal review and the recommendations of the city's geotechnical consultant (see attached Cotton Shires & Associates February 24, 2009 letter), staff concludes that the project's site geotechnical conditions have been satisfactorily characterized, and that the existing development conditions and Municipal Code requirements afford all necessary regulatory authority for staff to require a development that meets the current standards in regards to protection of public health and safety.

Staff recommends no changes in or additions to the proposed development's conditions of approval.

Background:

The City Council approved the 30-unit residential project (Design Permit DP-1-02/Use Permit UP-1-02) on August 1, 2005, subject to conditions of approval including:

I(2)(a) Prior to issuance of the building permit, the plans shall be approved by the licensed geotechnical consultant, consistent with the submitted geotechnical study (soils engineering report and engineering geology report) based upon the results of the exploratory geotechnical work conducted on the site. The final geotechnical study shall include a dynamic seismic stability analysis using strong-motion

seismograms to evaluate both the modified slope and the proposed mitigation structures. Per BMC Section 15.01.050, the City Engineer will require that the geotechnical study and the grading plans be subject to the review of an independent geotechnical engineer.

I.(2)(b) Prior to issuance of the building permit, the recommendations of the geotechnical consultant shall be presented to the City Council at a public hearing to allow members of the public to comment on the final recommendations and determine whether any changes in the conditions of approval are appropriate.

Although that approval was challenged in court, these conditions remain in effect per the stipulated judgment entered April 26, 2006.

The applicant's consultants provided a report on the geotechnical investigation to the City Council at its February 2, 2009 meeting.

Discussion:

Engineering Geologist Ted Sayre from Cotton Shires & Associates will attend the meeting to answer any detailed geology questions the Council might have on this project.

Fiscal Impact:

There is no direct cost to the city as the result of any anticipated action the Council might take on the recommendation.

Measure of Success:

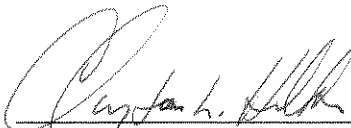
This final presentation to the City Council satisfies the condition of approval and the Council goal of community involvement and participation.

Attachments:

- ☐ Cotton Shires & Associates, Inc. February 24, 2009 letter
- ☐ February 2, 2009 staff Report (minus attachments)



Director of Public Works/City Engineer



City Manager



COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

February 24, 2009
J0014B

TO: Randy Breault
Director of Public Works/City Engineer
CITY OF BRISBANE
50 Park Lane
Brisbane, California 94005-1310

SUBJECT: Geologic and Geotechnical Peer Review
RE: 30-Unit Residential Project
UP-1-02, DP-1-02
3710-3760 Bayshore Boulevard

At your request, we have completed a geologic and geotechnical peer review of permit application for proposed site development using:

- Revised Geotechnical and Geological Investigation 3710-1760 Bayshore Boulevard (report) prepared by Treadwell & Rollo, dated January 21, 2009..

In addition, we have reviewed pertinent technical documents from our office files, evaluated aerial photographs covering the site and completed inspections of site exploratory excavations advanced by the Project Geotechnical Consultant.

DISCUSSION

The applicant has retained a geotechnical consultant (Treadwell & Rollo) to complete a geologic and geotechnical investigation of the subject property, including analysis of final slope configurations and engineered mitigation structures under dynamic seismic shaking conditions (consistent in magnitude with a repeat of the 1906 earthquake event). The proposed site development concept includes 30 residential units. Proposed buildings include three (3) stories of living space over a lower parking level. Construction of an access road is proposed east of the housing units. We understand that the project would include significant export of excavated earth material from the property. Civil design plans for the project are currently being prepared. Preliminary structural engineering plans depict proposed construction of two large retaining walls with tiebacks above the proposed buildings.

We have previously recommended completion of a detailed geologic and geotechnical investigation of site landslide conditions prior to preparation of project geotechnical design criteria or detailed construction plans.

CONCLUSIONS AND RECOMMENDED ACTION

The Project Geotechnical Consultant has completed a geologic and geotechnical investigation at the site including subsurface exploration to characterize site landslide and bedrock conditions. Based on jointly inspected surface and subsurface exposures, we concur that apparent site geotechnical conditions have been satisfactorily characterized. Based on our review of the referenced January 2009 report, we conclude that the Project Geotechnical Consultant has adequately analyzed the stability conditions of site slopes under static and anticipated seismic conditions, and has recommended appropriate geotechnical criteria for the proposed project.

Engineering mitigation measures proposed for the project include tie-back supported retaining walls. It is important that final retaining wall, foundation and grading plans be reviewed by the Project Geotechnical Consultant to verify compliance with recommended geotechnical design criteria. We do not have geotechnical objections to the basic site development layout or presented concepts for retaining site slopes. We recommend that the following Conditions 1 and 2 be satisfactorily addressed prior to issuance of building permits:

1. **Construction Plans** - Detailed retaining wall design, rock fall fence design, building foundation and grading plans for the project should be prepared along with supporting structural calculations.

Project construction plans, and geotechnical aspects of supporting calculations, should be reviewed by the Project Geotechnical Consultant for conformance with recommended geotechnical design criteria prior to plan submittal.

Appropriate documentation to address the above should be submitted to the City, for review by the City Engineer and City Geotechnical Consultant, prior to issuance of building permits.

2. **Geotechnical Plan Review** - The applicant's geotechnical consultant should review and approve all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site drainage improvements and design parameters for foundations, retaining walls and driveway) to ensure that their recommendations have been properly incorporated. The consultant should submit detailed measures to monitor slopes above project excavations during construction.

The results of the plan review should be summarized by the geotechnical consultant in a letter and submitted to the City Engineer for review prior to issuance of building permits.

3. Geotechnical Field Inspection - The geotechnical consultant should inspect, test (as needed), and approve all geotechnical aspects of the project construction. The inspections should include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. All significant project excavations should be inspected by an engineering geologist during construction to confirm anticipated geologic conditions.

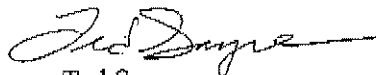
The results of these inspections and the as-built conditions of the project should be described by the geotechnical consultant in a letter and submitted to the City Engineer for review prior to final (granting of occupancy) project approval

LIMITATIONS

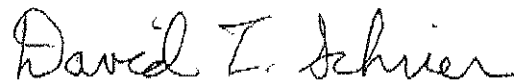
This geotechnical peer review has been performed to provide technical advice to assist the City with its discretionary permit decisions. Our services have been limited to review of the documents previously identified, and a visual review of the property. Our opinions and conclusions are made in accordance with generally accepted principles and practices of the geotechnical profession. This warranty is in lieu of all other warranties, either expressed or implied.

Respectfully submitted,

COTTON, SHIRES & ASSOCIATES, INC.
CITY GEOTECHNICAL CONSULTANT



Ted Sayre
Principal Engineering Geologist
CEG 1795



David T. Schrier
Principal Geotechnical Engineer
GE 2334

TS:DTS:kd

City of Brisbane

Agenda Report

TO: Honorable Mayor and City Council

FROM: Director of Public Works/City Engineer via City Manager

SUBJECT: Geotechnical Study for 30 Residential-Unit Complex proposed at 3710-3760 Bayshore Boulevard

DATE: February 2, 2009

City Council Goals: To encourage community involvement and participation. (#15)

Purpose: This presentation is required by the proposed project's conditions of approval.

Recommendation:

Determine whether any changes in the conditions of approval are appropriate, and provide direction to staff as necessary to implement these changes.

Background:

The City Council approved the 30-unit residential project (Design Permit DP-1-02/Use Permit UP-1-02) on August 1, 2005, subject to conditions of approval including:

- I(2)(a) Prior to issuance of the building permit, the plans shall be approved by the licensed geotechnical consultant, consistent with the submitted geotechnical study (soils engineering report and engineering geology report) based upon the results of the exploratory geotechnical work conducted on the site. The final geotechnical study shall include a dynamic seismic stability analysis using strong-motion seismograms to evaluate both the modified slope and the proposed mitigation structures. Per BMC Section 15.01.050, the City Engineer will require that the geotechnical study and the grading plans be subject to the review of an independent geotechnical engineer.
- I.(2)(b) Prior to issuance of the building permit, the recommendations of the geotechnical consultant shall be presented to the City Council at a public hearing to allow members of the public to comment on the final recommendations and determine whether any changes in the conditions of approval are appropriate.

Although that approval was challenged in court, these conditions remain in effect per the stipulated judgment entered April 26, 2006.

Discussion:

The scope of the completed geotechnical study is extensive; field work included subsurface exploration consisting of two borings and seven hand-excavated test pits. The 2'x3' test pits extended to a maximum depth of 43' below existing ground; geologists, including staff from Cotton Shires, physically entered the pits to characterize the exposed soil and to evaluate the depth of any landsliding and rock bedding.

City staff and our consultants were actively involved in the development of the study; staff participated in the original scoping meeting to determine the work effort required, participated in and observed the field work, and completed several rounds of document review and joint meetings.

General consensus between staff and consultants has been reached on the major points of characterizing the geologic and geotechnical conditions of the site, the results of laboratory and computer analysis, and the extent of geologic hazards and the mitigation that will be required to effectively stabilize the site. It is expected that as the civil design of the project proceeds, city staff and consultants will require additional information and may place requirements beyond the current recommendations on the project.

The applicant and his consultant will make a short presentation to the council on this study. City staff and our geotechnical consultant will also be in attendance.

For purposes of illustration, the applicant has also prepared conceptual grading & drainage and construction access plans which were based on the recommendations of the final study.

Fiscal Impact: There is no direct cost to the city as the result of any anticipated action the Council might take on the recommendation.

Measure of Success: The presentation to the City Council satisfies the condition of approval and the Council goal of community involvement and participation.

Attachments:

- ☐ Treadwell & Rollo 21 January 2009 Revised Geotechnical and Geological Investigation 3710-3760 Bayshore Boulevard
- ☐ Conceptual Grading & Drainage Plan and Construction Access Plan
- ☐ August 1, 2005 staff report

Director of Public Works/City Engineer

City Manager

A copy of supporting materials provided to the City Manager and Council Persons in connection with this agenda item is available for public inspection and copying at 50 Park Place, City of Brisbane Department of Public Works, Brisbane, C'A, 94005, Telephone: (415) 508-2130.