

ENNOVA

STRUCTURAL
ENGINEERS INC.

February 9, 2010

The Strata Council, Landmark Manor
C/O R. Jang & Associates
1010 West Broadway
Vancouver, B.C.
V6H 1E6

RE: Cracks in Existing Concrete Foundation Wall at 440 East 5th Avenue

Dear Sir,

At the request of Ms. Sheryl Savvis of R. Jang and Associates, Mr. Yung-Hung Lee from our office visited the building at 440 East 5th Avenue in Vancouver on February 8, 2010. The purpose was to investigate the cause and implications of cracks on the concrete walls at the entrance to the underground parking of the building.

From Mr. Lee's observations and photos taken, as well as photos received from Ms. Savvis, a major crack was observed on the stucco finish near the top of the concrete wall on the west side of the ramp to the underground parking. The crack originates approximately 5 feet from the south end of the wall and travels horizontally toward the south west corner, approximately 12" from the top of the wall. At approximately 24" from the south-west corner, the crack moves diagonally downward toward the corner and then westward around the corner. The size of the crack at some locations measures up to 1/2" wide.

Based on the above observation, a probable cause of the crack is the sagging of the slab and beam over the entrance to the garage. This resulted in the slab on the outside of the garage to lift up and thus the horizontal crack near the top of the wall. Subsequent, the slab caused a shear failure at the south west corner of the wall (the diagonal crack). In our opinion, this is a serious problem that needs to be addressed immediately. We recommend temporarily shoring up the beam over the garage entrance right away and repair the crack wall as soon as possible.

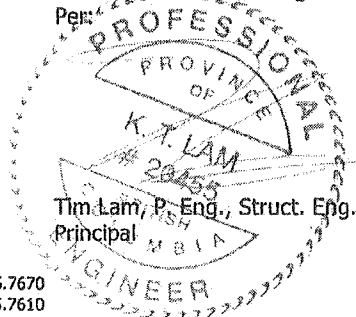
Cracks are also observed near the top of the retaining wall on the east side of the ramp. They appear to be minor and do not pose immediate danger to the public.

The remedial work the west ramp wall should be carried out under the direction of a qualified structural engineer. Ennova would be please further assist the council on this matter. Please contact the undersigned if there are any questions.

Yours truly

Ennova Structural Engineers Inc.

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