

February 22, 2023

Beach Cities Health District
514 North Prospect Avenue
Redondo Beach, CA 90277

Attention: Tom Bakaly, Chief Executive Officer

**Seismic Risk Update – Beach Cities Health Center
514 North Prospect Avenue, Redondo Beach, CA 90277**

Dear Mr. Bakaly,

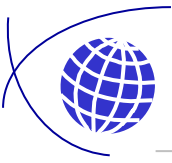
ImageCat, Inc. (ImageCat) is pleased to present this update to Beach Cities Health District (BCHD) for the seismic risks for Beach Cities Health Center. The property at 514 North Prospect Avenue consists of a 4-story medical office tower of reinforced concrete construction, with wings built in 1957 and 1967. ImageCat completed a previous study in 2021, as documented in a report dated October 21, 2021. In that report, we forecast the near-term risks to the property, using various time horizons. Two years have now passed. This update is intended to inform your decision-making process related to redevelopment/retrofit plans to achieve seismic safety while continuing to provide services to the community.

To provide a basis for this update, on February 2, 2023, I performed a brief visual survey with Beach Cities on-site Senior Project Manager (Consultant), who knows the property thoroughly. We were assisted by several members of the maintenance staff. We conducted the survey to confirm the physical condition of the property and discussed the schedule for demolition of these buildings and construction of new replacement facilities. We found the structural condition of the building and its independent structural parts to be fair to good – consistent with ImageCat’s findings in 2021. The structural features and seismic deficiencies remain as described – no significant structural modifications have been made. The potential for future ground shaking as currently understood is also unchanged. Hence the findings of the 2021 report remain unchanged:

The ‘status quo’ alternative presents no upfront (immediate) costs or loss of service and income to BCHD, such as those that would result from demolition or retrofit construction. However, this exposes BCHD to significant levels of risk in terms of building damage and downtime losses and potential liability for loss of life, should an earthquake occur. The building damage, downtime, and probability of collapse estimates with 10% probability of exceedance in the next 3 to 5 years are basically close to what would be expected, and deemed acceptable by most commercial lenders and institutional owners, from new buildings over a full lifetime (i.e., a 50-year exposure period).

At the present time, it is not possible to predict specific dates and locations of future earthquakes. The models of the United States Geological Survey (USGS) predict how frequently the ground will shake with any given level of intensity over the long term. In the USGS model, the probability of shaking levels that cause high levels of damage or structural collapse are time invariant, but the length of the exposure window affect the probability. Increasing the window of exposure means there is greater opportunity for a large earthquake to occur and damage the property. The change in probabilities is incremental, rather than dramatic.

In the 2021 report, we looked at ground motions with a 10% probability of exceedance in a given exposure period. We found that the North Tower had a 3% to 8% probability of collapse in an exposure period of



5 years, and a 9% to 19% probability of collapse in an exposure of 10 years. The range reflects uncertainty in the building performance, given the level of ground shaking. Similarly, we found that the South Tower had a 3 to 7% probability of collapse in an exposure period of 5 years, and a 8 to 16% probability of collapse in an exposure of 10 years. As stated in the 2021 report, risk for longer exposure periods ranging from 10 to 50 years becomes significantly higher, with probabilities of collapse that would likely be deemed unacceptable, especially for buildings that are used for assisted living, memory care, or other medical purposes.

If the District wishes to improve response and help reduce risks in the meantime, some steps can be taken. After any future large earthquake, the District will have questions about any damage that has just occurred, and whether the two towers are safe to continue to occupy, considering the damage and the potential for large aftershocks. The District can put together a plan for post-earthquake inspection, with contingencies for evacuation and relocation of the affected offices and functions if needed. Such a response plan can save a lot of time after future earthquakes, and help ensure that patients, staff and the public do not remain in facilities where damage may have critically weakened the structure. Where shaking is moderate and buildings are undamaged, such response can provide reassurance that continued occupancy is justified, or that occupancy may be resumed once nonstructural damage and building service equipment are repaired. The North Prospect Avenue site can be seismically instrumented to record the shaking at the basement level and at the roof level for each tower. Finally, the District can put in place an agreement with Nabih Youssef Associates (NYA) to provide rapid response to inspect and interpret the ground shaking and the damage. NYA's previous structural reviews and knowledge of the North Prospect Avenue site put them in the best position to provide such assistance. Let us know if these options are of interest to BCHD, and we can help you get started.

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Thank you for the opportunity to provide seismic risk services to BCHD. Should you have any questions or comments regarding this update letter, please contact me.

Sincerely,

ImageCat, Inc.

Vice President, Engineering
ImageCat Inc. (www.imagecatinc.com)