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# California Plastering Consultants

\*A Division of Construction Analysis Group II, Inc.

March 28, 2022

Mr. Adam Rohrbaugh A7 Group/ Architects 700 2nd Street, Unit H Encinitas, CA 92024

> RE: Building 3- Soffit Collapse Evaluation Surfside III 600 Sunfish Way Port Hueneme, CA 91041

Dear Mr. Rohrbaugh,

On or about March 21, 2022 you requested my consulting services to evaluate the possible causation(s) for the collapsing of an entire stucco soffit on Building 3 at the Surfside Community, located in Port Hueneme, CA. The soffit collapse occurred on March 13, 2022. You had indicated that the The Surfside Community, including Building 3, were constructed during the 1976-1978 time frame.

To assist with my evaluation, inspection photographs were provided by you which depicted the aftermath of the collapsed stucco soffit onto the private balcony decks located on the 3<sup>rd</sup> floor level. The following is a summary of opinions, regarding deficiencies observed in the photographs you provided:

### Opinion- 1

During the original construction of Building 3, boundary framing (blocking) was missing between individual stud bays, along the front and rear portions of the framed soffit (see **Photographs #001-002**). This omission prohibited the soffit lath from being properly secured above the front soffit beam and rear vent screed. Lath staples utilized for securing the soffit lath to the framing above were only engaged at individual studs that were spaced 16-inches on center. The missing boundary blocking and consequential lath attachment undermined the holding strength of the stucco soffit.

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# Opinion- 2

Lath staples utilized to secure the soffit lath to framing members were too short. The length of individual lath staples were measured and found to be only ¾-inches in length (see **Photographs #003- 004**). Building codes during the 1976-1978 time frame required minimum staple lengths to be ½-inches. Furthermore, staple lengths are increased when metal lath at soffits contain either Hi-Rib or other self-furred devices (i.e. "V" grooves, crimped/ dimpled). It appears from the photographs you provided, a "V" groove-type lath was utilized (see **Photographs #005- 007**). These "V" grooves provide the necessary ¼-inch furring off the wood supports, to allow for proper embedment and keying of the scratch coat.

Moreover, when attaching metal lath to wood supports (soffits), lath staples must be placed at the self-furred "V" grooves, so as not to inhibit embedment. In my opinion, the use of ¾-inch staples was inadequate in size and should have been increased to a required minimum 1¼- inches, in length. Furthermore, photographs indicate that the staple legs only engaged ½-inches, and not the minimum 7½- inches into wood supports (see **Photographs #008- 010**). The undersized staples contributed to the collapse of the stucco soffit.

# Opinion- 3

Building codes during the 1976-1978 time frame required the maximum spacing of attachments (i.e. staples) to be placed 6-inches apart. It appears from the photographs provided that some staple spacing exceeded the maximum 6-inch spacing requirement (see **Photographs #011- 013**). The over-spacing of staples could also have contributed to the soffit failure.

# Opinion- 4

Building codes during the 1976-1978 time frame required the thickness of plaster, when measured from the back plane of expanded metal lath, exclusive of self-furring devices, to be ¾- inches minimum. Although building codes do not provide maximum plaster thickness, the general rule is not to have variations greater than ¼-inches, in either direction. Based on photographs you provided, the plaster thickness ranged from 1 to 2-inches, in width (see **Photographs #014-015**). In some cases, the plaster was too thick. Plaster (stucco) weighs approximately 10 lbs, per square foot. Therefore, this variable increase in plaster thickness increased the overall weight of the soffit by 10 lbs.

### Opinions- 5

It appears from photographs you provided, that water infiltration, wood decay, rusting of metal lath and fasteners were all likely sources that led to the initial "domino effect" and collapse of the entire stucco soffit (see **Photographs #016- 022**). You indicted that this particular section (corner) of the soffit appears to have been repaired in the past, and where ultimately the soffit began its initial collapse. In my opinion, the consequence of a series of events, including the water infiltration, wood decay, and rusted lath, ultimately set off this chain reaction (domino-effect), due to the above listed lath and plaster deficiencies.



If you have any questions regarding this matter or the contents of this preliminary report, please do not hesitate to contact me.

Sincerely,

CALIFORNIA PLASTERING CONSULTANTS

MICHAEL S. ROBERTS

President



3/28/2022

■Building 3- Soffit Collapse Evaluation



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