Exhibit A

June 23, 2021

Craig S. Nuss
Penny J. Manship
Burg Simpson Eldredge Hersh & Jardine PC
8310 South Valley Highway, #270
Englewood, Colorado 80112

Project Number: 219061.00 (030)
Project Name: Gallery
Location: 3104-3127 North 71st Street
Scottsdale, Arizona 85251

Subject: Construction and Design Compliance Report

Dear Mr. Nuss and Ms. Manship:

PREAMBLE

Per your request, SBSA, LLC, A Charles Taylor Company (SBSA), conducted site observations, interior observations, exterior observations, intrusive examinations, and site measurements at the Gallery Townhomes site (Gallery) in Scottsdale, Arizona. The evaluation also consisted of file review as noted within this report. A record of site observation dates is contained in the attached Observation Drawing Set, Observation Photographs, and photograph log.

The purpose of this evaluation was to document the Construction and Design Compliance, including analysis of the design and construction components as necessary, to determine if the work was designed and constructed in conformance with the applicable code, regulations, technical criteria, site-specific plans, and recognized standard industry requirements. This report includes an evaluation of site civil systems, the stucco and roof systems, as well as additional miscellaneous issues as listed within.

SBSA conducted visual examinations and analysis of the provided file as necessary to determine the commonality of the construction practices used on this site. As well, the examination was conducted to determine the extent or likely extent of the manifestation of resultant damage caused by the inability of the systems to perform their intended function.

Field observations and testing were performed by Edward L. Fronapfel, MSCE, PE, Jerod B. Faris, MSCE, PE, Jeffrey J. Felderman, PE, Sameer S. Rampurawala, M.Eng., EI, and Peter E. Rabner, PE, under the responsible charge of Edward L. Fronapfel, MSCE, PE, D-IBFES, DFE, CBIE, CFCC,

Felten Group, "K. Hovnanian Homes, Subdivision Gallery," revised June 8, 2016, Sheet S1.1 "Foundation Plan Building A," states the following:

SOIL	
1. ALL EXCAVATION, FILL (INCLUDING BASEMENT WALL AND RETAINING WALL BACKFILL), COMPACTION, AND SOIL RELATED OPERATIONS SHALL BE PERFORMED ACCORDING TO SOILS CONSULTANT'S RECOMMENDATIONS. SEE SOILS REPORT AND ADDENDUMS BY THE GEOTECHNICAL ENGINEER FOR RECOMMENDATIONS ON THE CONSTRUCTION OF THE FOUNDATION SYSTEM. 2. SOME SOIL REPORTS REFERENCE FOUNDATION DEPTH FROM "LOWEST ADJACENT GRADE WITHIN 5 FEET OF THE FOUNDATION" WHILE OTHER SOIL REPORTS USE "ADJACENT GRADE". SEE SITE SPECIFIC SOILS REPORT FOR PROPER DATUM FOR THIS PROJECT.	
SOILS REPORT INFORMATION	
GEOTECHNICAL REPORT BY:	PROTEX
GEOTECHNICAL REPORT #:	4222
GEOTECHNICAL REPORT DATE:	3/18/2015
ALLOWABLE BEARING PRESSURE	1250 psf.
ALL EXCAVATION, FILL, COMPACTION AND SOIL RELATED OPERATIONS SHALL BE PERFORMED ACCORDING TO GEOTECHNICAL REPORT RECOMMENDATIONS.	

K. Hovnanian Homes, "Standard Specifications, The Gallery, 18 Lots," dated May 2, 2016, Bates Number "SMC000241," states the following:

Concrete: POST TENSION – 9" slab
Note: Soils Reports to be used are Pro Tex, project number # 4222 dated March 18th, 2015.

These notes are generally consistent with the Protex recommendations.

2. LATERAL FORCE RESISTING SYSTEM (LFRS)

The buildings at the Gallery site are three-story 3-plex and 5-plex townhomes. The foundation system includes 8-inch-thick post-tensioned slab-on-ground for each building footprint. The superstructure is constructed of conventional 2x wood stud framing and prefabricated engineered floor and roof trusses. The LFRS is comprised of the roof and floor diaphragms and gypsum wall board and wood-sheathed braced or shear walls.

a. Non-Compliant LFRS

The LFRS is a system of framing members and connections that are intended to transfer the lateral forces, which are developed from wind or seismic loads, from the roof and floor diaphragms of a building through collectors and ultimately into the foundation systems that transfer loads to the supporting soils. For an LFRS to function as a complete system, it must provide a continuous load path as the code mandates. This continuous load path system includes the use of properly designed and installed floor and roof diaphragms, collectors, shear walls, blocking, straps, hold-downs, anchorage from the bottom of the shear wall to the level below or foundation, and other mechanical connectors. The building's lateral resistance is part of the occupant safety criteria and building performance criteria. Failure to design and construct a complete LFRS based on the site-specific design criteria results in the potential for building damage and loss of use due in part to increased damages.

Intrusive examination revealed the framing at Unit 3111 of Building D of the Gallery site was constructed without the proper LFRS that was clearly detailed on structural braced/shear wall plans. The architectural plans label Building D as plan type 31-1211. The structural braced/shear wall plans for the front of the second floor of plan type 31-1211 specify a braced/shear wall type 4, which is a continuous 3/8-inch minimum rated sheathing behind the pop-out wall with .113 x 2-3/8-inch nails spaced per the braced/shear wall schedule. The braced/shear wall plan required one CMSTC16 or two CS16 straps at each end of the exterior sheathing installed with required fasteners to provide minimum tensile capacity of 3410-pounds-force.

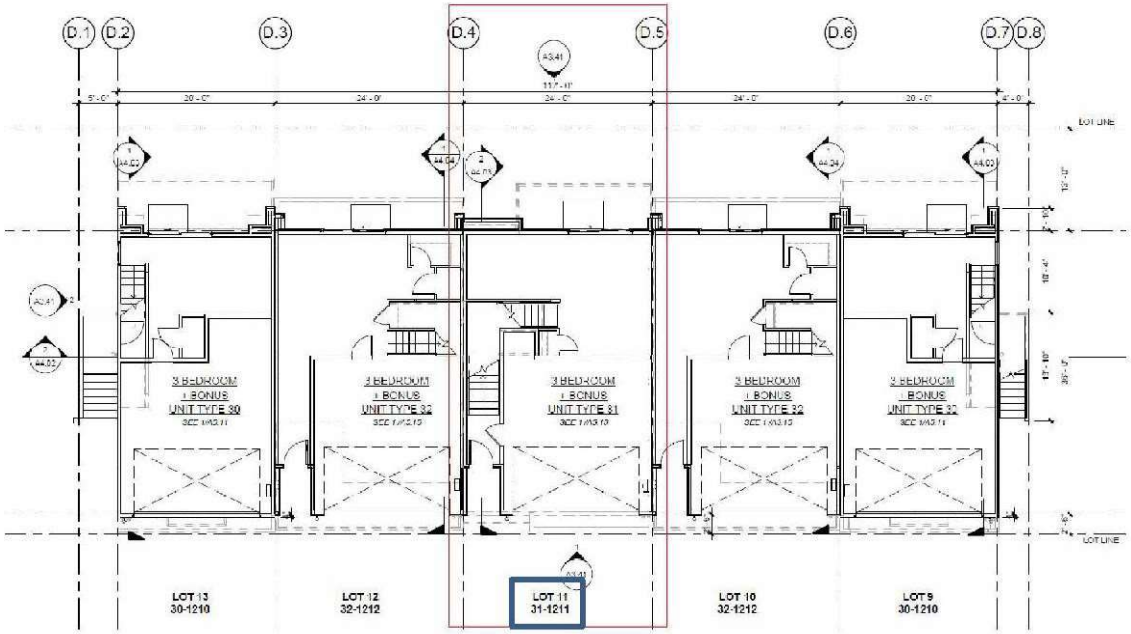
As constructed, the cladding was installed over open stud framing without the required exterior sheathing at the second floor level between the triple panel slider window in the great room and the pop-out wall. Fasteners in the CS16 strap connecting the exterior sheathing below the triple panel window were missing and the steel strap had buckled. The buckled steel strap and the missing exterior wood sheathing failed to comply with the braced/shear wall plan specified on the structural drawings. The non-compliant condition more likely than not reduces the structural integrity of the LFRS, as intended by the Structural Engineer of Record (EOR) and requires repairs.

Where non-compliant LFRS exists, the as-built condition falls short of the prescriptive requirements of the relevant codes, design, and industry standards and, therefore, the developer, contractor, and subcontractors who performed the work fell below the standard of care.

Applicable Code/Industry Standard References/Project-Specific Documents:

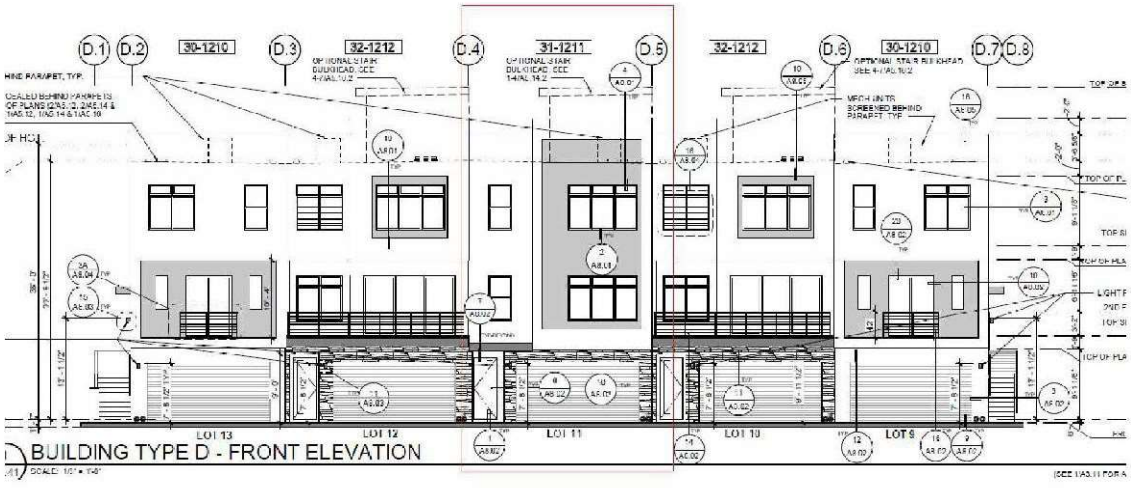
Otak, Inc., "K. Hovnanian Homes, Gallery Townhomes," revised date August 2, 2016, Sheet A2.41 "1st & 2nd Floors Building D, 5-Plex, Gallery Site #4,," Detail 1, illustrates the following:

- *"1/A2.41 First Floor Plan – Building D- 5 Plex"*



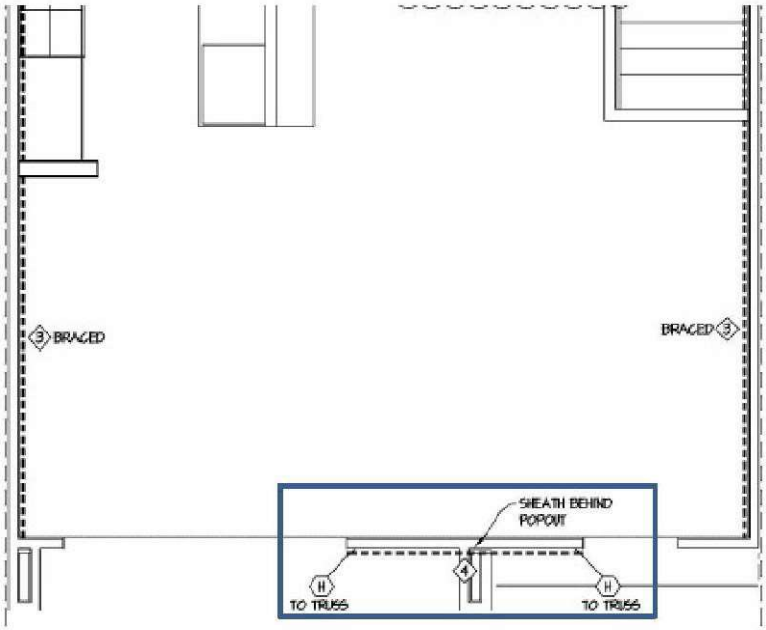
Otak, Inc., "K. Hovnanian Homes, Gallery Townhomes," revised date August 2, 2016, Sheet A3.41 "Exterior Elevations Building D, 5-Plex, Gallery Site #4," Detail 1, illustrates the following:

- *"1/A3.41 Building Type D- Front Elevation"*



Felten Group, "K. Hovnanian Homes, Subdivision Gallery," revised June 8, 2016, Sheet 3.3 "Braced/Shear Wall Plans," states the following:

- *"31-1211, 2nd Floor, Braced/ Shear Wall Plan"*



- *"Holdown Schedule"*

H	CMSTC16 STRAP CLEAR SPAN + 38" W/ (44) 10d NAILS (3410 LBS.) OR (2) CS16 STRAPS CLEAR SPAN + 28" W/ (26) 8d NAILS EACH STRAP (3410 LBS.)

Example Photographs:

March 10, 2021, Disc IT8, Photograph 41, SSR, Building D – Unit 3111, overall view of building elevation with non-compliant LFRS. Red box outlines the approximate area within which the exterior sheathing was identified to be missing.

March 10, 2021, Disc IT8, Photograph 237, SSR, Building D – Unit 3111, missing OSB sheathing at existing stud framing.

March 10, 2021, Disc IT8, Photograph 248, SSR, Building D – Unit 3111, missing OSB sheathing at existing stud framing.

March 10, 2021, Disc IT8, Photograph 278, SSR, Building D – Unit 3111, CS-16 metal strap is disengaged and buckled.

Locations:

Non-compliant LFRS was identified at Building D - Unit 3111 of the Gallery site. Refer to the attached Observation Drawings and Defect Matrix for locations and details of findings. Similar non-compliant LFRS issues will more likely than not be discovered during stucco repairs recommended in Sections C.1.b and C.1.c of this report.

b. Non-Compliant WRB for Stucco System

The building code, manufacturer specifications, and industry standards require a complete and compliant WRB behind moisture-managed claddings. The architectural drawings specify installation of WRB per section 2510.6 of the IBC. The stucco manufacturer's product evaluation report ESR-3529 specifies installation of WRB per the applicable building codes.

The applicable codes and the ESR-3529 require the WRB with a performance equivalent to two layers of Grade D paper, such that each layer provides a separate continuous plane. An exception to the above stated requirements is if the WRB applied over solid sheathing has a water resistance equal to or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially non-water-absorbing layer or drainage space.

Intrusive examination revealed that a single layer of WRB was generally installed over open stud framing and solid sheathing. Occasionally, two layers of WRB over framing were identified to have been used. The WRB used at the Gallery site was labeled GMCraft-10 324, Type 1, Grade D, Style 2, ESR 2376. The label indicates that the WRB product used throughout the site is an asphalt-saturated type D building paper that has a nominal finish weight of 3.5-pounds-per-100-square-feet and designed to resist water intrusion for a minimum of 10-minutes when tested according to ASTM D-779. The nominal weight for a number 15 asphalt felt is generally between 7.5- to 12.5-pounds-per-100-square-feet (psf). The WRB manufacturer's product specifications state the GMCraft-10 exceeds 20-minutes of water resistance but does not meet the 60-minute requirement required by the building code and the stucco manufacturer. As constructed, the applied WRB does not meet the nominal weight, the number of required layers, the water resistance requirements of the applicable building code, and the ESR-3529 report for the Amerimix stucco system specified on the architectural drawings. This deficiency in material properties and number of WRB layers impairs the functionality of the stucco system as required in the building codes and the stucco manufacturer's product specifications.

Haphazardly installed and closely spaced staple and fastener holes facilitate the water intrusion, causing damage and increasing future additional damage. Full-length rusted fasteners and stains on framing indicate damage due to water intrusion where the non-compliant WRB was installed behind stucco. Failure of the moisture-management system along with the combination of other construction defects as discussed in this report will continue to direct water onto moisture-sensitive building components.

Where non-compliant WRB for stucco system exists, the as-built condition falls short of the prescriptive requirements of the relevant codes, design, and industry standards and, therefore, the developer, contractor, and subcontractors who performed the work fell below the standard of care.

Applicable Code/Industry Standard References/Project-Specific Documents:

Otak, Inc., "K. Hovnanian Homes, Gallery Townhomes," revised date August 2, 2016, Sheet A1.01 "Construction Assemblies," states the following:

- *"IBC 1405.10.1.1 WATER RESISTIVE BARRIERS*

  Water-Resistive Barriers Shall Be Installed As Required In Section 2510.6"

ICC Evaluation Service Report (ESR), "Evaluation Report ESR-3529 "Evaluation Subject: Amerimix Fiber Base Coat Stucco," reissued February 2017, Section 3.0 "Description," subsection 3.2 "Material," states the following:

- *"3.2.10 Weather Protection:*

  3.2.10.1 Water-resistive Barrier: A water-resistive barrier is required and must comply with IBC Section 1404.2, IRC Section R703.2 or UBC Section 1402.1, as applicable. The barrier must be minimum No. 15 asphalt non-perforated felt complying as Type 1 in accordance with ASTM D226 (IBC or IRC); minimum Grade D kraft building paper complying with UBC Standard 14-1; asphalt-saturated rag felt complying with UL standard 55A (UBC); or material recognized in a current evaluation report as complying with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38).

  When applied over any wood-based sheathing, the barrier must be one of the following:

  a. A minimum of two layers of Grade D kraft building paper as set forth in IBC Section 2510.6, IRC Section R703.6.3 or UBC Section 2506.4, or an equivalent recognized in a current evaluation report.

  b. One layer of EPS insulation board having horizontal tongue-and-groove edges as described in Section 3.2.4, over one layer of Grade D kraft building paper having a minimum water-resistance rating of 60 minutes, or a water-resistive barrier recognized in a current ICC-ES evaluation report as having a minimum water-resistance rating of 60 minutes."

International Code Council, Inc. (ICC), "International Residential Code (IRC)," 2012, Chapter 7 "Wall Covering," Section R703 "Exterior Covering," Subsection R703.6 "Plaster," states the following:

Note: No local amendments for this section.

- ***"R703.6.3 Water-resistive barriers**. Water-resistive barriers shall be installed as required in Section 1404.2 and, where applied over wood-based sheathing, shall include a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper. The individual layers shall be installed independently such that each layer provides a separate continuous plane and any flashing (installed in accordance with Section 1405.4) intended to drain to the water-resistive barrier is directed between the layers.*

  Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal to or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially nonwater-absorbing layer or drainage space."

International Code Council, Inc. (ICC), "International Building Code (IBC)," 2012, Chapter 25 "Gypsum Board and Plaster," Section 2510 "Lathing and Furring for Cement Plaster (Stucco)," states the following:

Note: No local amendments for this section.

- *"2510.6 **Water-resistive barriers.** Water-resistive barriers shall be installed as required in Section 1404.2 and, where applied over wood-based sheathing, shall include a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper. The individual layers shall be installed independently such that each layer provides a separate continuous plane and any flashing (installed in accordance with Section 1405.4) intended to drain to the water-resistive barrier is directed between the layers.*

  Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal to or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially nonwater-absorbing layer or drainage space."

International Code Council, Inc. (ICC), "International Building Code (IBC)," 2012, Chapter 14 "Exterior Walls," Section 1404 "Materials," states the following:

Note: No local amendments for this section.

- *"**1404.2 Water-resistive barriers.** A minimum of one layer of No. l5 asphalt felt, complying with ASTM D 226 for Type 1 felt or other approved materials, shall be attached to the studs or sheathing, with flashing as described in Section 1405.4, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer."*

International Code Council, Inc. (ICC), "International Residential Code (IRC)," 2012, Chapter 7 "Wall Covering," Section R703 "Exterior Covering," states the following:

Note: No local amendments for this section.

- *"**R703.2 Water-resistive barrier.** One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1.*

  Exception: Omission of the water-resistive barrier is permitted in the following situations:

  1. In detached accessory buildings.

  2. Under exterior wall finish materials as permitted in Table R703.4.

  3. Under paperbacked stucco lath when the paper backing is an approved water-resistive barrier."

GMC Roofing & Building Paper Products, Inc. (GMC), "GMCraft 10 Minute Weather-Resistive Barrier, Product Data," June 2020, "Product Description," states the following:

- *"GMCraft is an asphalt saturated type "D" building paper exceeding the industry standards as a water-resistive-barrier. It is designed to prohibit water or moisture intrusion behind stucco and other exterior wall claddings. GMCraft offers superior protection against internal damage due to excessive moisture and condensation."*

GMC Roofing & Building Paper Products, Inc. (GMC), "GMCraft 10 Minute Weather-Resistive Barrier, Product Data," June 2020, "Test Results," states the following:

GMCraft 10	Test Method	Test Results
Water Vapor Transmission	ASTM E-96-00	**38 Perms**
Water Resistance	ASTM D-779	**Exceeds 20 minutes**
Tensile Strength	ASTM D-828	**MD 45 lb-f/in CD 21 lb-f/in**

ICC Evaluation Service Report (ESR), "Evaluation Subject: GMCraft 10 Minute, GMCraft 30 Minute, and GMCraft 60 Minute Water-Resistive Barriers, ESR-2376," reissued May 2019, Section 3.0 "Description," subsection 3.2 "GMCraft 10 Minute," states the following:

- *"GMCraft 10 Minute is asphalt-saturated kraft paper complying with UBC Standard 14-1 as Type I, Grade D, Style 2. The building paper has a nominal finish weight of 3.5 pounds per 100 square feet (0.17 kg/m2)."*

ICC Evaluation Service Report (ESR), "Evaluation Subject: GMCraft 10 Minute, GMCraft 30 Minute, and GMCraft 60 Minute Water-Resistive Barriers, ESR-2376," reissued May 2019, Section 4.0 "Installation," subsection 4.1 "General," states the following:

- *"When the barriers are installed over wood-based sheathing in exterior plaster applications, two layers of the product must be applied over the sheathing in accordance with Section 2510.6 of the 2012, 2009 and 2006 IBC or Section R703.7.3 [2012, 2009 and 2006 IRC Section R703.6.3] of the 2018 and 2015 IRC. As an alternative, one layer of the GMCraft 60 Minute may be installed in accordance with the exception to Section 2510.6 of the 2012, 2009 and 2006 IBC or the 2018 and 2015 IRC Section R703.7.3 [2012, 2009 and 2006 IRC Section R703.6.3]. Installation of water-resistive barriers under 2018 and 2015 IBC Section 2510.6 over wood-based sheathing is outside the scope of this report. For cementitious coatings over exterior insulation and finish systems, application must be in accordance with the ICC-ES evaluation report on the exterior coating system."*

Example Photographs:

March 9, 2021, Disc IT6, Photograph 314, SSR, Building A, one layer of WRB with 10-minute water resistance. Label references ESR 2376.

March 9, 2021, Disc IT5, Photograph 178, JJF, Building B, one layer of WRB over sheathing.

March 9, 2021, Disc IT5, Photograph 72, JJF, Building B, one layer of WRB over framing.

March 9, 2021, Disc IT5, Photograph 75, JJF, Building B, damaged framing due to water intrusion.

March 10, 2021, Disc IT9, Photograph 124, SSR, Building C, manufacturer's label shows the building paper is Type 1, Grade D, Style 2 building paper with 10-minute water resistance and references ESR 2376.

March 10, 2021, Disc IT8, Photograph 216, SSR, Building D, manufacturer's label shows the building paper is Type 1, Grade D, Style 2 building paper with 10-minute water resistance and references ESR 2376.

March 10, 2021, Disc IT8, Photograph 93, PER, Building C, deteriorated WRB over framing.

March 10, 2021, Disc IT8, Photograph 101, PER, Building C, deteriorated WRB over framing.

March 10, 2021, Disc IT7, Photograph 136, JJF, Building D, one layer of WRB over sheathing.

March 10, 2021, Disc IT8, Photograph 114, SSR, Building D, one layer of WRB over framing with visible stains.

March 10, 2021, Disc IT8, Photograph 120, SSR, Building D, deteriorated WRB over framing with visible stains.

March 10, 2021, Disc IT8, Photograph 172, SSR, Building D, full-depth rusted fasteners.

Locations:

Non-compliant WRB for the stucco system exists at all locations where stucco is applied across the Gallery site. Refer to the attached Observation Drawings and Defect Matrix for locations and details of findings.

c. Non-Compliant EPS Foam Board for Stucco System

The architectural drawings and builder's specifications both specify Amerimix stucco system installed over a 1-inch-thick rigid foam substrate. The architectural drawings and the manufacturer's product specification both refer to ESR-3529. Where the stucco system is installed over open stud framing, the ESR-3529 requires a minimum 1-inch-thick EPS foam plastic insulation board with 3/8-inch projecting tongues and compatible grooves for horizontal joints. Where installed over solids substrates such as OSB sheathing, the ESR-3529 requires a minimum 1/2-inch-thick EPS foam plastic insulation board with vertical grooves on the back face (interior side) of the boards. The groves are required to be a minimum 1/4-inch wide by 1/8-inch deep spaced a maximum of 12-inches to allow efficient drainage of moisture between the EPS foam boards and the WRB. As an alternative to EPS foam boards with vertical grooves, ESR-3529 allows using flat-faced EPS foam boards if Tyvek StuccoWrap® or Tyvek DrainWrap® WRB is installed over the solid substrate.

Intrusive examination revealed that the foam board used at the Gallery site was generally 3/8- to 7/8-inch thick, did not have the required vertical grooves, and was installed tight to the improperly selected WRB. The GMCraft-10 WRB was installed at all buildings and is not recognized by ESR-3529 for application of flat-faced foam boards without vertical grooves. Flat-faced foam boards installed tight to the WRB are non-compliant with the project requirements, prevent a bond break or drainage gap between the stucco system and the WRB, and obstruct drainage of the moisture behind the stucco. Use of non-compliant EPS foam boards in combination with the non-compliant WRB type reduces the overall performance of the moisture-management system. Damage included stains on the interior face of the EPS foam boards and full-length rusted fasteners where entrapped water overwhelmed the moisture-management system. This non-compliant condition, along with the combination of other construction defects of the stucco system, will more likely than not reduce the integrity of the structural components and the general appearance of the cladding in the foreseeable future.

Where non-compliant EPS foam board exists, the as-built condition falls short of the prescriptive requirements of the relevant codes, design, and industry standards and, therefore, the developer, contractor, and subcontractors who performed the work fell below the standard of care.

Applicable Code/Industry Standard References/Project-Specific Documents:

ICC Evaluation Service Report (ESR), Evaluation Report ESR-3529 "Evaluation Subject: Amerimix Fiber Base Coat Stucco," reissued February 2017, Section 3.0 "Description," subsection 3.2 "Material," states the following:

- *"3.2.4 **Foam Plastic Insulation Boards:** Foam plastic insulation formed from expanded polystyrene (EPS) resin, with a maximum flame spread index of 25 or less and a smoke-developed index not exceeding 450 when tested in accordance with ASTM E84 in the thickness intended for use. The foam plastic insulation boards must have a minimum nominal density of 1.5 pounds per cubic foot (24.0 kg/m3). When installed over open stud framing, the boards must be a minimum of 1 inch (25.4 mm) thick and have 3 /8-inch (9.5 mm) projecting tongues with compatible grooves for horizontal joints. See Figure 1 for*

joint detail. Foam plastic boards installed over solid substrates must have a minimum thickness of 1/2 inch (12.3 mm). The maximum board thickness must not exceed 4 inches (25.4 mm). All boards must be recognized in a current ICC-ES evaluation report. See Section 7.3 for board identification. When installation is over solid substrates, as described in Section 4.3, the boards must have minimum 1/4-inch-wide-by-1/8-inch-deep (6.4 mm by 3.2 mm) vertical grooves spaced a maximum of 12 inches (305 mm) on the back face of the boards. As an alternate to the vertical grooves in the foam plastic board, flat-faced boards may be installed over solid substrates provided the Tyvek StuccoWrap or Tyvek DrainWrap water-resistive barrier, recognized in ESR-2375, is installed between the EPS board and the solid substrate."

ICC Evaluation Service Report (ESR), Evaluation Report ESR-3529 "Evaluation Subject: Amerimix Fiber Base Coat Stucco," reissued February 2017, Section 4.0 "Installation," subsection 4.3 "Application over Solid Substrates," states the following:

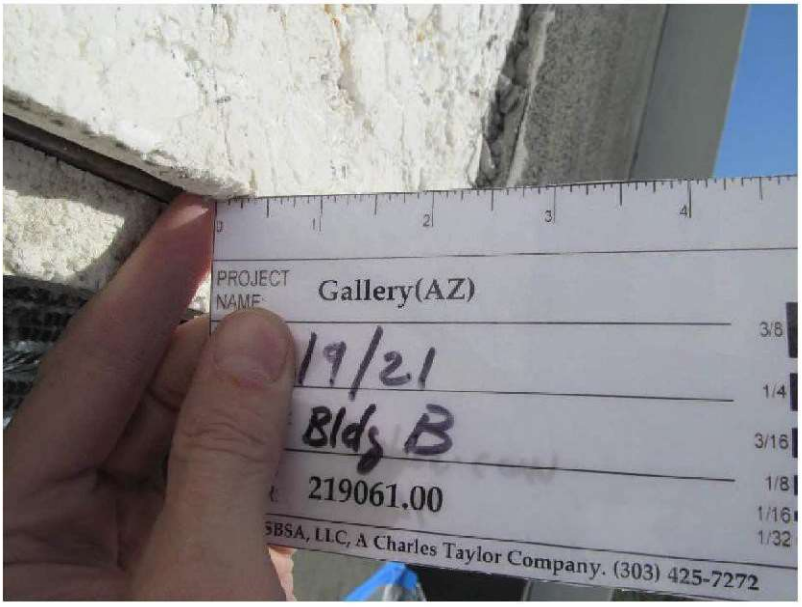
- *"**4.3.1 General:** All solid substrates, except for concrete and unit masonry, must be covered with a minimum of one layer of water-resistive barrier as described in Section 3.2.10.1 of this report and the lath described in Section 3.2.3 of this report. The installation of EPS boards over solid substrates is optional and must be governed by the conditions stated in this report. When EPS boards are installed over solid substrates, the EPS boards must incorporate vertical grooves as described in Section 3.2.4 or be flat-faced foam boards incorporating Tyvek water-resistive barriers described in Section 3.2.4 of this report. Two layers of water-resistive barriers as described in Section 3.2.10.1 are needed where wood-based substrates occur and the length of the fasteners used to attach the lath must be increased by the thickness of the EPS boards."*

Example Photographs:

May 14, 2019, Disc IT3, Photograph 18, JBF, Building A, EPS foam board installed tight to WRB and vertical grooves generally missing at the inner face.

March 9, 2021, Disc IT6, Photograph 271, SSR, Building A, EPS foam board installed tight to GMCraft WRB and vertical grooves generally missing at the inner face.

March 10, 2021, Disc IT7, Photograph 20, JJF, Building B, EPS foam board installed over WRB with vertical grooves generally missing at the back face.



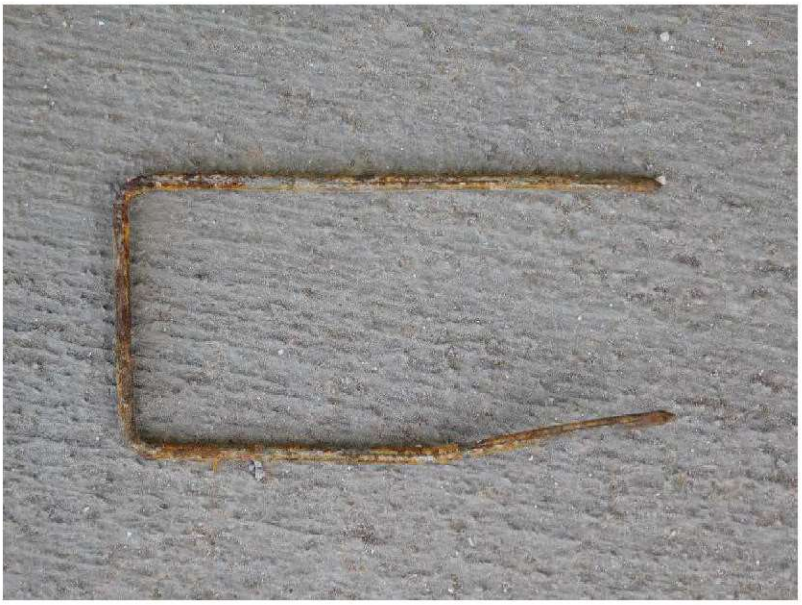
March 9, 2021, Disc IT5, Photograph 155, JJF, Building B, 3/8-inch-thick EPS foam board installed over WRB with vertical grooves generally missing at the back face.

May 13, 2019, Disc IT1, Photograph 116, JBF, Building B, 1/2-inch-thick EPS insulation installed over OSB sheathing does not incorporate vertical grooves.

March 10, 2021, Disc IT7, Photograph 279, JJF, Building C, EPS foam board installed over WRB with vertical grooves generally missing at the back face.

March 10, 2021, Disc IT7, Photograph 210, JJF, Building C, EPS foam board installed tight to WRB and vertical grooves generally missing at the back face.

March 10, 2021, Disc IT9, Photograph 92, PER, Building C, rusted lath



March 10, 2021, Disc IT9, Photograph 90, PER, Building C, rusted staples

March 10, 2021, Disc IT9, Photograph 87, PER, Building C, rusted staples and lath

March 10, 2021, Disc IT9, Photograph 95, PER, Building C, EPS foam board installed tight to WRB and vertical grooves generally missing at the back face. Note corrosion from the nails on the EPS foam board.

March 10, 2021, Disc IT7, Photograph 117, JJF, Building D, EPS foam board installed over WRB with vertical grooves generally missing at the back face.

March 10, 2021, Disc IT7, Photograph 226, JJF, Building D, EPS foam board installed over WRB with vertical grooves generally missing at the back face.

Locations:

Non-compliant EPS foam board installation for stucco exists at locations where stucco is applied over solid substrates across the Gallery site. Refer to the attached Observation Drawings and Defect Matrix for locations and details of findings.

GENERAL RECOMMENDATIONS FOR REPAIR

All comments made are based on conditions seen at the time of these observations. SBSA does not accept any responsibility for unknown or unknowable conditions within the existing site or structures that are typically encountered during the rehabilitation process. The repair recommendations herein are conceptual and are intended for cost estimating purposes only. They are intended to provide repairs in conformance with the applicable building code and industry standard of care. These repairs are not intended for construction or for use on this project or extensions of the project unless completed, adapted, stamped, or acknowledged by SBSA. Any and all designs, repair recommendations, or work provided herein is an instrument of service of SBSA. Instruments of service are intended to work in a full system property/fully integrated system approach and should not be used individually without adaptation and completion by or from SBSA. Any unauthorized use of instruments of service shall be at the sole risk of the user and SBSA shall not be liable in any way for such use. The intent of the following is that all repairs will be provided in whole. It will be necessary for qualified design professionals to perform additional work to prepare proper construction documents, details, calculations, and specifications suitable for construction of the repairs described herein.

The repair cost is a Level Two (Schematic/Conceptual Design) estimate as defined in the Standard Estimating Practice, 9th Edition, by the American Society of Professional Estimators. The estimation for this level may range from -20 to plus 10-percent of accuracy.

Contingencies: Normal reconstruction contingencies are 10-percent of the unburdened construction services total, and have some relation to the general conditions of the project. The general conditions should be reviewed for both contingency and design fees and should be burdened appropriately to those items that require review and work with the design team and that require relation to the discovery, measurement, scheduling, and repair of the work for contingent items. Based on SBSA's findings on this project; damage to flatwork and asphalt, of misapplied materials, damage to substrates, WRB and interstitial spaces, SBSA believes that the burden for contingent items (known/unknowns) should be set at 10-percent.

All repairs shall be performed per applicable building codes, project-specific details, manufacturer installation guidelines, and industry standards.

A. STRUCTURAL

1. COMPLIANCE WITH GEOTECHNICAL REPORT

- The original geotechnical report presents recommendations for overexcavation, soil stabilization, and drainage on the site. Review the original geotechnical report for applicable design and construction recommendations for informational purposes.

2. LATERAL FORCE RESISTING SYSTEM (LFRS)

a. Non-Compliant LFRS

- All LFRS repairs shall be performed per the braced/shear wall and holddown schedule provided on Sheets S3.1 through S3.6 of the Felten structural plans as designed by the Structural EOR.
- For Unit 3111 of Building D, perform the following repairs to the LFRS.

- Remove existing stucco to coordinate with repairs recommended in Sections C.1 and C.2 of this report.
- Repair contractor to verify and confirm the extent of repairs to the LFRS.
- Where exterior sheathing is identified as missing, install new 3/8-inch minimum-rated sheathing using specified nails spaced to provide minimum shear resistance of 306-plf per the braced/ shear wall schedule.
- Where existing strap is identified as installed incorrectly, remove and replace with new strap per the holddown schedule. Install according to the manufacturer's installation requirements.
- Reinstall cladding per the repairs recommended in Sections C.1 and C.2 of this report.

- Repair contractor to include 10-percent of the stucco repair costs for use as a contingency for the repairs for the non-compliant LFRS. The as-built construction of the LFRS will be compared with LFRS design on the Felten structural plans as designed by the Structural EOR after the stucco system is removed.

B. CIVIL

1. GRADING AND DRAINAGE

a. Drainage Bounded by Concrete Flatwork

- Perform repairs at all locations noted in the Civil Repair Drawings.
- Coordinate sidewalks, curbs, and roadway to allow for proper site geometric integration in all new construction. A full topographical survey from the curb line to the face of the building will be required due to the limited site elevation difference to enable design to correct the deficient construction.
- Construct concrete aprons below roof drain terminations. Where sidewalks exist, remove sidewalk to nearest joint and provide sidewalk chase. Where no sidewalks are constructed, construct curb cut to allow flow out of bounded area, and regrade unpaved area to drain.
- Place rocks (4- to 6-inch diameter) in concrete aprons.
- Adjust existing electrical and irrigation boxes as required.

b. Non-Compliant Management of Concentrated Flows

- Perform repairs at all locations noted in the Civil Repair Drawings.
- Construct concrete aprons below roof drain terminations. Where sidewalks exist, remove sidewalk to nearest joint and provide sidewalk chase. Where no sidewalks are constructed, construct curb cut to allow flow out of bounded area.
- Place rocks (4- to 6-inch diameter) in concrete aprons.
- Adjust existing electrical and irrigation boxes as required.

2. CONCRETE FLATWORK

a. **Non-Compliant Cross-Slope of Sidewalks**

- Remove and replace concrete as noted in Civil Repair Drawings. Coordinate between asphalt roadway, curb profile, and sidewalks to achieve geometric integration.
- Concrete removal shall be to the nearest construction/control joint.
- Ensure that subgrade is prepared in compliance with the recommendations of a geotechnical engineer prior to the placement of concrete.
- Ensure grading and drainage direct runoff away from flatwork subbase.
- Ensure all new flatwork meets slope requirements set forth in the current applicable building code as amended by the City of Scottsdale, MAG Standard Details, and ADA/ANSI standards.
- At all locations where new concrete flatwork is to be constructed directly adjacent to vertical building elements, provide full-depth, 1/2-inch expansion joints in compliance with applicable codes and/or industry standards.

b. **Non-Compliant Longitudinal Slope of Sidewalks**

- Remove and replace concrete as noted in Civil Repair Drawings.
- Concrete removal shall be to the nearest construction/control joint.
- Ensure that subgrade is prepared in compliance with the recommendations of a geotechnical engineer prior to the placement of concrete.
- Ensure grading and drainage direct runoff away from flatwork subbase.
- Ensure all new flatwork meets slope requirements set forth in the current applicable building code as amended by the City of Scottsdale, MAG Standard Details, and ADA/ANSI standards.
- Verify final geometry using topographic survey. If required, construct code-compliant stairs at entrances to buildings or at bottoms of existing stairways.
- At all locations where new concrete flatwork is to be constructed directly adjacent to vertical building elements, provide full-depth, 1/2-inch expansion joints in compliance with applicable codes and/or industry standards.

c. **Non-Compliant Landings**

- Remove and replace concrete as noted in Civil Repair Drawings.
- Concrete removal shall be to the nearest construction/control joint.
- Ensure that subgrade is prepared in compliance with the recommendations of a geotechnical engineer prior to the placement of concrete.
- Ensure grading and drainage direct runoff away from flatwork subbase.

- Ensure all new flatwork meets slope requirements set forth in the current applicable building code as amended by the City of Scottsdale, MAG Standard Details, and ADA/ANSI standards. Maximum slope of landings to be 2-percent.
- Verify final geometry using topographic survey. If required, construct code-compliant stairs at entrances to buildings or at bottoms of existing stairways.
- At all locations where new concrete flatwork is to be constructed directly adjacent to vertical building elements, provide full-depth, 1/2-inch expansion joints in compliance with applicable codes and/or industry standards.

C. BUILDING ENVELOPE

1. FAÇADE (EXTERIOR CLADDING AND SEALANTS) TYPE 1 – STUCCO

a. Missing Weep Mechanism in Stucco

- Coordinate with replacement of the WRB and the stucco system as described in Sections C.1.b and C.1.c of this report.
- Install new weep mechanisms at the following horizontal terminations.
- At window heads, slider door heads, swing door heads, and garage door heads, terminate the weep casing bead 1/4-inch above sheet metal head flashing.
- At soffits, install weeps per the architectural Detail 4/A8.03 and manufacturer's requirements.
- Shingle-lap WRB with new weep mechanisms.
- Coordinate repair with related stucco and underlying moisture-management repair recommendations as well as all adjacent civil repair recommendations.

b. Non-Compliant WRB for Stucco System

- Full removal and replacement of the stucco and the exterior insulation is required to address the non-compliant installation of the WRB for the existing stucco system. Remove existing WRB to perform following repairs.
- Install missing exterior sheathing and straps, as necessary, per the LFRS repairs recommended in Section A.2 of this report.
- Install sheet metal flashings per Section C.2.a of this report.
- Ensure that the WRB above is shingle-lapped with the sheet metal flashing.
- Install new WRB per the requirements of ESR-3529 for the existing stucco system.
    - Repair contractor to estimate using between two layers of Grade D kraft building paper or one layer of Grade D kraft paper with minimum water-resistance rating of 60-minutes or using Tyvek products such as StuccoWrap or DrainWrap as specified in Section 3.2.4 and Section 3.2.10 of ESR-3529.
- Ensure all WRB terminations shingle-lap with all surrounding rigid and flexible flashings, weeps, and accessories.
- Install EPS foam boards per repairs recommended in Section C.1.c of this report.

- Install new stucco system to comply with the current requirements of ESR-2359.
- Install lath per the stucco manufacturer and ASTM C1063.
- Install control joints at fenestration corners, floorlines, top plate/truss lines, and within the field of the wall to comply with ASTM C1063 and the stucco manufacturer.
- Install weep casing beads with 3-1/2-inch vertical legs at all stucco terminations Ensure that the WRB shingle-laps with the new weep casing beads.
- Coordinate with adjacent repairs, including underlying moisture-management and stucco repair recommendations.

c. **Non-Compliant EPS Foam Board for Stucco System**

- Full removal and replacement of the stucco is required to address the non-compliant installation of the EPS foam board for the existing stucco system.
- Where installed over solid substrates, remove existing EPS foam board to perform the following repairs. Also refer to other stucco repairs in this report.
- Ensure all EPS foam boards have 3/8-inch projecting tongues with compatible grooves at horizontal joints.
- At solid substrates, install new minimum 1/2-inch-thick EPS foam board with vertical grooves spaced at a maximum 12-inches on-center on the back face of the boards. The vertical grooves should be a minimum 1/4-inch wide by 1/8-inch deep as required by ESR-3529.
- As an alternative to EPS foam boards with vertical grooves, flat-faced EPS foam boards may be installed over the solid substrates provided the WRB recommended in Section 3.2.4 of ESR-3529 is used.
- Coordinate with adjacent repairs, including underlying moisture-management and stucco repair recommendations.
- Where EPS foam board repairs are necessary at open stud framing, use minimum 1-inch-thick EPS boards installed in compliance with ESR-3529.

d. **Non-Compliant Slope of Horizontal Stucco Surfaces**

- Repair to be performed at all stucco parapet walls and pop-out boxes sloped less than 2:1.
- Remove existing stucco, lath, and building paper as required to perform the repair as described below.
- Install continuous shims to provide a 2:1 minimum slope on stucco wall caps.
- Install new self-sealing SAM that reduces the potential for water intrusion due to fastener holes. Install new SAM over the top of the continuous shim, ensuring SAM shingle-laps over the adjacent WRB on all sides and forms a continuous saddle at the intersections with the adjacent wall.
- Reinstall stucco as described in Repair Section C.1.c.

- Coordinate repair with related cladding, flashing, and underlying moisture-management recommendations.

e. Deficient Self-Adhered Membrane under Horizontal Stucco System

- Refer to Repair Section C.1.d of this report.

f. Missing Control/Movement Joints

- Refer to Repair Section C.1.b of this report.

2. MOISTURE-MANAGEMENT SYSTEM (BARRIERS, FLASHINGS, DRAINAGE, ETC.)

a. Missing Sheet Metal Flashing at Window Head

- Coordinate with replacement of the WRB and the stucco system as described in the stucco repair sections of this report.
- Where sheet metal flashing is missing at fenestration heads, perform the repair described below.
- Install new pre-finished sheet metal flashings with 4-inch vertical legs and horizontal legs sloped 10- to 15-degrees as detailed on the architectural plans with hemmed drip edges.
- Apply sealant at ends of sheet metal flashing to provide end dams.
- Ensure all flashing joints and corners are sealed.
- Ensure that the WRB above is shingle-lapped with the sheet metal flashing.
- Reinstall cladding per manufacturer instructions with a minimum 1/4-inch clearance between the bottom of cladding and the back of the sloped sheet metal flashing. Gap between the cladding and flashing to remain unsealed.
- Coordinate repair with related cladding and underlying moisture-management repair recommendations.

b. Non-Compliant Flashing to Stucco Interface

- At elevated decks and awnings, remove existing edge flashing and membrane/coating to allow for stucco repairs described below.
- Remove and replace stucco as required by the architectural details 12/A8.03 and 5/A8.04. Coordinate with replacement of the WRB and the stucco system as described in the stucco repair sections of this report.
- Install new edge flashing at decks per Section C.4.a of this report. New deck coating and new awning TPO perimeter edge membrane will be required to facilitate the repairs. Ensure the flashing is integrated with the new deck coating and awning TPO membrane.

c. **Non-Compliant Isolation Joints at Dissimilar Materials**

- At locations where stucco interfaces with dissimilar materials, perform the following repairs. Typical locations for repair include joints at fenestrations, penetrations at all cladding types, vertical joints between cladding types, and joints between all cladding types and wood trim, including fascia trim at re-entrant corners.
- Reinstall cladding as required to address other repair recommendations, providing 3/8- to 1/2-inch-wide gap between dissimilar materials. The depth to width ratio for the joint should be equal to 2:1. At stucco, provide casing bead at edge of joint.
- Install type B backer rod and low-modulus elastomeric sealant to provide compliant butt isolation joint at dissimilar material interfaces with joint widths that are 3/8-inch or greater.
- Install polyethylene bond breaker tape and low-modulus elastomeric sealant to provide compliant fillet isolation joint at dissimilar material interfaces where the existing space is less than 3/8-inch wide or the dissimilar materials are out of plane.
- Following installation of sealant isolation joints at penetrations through the cladding, set surface-mounted objects in continuous sealant against the face of the cladding. Where applicable, profile the sealant at the top of the surface-mounted objects to promote drainage over the top flanges.

3. **ROOFING SYSTEM TYPE 1 – SPRAY POLYURETHANE FOAM (SPF)**

a. **Non-Compliant Slope to Roof Drains**

- Repairs to be performed at all roof decks with non-compliant drainage.
- Remove and replace membrane and underlying substrates as necessary to perform repairs described below.
- Remove and replace damaged underlying coverboard and structure, if present.
- Install tapered insulation to provide positive drainage (1/4-inch minimum) towards roof drains.
- Slope cricket a minimum of 1/4-inch-per-foot along the valley.

4. **ELEVATED DECKS, BALCONIES, OR WALKWAYS**

a. **Non-Compliant Slope of Deck**

- Repairs to be performed at all decks with non-compliant slope and drainage at edge flashing.
- Remove existing deck edge flashing, membrane, and underlying substrates as necessary to perform repairs described below. Remove and replace damaged underlying structure, if present.
- Provide a notch equivalent to the thickness of the metal flashing and deck coating for a length equal to the horizontal leg of the flashing. Ensure the notch slopes positively towards the deck edge.

- Install new flashing and deck coating flush to the existing deck surface and sloped a minimum of 2-percent to the deck edge.
- Coordinate with repairs recommended in this report.

Limitations of Liability:

All comments made are based on conditions seen at the time of these visual observations and review of provided documentation. SBSA does not accept any responsibility for unknown or unknowable conditions within the existing site or structures. In addition, if the professional services of the consultant do not extend to the repair phase, then, by acceptance of this report, it is agreed that the owner will defend, indemnify, and hold harmless SBSA from any claim or suit whatsoever. SBSA agrees to be responsible for its own or its employees' negligent acts, errors, or omissions.

Sincerely,

SBSA, LLC
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Chief Executive Officer

SSR:DMD:JJF:ELF:kn

Attachments: Observation Photographs
Photograph Log
Observation Drawing Set, Sheets G0.00, A1.01-1.04, C1.01-C1.16, C2.01-C2.04, C3.01-C3.08
Repair Drawings, Sheets B1.01-B1.04
Defect Matrix
References

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