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SUBJECT: HISTORICAL SIGNIFICANCE OF SOLARMAX'S ADAPTIVE REUSE OF RIVERSIDE'S FMC BUILDING

SolarMax Technology, Inc. ("SolarMax") has taken on the difficult and historically significant task of adapting the World War II era Food Machinery Corporation (FMC) building in Riverside for its corporate headquarters. SolarMax hired my firm, Wilkman Historical Services (WHS), in April of this year to advise them on the best means for meeting its corporate needs while preserving the historic integrity of this extraordinarily important historical building.

The building on which Solar Max is working is one of two major factory buildings once used by FMC for its pioneering and industry-leading design and production of food processing machinery and amphibious military landing craft. The two buildings in which FMC complex is situated are northwest of the intersection of 14th Street and Howard Avenue in the City of Riverside. The first FMC building was built ca. 1938 and is situated north of 12th Street. This building is best known for food processing technology. The second building was built ca. 1942-1943 and is best known for the design and production of an amphibious military landing craft known as the "Water Buffalo." This latter building is the one being adapted for SolarMax's corporate headquarters and Southern California distribution center.

The entire FMC complex was designated a City of Riverside Cultural Heritage Landmark in 1995. In 2008, the complex was further studied and determined eligible for listing on the National Register of Historic Places. The complex's historical significance at both the local and national levels is tied to its relationship to food processing technology and the Water Buffalo military landing craft.

The Water Buffalo was an improved version of an amphibious craft known as the "Alligator", first developed as a peacetime amphibious vehicle for swamp rescue operations. Later adapted for military use, the Alligator was distinguished from the Water Buffalo in its lighter construction and lack of guns. Both the Alligator and Water Buffalo were known as "LVT" vehicles, standing for Landing Vehicle Tracked. The Alligator was intended for use primarily to deliver equipment and troops to uncontested beaches. FMC manufactured both vehicles. The Alligator was produced in Clearwater, Florida, while the Water Buffalo was produced in Riverside, California. The Water Buffalo was armored and equipped with guns so it could be used as an amphibious landing craft under enemy fire. First employed in combat on atoll Tarawa in the Pacific Islands, Water Buffalo landing craft proved highly effective in transporting troops from sea to land, with minimal loss of life compared to other

landing vehicles. Five models of the Water Buffalo were used in 20 different battles in the Pacific Islands.

Over the course of World War II, the Riverside plant was expanded to over 400,000 square feet, employing some 850 workers and producing three million dollars' worth of amphibious tanks. Of the 11,251 LVT's produced nationwide, over half were made in Riverside's FMC plant, and all of these were armed Water Buffalo models. Water Buffalos were produced in the Riverside plant between 1942 and 1946 to serve the needs of World War II, and then again between 1951 and 1958 for the Korean War. Between World War II and the Korean War, and after the Korean War, the building was used to produce food processing machinery.

The building being adapted by SolarMax retains incredible integrity, inside and out, to its World War II era of construction. And as such it interprets that history to a degree unmatched by any other World War II related building in the City of Riverside. In this regard, the building's exterior architecture and finishes remain largely unaltered. Important exterior features include the building's massive and numerous sawtooth skylights, its stucco and corrugated metal exterior wall cladding, and its historic doors and windows. Also of historical importance is the entry gate to the complex which is completely unaltered from its World War II configuration. Interior elements of significance include the building's impressive bowstring truss roof structure, its sawtooth skylights, and the wood timbers that support the massive structure. The extensive use of wood for all these structural elements is a direct reflection of the need during World War II of reserving steel for the manufacture of battle-related equipment. Other significant interior features include steel production line rails embedded in the concrete floors, and poured-in-place concrete walls used for fire separation wherever operations posing a fire hazard were situated in adjacent spaces.

SolarMax has worked closely with WHS and the City of Riverside to assure that its adaptation of the building will not significantly reduce the building's historic integrity. In this regard SolarMax has limited new penetrations of the building to just five locations on the building's Howard Avenue frontage. SolarMax is also working to preserve the historical materials of the skylights to the greatest extent possible. New architectural features designed to reflect SolarMax's corporate image are largely proposed to be situated in front of the historic building, so as to minimize alterations to historic fabric, and to provide views to the original building façade wherever possible. The effort to obtain a balance between corporate identity and historical integrity has been particularly challenging but SolarMax has been committed to finding creative solutions to these potentially disparate objectives.

Overall, the cause of historic preservation has been greatly advanced through SolarMax's adaptive reuse of the FMC Water Buffalo factory building. The building's massive size and its wood structural framework posed huge challenges to previous entities seeking to reuse the property. Prior to SolarMax, the most recent proposal for the site, advanced in 2008, called for the complete demolition of both FMC buildings to make way for a transit oriented development project. This developer and others who considered the adaptive reuse of the building abandoned their plans when the realities of structural issues, a total lack of interior insulation, and the daunting task of incorporating new uses into the massive interiors proved overwhelming. The previous user of the building, Atco Rubber Products, Inc., only used a small part of the building as a satellite distribution center for its rubber and metal ducting products. The balance of the building was left to languish and deteriorate from a lack of maintenance. SolarMax's proposed use of the building as both a warehouse and office/retail space made it possible to maintain large areas of the building in their historical open configurations. Most significant in this regard is SolarMax's proposal to devote a large public area at the front of the building to a history gallery where the history of the building will be interpreted. This space will not only serve as a place where the public can learn about the building's heritage, it will also be a significant area where the public can see the magnificent wood structural elements and skylights that are so important to the building's architecture.

SolarMax is the first company to design a reuse of this historical building that both respects the building's history and meets the functional needs of a contemporary use.

I would be happy to discuss this project with anyone who would like to learn more about this historically significant project.

Sincerely

A handwritten signature in cursive script, appearing to read "Bill Wilkman".

Bill Wilkman, MA
Wilkman Historical Service