

November 28, 2007

Ms. Debra Dockery, A.I.A.
Debra J. Dockery, Architect, P.C.
118 Broadway, Suite 516
San Antonio, TX 78205

Re: Plaza De Armas
111 Plaza De Armas
San Antonio, Texas 78205

Subject: Skylights Support Framing
Structural Evaluation

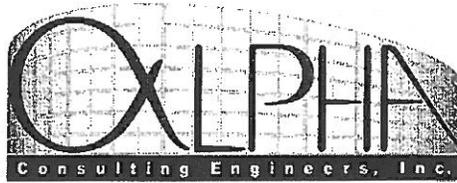
Dear Debra:

At your request, we conducted a visual observation of the existing skylights support framing at the above referenced building to determine if the existing structural framing is adequate to support additional weight of a proposed re-roofing of the building. Your office has provided some architectural and structural plans of the building modifications to our office but contains no information on the original building framing. Our investigation was conducted on the morning of October 12, 2007. The existing skylights are located over the three story tall Atrium of the building. The atrium is approximately 36 feet by 52 feet and 36 feet tall. After the initial site visit, our office proposed minor demolition to be performed to help further investigation. The limited demolitions were performed after work hours on November 8, 2007. The investigation was to gather any additional information to determine 1) the adequacy of the existing skylights support framing and 2) if new skylight framing can be supported by the two existing masonry walls at north and south side of the atrium.

A total of nine holes were drilled at the existing walls and four of the holes drilled showed some voids in the existing masonry walls (refer to architect's field report dated on Nov. 08, 2007). Also wood wall siding was removed from two corners underneath the skylights to determine the framing supporting the joists under the skylights.

Option 1

We have analyzed the existing wood framing supporting the skylights. There are a total of five skylights. Each one is approximately 52 feet long in north-south direction. These skylights are supported by 2" x 14" wood joists spaced at 4 feet on center spanning 36 feet perpendicular to the skylights. These joists are spliced with steel plates at about five feet from each end. Since information of wood grade and species of joists were not available, we have assumed the highest grade (Select Structural) Douglas Fir-Larch. The dead load of the existing skylights were estimated to be 15 pounds per square feet. The existing wood joists are grossly undersized even if



it was assumed to be the highest grade of wood available. As a matter of fact, even with the dead load of just the skylights, it is still grossly overstressed.

We also analyzed the perimeter wood beams supporting these joists. These beams are made of two 2x16 wood members. It seems the wood beams are spanning 52 feet in a north-south direction with a column in the middle. Therefore, span of the beam is 26 feet. These beams are also grossly undersized.

- It's very hard to tell the exact capacity of the existing joists and beams since no information is available on these wood members, but these wood members seem to be excessively overstressed past its allowable capacity. With it's own weight alone, they are close to failing. Definitely, these wood members don't have the capacity to meet the minimum live load requirements of the City Code. In our opinion, these joists and perimeter beams need to be strengthened extensively or replaced with stronger members such as steel beams immediately.

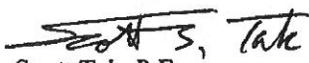
Option 2

We have reviewed minor demolitions and coring of the existing masonry wall at the north and south side of the atrium. The walls are 14 to 18 inches thick and currently used as load bearing walls. These types of walls don't have a real accurate way to calculate its load bearing capacity. One way to measure the load capacity of the wall is by performing an actual load test on the existing walls. The actual load test is very expensive and local testing laboratories may not even have the capacity to perform the test.

- In our opinion, these masonry walls can support an additional 1,000 pounds per linear foot if no voids exist in the walls, but due to our findings, these walls have several voids. We recommend that all voids be filled with flowable non-shrink grout. The procedure of filling the voids shall be carefully planned so that walls are not subjected to too much lateral pressure. By doing the recommended procedure, new skylights can be placed and supported by these masonry walls,

This report has been prepared for Ms. Debra Dockery and her client, City of San Antonio, and may not contain sufficient information or detail for other persons or uses. It has been our pleasure to assist you with your concerns. If we can be of further assistance on any of these matters or with any other concerns please feel free to contact us.

Respectfully,


Scott Tak, P.E.

ALPHA CONSULTING ENGINEERS, INC.





September 25, 2007

Debra J. Dockery, Architect, P.C.
118 Broadway, Suite 516
San Antonio, Texas 78205

Re: Plaza De Armas Building
Scope of Structural Investigation

ACE Project No.: 071685

Dear Ms. Dockery,

At your request, Alpha Consulting Engineers, Inc., has performed a walk-thru observation of above referenced existing building. Prior to proceeding with structural modification to roof skylight framing, we would like to recommend an investigation of the structure to uncover and define the existing framing system. Currently two modification/repair options are being considered. The first option is to add a new clearstory over the entire existing skylights. Obviously the existing skylight framing can't support any additional loading when the existing framing is questionable in supporting the current loading condition. Therefore, the proposed solution may be supporting the new clearstory framing entirely off two masonry party walls at each end of the skylights. In order to determine the structural integrity of the existing masonry party walls, the walls need to be investigated. We recommend the following.

1. Core drill the walls in a total of eighteen locations (Three per floor at each wall). Determine the thickness and the composition of the existing wall. Based on the finding, the walls may need to be strengthened to support the additional clearstory weight. It has been our past experience, the thick masonry walls like these built around the turn of the last century have rubbles and many voids inside and structurally unfit to be load-bearing walls, and requires extensive work to be used as load-bearing.

The second option is to repair and modify the existing skylights whose support framing have shown excessive deflection. To repair and modify the existing skylights, we recommend the following.



1. Remove the southwest and southeast corner of the interior wall panels above the third floor ceiling at hallway and expose the structural framing to determine the main structural framing in the north-south direction around the skylights (east and west support conditions). Also provide scaffolding to the underside of the skylights from the third floor hallway to measure the size and steel splice of the existing beams running in the east-west direction. This information will be used to determine the structural repair and strengthening of the existing support framing.

The opportunity to serve you on this project has been greatly appreciated. Should there be any questions or need for clarifications subsequent to your review of this report, please feel free to call.

Sincerely,

ALPHA CONSULTING ENGINEERS, INC.


Scott S. Tak, P.E.