

April 22, 2016

Project: 319 Lincoln Street - Shadow Study Peer Review



Executive Summary:

Pursuant to your request, we have completed a review of the shadow study materials shared with our office. Those materials included a Sketch-Up model of the proposed building and a PDF copy of the shadow study, completed by The Architectural Team, dated April 6th 2016.

Methodology: Our analysis focused on two areas: First we examined and tested the shadow study as submitted by the design team. We verified the proposed 5 story building's orientation and approximate dimensions, measured the lengths of the shadows being cast by all buildings on the page, and recorded those measurements graphically in a separate copy of that document titled "Measurement Verification". Our second means of investigation was to use the original Sketch Up model to verify the settings and shadows. Because we were only provided with 3d modeling of the proposed building and not of the surrounding context, we modeled several of the surrounding buildings, using qualified assumptions about building heights based on photographs and satellite imagery. We then measured the lengths of shadows from that analysis and recorded them graphically in the document titled "Simulation Results".

Findings: The existing buildings surrounding the site of the proposed building appear to be inaccurately modeled to exceed their actual heights, resulting in significantly exaggerated shadows. This created the appearance that the proposed building will not cast disproportionately longer shadows than the surrounding buildings. It is apparent in our document titled "Simulation Results" that the shadows from the smaller residential buildings are much shorter and that proportionally the taller building would cast more substantial shadows. Building "A" is seen to cast a much smaller shadow than that indicated by the original shadow study.

It appears the proposed new 5 story building shadows are accurate when comparing the TAT studies to the D&W study. These findings are applicable to all eleven pages of the original study.

Recommendations:

- Model more accurate roof articulation on abutting building B-S.
- Confirm height assumptions regarding all buildings, for accurate comparative analyses.
- Confirm software is set to cast shadows "on faces".
- Confirm model is set to the correct time zone.
- Indicate whether Daylight Saving Time is accounted for or ignored
- Once revised, share the base model and the site context model (with scenes) for additional peer review.

Please do not hesitate to contact us if you have any questions regarding our peer review of this study.

Respectfully submitted,
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