

## Draft Project Description

**To:** Stein Coriell, AICP, SHN Engineering  
**From:** Kristen Bogue, Michael Baker International  
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**Subject:** Albee Stadium Eureka High School Project – Photometric Analysis

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Michael Baker International (Michael Baker) has prepared a Photometric Analysis for the proposed Albee Stadium Eureka High School Project. The intent of the Photometric Lighting Plan is to depict the resultant limit of light spillover.

### **METHODOLOGY**

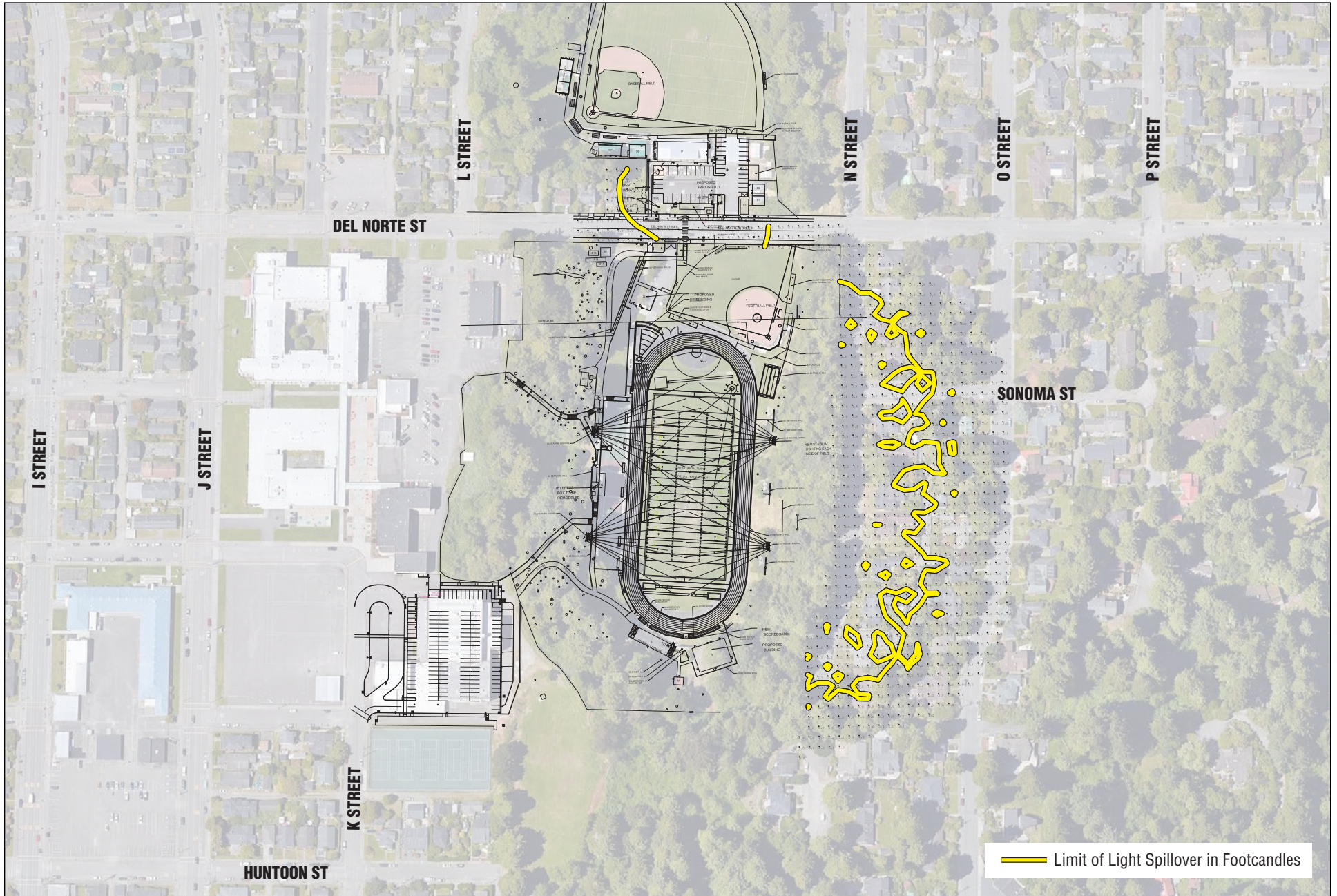
Light spillage is reported in foot-candle power. A foot-candle is the unit for measuring the light present on a surface or workplane. One foot-candle is roughly equal to the uniform distribution of light from an ordinary wax candle on a one-square foot surface, located one foot away from the flame.

The photometric analysis included the use of lighting photometric simulation software AGI32 to model the proposed football field lighting and parking lot lighting. The football field sports lighting was provided by Musco along with the photometry files and aiming points. The parking lot lighting information was provided on the light fixture schedule and the photometry downloaded from the manufacturer's website in October 2020. The study included analysis of the trespass light levels outside of the property boundaries, which were determined using GIS data obtained from the Humboldt County GIS website, accessed in October 2020. Additionally, trees were added (via digital surface model [dsm] data) into the simulation to include their effects on the trespass light levels. The final analysis showed the trespass lighting levels (in foot-candles) outside the property boundaries which were due to the football field lighting and parking lot lighting. The light levels were calculated and displayed until they dropped off to zero foot-candles from the property.

### **FINDINGS**

Attachment A, Photometric Diagram, provides our findings made regarding proposed lighting conditions as a result of the proposed project.

**ATTACHMENT A**  
**Photometric Diagram**



— Limit of Light Spillover in Footcandles