

PHOTOMETRIC READINGS FOR BUILDING EXTERIORS/PARKING LOTS/PATHWAYS BETWEEN BUILDINGS AT (9) SCHOOL SITES

For

Greystone West Company (MVWSD) 621 West Spain Street Sonoma, CA 95476

October 12, 2020

Prepared by: Najib Anwary, P.E., LEED AP (BD+C) & Sam Saraj

Aurum Consulting Engineers 1798 Technology Drive, Suite 242 San Jose, California 95110 Telephone :(408) 564-7925 ACEMB Project #: 20-320.00

INTRODUCTION

The following is based on our nightly site visits over the course of three weeks to measure illumination levels at nine (9) School sites for Mountain View Whisman School District (MVWSD). We were tasked with visiting each site during night time hours well after sunset to ensure ambient light/twilight hours illumination did not impact survey (although most nights were clear with full or near full moon conditions and a few nights there was smoke from wild fires that minimized illumination from the moon, in no way was the smoke ever at a level where illumination from building or pole lights were impacting readings taken at each site). Our measurements of illumination levels were conducted at finish grade level along building exteriors, pathways and parking lots. We utilized an Illumination Meter; Konica Minolta T-10 and T-10A to measure foot-candle (FC) readings as provided by the meter.

SITE PLANS with FOOT-CANDLE MEASUREMENTS

As part of the project, the Construction Management Team/School District provided PDF site plans for each of the (9) School Sites. Each school site arranged for all exterior lights to be turned on during our scheduled visits and as such most light fixtures (building mounted and parking lot pole lights) were "on" when we arrived. We have provided as an attachment, our measurements over the PDFs provided with recorded values in FC units. We measured "approximately" every 10 feet along walking paths, driveways, parking lots, and general building exterior locations. There were various sites at which the exterior lighting (some building mounted, some pole mounted and at times all building exterior light fixtures) were not turned on at all. Such locations will likely show lower values or near "0" illumination and may not reflect actual/real-time conditions where time clocks/relays may be adjusted to turn on building lights (one prime example is Crittenden Middle School Library Exterior Building Lights, they seemed relatively new and not "on", while the building interior lights were on for the duration of our 3-hour site visit...interior lighting impact light levels outside considering there are clearstory/glass windows where interior lighting at night should/may not be depended upon for illuminating building exteriors).

<u>SUMMARY</u>

The intent of our site visits was to record illumination levels and although some sites will show well illuminated exterior areas, there are quite a few sites that have near "0" illumination between building, along pathways and parking lots. Some of the parking lots are near residences, so it seemed the illumination was missing in way of pole lights not installed in order to mitigate any light glare/trespass onto residences that shared fences with school properties, while other locations simply did not have any pole lights installed to illuminate the parking lots. At a few school sites, there seemed to be multiple pathway bollard light fixtures meant to illuminate open paths in central campus locations, but they were "off" and providing no illumination. Also, there were sites where some building canopy lights in strings/rows were "off", when approaching custodial staff to see if they were not "on" during our visit by chance or if it was normal condition such fixtures to be "off", staff stated: "they are off all the time".