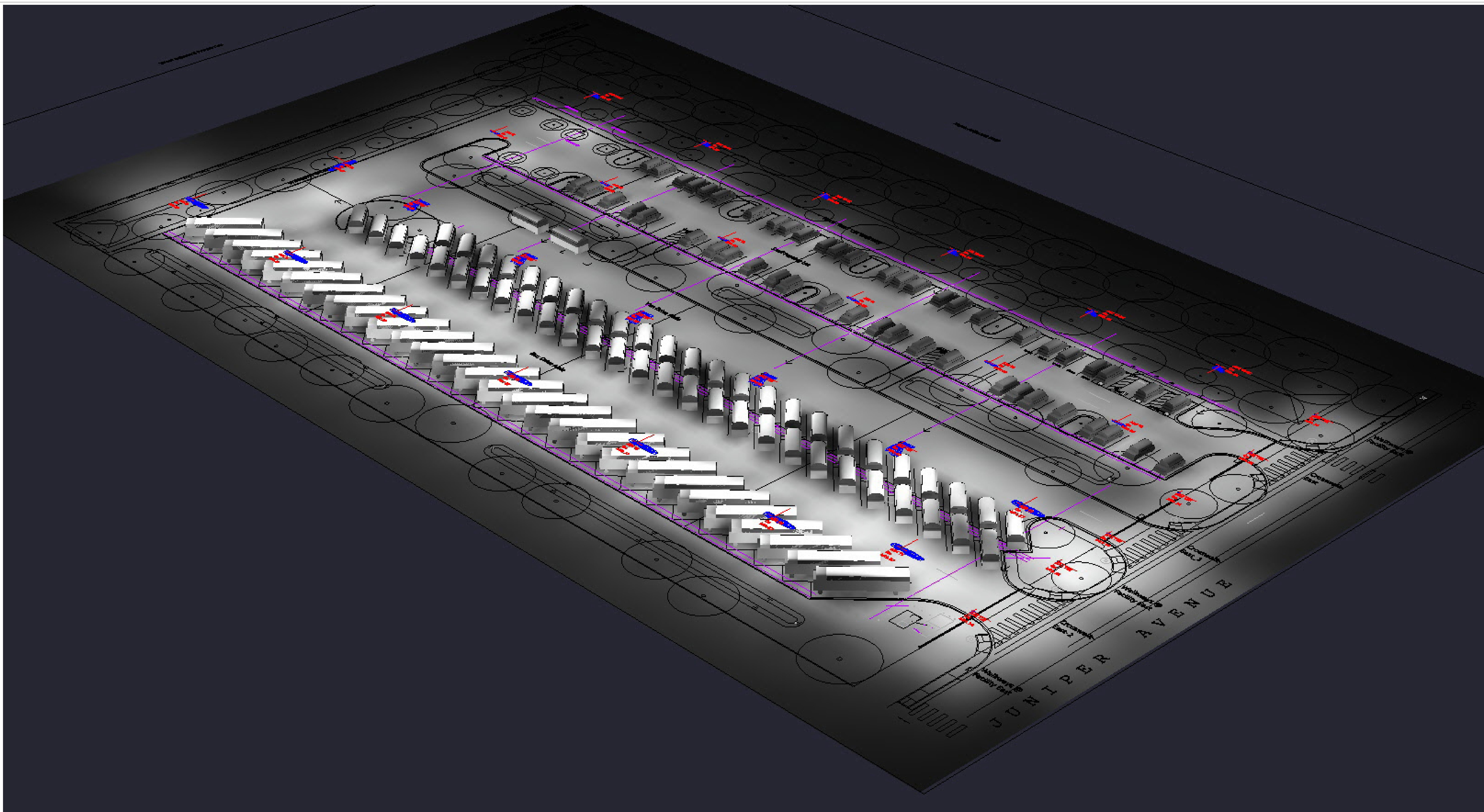


WCT PARKING FACILITY
COMPUTER-PROJECTED RENDERING of ILLUMINATION
 provided by
ORIGINAL PERMITTED LIGHTING SCHEME*

***ADJUSTMENTS to ORIGINAL PERMITTED LIGHTING SCHEME:**

- 1) Wattage/Light Output ratings for most luminaire heads have been reduced, to lower overall light levels, while maintaining levels that exceed Industry minimum recommended criteria.
- 2) Light Poles at South edge of large Bio Retention Area Relocated RELOCATED to North edge, LOWERED from 35ft to 25ft high, to eliminate excessive shadowing of Staff Parking Lot from numerous large Oak Trees planned in the Bio Retention area.
- 3) Deleted (6) high-output (170w) Van/Bus Lot luminaire heads entirely from relocated Poles.

- ~ All other Original Pole Luminaire *locations & heights* remain unchanged.
- ~ Projected Light Levels based on originally-specified 3000 deg. K CCT LED light sources (See C.
- ~ 2700 deg. K CCT LED's are available, but are 14% LESS EFFICIENT than the 3000 deg. spec'd & calc'd here.
- ~ Projected Light levels with 2700 deg. K LED's are 86% of those shown on the Calculations Sheet, C-1



WCT PARKING FACILITY
COMPUTER-PROJECTED RENDERING of ILLUMINATION
 provided by
PROPOSED COMPROMISE LIGHTING SCHEME

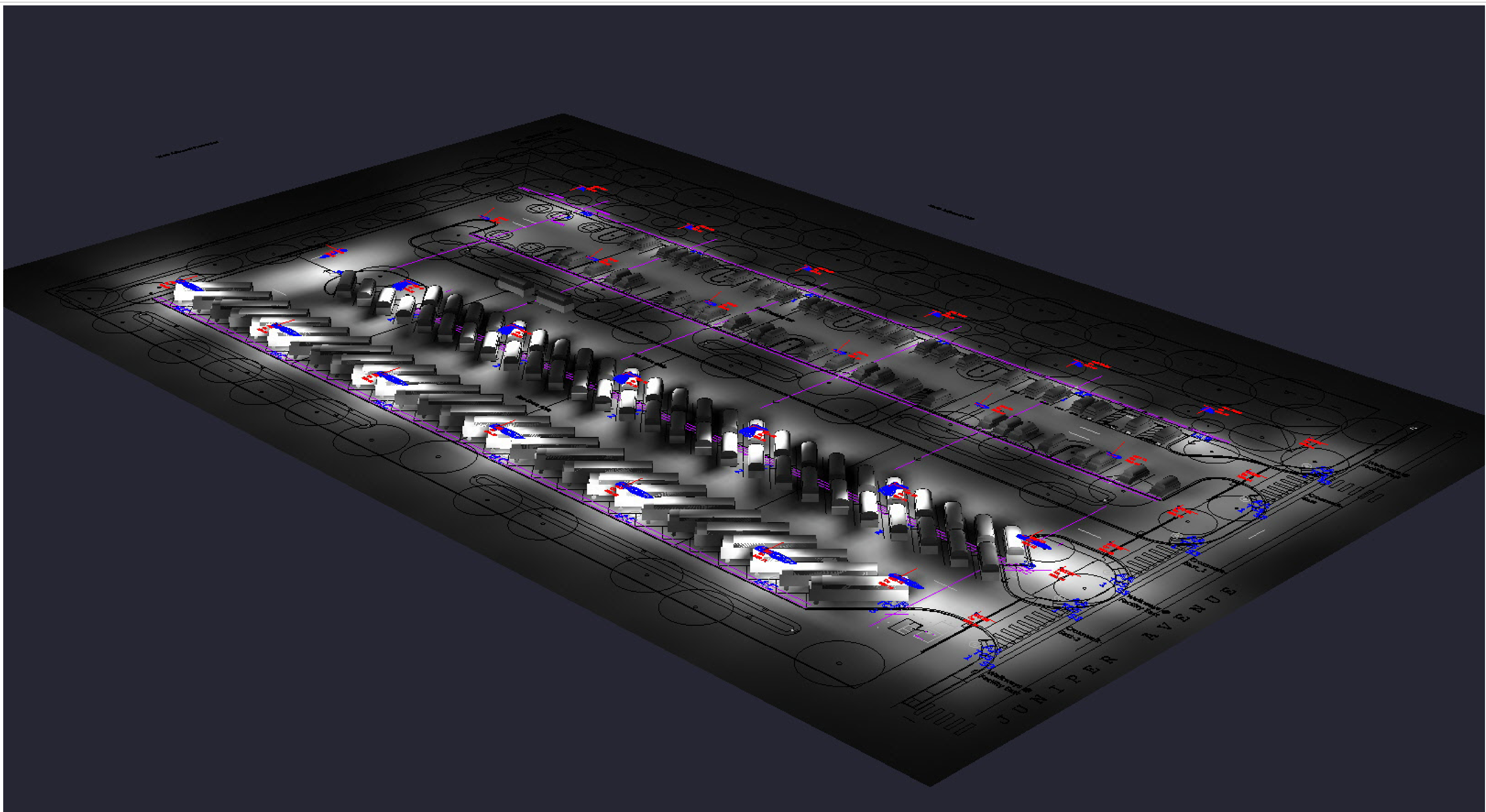


PROPOSED COMPROMISE LIGHTING SCHEME MODEL:

- 1) Light Pole *locations*, luminaire *Types*, *wattages* and *output ratings* used for this Computer Model are **IDENTICAL** to those included in the (Adjusted) ORIGINAL PERMITTED SCHEME.
- 2) All Luminaire heads at Bus/Van Lot: set at 27ft above finished grade.
- 3) All Luminaire heads at Staff Auto Lot: set at 20ft above finished grade.
- 4) Although 2700 deg. K LED's are available now as a standard Option, they are 14% LESS EFFICIENT than 3000 deg. LED'S specified, and so these were used as the basis for this Computer Model. To determine light levels for this Scheme using 2700 deg. K LEDs: take 86% of *fc levels* shown on Sheet C-2.

~ While this Compromise Scheme cannot match the performance of the ORIGINAL PERMITTED SCHEME in the difficult category of providing sufficient lighting between parked buses and vans, it still does perform very well, and dramatically better than the Scheme using all the same locations and luminaires, set on the very much too-short poles that the DRC has stipulated.

~ Even at this reduced compromised height (27ft), the system is still able to meet Industry standards for Average light levels, Uniformity of illumination, and to achieve acceptable lighting at the difficult spaces between the large Buses and Vans that will be parked at this Facility nightly (as illustrated on Sheet C-2, even with the reductions in light output that have been made from those originally specified, and the deletion of the (6) most powerful luminaire included in the Original Permit Set.



WCT PARKING FACILITY
COMPUTER-PROJECTED RENDERING of ILLUMINATION
 provided by
DRC-STIPULATED/LOWERED POLES LIGHTING SCHEME



DRC-STIPULATED/LOWER POLES LIGHTING SCHEME:

- 1) Light Pole *locations*, luminaire *Types*, *wattages* and *output ratings* are IDENTICAL to those included in ORIGINAL PERMITTED SCHEME; as with the other Schemes, all LED's are 3000 deg. K for this Scheme.
- 2) All Light Poles at Bus/Van Lot: 16ft high.
- 3) All Light Poles at Staff Auto Lot: 14ft high.
- 4) Light poles in this Scheme are set too far below the minimum heights required to provide lighting performance that meets Industry Standards - not only for Average light levels, but also for Uniformity (ratios of Maximum levels to Minimum levels) and COVERAGE of illumination (especially the ability to provide adequate lighting in the difficult-to-reach narrow spaces between the very large parked Buses), resulting in an installation that does not meet accepted Industry Standards for Safety & Security.

~ This Scheme cannot perform remotely as well as either the ORIGINAL PERMITTED or the PROPOSED COMPROMISE SCHEME, by any measure. The poles are much too low for the Bus/Van Parking Lot, resulting in light levels that are MUCH too *high* in the very small areas directly beneath them, far too *low* in the areas between the poles, and alarmingly low in the narrow aisles between parked vehicles - especially in the Bus areas. The wide Drive Aisles at both Lots are also underserved by this Scheme, because the luminaires are too low to 'see' over the tops of parked vehicles at an angle that would allow significant light down onto the pavements beyond.

~ The lone successes with this Scheme are: 1) higher average levels along the North Walkway at the Staff Lot, where the lower-mounted luminaires have an unobstructed view to the Pathway directly below (which, unfortunately, means even less light make its way out over the parked cars beyond the Path), and: 2) Trespass/Spill light off-property is more limited, because the shorter luminaire poles limits the spread of coverage - the very source of several of this Scheme's significant deficiencies.

Drawn By: ME
 Checked By: JPM
 Date: 10/20/2022

DRC - STIPULATED SCHEME
 Computer Rendering of Illumination
 with Vehicles

West Valley Transportation
 Parking Area

R-3