

|  |                                   |                         |
|--|-----------------------------------|-------------------------|
| <b>Jurisdiction</b>                    | El Dorado County - Unincorporated |                         |
| <b>Reporting Year</b>                  | 2023                              | (Jan. 1 - Dec. 31)      |
| <b>Housing Element Planning Period</b> | 6th Cycle                         | 05/15/2021 - 05/15/2029 |

| Building Permits Issued by Affordability Summary |                     |              |
|--|---------------------|--------------|
| Income Level                                     |                     | Current Year |
| Very Low   | Deed Restricted     | 48           |
|  | Non-Deed Restricted | 15           |
| Low  | Deed Restricted     | 32           |
|  | Non-Deed Restricted | 26           |
| Moderate   | Deed Restricted     | 0            |
|  | Non-Deed Restricted | 34           |
| Above Moderate                                   |                     | 471          |
| Total Units                                      |                     | 626          |

Note: Units serving extremely low-income households are included in the very low-income permitted units totals

| Units by Structure Type    | Entitled | Permitted  | Completed  |
|----------------------------|----------|------------|------------|
| Single-family Attached     | 0        | 0          | 0          |
| Single-family Detached     | 9        | 436        | 443        |
| 2 to 4 units per structure | 0        | 0          | 0          |
| 5+ units per structure     | 0        | 81         | 0          |
| Accessory Dwelling Unit    | 0        | 75         | 50         |
| Mobile/Manufactured Home   | 0        | 34         | 29         |
| <b>Total</b>               | <b>9</b> | <b>626</b> | <b>522</b> |

| Infill Housing Developments and Infill Units Permitted | # of Projects | Units |
|--|---------------|-------|
| Indicated as Infill                                    | 16            | 16    |
| Not Indicated as Infill                                | 539           | 610   |

| Housing Applications Summary                           |       |
|--|-------|
| Total Housing Applications Submitted:                  | 16    |
| Number of Proposed Units in All Applications Received: | 4,983 |
| Total Housing Units Approved:                          | 0     |
| Total Housing Units Disapproved:                       | 0     |

| Use of SB 35 Streamlining Provisions - Applications |   |
|---|---|
| Number of SB 35 Streamlining Applications           | 0 |
| Number of SB 35 Streamlining Applications Approved  | 0 |

| Units Constructed - SB 35 Streamlining Permits |          |           |          |
|--|----------|-----------|----------|
| Income   | Rental   | Ownership | Total    |
| Very Low                                       | 0        | 0         | 0        |
| Low  | 0        | 0         | 0        |
| Moderate                                       | 0        | 0         | 0        |
| Above Moderate                                 | 0        | 0         | 0        |
| <b>Total</b>                                   | <b>0</b> | <b>0</b>  | <b>0</b> |

| Streamlining Provisions Used - Permitted Units | # of Projects | Units |
|--|---------------|-------|
| SB 9 (2021) - Duplex in SF Zone                | 0             | 0     |
| SB 9 (2021) - Residential Lot Split            | 0             | 0     |
| AB 2011 (2022)                                 | 0             | 0     |
| SB 6 (2022)                                    | 0             | 0     |
| SB 35 (2017)                                   | 0             | 0     |

| Ministerial and Discretionary Applications | Applications | Units |
|--|--------------|-------|
| Ministerial                                | 0            | 0     |
| Discretionary                              | 16           | 4983  |

| Density Bonus Applications and Units Permitted                       |     |
|--|-----|
| Number of Applications Submitted Requesting a Density Bonus          | 1   |
| Number of Units in Applications Submitted Requesting a Density Bonus | 161 |
| Number of Projects Permitted with a Density Bonus                    | 0   |
| Number of Units in Projects Permitted with a Density Bonus           | 0   |

| Housing Element Programs Implemented and Sites Rezoned | Count |
|--|-------|
| Programs Implemented                                   | 40    |
| Sites Rezoned to Accommodate the RHNA                  | 0     |

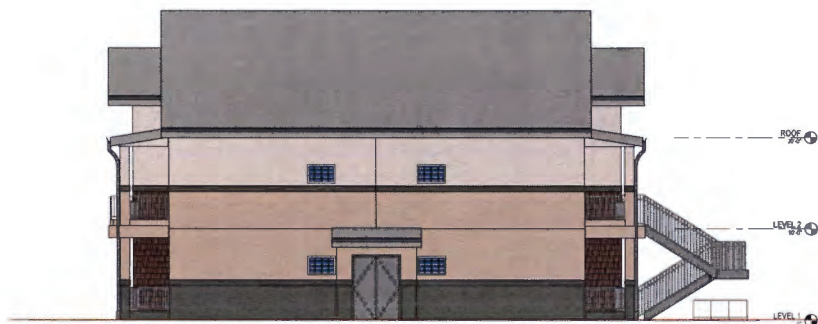


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EL DORADO COUNTY  
PLANNING COMMISSION

*[Signature]*

DATE: January 9, 2025

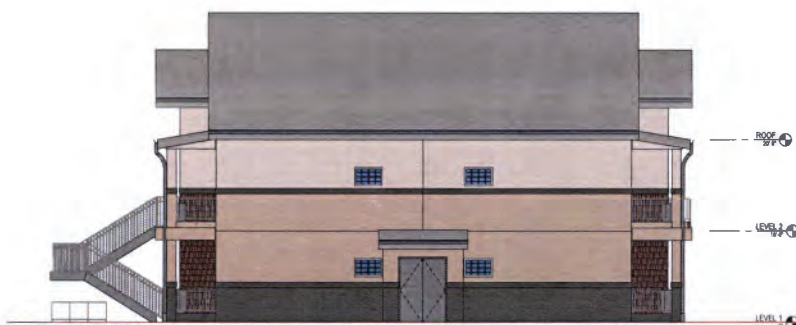
EXECUTIVE SECRETARY: Karen L. Garner



④ 1 - BR - LEFT ELEVATION  
 $\frac{3}{16}'' = 1'-6''$



1 - BR - FRONT ELEVATION  
3/16" = 1'-0"



3 1 - BR - RIGHT ELEVATION  
3/16" = 1'-0"



2 1 - BR - REAR ELEVATION  
3/16" = 1'-0"



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EL DORADO COUNTY  
PLANNING COMMISSION

DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

PRCA

#### APARTMENT BUILDINGS- EXTERIOR FINISHES



**SH-1**  
**HARDY SINGLE SCOR**  
POTATO SCORING  
POTATO SCORING  
POTATO SCORING

STUCCO

P19  
SAND FIBER—COLD  
CLEAN CONCRETE  
SPRAYS  
PARENTS 1985



PCB  
SAND FILL - SEE GEOTECH  
GULCH EROSION  
LIFE 272  
C - YOU TO GO



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## 1-BED ELEVATIONS

## A1.2



PRCA

### APARTMENT BUILDINGS- EXTERIOR FINISHES

[illegible]

**SPUCCO**

**SAND FILTER CALICHE**

0.25 x 2.75 m x 0.5  
146/772

**CITY TRAIL**



STUCCO

7555  
9410 F085 - C.A. 38 3

QUINTIENAROS  
O.F. 5.5

COCOS, P. 10.10



2-BB

## 2-BED ELEVATIONS

## A2.2



① BUILDING ELEVATION 1  
 $\frac{3}{16}'' = 1'-0''$

2 BUILDING ELEVATION 2  
3/16" = 1'-0"



DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

#### APARTMENT BUILDINGS- EXTERIOR FINISHES



59-1  
MARCH 20TH 1965  
PROCESSED FOR THE  
FBI ON 11/11/65  
ORIGINAL FILED IN 105



FIG. 1  
SH-ND FIVE-COLOR  
COLOR MATCHING  
CHART



2010  
SAND FLYING COLONY  
DAILY EDITION  
L14-272  
© 2010 The S.F.



DATE: 11-11-11  
CITY: NEW YORK  
STATE: NY

[illegible]

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. © ARCHITECTS LOCAL 3079

|            |                     |
|------------|---------------------|
| DATE       | AL PROJECT NUMBER   |
| 03/13/2024 | 2-212402            |
|            | 311 HAYS BOW STREET |

### 3-BED ELEVATIONS

### A3.21





#13  
5-ND P205- COLOR  
L204K 0204-006  
D179067  
600-700-2

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 01.14 01.15 01.16 01.17  
 01.18 01.19 01.20

PLAC  
MAY 23 1998 - C. J. 20 2  
C. J. 20 2  
C. J. 20 2  
C. J. 20 2

### 3-BED ELEVATIONS

### A3.22





# WDGE1 LED

## Architectural Wall Sconce



Catalog  
Number

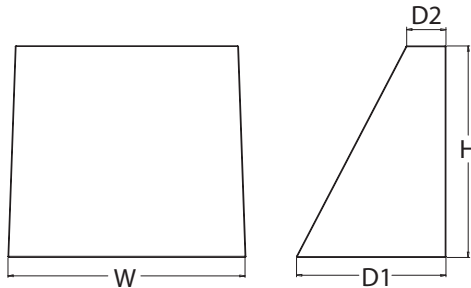
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

### Specifications

**Depth (D1):** 5.5"  
**Depth (D2):** 1.5"  
**Height:** 8"  
**Width:** 9"  
**Weight:** 9 lbs  
(without options)



### Introduction

The WDGE1 LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit [www.acuitybrands.com/designselect](http://www.acuitybrands.com/designselect).  
\*See ordering tree for details

### WDGE LED Family Overview

| Luminaire | Optics               | Standard EM, 0°C | Cold EM, -20°C | Sensor              | Approximate Lumens (4000K, 80CRI) |        |        |        |        |        |        |
|-----------|----------------------|------------------|----------------|---------------------|-----------------------------------|--------|--------|--------|--------|--------|--------|
|           |                      |                  |                |                     | P0                                | P1     | P2     | P3     | P4     | P5     | P6     |
| WDGE1 LED | Visual Comfort       | 4W               |                | --                  | 750                               | 1,200  | 2,000  | --     | --     | --     | --     |
| WDGE2 LED | Visual Comfort       | 10W              | 18W            | Standalone / nLight | --                                | 1,200  | 2,000  | 3,000  | 4,500  | 6,000  | --     |
| WDGE2 LED | Precision Refractive | 10W              | 18W            | Standalone / nLight | 700                               | 1,200  | 2,000  | 3,200  | 4,200  | --     | --     |
| WDGE3 LED | Precision Refractive | 15W              | 18W            | Standalone / nLight | 6,000                             | 7,500  | 8,500  | 10,000 | 12,000 | --     | --     |
| WDGE4 LED | Precision Refractive |                  |                | Standalone / nLight | --                                | 12,000 | 16,000 | 18,000 | 20,000 | 22,000 | 25,000 |

### Ordering Information

**EXAMPLE:** WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

| Series    | Package | Color Temperature      | CRI   | Distribution                    | Voltage                   | Mounting  |
|-----------|---------|------------------------|-------|---------------------------------|---------------------------|---|
| WDGE1 LED | P0      | 27K 2700K              | 80CRI | VF Visual comfort forward throw | MVOLT<br>347 <sup>2</sup> | <b>Shipped included</b><br>SRM Surface mounting bracket<br>ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) <sup>3</sup><br><b>Shipped separately</b><br>AWS 3/8inch Architectural wall spacer <sup>4</sup><br>PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available. <sup>4</sup> |
|           | P1      | 30K 3000K              | 90CRI | VW Visual comfort wide          |                           |   |
|           | P2      | 35K 3500K              |       |                                 |                           |   |
|           |         | 40K 4000K              |       |                                 |                           |   |
|           |         | 50K <sup>1</sup> 5000K |       |                                 |                           |   |

#### Options

#### Finish

**E4WH** Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)<sup>5</sup>  
**PE** Photocell, Button Type<sup>6</sup>  
**DS** Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)<sup>7</sup>  
**DMG** 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)  
**BCE** Bottom conduit entry for back box (PBBW). Total of 4 entry points.  
**DSLE** Dual Switching (1 Driver, 2 Light Engines)  
**CCE** Coastal Construction<sup>4</sup>

**DDBXD** Dark bronze  
**DBLXD** Black  
**DNAXD** Natural aluminum  
**DWHXD** White  
**DSSXD** Sandstone  
**DBBTXD** Textured dark bronze  
**DBLTXD** Textured black  
**DNATXD** Textured natural aluminum  
**DWHGXD** Textured white  
**DSSTXD** Textured sandstone



**APPROVED**  
**EL DORADO COUNTY**  
**PLANNING COMMISSION**

DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

*RRG*



COMMERCIAL OUTDOOR

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WDGE1 LED  
Rev. 08/07/24

DR24-0008/Diamond Springs Village Apartments - Phase II  
Exhibit M - Preliminary Lighting Plan

## Accessories

Ordered and shipped separately.

|                   |   |
|-------------------|---|
| WDGEAWS DDBXD     | WDGE 3/8inch Architectural Wall Spacer (specify finish) |
| WDGE1PBBW DDBXD U | WDGE1 surface-mounted back box (specify finish)         |

## NOTES

- 1 50K not available in 90CRI.
- 2 347V not available with E4WH, DS, DSLE or PE.
- 3 Not qualified for DLC. Not available with E4WH.
- 4 For PBBW and AWS with CCE option, require an RFA.
- 5 E4WH not available with PE or DS.
- 6 PE not available with DS.
- 7 DS is not available with P0.

## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

| Performance Package | System Watts | Dist. Type | 27K (2700K, 80 CRI) |     |   |   |   | 30K (3000K, 80 CRI) |     |   |   |   | 35K (3500K, 80 CRI) |     |   |   |   | 40K (4000K, 80 CRI) |     |   |   |   | 50K (5000K, 80 CRI) |     |   |   |   |
|---------------------|--------------|------------|---------------------|-----|---|---|---|---------------------|-----|---|---|---|---------------------|-----|---|---|---|---------------------|-----|---|---|---|---------------------|-----|---|---|---|
|                     |              |            | Lumens              | LPW | B | U | G | Lumens              | LPW | B | U | G | Lumens              | LPW | B | U | G | Lumens              | LPW | B | U | G | Lumens              | LPW | B | U | G |
| P0                  | 7W           | VF         | 693                 | 99  | 0 | 0 | 0 | 718                 | 103 | 0 | 0 | 0 | 739                 | 106 | 0 | 0 | 0 | 759                 | 108 | 0 | 0 | 0 | 764                 | 109 | 0 | 0 | 0 |
|                     |              | VW         | 694                 | 99  | 0 | 0 | 0 | 720                 | 103 | 0 | 0 | 0 | 740                 | 106 | 0 | 0 | 0 | 760                 | 109 | 0 | 0 | 0 | 766                 | 109 | 0 | 0 | 0 |
| P1                  | 10W          | VF         | 1,120               | 112 | 0 | 0 | 0 | 1,161               | 116 | 0 | 0 | 0 | 1,194               | 119 | 0 | 0 | 0 | 1,227               | 123 | 0 | 0 | 0 | 1,235               | 123 | 0 | 0 | 0 |
|                     |              | VW         | 1,122               | 112 | 0 | 0 | 0 | 1,163               | 116 | 0 | 0 | 0 | 1,196               | 120 | 0 | 0 | 0 | 1,229               | 123 | 0 | 0 | 0 | 1,237               | 124 | 0 | 0 | 0 |
| P2                  | 15W          | VF         | 1,806               | 120 | 1 | 0 | 0 | 1,872               | 125 | 1 | 0 | 0 | 1,925               | 128 | 1 | 0 | 0 | 1,978               | 132 | 1 | 0 | 0 | 1,992               | 133 | 1 | 0 | 0 |
|                     |              | VW         | 1,809               | 120 | 1 | 0 | 0 | 1,876               | 125 | 1 | 0 | 0 | 1,929               | 128 | 1 | 0 | 0 | 1,982               | 132 | 1 | 0 | 0 | 1,996               | 133 | 1 | 0 | 0 |

### Electrical Load

| Performance Package | System Watts | Current (A) |       |       |       |       |
|---------------------|--------------|-------------|-------|-------|-------|-------|
|                     |              | 120V        | 208V  | 240V  | 277V  | 347V  |
| P0                  | 7W           | 0.060       | 0.035 | 0.030 | 0.026 | --    |
|                     | 9W           | --          | --    | --    | --    | 0.026 |
| P1                  | 10W          | 0.082       | 0.049 | 0.043 | 0.038 | --    |
|                     | 13W          | --          | --    | --    | --    | 0.046 |
| P2                  | 15W          | 0.132       | 0.081 | 0.072 | 0.064 | --    |
|                     | 18W          | --          | --    | --    | --    | 0.056 |

### Lumen Multiplier for 90CRI

| CCT | Multiplier |
|-----|------------|
| 27K | 0.845      |
| 30K | 0.867      |
| 35K | 0.845      |
| 40K | 0.885      |
| 50K | 0.898      |

### Lumen Output in Emergency Mode (4000K, 80 CRI)

| Option | Dist. Type | Lumens |
|--------|------------|--------|
| E4WH   | VF         | 646    |
|        | VW         | 647    |

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

| Ambient |       | Lumen Multiplier |
|---------|-------|------------------|
| 0°C     | 32°F  | 1.03             |
| 10°C    | 50°F  | 1.02             |
| 20°C    | 68°F  | 1.01             |
| 25°C    | 77°F  | 1.00             |
| 30°C    | 86°F  | 0.99             |
| 40°C    | 104°F | 0.98             |

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

| Operating Hours          | 0   | 25,000 | 50,000 | 100,000 |
|--------------------------|-----|--------|--------|---------|
| Lumen Maintenance Factor | 1.0 | >0.96  | >0.95  | >0.91   |



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WDGE1 LED

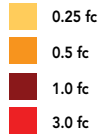
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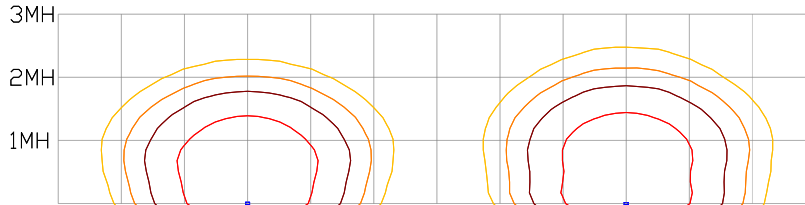
## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage.  
Tested in accordance with IESNA LM-79 and LM-80 standards.

### LEGEND



MH = 8ft  
Grid = 8ft x 8ft



WDGE1 LED P2 40K 80CRI VW

WDGE1 LED P2 40K 80CRI VF

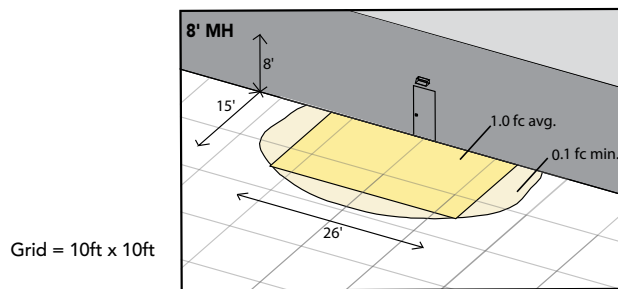
## Emergency Egress Options

### Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90 minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.

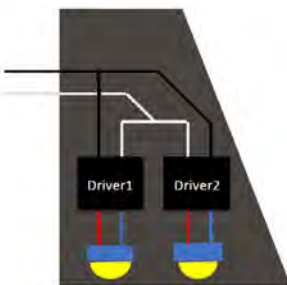


WDGE1 LED xx 40K 80CRI VF MVOLT E4WH

### Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark.

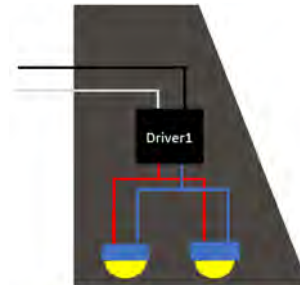
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



### Dual Switching Light Engine (DSLE) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with one driver and two light engines. These work completely independent to each other so that a failure of either light engine does not cause the whole luminaire to go dark.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9





**E4WH – 4W Emergency Battery Backup**

D = 5.5"

H = 8"

W = 9"



**PBBW – Surface-Mounted Back Box**

**Use when there is no junction box available.**

D = 1.75"

H = 8"

W = 9"



**AWS – 3/8inch Architectural Wall Spacer**

D = 0.38"

H = 4.4"

W = 7.5"

## FEATURES & SPECIFICATIONS

### INTENDED USE

Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

### CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

### FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

### OPTICS

Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

### ELECTRICAL

Light engine consists of high-efficiency LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

### INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

### LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

### GOVERNMENT PROCUREMENT

BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to [www.acuitybrands.com/buy-american](http://www.acuitybrands.com/buy-american) for additional information.

### WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

[www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

## AREA & ROADWAY LIGHTING

# RAZAR SERIES - LED

## LOW PROFILE AREA LUMINAIRE

### Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life. The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

### Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

### Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5° or +3° up from the horizontal. All hardware is stainless steel.

### PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

### LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stability. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

**True Amber LED's** TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

### LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

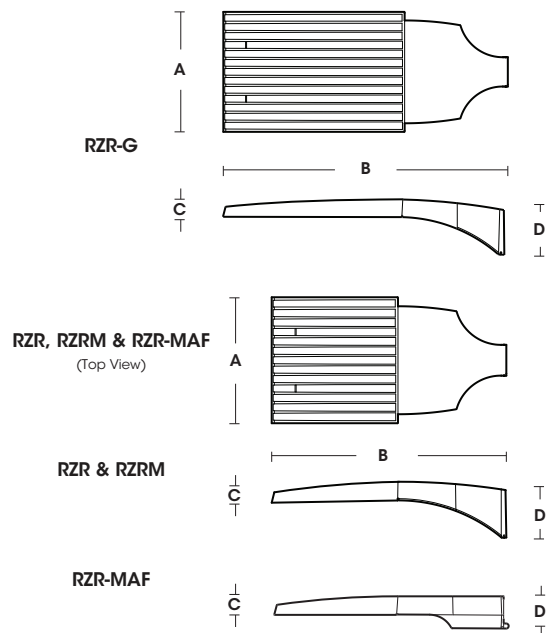
### Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.



## RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)



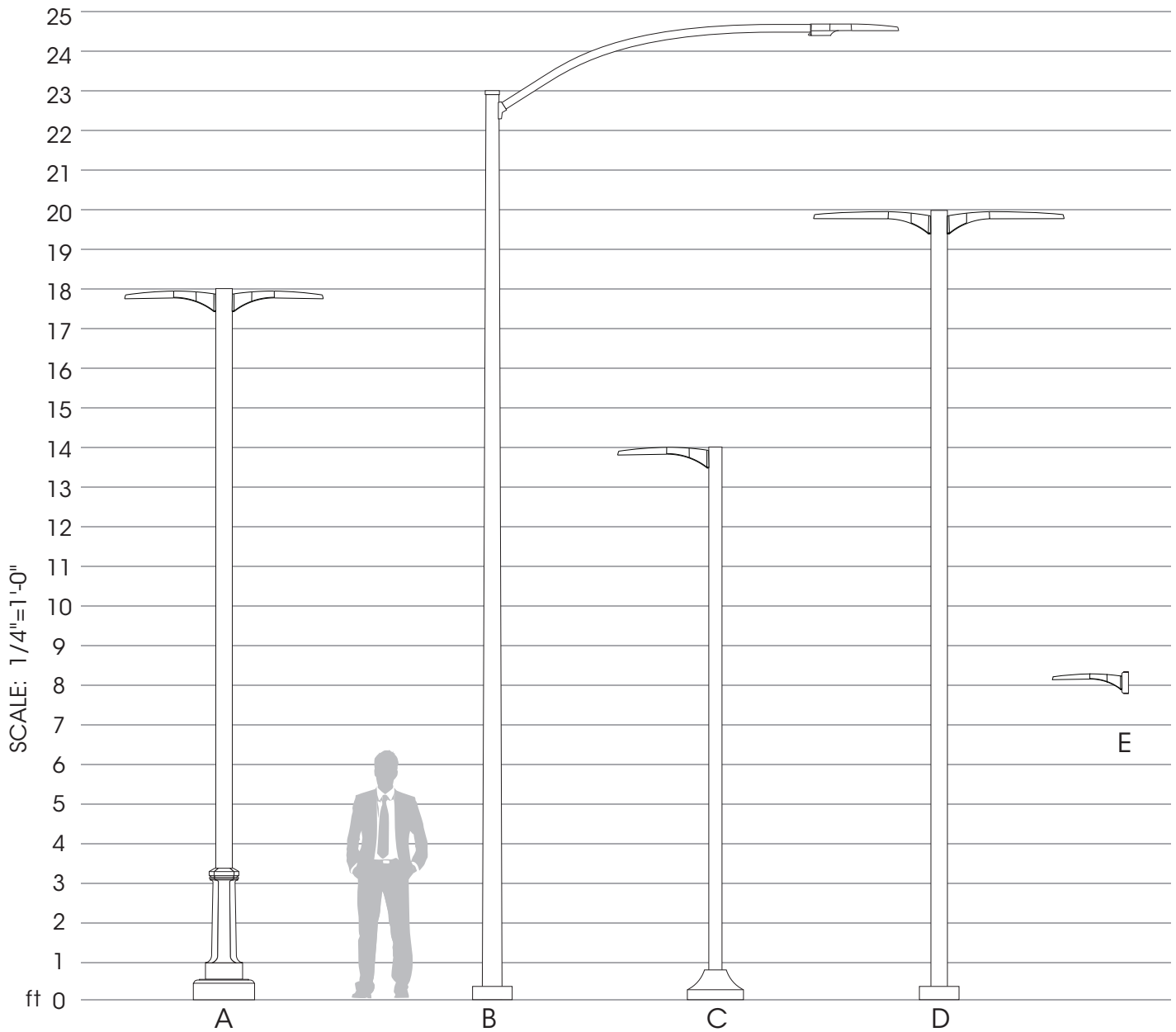
| Fixture | A               | B               | C             | D              |
|---------|-----------------|-----------------|---------------|----------------|
| RZR-G   | 15"<br>381mm    | 36.5"<br>927mm  | 3"<br>76mm    | 7"<br>187mm    |
| RZR     | 14.75"<br>375mm | 28.25"<br>718mm | 2.75"<br>70mm | 6.5"<br>165mm  |
| RZRM    | 11.5"<br>292mm  | 22"<br>559mm    | 2.5"<br>64mm  | 5.25"<br>133mm |
| RZR-MAF | 15"<br>381mm    | 28.25"<br>724mm | 2.5"<br>64mm  | 4"<br>102mm    |



2024281



**SAMPLE ASSEMBLIES**



A. 11-1050-18'-0" / 2-180 / RZR / LED / ACCESSORIES / FINISH

B. 1046T-23'-0" / ASL-8' / RZR-MAF / LED / ACCESSORIES / FINISH

C. RNTA-144-125-RBC / 1 / RZR / LED / ACCESSORIES / FINISH

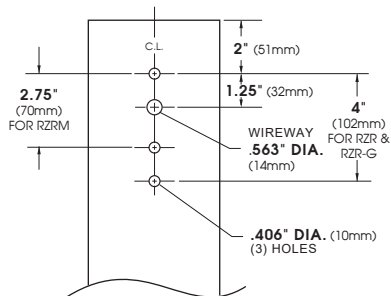
D. RNTS205-7 / 2-180 / RZR-G / LED / ACCESSORIES / FINISH

E. WM / RZRM / LED / ACCESSORIES / FINISH

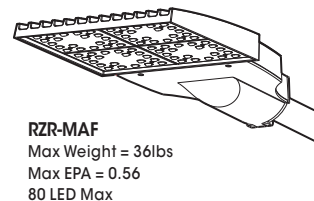
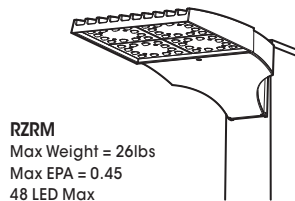
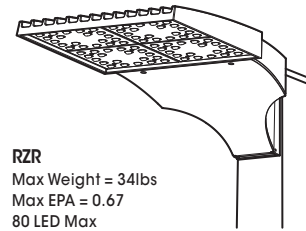
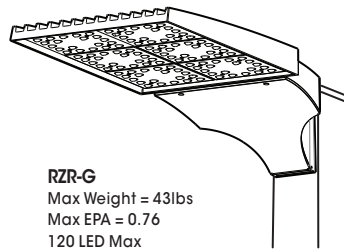
Sample Assemblies show a small offering of the Sun Valley Line of Poles, Bases, Shafts, Arms, & Luminaires. Please visit [usaltg.com](http://usaltg.com) for the full product offering.

## SPECIFICATIONS

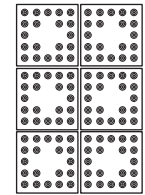
### POLE DRILLING TEMPLATE



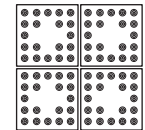
### EPA & WEIGHT



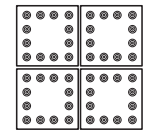
### PLED™ MODULES



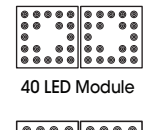
120 LED Module



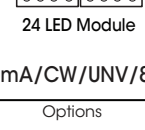
80 LED Module



48 LED Module



40 LED Module



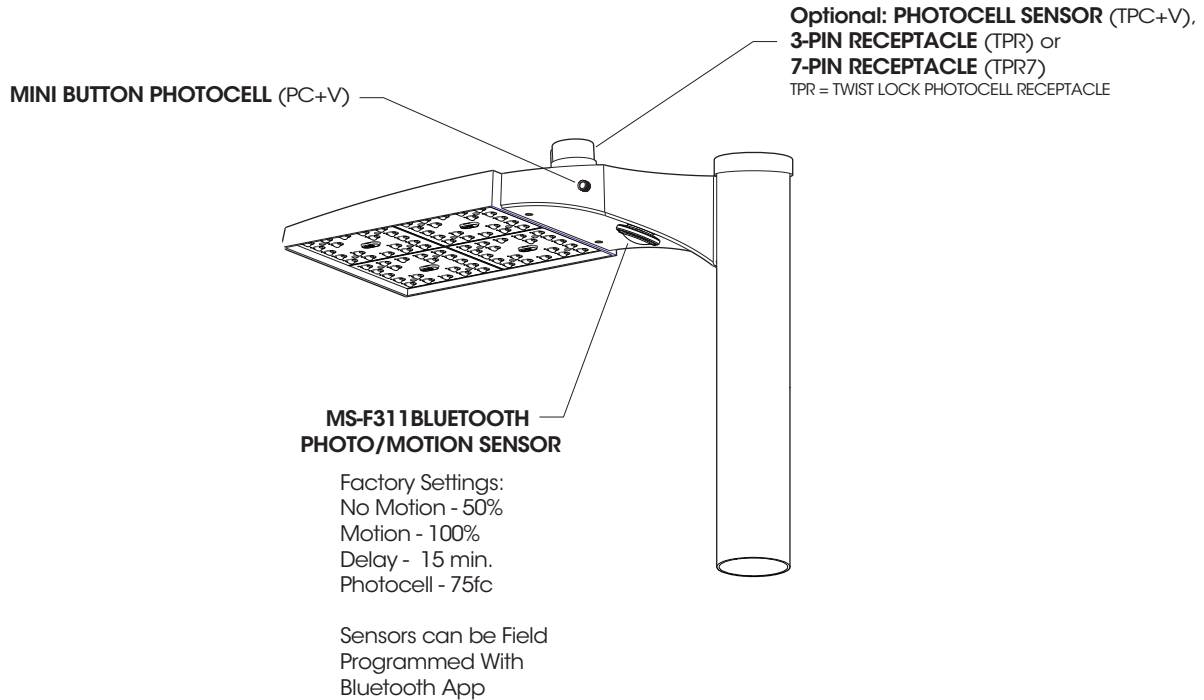
24 LED Module

## ORDERING INFORMATION

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

| Luminaire  | Optics  | LED Mode   | Voltage   | Mounting   | Finish   | Options   |
|--|---|--|---|--|--|---|
| Luminaire  | Optics  | LED  | Voltage   | Mounting   | Finish   | Options   |
| <input type="checkbox"/> RZR-G                                   | <input type="checkbox"/> PLED-II<br><input type="checkbox"/> PLED-II-FR<br><input type="checkbox"/> PLED-II-MIL                                     | <b>RZR-G</b><br># of LEDs<br><input type="checkbox"/> 120LED<br><input type="checkbox"/> 80LED<br>Drive Current<br><input type="checkbox"/> 1400mA <sup>1</sup><br><input type="checkbox"/> 1225mA <sup>1</sup><br><input type="checkbox"/> 1050mA<br><input type="checkbox"/> 875mA<br><input type="checkbox"/> 700mA<br>Color Temp - CCT<br><input type="checkbox"/> 27K (2700K)<br><input type="checkbox"/> 30K (3000K)<br><input type="checkbox"/> 40K (4000K)<br><input type="checkbox"/> 50K (5000K) | <input type="checkbox"/> UNV<br>(120-277)<br><input type="checkbox"/> 347<br><input type="checkbox"/> 480                     | Arm Mount<br><input type="checkbox"/> 1<br><input type="checkbox"/> 2-180<br><input type="checkbox"/> 2-90<br><input type="checkbox"/> 3-90<br><input type="checkbox"/> 3-120<br><input type="checkbox"/> 4-90 | Standard Textured Finish<br><input type="checkbox"/> Black 9005-T<br><input type="checkbox"/> White 9003-T<br><input type="checkbox"/> Grey 7004-T<br><input type="checkbox"/> Dark Bronze 8019-T<br><input type="checkbox"/> Green 6005-T | <input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLED/48)<br><input type="checkbox"/> External Glare Shield 4 Sided<br><input type="checkbox"/> External Glare Shield 3 Sided Rear Wedge<br><input type="checkbox"/> Round Pole Adapter  |
| <input type="checkbox"/> RZR<br><input type="checkbox"/> RZR-MAF | <input type="checkbox"/> PLED-III<br><input type="checkbox"/> PLED-III-W<br><input type="checkbox"/> PLED-IV<br><input type="checkbox"/> PLED-IV-FT | <b>RZR / RZR-MAF</b><br># of LEDs<br><input type="checkbox"/> 80LED<br><input type="checkbox"/> 40LED<br>Drive Current<br><input type="checkbox"/> 525mA<br><input type="checkbox"/> 350mA<br>Color Temp - CCT<br><input type="checkbox"/> TRA True Amber<br>Consult Factory for Other LED Color, CCT, & CRI Options   |   | Wall Mount<br><input type="checkbox"/> WM  | Premium Finishes<br><input type="checkbox"/> Rust<br><input type="checkbox"/> Patina Copper PC   | <input type="checkbox"/> Twist Lock Receptable Only<br><input type="checkbox"/> 7-Pin Twist Lock Receptable Only<br><input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25)<br><input type="checkbox"/> Twist Lock Photocell + Voltage (Example: TPC347V)<br><input type="checkbox"/> Photo Cell + Voltage (Example: PC120V)<br><input type="checkbox"/> Single Fuse (120V, 277V)<br><input type="checkbox"/> Double Fuse (208V, 240V)<br><input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75ic) |
| <input type="checkbox"/> RZRM                                    | <input type="checkbox"/> PLED-VSQ-N<br><input type="checkbox"/> PLED-V-SQ-M<br><input type="checkbox"/> PLED-V-SQ-W                                 | <b>RZRM</b><br># of LEDs<br><input type="checkbox"/> 48LED<br><input type="checkbox"/> 24LED<br>Drive Current<br>Consult Factory for Other Drive Currents  | NOTES:<br>1 - 1400mA & 1225mA drive currents not available in RZRM<br>2 - TRA available in 350mA & 525mA drive currents only. |  | For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)<br>Consult factory for custom colors  | <input type="checkbox"/> HS-PLED<br><input type="checkbox"/> EGS4<br><input type="checkbox"/> EGS3W<br><input type="checkbox"/> RPA<br><input type="checkbox"/> TPR<br><input type="checkbox"/> TPR7<br><input type="checkbox"/> HLSW<br><input type="checkbox"/> TPC+V<br><input type="checkbox"/> SF<br><input type="checkbox"/> DF<br><input type="checkbox"/> MS-F311   |

**OPTIONS**



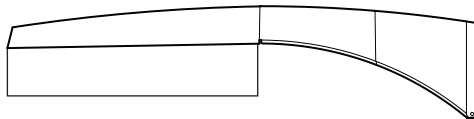
**High Low Dimming For Switches (HLSW)**

The HLSW is a Small Electronic Switch which Provides High Low Dimming Control Through the LED Driver's 0-10V Control. Switching is Done by Adding a Secondary AC Switched Hot Trigger Line to the HLSW in Addition to the Normal AC Power Line. When the Secondary Trigger Line is Powered, the Fixture will go to 100% Dimming. With no Power to the Trigger, the Fixture will operate at 50% or 25% Dimming. Switches for the Trigger Line can be a Normal AC Switch/Breaker or Timed Switch/Breaker.

**Wireless and Other Fixture Controls**

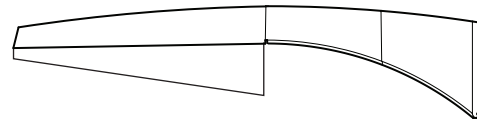
Contact Factory for Wireless and Other Fixture Controls and Recommendations. Most Controls Can be Integrated and Factory Installed.

**EXTERNAL GLARE SHIELDS**



**EGS4 - 4 Sided Shield**

Minimum Cutoff = 12°  
Average Cutoff = 23°



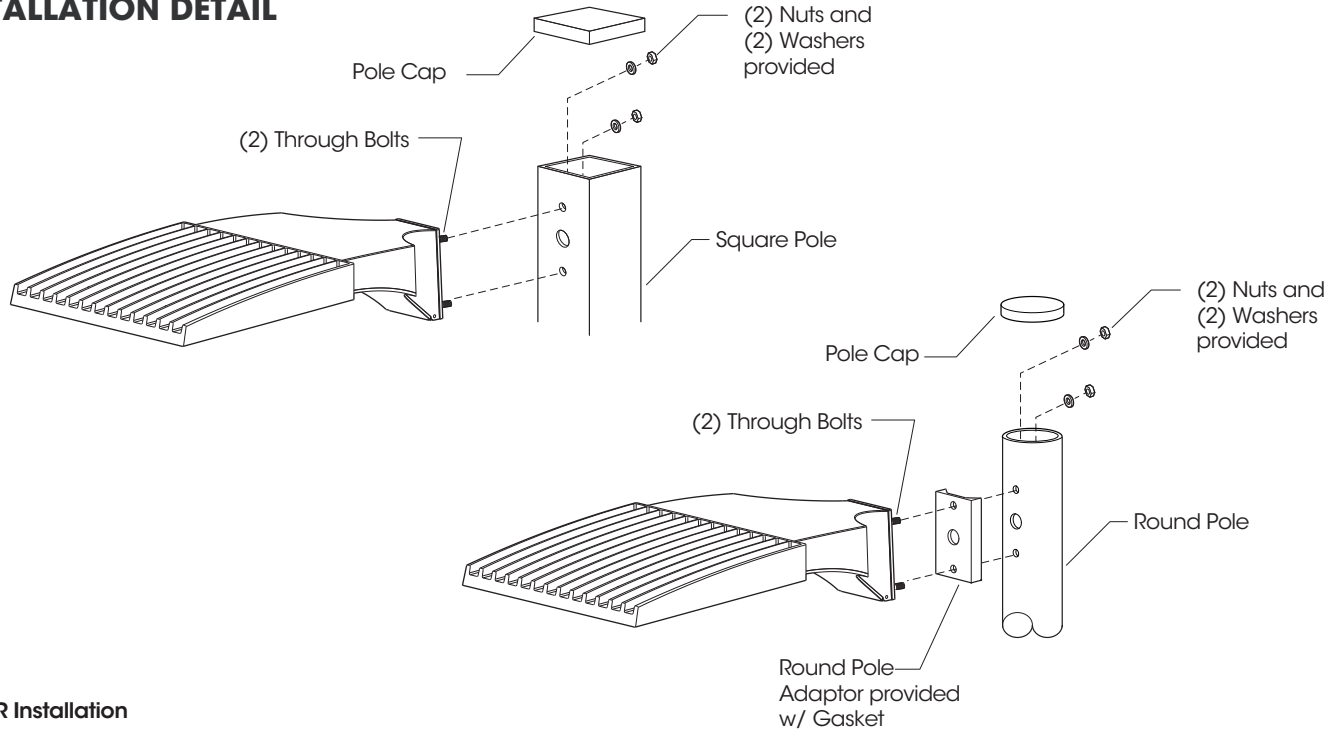
**EGS3W - 3 Sided Shield**

Minimum Rear Cutoff = 12°  
Average Rear Cutoff = 23°  
Minimum Side Cutoff = 4°  
Average Side Cutoff = 16°

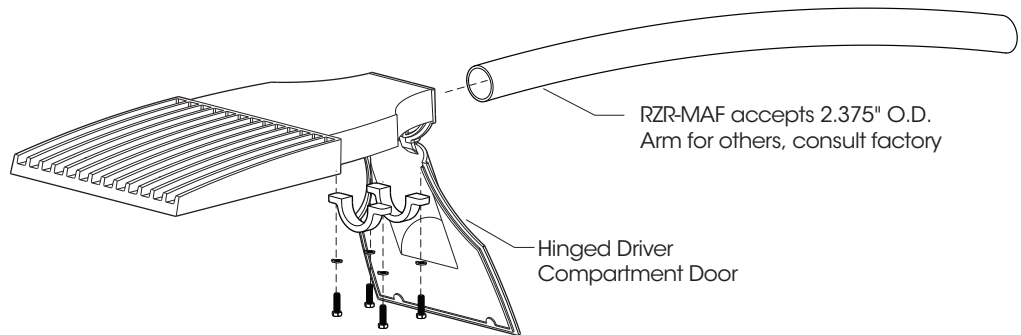
Glare Shields are rotatable on RZR and RZRM. Consult factory for custom applications.



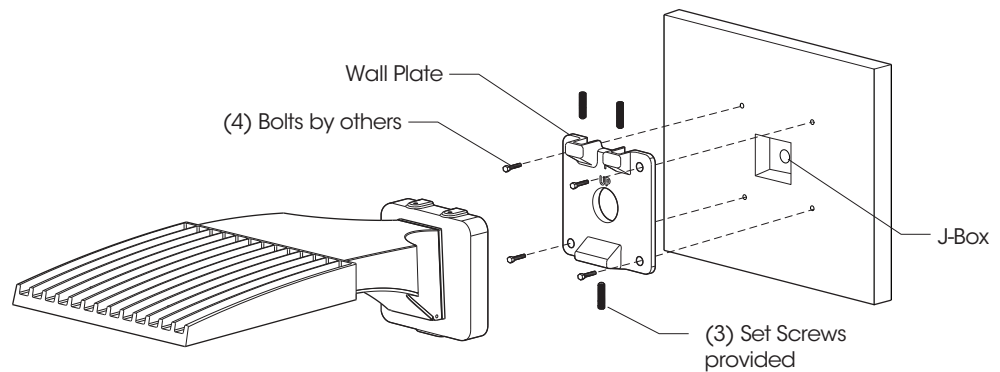
**INSTALLATION DETAIL**



**RZR Installation**



**RZR-MAF Installation**



**RZR-WM Installation**

## ELECTRICAL DATA GUIDE - AMPERAGE CHART

| ELECTRICAL LOAD |      |              | CURRENT (Amps) |      |      |      |      |
|-----------------|------|--------------|----------------|------|------|------|------|
| # of LEDs       | mA   | System Watts | 120V           | 208V | 277V | 347V | 480V |
| 24              | 350  | 26           | 0.21           | 0.12 | 0.09 | 0.07 | 0.05 |
| 24              | 525  | 39           | 0.32           | 0.19 | 0.14 | 0.11 | 0.08 |
| 24              | 700  | 52           | 0.43           | 0.25 | 0.19 | 0.15 | 0.11 |
| 24              | 875  | 67           | 0.55           | 0.32 | 0.24 | 0.19 | 0.14 |
| 24              | 1050 | 81           | 0.67           | 0.39 | 0.29 | 0.23 | 0.17 |
| 48              | 350  | 52           | 0.43           | 0.25 | 0.19 | 0.15 | 0.11 |
| 48              | 525  | 78           | 0.65           | 0.37 | 0.28 | 0.22 | 0.16 |
| 48              | 700  | 104          | 0.87           | 0.50 | 0.38 | 0.30 | 0.22 |
| 48              | 875  | 133          | 1.11           | 0.64 | 0.48 | 0.38 | 0.28 |
| 48              | 1050 | 162          | 1.35           | 0.78 | 0.58 | 0.47 | 0.34 |
| 40              | 350  | 43           | 0.36           | 0.21 | 0.15 | 0.12 | 0.09 |
| 40              | 525  | 65           | 0.54           | 0.31 | 0.23 | 0.19 | 0.14 |
| 40              | 700  | 87           | 0.72           | 0.42 | 0.31 | 0.25 | 0.18 |
| 40              | 875  | 111          | 0.92           | 0.53 | 0.40 | 0.32 | 0.23 |
| 40              | 1050 | 135          | 1.12           | 0.65 | 0.49 | 0.39 | 0.28 |
| 40              | 1225 | 159          | 1.32           | 0.76 | 0.57 | 0.46 | 0.33 |
| 40              | 1400 | 183          | 1.53           | 0.88 | 0.66 | 0.53 | 0.38 |
| 80              | 350  | 86           | 0.72           | 0.41 | 0.31 | 0.25 | 0.18 |
| 80              | 525  | 130          | 1.08           | 0.62 | 0.47 | 0.37 | 0.27 |
| 80              | 700  | 174          | 1.45           | 0.83 | 0.63 | 0.50 | 0.36 |
| 80              | 875  | 222          | 1.85           | 1.06 | 0.80 | 0.64 | 0.46 |
| 80              | 1050 | 270          | 2.25           | 1.30 | 0.97 | 0.78 | 0.56 |
| 80              | 1225 | 318          | 2.65           | 1.53 | 1.15 | 0.92 | 0.66 |
| 80              | 1400 | 366          | 3.05           | 1.76 | 1.32 | 1.06 | 0.76 |
| 120             | 350  | 129          | 1.07           | 0.62 | 0.46 | 0.37 | 0.27 |
| 120             | 525  | 195          | 1.62           | 0.94 | 0.70 | 0.56 | 0.41 |
| 120             | 700  | 260          | 2.17           | 1.25 | 0.94 | 0.75 | 0.54 |
| 120             | 875  | 332          | 2.77           | 1.60 | 1.20 | 0.96 | 0.69 |
| 120             | 1050 | 404          | 3.37           | 1.94 | 1.46 | 1.17 | 0.84 |
| 120             | 1225 | 477          | 3.97           | 2.29 | 1.72 | 1.37 | 0.99 |
| 120             | 1400 | 549          | 4.58           | 2.64 | 1.98 | 1.58 | 1.14 |

## PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

| LED LUMEN MAINTENANCE (350mA to 1050mA) |                    |                                 |
|---|--------------------|---------------------------------|
| LED Life / Operating Hours              | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000                                  | L96                | 0.96x                           |
| 100,000 (6X LED Test Hrs)               | L93                | 0.93x                           |
| 150,000 (Theoretical)                   | L89                | 0.90x                           |
| 200,000 (Theoretical)                   | L86                | 0.87x                           |

TM-21 6x Test Time Dictates that L93 > 100,000 Hours.

| LED LUMEN MAINTENANCE (1225mA & 1400mA) |                    |                                 |
|---|--------------------|---------------------------------|
| LED Life / Operating Hours              | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000                                  | L93                | 0.93x                           |
| 100,000 (6X LED Test Hrs)               | L89                | 0.89x                           |
| 150,000 (Theoretical)                   | L84                | 0.84x                           |
| 200,000 (Theoretical)                   | L80                | 0.80x                           |

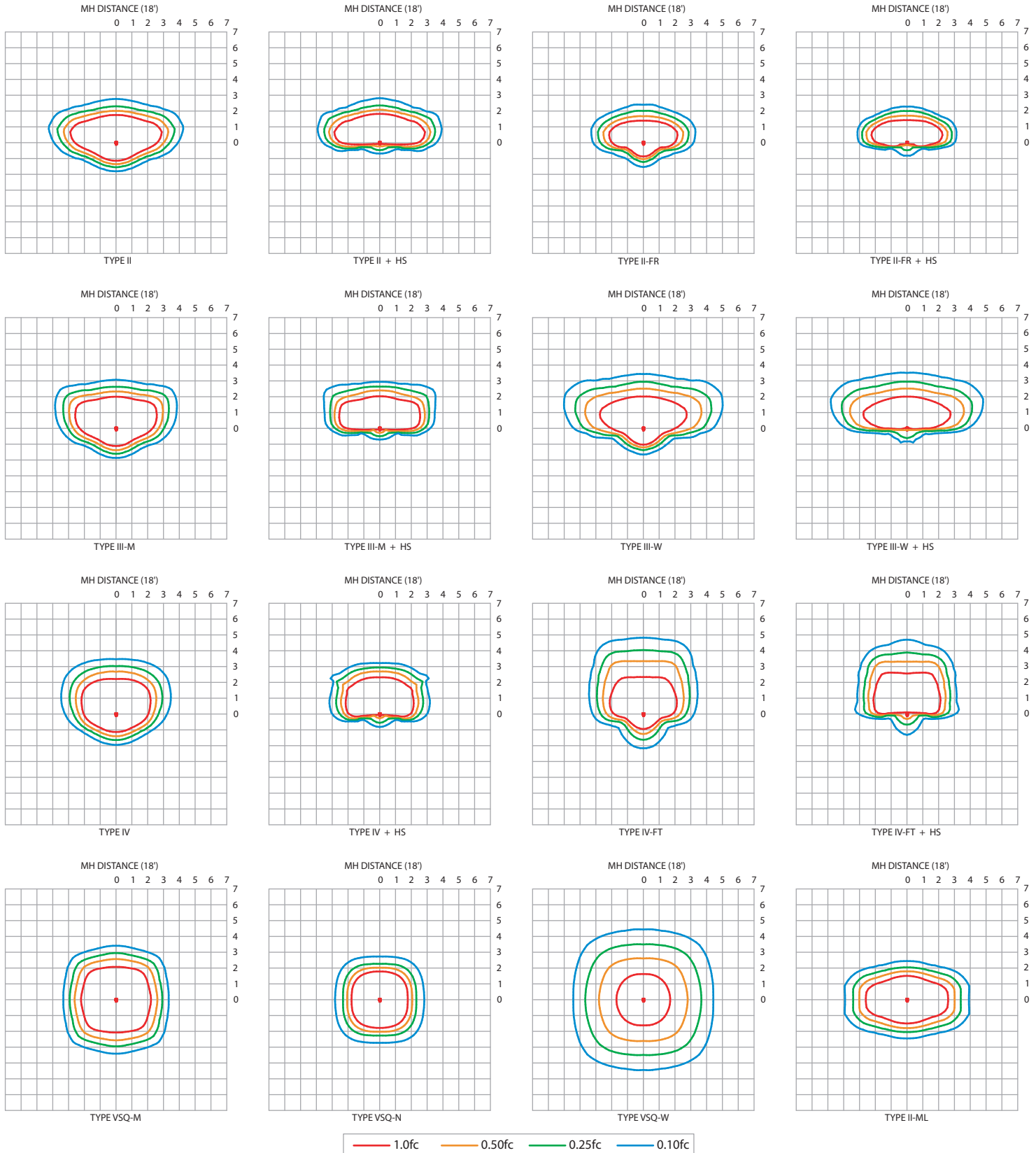
TM-21 6x Test Time Dictates that L93 > 100,000 Hours.

Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

IES File downloads for this product can be found at [www.usaltg.com/downloads/asr.html](http://www.usaltg.com/downloads/asr.html)

**ELECTRICAL DATA GUIDE - ISOFOOTCANDLE PLOTS**

**RZR-M-PLED-48LED-700mA-40K - 18' Pole Height**



IES File downloads for this product can be found at [www.usaltg.com/downloads/asr.html](http://www.usaltg.com/downloads/asr.html)



**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**

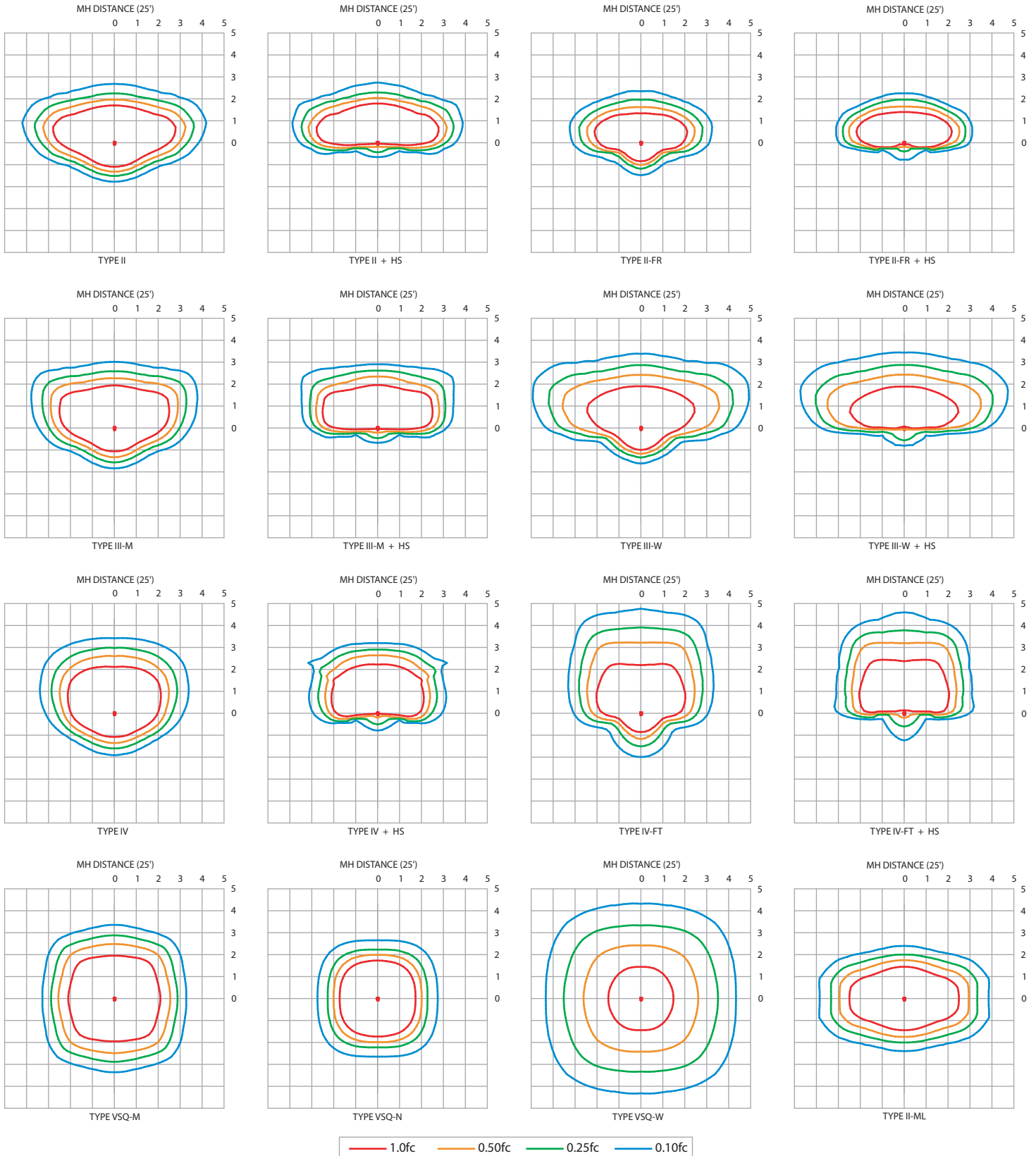
| RZR-M-LED |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 24        | 350                | 25.7         | II          | 3705                | 144 | B1-U0-G1   | 3866                | 150 | B1-U0-G1   | 4027                | 157 | B1-U0-G1   | 4188                | 163 | B1-U0-G1   | 20.0         | 1363        | 68  | B1-U0-G1   |
|           |                    |              | II-FR       | 3729                | 145 | B1-U0-G1   | 3892                | 151 | B1-U0-G1   | 4054                | 158 | B1-U0-G1   | 4216                | 164 | B1-U0-G1   |              | 1372        | 69  | B1-U0-G0   |
|           |                    |              | II-ML       | 3705                | 144 | B2-U0-G2   | 3866                | 150 | B2-U0-G2   | 4027                | 157 | B2-U0-G2   | 4188                | 163 | B2-U0-G2   |              | 1363        | 68  | B1-U0-G1   |
|           |                    |              | III-M       | 3770                | 147 | B1-U0-G1   | 3933                | 153 | B1-U0-G1   | 4097                | 159 | B1-U0-G1   | 4261                | 166 | B1-U0-G1   |              | 1387        | 69  | B1-U0-G0   |
|           |                    |              | III-W       | 3500                | 136 | B1-U0-G1   | 3652                | 142 | B1-U0-G1   | 3804                | 148 | B1-U0-G1   | 3956                | 154 | B1-U0-G2   |              | 1289        | 64  | B0-U0-G1   |
|           |                    |              | IV          | 3741                | 146 | B1-U0-G1   | 3903                | 152 | B1-U0-G1   | 4066                | 158 | B1-U0-G1   | 4229                | 165 | B1-U0-G1   |              | 1377        | 69  | B1-U0-G1   |
|           |                    |              | IV-FT       | 3408                | 133 | B1-U0-G1   | 3556                | 138 | B1-U0-G1   | 3704                | 144 | B1-U0-G1   | 3853                | 150 | B1-U0-G1   |              | 1254        | 63  | B0-U0-G1   |
|           |                    |              | VSQ-N       | 3911                | 152 | B2-U0-G0   | 4080                | 159 | B2-U0-G0   | 4250                | 165 | B2-U0-G0   | 4420                | 172 | B2-U0-G1   |              | 1439        | 72  | B1-U0-G0   |
|           |                    |              | VSQ-M       | 3834                | 149 | B2-U0-G1   | 4000                | 156 | B2-U0-G1   | 4167                | 162 | B2-U0-G1   | 4334                | 169 | B3-U0-G1   |              | 1410        | 71  | B1-U0-G0   |
|           |                    |              | VSQ-W       | 3743                | 146 | B3-U0-G1   | 3905                | 152 | B3-U0-G1   | 4068                | 158 | B3-U0-G1   | 4231                | 165 | B3-U0-G2   |              | 1377        | 69  | B1-U0-G1   |
|           |                    |              | II-HS       | 2710                | 105 | B0-U0-G1   | 2827                | 110 | B0-U0-G1   | 2945                | 115 | B0-U0-G1   | 3063                | 119 | B0-U0-G1   |              | 997         | 50  | B0-U0-G0   |
|           |                    |              | II-FR-HS    | 2756                | 107 | B0-U0-G0   | 2876                | 112 | B0-U0-G0   | 2995                | 117 | B0-U0-G0   | 3115                | 121 | B0-U0-G0   |              | 1014        | 51  | B0-U0-G0   |
|           |                    |              | III-M-HS    | 2741                | 107 | B0-U0-G1   | 2861                | 111 | B0-U0-G1   | 2980                | 116 | B0-U0-G1   | 3099                | 121 | B0-U0-G1   |              | 1008        | 50  | B0-U0-G0   |
|           |                    |              | III-W-HS    | 2682                | 104 | B0-U0-G1   | 2799                | 109 | B0-U0-G1   | 2916                | 113 | B0-U0-G1   | 3032                | 118 | B0-U0-G1   |              | 987         | 49  | B0-U0-G1   |
|           |                    |              | IV-HS       | 2831                | 110 | B0-U0-G1   | 2954                | 115 | B0-U0-G1   | 3078                | 120 | B0-U0-G1   | 3201                | 125 | B0-U0-G1   |              | 1042        | 52  | B0-U0-G0   |
|           |                    |              | IV-FT-HS    | 2675                | 104 | B0-U0-G1   | 2792                | 109 | B0-U0-G1   | 2908                | 113 | B0-U0-G1   | 3024                | 118 | B0-U0-G1   |              | 985         | 49  | B0-U0-G1   |
| 24        | 525                | 38.9         | II          | 5352                | 138 | B1-U0-G1   | 5584                | 144 | B1-U0-G1   | 5817                | 150 | B2-U0-G1   | 6050                | 156 | B2-U0-G1   | 31.0         | 1586        | 51  | B1-U0-G1   |
|           |                    |              | II-FR       | 5387                | 138 | B1-U0-G1   | 5621                | 145 | B2-U0-G1   | 5856                | 151 | B2-U0-G1   | 6090                | 157 | B2-U0-G1   |              | 1598        | 52  | B1-U0-G0   |
|           |                    |              | II-ML       | 5352                | 138 | B2-U0-G2   | 5585                | 144 | B2-U0-G2   | 5817                | 150 | B3-U0-G3   | 6050                | 156 | B3-U0-G3   |              | 1587        | 51  | B1-U0-G1   |
|           |                    |              | III-M       | 5446                | 140 | B1-U0-G1   | 5683                | 146 | B1-U0-G2   | 5919                | 152 | B1-U0-G2   | 6156                | 158 | B1-U0-G2   |              | 1615        | 52  | B1-U0-G0   |
|           |                    |              | III-W       | 5056                | 130 | B1-U0-G2   | 5276                | 136 | B1-U0-G2   | 5496                | 141 | B1-U0-G2   | 5716                | 147 | B1-U0-G2   |              | 1500        | 48  | B0-U0-G1   |
|           |                    |              | IV          | 5404                | 139 | B1-U0-G1   | 5639                | 145 | B1-U0-G1   | 5874                | 151 | B1-U0-G2   | 6109                | 157 | B2-U0-G2   |              | 1602        | 52  | B1-U0-G1   |
|           |                    |              | IV-FT       | 4924                | 127 | B1-U0-G2   | 5138                | 132 | B1-U0-G2   | 5352                | 138 | B1-U0-G2   | 5566                | 143 | B1-U0-G2   |              | 1460        | 47  | B0-U0-G1   |
|           |                    |              | VSQ-N       | 5648                | 145 | B2-U0-G1   | 5894                | 152 | B2-U0-G1   | 6139                | 158 | B2-U0-G1   | 6385                | 164 | B2-U0-G1   |              | 1676        | 54  | B1-U0-G0   |
|           |                    |              | VSQ-M       | 5539                | 142 | B3-U0-G1   | 5780                | 149 | B3-U0-G1   | 6021                | 155 | B3-U0-G1   | 6262                | 161 | B3-U0-G1   |              | 1643        | 53  | B1-U0-G0   |
|           |                    |              | VSQ-W       | 5407                | 139 | B3-U0-G2   | 5642                | 145 | B3-U0-G2   | 5877                | 151 | B3-U0-G2   | 6112                | 157 | B3-U0-G2   |              | 1603        | 52  | B1-U0-G1   |
|           |                    |              | II-HS       | 3914                | 101 | B0-U0-G1   | 4084                | 105 | B0-U0-G1   | 4254                | 109 | B0-U0-G1   | 4424                | 114 | B0-U0-G1   |              | 1161        | 37  | B0-U0-G0   |
|           |                    |              | II-FR-HS    | 3982                | 102 | B0-U0-G1   | 4155                | 107 | B0-U0-G1   | 4328                | 111 | B0-U0-G1   | 4501                | 116 | B0-U0-G1   |              | 1181        | 38  | B0-U0-G0   |
|           |                    |              | III-M-HS    | 3960                | 102 | B0-U0-G1   | 4132                | 106 | B0-U0-G1   | 4304                | 111 | B0-U0-G2   | 4476                | 115 | B0-U0-G2   |              | 1174        | 38  | B0-U0-G0   |
|           |                    |              | III-W-HS    | 3876                | 100 | B0-U0-G2   | 4045                | 104 | B0-U0-G2   | 4213                | 108 | B0-U0-G2   | 4382                | 113 | B0-U0-G2   |              | 1150        | 37  | B0-U0-G1   |
|           |                    |              | IV-HS       | 4090                | 105 | B0-U0-G1   | 4268                | 110 | B0-U0-G1   | 4446                | 114 | B0-U0-G1   | 4624                | 119 | B0-U0-G1   |              | 1213        | 39  | B0-U0-G0   |
|           |                    |              | IV-FT-HS    | 3866                | 99  | B0-U0-G2   | 4034                | 104 | B0-U0-G2   | 4202                | 108 | B0-U0-G2   | 4370                | 112 | B0-U0-G2   |              | 1146        | 37  | B0-U0-G1   |
| 24        | 700                | 52.1         | II          | 6733                | 129 | B2-U0-G2   | 7025                | 135 | B2-U0-G2   | 7318                | 140 | B2-U0-G2   | 7611                | 146 | B2-U0-G2   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 6778                | 130 | B2-U0-G1   | 7073                | 136 | B2-U0-G1   | 7367                | 141 | B2-U0-G1   | 7662                | 147 | B2-U0-G1   |              |             |     |            |
|           |                    |              | II-ML       | 6732                | 129 | B3-U0-G3   | 7025                | 135 | B3-U0-G3   | 7318                | 140 | B3-U0-G3   | 7611                | 146 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-M       | 6851                | 131 | B2-U0-G2   | 7148                | 137 | B2-U0-G2   | 7446                | 143 | B2-U0-G2   | 7744                | 149 | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-W       | 6360                | 122 | B1-U0-G2   | 6637                | 127 | B1-U0-G2   | 6913                | 133 | B1-U0-G2   | 7190                | 138 | B1-U0-G2   |              |             |     |            |
|           |                    |              | IV          | 6799                | 131 | B2-U0-G2   | 7095                | 136 | B2-U0-G2   | 7391                | 142 | B2-U0-G2   | 7686                | 148 | B2-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT       | 6193                | 119 | B1-U0-G2   | 6463                | 124 | B1-U0-G2   | 6732                | 129 | B1-U0-G2   | 7001                | 134 | B1-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-N       | 7107                | 136 | B2-U0-G1   | 7416                | 142 | B2-U0-G1   | 7725                | 148 | B2-U0-G1   | 8034                | 154 | B3-U0-G1   |              |             |     |            |
|           |                    |              | VSQ-M       | 6968                | 134 | B3-U0-G1   | 7271                | 140 | B3-U0-G1   | 7574                | 145 | B3-U0-G1   | 7877                | 151 | B3-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 6802                | 131 | B3-U0-G2   | 7098                | 136 | B3-U0-G2   | 7394                | 142 | B3-U0-G2   | 7690                | 148 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-HS       | 4924                | 95  | B1-U0-G2   | 5138                | 99  | B1-U0-G2   | 5352                | 103 | B1-U0-G2   | 5566                | 107 | B1-U0-G2   |              |             |     |            |
|           |                    |              | II-FR-HS    | 5009                | 96  | B0-U0-G1   | 5227                | 100 | B0-U0-G1   | 5444                | 104 | B0-U0-G1   | 5662                | 109 | B1-U0-G1   |              |             |     |            |
|           |                    |              | III-M-HS    | 4981                | 96  | B0-U0-G2   | 5198                | 100 | B0-U0-G2   | 5414                | 104 | B0-U0-G2   | 5631                | 108 | B0-U0-G2   |              |             |     |            |
|           |                    |              | III-W-HS    | 4875                | 94  | B0-U0-G2   | 5087                | 98  | B0-U0-G2   | 5299                | 102 | B0-U0-G2   | 5511                | 106 | B0-U0-G2   |              |             |     |            |
|           |                    |              | IV-HS       | 5146                | 99  | B0-U0-G2   | 5369                | 103 | B0-U0-G2   | 5593                | 107 | B0-U0-G2   | 5817                | 112 | B0-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 4863                | 93  | B0-U0-G2   | 5074                | 97  | B0-U0-G2   | 5286                | 101 | B0-U0-G2   | 5497                | 106 | B0-U0-G2   |              |             |     |            |
| 24        | 875                | 66.5         | II          | 8051                | 121 | B2-U0-G2   | 8401                | 126 | B2-U0-G2   | 8751                | 132 | B2-U0-G2   | 9101                | 137 | B2-U0-G2   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 8105                | 122 | B2-U0-G1   | 8458                | 127 | B2-U0-G1   | 8810                | 132 | B2-U0-G1   | 9163                | 138 | B2-U0-G1   |              |             |     |            |
|           |                    |              | II-ML       | 8051                | 121 | B3-U0-G3   | 8401                | 126 | B3-U0-G3   | 8751                | 132 | B3-U0-G3   | 9101                | 137 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-M       | 8192                | 123 | B2-U0-G2   | 8548                | 129 | B2-U0-G2   | 8904                | 134 | B2-U0-G2   | 9260                | 139 | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-W       | 7606                | 114 | B1-U0-G2   | 7937                | 119 | B2-U0-G2   | 8267                | 124 | B2-U0-G2   | 8598                | 129 | B2-U0-G2   |              |             |     |            |
|           |                    |              | IV          | 8129                | 122 | B2-U0-G2   | 8483                | 128 | B2-U0-G2   | 8836                | 133 | B2-U0-G2   | 9190                | 138 | B2-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT       | 7405                | 111 | B2-U0-G2   | 7727                | 116 | B2-U0-G2   | 8050                | 121 | B2-U0-G2   | 8372                | 126 | B2-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-N       | 8498                | 128 | B3-U0-G1   | 8867                | 133 | B3-U0-G1   | 9236                | 139 | B3-U0-G1   | 9606                | 144 | B3-U0-G1   |              |             |     |            |
|           |                    |              | VSQ-M       | 8333                | 125 | B3-U0-G2   | 8695                | 131 | B3-U0-G2   | 9057                | 136 | B3-U0-G2   | 9419                | 142 | B3-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 8134                | 122 | B3-U0-G2   | 8487                | 128 | B4-U0-G2   | 8841                | 133 | B4-U0-G2   | 9195                | 138 | B4-U0-G2   |              |             |     |            |
|           |                    |              | II-HS       | 5888                | 89  | B1-U0-G2   | 6144                | 92  | B1-U0-G2   | 6400                | 96  | B1-U0-G2   | 6656                | 100 | B1-U0-G2   |              |             |     |            |
|           |                    |              | II-FR-HS    | 5990                | 90  | B1-U0-G1   | 6250                | 94  | B1-U0-G1   | 6510                | 98  | B1-U0-G1   | 6771                | 102 | B1-U0-G1   |              |             |     |            |
|           |                    |              | III-M-HS    | 5957                | 90  | B0-U0-G2   | 6216                | 93  | B0-U0-G2   | 6475                | 97  | B0-U0-G2   | 6734                | 101 | B0-U0-G2   |              |             |     |            |
|           |                    |              | III-W-HS    | 5830                | 88  | B0-U0-G2   | 6084                | 91  | B0-U0-G2   | 6337                | 95  | B0-U0-G2   | 6591                | 99  | B0-U0-G2   |              |             |     |            |
|           |                    |              | IV-HS       | 6153                | 93  | B0-U0-G2   | 6420                | 97  | B0-U0-G2   | 6688                | 101 | B0-U0-G2   | 6955                | 105 | B0-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 5815                | 87  | B0-U0-G2   | 6067                | 91  | B0-U0-G2   | 6320                | 95  | B0-U0-G2   | 6573                | 99  | B0-U0-G2   |              |             |     |            |
| 24        | 1050               | 80.9         | II          | 9160                | 113 | B2-U0-G2   | 9558                | 118 | B2-U0-G2   | 9956                | 123 | B2-U0-G2   | 10354               | 128 | B2-U0-G2   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 9221                | 114 | B2-U0-G1   | 9622                | 119 | B2-U0-G1   | 10023               | 124 | B2-U0-G1   | 10424               | 129 | B2-U0-G1   |              |             |     |            |
|           |                    |              | II-ML       | 9160                | 113 | B3-U0-G3   | 9558                | 118 | B3-U0-G3   | 9956                | 123 | B3-U0-G3   | 10354               | 128 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-M       | 9320                | 115 | B2-U0-G2   | 9725                | 120 | B2-U0-G2   | 10131               | 125 | B2-U0-G2   | 10536               | 130 | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-W       | 8653                | 107 | B2-U0-G2   | 9029                | 112 | B2-U0-G3   | 9405                | 116 | B2-U0-G3   | 9782                | 121 | B2-U0-G3   |              |             |     |            |
|           |                    |              | IV          | 9249                | 114 | B2-U0-G2   | 9651                | 119 | B2-U0-G2   | 10053               | 124 | B2-U0-G2   | 10456               | 129 | B2-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT       | 8426                | 104 | B2-U0-G2   | 8792                | 109 | B2-U0-G3   | 9158                | 113 | B2-U0-G3   | 9525                | 118 | B2-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-N       | 9668                | 120 | B3-U0-G1   | 10088               | 125 | B3-U0-G1   | 10508               | 130 | B3-U0-G1   | 10929               | 135 | B3-U0-G1   |              |             |     |            |
|           |                    |              | VSQ-M       | 9480                | 117 | B3-U0-G2   | 9892                | 122 | B3-U0-G2   | 10305               | 127 | B3-U0-G2   | 10717               | 132 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 9254                | 114 | B4-U0-G2   | 9656                | 119 | B4-U0-G3   | 10059               | 124 | B4-U0-G3   | 10461               | 129 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-HS       | 6699                | 83  | B1-U0-G2   | 6990                | 86  | B1-U0-G2   | 7281                | 90  | B1-U0-G2   | 7573                | 94  | B1-U0-G2   |              |             |     |            |
|           |                    |              | II-FR-HS    | 6814                | 84  | B1-U0-G1   | 7110                | 88  | B1-U0-G1   | 7407                | 92  | B1-U0-G1   | 7703                | 95  | B1-U0-G1   |              |             |     |            |
|           |                    |              | III-M-HS    | 6777                | 84  | B0-U0-G2   | 7072                | 87  | B0-U0-G2   | 7366                | 91  | B0-U0-G2   | 7661                | 95  | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-W-HS    | 6633                | 82  | B0-U0-G2   | 6922                | 86  | B0-U0-G2   | 7210                | 89  | B0-U0-G2   | 7498                | 93  | B0-U0-G2   |              |             |     |            |
|           |                    |              | IV-HS       | 7000                | 87  | B0-U0-G2   | 7305                | 90  | B0-U0-G2   | 7609                | 94  | B1-U0-G2   | 7913                | 98  | B1-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 6615                | 82  | B0-U0-G2   | 6903                | 85  | B1-U0-G2   | 7191                | 89  | B1-U0-G3   | 7478                | 92  | B1-U0-G3   |              |             |     |            |

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| RZR-M-LED |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 48        | 350                | 51.5         | II          | 7194                | 140 | B2-U0-G2   | 7507                | 146 | B2-U0-G2   | 7820                | 152 | B2-U0-G2   | 8133                | 158 | B2-U0-G2   | 41.0         | 2713        | 66  | B1-U0-G1   |
|           |                    |              | II-FR       | 7243                | 141 | B2-U0-G1   | 7558                | 147 | B2-U0-G1   | 7873                | 153 | B2-U0-G1   | 8187                | 159 | B2-U0-G1   |              | 2731        | 67  | B1-U0-G1   |
|           |                    |              | II-ML       | 7194                | 140 | B3-U0-G3   | 7507                | 146 | B3-U0-G3   | 7820                | 152 | B3-U0-G3   | 8133                | 158 | B3-U0-G3   |              | 2713        | 66  | B1-U0-G1   |
|           |                    |              | III-M       | 7320                | 142 | B2-U0-G2   | 7639                | 148 | B2-U0-G2   | 7957                | 154 | B2-U0-G2   | 8275                | 161 | B2-U0-G2   |              | 2760        | 67  | B1-U0-G1   |
|           |                    |              | III-W       | 6797                | 132 | B1-U0-G2   | 7092                | 138 | B1-U0-G2   | 7388                | 143 | B1-U0-G2   | 7683                | 149 | B1-U0-G2   |              | 2563        | 63  | B1-U0-G1   |
|           |                    |              | IV          | 7265                | 141 | B2-U0-G2   | 7581                | 147 | B2-U0-G2   | 7896                | 153 | B2-U0-G2   | 8212                | 159 | B2-U0-G2   |              | 2740        | 67  | B1-U0-G1   |
|           |                    |              | IV-FT       | 6618                | 128 | B1-U0-G2   | 6905                | 134 | B1-U0-G2   | 7193                | 140 | B1-U0-G2   | 7481                | 145 | B2-U0-G2   |              | 2496        | 61  | B1-U0-G1   |
|           |                    |              | VSQ-N       | 7594                | 147 | B2-U0-G1   | 7924                | 154 | B3-U0-G1   | 8254                | 160 | B3-U0-G1   | 8584                | 167 | B3-U0-G1   |              | 2864        | 70  | B1-U0-G0   |
|           |                    |              | VSQ-M       | 7446                | 145 | B3-U0-G1   | 7770                | 151 | B3-U0-G2   | 8094                | 157 | B3-U0-G2   | 8417                | 163 | B3-U0-G2   |              | 2808        | 68  | B2-U0-G1   |
|           |                    |              | VSQ-W       | 7269                | 141 | B3-U0-G2   | 7585                | 147 | B3-U0-G2   | 7901                | 153 | B3-U0-G2   | 8217                | 160 | B3-U0-G2   |              | 2741        | 67  | B2-U0-G1   |
|           |                    |              | II-HS       | 5262                | 102 | B1-U0-G2   | 5491                | 107 | B1-U0-G2   | 5719                | 111 | B1-U0-G2   | 5948                | 115 | B1-U0-G2   |              | 1984        | 48  | B0-U0-G1   |
|           |                    |              | II-FR-HS    | 5352                | 104 | B0-U0-G1   | 5585                | 108 | B0-U0-G1   | 5818                | 113 | B1-U0-G1   | 6050                | 117 | B1-U0-G1   |              | 2018        | 49  | B0-U0-G0   |
|           |                    |              | III-M-HS    | 5323                | 103 | B0-U0-G2   | 5555                | 108 | B0-U0-G2   | 5786                | 112 | B0-U0-G2   | 6017                | 117 | B0-U0-G2   |              | 2007        | 49  | B0-U0-G1   |
|           |                    |              | III-W-HS    | 5211                | 101 | B0-U0-G2   | 5437                | 106 | B0-U0-G2   | 5664                | 110 | B0-U0-G2   | 5890                | 114 | B0-U0-G2   |              | 1965        | 48  | B0-U0-G1   |
|           |                    |              | IV-HS       | 5498                | 107 | B0-U0-G2   | 5737                | 111 | B0-U0-G2   | 5976                | 116 | B0-U0-G2   | 6215                | 121 | B0-U0-G2   |              | 2074        | 51  | B0-U0-G1   |
|           |                    |              | IV-FT-HS    | 5196                | 101 | B0-U0-G2   | 5422                | 105 | B0-U0-G2   | 5648                | 110 | B0-U0-G2   | 5874                | 114 | B0-U0-G2   |              | 1960        | 48  | B0-U0-G1   |
| 48        | 525                | 77.8         | II          | 10334               | 133 | B2-U0-G2   | 10783               | 139 | B2-U0-G2   | 11232               | 144 | B2-U0-G2   | 11682               | 150 | B2-U0-G2   | 62.0         | 3143        | 51  | B1-U0-G1   |
|           |                    |              | II-FR       | 10403               | 134 | B2-U0-G1   | 10855               | 140 | B2-U0-G1   | 11308               | 145 | B3-U0-G1   | 11760               | 151 | B3-U0-G1   |              | 3164        | 51  | B1-U0-G1   |
|           |                    |              | II-ML       | 10334               | 133 | B3-U0-G3   | 10783               | 139 | B3-U0-G3   | 11233               | 144 | B3-U0-G3   | 11682               | 150 | B3-U0-G3   |              | 3143        | 51  | B2-U0-G2   |
|           |                    |              | III-M       | 10515               | 135 | B2-U0-G2   | 10972               | 141 | B2-U0-G2   | 11429               | 147 | B2-U0-G2   | 11887               | 153 | B2-U0-G2   |              | 3198        | 52  | B1-U0-G1   |
|           |                    |              | III-W       | 9763                | 125 | B2-U0-G3   | 10188               | 131 | B2-U0-G3   | 10612               | 136 | B2-U0-G3   | 11037               | 142 | B2-U0-G3   |              | 2969        | 48  | B1-U0-G1   |
|           |                    |              | IV          | 10436               | 134 | B2-U0-G2   | 10890               | 140 | B2-U0-G2   | 11343               | 146 | B2-U0-G2   | 11797               | 152 | B2-U0-G2   |              | 3174        | 51  | B1-U0-G1   |
|           |                    |              | IV-FT       | 9506                | 122 | B2-U0-G3   | 9920                | 128 | B2-U0-G3   | 10333               | 133 | B2-U0-G3   | 10746               | 138 | B2-U0-G3   |              | 2892        | 47  | B1-U0-G1   |
|           |                    |              | VSQ-N       | 10907               | 140 | B3-U0-G1   | 11382               | 146 | B3-U0-G1   | 11856               | 152 | B3-U0-G1   | 12330               | 158 | B3-U0-G1   |              | 3317        | 54  | B2-U0-G0   |
|           |                    |              | VSQ-M       | 10695               | 137 | B4-U0-G2   | 11160               | 143 | B4-U0-G2   | 11626               | 149 | B4-U0-G2   | 12091               | 155 | B4-U0-G2   |              | 3253        | 52  | B2-U0-G1   |
|           |                    |              | VSQ-W       | 10441               | 134 | B4-U0-G3   | 10895               | 140 | B4-U0-G3   | 11349               | 146 | B4-U0-G3   | 11803               | 152 | B4-U0-G3   |              | 3175        | 51  | B2-U0-G1   |
|           |                    |              | II-HS       | 7558                | 97  | B1-U0-G2   | 7887                | 101 | B1-U0-G2   | 8215                | 106 | B1-U0-G2   | 8544                | 110 | B1-U0-G2   |              | 2298        | 37  | B0-U0-G1   |
|           |                    |              | II-FR-HS    | 7688                | 99  | B1-U0-G1   | 8022                | 103 | B1-U0-G1   | 8356                | 107 | B1-U0-G1   | 8690                | 112 | B1-U0-G1   |              | 2339        | 38  | B0-U0-G0   |
|           |                    |              | III-M-HS    | 7646                | 98  | B1-U0-G2   | 7978                | 103 | B1-U0-G2   | 8311                | 107 | B1-U0-G2   | 8643                | 111 | B1-U0-G2   |              | 2325        | 38  | B0-U0-G1   |
|           |                    |              | III-W-HS    | 7484                | 96  | B0-U0-G2   | 7810                | 100 | B0-U0-G2   | 8135                | 105 | B1-U0-G2   | 8460                | 109 | B1-U0-G2   |              | 2276        | 37  | B0-U0-G1   |
|           |                    |              | IV-HS       | 7898                | 102 | B1-U0-G2   | 8241                | 106 | B1-U0-G2   | 8584                | 110 | B1-U0-G2   | 8928                | 115 | B1-U0-G2   |              | 2402        | 39  | B0-U0-G1   |
|           |                    |              | IV-FT-HS    | 7463                | 96  | B1-U0-G3   | 7788                | 100 | B1-U0-G3   | 8112                | 104 | B1-U0-G3   | 8437                | 108 | B1-U0-G3   |              | 2270        | 37  | B0-U0-G1   |
| 48        | 700                | 104.1        | II          | 13148               | 126 | B2-U0-G2   | 13720               | 132 | B2-U0-G2   | 14291               | 137 | B2-U0-G2   | 14863               | 143 | B3-U0-G2   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 13236               | 127 | B3-U0-G1   | 13811               | 133 | B3-U0-G1   | 14386               | 138 | B3-U0-G1   | 14962               | 144 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 13148               | 126 | B3-U0-G3   | 13720               | 132 | B3-U0-G3   | 14291               | 137 | B3-U0-G3   | 14863               | 143 | B4-U0-G4   |              |             |     |            |
|           |                    |              | III-M       | 13378               | 129 | B2-U0-G2   | 13959               | 134 | B2-U0-G2   | 14541               | 140 | B2-U0-G2   | 15123               | 145 | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-W       | 12420               | 119 | B2-U0-G3   | 12960               | 124 | B2-U0-G3   | 13500               | 130 | B2-U0-G3   | 14040               | 135 | B2-U0-G3   |              |             |     |            |
|           |                    |              | IV          | 13277               | 128 | B2-U0-G2   | 13854               | 133 | B2-U0-G2   | 14431               | 139 | B2-U0-G2   | 15008               | 144 | B2-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT       | 12094               | 116 | B2-U0-G3   | 12620               | 121 | B2-U0-G3   | 13146               | 126 | B2-U0-G3   | 13672               | 131 | B2-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-N       | 13876               | 133 | B3-U0-G1   | 14479               | 139 | B3-U0-G1   | 15083               | 145 | B3-U0-G1   | 15686               | 151 | B3-U0-G1   |              |             |     |            |
|           |                    |              | VSQ-M       | 13607               | 131 | B4-U0-G2   | 14199               | 136 | B4-U0-G2   | 14790               | 142 | B4-U0-G2   | 15382               | 148 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 13283               | 128 | B4-U0-G3   | 13860               | 133 | B4-U0-G3   | 14438               | 139 | B4-U0-G3   | 15015               | 144 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-HS       | 9616                | 92  | B1-U0-G2   | 10034               | 96  | B1-U0-G2   | 10452               | 100 | B1-U0-G2   | 10870               | 104 | B1-U0-G2   |              |             |     |            |
|           |                    |              | II-FR-HS    | 9781                | 94  | B1-U0-G1   | 10206               | 98  | B1-U0-G1   | 10631               | 102 | B1-U0-G1   | 11056               | 106 | B1-U0-G1   |              |             |     |            |
|           |                    |              | III-M-HS    | 9727                | 93  | B1-U0-G2   | 10150               | 98  | B1-U0-G2   | 10573               | 102 | B1-U0-G2   | 10995               | 106 | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-W-HS    | 9521                | 91  | B1-U0-G3   | 9935                | 95  | B1-U0-G3   | 10349               | 99  | B1-U0-G3   | 10763               | 103 | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-HS       | 10048               | 97  | B1-U0-G2   | 10485               | 101 | B1-U0-G2   | 10921               | 105 | B1-U0-G2   | 11358               | 109 | B1-U0-G2   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 9496                | 91  | B1-U0-G3   | 9909                | 95  | B1-U0-G3   | 10322               | 99  | B1-U0-G3   | 10735               | 103 | B1-U0-G3   |              |             |     |            |
| 48        | 875                | 132.9        | II          | 15655               | 118 | B3-U0-G2   | 16336               | 123 | B3-U0-G3   | 17016               | 128 | B3-U0-G3   | 17697               | 133 | B3-U0-G3   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 15759               | 119 | B3-U0-G2   | 16445               | 124 | B3-U0-G2   | 17130               | 129 | B3-U0-G2   | 17815               | 134 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 15655               | 118 | B4-U0-G4   | 16336               | 123 | B4-U0-G4   | 17016               | 128 | B4-U0-G4   | 17697               | 133 | B4-U0-G4   |              |             |     |            |
|           |                    |              | III-M       | 15929               | 120 | B3-U0-G3   | 16621               | 125 | B3-U0-G3   | 17314               | 130 | B3-U0-G3   | 18006               | 135 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-W       | 14789               | 111 | B2-U0-G3   | 15432               | 116 | B2-U0-G3   | 16075               | 121 | B3-U0-G3   | 16718               | 126 | B3-U0-G3   |              |             |     |            |
|           |                    |              | IV          | 15809               | 119 | B3-U0-G2   | 16496               | 124 | B3-U0-G3   | 17183               | 129 | B3-U0-G3   | 17871               | 134 | B3-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT       | 14401               | 108 | B2-U0-G3   | 15027               | 113 | B3-U0-G3   | 15653               | 118 | B3-U0-G3   | 16279               | 122 | B3-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-N       | 16523               | 124 | B4-U0-G1   | 17242               | 130 | B4-U0-G2   | 17960               | 135 | B4-U0-G2   | 18679               | 141 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 16202               | 122 | B4-U0-G2   | 16907               | 127 | B4-U0-G2   | 17611               | 133 | B4-U0-G2   | 18316               | 138 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 15816               | 119 | B4-U0-G3   | 16503               | 124 | B4-U0-G3   | 17191               | 129 | B5-U0-G3   | 17879               | 135 | B5-U0-G3   |              |             |     |            |
|           |                    |              | II-HS       | 11449               | 86  | B1-U0-G2   | 11946               | 90  | B1-U0-G2   | 12444               | 94  | B1-U0-G2   | 12942               | 97  | B1-U0-G2   |              |             |     |            |
|           |                    |              | II-FR-HS    | 11646               | 88  | B1-U0-G2   | 12152               | 91  | B1-U0-G2   | 12659               | 95  | B1-U0-G2   | 13165               | 99  | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 11582               | 87  | B1-U0-G2   | 12086               | 91  | B1-U0-G3   | 12589               | 95  | B1-U0-G3   | 13093               | 99  | B1-U0-G3   |              |             |     |            |
|           |                    |              | III-W-HS    | 11337               | 85  | B1-U0-G3   | 11830               | 89  | B1-U0-G3   | 12323               | 93  | B1-U0-G3   | 12816               | 96  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-HS       | 11964               | 90  | B1-U0-G2   | 12484               | 94  | B1-U0-G2   | 13004               | 98  | B1-U0-G3   | 13524               | 102 | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 11307               | 85  | B1-U0-G3   | 11798               | 89  | B1-U0-G3   | 12290               | 92  | B1-U0-G3   | 12782               | 96  | B1-U0-G3   |              |             |     |            |
| 48        | 1050               | 161.7        | II          | 17775               | 110 | B3-U0-G3   | 18548               | 115 | B3-U0-G3   | 19320               | 119 | B3-U0-G3   | 20093               | 124 | B3-U0-G3   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 17894               | 111 | B3-U0-G2   | 18672               | 115 | B3-U0-G2   | 19450               | 120 | B3-U0-G2   | 20228               | 125 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 17775               | 110 | B4-U0-G4   | 18548               | 115 | B4-U0-G4   | 19321               | 119 | B4-U0-G4   | 20094               | 124 | B4-U0-G4   |              |             |     |            |
|           |                    |              | III-M       | 18086               | 112 | B3-U0-G3   | 18872               | 117 | B3-U0-G3   | 19658               | 122 | B3-U0-G3   | 20445               | 126 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-W       | 16792               | 104 | B3-U0-G3   | 17522               | 108 | B3-U0-G3   | 18252               | 113 | B3-U0-G3   | 18982               | 117 | B3-U0-G4   |              |             |     |            |
|           |                    |              | IV          | 17950               | 111 | B3-U0-G3   | 18730               | 116 | B3-U0-G3   | 19511               | 121 | B3-U0-G3   | 20291               | 125 | B3-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT       | 16351               | 101 | B3-U0-G3   | 17062               | 106 | B3-U0-G3   | 17773               | 110 | B3-U0-G3   | 18484               | 114 | B3-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-N       | 18761               | 116 | B4-U0-G2   | 19577               | 121 | B4-U0-G2   | 20392               | 126 | B4-U0-G2   | 21208               | 131 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 18397               | 114 | B4-U0-G2   | 19197               | 119 | B4-U0-G2   | 19996               | 124 | B4-U0-G2   | 20796               | 129 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 17957               | 111 | B5-U0-G3   | 18738               | 116 | B5-U0-G3   | 19519               | 121 | B5-U0-G3   | 20300               | 126 | B5-U0-G3   |              |             |     |            |
|           |                    |              | II-HS       | 12999               | 80  | B1-U0-G2   | 13565               | 84  | B1-U0-G3   | 14130               | 87  | B1-U0-G3   | 14695               | 91  | B1-U0-G3   |              |             |     |            |
|           |                    |              | II-FR-HS    | 13224               | 82  | B1-U0-G2   | 13799               | 85  | B1-U0-G2   | 14373               | 89  | B1-U0-G2   | 14948               | 92  | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 13151               | 81  | B1-U0-G3   | 13723               | 85  | B1-U0-G3   | 14295               | 88  | B1-U0-G3   | 14867               | 92  | B1-U0-G3   |              |             |     |            |
|           |                    |              | III-W-HS    | 12873               | 80  | B1-U0-G3   | 13433               | 83  | B1-U0-G3   | 13992               | 87  | B1-U0-G3   | 14552               | 90  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-HS       | 13584               | 84  | B1-U0-G3   | 14175               | 88  | B1-U0-G3   | 14765               | 91  | B1-U0-G3   | 15356               | 95  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 12838               | 79  | B1-U0-G3   | 13396               | 83  | B1-U0-G3   | 13955               | 86  | B1-U0-G4   | 14513               | 90  | B1-U0-G4   |              |             |     |            |

**PHOTOMETRIC DATA GUIDE - ISOFOOTCANDLE PLOTS**

**RZR/RZR-MAF-PLED-80LED-700mA-40K - 25' Pole Height**



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**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**
**RZR/RZR-MAF-PLED**

| RZR/RZR-MAF-PLED |                    |              |             |                     |       |            |                     |     |            |                     |     |            |                     |     |            |              |             |          |            |        |      |            |          |     |  |  |
|------------------|--------------------|--------------|-------------|---------------------|-------|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|----------|------------|--------|------|------------|----------|-----|--|--|
| LED Count        | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |       |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |          |            |        |      |            |          |     |  |  |
|                  |                    |              |             | LUMENS              | LPW   | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW      | BUG RATING | LUMENS | LPW  | BUG RATING |          |     |  |  |
| 40               | 350                | 42.9         | II          | 6500                | 152   | B2-U0-G2   | 6782                | 158 | B2-U0-G2   | 7065                | 165 | B2-U0-G2   | 7348                | 171 | B2-U0-G2   | 33.0         | 2309        | 70       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | II-FR       | 6544                | 153   | B2-U0-G1   | 6828                | 159 | B2-U0-G1   | 7113                | 166 | B2-U0-G1   | 7397                | 172 | B2-U0-G1   |              | 2325        | 70       | B1-U0-G0   |        |      |            |          |     |  |  |
|                  |                    |              | II-ML       | 6500                | 152   | B3-U0-G3   | 6783                | 158 | B3-U0-G3   | 7065                | 165 | B3-U0-G3   | 7348                | 171 | B3-U0-G3   |              | 2309        | 70       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | III-M       | 6614                | 154   | B2-U0-G2   | 6901                | 161 | B2-U0-G2   | 7189                | 168 | B2-U0-G2   | 7476                | 174 | B2-U0-G2   |              | 2349        | 71       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | III-W       | 6141                | 143   | B1-U0-G2   | 6408                | 149 | B1-U0-G2   | 6675                | 156 | B1-U0-G2   | 6942                | 162 | B1-U0-G2   |              | 2182        | 66       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | IV          | 6564                | 153   | B2-U0-G2   | 6849                | 160 | B2-U0-G2   | 7135                | 166 | B2-U0-G2   | 7420                | 173 | B2-U0-G2   |              | 2332        | 71       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT       | 5979                | 139   | B1-U0-G2   | 6239                | 145 | B1-U0-G2   | 6499                | 152 | B1-U0-G2   | 6759                | 158 | B1-U0-G2   |              | 2124        | 64       | B1-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-N       | 6860                | 160   | B2-U0-G1   | 7159                | 167 | B2-U0-G1   | 7457                | 174 | B2-U0-G1   | 7755                | 181 | B2-U0-G1   |              | 2438        | 74       | B1-U0-G0   |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-M       | 6727                | 157   | B3-U0-G1   | 7020                | 164 | B3-U0-G1   | 7313                | 170 | B3-U0-G1   | 7605                | 177 | B3-U0-G2   |              | 2390        | 72       | B2-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-W       | 6567                | 153   | B3-U0-G2   | 6852                | 160 | B3-U0-G2   | 7138                | 166 | B3-U0-G2   | 7423                | 173 | B3-U0-G2   |              | 2333        | 71       | B2-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | II-HS       | 4754                | 111   | B1-U0-G2   | 4961                | 116 | B1-U0-G2   | 5167                | 120 | B1-U0-G2   | 5374                | 125 | B1-U0-G2   |              | 1689        | 51       | B0-U0-G0   |        |      |            |          |     |  |  |
|                  |                    |              | II-FR-HS    | 4836                | 113   | B0-U0-G1   | 5046                | 118 | B0-U0-G1   | 5256                | 123 | B0-U0-G1   | 5466                | 127 | B0-U0-G1   |              | 1718        | 52       | B0-U0-G0   |        |      |            |          |     |  |  |
|                  |                    |              | III-M-HS    | 4810                | 112   | B0-U0-G2   | 5019                | 117 | B0-U0-G2   | 5228                | 122 | B0-U0-G2   | 5437                | 127 | B0-U0-G2   |              | 1708        | 52       | B0-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | III-W-HS    | 4708                | 110   | B0-U0-G2   | 4912                | 115 | B0-U0-G2   | 5117                | 119 | B0-U0-G2   | 5321                | 124 | B0-U0-G2   |              | 1673        | 51       | B0-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | IV-HS       | 4968                | 116   | B0-U0-G2   | 5184                | 121 | B0-U0-G2   | 5400                | 126 | B0-U0-G2   | 5616                | 131 | B0-U0-G2   |              | 1764        | 53       | B0-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT-HS    | 4695                | 109   | B0-U0-G2   | 4899                | 114 | B0-U0-G2   | 5103                | 119 | B0-U0-G2   | 5307                | 124 | B0-U0-G2   |              | 1668        | 51       | B0-U0-G1   |        |      |            |          |     |  |  |
|                  |                    |              | 40          | 525                 | 64.8  | II         | 9340                | 144 | B2-U0-G2   | 9746                | 150 | B2-U0-G2   | 10152               | 157 | B2-U0-G2   |              | 10559       | 163      | B2-U0-G2   | 51.0   | 2715 | 53         | B1-U0-G1 |     |  |  |
|                  |                    |              |             |                     |       | II-FR      | 9403                | 145 | B2-U0-G1   | 9812                | 151 | B2-U0-G1   | 10221               | 158 | B2-U0-G1   |              | 10630       | 164      | B2-U0-G1   |        | 2733 | 54         | B1-U0-G1 |     |  |  |
| II-ML            | 9341               | 144          |             |                     |       | B3-U0-G3   | 9747                | 150 | B3-U0-G3   | 10153               | 157 | B3-U0-G3   | 10559               | 163 | B3-U0-G3   | 2715         | 53          | B1-U0-G1 |            |        |      |            |          |     |  |  |
| III-M            | 9504               | 147          |             |                     |       | B2-U0-G2   | 9917                | 153 | B2-U0-G2   | 10330               | 159 | B2-U0-G2   | 10743               | 166 | B2-U0-G2   | 2762         | 54          | B1-U0-G1 |            |        |      |            |          |     |  |  |
| III-W            | 8824               | 136          |             |                     |       | B2-U0-G3   | 9208                | 142 | B2-U0-G3   | 9592                | 148 | B2-U0-G3   | 9976                | 154 | B2-U0-G3   | 2565         | 50          | B1-U0-G1 |            |        |      |            |          |     |  |  |
| IV               | 9433               | 146          |             |                     |       | B2-U0-G2   | 9843                | 152 | B2-U0-G2   | 10253               | 158 | B2-U0-G2   | 10663               | 165 | B2-U0-G2   | 2742         | 54          | B1-U0-G1 |            |        |      |            |          |     |  |  |
| IV-FT            | 8592               | 133          |             |                     |       | B2-U0-G3   | 8966                | 138 | B2-U0-G3   | 9340                | 144 | B2-U0-G3   | 9713                | 150 | B2-U0-G3   | 2497         | 49          | B1-U0-G1 |            |        |      |            |          |     |  |  |
| VSQ-N            | 9858               | 152          |             |                     |       | B3-U0-G1   | 10287               | 159 | B3-U0-G1   | 10716               | 165 | B3-U0-G1   | 11144               | 172 | B3-U0-G1   | 2866         | 56          | B1-U0-G0 |            |        |      |            |          |     |  |  |
| VSQ-M            | 9667               | 149          |             |                     |       | B3-U0-G2   | 10088               | 156 | B3-U0-G2   | 10508               | 162 | B3-U0-G2   | 10928               | 169 | B4-U0-G2   | 2809         | 55          | B2-U0-G1 |            |        |      |            |          |     |  |  |
| VSQ-W            | 9436               | 146          |             |                     |       | B4-U0-G3   | 9846                | 152 | B4-U0-G3   | 10257               | 158 | B4-U0-G3   | 10667               | 165 | B4-U0-G3   | 2743         | 54          | B2-U0-G1 |            |        |      |            |          |     |  |  |
| II-HS            | 6831               | 105          |             |                     |       | B1-U0-G2   | 7128                | 110 | B1-U0-G2   | 7425                | 115 | B1-U0-G2   | 7722                | 119 | B1-U0-G2   | 1985         | 39          | B0-U0-G1 |            |        |      |            |          |     |  |  |
| II-FR-HS         | 6949               | 107          |             |                     |       | B1-U0-G1   | 7251                | 112 | B1-U0-G1   | 7553                | 117 | B1-U0-G1   | 7855                | 121 | B1-U0-G1   | 2020         | 40          | B0-U0-G0 |            |        |      |            |          |     |  |  |
| III-M-HS         | 6911               | 107          |             |                     |       | B0-U0-G2   | 7212                | 111 | B0-U0-G2   | 7512                | 116 | B1-U0-G2   | 7813                | 121 | B1-U0-G2   | 2009         | 39          | B0-U0-G1 |            |        |      |            |          |     |  |  |
| III-W-HS         | 6764               | 104          |             |                     |       | B0-U0-G2   | 7059                | 109 | B0-U0-G2   | 7353                | 113 | B0-U0-G2   | 7647                | 118 | B0-U0-G2   | 1966         | 39          | B0-U0-G1 |            |        |      |            |          |     |  |  |
| IV-HS            | 7138               | 110          |             |                     |       | B0-U0-G2   | 7449                | 115 | B1-U0-G2   | 7759                | 120 | B1-U0-G2   | 8069                | 125 | B1-U0-G2   | 2075         | 41          | B0-U0-G1 |            |        |      |            |          |     |  |  |
| IV-FT-HS         | 6746               | 104          |             |                     |       | B0-U0-G2   | 7040                | 109 | B1-U0-G3   | 7333                | 113 | B1-U0-G3   | 7626                | 118 | B1-U0-G3   | 1960         | 38          | B0-U0-G1 |            |        |      |            |          |     |  |  |
| 40               | 700                | 86.8         |             |                     |       | II         | 11823               | 136 | B2-U0-G2   | 12337               | 142 | B2-U0-G2   | 12851               | 148 | B2-U0-G2   | 13365        | 154         | B2-U0-G2 | N/A        |        | N/A  |            |          |     |  |  |
|                  |                    |              |             |                     |       | II-FR      | 11903               | 137 | B3-U0-G1   | 12420               | 143 | B3-U0-G1   | 12938               | 149 | B3-U0-G1   | 13455        | 155         | B3-U0-G1 |            |        |      |            |          |     |  |  |
|                  |                    |              | II-ML       | 11824               | 136   | B3-U0-G3   | 12338               | 142 | B3-U0-G3   | 12852               | 148 | B3-U0-G3   | 13366               | 154 | B3-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-M       | 12030               | 139   | B2-U0-G2   | 12553               | 145 | B2-U0-G2   | 13076               | 151 | B2-U0-G2   | 13599               | 157 | B2-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-W       | 11170               | 129   | B2-U0-G3   | 11656               | 134 | B2-U0-G3   | 12142               | 140 | B2-U0-G3   | 12627               | 145 | B2-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV          | 11940               | 138   | B2-U0-G2   | 12459               | 144 | B2-U0-G2   | 12978               | 150 | B2-U0-G2   | 13497               | 156 | B2-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT       | 10876               | 125   | B2-U0-G3   | 11349               | 131 | B2-U0-G3   | 11822               | 136 | B2-U0-G3   | 12295               | 142 | B2-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-N       | 12479               | 144   | B3-U0-G1   | 13022               | 150 | B3-U0-G1   | 13564               | 156 | B3-U0-G1   | 14107               | 163 | B3-U0-G1   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-M       | 12237               | 141   | B4-U0-G2   | 12769               | 147 | B4-U0-G2   | 13301               | 153 | B4-U0-G2   | 13833               | 159 | B4-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-W       | 11945               | 138   | B4-U0-G3   | 12464               | 144 | B4-U0-G3   | 12983               | 150 | B4-U0-G3   | 13502               | 156 | B4-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | II-HS       | 8647                | 100   | B1-U0-G2   | 9023                | 104 | B1-U0-G2   | 9399                | 108 | B1-U0-G2   | 9775                | 113 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | II-FR-HS    | 8797                | 101   | B1-U0-G1   | 9179                | 106 | B1-U0-G1   | 9561                | 110 | B1-U0-G1   | 9944                | 115 | B1-U0-G1   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-M-HS    | 8749                | 101   | B1-U0-G2   | 9129                | 105 | B1-U0-G2   | 9510                | 110 | B1-U0-G2   | 9890                | 114 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-W-HS    | 8563                | 99    | B1-U0-G2   | 8935                | 103 | B1-U0-G2   | 9307                | 107 | B1-U0-G2   | 9680                | 112 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-HS       | 9036                | 104   | B1-U0-G2   | 9429                | 109 | B1-U0-G2   | 9822                | 113 | B1-U0-G2   | 10215               | 118 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT-HS    | 8540                | 98    | B1-U0-G3   | 8911                | 103 | B1-U0-G3   | 9282                | 107 | B1-U0-G3   | 9653                | 111 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | 40          | 875                 | 110.8 | II         | 14168               | 128 | B2-U0-G2   | 14785               | 133 | B3-U0-G2   | 15401               | 139 | B3-U0-G2   | 16017        | 145         | B3-U0-G3 |            | N/A    |      |            |          | N/A |  |  |
|                  |                    |              |             |                     |       | II-FR      | 14264               | 129 | B3-U0-G1   | 14884               | 134 | B3-U0-G2   | 15504               | 140 | B3-U0-G2   | 16125        | 146         | B3-U0-G2 |            |        |      |            |          |     |  |  |
| II-ML            | 14169              | 128          |             |                     |       | B3-U0-G3   | 14785               | 133 | B4-U0-G4   | 15401               | 139 | B4-U0-G4   | 16017               | 145 | B4-U0-G4   |              |             |          |            |        |      |            |          |     |  |  |
| III-M            | 14416              | 130          |             |                     |       | B2-U0-G2   | 15043               | 136 | B2-U0-G2   | 15670               | 141 | B3-U0-G2   | 16297               | 147 | B3-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| III-W            | 13386              | 121          |             |                     |       | B2-U0-G3   | 13968               | 126 | B2-U0-G3   | 14550               | 131 | B2-U0-G3   | 15132               | 137 | B2-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| IV               | 14309              | 129          |             |                     |       | B2-U0-G2   | 14931               | 135 | B2-U0-G2   | 15553               | 140 | B3-U0-G2   | 16175               | 146 | B3-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| IV-FT            | 13034              | 118          |             |                     |       | B2-U0-G3   | 13601               | 123 | B2-U0-G3   | 14167               | 128 | B2-U0-G3   | 14734               | 133 | B2-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| VSQ-N            | 14955              | 135          |             |                     |       | B3-U0-G1   | 15605               | 141 | B3-U0-G1   | 16255               | 147 | B4-U0-G1   | 16905               | 153 | B4-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| VSQ-M            | 14665              | 132          |             |                     |       | B4-U0-G2   | 15302               | 138 | B4-U0-G2   | 15940               | 144 | B4-U0-G2   | 16578               | 150 | B4-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| VSQ-W            | 14314              | 129          |             |                     |       | B4-U0-G3   | 14937               | 135 | B4-U0-G3   | 15559               | 140 | B4-U0-G3   | 16181               | 146 | B4-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| II-HS            | 10363              | 94           |             |                     |       | B1-U0-G2   | 10813               | 98  | B1-U0-G2   | 11264               | 102 | B1-U0-G2   | 11714               | 106 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| II-FR-HS         | 10541              | 95           |             |                     |       | B1-U0-G1   | 10999               | 99  | B1-U0-G1   | 11458               | 103 | B1-U0-G2   | 11916               | 108 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| III-M-HS         | 10484              | 95           |             |                     |       | B1-U0-G2   | 10940               | 99  | B1-U0-G2   | 11396               | 103 | B1-U0-G2   | 11852               | 107 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| III-W-HS         | 10262              | 93           |             |                     |       | B1-U0-G3   | 10708               | 97  | B1-U0-G3   | 11154               | 101 | B1-U0-G3   | 11600               | 105 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| IV-HS            | 10828              | 98           |             |                     |       | B1-U0-G2   | 11299               | 102 | B1-U0-G2   | 11770               | 106 | B1-U0-G2   | 12241               | 110 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
| IV-FT-HS         | 10234              | 92           |             |                     |       | B1-U0-G3   | 10678               | 96  | B1-U0-G3   | 11123               | 100 | B1-U0-G3   | 11568               | 104 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
| 40               | 1050               | 134.8        |             |                     |       | II         | 16120               | 120 | B3-U0-G3   | 16820               | 125 | B3-U0-G3   | 17521               | 130 | B3-U0-G3   | 18222        | 135         | B3-U0-G3 | N/A        |        | N/A  |            |          |     |  |  |
|                  |                    |              |             |                     |       | II-FR      | 16228               | 120 | B3-U0-G2   | 16934               | 126 | B3-U0-G2   | 17639               | 131 | B3-U0-G2   | 18345        | 136         | B3-U0-G2 |            |        |      |            |          |     |  |  |
|                  |                    |              | II-ML       | 16120               | 120   | B4-U0-G4   | 16821               | 125 | B4-U0-G4   | 17522               | 130 | B4-U0-G4   | 18223               | 135 | B4-U0-G4   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-M       | 16402               | 122   | B3-U0-G3   | 17115               | 127 | B3-U0-G3   | 17828               | 132 | B3-U0-G3   | 18541               | 138 | B3-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-W       | 15229               | 113   | B2-U0-G3   | 15891               | 118 | B3-U0-G3   | 16554               | 123 | B3-U0-G3   | 17216               | 128 | B3-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV          | 16279               | 121   | B3-U0-G3   | 16987               | 126 | B3-U0-G3   | 17694               | 131 | B3-U0-G3   | 18402               | 137 | B3-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT       | 14829               | 110   | B2-U0-G3   | 15474               | 115 | B3-U0-G3   | 16118               | 120 | B3-U0-G4   | 16763               | 124 | B3-U0-G4   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-N       | 17014               | 126   | B4-U0-G2   | 17754               | 132 | B4-U0-G2   | 18494               | 137 | B4-U0-G2   | 19233               | 143 | B4-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-M       | 16684               | 124   | B4-U0-G2   | 17410               | 129 | B4-U0-G2   | 18135               | 135 | B4-U0-G2   | 18861               | 140 | B4-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | VSQ-W       | 16285               | 121   | B4-U0-G3   | 16993               | 126 | B5-U0-G3   | 17701               | 131 | B5-U0-G3   | 18409               | 137 | B5-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | II-HS       | 11789               | 87    | B1-U0-G2   | 12302               | 91  | B1-U0-G2   | 12814               | 95  | B1-U0-G2   | 13327               | 99  | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | II-FR-HS    | 11993               | 89    | B1-U0-G2   | 12514               | 93  | B1-U0-G2   | 13035               | 97  | B1-U0-G2   | 13557               | 101 | B1-U0-G2   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-M-HS    | 11928               | 88    | B1-U0-G3   | 12447               | 92  | B1-U0-G3   | 12965               | 96  | B1-U0-G3   | 13484               | 100 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | III-W-HS    | 11674               | 87    | B1-U0-G3   | 12182               | 90  | B1-U0-G3   | 12690               | 94  | B1-U0-G3   | 13197               | 98  | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-HS       | 12319               | 91    | B1-U0-G2   | 12855               | 95  | B1-U0-G2   | 13391               | 99  | B1-U0-G3   | 13926               | 103 | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |
|                  |                    |              | IV-FT-HS    | 11643               | 86    | B1-U0-G3   | 12149               | 90  | B1-U0-G3   | 12655               | 94  | B1-U0-G3   | 13161               | 98  | B1-U0-G3   |              |             |          |            |        |      |            |          |     |  |  |

**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**
**RZR/RZR-MAF-PLED**

| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 40        | 1225               | 158.9        | II          | 17939               | 113 | B3-U0-G3   | 18720               | 118 | B3-U0-G3   | 19499               | 123 | B3-U0-G3   | 20279               | 128 | B3-U0-G3   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 18060               | 114 | B3-U0-G2   | 18845               | 119 | B3-U0-G2   | 19631               | 124 | B3-U0-G2   | 20416               | 128 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 17940               | 113 | B4-U0-G4   | 18720               | 118 | B4-U0-G4   | 19501               | 123 | B4-U0-G4   | 20281               | 128 | B4-U0-G4   |              |             |     |            |
|           |                    |              | III-M       | 18254               | 115 | B3-U0-G3   | 19047               | 120 | B3-U0-G3   | 19841               | 125 | B3-U0-G3   | 20635               | 130 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-W       | 16949               | 107 | B3-U0-G3   | 17686               | 111 | B3-U0-G3   | 18423               | 116 | B3-U0-G3   | 19160               | 121 | B3-U0-G4   |              |             |     |            |
|           |                    |              | IV          | 18117               | 114 | B3-U0-G3   | 18904               | 119 | B3-U0-G3   | 19692               | 124 | B3-U0-G3   | 20480               | 129 | B3-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT       | 16503               | 104 | B3-U0-G4   | 17221               | 108 | B3-U0-G4   | 17938               | 113 | B3-U0-G4   | 18656               | 117 | B3-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-N       | 18935               | 119 | B4-U0-G2   | 19758               | 124 | B4-U0-G2   | 20582               | 130 | B4-U0-G2   | 21405               | 135 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 18568               | 117 | B4-U0-G2   | 19375               | 122 | B4-U0-G2   | 20183               | 127 | B4-U0-G2   | 20990               | 132 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-W       | 18124               | 114 | B5-U0-G3   | 18912               | 119 | B5-U0-G3   | 19700               | 124 | B5-U0-G3   | 20488               | 129 | B5-U0-G3   |              |             |     |            |
|           |                    |              | II-HS       | 13121               | 83  | B1-U0-G3   | 13691               | 86  | B1-U0-G3   | 14262               | 90  | B1-U0-G3   | 14832               | 93  | B1-U0-G3   |              |             |     |            |
|           |                    |              | II-FR-HS    | 13347               | 84  | B1-U0-G2   | 13927               | 88  | B1-U0-G2   | 14508               | 91  | B1-U0-G2   | 15088               | 95  | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 13275               | 84  | B1-U0-G3   | 13852               | 87  | B1-U0-G3   | 14429               | 91  | B1-U0-G3   | 15006               | 94  | B1-U0-G3   |              |             |     |            |
|           |                    |              | III-W-HS    | 12993               | 82  | B1-U0-G3   | 13558               | 85  | B1-U0-G3   | 14123               | 89  | B1-U0-G3   | 14688               | 92  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-HS       | 13711               | 86  | B1-U0-G3   | 14307               | 90  | B1-U0-G3   | 14903               | 94  | B1-U0-G3   | 15499               | 98  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 12957               | 82  | B1-U0-G3   | 13521               | 85  | B1-U0-G3   | 14084               | 89  | B1-U0-G4   | 14647               | 92  | B1-U0-G4   |              |             |     |            |
| 40        | 1400               | 183.1        | II          | 19441               | 106 | B3-U0-G3   | 20286               | 111 | B3-U0-G3   | 21131               | 115 | B3-U0-G3   | 21977               | 120 | B3-U0-G3   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 19572               | 107 | B3-U0-G2   | 20423               | 112 | B3-U0-G2   | 21274               | 116 | B3-U0-G2   | 22125               | 121 | B3-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 19442               | 106 | B4-U0-G4   | 20287               | 111 | B4-U0-G4   | 21133               | 115 | B4-U0-G4   | 21978               | 120 | B4-U0-G4   |              |             |     |            |
|           |                    |              | III-M       | 19781               | 108 | B3-U0-G3   | 20641               | 113 | B3-U0-G3   | 21501               | 117 | B3-U0-G3   | 22361               | 122 | B3-U0-G3   |              |             |     |            |
|           |                    |              | III-W       | 18367               | 100 | B3-U0-G3   | 19166               | 105 | B3-U0-G4   | 19964               | 109 | B3-U0-G4   | 20763               | 113 | B3-U0-G4   |              |             |     |            |
|           |                    |              | IV          | 19633               | 107 | B3-U0-G3   | 20487               | 112 | B3-U0-G3   | 21341               | 117 | B3-U0-G3   | 22194               | 121 | B3-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT       | 17885               | 98  | B3-U0-G4   | 18662               | 102 | B3-U0-G4   | 19440               | 106 | B3-U0-G4   | 20217               | 110 | B3-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-N       | 20520               | 112 | B4-U0-G2   | 21412               | 117 | B4-U0-G2   | 22304               | 122 | B4-U0-G2   | 23196               | 127 | B4-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 20122               | 110 | B4-U0-G2   | 20997               | 115 | B4-U0-G2   | 21872               | 119 | B5-U0-G3   | 22747               | 124 | B5-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-W       | 19641               | 107 | B5-U0-G3   | 20495               | 112 | B5-U0-G3   | 21349               | 117 | B5-U0-G4   | 22203               | 121 | B5-U0-G4   |              |             |     |            |
|           |                    |              | II-HS       | 14219               | 78  | B1-U0-G3   | 14837               | 81  | B1-U0-G3   | 15455               | 84  | B1-U0-G3   | 16074               | 88  | B1-U0-G3   |              |             |     |            |
|           |                    |              | II-FR-HS    | 14464               | 79  | B1-U0-G2   | 15093               | 82  | B1-U0-G2   | 15722               | 86  | B1-U0-G2   | 16351               | 89  | B1-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 14386               | 79  | B1-U0-G3   | 15012               | 82  | B1-U0-G3   | 15637               | 85  | B1-U0-G3   | 16262               | 89  | B1-U0-G3   |              |             |     |            |
|           |                    |              | III-W-HS    | 14080               | 77  | B1-U0-G3   | 14692               | 80  | B1-U0-G3   | 15305               | 84  | B1-U0-G4   | 15917               | 87  | B1-U0-G4   |              |             |     |            |
|           |                    |              | IV-HS       | 14858               | 81  | B1-U0-G3   | 15504               | 85  | B1-U0-G3   | 16150               | 88  | B1-U0-G3   | 16796               | 92  | B1-U0-G3   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 14041               | 77  | B1-U0-G4   | 14652               | 80  | B1-U0-G4   | 15262               | 83  | B1-U0-G4   | 15873               | 87  | B1-U0-G4   |              |             |     |            |

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**PHOTOMETRIC GUIDE - LUMEN TABLES**
**RZR/RZR-MAF-PLED**

| RZR/RZR-MAF-PLIED |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |
|-------------------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
| LED Count         | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|                   |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 80                | 350                | 85.8         | II          | 12597               | 147 | B2-U0-G2   | 13145               | 153 | B2-U0-G2   | 13692               | 160 | B2-U0-G2   | 14240               | 166 | B2-U0-G2   | 67.0         | 4475        | 67  | B1-U0-G1   |
|                   |                    |              | II-FR       | 12681               | 148 | B3-U0-G1   | 13233               | 154 | B3-U0-G1   | 13784               | 161 | B3-U0-G1   | 14335               | 167 | B3-U0-G1   |              | 4504        | 67  | B1-U0-G1   |
|                   |                    |              | II-ML       | 12597               | 147 | B3-U0-G3   | 13145               | 153 | B3-U0-G3   | 13693               | 160 | B3-U0-G3   | 14241               | 166 | B3-U0-G3   |              | 4475        | 67  | B2-U0-G2   |
|                   |                    |              | III-M       | 12817               | 149 | B2-U0-G2   | 13375               | 156 | B2-U0-G2   | 13932               | 162 | B2-U0-G2   | 14489               | 169 | B2-U0-G2   |              | 4553        | 68  | B1-U0-G1   |
|                   |                    |              | III-W       | 11901               | 139 | B2-U0-G3   | 12418               | 145 | B2-U0-G3   | 12936               | 151 | B2-U0-G3   | 13453               | 157 | B2-U0-G3   |              | 4228        | 63  | B1-U0-G2   |
|                   |                    |              | IV          | 12721               | 148 | B2-U0-G2   | 13274               | 155 | B2-U0-G2   | 13827               | 161 | B2-U0-G2   | 14380               | 168 | B2-U0-G2   |              | 4518        | 67  | B1-U0-G1   |
|                   |                    |              | IV-FT       | 11588               | 135 | B2-U0-G3   | 12092               | 141 | B2-U0-G3   | 12596               | 147 | B2-U0-G3   | 13099               | 153 | B2-U0-G3   |              | 4117        | 61  | B1-U0-G1   |
|                   |                    |              | VSQ-N       | 13295               | 155 | B3-U0-G1   | 13874               | 162 | B3-U0-G1   | 14452               | 168 | B3-U0-G1   | 15030               | 175 | B3-U0-G1   |              | 4723        | 70  | B2-U0-G1   |
|                   |                    |              | VSQ-M       | 13038               | 152 | B4-U0-G2   | 13605               | 159 | B4-U0-G2   | 14172               | 165 | B4-U0-G2   | 14738               | 172 | B4-U0-G2   |              | 4631        | 69  | B3-U0-G1   |
|                   |                    |              | VSQ-W       | 12726               | 148 | B4-U0-G3   | 13280               | 155 | B4-U0-G3   | 13833               | 161 | B4-U0-G3   | 14386               | 168 | B4-U0-G3   |              | 4520        | 67  | B3-U0-G2   |
|                   |                    |              | II-HS       | 9213                | 107 | B1-U0-G2   | 9613                | 112 | B1-U0-G2   | 10014               | 117 | B1-U0-G2   | 10414               | 121 | B1-U0-G2   |              | 3273        | 49  | B0-U0-G1   |
|                   |                    |              | II-FRHS     | 9371                | 109 | B1-U0-G1   | 9779                | 114 | B1-U0-G1   | 10186               | 119 | B1-U0-G1   | 10594               | 123 | B1-U0-G1   |              | 3329        | 50  | B0-U0-G1   |
|                   |                    |              | III-MHS     | 9321                | 109 | B1-U0-G2   | 9726                | 113 | B1-U0-G2   | 10131               | 118 | B1-U0-G2   | 10536               | 123 | B1-U0-G2   |              | 3311        | 49  | B0-U0-G1   |
|                   |                    |              | III-WHS     | 9123                | 106 | B1-U0-G2   | 9520                | 111 | B1-U0-G3   | 9916                | 116 | B1-U0-G3   | 10313               | 120 | B1-U0-G3   |              | 3240        | 48  | B0-U0-G1   |
|                   |                    |              | IV-HS       | 9627                | 112 | B1-U0-G2   | 10046               | 117 | B1-U0-G2   | 10464               | 122 | B1-U0-G2   | 10882               | 127 | B1-U0-G2   |              | 3420        | 51  | B0-U0-G1   |
|                   |                    |              | IV-FT-HS    | 9098                | 106 | B1-U0-G3   | 9494                | 111 | B1-U0-G3   | 9889                | 115 | B1-U0-G3   | 10285               | 120 | B1-U0-G3   |              | 3232        | 48  | B0-U0-G2   |
| 80                | 525                | 129.7        | II          | 18101               | 140 | B3-U0-G3   | 18889               | 146 | B3-U0-G3   | 19676               | 152 | B3-U0-G3   | 20462               | 158 | B3-U0-G3   | 101.0        | 5251        | 52  | B1-U0-G1   |
|                   |                    |              | II-FR       | 18223               | 141 | B3-U0-G2   | 19016               | 147 | B3-U0-G2   | 19808               | 153 | B3-U0-G2   | 20600               | 159 | B3-U0-G2   |              | 5286        | 52  | B1-U0-G1   |
|                   |                    |              | II-ML       | 18102               | 140 | B4-U0-G4   | 18889               | 146 | B4-U0-G4   | 19676               | 152 | B4-U0-G4   | 20463               | 158 | B4-U0-G4   |              | 5251        | 52  | B2-U0-G2   |
|                   |                    |              | III-M       | 18418               | 142 | B3-U0-G3   | 19219               | 148 | B3-U0-G3   | 20020               | 154 | B3-U0-G3   | 20821               | 161 | B3-U0-G3   |              | 5343        | 53  | B1-U0-G2   |
|                   |                    |              | III-W       | 17101               | 132 | B3-U0-G3   | 17845               | 138 | B3-U0-G3   | 18589               | 143 | B3-U0-G4   | 19332               | 149 | B3-U0-G4   |              | 4961        | 49  | B1-U0-G2   |
|                   |                    |              | IV          | 18280               | 141 | B3-U0-G3   | 19075               | 147 | B3-U0-G3   | 19869               | 153 | B3-U0-G3   | 20664               | 159 | B3-U0-G3   |              | 5302        | 52  | B1-U0-G1   |
|                   |                    |              | IV-FT       | 16652               | 128 | B3-U0-G4   | 17376               | 134 | B3-U0-G4   | 18100               | 140 | B3-U0-G4   | 18824               | 145 | B3-U0-G4   |              | 4830        | 48  | B1-U0-G2   |
|                   |                    |              | VSQ-N       | 19106               | 147 | B4-U0-G2   | 19936               | 154 | B4-U0-G2   | 20767               | 160 | B4-U0-G2   | 21598               | 167 | B4-U0-G2   |              | 5542        | 55  | B2-U0-G1   |
|                   |                    |              | VSQ-M       | 18736               | 144 | B4-U0-G2   | 19550               | 151 | B4-U0-G2   | 20365               | 157 | B4-U0-G2   | 21179               | 163 | B5-U0-G3   |              | 5434        | 54  | B3-U0-G1   |
|                   |                    |              | VSQ-W       | 18288               | 141 | B5-U0-G3   | 19083               | 147 | B5-U0-G3   | 19878               | 153 | B5-U0-G3   | 20673               | 159 | B5-U0-G3   |              | 5304        | 53  | B3-U0-G2   |
|                   |                    |              | II-HS       | 13238               | 102 | B1-U0-G3   | 13814               | 107 | B1-U0-G3   | 14390               | 111 | B1-U0-G3   | 14965               | 115 | B1-U0-G3   |              | 3841        | 38  | B0-U0-G1   |
|                   |                    |              | II-FRHS     | 13467               | 104 | B1-U0-G2   | 14052               | 108 | B1-U0-G2   | 14638               | 113 | B1-U0-G2   | 15223               | 117 | B1-U0-G2   |              | 3906        | 39  | B0-U0-G1   |
|                   |                    |              | III-MHS     | 13393               | 103 | B1-U0-G3   | 13976               | 108 | B1-U0-G3   | 14558               | 112 | B1-U0-G3   | 15140               | 117 | B1-U0-G3   |              | 3885        | 38  | B0-U0-G1   |
|                   |                    |              | III-WHS     | 13110               | 101 | B1-U0-G3   | 13679               | 105 | B1-U0-G3   | 14250               | 110 | B1-U0-G3   | 14820               | 114 | B1-U0-G4   |              | 3803        | 38  | B0-U0-G2   |
|                   |                    |              | IV-HS       | 13834               | 107 | B1-U0-G3   | 14435               | 111 | B1-U0-G3   | 15037               | 116 | B1-U0-G3   | 15638               | 121 | B1-U0-G3   |              | 4013        | 40  | B0-U0-G1   |
|                   |                    |              | IV-FT-HS    | 13074               | 101 | B1-U0-G3   | 13642               | 105 | B1-U0-G3   | 14211               | 110 | B1-U0-G4   | 14779               | 114 | B1-U0-G4   |              | 3792        | 38  | B0-U0-G2   |
| 80                | 700                | 173.5        | II          | 22914               | 132 | B3-U0-G3   | 23910               | 138 | B3-U0-G3   | 24906               | 144 | B3-U0-G3   | 25902               | 149 | B3-U0-G3   | N/A          | N/A         |     |            |
|                   |                    |              | II-FR       | 23068               | 133 | B3-U0-G2   | 24070               | 139 | B3-U0-G2   | 25073               | 145 | B3-U0-G2   | 26076               | 150 | B3-U0-G2   |              |             |     |            |
|                   |                    |              | II-ML       | 22914               | 132 | B4-U0-G4   | 23910               | 138 | B4-U0-G4   | 24907               | 144 | B4-U0-G4   | 25903               | 149 | B4-U0-G4   |              |             |     |            |
|                   |                    |              | III-M       | 23314               | 134 | B3-U0-G3   | 24328               | 140 | B3-U0-G4   | 25342               | 146 | B3-U0-G4   | 26355               | 152 | B3-U0-G4   |              |             |     |            |
|                   |                    |              | III-W       | 21647               | 125 | B3-U0-G4   | 22589               | 130 | B3-U0-G4   | 23530               | 136 | B3-U0-G4   | 24471               | 141 | B3-U0-G4   |              |             |     |            |
|                   |                    |              | IV          | 23139               | 133 | B3-U0-G3   | 24145               | 139 | B3-U0-G3   | 25152               | 145 | B3-U0-G4   | 26158               | 151 | B3-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT       | 21079               | 121 | B3-U0-G4   | 21995               | 127 | B3-U0-G4   | 22911               | 132 | B3-U0-G4   | 23828               | 137 | B3-U0-G4   |              |             |     |            |
|                   |                    |              | VSQ-N       | 24184               | 139 | B4-U0-G2   | 25236               | 145 | B4-U0-G2   | 26287               | 152 | B4-U0-G2   | 27339               | 158 | B5-U0-G2   |              |             |     |            |
|                   |                    |              | VSQ-M       | 23716               | 137 | B5-U0-G3   | 24747               | 143 | B5-U0-G3   | 25778               | 149 | B5-U0-G3   | 26809               | 155 | B5-U0-G3   |              |             |     |            |
|                   |                    |              | VSQ-W       | 23149               | 133 | B5-U0-G4   | 24156               | 139 | B5-U0-G4   | 25162               | 145 | B5-U0-G4   | 26169               | 151 | B5-U0-G4   |              |             |     |            |
|                   |                    |              | II-HS       | 16758               | 97  | B1-U0-G3   | 17486               | 101 | B1-U0-G3   | 18215               | 105 | B1-U0-G3   | 18944               | 109 | B1-U0-G3   |              |             |     |            |
|                   |                    |              | II-FRHS     | 17046               | 98  | B1-U0-G2   | 17788               | 103 | B1-U0-G2   | 18529               | 107 | B1-U0-G2   | 19270               | 111 | B1-U0-G2   |              |             |     |            |
|                   |                    |              | III-MHS     | 16954               | 98  | B1-U0-G3   | 17691               | 102 | B1-U0-G4   | 18428               | 106 | B1-U0-G4   | 19165               | 110 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | III-WHS     | 16595               | 96  | B1-U0-G4   | 17316               | 100 | B1-U0-G4   | 18038               | 104 | B1-U0-G4   | 18759               | 108 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | IV-HS       | 17511               | 101 | B1-U0-G3   | 18272               | 105 | B1-U0-G3   | 19034               | 110 | B1-U0-G3   | 19795               | 114 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT-HS    | 16549               | 95  | B1-U0-G4   | 17269               | 100 | B1-U0-G4   | 17988               | 104 | B1-U0-G4   | 18708               | 108 | B1-U0-G4   |              |             |     |            |
| 80                | 875                | 221.5        | II          | 27459               | 124 | B3-U0-G4   | 28653               | 129 | B3-U0-G4   | 29847               | 135 | B4-U0-G4   | 31040               | 140 | B4-U0-G4   | N/A          | N/A         |     |            |
|                   |                    |              | II-FR       | 27643               | 125 | B3-U0-G2   | 28845               | 130 | B4-U0-G2   | 30047               | 136 | B4-U0-G2   | 31249               | 141 | B4-U0-G2   |              |             |     |            |
|                   |                    |              | II-ML       | 27460               | 124 | B4-U0-G4   | 28654               | 129 | B4-U0-G4   | 29848               | 135 | B5-U0-G5   | 31042               | 140 | B5-U0-G5   |              |             |     |            |
|                   |                    |              | III-M       | 27939               | 126 | B3-U0-G4   | 29154               | 132 | B3-U0-G4   | 30369               | 137 | B3-U0-G4   | 31584               | 143 | B4-U0-G4   |              |             |     |            |
|                   |                    |              | III-W       | 25942               | 117 | B3-U0-G4   | 27070               | 122 | B3-U0-G4   | 28198               | 127 | B3-U0-G4   | 29326               | 132 | B3-U0-G5   |              |             |     |            |
|                   |                    |              | IV          | 27729               | 125 | B3-U0-G4   | 28935               | 131 | B3-U0-G4   | 30141               | 136 | B3-U0-G4   | 31346               | 142 | B4-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT       | 25260               | 114 | B3-U0-G5   | 26358               | 119 | B3-U0-G5   | 27456               | 124 | B3-U0-G5   | 28554               | 129 | B3-U0-G5   |              |             |     |            |
|                   |                    |              | VSQ-N       | 28982               | 131 | B5-U0-G2   | 30242               | 137 | B5-U0-G2   | 31502               | 142 | B5-U0-G2   | 32762               | 148 | B5-U0-G2   |              |             |     |            |
|                   |                    |              | VSQ-M       | 28420               | 128 | B5-U0-G3   | 29656               | 134 | B5-U0-G3   | 30892               | 139 | B5-U0-G3   | 32128               | 145 | B5-U0-G4   |              |             |     |            |
|                   |                    |              | VSQ-W       | 27742               | 125 | B5-U0-G4   | 28948               | 131 | B5-U0-G4   | 30154               | 136 | B5-U0-G4   | 31360               | 142 | B5-U0-G4   |              |             |     |            |
|                   |                    |              | II-HS       | 20082               | 91  | B1-U0-G4   | 20955               | 95  | B2-U0-G4   | 21828               | 99  | B2-U0-G4   | 22701               | 102 | B2-U0-G4   |              |             |     |            |
|                   |                    |              | II-FRHS     | 20428               | 92  | B1-U0-G2   | 21316               | 96  | B1-U0-G2   | 22204               | 100 | B1-U0-G2   | 23092               | 104 | B1-U0-G2   |              |             |     |            |
|                   |                    |              | III-MHS     | 20317               | 92  | B1-U0-G4   | 21200               | 96  | B1-U0-G4   | 22084               | 100 | B1-U0-G4   | 22967               | 104 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | III-WHS     | 19887               | 90  | B1-U0-G4   | 20751               | 94  | B1-U0-G4   | 21616               | 98  | B1-U0-G4   | 22481               | 101 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | IV-HS       | 20985               | 95  | B1-U0-G4   | 21897               | 99  | B1-U0-G4   | 22810               | 103 | B1-U0-G4   | 23722               | 107 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT-HS    | 19832               | 90  | B1-U0-G4   | 20695               | 93  | B1-U0-G4   | 21557               | 97  | B1-U0-G4   | 22419               | 101 | B1-U0-G5   |              |             |     |            |
| 80                | 1050               | 269.5        | II          | 31240               | 116 | B4-U0-G4   | 32598               | 121 | B4-U0-G4   | 33957               | 126 | B4-U0-G4   | 35315               | 131 | B4-U0-G4   | N/A          | N/A         |     |            |
|                   |                    |              | II-FR       | 31450               | 117 | B4-U0-G2   | 32817               | 122 | B4-U0-G2   | 34185               | 127 | B4-U0-G2   | 35552               | 132 | B4-U0-G2   |              |             |     |            |
|                   |                    |              | II-ML       | 31241               | 116 | B5-U0-G5   | 32600               | 121 | B5-U0-G5   | 33958               | 126 | B5-U0-G5   | 35317               | 131 | B5-U0-G5   |              |             |     |            |
|                   |                    |              | III-M       | 31787               | 118 | B4-U0-G4   | 33169               | 123 | B4-U0-G4   | 34551               | 128 | B4-U0-G4   | 35933               | 133 | B4-U0-G4   |              |             |     |            |
|                   |                    |              | III-W       | 29514               | 110 | B3-U0-G5   | 30797               | 114 | B3-U0-G5   | 32080               | 119 | B3-U0-G5   | 33364               | 124 | B3-U0-G5   |              |             |     |            |
|                   |                    |              | IV          | 31548               | 117 | B4-U0-G4   | 32920               | 122 | B4-U0-G4   | 34291               | 127 | B4-U0-G4   | 35663               | 132 | B4-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT       | 28738               | 107 | B3-U0-G5   | 29987               | 111 | B3-U0-G5   | 31237               | 116 | B3-U0-G5   | 32487               | 121 | B3-U0-G5   |              |             |     |            |
|                   |                    |              | VSQ-N       | 32973               | 122 | B5-U0-G2   | 34406               | 128 | B5-U0-G2   | 35840               | 133 | B5-U0-G2   | 37274               | 138 | B5-U0-G2   |              |             |     |            |
|                   |                    |              | VSQ-M       | 32334               | 120 | B5-U0-G4   | 33740               | 125 | B5-U0-G4   | 35145               | 130 | B5-U0-G4   | 36551               | 136 | B5-U0-G4   |              |             |     |            |
|                   |                    |              | VSQ-W       | 31561               | 117 | B5-U0-G5   | 32934               | 122 | B5-U0-G5   | 34306               | 127 | B5-U0-G5   | 35678               | 132 | B5-U0-G5   |              |             |     |            |
|                   |                    |              | II-HS       | 22847               | 85  | B2-U0-G4   | 23841               | 88  | B2-U0-G4   | 24834               | 92  | B2-U0-G4   | 25827               | 96  | B2-U0-G4   |              |             |     |            |
|                   |                    |              | II-FRHS     | 23241               | 86  | B1-U0-G2   | 24251               | 90  | B1-U0-G2   | 25262               | 94  | B1-U0-G2   | 26272               | 97  | B2-U0-G2   |              |             |     |            |
|                   |                    |              | III-MHS     | 23115               | 86  | B1-U0-G4   | 24120               | 89  | B1-U0-G4   | 25125               | 93  | B1-U0-G4   | 26130               | 97  | B1-U0-G4   |              |             |     |            |
|                   |                    |              | III-WHS     | 22625               | 84  | B1-U0-G4   | 23609               | 88  | B1-U0-G5   | 24592               | 91  | B1-U0-G5   | 25576               | 95  | B1-U0-G5   |              |             |     |            |
|                   |                    |              | IV-HS       | 23874               | 89  | B1-U0-G4   | 24913               | 92  | B1-U0-G4   | 25950               | 96  | B1-U0-G4   | 26988               | 100 | B1-U0-G4   |              |             |     |            |
|                   |                    |              | IV-FT-HS    | 22563               | 84  | B1-U0-G5   | 23545               | 87  | B1-U0-G5   | 24525               | 91  | B1-U0-G5   | 25506               | 95  | B1-U0-G5   |              |             |     |            |

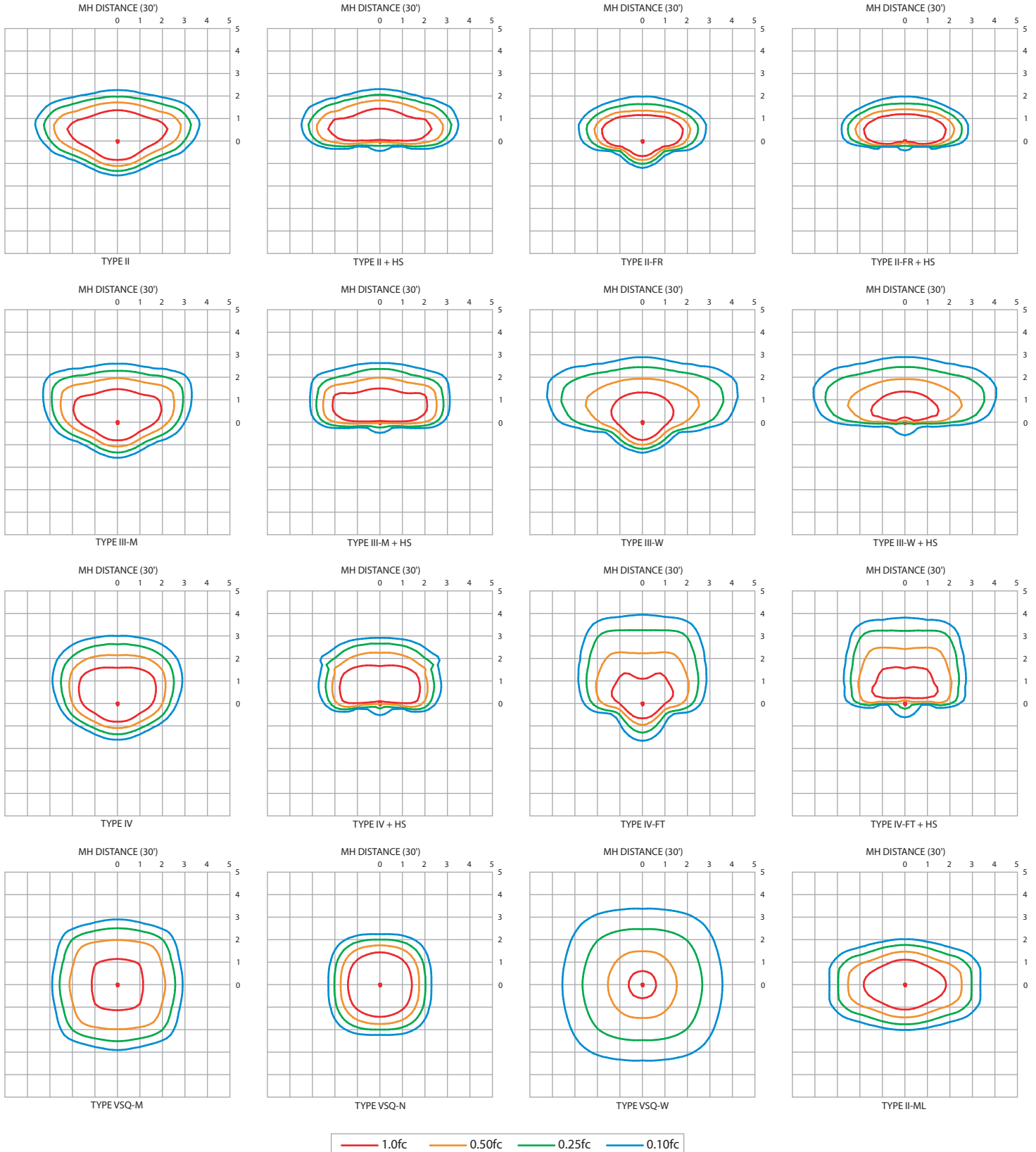
**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**
**RZR/RZR-MAF-PLED**

| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 80        | 1225               | 317.9        | II          | 34767               | 109 | B4-U0-G4   | 36279               | 114 | B4-U0-G4   | 37790               | 119 | B4-U0-G4   | 39302               | 124 | B4-U0-G4   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 35001               | 110 | B4-U0-G2   | 36523               | 115 | B4-U0-G2   | 38044               | 120 | B4-U0-G2   | 39566               | 124 | B4-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 34769               | 109 | B5-U0-G5   | 36280               | 114 | B5-U0-G5   | 37792               | 119 | B5-U0-G5   | 39304               | 124 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 35375               | 111 | B4-U0-G4   | 36913               | 116 | B4-U0-G4   | 38451               | 121 | B4-U0-G5   | 39989               | 126 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 32846               | 103 | B3-U0-G5   | 34274               | 108 | B3-U0-G5   | 35702               | 112 | B3-U0-G5   | 37131               | 117 | B3-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 35110               | 110 | B4-U0-G4   | 36636               | 115 | B4-U0-G4   | 38163               | 120 | B4-U0-G4   | 39689               | 125 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 31983               | 101 | B3-U0-G5   | 33373               | 105 | B3-U0-G5   | 34764               | 109 | B3-U0-G5   | 36155               | 114 | B3-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 36696               | 115 | B5-U0-G2   | 38291               | 120 | B5-U0-G2   | 39887               | 125 | B5-U0-G2   | 41482               | 130 | B5-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 35985               | 113 | B5-U0-G4   | 37549               | 118 | B5-U0-G4   | 39114               | 123 | B5-U0-G4   | 40678               | 128 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 35125               | 110 | B5-U0-G5   | 36652               | 115 | B5-U0-G5   | 38179               | 120 | B5-U0-G5   | 39706               | 125 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 25427               | 80  | B2-U0-G4   | 26533               | 83  | B2-U0-G4   | 27638               | 87  | B2-U0-G4   | 28744               | 90  | B2-U0-G4   |              |             |     |            |
|           |                    |              | II-FR-HS    | 25865               | 81  | B2-U0-G2   | 26989               | 85  | B2-U0-G2   | 28114               | 88  | B2-U0-G2   | 29239               | 92  | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 25725               | 81  | B1-U0-G4   | 26843               | 84  | B1-U0-G4   | 27962               | 88  | B1-U0-G5   | 29080               | 91  | B1-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 25179               | 79  | B1-U0-G5   | 26274               | 83  | B1-U0-G5   | 27369               | 86  | B1-U0-G5   | 28464               | 90  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 26570               | 84  | B1-U0-G4   | 27725               | 87  | B1-U0-G4   | 28881               | 91  | B1-U0-G4   | 30036               | 94  | B1-U0-G4   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 25111               | 79  | B1-U0-G5   | 26202               | 82  | B1-U0-G5   | 27294               | 86  | B1-U0-G5   | 28386               | 89  | B1-U0-G5   |              |             |     |            |
| 80        | 1400               | 366.2        | II          | 37677               | 103 | B4-U0-G4   | 39315               | 107 | B4-U0-G4   | 40953               | 112 | B4-U0-G4   | 42591               | 116 | B4-U0-G5   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 37930               | 104 | B4-U0-G2   | 39579               | 108 | B4-U0-G2   | 41228               | 113 | B4-U0-G3   | 42877               | 117 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-ML       | 37678               | 103 | B5-U0-G5   | 39317               | 107 | B5-U0-G5   | 40955               | 112 | B5-U0-G5   | 42593               | 116 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 38336               | 105 | B4-U0-G5   | 40003               | 109 | B4-U0-G5   | 41670               | 114 | B4-U0-G5   | 43337               | 118 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 35595               | 97  | B3-U0-G5   | 37143               | 101 | B3-U0-G5   | 38690               | 106 | B3-U0-G5   | 40238               | 110 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 38048               | 104 | B4-U0-G4   | 39703               | 108 | B4-U0-G5   | 41357               | 113 | B4-U0-G5   | 43011               | 117 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 34659               | 95  | B3-U0-G5   | 36166               | 99  | B3-U0-G5   | 37673               | 103 | B4-U0-G5   | 39180               | 107 | B4-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 39767               | 109 | B5-U0-G2   | 41496               | 113 | B5-U0-G2   | 43225               | 118 | B5-U0-G2   | 44954               | 123 | B5-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 38996               | 106 | B5-U0-G4   | 40692               | 111 | B5-U0-G4   | 42387               | 116 | B5-U0-G4   | 44082               | 120 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 38065               | 104 | B5-U0-G5   | 39720               | 108 | B5-U0-G5   | 41374               | 113 | B5-U0-G5   | 43029               | 118 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 27555               | 75  | B2-U0-G4   | 28753               | 79  | B2-U0-G4   | 29951               | 82  | B2-U0-G4   | 31149               | 85  | B2-U0-G4   |              |             |     |            |
|           |                    |              | II-FR-HS    | 28030               | 77  | B2-U0-G2   | 29248               | 80  | B2-U0-G2   | 30467               | 83  | B2-U0-G2   | 31686               | 87  | B2-U0-G3   |              |             |     |            |
|           |                    |              | III-M-HS    | 27878               | 76  | B1-U0-G5   | 29090               | 79  | B1-U0-G5   | 30302               | 83  | B1-U0-G5   | 31514               | 86  | B1-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 27287               | 75  | B1-U0-G5   | 28474               | 78  | B1-U0-G5   | 29660               | 81  | B1-U0-G5   | 30846               | 84  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 28794               | 79  | B1-U0-G4   | 30046               | 82  | B1-U0-G4   | 31298               | 85  | B1-U0-G5   | 32550               | 89  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 27213               | 74  | B1-U0-G5   | 28396               | 78  | B1-U0-G5   | 29579               | 81  | B1-U0-G5   | 30762               | 84  | B1-U0-G5   |              |             |     |            |

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**PHOTOMETRIC DATA GUIDE - ISOFOOTCANDLE PLOTS**

**RZR-G-PLED-120LED-700mA-40K 30' Pole Height**



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**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**

| RZR-G-PLD |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |        |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|--------|
| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |        |
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING | LUMENS |
| 80        | 350                | 85.8         | II          | 12975               | 151 | B2-U0-G2   | 13539               | 158 | B2-U0-G2   | 14103               | 164 | B2-U0-G2   | 14667               | 171 | B3-U0-G2   | 67.0         | 4610        | 69  | B1-U0-G1   |        |
|           |                    |              | II-FR       | 13062               | 152 | B3-U0-G1   | 13630               | 159 | B3-U0-G1   | 14198               | 165 | B3-U0-G1   | 14766               | 172 | B3-U0-G2   |              | 4640        | 69  | B1-U0-G1   |        |
|           |                    |              | II-ML       | 12975               | 151 | B3-U0-G3   | 13539               | 158 | B3-U0-G3   | 14104               | 164 | B3-U0-G3   | 14668               | 171 | B4-U0-G4   |              | 4610        | 69  | B2-U0-G2   |        |
|           |                    |              | III-M       | 13201               | 154 | B2-U0-G2   | 13776               | 161 | B2-U0-G2   | 14350               | 167 | B2-U0-G2   | 14924               | 174 | B2-U0-G2   |              | 4689        | 70  | B1-U0-G1   |        |
|           |                    |              | III-W       | 12258               | 143 | B2-U0-G3   | 12791               | 149 | B2-U0-G3   | 13324               | 155 | B2-U0-G3   | 13857               | 161 | B2-U0-G3   |              | 4354        | 65  | B1-U0-G2   |        |
|           |                    |              | IV          | 13103               | 153 | B2-U0-G2   | 13672               | 159 | B2-U0-G2   | 14242               | 166 | B2-U0-G2   | 14812               | 173 | B2-U0-G2   |              | 4654        | 69  | B1-U0-G1   |        |
|           |                    |              | IV-FI       | 11936               | 139 | B2-U0-G3   | 12455               | 145 | B2-U0-G3   | 12973               | 151 | B2-U0-G3   | 13492               | 157 | B2-U0-G3   |              | 4240        | 63  | B1-U0-G1   |        |
|           |                    |              | VSQ-N       | 13694               | 160 | B3-U0-G1   | 14290               | 167 | B3-U0-G1   | 14885               | 173 | B3-U0-G1   | 15481               | 180 | B3-U0-G1   |              | 4865        | 73  | B2-U0-G1   |        |
|           |                    |              | VSQ-M       | 13429               | 157 | B4-U0-G2   | 14013               | 163 | B4-U0-G2   | 14597               | 170 | B4-U0-G2   | 15181               | 177 | B4-U0-G2   |              | 4770        | 71  | B3-U0-G1   |        |
|           |                    |              | VSQ-W       | 13108               | 153 | B4-U0-G3   | 13678               | 159 | B4-U0-G3   | 14248               | 166 | B4-U0-G3   | 14818               | 173 | B4-U0-G3   |              | 4656        | 69  | B3-U0-G2   |        |
|           |                    |              | II-HS       | 9489                | 111 | B1-U0-G2   | 9902                | 115 | B1-U0-G2   | 10314               | 120 | B1-U0-G2   | 10726               | 125 | B1-U0-G2   |              | 3371        | 50  | B0-U0-G1   |        |
|           |                    |              | II-FRHS     | 9652                | 112 | B1-U0-G1   | 10072               | 117 | B1-U0-G1   | 10492               | 122 | B1-U0-G1   | 10911               | 127 | B1-U0-G1   |              | 3428        | 51  | B0-U0-G1   |        |
|           |                    |              | III-MHS     | 9600                | 112 | B1-U0-G2   | 10018               | 117 | B1-U0-G2   | 10435               | 122 | B1-U0-G2   | 10852               | 126 | B1-U0-G2   |              | 3410        | 51  | B0-U0-G1   |        |
|           |                    |              | III-WHS     | 9397                | 110 | B1-U0-G3   | 9805                | 114 | B1-U0-G3   | 10214               | 119 | B1-U0-G3   | 10622               | 124 | B1-U0-G3   |              | 3337        | 50  | B0-U0-G1   |        |
|           |                    |              | IV-HS       | 9916                | 116 | B1-U0-G2   | 10347               | 121 | B1-U0-G2   | 10778               | 126 | B1-U0-G2   | 11209               | 131 | B1-U0-G2   |              | 3523        | 53  | B0-U0-G1   |        |
|           |                    |              | IV-FI-HS    | 9371                | 109 | B1-U0-G3   | 9778                | 114 | B1-U0-G3   | 10186               | 119 | B1-U0-G3   | 10593               | 123 | B1-U0-G3   |              | 3329        | 50  | B0-U0-G2   |        |
| 80        | 525                | 129.7        | II          | 18645               | 144 | B3-U0-G3   | 19455               | 150 | B3-U0-G3   | 20266               | 156 | B3-U0-G3   | 21077               | 163 | B3-U0-G3   | 101.0        | 5408        | 54  | B1-U0-G1   |        |
|           |                    |              | II-FR       | 18770               | 145 | B3-U0-G2   | 19586               | 151 | B3-U0-G2   | 20402               | 157 | B3-U0-G2   | 21218               | 164 | B3-U0-G2   |              | 5444        | 54  | B1-U0-G1   |        |
|           |                    |              | II-ML       | 18645               | 144 | B4-U0-G4   | 19456               | 150 | B4-U0-G4   | 20266               | 156 | B4-U0-G4   | 21077               | 163 | B4-U0-G4   |              | 5408        | 54  | B2-U0-G2   |        |
|           |                    |              | III-M       | 18971               | 146 | B3-U0-G3   | 19796               | 153 | B3-U0-G3   | 20620               | 159 | B3-U0-G3   | 21445               | 165 | B3-U0-G3   |              | 5503        | 54  | B1-U0-G2   |        |
|           |                    |              | III-W       | 17614               | 136 | B3-U0-G3   | 18380               | 142 | B3-U0-G3   | 19146               | 148 | B3-U0-G4   | 19912               | 154 | B3-U0-G4   |              | 5110        | 51  | B1-U0-G2   |        |
|           |                    |              | IV          | 18828               | 145 | B3-U0-G3   | 19647               | 151 | B3-U0-G3   | 20466               | 158 | B3-U0-G3   | 21284               | 164 | B3-U0-G3   |              | 5461        | 54  | B1-U0-G1   |        |
|           |                    |              | IV-FI       | 17151               | 132 | B3-U0-G4   | 17897               | 138 | B3-U0-G4   | 18643               | 144 | B3-U0-G4   | 19389               | 149 | B3-U0-G4   |              | 4975        | 49  | B1-U0-G2   |        |
|           |                    |              | VSQ-N       | 19679               | 152 | B4-U0-G2   | 20535               | 158 | B4-U0-G2   | 21390               | 165 | B4-U0-G2   | 22246               | 172 | B4-U0-G2   |              | 5709        | 57  | B2-U0-G1   |        |
|           |                    |              | VSQ-M       | 19298               | 149 | B4-U0-G2   | 20137               | 155 | B4-U0-G2   | 20976               | 162 | B4-U0-G2   | 21815               | 168 | B5-U0-G3   |              | 5597        | 55  | B3-U0-G1   |        |
|           |                    |              | VSQ-W       | 18837               | 145 | B5-U0-G3   | 19656               | 152 | B5-U0-G3   | 20475               | 158 | B5-U0-G3   | 21293               | 164 | B5-U0-G4   |              | 5464        | 54  | B3-U0-G2   |        |
|           |                    |              | II-HS       | 13636               | 105 | B1-U0-G3   | 14228               | 110 | B1-U0-G3   | 14821               | 114 | B1-U0-G3   | 15414               | 119 | B1-U0-G3   |              | 3956        | 39  | B0-U0-G1   |        |
|           |                    |              | II-FRHS     | 13870               | 107 | B1-U0-G2   | 14473               | 112 | B1-U0-G2   | 15077               | 116 | B1-U0-G2   | 15680               | 121 | B1-U0-G2   |              | 4023        | 40  | B0-U0-G1   |        |
|           |                    |              | III-MHS     | 13795               | 106 | B1-U0-G3   | 14395               | 111 | B1-U0-G3   | 14995               | 116 | B1-U0-G3   | 15594               | 120 | B1-U0-G3   |              | 4001        | 40  | B0-U0-G1   |        |
|           |                    |              | III-WHS     | 13503               | 104 | B1-U0-G3   | 14090               | 109 | B1-U0-G3   | 14677               | 113 | B1-U0-G3   | 15264               | 118 | B1-U0-G4   |              | 3917        | 39  | B0-U0-G2   |        |
|           |                    |              | IV-HS       | 14249               | 110 | B1-U0-G3   | 14868               | 115 | B1-U0-G3   | 15488               | 119 | B1-U0-G3   | 16107               | 124 | B1-U0-G3   |              | 4133        | 41  | B0-U0-G1   |        |
|           |                    |              | IV-FI-HS    | 13466               | 104 | B1-U0-G3   | 14052               | 108 | B1-U0-G4   | 14637               | 113 | B1-U0-G4   | 15222               | 117 | B1-U0-G4   |              | 3906        | 39  | B0-U0-G2   |        |
| 80        | 700                | 173.5        | II          | 23601               | 136 | B3-U0-G3   | 24627               | 142 | B3-U0-G3   | 25653               | 148 | B3-U0-G3   | 26679               | 154 | B3-U0-G4   | N/A          | N/A         |     |            |        |
|           |                    |              | II-FR       | 23760               | 137 | B3-U0-G2   | 24793               | 143 | B3-U0-G2   | 25826               | 149 | B3-U0-G2   | 26858               | 155 | B3-U0-G2   |              |             |     |            |        |
|           |                    |              | II-ML       | 23602               | 136 | B4-U0-G4   | 24628               | 142 | B4-U0-G4   | 25654               | 148 | B4-U0-G4   | 26680               | 154 | B4-U0-G4   |              |             |     |            |        |
|           |                    |              | III-M       | 24014               | 138 | B3-U0-G4   | 25058               | 144 | B3-U0-G4   | 26102               | 150 | B3-U0-G4   | 27146               | 156 | B3-U0-G4   |              |             |     |            |        |
|           |                    |              | III-W       | 22297               | 129 | B3-U0-G4   | 23266               | 134 | B3-U0-G4   | 24236               | 140 | B3-U0-G4   | 25205               | 145 | B3-U0-G4   |              |             |     |            |        |
|           |                    |              | IV          | 23833               | 137 | B3-U0-G3   | 24870               | 143 | B3-U0-G4   | 25906               | 149 | B3-U0-G4   | 26942               | 155 | B3-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI       | 21711               | 125 | B3-U0-G4   | 22655               | 131 | B3-U0-G4   | 23599               | 136 | B3-U0-G4   | 24543               | 141 | B3-U0-G5   |              |             |     |            |        |
|           |                    |              | VSQ-N       | 24910               | 144 | B4-U0-G2   | 25993               | 150 | B4-U0-G2   | 27076               | 156 | B5-U0-G2   | 28159               | 162 | B5-U0-G2   |              |             |     |            |        |
|           |                    |              | VSQ-M       | 24427               | 141 | B5-U0-G3   | 25489               | 147 | B5-U0-G3   | 26551               | 153 | B5-U0-G3   | 27613               | 159 | B5-U0-G3   |              |             |     |            |        |
|           |                    |              | VSQ-W       | 23844               | 137 | B5-U0-G4   | 24880               | 143 | B5-U0-G4   | 25917               | 149 | B5-U0-G4   | 26954               | 155 | B5-U0-G4   |              |             |     |            |        |
|           |                    |              | II-HS       | 17260               | 99  | B1-U0-G3   | 18011               | 104 | B1-U0-G3   | 18761               | 108 | B1-U0-G3   | 19512               | 112 | B1-U0-G3   |              |             |     |            |        |
|           |                    |              | II-FRHS     | 17557               | 101 | B1-U0-G2   | 18321               | 106 | B1-U0-G2   | 19084               | 110 | B1-U0-G2   | 19848               | 114 | B1-U0-G2   |              |             |     |            |        |
|           |                    |              | III-MHS     | 17462               | 101 | B1-U0-G4   | 18222               | 105 | B1-U0-G4   | 18981               | 109 | B1-U0-G4   | 19740               | 114 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | III-WHS     | 17092               | 99  | B1-U0-G4   | 17836               | 103 | B1-U0-G4   | 18579               | 107 | B1-U0-G4   | 19322               | 111 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-HS       | 18036               | 104 | B1-U0-G3   | 18821               | 108 | B1-U0-G3   | 19605               | 113 | B1-U0-G4   | 20389               | 118 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI-HS    | 17046               | 98  | B1-U0-G4   | 17787               | 103 | B1-U0-G4   | 18528               | 107 | B1-U0-G4   | 19269               | 111 | B1-U0-G4   |              |             |     |            |        |
| 80        | 875                | 221.5        | II          | 28283               | 128 | B3-U0-G4   | 29512               | 133 | B4-U0-G4   | 30742               | 139 | B4-U0-G4   | 31972               | 144 | B4-U0-G4   | N/A          | N/A         |     |            |        |
|           |                    |              | II-FR       | 28472               | 129 | B4-U0-G2   | 29710               | 134 | B4-U0-G2   | 30948               | 140 | B4-U0-G2   | 32186               | 145 | B4-U0-G2   |              |             |     |            |        |
|           |                    |              | II-ML       | 28283               | 128 | B4-U0-G4   | 29513               | 133 | B5-U0-G5   | 30743               | 139 | B5-U0-G5   | 31973               | 144 | B5-U0-G5   |              |             |     |            |        |
|           |                    |              | III-M       | 28778               | 130 | B3-U0-G4   | 30029               | 136 | B3-U0-G4   | 31280               | 141 | B4-U0-G4   | 32531               | 147 | B4-U0-G4   |              |             |     |            |        |
|           |                    |              | III-W       | 26720               | 121 | B3-U0-G4   | 27882               | 126 | B3-U0-G4   | 29044               | 131 | B3-U0-G4   | 30205               | 136 | B3-U0-G5   |              |             |     |            |        |
|           |                    |              | IV          | 28561               | 129 | B3-U0-G4   | 29803               | 135 | B3-U0-G4   | 31045               | 140 | B4-U0-G4   | 32287               | 146 | B4-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI       | 26017               | 117 | B3-U0-G5   | 27149               | 123 | B3-U0-G5   | 28280               | 128 | B3-U0-G5   | 29411               | 133 | B3-U0-G5   |              |             |     |            |        |
|           |                    |              | VSQ-N       | 29851               | 135 | B5-U0-G2   | 31149               | 141 | B5-U0-G2   | 32447               | 146 | B5-U0-G2   | 33745               | 152 | B5-U0-G2   |              |             |     |            |        |
|           |                    |              | VSQ-M       | 29273               | 132 | B5-U0-G3   | 30546               | 138 | B5-U0-G3   | 31819               | 144 | B5-U0-G4   | 33091               | 149 | B5-U0-G4   |              |             |     |            |        |
|           |                    |              | VSQ-W       | 28574               | 129 | B5-U0-G4   | 29816               | 135 | B5-U0-G4   | 31059               | 140 | B5-U0-G4   | 32301               | 146 | B5-U0-G5   |              |             |     |            |        |
|           |                    |              | II-HS       | 20684               | 93  | B1-U0-G4   | 21584               | 97  | B2-U0-G4   | 22483               | 102 | B2-U0-G4   | 23382               | 106 | B2-U0-G4   |              |             |     |            |        |
|           |                    |              | II-FRHS     | 21040               | 95  | B1-U0-G2   | 21956               | 99  | B1-U0-G2   | 22870               | 103 | B1-U0-G2   | 23785               | 107 | B1-U0-G2   |              |             |     |            |        |
|           |                    |              | III-MHS     | 20926               | 94  | B1-U0-G4   | 21836               | 99  | B1-U0-G4   | 22746               | 103 | B1-U0-G4   | 23656               | 107 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | III-WHS     | 20483               | 92  | B1-U0-G4   | 21374               | 96  | B1-U0-G4   | 22264               | 101 | B1-U0-G4   | 23155               | 105 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-HS       | 21614               | 98  | B1-U0-G4   | 22554               | 102 | B1-U0-G4   | 23494               | 106 | B1-U0-G4   | 24433               | 110 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI-HS    | 20427               | 92  | B1-U0-G4   | 21315               | 96  | B1-U0-G4   | 22203               | 100 | B1-U0-G5   | 23092               | 104 | B1-U0-G5   |              |             |     |            |        |
| 80        | 1050               | 269.5        | II          | 32177               | 119 | B4-U0-G4   | 33576               | 125 | B4-U0-G4   | 34975               | 130 | B4-U0-G4   | 36374               | 135 | B4-U0-G4   | N/A          | N/A         |     |            |        |
|           |                    |              | II-FR       | 32393               | 120 | B4-U0-G2   | 33802               | 125 | B4-U0-G2   | 35210               | 131 | B4-U0-G2   | 36619               | 136 | B4-U0-G2   |              |             |     |            |        |
|           |                    |              | II-ML       | 32179               | 119 | B5-U0-G5   | 33578               | 125 | B5-U0-G5   | 34977               | 130 | B5-U0-G5   | 36376               | 135 | B5-U0-G5   |              |             |     |            |        |
|           |                    |              | III-M       | 32740               | 121 | B4-U0-G4   | 34164               | 127 | B4-U0-G4   | 35587               | 132 | B4-U0-G4   | 37011               | 137 | B4-U0-G4   |              |             |     |            |        |
|           |                    |              | III-W       | 30399               | 113 | B3-U0-G5   | 31721               | 118 | B3-U0-G5   | 33043               | 123 | B3-U0-G5   | 34364               | 128 | B3-U0-G5   |              |             |     |            |        |
|           |                    |              | IV          | 32494               | 121 | B4-U0-G4   | 33907               | 126 | B4-U0-G4   | 35320               | 131 | B4-U0-G4   | 36733               | 136 | B4-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI       | 29600               | 110 | B3-U0-G5   | 30887               | 115 | B3-U0-G5   | 32174               | 119 | B3-U0-G5   | 33461               | 124 | B3-U0-G5   |              |             |     |            |        |
|           |                    |              | VSQ-N       | 33962               | 126 | B5-U0-G2   | 35439               | 131 | B5-U0-G2   | 36916               | 137 | B5-U0-G2   | 38392               | 142 | B5-U0-G2   |              |             |     |            |        |
|           |                    |              | VSQ-M       | 33304               | 124 | B5-U0-G4   | 34752               | 129 | B5-U0-G4   | 36200               | 134 | B5-U0-G4   | 37648               | 140 | B5-U0-G4   |              |             |     |            |        |
|           |                    |              | VSQ-W       | 32508               | 121 | B5-U0-G5   | 33921               | 126 | B5-U0-G5   | 35335               | 131 | B5-U0-G5   | 36749               | 136 | B5-U0-G5   |              |             |     |            |        |
|           |                    |              | II-HS       | 23533               | 87  | B2-U0-G4   | 24556               | 91  | B2-U0-G4   | 25579               | 95  | B2-U0-G4   | 26602               | 99  | B2-U0-G4   |              |             |     |            |        |
|           |                    |              | II-FRHS     | 23938               | 89  | B1-U0-G2   | 24979               | 93  | B1-U0-G2   | 26019               | 97  | B2-U0-G2   | 27060               | 100 | B2-U0-G2   |              |             |     |            |        |
|           |                    |              | III-MHS     | 23808               | 88  | B1-U0-G4   | 24843               | 92  | B1-U0-G4   | 25878               | 96  | B1-U0-G4   | 26913               | 100 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | III-WHS     | 23304               | 86  | B1-U0-G4   | 24317               | 90  | B1-U0-G5   | 25330               | 94  | B1-U0-G5   | 26343               | 98  | B1-U0-G5   |              |             |     |            |        |
|           |                    |              | IV-HS       | 24591               | 91  | B1-U0-G4   | 25660               | 95  | B1-U0-G4   | 26729               | 99  | B1-U0-G4   | 27798               | 103 | B1-U0-G4   |              |             |     |            |        |
|           |                    |              | IV-FI-HS    | 23240               | 86  | B1-U0-G5   | 24251               | 90  | B1-U0-G5   | 25261               | 94  | B1-U0-G5   | 26272               | 97  | B1-U0-G5   |              |             |     |            |        |

**PHOTOMETRIC GUIDE - LUMEN TABLES**
**RZR-G-PLD**

| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 80        | 1225               | 317.9        | II          | 35810               | 113 | B4-U0-G4   | 37367               | 118 | B4-U0-G4   | 38924               | 122 | B4-U0-G4   | 40481               | 127 | B4-U0-G4   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 36051               | 113 | B4-U0-G2   | 37618               | 118 | B4-U0-G2   | 39185               | 123 | B4-U0-G2   | 40753               | 128 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-ML       | 35812               | 113 | B5-U0-G5   | 37369               | 118 | B5-U0-G5   | 38926               | 122 | B5-U0-G5   | 40483               | 127 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 36437               | 115 | B4-U0-G4   | 38021               | 120 | B4-U0-G5   | 39605               | 125 | B4-U0-G5   | 41189               | 130 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 33831               | 106 | B3-U0-G5   | 35302               | 111 | B3-U0-G5   | 36773               | 116 | B3-U0-G5   | 38244               | 120 | B3-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 36163               | 114 | B4-U0-G4   | 37735               | 119 | B4-U0-G4   | 39308               | 124 | B4-U0-G5   | 40880               | 129 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 32942               | 104 | B3-U0-G5   | 34374               | 108 | B3-U0-G5   | 35807               | 113 | B3-U0-G5   | 37239               | 117 | B3-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 37796               | 119 | B5-U0-G2   | 39440               | 124 | B5-U0-G2   | 41083               | 129 | B5-U0-G2   | 42726               | 134 | B5-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 37064               | 117 | B5-U0-G4   | 38675               | 122 | B5-U0-G4   | 40287               | 127 | B5-U0-G4   | 41899               | 132 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 36179               | 114 | B5-U0-G5   | 37752               | 119 | B5-U0-G5   | 39325               | 124 | B5-U0-G5   | 40898               | 129 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 26190               | 82  | B2-U0-G4   | 27328               | 86  | B2-U0-G4   | 28467               | 90  | B2-U0-G4   | 29606               | 93  | B2-U0-G4   |              |             |     |            |
|           |                    |              | II-FR-HS    | 26641               | 84  | B2-U0-G2   | 27799               | 87  | B2-U0-G2   | 28957               | 91  | B2-U0-G2   | 30116               | 95  | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 26496               | 83  | B1-U0-G4   | 27648               | 87  | B1-U0-G4   | 28800               | 91  | B1-U0-G5   | 29952               | 94  | B1-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 25935               | 82  | B1-U0-G5   | 27062               | 85  | B1-U0-G5   | 28190               | 89  | B1-U0-G5   | 29318               | 92  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 27367               | 86  | B1-U0-G4   | 28557               | 90  | B1-U0-G4   | 29747               | 94  | B1-U0-G4   | 30937               | 97  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 25864               | 81  | B1-U0-G5   | 26988               | 85  | B1-U0-G5   | 28113               | 88  | B1-U0-G5   | 29238               | 92  | B1-U0-G5   |              |             |     |            |
| 80        | 1400               | 366.2        | II          | 38807               | 106 | B4-U0-G4   | 40495               | 111 | B4-U0-G4   | 42182               | 115 | B4-U0-G5   | 43869               | 120 | B4-U0-G5   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 39068               | 107 | B4-U0-G2   | 40767               | 111 | B4-U0-G3   | 42465               | 116 | B4-U0-G3   | 44164               | 121 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-ML       | 38809               | 106 | B5-U0-G5   | 40496               | 111 | B5-U0-G5   | 42183               | 115 | B5-U0-G5   | 43871               | 120 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 39486               | 108 | B4-U0-G5   | 41203               | 113 | B4-U0-G5   | 42920               | 117 | B4-U0-G5   | 44637               | 122 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 36663               | 100 | B3-U0-G5   | 38257               | 104 | B3-U0-G5   | 39851               | 109 | B4-U0-G5   | 41445               | 113 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 39190               | 107 | B4-U0-G5   | 40894               | 112 | B4-U0-G5   | 42598               | 116 | B4-U0-G5   | 44301               | 121 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 35699               | 97  | B3-U0-G5   | 37251               | 102 | B3-U0-G5   | 38804               | 106 | B4-U0-G5   | 40356               | 110 | B4-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 40960               | 112 | B5-U0-G2   | 42741               | 117 | B5-U0-G2   | 44522               | 122 | B5-U0-G2   | 46302               | 126 | B5-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 40166               | 110 | B5-U0-G4   | 41912               | 114 | B5-U0-G4   | 43659               | 119 | B5-U0-G4   | 45405               | 124 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 39206               | 107 | B5-U0-G5   | 40911               | 112 | B5-U0-G5   | 42616               | 116 | B5-U0-G5   | 44320               | 121 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 28382               | 78  | B2-U0-G4   | 29616               | 81  | B2-U0-G4   | 30850               | 84  | B2-U0-G4   | 32084               | 88  | B2-U0-G5   |              |             |     |            |
|           |                    |              | II-FR-HS    | 28871               | 79  | B2-U0-G2   | 30126               | 82  | B2-U0-G2   | 31381               | 86  | B2-U0-G3   | 32636               | 89  | B2-U0-G3   |              |             |     |            |
|           |                    |              | III-M-HS    | 28714               | 78  | B1-U0-G5   | 29963               | 82  | B1-U0-G5   | 31211               | 85  | B1-U0-G5   | 32459               | 89  | B1-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 28106               | 77  | B1-U0-G5   | 29328               | 80  | B1-U0-G5   | 30550               | 83  | B1-U0-G5   | 31772               | 87  | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 29658               | 81  | B1-U0-G4   | 30947               | 85  | B1-U0-G5   | 32237               | 88  | B1-U0-G5   | 33526               | 92  | B2-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 28029               | 77  | B1-U0-G5   | 29248               | 80  | B1-U0-G5   | 30466               | 83  | B1-U0-G5   | 31685               | 87  | B2-U0-G5   |              |             |     |            |

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**PHOTOMETRIC DATA GUIDE - LUMEN TABLES**

| RZR-G-PLD |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |
|-----------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
| LED Count | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|           |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 120       | 350                | 128.7        | II          | 18895               | 147 | B3-U0-G3   | 19717               | 153 | B3-U0-G3   | 20538               | 160 | B3-U0-G3   | 21360               | 166 | B3-U0-G3   | 100.5        | 6713        | 67  | B2-U0-G2   |
|           |                    |              | II-FR       | 19022               | 148 | B3-U0-G2   | 19849               | 154 | B3-U0-G2   | 20676               | 161 | B3-U0-G2   | 21503               | 167 | B3-U0-G2   |              | 6757        | 67  | B2-U0-G1   |
|           |                    |              | II-ML       | 18896               | 147 | B4-U0-G4   | 19718               | 153 | B4-U0-G4   | 20539               | 160 | B4-U0-G4   | 21361               | 166 | B4-U0-G4   |              | 6713        | 67  | B3-U0-G3   |
|           |                    |              | III-M       | 19226               | 149 | B3-U0-G3   | 20062               | 156 | B3-U0-G3   | 20897               | 162 | B3-U0-G3   | 21733               | 169 | B3-U0-G3   |              | 6829        | 68  | B2-U0-G2   |
|           |                    |              | III-W       | 17851               | 139 | B3-U0-G3   | 18627               | 145 | B3-U0-G4   | 19403               | 151 | B3-U0-G4   | 20179               | 157 | B3-U0-G4   |              | 6341        | 63  | B1-U0-G2   |
|           |                    |              | IV          | 19081               | 148 | B3-U0-G3   | 19911               | 155 | B3-U0-G3   | 20741               | 161 | B3-U0-G3   | 21570               | 168 | B3-U0-G3   |              | 6778        | 67  | B2-U0-G2   |
|           |                    |              | IV-FT       | 17382               | 135 | B3-U0-G4   | 18138               | 141 | B3-U0-G4   | 18893               | 147 | B3-U0-G4   | 19649               | 153 | B3-U0-G4   |              | 6175        | 61  | B1-U0-G2   |
|           |                    |              | VSQ-N       | 19943               | 155 | B4-U0-G2   | 20810               | 162 | B4-U0-G2   | 21677               | 168 | B4-U0-G2   | 22544               | 175 | B4-U0-G2   |              | 7085        | 70  | B2-U0-G1   |
|           |                    |              | VSQ-M       | 19557               | 152 | B4-U0-G2   | 20407               | 159 | B4-U0-G2   | 21257               | 165 | B5-U0-G3   | 22108               | 172 | B5-U0-G3   |              | 6947        | 69  | B3-U0-G1   |
|           |                    |              | VSQ-W       | 19089               | 148 | B5-U0-G3   | 19920               | 155 | B5-U0-G3   | 20750               | 161 | B5-U0-G3   | 21580               | 168 | B5-U0-G4   |              | 6781        | 67  | B3-U0-G2   |
|           |                    |              | II-HS       | 13819               | 107 | B1-U0-G3   | 14420               | 112 | B1-U0-G3   | 15021               | 117 | B1-U0-G3   | 15622               | 121 | B1-U0-G3   |              | 4909        | 49  | B1-U0-G2   |
|           |                    |              | II-FR-HS    | 14057               | 109 | B1-U0-G2   | 14668               | 114 | B1-U0-G2   | 15279               | 119 | B1-U0-G2   | 15890               | 123 | B1-U0-G2   |              | 4993        | 50  | B0-U0-G1   |
|           |                    |              | III-M-HS    | 13981               | 109 | B1-U0-G3   | 14589               | 113 | B1-U0-G3   | 15197               | 118 | B1-U0-G3   | 15804               | 123 | B1-U0-G3   |              | 4967        | 49  | B0-U0-G2   |
|           |                    |              | III-W-HS    | 13685               | 106 | B1-U0-G3   | 14279               | 111 | B1-U0-G3   | 14875               | 116 | B1-U0-G4   | 15470               | 120 | B1-U0-G4   |              | 4860        | 48  | B0-U0-G2   |
|           |                    |              | IV-HS       | 14440               | 112 | B1-U0-G3   | 15068               | 117 | B1-U0-G3   | 15696               | 122 | B1-U0-G3   | 16324               | 127 | B1-U0-G3   |              | 5131        | 51  | B0-U0-G2   |
|           |                    |              | IV-FT-HS    | 13647               | 106 | B1-U0-G3   | 14241               | 111 | B1-U0-G4   | 14834               | 115 | B1-U0-G4   | 15427               | 120 | B1-U0-G4   |              | 4848        | 48  | B0-U0-G2   |
| 120       | 525                | 194.5        | II          | 27152               | 140 | B3-U0-G4   | 28333               | 146 | B3-U0-G4   | 29513               | 152 | B4-U0-G4   | 30694               | 158 | B4-U0-G4   | 151.5        | 7876        | 52  | B2-U0-G2   |
|           |                    |              | II-FR       | 27335               | 141 | B3-U0-G2   | 28523               | 147 | B4-U0-G2   | 29712               | 153 | B4-U0-G2   | 30900               | 159 | B4-U0-G2   |              | 7928        | 52  | B2-U0-G1   |
|           |                    |              | II-ML       | 27153               | 140 | B4-U0-G4   | 28334               | 146 | B4-U0-G4   | 29514               | 152 | B5-U0-G5   | 30695               | 158 | B5-U0-G5   |              | 7876        | 52  | B3-U0-G3   |
|           |                    |              | III-M       | 27627               | 142 | B3-U0-G4   | 28828               | 148 | B3-U0-G4   | 30030               | 154 | B3-U0-G4   | 31231               | 161 | B4-U0-G4   |              | 8014        | 53  | B2-U0-G2   |
|           |                    |              | III-W       | 25652               | 132 | B3-U0-G4   | 26768               | 138 | B3-U0-G4   | 27883               | 143 | B3-U0-G4   | 28998               | 149 | B3-U0-G4   |              | 7442        | 49  | B1-U0-G2   |
|           |                    |              | IV          | 27420               | 141 | B3-U0-G4   | 28612               | 147 | B3-U0-G4   | 29804               | 153 | B3-U0-G4   | 30996               | 159 | B4-U0-G4   |              | 7954        | 52  | B2-U0-G2   |
|           |                    |              | IV-FT       | 24978               | 128 | B3-U0-G5   | 26063               | 134 | B3-U0-G5   | 27150               | 140 | B3-U0-G5   | 28236               | 145 | B3-U0-G5   |              | 7246        | 48  | B1-U0-G2   |
|           |                    |              | VSQ-N       | 28658               | 147 | B5-U0-G2   | 29904               | 154 | B5-U0-G2   | 31150               | 160 | B5-U0-G2   | 32396               | 167 | B5-U0-G2   |              | 8314        | 55  | B3-U0-G1   |
|           |                    |              | VSQ-M       | 28103               | 144 | B5-U0-G3   | 29325               | 151 | B5-U0-G3   | 30547               | 157 | B5-U0-G3   | 31769               | 163 | B5-U0-G4   |              | 8151        | 54  | B3-U0-G2   |
|           |                    |              | VSQ-W       | 27432               | 141 | B5-U0-G4   | 28625               | 147 | B5-U0-G4   | 29817               | 153 | B5-U0-G4   | 31010               | 159 | B5-U0-G4   |              | 7957        | 53  | B3-U0-G2   |
|           |                    |              | II-HS       | 19858               | 102 | B1-U0-G4   | 20721               | 107 | B2-U0-G4   | 21585               | 111 | B2-U0-G4   | 22448               | 115 | B2-U0-G4   |              | 5761        | 38  | B1-U0-G2   |
|           |                    |              | II-FR-HS    | 20200               | 104 | B1-U0-G2   | 21078               | 108 | B1-U0-G2   | 21956               | 113 | B1-U0-G2   | 22834               | 117 | B1-U0-G2   |              | 5859        | 39  | B1-U0-G1   |
|           |                    |              | III-M-HS    | 20090               | 103 | B1-U0-G4   | 20964               | 108 | B1-U0-G4   | 21837               | 112 | B1-U0-G4   | 22711               | 117 | B1-U0-G4   |              | 5827        | 38  | B0-U0-G2   |
|           |                    |              | III-W-HS    | 19664               | 101 | B1-U0-G4   | 20519               | 105 | B1-U0-G4   | 21374               | 110 | B1-U0-G4   | 22229               | 114 | B1-U0-G4   |              | 5704        | 38  | B0-U0-G2   |
|           |                    |              | IV-HS       | 20751               | 107 | B1-U0-G4   | 21653               | 111 | B1-U0-G4   | 22555               | 116 | B1-U0-G4   | 23457               | 121 | B1-U0-G4   |              | 6020        | 40  | B0-U0-G2   |
|           |                    |              | IV-FT-HS    | 19611               | 101 | B1-U0-G4   | 20464               | 105 | B1-U0-G4   | 21316               | 110 | B1-U0-G4   | 22169               | 114 | B1-U0-G5   |              | 5689        | 38  | B0-U0-G2   |
| 120       | 700                | 260.3        | II          | 34370               | 132 | B4-U0-G4   | 35865               | 138 | B4-U0-G4   | 37359               | 144 | B4-U0-G4   | 38853               | 149 | B4-U0-G4   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 34601               | 133 | B4-U0-G2   | 36106               | 139 | B4-U0-G2   | 37610               | 144 | B4-U0-G2   | 39114               | 150 | B4-U0-G2   |              |             |     |            |
|           |                    |              | II-ML       | 34371               | 132 | B5-U0-G5   | 35866               | 138 | B5-U0-G5   | 37360               | 144 | B5-U0-G5   | 38855               | 149 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 34972               | 134 | B4-U0-G4   | 36492               | 140 | B4-U0-G4   | 38013               | 146 | B4-U0-G5   | 39533               | 152 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 32471               | 125 | B3-U0-G5   | 33883               | 130 | B3-U0-G5   | 35295               | 136 | B3-U0-G5   | 36707               | 141 | B3-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 34709               | 133 | B4-U0-G4   | 36218               | 139 | B4-U0-G4   | 37727               | 145 | B4-U0-G4   | 39236               | 151 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 31618               | 121 | B3-U0-G5   | 32993               | 127 | B3-U0-G5   | 34367               | 132 | B3-U0-G5   | 35742               | 137 | B3-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 36277               | 139 | B5-U0-G2   | 37854               | 145 | B5-U0-G2   | 39431               | 151 | B5-U0-G2   | 41008               | 158 | B5-U0-G2   |              |             |     |            |
|           |                    |              | VSQ-M       | 35574               | 137 | B5-U0-G4   | 37120               | 143 | B5-U0-G4   | 38667               | 149 | B5-U0-G4   | 40214               | 154 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 34724               | 133 | B5-U0-G5   | 36233               | 139 | B5-U0-G5   | 37743               | 145 | B5-U0-G5   | 39253               | 151 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 25137               | 97  | B2-U0-G4   | 26230               | 101 | B2-U0-G4   | 27322               | 105 | B2-U0-G4   | 28415               | 109 | B2-U0-G4   |              |             |     |            |
|           |                    |              | II-FR-HS    | 25569               | 98  | B2-U0-G2   | 26681               | 103 | B2-U0-G2   | 27793               | 107 | B2-U0-G2   | 28905               | 111 | B2-U0-G2   |              |             |     |            |
|           |                    |              | III-M-HS    | 25431               | 98  | B1-U0-G4   | 26537               | 102 | B1-U0-G4   | 27643               | 106 | B1-U0-G4   | 28748               | 110 | B1-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 24892               | 96  | B1-U0-G5   | 25974               | 100 | B1-U0-G5   | 27057               | 104 | B1-U0-G5   | 28139               | 108 | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 26267               | 101 | B1-U0-G4   | 27409               | 105 | B1-U0-G4   | 28551               | 110 | B1-U0-G4   | 29693               | 114 | B1-U0-G4   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 24824               | 95  | B1-U0-G5   | 25903               | 100 | B1-U0-G5   | 26983               | 104 | B1-U0-G5   | 28062               | 108 | B1-U0-G5   |              |             |     |            |
| 120       | 875                | 332.3        | II          | 41188               | 124 | B4-U0-G4   | 42979               | 129 | B4-U0-G5   | 44770               | 135 | B4-U0-G5   | 46561               | 140 | B4-U0-G5   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 41465               | 125 | B4-U0-G3   | 43268               | 130 | B4-U0-G3   | 45071               | 136 | B4-U0-G3   | 46874               | 141 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-ML       | 41190               | 124 | B5-U0-G5   | 42981               | 129 | B5-U0-G5   | 44772               | 135 | B5-U0-G5   | 46563               | 140 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 41909               | 126 | B4-U0-G5   | 43731               | 132 | B4-U0-G5   | 45553               | 137 | B4-U0-G5   | 47375               | 143 | B4-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 38913               | 117 | B3-U0-G5   | 40605               | 122 | B4-U0-G5   | 42296               | 127 | B4-U0-G5   | 43988               | 132 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 41594               | 125 | B4-U0-G5   | 43402               | 131 | B4-U0-G5   | 45211               | 136 | B4-U0-G5   | 47020               | 141 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 37890               | 114 | B4-U0-G5   | 39537               | 119 | B4-U0-G5   | 41185               | 124 | B4-U0-G5   | 42832               | 129 | B4-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 43473               | 131 | B5-U0-G2   | 45363               | 137 | B5-U0-G2   | 47253               | 142 | B5-U0-G3   | 49143               | 148 | B5-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-M       | 42631               | 128 | B5-U0-G4   | 44484               | 134 | B5-U0-G4   | 46338               | 139 | B5-U0-G4   | 48191               | 145 | B5-U0-G4   |              |             |     |            |
|           |                    |              | VSQ-W       | 41613               | 125 | B5-U0-G5   | 43422               | 131 | B5-U0-G5   | 45231               | 136 | B5-U0-G5   | 47041               | 142 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 30123               | 91  | B2-U0-G4   | 31433               | 95  | B2-U0-G5   | 32742               | 99  | B2-U0-G5   | 34052               | 102 | B2-U0-G5   |              |             |     |            |
|           |                    |              | II-FR-HS    | 30642               | 92  | B2-U0-G2   | 31974               | 96  | B2-U0-G3   | 33306               | 100 | B2-U0-G3   | 34639               | 104 | B2-U0-G3   |              |             |     |            |
|           |                    |              | III-M-HS    | 30475               | 92  | B1-U0-G5   | 31800               | 96  | B1-U0-G5   | 33125               | 100 | B1-U0-G5   | 34450               | 104 | B2-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 29830               | 90  | B1-U0-G5   | 31127               | 94  | B1-U0-G5   | 32424               | 98  | B1-U0-G5   | 33721               | 101 | B1-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 31477               | 95  | B1-U0-G5   | 32846               | 99  | B1-U0-G5   | 34214               | 103 | B2-U0-G5   | 35583               | 107 | B2-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 29748               | 90  | B1-U0-G5   | 31042               | 93  | B2-U0-G5   | 32335               | 97  | B2-U0-G5   | 33629               | 101 | B2-U0-G5   |              |             |     |            |
| 120       | 1050               | 404.3        | II          | 46860               | 116 | B4-U0-G5   | 48898               | 121 | B5-U0-G5   | 50935               | 126 | B5-U0-G5   | 52973               | 131 | B5-U0-G5   | N/A          | N/A         |     |            |
|           |                    |              | II-FR       | 47175               | 117 | B4-U0-G3   | 49226               | 122 | B4-U0-G3   | 51277               | 127 | B4-U0-G3   | 53328               | 132 | B4-U0-G3   |              |             |     |            |
|           |                    |              | II-ML       | 46862               | 116 | B5-U0-G5   | 48900               | 121 | B5-U0-G5   | 50937               | 126 | B5-U0-G5   | 52975               | 131 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-M       | 47680               | 118 | B4-U0-G5   | 49753               | 123 | B4-U0-G5   | 51826               | 128 | B4-U0-G5   | 53899               | 133 | B5-U0-G5   |              |             |     |            |
|           |                    |              | III-W       | 44271               | 110 | B4-U0-G5   | 46196               | 114 | B4-U0-G5   | 48121               | 119 | B4-U0-G5   | 50045               | 124 | B4-U0-G5   |              |             |     |            |
|           |                    |              | IV          | 47322               | 117 | B4-U0-G5   | 49379               | 122 | B4-U0-G5   | 51437               | 127 | B4-U0-G5   | 53494               | 132 | B5-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT       | 43107               | 107 | B4-U0-G5   | 44981               | 111 | B4-U0-G5   | 46856               | 116 | B4-U0-G5   | 48730               | 121 | B4-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-N       | 49459               | 122 | B5-U0-G3   | 51610               | 128 | B5-U0-G3   | 53760               | 133 | B5-U0-G3   | 55911               | 138 | B5-U0-G3   |              |             |     |            |
|           |                    |              | VSQ-M       | 48501               | 120 | B5-U0-G4   | 50609               | 125 | B5-U0-G4   | 52718               | 130 | B5-U0-G5   | 54827               | 136 | B5-U0-G5   |              |             |     |            |
|           |                    |              | VSQ-W       | 47342               | 117 | B5-U0-G5   | 49401               | 122 | B5-U0-G5   | 51459               | 127 | B5-U0-G5   | 53517               | 132 | B5-U0-G5   |              |             |     |            |
|           |                    |              | II-HS       | 34271               | 85  | B2-U0-G5   | 35761               | 88  | B2-U0-G5   | 37251               | 92  | B2-U0-G5   | 38741               | 96  | B2-U0-G5   |              |             |     |            |
|           |                    |              | II-FR-HS    | 34861               | 86  | B2-U0-G3   | 36377               | 90  | B2-U0-G3   | 37893               | 94  | B2-U0-G3   | 39408               | 97  | B2-U0-G3   |              |             |     |            |
|           |                    |              | III-M-HS    | 34672               | 86  | B2-U0-G5   | 36180               | 89  | B2-U0-G5   | 37687               | 93  | B2-U0-G5   | 39195               | 97  | B2-U0-G5   |              |             |     |            |
|           |                    |              | III-W-HS    | 33938               | 84  | B1-U0-G5   | 35413               | 88  | B1-U0-G5   | 36889               | 91  | B2-U0-G5   | 38364               | 95  | B2-U0-G5   |              |             |     |            |
|           |                    |              | IV-HS       | 35812               | 89  | B2-U0-G5   | 37368               | 92  | B2-U0-G5   | 38926               | 96  | B2-U0-G5   | 40483               | 100 | B2-U0-G5   |              |             |     |            |
|           |                    |              | IV-FT-HS    | 33845               | 84  | B2-U0-G5   | 35317               | 87  | B2-U0-G5   | 36788               | 91  | B2-U0-G5   | 38260               | 95  | B2-U0-G5   |              |             |     |            |

**PHOTOMETRIC DATA GUIDE - ISOFOOTCANDLE PLOTS**

| RZR-G-PLED |                    |              |             |                     |     |            |                     |     |            |                     |     |            |                     |     |            |              |             |     |            |
|------------|--------------------|--------------|-------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|---------------------|-----|------------|--------------|-------------|-----|------------|
| LED Count  | Drive Current (mA) | System Watts | Dist'n Type | 27K (2700K - 70CRI) |     |            | 30K (3000K - 70CRI) |     |            | 40K (4000K - 70CRI) |     |            | 50K (5000K - 70CRI) |     |            | System Watts | TRA (590nm) |     |            |
|            |                    |              |             | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING | LUMENS              | LPW | BUG RATING |              | LUMENS      | LPW | BUG RATING |
| 120        | 1225               | 476.8        | II          | 52151               | 109 | B5-U0-G5   | 54418               | 114 | B5-U0-G5   | 56686               | 119 | B5-U0-G5   | 58953               | 124 | B5-U0-G5   | N/A          | N/A         |     |            |
|            |                    |              | II-FR       | 52501               | 110 | B4-U0-G3   | 54784               | 115 | B4-U0-G3   | 57067               | 120 | B5-U0-G3   | 59349               | 124 | B5-U0-G3   |              |             |     |            |
|            |                    |              | II-ML       | 52152               | 109 | B5-U0-G5   | 54420               | 114 | B5-U0-G5   | 56687               | 119 | B5-U0-G5   | 58955               | 124 | B5-U0-G5   |              |             |     |            |
|            |                    |              | III-M       | 53063               | 111 | B5-U0-G5   | 55370               | 116 | B5-U0-G5   | 57677               | 121 | B5-U0-G5   | 59984               | 126 | B5-U0-G5   |              |             |     |            |
|            |                    |              | III-W       | 49269               | 103 | B4-U0-G5   | 51411               | 108 | B4-U0-G5   | 53554               | 112 | B4-U0-G5   | 55696               | 117 | B4-U0-G5   |              |             |     |            |
|            |                    |              | IV          | 52665               | 110 | B5-U0-G5   | 54954               | 115 | B5-U0-G5   | 57244               | 120 | B5-U0-G5   | 59534               | 125 | B5-U0-G5   |              |             |     |            |
|            |                    |              | IV-FT       | 47974               | 101 | B4-U0-G5   | 50060               | 105 | B4-U0-G5   | 52146               | 109 | B4-U0-G5   | 54232               | 114 | B4-U0-G5   |              |             |     |            |
|            |                    |              | VSQ-N       | 55043               | 115 | B5-U0-G3   | 57436               | 120 | B5-U0-G3   | 59830               | 125 | B5-U0-G3   | 62223               | 131 | B5-U0-G3   |              |             |     |            |
|            |                    |              | VSQ-M       | 53977               | 113 | B5-U0-G5   | 56324               | 118 | B5-U0-G5   | 58670               | 123 | B5-U0-G5   | 61017               | 128 | B5-U0-G5   |              |             |     |            |
|            |                    |              | VSQ-W       | 52688               | 111 | B5-U0-G5   | 54978               | 115 | B5-U0-G5   | 57269               | 120 | B5-U0-G5   | 59560               | 125 | B5-U0-G5   |              |             |     |            |
|            |                    |              | II-HS       | 38140               | 80  | B2-U0-G5   | 39799               | 83  | B2-U0-G5   | 41457               | 87  | B3-U0-G5   | 43115               | 90  | B3-U0-G5   |              |             |     |            |
|            |                    |              | II-FR-HS    | 38797               | 81  | B2-U0-G3   | 40484               | 85  | B2-U0-G3   | 42171               | 88  | B2-U0-G3   | 43858               | 92  | B2-U0-G3   |              |             |     |            |
|            |                    |              | III-M-HS    | 38587               | 81  | B2-U0-G5   | 40265               | 84  | B2-U0-G5   | 41942               | 88  | B2-U0-G5   | 43620               | 91  | B2-U0-G5   |              |             |     |            |
|            |                    |              | III-W-HS    | 37769               | 79  | B2-U0-G5   | 39411               | 83  | B2-U0-G5   | 41054               | 86  | B2-U0-G5   | 42696               | 90  | B2-U0-G5   |              |             |     |            |
|            |                    |              | IV-HS       | 39855               | 84  | B2-U0-G5   | 41588               | 87  | B2-U0-G5   | 43321               | 91  | B2-U0-G5   | 45054               | 94  | B2-U0-G5   |              |             |     |            |
|            |                    |              | IV-FT-HS    | 37666               | 79  | B2-U0-G5   | 39304               | 82  | B2-U0-G5   | 40941               | 86  | B2-U0-G5   | 42579               | 89  | B2-U0-G5   |              |             |     |            |
| 120        | 1400               | 549.3        | II          | 56515               | 103 | B5-U0-G5   | 58973               | 107 | B5-U0-G5   | 61430               | 112 | B5-U0-G5   | 63887               | 116 | B5-U0-G5   | N/A          | N/A         |     |            |
|            |                    |              | II-FR       | 56895               | 104 | B5-U0-G3   | 59369               | 108 | B5-U0-G3   | 61842               | 113 | B5-U0-G4   | 64316               | 117 | B5-U0-G4   |              |             |     |            |
|            |                    |              | II-ML       | 56518               | 103 | B5-U0-G5   | 58975               | 107 | B5-U0-G5   | 61432               | 112 | B5-U0-G5   | 63890               | 116 | B5-U0-G5   |              |             |     |            |
|            |                    |              | III-M       | 57504               | 105 | B5-U0-G5   | 60004               | 109 | B5-U0-G5   | 62504               | 114 | B5-U0-G5   | 65005               | 118 | B5-U0-G5   |              |             |     |            |
|            |                    |              | III-W       | 53392               | 97  | B4-U0-G5   | 55714               | 101 | B4-U0-G5   | 58035               | 106 | B4-U0-G5   | 60357               | 110 | B4-U0-G5   |              |             |     |            |
|            |                    |              | IV          | 57073               | 104 | B5-U0-G5   | 59554               | 108 | B5-U0-G5   | 62036               | 113 | B5-U0-G5   | 64517               | 117 | B5-U0-G5   |              |             |     |            |
|            |                    |              | IV-FT       | 51989               | 95  | B4-U0-G5   | 54249               | 99  | B4-U0-G5   | 56510               | 103 | B4-U0-G5   | 58771               | 107 | B4-U0-G5   |              |             |     |            |
|            |                    |              | VSQ-N       | 59650               | 109 | B5-U0-G3   | 62244               | 113 | B5-U0-G3   | 64837               | 118 | B5-U0-G3   | 67431               | 123 | B5-U0-G3   |              |             |     |            |
|            |                    |              | VSQ-M       | 58495               | 106 | B5-U0-G5   | 61038               | 111 | B5-U0-G5   | 63581               | 116 | B5-U0-G5   | 66124               | 120 | B5-U0-G5   |              |             |     |            |
|            |                    |              | VSQ-W       | 57097               | 104 | B5-U0-G5   | 59579               | 108 | B5-U0-G5   | 62062               | 113 | B5-U0-G5   | 64544               | 118 | B5-U0-G5   |              |             |     |            |
|            |                    |              | II-HS       | 41333               | 75  | B2-U0-G5   | 43130               | 79  | B3-U0-G5   | 44927               | 82  | B3-U0-G5   | 46724               | 85  | B3-U0-G5   |              |             |     |            |
|            |                    |              | II-FR-HS    | 42045               | 77  | B2-U0-G3   | 43873               | 80  | B2-U0-G3   | 45701               | 83  | B2-U0-G3   | 47529               | 87  | B2-U0-G4   |              |             |     |            |
|            |                    |              | III-M-HS    | 41817               | 76  | B2-U0-G5   | 43635               | 79  | B2-U0-G5   | 45453               | 83  | B2-U0-G5   | 47271               | 86  | B2-U0-G5   |              |             |     |            |
|            |                    |              | III-W-HS    | 40931               | 75  | B2-U0-G5   | 42711               | 78  | B2-U0-G5   | 44490               | 81  | B2-U0-G5   | 46270               | 84  | B2-U0-G5   |              |             |     |            |
|            |                    |              | IV-HS       | 43191               | 79  | B2-U0-G5   | 45069               | 82  | B2-U0-G5   | 46947               | 85  | B2-U0-G5   | 48825               | 89  | B2-U0-G5   |              |             |     |            |
|            |                    |              | IV-FT-HS    | 40819               | 74  | B2-U0-G5   | 42594               | 78  | B2-U0-G5   | 44368               | 81  | B2-U0-G5   | 46143               | 84  | B2-U0-G5   |              |             |     |            |

 IES File downloads for this product can be found at [www.usaltg.com/downloads/asr.html](http://www.usaltg.com/downloads/asr.html)





MOUNTING HEIGHTS:  
TYPE S4 - 18FT  
TYPE S5 - 8FT

GENERAL LIGHTING  
PHOTOMETRIC  
PLAN - PHASE II

# E300



# APPENDIX A

## EL DORADO COUNTY

### Lighting Inventory

#### Section A Project Information:

Project Name & File No: DIAMOND VILLAGE APARTMENTS PHASE II

Site Address or Location: 750 BLACK RICE ROAD, PLACERVILLE, CA 95667

APN: 051-461-069

Building Permit #

#### Section B.1 Lighting Allowance

As a reference source, please review the Outdoor Lighting Ordinance, Chapter 130.34 (Outdoor Lighting) of Title 130 of the County Code of Ordinances.

$$\begin{array}{rcl} & \underline{50000} & \text{Maximum lumens (CR, RC, or RR)} \\ \times & \underline{5.71} & \text{Total project area (Acres or net acres)} \\ = & \underline{285500} & \text{Maximum Lumen Output Allowed} \end{array}$$

#### Section B.2 Preliminary Lighting Use

| (A)<br>Lamp Type | (B)<br>Watts<br>per lamp | (C)<br>Lighting Plan<br>Key (ID#)   | (D)<br>Number of<br>lamps/<br>Length in feet<br>(Neon only) | (E)<br>Initial Lumen<br>Output | (D x E)<br>Total Unit<br>Lumen Output |
|------------------|--------------------------|-------------------------------------|---|--------------------------------|---------------------------------------|
| LED              | 39                       | RM-PLED-IV-FT-24LED-525MA-30K-HS-EC | 18  | 2045                           | 36810                                 |
| LED              | 10                       | WDGE1-LED-P1P30K-90CRI-VF           | 42  | 1028                           | 43176                                 |
|                  |                          |                                     |   |                                |                                       |
|                  |                          |                                     |   |                                |                                       |
|                  |                          |                                     |   |                                |                                       |
|                  |                          |                                     |   |                                |                                       |
|                  |                          |                                     |   | <b>Total Lumen<br/>Output</b>  | <b>79986</b>                          |

# APPENDIX A

## Design Certification:

This form must be completed and signed by the design professional, as defined under Subsection 3.2 (Definitions) of the Community Design Standards (Outdoor Lighting).

“I/we certify that the design and technical specifications are compliant with the requirements in Community Design Standards (Outdoor Lighting).”

|  |  |
|--|--|
| Signature<br> | Date<br>12/17/2024                                 |
| Name (Print)<br><b>Andrew Balkwell</b>   | Title<br><b>Electrical Engineer</b>                |
| Telephone No.<br><b>949 280-9743</b>   | E-mail Address<br><b>abalkwell@arbelectric.com</b> |
| License or Certification No.<br>E18563   |  |
| Company<br>ARB Electrical Inc.   | Street Address<br>1401 N EL CAMINO REAL #201       |
| City<br>San Clemente   | State and Zip Code<br>CA- 92672                    |

## **Section C Construction and Installation Certificate of Completion**

This form must be completed and signed by the design professional or the licensed contractor who installed the system.

“I/we certify that based upon periodic site observations, the work has been completed in accordance with the Community Design Standards (Outdoor Lighting) and that the lighting system was built and installed according to the design specifications certified above.”

|                              |                    |
|------------------------------|--------------------|
| Signature                    | Date               |
| Name (Print)                 | Title              |
| Telephone No.                | E-mail Address     |
| License or Certification No. |                    |
| Company                      | Street Address     |
| City                         | State and Zip Code |



**From:** Greg Matuzak, Principal Biologist  
Greg Matuzak Environmental Consulting LLC  
P.O. Box 2016  
Nevada City, CA 95959 Phone: (530) 557-5077  
Email: [gmatuzak@gmail.com](mailto:gmatuzak@gmail.com)

**For:** Sergei Oleshko  
SNO Foundation  
8863 Greenback Lane, Suite 324  
Orangevale, CA 95662  
Phone: (916) 949-8882  
Email: [sergei@snofoundation.org](mailto:sergei@snofoundation.org)



**APPROVED**  
EL DORADO COUNTY  
PLANNING COMMISSION

DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

*PRG*

**C/O:** Millennium Planning & Engineering  
471 Sutton Way, Suite #210  
Grass Valley, CA 95945  
Email: [subs@millpe.com](mailto:subs@millpe.com)

**Date:** October 31, 2024

**Re:** Updated Biological Resources and Wetland Assessment Technical  
Memorandum for the Diamond Springs Village Apartments Phase II in El  
Dorado County (APN: 051-461-069)

## Introduction

The previous reporting for sensitive biological resources developed for the proposed Diamond Springs Village Apartments Phase II Project (Project) by Greg Matuzak Environmental Consulting LLC included the following two (2) technical memorandums:

- Biological Resources Assessment Technical Memorandum for the Diamond Springs Village Apartments Phase II Project (dated May 31, 2024); and
- United States Fish and Wildlife Service (USFWS) Wetland Assessment Technical Memorandum for the proposed Diamond Springs Village Apartments Phase II Project (Project) in Diamond Springs, El Dorado County (dated September 10, 2024).

The Biological Resources Assessment Technical Memorandum provided an assessment of the habitats identified within the Phase II Project area as well as an assessment of suitable habitat for special-status species (including state and federally listed species under their respective Endangered Species Acts) to occur within the Phase II Project area. The Biological Resources Assessment Technical Memorandum also included an assessment of the existing trees and wetlands and streams that occur

within the Phase II Project area. Lastly, the Biological Resources Technical Memorandum (dated May 31, 2024) included an overview of the permitting requirements if such sensitive biological resources would be impacted by the proposed Phase II Project.

The Wetland Assessment Technical Memorandum was developed to ensure the Phase II Project is in compliance with the requirements of the Project's SB 35 application. As part of the Project's SB 35 preliminary application, the El Dorado County Planning Department requested updated reporting that analyzes the potential for wetlands and/or streams defined by the USFWS and under the State of California Government Code § 65913.4.

Therefore, this Updated Biological Resources and Wetland Assessment Technical Memorandum (Updated Tech Memo) provides an overview of the assessment of sensitive biological resources within the Phase II Project parcel, which is based on current database searches and a recent site visit and reconnaissance-level biological resources survey (conducted in 2024) and were focused on the following resources:

- Sensitive habitats, including riparian and wetland habitats
- Suitable habitat for special-status species, including Designated Critical Habitat (DCH) mapped by the USFWS
- Trees protected by El Dorado County, including protected oak resources
- Compliance with local, state, and federal regulations covering the protection of sensitive biological resources
- Compliance with the State of California's SB 35 requirements as they relate to the presence of USFWS defined wetlands within the Phase II Project parcel per State of California Government Code § 65913.4

## **Project Background**

The proposed Project is an affordable housing project that addresses California's overall housing shortage. The applicant proposes to construct 32 affordable housing ("Apartments") units located on 750 Black Rice Road, adjacent to the Diamond Springs Village Apartments project (PD17- 0002) within the Diamond Springs community of El Dorado County. The subject parcel originally consisted of 10.7 acres, identified as APN 051-461- 059, and was included in the review for PD17- 0002/Diamond Springs Village Apartments. The property has since been subdivided to separate Phases 1 and 2 for funding purposes, with the resultant subject parcel (APN 051-461-069) consisting of 5.71- acres.

The subject parcel is located within the Community Region of Diamond Springs and El Dorado on the south side of Black Rice Road, approximately 0.25 miles from Highway 49. The parcel has “split” zoning consisting of RM (west portion) and RE-5 (east portion). Construction of Diamond Springs Village Apartments (PD17-0002) is currently underway on the adjacent 5.01 parcel. Most of the proposed development area for the project has already been graded under Permit #0368221 to stage equipment and materials during construction activities of Construction of Diamond Springs Village Apartments (PD17-0002). The surrounding parcels have compatible land uses and zoning designations. The site is surrounded on the east, west, and south with high- density multi-family development and to the north across Black Rice Road are single-family residential dwellings. See attached Site Plan dated October 2024.

Based on the understanding of the proposed Project, the applicant would develop 32 affordable housing (“apartments”) on the ~5.71-acre parcel. The apartments would consist of four (4) multi-family buildings located entirely within the RM zoning on the westerly portion of property. The approximate number of units and square footage of each are as follows.

- Building 1: Eight (8) 1-bedroom units      598 sqft/ea      Total: 4,784 sqft
  
- Building 2: Eight (8) 2-bedroom units      802 sqft/ea      Total: 6,416 sqft
  
- Building 3: Eight (8) 2-bedroom units      802 sqft/ea      Total: 6,416 sqft
  
- Building 4: Eight (8) 3-bedroom units      1,095 sqft/ea      Total: 8,760 sqft

Of the 32 units, one of the units will be designated as a Managers Unit. The design of the buildings is similar to the adjacent development of Diamond Springs Village Apartments – Phase 1. The Project proposes 61 parking spaces for the eight (8) 1-bedroom, sixteen (16) 2-bedroom and eight (8) 3-bedroom units. Therefore, this Updated Tech Memo for the Phase II Project has been developed for review and approval by the El Dorado County Planning Department. While Phase II will not develop the entire 5.71-acre parcel, this Biological Resources and Wetland Assessment Technical Memorandum considers the potential for sensitive biological resources, including

potential wetlands, on the entire parcel, not just the Phase II development site or area.

### **Conclusions of the Previous Reporting for Biological Resources within the Project Area**

#### *EcoSynthesis Scientific & Regulatory Services, Inc. Report dated November 19, 2012*

A Biological Resource Report and Wetland Delineation was prepared for the area prior to the parcel split in November of 2012. The existing vegetation was identified to consist of non- native grassland, with small areas of ponderosa pine, willow-valley oak riparian, interior live oak woodland, coyote brush scrub, and mesic meadow. This initial reporting covering the Project area was developed by EcoSynthesis Scientific & Regulatory Services, Inc. and was dated November 19, 2012. The reporting completed in 2012 included a delineation of a seasonal drainage and associated riparian areas associated with the drainage area located along the northeastern border of the project area.

The November 2012 report concluded that mesic meadow areas were located and mapped within the southernmost part of the study area and they lie within 100 feet of a drainage inlet south of Service Drive, which “we can reasonably assume flows ultimately into some downslope tributary.” The total area mapped in 2012 was 0.63 acres. However, the areas mapped as mesic meadows lie outside the proposed Project parcel for the Phase II Project covered under this Updated Tech Memo. Service Drive is located well to the south of the Phase II Project parcel and therefore, previously mapped potential wetland areas do not occur within the Phase II Project parcel covered under this Updated Tech Memo based on the findings of the November 2012 report.

Lastly, the November 2012 report concluded that the grasslands within the woodlands adjacent to the Phase II Project area have the potential for the CNPS List 3 rated plant species, the dubious pea (*Lathyrus sulphureus* var. *argillaceus*), to occur within those area, but the surveys completed were conducted outside the blooming season for the species (April and May). The November 2012 report however, did not identify any suitable habitat for other special-status plant or wildlife species within the entirety of the area covered in their reporting, which also included the entirety of the Phase II Project parcel.

#### *Greg Matuzak Environmental Consulting Biological Resources Assessment (May 31, 2024)*

The May 31, 2024 Biological Resources Technical Memorandum concluded that no habitat for special-status species occurs within the Phase II Project area and that no drainages, streams, ponds, wetlands, or other potentially regulated aquatic habitats were identified within the Phase II Project disturbance areas. However, an existing drainage area with associated riparian vegetation is mapped adjacent to the west of the proposed Phase II Project disturbance areas and this area was included as part of

the review of the Phase I Project area and a CDFW Streambed Alteration Agreement (LSA) Permit was finalized for that area and proposed impacts to the mapped riparian area. The mapped riparian area is not a “wetland” as it does not meet the federal criteria (U.S. Army Corps of Engineers or USFWS) as a regulated wetland and therefore, it is mapped as a riparian habitat area and not a “wetland”.

Surveys of the grasslands within the woodlands adjacent to the Phase II Project area did not identify the dubious pea or any other special-status plant species within the entirety of the Phase II Project area. Therefore, the May 31, 2024 Biological Resources Technical Memorandum concluded that no habitat for special-status species occurs within the Phase II Project parcel and no special-status species would be impacted by the proposed Phase II Project.

Therefore, the Phase II Project area does not include any special-status plant, wildlife, or fish species protected under state or federal regulations, including under CEQA. Given the location of the seasonal drainage area and associated riparian habitat that lies to the west of the proposed Phase II Project area will not be impacted by the Phase II Project, an amendment to the existing LSA permit with CDFW is not required. Furthermore, no additional permitting is required for the Phase II Project area given the area does not contain any regulated wetlands under the Clean Water Act (CWA) and state or federally listed species would not occur within the Phase II Project area given a lack of suitable habitat and Designated Critical Habitat for any listed species.

*Greg Matuzak Environmental Consulting Wetland Assessment (September 10, 2024)*

As explained in the September 10, 2024 USFWS Wetland Assessment Technical Memorandum, California Government Code § 65913.4 states that “wetlands, as defined in the USFWS Manual, Part 660 FW 2 (dated June 21, 1993)” documented within the Project site could preclude development of a project applying for SB 35 coverage. See the attached USFWS wetlands classification system and definitions and the State of California Government Code § 65913.4 with the requirements highlighted for how wetlands are defined per the Code.

The September 10, 2024 USFWS Wetland Assessment Technical Memorandum concluded unequivocally that there are no USFWS defined drainages or wetlands within the Phase II Project area and the areas to the east of the Phase II Project parcel where previous NWI mapped aquatic resources occur are located completely to the east and outside of the Phase II Project parcel within a low-lying area on the eastern side of the neighboring property’s driveway. The eastern section and boundary of the Phase II Project parcel does not contain the topography, vegetation, soils, or hydrology required to meet the definition of USFWS as a wetland, nor does it meet the definition of the State of California as a regulated wetland area. Therefore, the Phase II Project is not subject to USFWS, State of California, or any other state or federal agency review or permitting



process as it relates to streams and wetlands.

The September 10, 2024 Wetland Assessment recognized that a USFWS map located within the National Wetland Inventory (NWI) contains a previously mapped drainage or wetland area that could appear adjacent or along the parcel boundary. It explained, however, that while USFWS National Wetland Inventory maps are an informative tool and were provided to show potential features in the area, the USFWS maps are set up from historic flyovers and aerial photographs and were never field verified by any agency. The USFWS wetland mapping provided within the NWI is for reference only and is not sufficient within itself to determine the presence or absence of wetlands within a study area. The USFWS wetland data included within the NWI is backed by metadata that also states the following disclaimer on the face of the map:

*This map is for general reference only. The USFWS is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site (NWI).*

The State of California specifically provides the following disclaimers regarding the USFWS maps:

*Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities. Acknowledgement of the U.S. Fish and Wildlife Service and (or) the National Wetlands Inventory would be appreciated in products derived from these data.*

***Disclaimer:*** *The State makes no claims, promises, or guarantees about the accuracy, completeness, reliability, or adequacy of these data and expressly disclaims liability for errors and omissions in these data. No warranty of any kind, implied, expressed, or statutory, including but not limited to the warranties of non-infringement of third party rights, title, merchantability, fitness for a particular purpose, and freedom from computer virus, is given with respect to these data.*

(<https://map.dfg.ca.gov/metadata/ds2630.html>.)

*The NWI map is therefore a starting point, but must be evaluated in the field as occurred here and the conclusions stated below.*

The September 10, 2024 Wetland Assessment also explained that, a formal wetland delineation or any other further study of wetlands should not be necessary from a practical level given within the Phase II Project parcel there is nothing to delineate as there is a clear lack of required hydrology, vegetation, topography, and soils to define any area as a wetland using the USFWS definition. Formal wetland delineation forms (in this case would be the Wetland Determination Data Form for Western Mountains, Valleys, and Coast Region) are forms required by the United States Army Corps of Engineers for the determination of the presence of wetlands regulated under the CWA.

## Methods

Standard biological resources database searches were conducted to identify potential sensitive biological resources within and immediately adjacent to the Project area and the disturbed and graded areas within the Project area (see attached Phase II Project related figures and the results of the database searches conducted for the evaluation covered in this Updated Tech Memo). This Updated Tech Memo evaluates the areas of proposed disturbance related to the Project and it tiers off the existing Biological Resources and USFWS Wetland Assessment Technical Memorandums developed by Greg Matuzak Environmental Consulting LLC Delineation (dated May 31, 2024 and September 10, 2024 respectively).

The following information was used to identify potential sensitive biological resources, including the presence of special-status plant and wildlife species within the Phase II Project area region that could be found to use the Project area:

- California Department of Fish and Wildlife's California Natural Diversity Database records search of 3-mile buffer around the Project area (CDFW, 2024);
- The California Native Plant Society's online Inventory of Rare and Endangered Plants of California for the Project area (CNPS, 2024);
- The U.S. Fish and Wildlife Service Information, Planning, and Consultation System (IPaC) for endangered, threatened, and proposed listed species for the Project area (USFWS, 2024);
- National Wetland Inventory and National Hydrography Database map of the Project area (NWI and NHD, 2024);
- United States Department of Agriculture (USDA) Soils Mapper of the Project area (USDA, 2024);
- Natural Resources Conservation Service (NRCS) Hydric Soils List for El Dorado County (NRCS, 2024); and
- El Dorado County Land Use and Development Code, Ordinances, and General Plan.

## Site Visit and Reconnaissance-Level Biological Resources Survey

Greg Matuzak conducted a consultation with the applicant and Project engineers as part of the development of this Updated Tech Memo for the proposed Project. The consultations initially occurred on April 20<sup>th</sup>, 2024 and then several follow up consultations occurred in August and September of 2024. A follow up site visit and reconnaissance-level biological resources and USFWS wetland survey was conducted for the entirety of the Phase II Project area by Greg Matuzak on April 20<sup>th</sup>, 2024. See the attached photo log documenting the Project area during the site visit for the development of this Updated Tech Memo.

Therefore, this Updated Tech Memo provides an overview of the assessment of sensitive biological resources within the Phase II Project area, which is based on current database searches and a recent site visit and reconnaissance-level biological resources survey (conducted in 2024). Below includes the results of the site assessment for the Phase II Project for sensitive biological resources protected at the local, state, and federal levels.

### Results

#### Habitats within the Phase II Project Area

##### *Non-Native Annual Grasslands*

The dominant species within the Phase II Project area include non-native vegetation as well as some annual and perennial non-native weeds such as yellow star- thistle (*Centaurea solstitialis*) and Klamath weed (*Hypericum perforatum*). The most prevalent invasive grass within the Project area is medusa-head grass (*Elymus [Taeniatherum] caput-medusae*). Additionally, soft chess (*Bromus hordeaceus*) and the non-native perennial, tall wheat grass (*Elymus ponticus*), appears to have been planted for soil stabilization within areas of previous disturbance within the Project area.

##### *Foothill Riparian*

A fragment of riparian habitat less than 400 feet long extends between Deuce Drive and Black Rice Road. The Phase I Project impacted this mapped sensitive habitat and a CDFW LSA was applied for and approved prior to the implementation of riparian habitat related impacts within the Phase I Project area. The woody riparian vegetation within the site is a small area and is of mixed composition. The dominant species in terms of cover is probably arroyo willow (*Salix lasiolepis*). The most notable tree species are several large valley oaks and Fremont's cottonwoods (*Populus fremontii*) at the north end, but neither of these species predominates throughout. None of the Phase II Project will encroach upon the existing riparian

habitat the runs between the Phase I and Phase II Project areas (see attached Site Plan demonstrating that the Phase II Project will avoid encroachment into the fenced of riparian habitat area.

Overall, the tree component corresponds well with the typical expression of foothill riparian habitat with the understory, where present, almost exclusively Himalayan blackberry (*Rubus armeniacus*). A portion of the riparian corridor is comprised entirely of this understory species with no tree overstory. No wetlands or other CWA aquatic resources were documented along the drainage area or within any area of the Phase II Project area.

### **Tree and Protected Oak Resources for the El Dorado Oak Technical Report**

The proposed Phase II Project will remove two (2) foothill pine trees (both measuring approximately 16-inch DBH) that are located along the eastern boundary of the proposed areas of disturbance. The existing native oak trees located within the fenced off area to the west of the Phase II Project area will not be impacted, nor will the 42" DBH native oak tree located adjacent to the retaining wall along the western edge of the Phase II Project area given the retaining wall will be located outside of the dripline of the 42" DBH oak tree. A single native oak tree with a DBH of 8 inches will be removed as part of the attached updated Site Plan showing the three (3) trees to be removed.

Section 2.1.5 from the El Dorado County Oak Resources Management Plan (ORMP) dated September 2017 includes the following exemption from the required mitigation and associated development of an Oak Resources Technical Report for the removal of the single 8" blue oak tree within the Phase II Project site:

- 2.1.5 Affordable Housing Exemption  
*Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076 are exempted from the mitigation requirements included in this ORMP.*

Therefore, given the Phase II Project meets the Section 2.1.5 exemption for affordable housing, the proposed removal of a single 8" blue oak tree from within the Phase II Project area would not require mitigation and the associated development of an Oak Resources Technical Report or require mitigation requirements included in the ORMP.

## **Wetlands (as stated in the September 10, 2024 SFWS Wetland Assessment Technical Memorandum)**

Mr. Matuzak is a USFWS and California Department of Fish and Wildlife (CDFW) Qualified Biologist and was responsible for the evaluation of potential wetlands as defined by the USFWS that was approved by the El Dorado County Planning Department (Phase I and Phase II Projects). Additionally, Mr. Matuzak successfully coordinated and consulted with CDFW as part of an executed Lake or Streambed Alteration Agreement permit covering the Diamond Springs Village Apartments Phase I Project. Mr. Matuzak has conducted dozens of wetland assessments reviewed and approved by the USFWS and other state and federal agencies with jurisdiction over such wetland features.

Based on the site visit within the Diamond Springs Village Apartments Phase II Project area on April 20, 2024 and an updated review of the USFWS National Wetland Inventory (NWI), which is a database of USFWS defined aquatic resources, including streams and wetlands, the proposed Diamond Springs Village Apartments Phase II Project parcel does not contain any previously USFWS mapped wetlands, nor does it currently contain any areas that meet the definition of a wetland by the USFWS.

Per USFW Service Manual, Part 660 FW 2 (dated June 21, 1993), the following is the definition of a wetland:

- Wetlands. Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (plants specifically adapted to live in wetlands); (2) the substrate is predominantly undrained hydric (wetland) soil; and (3) the substrate is non soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

The findings of this Tech Memo concur with the previous Biological Resources Technical Memorandum developed by Greg Matuzak Environmental Consulting LLC for the Phase II Project (dated May 31, 2024) that concluded “no drainages, streams, ponds, wetlands, or other potentially regulated aquatic habitats were identified within the Phase II Project area.” The conclusion of this Tech Memo and the previous assessment of the Phase II Project area is based on the multiple site visits conducted by Mr. Matuzak, the topography within the Project area, and the expertise that Mr. Matuzak has with federal guidelines pertaining to the delineation of “waters of the U.S.,” including wetlands, as defined by the federal government and by USFWS. The attached most up to date review of the USFWS NWI covering the Project area and the property containing it includes a



USFWS mapped drainage area and wetland/pond area located to the east of the Phase II Project parcel eastern boundary.

The attached topographic map shows that within the eastern and northeastern sections of the Project parcel, there is a moderate incline along the eastern edge of the Project parcel. Adjacent to the east of the Project boundary is a driveway that enters from north to south such that the neighboring property has access into its adjacent property to the east of the Project parcel. The adjacent parcel to the east does contain a low-lying drainage area to the east of their driveway and it includes an approximate 3-foot contour that is wholly located completely within their property and to the east of the access road into their property.

See the attached photos showing the driveway that enters the neighboring property to the east and the moderate incline up to the west from the existing driveway. The attached photos also clearly show a drainage area located to the east of the access road into the property located to the east of the Phase II Project parcel, which clearly demonstrates that the Phase II Project parcel located to the west and upslope of the driveway does not contain the topography, hydrology, or vegetation required to be defined as a wetland by the USFWS. Therefore, the Project parcel along the eastern and northeast border does not contain any USFWS aquatic resources, including streams and/or wetlands, and it does not contain any wetlands that would be regulated by any federal or state regulatory agency.

The photos show no sign of any drainage, nor do they show any sign of wetlands or areas that would meet any of the USFWS criteria as the following:

*"(1) at least periodically, the land supports predominantly hydrophytes (plants specifically adapted to live in wetlands); (2) the substrate is predominantly undrained hydric (wetland) soil; and (3) the substrate is non soil and is saturated with water or covered by shallow water at some time during the growing season of each year."*

The mapped USDA Soil Series within the Diamond Springs Village Apartments Phase II Project area and parcel is the Diamond Springs Series. This USDA Soil Series is an upland soil type that does not associate with wetland areas given the characteristics of this soil type as listed below. Also, see the attached soil description for the Diamond Springs Series.

Below, is an outline of the series characteristics:

- Diamond Springs Series is very fine sandy loam – located with oaks, grasslands, ponderosa pine.
- Well-drained; medium to rapid runoff; moderate or moderately slow

permeability.

- Native vegetation is live oak, blue oak, black oak, ponderosa pine, Douglas-fir, white fir and Digger pine with an understory of brush, annual grasses, and forbs.

Given the updated 2023 Waters of the United States rule by the Environmental Protection Agency (EPA) and U.S. Corps of Engineers (Corps) states that regulated “waters of the U.S.,” including wetlands, must be perennial and have a clear and direct connection to a navigable waterway, the drainages and previously mapped wetlands would not be regulated under the Clean Water Act (CWA) as of 2023 and currently in 2024. Furthermore, no wetland associated vegetation or hydrology was identified within the Phase II Project parcel and therefore, such wetlands or other aquatic resources do not occur within the Phase II Project parcel, nor does any area within the Phase II Project parcel meet the definition of a wetland defined by the USFWS or under the State of California Government Code § 65913.4.

## **Phase II Project Area Observations and Recommendations**

Based on an evaluation of sensitive biological resources conducted by Greg Matuzak for the applicant, the following evaluations and conclusions were made for the project:

### *Special-Status Species and Sensitive Habitats*

- **Identification of special-status wildlife and plant species with potential to occur within or directly adjacent to the subject parcel based on a review of CDFW and USFWS databases, mapped USDA soil types within the proposed project area, previous biological resources reporting for the parcel, and the closest known previously documented locations of such special-status species:**
- A review of the 2012 EcoSynthesis El Dorado Apartment Biological Resources Report and Wetland Delineation reporting identified the dubious pea, a CNPS List 3 species, as the only special-status species with any potential to occur within the project area and parcel. The dubious pea is known to occur within lower montane woodlands that occur within the southern portions of the project area and the 2012 reported that the species is the only special-status species with potential to occur within the project area.
- An updated review of the CNDDB (May 2024) documenting the previous locations of special-status species that have been previously identified within 3 miles of the subject parcel concluded that a total of ten (10) special-status species have been previously documented within 3 miles of the Project area. See the attached figure depicting the

location of the special-status species within 3 miles of the Project area that have previously been identified and included within the CNDDB by CDFW (as of May 2024). Furthermore, within 3 miles of the Project area, Designated Critical Habitat (DCH) has not been mapped for any federally listed species.

- During the site visit and reconnaissance-level biological resources survey conducted for the entirety of the proposed disturbed areas within the Phase II Project area, no suitable habitat occurs within or directly adjacent to those areas for special-status species (either special-status plant or special-status wildlife species).
- The attached species list has been updated to include the species evaluated within the 2012 EcoSynthesis report as well as additional species, including the monarch butterfly and Crotch's bumble bee as both species are now Candidates for listing under the federal Endangered Species Act and California Endangered Species Act, respectively.
- During the April 20<sup>th</sup>, 2024 survey of the Project area, plant or wildlife species were identified within the Phase II Project area and the species list is attached to this Updated Tech Memo.
- During the site visit and reconnaissance-level biological resources survey conducted for the entirety of the proposed disturbed areas within the Project area, no suitable habitat occurs within or directly adjacent to those areas for special-status species given the level of localized disturbance and a dominance of non-native annual grassland species, as well as invasive weeds, within the areas proposed for Project related disturbance. Furthermore, dubious pea was not identified within the proposed areas of disturbance within the Project area during the April 20<sup>th</sup>, 2024 biological resources survey of the proposed areas to be impacted by the proposed Project and therefore, no special-status species will be impacted by the proposed project. The survey conducted in April 2024 was completed during the blooming period for the dubious pea which is known to include April and May.
- It is recommended the El Dorado County Conditions of Approval include a standard condition requiring surveys for nesting birds be implemented prior to vegetation clearing and grading to ensure that no nesting birds are impacted by the proposed project.
- The proposed Phase II Project may remove two (2) foothill pine trees (both measuring approximately 16-inch DBH) and a single 8" DBH blue oak tree along the eastern boundary of the Phase II Project area.
- Given the Phase II Project meets the Section 2.1.5 exemption for affordable housing, the proposed removal of a single 8" blue oak tree from within the Phase II Project area would not require the development of an Oak Resources Technical

Report or require mitigation requirements included in the ORMP.

- Oak resources mitigation for the loss of the single oak tree would not be required to be implemented given the Phase II Project is exempted under Section 2.1.5 of the ORMP.

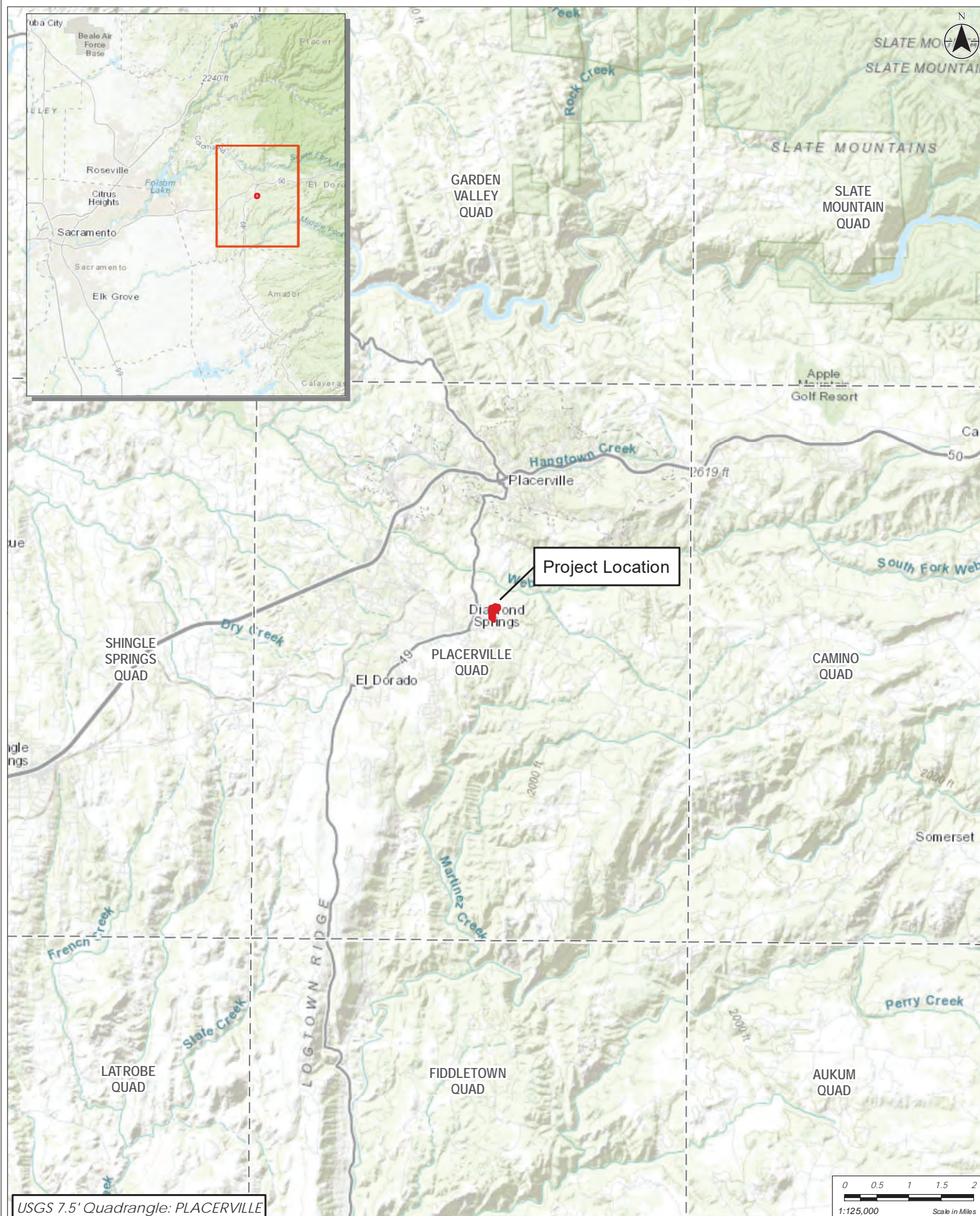
## Conclusions

This Updated Tech Memo concludes that no suitable habitat for special-status species occurs within the Project area and that no drainages, streams, ponds, wetlands, or other potentially regulated aquatic habitats were identified within the Phase II Project disturbance areas. However, surveys of the grasslands within the woodlands adjacent to the Phase II Project area did not identify the dubious pea or any other special-status species within the entirety of the Phase II Project area to be impacted by the proposed Project. Given the location of the seasonal drainage area and associated riparian habitat lies to the west of the proposed Phase II Project area and will not be impacted, an LSA permit with CDFW is not required and given the Phase II Project area does not contain any regulated wetlands under the CWA and no additional permitting is required.

Therefore, with the implementation of the El Dorado County Conditions of Approval covering the proposed Phase II Project, I conclude that the proposed disturbance would not have a potential substantial or significant negative impact on sensitive biological resources. Given the lack of suitable habitat for special-status plant and wildlife species within and directly adjacent to the proposed disturbance areas within the Phase II Project area, no impacts to special-status species would occur from the development of the Project. Additionally, no wetland areas defined by the USFWS or under the State of California Government Code § 65913.4 are located within the Phase II Project parcel. Lastly, mitigation under the ORMP is not required to be implemented given the removal of the 8" native blue oak tree is exempt from mitigation requirements under the ORMP. Therefore, an Oak Resources Code Compliance Certificate has been filled out and signed by the Phase II Project applicant.

## Attachments





**GREG MATUZAK**  
Environmental Consulting LLC  
Nevada City, CA

El Dorado Apartments

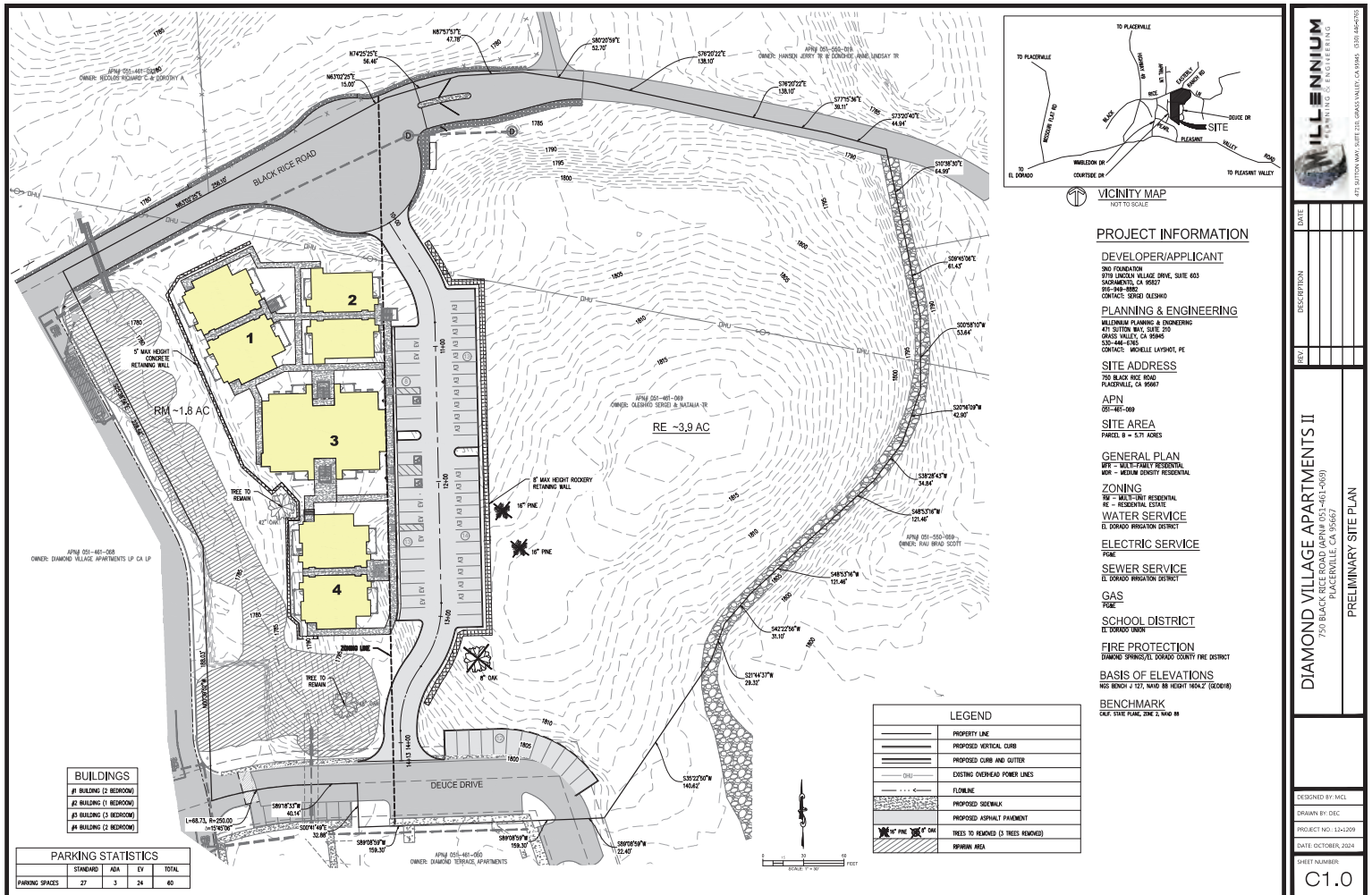




**GREG MATUZAK**  
 Environmental Consulting LLC  
 Nevada City, CA

El Dorado Apartments





Photos of the Site Visit and Field Survey on April 20<sup>th</sup>, 2024



Photo 1: Phase II Project area along Black Rice Road to the left. Phase I permitted temporary storage is also located to the left. Riparian zone fenced off in photo.



Photo 2: Phase I Project Sign along Black Rice Road, the north end of the Project area.





Photo 3: Large open area within the Phase II Project along Black Rice Road to the right.



Photo 4: Along Black Rice Road with Phase I to the right being constructed and Phase II to the left. Riparian zone fenced off in photo and no Phase II impacts proposed.





**Photo 5. South end of Phase II Project with Deuce Drive to the left. Riparian area with fencing and native oak trees protected. Access road into Phase II in photo with gravel.**



**Photo 6: South end of Phase II Project looking north along Deuce Drive. Riparian area with fencing and native oak trees protected. Access road into Phase II in photo.**





**Photo 7: Pine trees mapped within the Phase II Project area with the Phase I temporary storage within the Phase II Project area below. No oaks to be removed.**



**Photo 8: Phase II Project area with the permitted Phase I temporary storage within the Phase II Project area. No wetlands were identified within the Phase II Project area.**





**Photo 9. Fenced off area within the Phase II Project area with the Phase I temporary storage within the Phase II Project area to the left. Black Rice Road at power line pole.**



**Photo 10. Phase II Project area with silt fencing located along Black Rice Road to the right. No wetlands or aquatic habitats identified in the Phase II Project area.**





Photo 11. Pine trees to the right located along the edge of proposed disturbance within the Phase II Project. Small oak trees to be avoided. No oak trees to be disturbed.



Photo 12. Existing Phase II fence line with Deuce Drive below in photo. Phase I being constructed across to the south of Deuce Drive in photo to the right.





**Photo 13:** Phase II Project area property is located to the right of the existing driveway into the adjacent property to the Phase II Project area. Any drainage is located within the neighboring property in photo and not to the right of the access road in the photo.

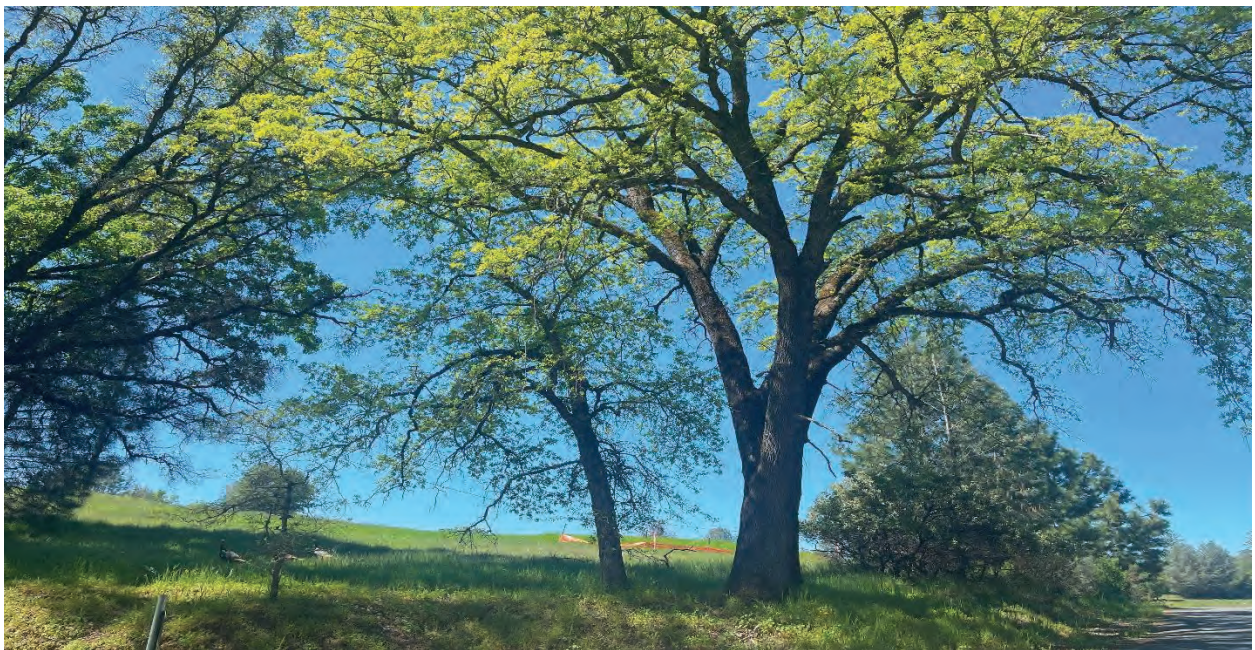


**Photo 14:** Phase II Project area is located 100s of feet on the other side of the existing driveway that enter the adjacent property. However, the trees in the photo demarcate the approximate property line for the property that includes the Phase II Project area.





**Photo 15:** Large open area within the Phase II Project property at the corner of Black Rice Road to the right and the existing access to the left into the neighboring property. No drainages or USFWS wetland criteria were identified within the Phase II Project property.



**Photo 16:** Large open area within the Phase II Project property at the corner of Black Rice Road to the right and the existing access to the left into the neighboring property. No drainages or USFWS wetland criteria were identified within the Phase II Project property.

Table 1. Special-status species recorded by CNDDDB in the nine USGS quadrangles centered on the &M %PSBEP study site. Animals are listed roughly according to phylogenetic relationships; plants are listed alphabetically by scientific name. See text for additional information on species for which suitable habitat is present. Many species tracked by CNDDDB have no regulatory status, and/or are not very rare either statewide or globally (ranks G4 or 5 and S4 or 5), and/or have status applicable only within federal lands (e.g., U.S. Forest Service sensitive species), and do not necessarily meet the threatened/endangered criteria applicable under CEQA guideline 15380.

Status definitions (Federal status/State status/California Native Plant Society [CNPS] list):

E or T, listed as endangered or threatened under state or federal Endangered Species Act;

C, candidate for listing as endangered or threatened;

SC, species of special concern (California DFG);

List 1B, considered rare, threatened or endangered by CNPS and normally regarded by DFG as meriting consideration under CEQA Guideline 15380; List 2, rare, threatened, or endangered in California but more common elsewhere; effects on List 3 (insufficient information) and List 4 (watch list) species are not considered to be significant except on a case-by-case basis.

| Species   | Status<br>(US/CA/<br>CNPS) | Microhabitat/Occurrence  | Suitable<br>Habitat<br>Present? | Other Information   |
|---|----------------------------|--|---------------------------------|---|
| MAMMALS   |                            |  |                                 |   |
| Pacific fisher<br><i>Martes pennanti</i>              | C/-                        | Extensive dense forest and other woody habitats in northern Sierra foothills and southern Sierra Nevada. | No                              | Area of project is no longer within geographic range (Zielinski, 1995).   |
| Silver-haired bat<br><i>Lasionycteris noctivagans</i> | -                          | Roosts in buildings, tree cavities, under bark, and in rock crevices or caves; coastal, montane.         | No                              | One of the most widely distributed bats in U.S. Requires access to water. |
| Yuma myotis<br><i>Myotis yumanensis</i>               | -                          | Roosts in cliffs, rock crevices, buildings, mines, and caves.  | No                              | Forages over water.   |
| BIRDS   |                            |  |                                 |   |
| Bank swallow<br><i>Riparia riparia</i>                | -/T                        | Excavates nesting cavities in dirt banks of large rivers.  | No                              |   |
| Great egret<br><i>Ardea alba</i>                      | -                          | Large wetlands with prolonged surface saturation and shallow ponded water.                               | No                              |   |
| Great gray owl<br><i>Strix nebulosa</i>               | -/E                        | High-canopy coverage forest with large snag(s) for nesting, near meadows for hunting.                    | No                              | Intolerant of nearby human presence.                                      |



|  |        |  |          |  |
|--|--------|--|----------|--|
| Northern goshawk<br><i>Accipiter gentilis</i>                                  | -/SC   | High-canopy-cover coniferous forest, remote from human disturbance.  | No       | Site is below species elevational range and does not contain suitable forest.  |
| Tricolored blackbird<br><i>Agelaius tricolor</i>                               | -/SC   | Large areas of tall emergent wetland vegetation and blackberries.  | No       | Area of blackberry vegetation on site is much too small.   |
| REPTILES, AMPHIBIANS   |        |  |          |  |
| Coast horned lizard<br><i>Phrynosoma blainvillii</i>                           | -/SC   | Scattered shrubby or other open woody habitat with sandy, friable soils and abundant native ants.                              | No       | Soils on site are disturbed and compact, do not support notable populations of native ants; isolated small patch of habitat surrounded by development. |
| Foothill yellow-legged frog<br><i>Rana boylei</i>                              | -/SC   | Small tributaries with perennial or near-perennial flow and coarse sand/gravel/cobble substrate.                               | No       |  |
| Western pond turtle<br><i>Emys marmorata</i>                                   | -/SC   | Ponds with suitable shores or in-water elements for basking and nearby sandy soils for nesting.                                | No       |  |
| INVERTEBRATES  |        |  |          |  |
| Cosumnes spring stonefly<br><i>Cosumnoperla hypocrena</i>                      | -      | One known occurrence: long-seasonal stream with spring water and rock substrate.   | No       | Only locality is North Fork of Cosumnes River.   |
| Galile's cave harvestman<br><i>Banksula galilei</i>                            | -      | Alabaster Cave (only known occurrence is type collection, described in 1900).  | No       | Site is believed to be destroyed; species is likely extirpated at only known site.   |
| Tight coin (Yates's snail)<br><i>Ammonitella yatesii</i>                       | -      | Limestone caves, outcrops, talus; moist setting.   | No       |  |
| Vernal pool andrenid bee<br><i>Andrena subapasta</i>                           | -      | Grassland near vernal pools. Utilizes <i>Arenaria</i> , <i>Triphysaria eriantha</i> , <i>Lasthenia</i> spp. for food.          | No       | Grassland on site has very poor native plant diversity; food plants not seen.  |
| Monarch butterfly<br><i>Danaus plexippus</i>                                   | C/-    | Requires its host plant milkweed ( <i>Asclepias</i> spp.). Species has not been identified within 3 miles of the Project site. | No       | Site does not contain the host plant of this species and therefore, it is not present.   |
| Crotch's bumble bee<br><i>Bombus crotchii</i>                                  | -/C    | Species host plant not located within Project site and is not known within 3 miles of the Project site.                        | No       | Site does not contain the host plant of this species and therefore, it is not present.   |
| PLANTS   |        |  |          |  |
| Jepson's onion<br><i>Allium jepsonii</i>                                       | -/-/1B | Open serpentine or volcanic tableland.   | No       |  |
| Nissenan manzanita<br><i>Arctostaphylos nissenana</i>                          | -/-/1B | Chaparral and woodland on open rocky ridges.   | Unlikely | All manzanita plants seen on site were <i>A. viscida</i> .   |
| Pleasant Valley mariposa lily<br><i>Calochortus clavatus</i> var. <i>avius</i> | -/-/1B | Open oak-pine forest, Josephine silt loam.   | Unlikely | Potentially suitable habitat in far southern end of site.  |
| Stebbins's morning-glory<br><i>Calystegia stebbinsii</i>                       | E/E/1B | Specialized soils (serpentine/gabbroic).   | No       |  |



|  |        |   |          |   |
|--|--------|---|----------|---|
| Pine Hill ceanothus<br><i>Ceanothus roderickii</i>                   | E/R/1B | Specialized soils (serpentine/gabbroic).  | No       |   |
| Red Hills soaproot<br><i>Chlorogalum grandiflorum</i>                | -/-/1B | Usually but not exclusively on specialized soils (serpentine/gabbroic).                       | No       |   |
| Brandegee's clarkia<br><i>Clarkia biloba</i> ssp. <i>brandegeae</i>  | -/-/1B | Steep grassy slopes (usually >30 percent); one Placerville occurrence near riparian woodland. | Unlikely | Disturbed and highly weed-dominated grassland is marginally or not suitable.    |
| Pine Hill flannelbush<br><i>Fremontodendron decumbens</i>            | E/R/1B | Specialized soils (serpentine/gabbroic).  | No       |   |
| El Dorado bedstraw<br><i>Galium californicum</i> ssp. <i>sierrae</i> | E/R/1B | Specialized soils (serpentine/gabbroic).  | No       |   |
| Bisbee Peak rush-rose<br><i>Helianthemum suffrutescens</i>           | -/-/3  | Specialized soils (serpentine/gabbroic; lone clay).   | No       |   |
| Parry's horkelia<br><i>Horkelia parryi</i>                           | -/-/1B | Clay, specifically lone formation.  | No       |   |
| Dubious pea<br><i>Lathyrus sulphureus</i> var. <i>argillaceus</i>    | -/-/3  | Lower montane woodland  | Yes      | No longer regarded as a separate taxon.   |
| Layne's ragwort<br><i>Packera layneae</i>                            | T/R/1B | Specialized soils (serpentine/gabbroic).  | No       |   |
| Oval-leaved viburnum<br><i>Viburnum ellipticum</i>                   | -/-/2  | Chaparral, pine forest on north slopes or in major river canyons.                             | No       |   |
| El Dorado County mule ears<br><i>Wyethia reticulata</i>              | -/-/1B | Chaparral or woodland on clay, gabbroic soils.  | No       |   |
| NATURAL COMMUNITIES  |        |   |          |   |
| Central Valley Drainage<br>Hardhead/Squawfish Stream                 | n.a.   |   | No       | No perennial streams within site.   |
| Central Valley Drainage Resident<br>Rainbow Trout Stream             | n.a.   |   | No       | No perennial streams within site.   |
| Sacramento-San Joaquin<br>Foothill/Valley Ephemeral<br>Stream        | n.a.   |   | No       | No longer conforms to this natural community type due to watershed alterations. |

## Plant and Wildlife Species Observed During the Phase II Project Area

### Site Surveys in April 2024

| Common Name                | Scientific Name               | Species Status                 |
|----------------------------|-------------------------------|--------------------------------|
| <b>Plants</b>              |                               |                                |
| buttercup spp.             | <i>Ranunculus</i> spp.        | Not FESA, CESA, or CNPS listed |
| blue oak                   | <i>Quercus douglasii</i>      | Not FESA, CESA, or CNPS listed |
| arroyo willow              | <i>Salix lasiolepis</i>       | Not FESA, CESA, or CNPS listed |
| California wild rose       | <i>Rosa californica</i>       | Not FESA, CESA, or CNPS listed |
| Fremont's cottonwood       | <i>Populus fremontii</i>      | Not FESA, CESA, or CNPS listed |
| deer brush                 | <i>Ceanothus integerrimus</i> | Not FESA, CESA, or CNPS listed |
| Foothill pine              | <i>Pinus sabiniana</i>        | Not FESA, CESA, or CNPS listed |
| interior live oak          | <i>Quercus wislizeni</i>      | Not FESA, CESA, or CNPS listed |
| common mouse ear chickweed | <i>Cerastium fontanum</i>     | Not FESA, CESA, or CNPS listed |
| common mullein             | <i>Verbascum Thapsus</i>      | Not FESA, CESA, or CNPS listed |
| common mustard             | <i>Brassica rapa</i>          | Not FESA, CESA, or CNPS listed |
| common periwinkle          | <i>Vinca minor</i>            | Not FESA, CESA, or CNPS listed |
| common sheep sorrel        | <i>Rumex acetocella</i>       | Not FESA, CESA, or CNPS listed |
| Cryptanth spp.             | <i>Cryptantha</i> spp.        | Not FESA, CESA, or CNPS listed |
| dandelion spp.             | <i>Agoseris</i> spp.          | Not FESA, CESA, or CNPS listed |

| <b>Common Name</b>            | <b>Scientific Name</b>            | <b>Species Status</b>          |
|-------------------------------|-----------------------------------|--------------------------------|
| tall wheat grass              | <i>Elymus ponticus</i>            | Not FESA, CESA, or CNPS listed |
| medusa head grass             | <i>Elymus caput-medusae</i>       | Not FESA, CESA, or CNPS listed |
| English plantain              | <i>Plantago lanceolate</i>        | Not FESA, CESA, or CNPS listed |
| everlasting pea               | <i>Lathyrus latifolius</i>        | Not FESA, CESA, or CNPS listed |
| filaree                       | <i>Erodium cicutarium</i>         | Not FESA, CESA, or CNPS listed |
| honeysuckle spp.              | <i>Lonicera</i> spp.              | Not FESA, CESA, or CNPS listed |
| hyssop loosestrife            | <i>Lythrum hyssopifolia</i>       | Not FESA, CESA, or CNPS listed |
| Klamath weed                  | <i>Hypericum perforatum</i>       | Not FESA, CESA, or CNPS listed |
| poison oak                    | <i>Toxicodendron diversilobum</i> | Not FESA, CESA, or CNPS listed |
| ponderosa pine                | <i>Pinus ponderosa</i>            | Not FESA, CESA, or CNPS listed |
| ripgut brome                  | <i>Bromus diandrus</i>            | Not FESA, CESA, or CNPS listed |
| Scotch broom                  | <i>Cytisus scoparius</i>          | Not FESA, CESA, or CNPS listed |
| St. John's wort; Klamath weed | <i>Hypericum perforatum</i>       | Not FESA, CESA, or CNPS listed |
| shamrock clover               | <i>Trifolium dubium</i>           | Not FESA, CESA, or CNPS listed |
| soft chess                    | <i>Bromus hordeaceus</i>          | Not FESA, CESA, or CNPS listed |
| stork's bill spp.             | <i>Erodium</i> spp.               | Not FESA, CESA, or CNPS listed |
| Himalayan blackberry          | <i>Rubus armeniacus</i>           | Not FESA, CESA, or CNPS listed |

| Common Name            | Scientific Name                                   | Species Status                 |
|------------------------|---|--------------------------------|
| white-leaved manzanita | <i>Arctostaphylos viscida</i> ssp. <i>viscida</i> | Not FESA, CESA, or CNPS listed |
| wild oats              | <i>Avena fatua</i>                                | Not FESA, CESA, or CNPS listed |
| wild rye               | <i>Elymus glaucus</i>                             | Not FESA, CESA, or CNPS listed |
| valley oak             | <i>Quercus lobata</i>                             | Not FESA, CESA, or CNPS listed |
| yellow star thistle    | <i>Centaurea solstitialis</i>                     | Not FESA, CESA, or CNPS listed |

#### Birds

|                   |                               |  |
|-------------------|-------------------------------|--|
| American robin    | <i>Turdus migratorius</i>     | Not CESA or FESA listed.<br>Migratory (active nests protected) |
| dark-eyed junco   | <i>Junco hyemalis</i>         | Not CESA or FESA listed.<br>Migratory (active nests protected) |
| house finch       | <i>Haemorhous mexicanus</i>   | Not CESA or FESA listed.<br>Migratory (active nests protected) |
| mourning dove     | <i>Zenaida macroura</i>       | Not CESA or FESA listed.<br>Migratory (active nests protected) |
| northern flicker  | <i>Colaptes auratus</i>       | Not CESA or FESA listed.<br>Migratory (active nests protected) |
| western scrub-jay | <i>Aphelocoma californica</i> | Not CESA or FESA listed.<br>Migratory (active nests protected) |

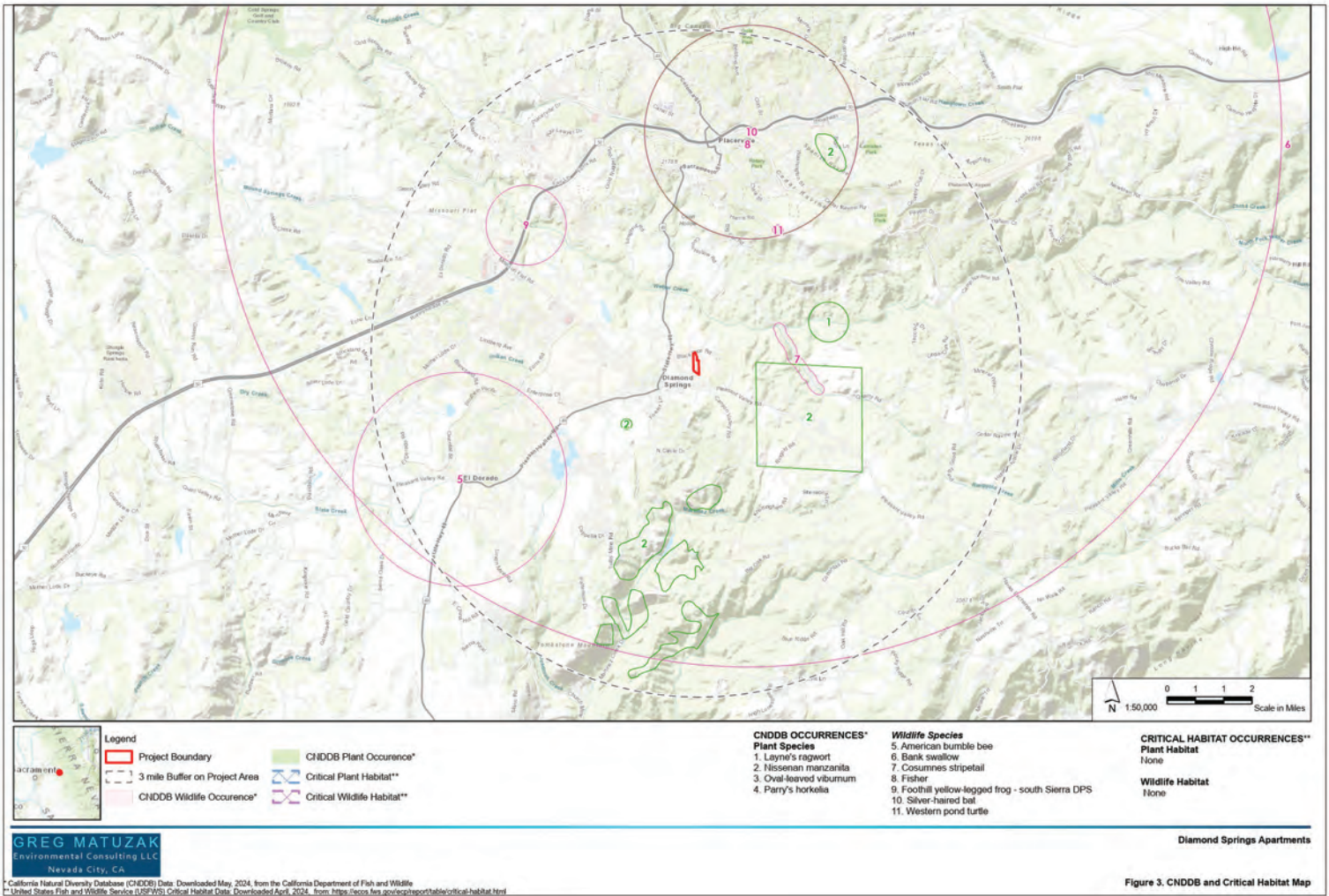
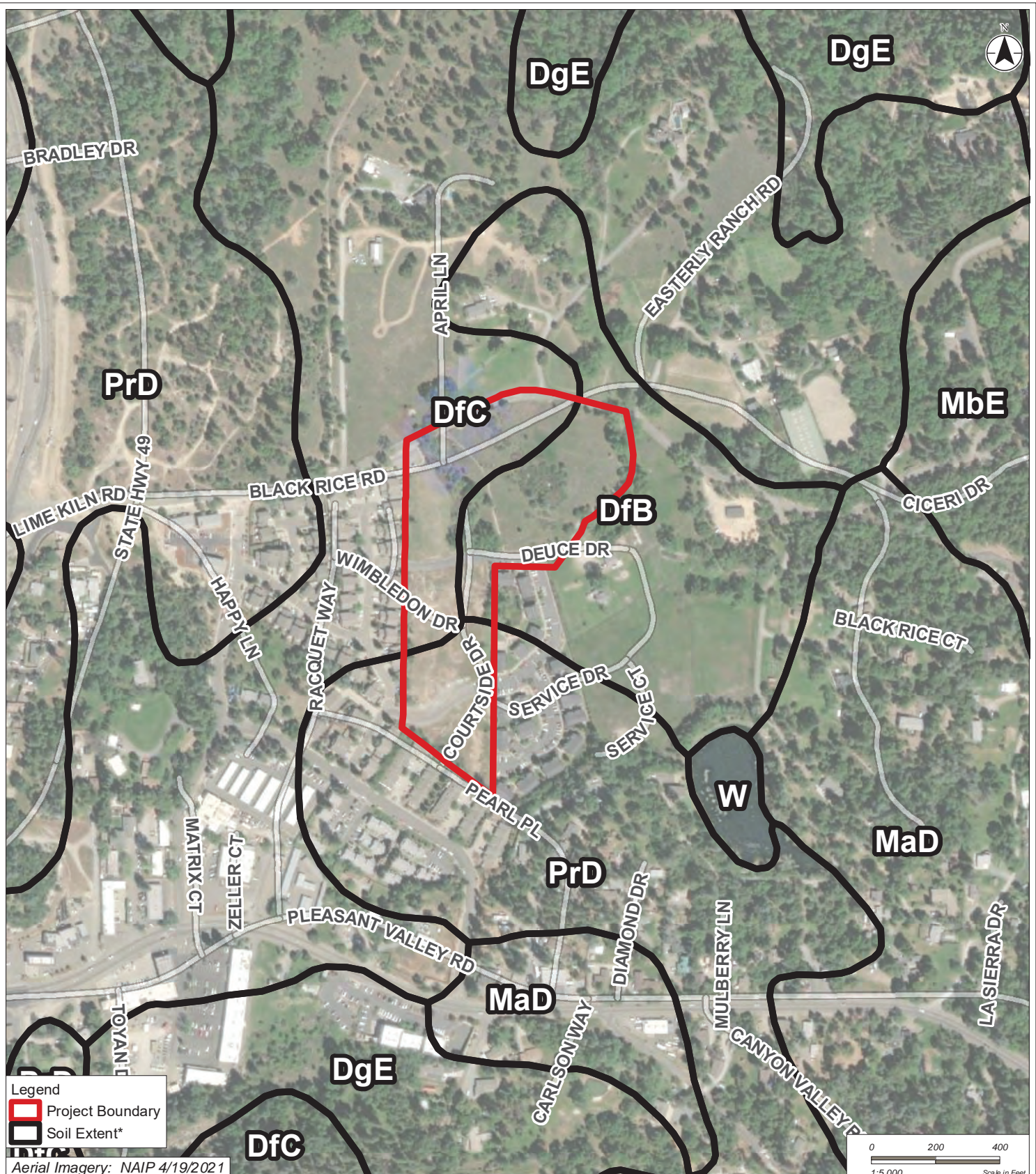


Figure 3. CNDBB and Critical Habitat Map





#### SOIL TYPE\*

DfB - Diamond Springs very fine sandy loam, 3 to 9 percent slopes  
 DfC - Diamond Springs very fine sandy loam, 9 to 15 percent slopes  
 DgE - Diamond Springs very rocky very fine sandy loam, 3 to 50 percent slopes  
 MaD - Mariposa gravelly silt loam, 3 to 30 percent slopes

MbE - Mariposa very rocky silt loam, 3 to 50 percent slopes  
 MbF - Mariposa very rocky silt loam, 50 to 70 percent slopes  
 McE - Mariposa-Josephine very rocky loams, 15 to 50 percent slopes  
 PrD - Placer diggings  
 W - Water

\* Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. Accessed 03/06/2019

**GREG MATUZAK**  
 Environmental Consulting LLC  
 Nevada City, CA

El Dorado Apartments

DR24-0008/Diamond Springs Village Apartments - Phase II

Exhibit N - Biological Resource Assessment & Wetland Assessment Technical Memorandum

**Figure 4. Soils Map**





August 13, 2024

Wetlands

- |  |                                |   |                                   |   |          |
|--|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|  |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)  
This page was produced by the NWI mapper



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** E0ndx<span style='color:Red'> IS </span>(105507<span style='color:Red'> OR </span>111134<span style='color:Red'> OR </span>124092<span style='color:Red'> OR </span>16866<span style='color:Red'> OR </span>20113<span style='color:Red'> OR </span>24343<span style='color:Red'> OR </span>24345<span style='color:Red'> OR </span>49534<span style='color:Red'> OR </span>49957<span style='color:Red'> OR </span>50044<span style='color:Red'> OR </span>68913<span style='color:Red'> OR </span>78967<span style='color:Red'> OR </span>85439<span style='color:Red'> OR </span>88186)

|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | A9290                 | <b>EO Index:</b>                | 111134     |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | AAABH01055 |
| <b>Occurrence Number:</b> | 24                    | <b>Occurrence Last Updated:</b> | 2018-09-21 |

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|                             |  |                         |  |
|-----------------------------|--|-------------------------|--|
| <b>Scientific Name:</b>     | <i>Rana boylli pop. 5</i>                              | <b>Common Name:</b>     | foothill yellow-legged frog - south Sierra DPS |
| <b>Listing Status:</b>      | <b>Federal:</b> Endangered<br><b>State:</b> Endangered | <b>Rare Plant Rank:</b> |  |
| <b>CNDDB Element Ranks:</b> | <b>Global:</b> G3T2<br><b>State:</b> S2                | <b>Other Lists:</b>     | BLM_S-Sensitive<br>USFS_S-Sensitive            |

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|   |   |
|---|---|
| <b>General Habitat:</b>   | <b>Micro Habitat:</b>   |
| SIERRA NEVADA FROM SOUTH FORK AMERICAN RIVER SUBBASIN (HU 8) IN EL DORADO COUNTY SOUTH TO TEHACHAPI MOUNTAINS IN KERN COUNTY. | PARTLY SHADED SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS. NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING AND AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS. |

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|                            |  |                            |                           |
|----------------------------|--|----------------------------|---------------------------|
| <b>Last Date Observed:</b> | 1958-07-18   | <b>Occurrence Type:</b>    | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 2017-06-22   | <b>Occurrence Rank:</b>    | None                      |
| <b>Owner/Manager:</b>      | PVT  | <b>Trend:</b>              | Unknown                   |
| <b>Presence:</b>           | Extirpated   |                            |                           |
| <b>Location:</b>           | WEBBER CREEK, IN VICINITY OF FORNI RD, SOUTHWEST PLACERVILLE.  |                            |                           |
| <b>Detailed Location:</b>  | INCLUDES COLLECTIONS FROM "WEBBER CRK AT BRIDGE 0.6 MI S HWY 50, PLACERVILLE," AND "WEBBER CREEK, 2.2 MI WSW PLACERVILLE."   |                            |                           |
| <b>Ecological:</b>         |  |                            |                           |
| <b>Threats:</b>            |  |                            |                           |
| <b>General:</b>            | 4 COLLECTED ON 1 JUN 1952. COLLECTED ON 18 JUL 1958 (HOUSED AT CSU, SACRAMENTO). NONE DETECTED VIA EDNA ON 22 JUN 2017. ACCORDING TO JENNINGS AND LIND, RANA BOYLII IS EXTIRPATED AT THIS LOCATION.            |                            |                           |
| <b>PLSS:</b>               | T10N, R10E, Sec. 14, SE (M)  | <b>Accuracy:</b>           | 2/5 mile                  |
| <b>UTM:</b>                | Zone-10 N4287568 E688103   | <b>Latitude/Longitude:</b> | 38.71676 / -120.83642     |
| <b>Area (acres):</b>       | 280  |                            |                           |
| <b>Elevation (feet):</b>   | 1,530  |                            |                           |
| <b>County Summary:</b>     | <b>Quad Summary:</b>   |                            |                           |
| El Dorado                  | Placerville (3812067)  |                            |                           |
| <b>Sources:</b>            |  |                            |                           |
| BRO80U0001                 | BRODE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - GEOGRAPHIC REFERENCE CARD CATALOG OF SPECIMENS AND FIELD NOTE RECORDS COMPILED BY JOHN BRODE (DFG) 1980-XX-XX   |                            |                           |
| GOL17D0001                 | GOLDBERG, C. - EXCEL TABLE OF EDNA RESULTS FOR RANA BOYLII 2017-XX-XX  |                            |                           |
| JEN94R0001                 | JENNINGS, M. & M. HAYES - AMPHIBIAN AND REPTILE SPECIES OF SPECIAL CONCERN IN CALIFORNIA. FINAL REPORT SUBMITTED TO DFG, INLAND FISHERIES DIVISION, RANCHO CORDOVA. 255 PP. 1994-11-01                         |                            |                           |
| JEN96R0001                 | JENNINGS, M. - CHAPTER 31: STATUS OF AMPHIBIANS, PP 921-944 IN: SIERRA NEVADA ECOSYSTEM PROJECT: FINAL REPORT TO CONGRESS, VOL II. 1996-XX-XX  |                            |                           |
| LIN05U0001                 | LIND, A. (UNIVERSITY OF CALIFORNIA, DAVIS) - REINTRODUCTION OF A DECLINING AMPHIBIAN: DETERMINING AN ECOLOGICALLY FEASIBLE APPROACH FOR THE FOOTHILL YELLOW-LEGGED FROG. PHD DISSERTATION, UC DAVIS 2005-XX-XX |                            |                           |
| ZWE52S0024                 | ZWEIFEL, R. - MVZ #58038, 58039, 58040 & 58085 COLLECTED FROM WEBBER CREEK, 2.2 MI WSW PLACERVILLE 1952-06-01  |                            |                           |



Occurrence Report  
California Department of Fish and Wildlife  
California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 78087                 | EO Index:                | 85439      |
| Key Quad:          | Placerville (3812067) | Element Code:            | ABPAU08010 |
| Occurrence Number: | 295                   | Occurrence Last Updated: | 2011-12-06 |

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|                       |                                    |                  |  |
|-----------------------|------------------------------------|------------------|--|
| Scientific Name:      | <i>Riparia riparia</i>             | Common Name:     | bank swallow                             |
| Listing Status:       | Federal: None<br>State: Threatened | Rare Plant Rank: |  |
| CNDDDB Element Ranks: | Global: G5<br>State: S3            | Other Lists:     | BLM_S-Sensitive<br>IUCN_LC-Least Concern |

---

|   |   |
|---|---|
| General Habitat:  | Micro Habitat:  |
| COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT. | REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE. |

---

|                     |   |                     |                           |
|---------------------|---|---------------------|---------------------------|
| Last Date Observed: | 1873-XX-XX  | Occurrence Type:    | Natural/Native occurrence |
| Last Survey Date:   | 1873-XX-XX  | Occurrence Rank:    | Unknown                   |
| Owner/Manager:      | UNKNOWN   | Trend:              | Unknown                   |
| Presence:           | Presumed Extant   |                     |                           |
| Location:           | NEAR PLACERVILLE.   |                     |                           |
| Detailed Location:  | LOCATION STATED AS "NEAR PLACERVILLE."  |                     |                           |
| Ecological:         | COLONY NESTED IN THE "ROUGH FACE OF A HIGH GRAVELLY HILL, THAT HAD BEEN WASHED DOWN FOR YEARS BY THE PROCESS OF HYDRAULICING FOR GOLD." |                     |                           |
| Threats:            |   |                     |                           |
| General:            | AN ALBINO BANK SWALLOW OBSERVED SOMETIME DURING 1873.   |                     |                           |
| PLSS:               | T10N, R11E, Sec. 07 (M)   | Accuracy:           | 5 miles                   |
| UTM:                | Zone-10 N4289058 E691378  | Latitude/Longitude: | 38.72948 / -120.79835     |
|                     |   | Area (acres):       | 0                         |
|                     |   | Elevation (feet):   | 2,000                     |
| County Summary:     | Quad Summary:   |                     |                           |
| El Dorado           | Camino (3812066), Placerville (3812067), Shingle Springs (3812068), Slate Mtn. (3812076), Garden Valley (3812077), Coloma (3812078)     |                     |                           |
| Sources:            |   |                     |                           |
| EME88A0001          | EMERSON, O - EXCERPT FROM ORNITHOLOGIST AND OOLOGIST 13 (6):82. 1988-XX-XX  |                     |                           |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 49957                 | EO Index:                | 68913      |
| Key Quad:          | Placerville (3812067) | Element Code:            | AMACC02010 |
| Occurrence Number: | 35                    | Occurrence Last Updated: | 2007-03-19 |

|                      |                                  |                  |                       |
|----------------------|----------------------------------|------------------|-----------------------|
| Scientific Name:     | <i>Lasionycteris noctivagans</i> | Common Name:     | silver-haired bat     |
| Listing Status:      | Federal: None<br>State: None     | Rare Plant Rank: |                       |
| CNDDB Element Ranks: | Global: G3G4<br>State: S3S4      | Other Lists:     | IUCN_LC-Least Concern |

|  |   |
|--|---|
| General Habitat:   | Micro Habitat:  |
| PRIMARILY A COASTAL AND MONTANE FOREST DWELLER, FEEDING OVER STREAMS, PONDS AND OPEN BRUSHY AREAS. | ROOSTS IN HOLLOW TREES, BENEATH EXFOLIATING BARK, ABANDONED WOODPECKER HOLES, AND RARELY UNDER ROCKS. NEEDS DRINKING WATER. |

|                     |                 |                  |                           |
|---------------------|-----------------|------------------|---------------------------|
| Last Date Observed: | 1990-10-25      | Occurrence Type: | Natural/Native occurrence |
| Last Survey Date:   | 1990-10-25      | Occurrence Rank: | Unknown                   |
| Owner/Manager:      | UNKNOWN         | Trend:           | Unknown                   |
| Presence:           | Presumed Extant |                  |                           |

**Location:**  
PLACERVILLE.

**Detailed Location:**  
MAPPED TO INCLUDE LAT/LONG COORDINATES PROVIDED BY MANIS, WITH UNCERTAINTY OF 3229.9534 M.

**Ecological:**

**Threats:**

**General:**

CAS #16930 COLLECTED BY P.O. SIMONS ON 13 JUL 1896. 1 MALE SPECIMEN (MVZ #182378) COLLECTED BY WILLIAM E. RAINEY ON 25 OCT 1990.

|       |                          |                     |                       |                   |   |
|-------|--------------------------|---------------------|-----------------------|-------------------|---|
| PLSS: | T10N, R11E, Sec. 07 (M)  | Accuracy:           | 1 mile                | Area (acres):     | 0 |
| UTM:  | Zone-10 N4289067 E691435 | Latitude/Longitude: | 38.72955 / -120.79770 | Elevation (feet): |   |

|                 |                       |
|-----------------|-----------------------|
| County Summary: | Quad Summary:         |
| El Dorado       | Placerville (3812067) |

|  |
|--|
| Sources:   |
| MAN04S0022 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF LASIONYCTERIS NOCTIVAGANS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM LACM, CAS, MSB & MVZ. 2004-12-10 |





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 78087                 | EO Index:                | 78967      |
| Key Quad:          | Placerville (3812067) | Element Code:            | AMAJF01020 |
| Occurrence Number: | 700                   | Occurrence Last Updated: | 2010-02-08 |

|                       |                              |                  |   |
|-----------------------|------------------------------|------------------|---|
| Scientific Name:      | <i>Pekania pennanti</i>      | Common Name:     | Fisher  |
| Listing Status:       | Federal: None<br>State: None | Rare Plant Rank: |   |
| CNDDDB Element Ranks: | Global: G5<br>State: S2S3    | Other Lists:     | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive |

|  |  |
|--|--|
| General Habitat:   | Micro Habitat:   |
| INTERMEDIATE TO LARGE-TREE STAGES OF CONIFEROUS FORESTS AND DECIDUOUS-RIPARIAN AREAS WITH HIGH PERCENT CANOPY CLOSURE. | USES CAVITIES, SNAGS, LOGS AND ROCKY AREAS FOR COVER AND DENNING. NEEDS LARGE AREAS OF MATURE, DENSE FOREST. |

|                     |                 |                  |                           |
|---------------------|-----------------|------------------|---------------------------|
| Last Date Observed: | 1916-07-XX      | Occurrence Type: | Natural/Native occurrence |
| Last Survey Date:   | 1916-07-XX      | Occurrence Rank: | Unknown                   |
| Owner/Manager:      | UNKNOWN         | Trend:           | Unknown                   |
| Presence:           | Presumed Extant |                  |                           |

Location:  
NEAR PLACERVILLE.

Detailed Location:

Ecological:

Threats:

General:

FIVE FISHERS WERE KILLED FOR THEIR PELTS NEAR PLACERVILLE DURING JULY 1916.

|       |                          |                     |                       |                   |       |
|-------|--------------------------|---------------------|-----------------------|-------------------|-------|
| PLSS: | T10N, R11E, Sec. 07 (M)  | Accuracy:           | 5 miles               | Area (acres):     | 0     |
| UTM:  | Zone-10 N4289058 E691378 | Latitude/Longitude: | 38.72948 / -120.79835 | Elevation (feet): | 2,000 |

|                 |   |
|-----------------|---|
| County Summary: | Quad Summary:   |
| El Dorado       | Camino (3812066), Placerville (3812067), Shingle Springs (3812068), Slate Mtn. (3812076), Garden Valley (3812077), Coloma (3812078) |

Sources:

|            |  |
|------------|--|
| DFG17A0001 | CALIFORNIA DEPARTMENT OF FISH & GAME - NOTE IN CALIFORNIA FISH AND GAME REGARDING THE PRICE PAID FOR FISHER PELTS TAKEN IN THE SUMMER MONTHS. CALIF FISH & GAME 3(3):120. 1917-07-XX |
|------------|--|





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | 49534                 | <b>EO Index:</b>                | 49534      |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | ARAAD02030 |
| <b>Occurrence Number:</b> | 567                   | <b>Occurrence Last Updated:</b> | 2002-12-03 |

|                             |                                     |                         |  |
|-----------------------------|-------------------------------------|-------------------------|--|
| <b>Scientific Name:</b>     | <i>Emys marmorata</i>               | <b>Common Name:</b>     | western pond turtle  |
| <b>Listing Status:</b>      | <b>Federal:</b> Proposed Threatened | <b>Rare Plant Rank:</b> |  |
|                             | <b>State:</b> None                  | <b>Other Lists:</b>     | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable<br>USFS_S-Sensitive |
| <b>CNDDB Element Ranks:</b> | <b>Global:</b> G3G4                 |                         |  |
|                             | <b>State:</b> S3                    |                         |  |

|  |   |
|--|---|
| <b>General Habitat:</b>  | <b>Micro Habitat:</b>   |
| A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION. | NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING. |

|                            |                                |                         |                           |
|----------------------------|--------------------------------|-------------------------|---------------------------|
| <b>Last Date Observed:</b> | 2002-XX-XX                     | <b>Occurrence Type:</b> | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 2002-XX-XX                     | <b>Occurrence Rank:</b> | Good                      |
| <b>Owner/Manager:</b>      | PVT-PLACERVILLE GOLD MINING CO | <b>Trend:</b>           | Unknown                   |
| <b>Presence:</b>           | Presumed Extant                |                         |                           |

**Location:**  
NORTH SIDE OF HARRIS ROAD, BETWEEN CEDAR RAVINE AND BIG CUT ROAD, PLACERVILLE.

**Detailed Location:**  
THIS IS THE ONLY YEAR-ROUND, OPEN-WATER POND IN THE IMMEDIATE AREA.

**Ecological:**  
HABITAT CONSISTS OF A FRESHWATER POND, DOMINATED BY CATTAILS; SURROUNDED BY WILLOWS, BLACKBERRY VINES, RUSHES, NATIVE GRASSES, AND TOYON (OAK/PINE COMMUNITY).

**Threats:**  
THREATENED BY LIKELY RESIDENTIAL DEVELOPMENT.

**General:**  
3 ADULTS AND 2 JUVENILES OBSERVED 16 MAY 2001. OBSERVATIONS CONTINUED THROUGH 2002.

|              |                             |                            |                       |                          |       |
|--------------|-----------------------------|----------------------------|-----------------------|--------------------------|-------|
| <b>PLSS:</b> | T10N, R11E, Sec. 17, SW (M) | <b>Accuracy:</b>           | 80 meters             | <b>Area (acres):</b>     | 0     |
| <b>UTM:</b>  | Zone-10 N4287614 E691881    | <b>Latitude/Longitude:</b> | 38.71637 / -120.79298 | <b>Elevation (feet):</b> | 2,200 |

|                        |                       |
|------------------------|-----------------------|
| <b>County Summary:</b> | <b>Quad Summary:</b>  |
| El Dorado              | Placerville (3812067) |

**Sources:**  
SHA01F0002 SHANNON, B. - FIELD SURVEY FORM FOR CLEMMYS MARMORATA (MARMORATA) 2001-05-16



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Map Index Number:** B8947  
**Key Quad:** Placerville (3812067)  
**Occurrence Number:** 68  
**EO Index:** 124092  
**Element Code:** IHHYM24260  
**Occurrence Last Updated:** 2023-05-23

**Scientific Name:** *Bombus pensylvanicus*  
**Common Name:** American bumble bee  
**Listing Status:** **Federal:** None  
**State:** None  
**Rare Plant Rank:**  
**Other Lists:** IUCN\_VU-Vulnerable  
**CNDDDB Element Ranks:** **Global:** G3G4  
**State:** S2

**General Habitat:**  
-  
**Micro Habitat:**  
LONG-TONGUED; FORAGES ON A WIDE VARIETY OF FLOWERS INCLUDING VETCHES (VICIA), CLOVERS (TRIFOLIUM), THISTLES (CIRSIIUM), SUNFLOWERS (HELIANTHUS), ETC. NESTS ABOVE GROUND UNDER LONG GRASS OR UNDERGROUND. QUEENS OVERWINTER IN ROTTEN WOOD OR UNDERGROUND.

**Last Date Observed:** 1958-04-13  
**Last Survey Date:** 1958-04-13  
**Owner/Manager:** UNKNOWN  
**Presence:** Presumed Extant  
**Occurrence Type:** Natural/Native occurrence  
**Occurrence Rank:** Unknown  
**Trend:** Unknown

**Location:**  
EL DORADO.  
**Detailed Location:**  
EXACT LOCATION UNKNOWN. MAPPED NON-SPECIFICALLY TO TOWN OF EL DORADO.

#### Ecological:

#### Threats:

#### General:

1 ADULT FEMALE COLLECTED ON 13 APR 1958 (CSCA #479).

**PLSS:** T10N, R10E, Sec. 35 (M) **Accuracy:** 1 mile **Area (acres):** 1,987  
**UTM:** Zone-10 N4283738 E687231 **Latitude/Longitude:** 38.68245 / -120.84747 **Elevation (feet):** 1,608

**County Summary:** **Quad Summary:**  
El Dorado Placerville (3812067)

#### Sources:

ANO58S0020 ANONYMOUS - CSCA #479 COLLECTED NEAR EL DORADO, EL DORADO COUNTY 1958-04-13  
RIC22D0001 RICHARDSON, L. (XERCES SOCIETY) - CALIFORNIA EXTRACT OF BUMBLE BEES OF NORTH AMERICA DATABASE.  
HTTPS://WWW.LEIFRICHARDSON.ORG/BBNA.HTML. ACCESSED 7 DEC 2022. 2022-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | 87220                 | <b>EO Index:</b>                | 88186      |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | IIPLE23020 |
| <b>Occurrence Number:</b> | 9                     | <b>Occurrence Last Updated:</b> | 2012-11-08 |

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|  |  |                         |                     |
|--|--|-------------------------|---------------------|
| <b>Scientific Name:</b>  | <i>Cosumnoperla hypocrena</i>              | <b>Common Name:</b>     | Cosumnes stripetail |
| <b>Listing Status:</b>   | <b>Federal:</b> None<br><b>State:</b> None | <b>Rare Plant Rank:</b> |                     |
| <b>CNDDB Element Ranks:</b>  | <b>Global:</b> G2<br><b>State:</b> S2      | <b>Other Lists:</b>     |                     |
| <b>General Habitat:</b>  | <b>Micro Habitat:</b>                      |                         |                     |
| FOUND IN INTERMITTENT STREAMS ON WESTERN SLOPE OF CENTRAL SIERRA NEVADA FOOTHILLS IN AMERICAN AND COSUMNES RIVER BASINS. |  | ~                       |                     |

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|                            |   |                            |                           |
|----------------------------|---|----------------------------|---------------------------|
| <b>Last Date Observed:</b> | 1988-03-17  | <b>Occurrence Type:</b>    | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 1988-03-17  | <b>Occurrence Rank:</b>    | Unknown                   |
| <b>Owner/Manager:</b>      | UNKNOWN   | <b>Trend:</b>              | Unknown                   |
| <b>Presence:</b>           | Presumed Extant   |                            |                           |
| <b>Location:</b>           | RINGGOLD CREEK, ABOUT 2 KM NE OF DIAMOND SPRINGS.   |                            |                           |
| <b>Detailed Location:</b>  | COLLECTION AT "RINGGOLD CREEK (531 M), 2 KM NE OF DIAMOND SPRINGS." MAPPED TO GENERAL AREA DESCRIBED.   |                            |                           |
| <b>Ecological:</b>         |   |                            |                           |
| <b>Threats:</b>            |   |                            |                           |
| <b>General:</b>            | 2 LARVAE COLLECTED 22 FEB 1988 & 1 LARVA COLLECTED 17 MAR 1988.   |                            |                           |
| <b>PLSS:</b>               | T10N, R11E, Sec. 20, S (M)  | <b>Accuracy:</b>           | non-specific area         |
| <b>UTM:</b>                | Zone-10 N4285763 E692151  | <b>Latitude/Longitude:</b> | 38.69964 / -120.79037     |
| <b>Area (acres):</b>       | 49  |                            |                           |
| <b>Elevation (feet):</b>   | 1,742   |                            |                           |
| <b>County Summary:</b>     | <b>Quad Summary:</b>  |                            |                           |
| El Dorado                  | Placerville (3812067)   |                            |                           |
| <b>Sources:</b>            |   |                            |                           |
| BOT07A0001                 | BOTTORFF, R.L. - COSUMNOPERLA SEQUOIA, A NEW SPECIES OF STONEFLY FROM THE SIERRA NEVADA, CALIFORNIA (PLECOPTERA: PERLODIDAE: ISOPERLINA). ILLIESIA 3(6):46-52. 2007-XX-XX |                            |                           |





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | 12685                 | <b>EO Index:</b>                | 16866      |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | PDAST8H1V0 |
| <b>Occurrence Number:</b> | 15                    | <b>Occurrence Last Updated:</b> | 2017-08-16 |

|                             |  |                         |   |
|-----------------------------|--|-------------------------|---|
| <b>Scientific Name:</b>     | <i>Packera layneae</i>                           | <b>Common Name:</b>     | Layne's ragwort   |
| <b>Listing Status:</b>      | <b>Federal:</b> Threatened<br><b>State:</b> Rare | <b>Rare Plant Rank:</b> | 1B.2  |
| <b>CNDDB Element Ranks:</b> | <b>Global:</b> G2<br><b>State:</b> S2            | <b>Other Lists:</b>     | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley<br>SB_UCSC-UC Santa Cruz |

|                                 |   |
|---------------------------------|---|
| <b>General Habitat:</b>         | <b>Micro Habitat:</b>   |
| CHAPARRAL, CISMONTANE WOODLAND. | ULTRAMAFIC SOIL (SERPENTINE OR GABBRO); OCCASIONALLY ALONG STREAMS. 205-1060 M. |

|                            |                     |                         |                           |
|----------------------------|---------------------|-------------------------|---------------------------|
| <b>Last Date Observed:</b> | 1978-07-XX          | <b>Occurrence Type:</b> | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 1983-11-08          | <b>Occurrence Rank:</b> | None                      |
| <b>Owner/Manager:</b>      | PVT                 | <b>Trend:</b>           | Unknown                   |
| <b>Presence:</b>           | Possibly Extirpated |                         |                           |

**Location:**  
WEBER CREEK, NEAR PLACERVILLE.

**Detailed Location:**  
**Ecological:**  
SITE CONTAINS MIXED CHAPARRAL AND IS SURROUNDED BY FOOTHILL WOODLAND. ASSOCIATES INCLUDE CEANOTHUS CUNEATUS, PINUS SABINIANA, AND QUERCUS SP.

**Threats:**  
AREA HAS BEEN GRADED.

**General:**  
SMALL COLONY OF ABOUT 25 PLANTS SEEN IN 1978. SURVEY IN 1983 REVEALED THAT SITE HAD RECENTLY BEEN GRADED AND THE POPULATION MAY HAVE BEEN EXTIRPATED; NO PLANTS FOUND IN 1983. 1907 AND 1977 COLLECTIONS FROM "WEBER CREEK" ATTRIBUTED HERE.

|              |                             |                            |                       |                          |       |
|--------------|-----------------------------|----------------------------|-----------------------|--------------------------|-------|
| <b>PLSS:</b> | T10N, R11E, Sec. 20, SE (M) | <b>Accuracy:</b>           | 1/5 mile              | <b>Area (acres):</b>     | 0     |
| <b>UTM:</b>  | Zone-10 N4286267 E692685    | <b>Latitude/Longitude:</b> | 38.70406 / -120.78410 | <b>Elevation (feet):</b> | 1,760 |

|                        |                       |
|------------------------|-----------------------|
| <b>County Summary:</b> | <b>Quad Summary:</b>  |
| El Dorado              | Placerville (3812067) |

**Sources:**

|            |   |
|------------|---|
| BRA07S0004 | BRANDEGEE, K. - BRANDEGEE SN UC #130732 1907-05-21                  |
| HUB83F0001 | HUBBARD, W. - FIELD SURVEY FORM FOR PACKERA LAYNEAE 1983-11-08      |
| PAT78U0004 | PATTERSON, C. - CNPS OBSERVATION CARD, PLACERVILLE CARD. 1978-07-XX |
| STE77S0010 | STEBBINS, G. - STEBBINS SN DAV #161060 1977-07-03                   |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 49957                 | EO Index:                | 49957      |
| Key Quad:          | Placerville (3812067) | Element Code:            | PDCPR07080 |
| Occurrence Number: | 5                     | Occurrence Last Updated: | 2003-01-23 |

|                       |                              |                  |                      |
|-----------------------|------------------------------|------------------|----------------------|
| Scientific Name:      | <i>Viburnum ellipticum</i>   | Common Name:     | oval-leaved viburnum |
| Listing Status:       | Federal: None<br>State: None | Rare Plant Rank: | 2B.3                 |
| CNDDDB Element Ranks: | Global: G4G5<br>State: S3    | Other Lists:     |                      |

|  |                |
|--|----------------|
| General Habitat:   | Micro Habitat: |
| CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST. | 215-1400 M.    |

|                     |                 |                  |                           |
|---------------------|-----------------|------------------|---------------------------|
| Last Date Observed: | 1901-09-XX      | Occurrence Type: | Natural/Native occurrence |
| Last Survey Date:   | 1901-09-XX      | Occurrence Rank: | Unknown                   |
| Owner/Manager:      | UNKNOWN         | Trend:           | Unknown                   |
| Presence:           | Presumed Extant |                  |                           |

Location:  
PLACERVILLE.

Detailed Location:  
EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS IN VICINITY OF PLACERVILLE.

Ecological:

Threats:

General:  
SITE BASED ON A 1900 & A 1901 IRWIN COLLECTION. NEEDS FIELDWORK.

|       |                          |                     |                       |                   |   |
|-------|--------------------------|---------------------|-----------------------|-------------------|---|
| PLSS: | T10N, R11E, Sec. 07 (M)  | Accuracy:           | 1 mile                | Area (acres):     | 0 |
| UTM:  | Zone-10 N4289067 E691435 | Latitude/Longitude: | 38.72955 / -120.79770 | Elevation (feet): |   |

|                 |                       |
|-----------------|-----------------------|
| County Summary: | Quad Summary:         |
| El Dorado       | Placerville (3812067) |

Sources:

|            |  |
|------------|--|
| IRW00S0001 | IRWIN, F. - IRWIN SN UC #28716 1900-10-XX                          |
| IRW01S0001 | IRWIN, F. - IRWIN SN UC #14241 1901-09-XX                          |
| MCM39B0001 | MCMINN, H. - AN ILLUSTRATED MANUAL OF CALIFORNIA SHRUBS 1939-XX-XX |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | 12635                 | <b>EO Index:</b>                | 24345      |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | PDERI040V0 |
| <b>Occurrence Number:</b> | 1                     | <b>Occurrence Last Updated:</b> | 2017-03-03 |

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|                              |  |                         |                                     |
|------------------------------|--|-------------------------|-------------------------------------|
| <b>Scientific Name:</b>      | <i>Arctostaphylos nissenana</i>            | <b>Common Name:</b>     | Nissenan manzanita                  |
| <b>Listing Status:</b>       | <b>Federal:</b> None<br><b>State:</b> None | <b>Rare Plant Rank:</b> | 1B.2                                |
| <b>CNDDDB Element Ranks:</b> | <b>Global:</b> G1<br><b>State:</b> S1      | <b>Other Lists:</b>     | BLM_S-Sensitive<br>USFS_S-Sensitive |

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|   |   |
|---|---|
| <b>General Habitat:</b>                   | <b>Micro Habitat:</b>   |
| CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL. | USUALLY ON METAMORPHICS, ASSOCIATED W/ OTHER CHAPARRAL SPECIES. 485-1005 M. |

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|                            |                 |                         |                           |
|----------------------------|-----------------|-------------------------|---------------------------|
| <b>Last Date Observed:</b> | 2005-01-20      | <b>Occurrence Type:</b> | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 2005-01-20      | <b>Occurrence Rank:</b> | Fair                      |
| <b>Owner/Manager:</b>      | PVT             | <b>Trend:</b>           | Decreasing                |
| <b>Presence:</b>           | Presumed Extant |                         |                           |

**Location:**  
SOUTH OF DIAMOND SPRINGS NEAR MARTINEZ CREEK.

**Detailed Location:**  
MAPPED AS 6 POLYGONS BY CNDDDB ACCORDING TO WIESLANDER VEGETATION TYPE MAPS FROM THE 1930S AND TWO 1992 CLARK MAPS. IN JANUARY 2005, GRABER NOTES THAT MORE THAN 95% OF THE POP NEAR FOWLER LANE WAS DEAD WITH NO REPRODUCTION VISIBLE.

**Ecological:**  
GROWING ON SOUTH FACING SLOPES, OFTEN IN PURE STANDS. OCCASIONALLY ASSOCIATED WITH ADENOSTOMA FASCICULATUM, DENDROMECON RIGIDA, ARCTOSTAPHYLOS VISCIDA, AND QUERCUS WISLIZENI. SOME INTERMEDIATES WITH A. VISCIDA ALSO IN THE AREA.

**Threats:**  
URBAN DEVELOPMENT, ROADS, AND TRAILS. CAUSE OF MANZANITA DIE-OFF UNKNOWN; POSSIBLY FUNGAL DISEASE.

**General:**  
4 S POLYGONS BASED ON 1930S MAP DATA. N POLYS: 1000S IN 1978 & 1992, 2300 IN 2004, UNK # IN 2005. IN 2004, PLANTS AT NE COLONY APPEAR HEALTHY BUT OTHER SITES UNHEALTHY WITH >50% DEAD; LOOKS SIMILAR TO PHYTOPHTHORA. INCLUDES FORMER OCC #13.

|              |                          |                            |                       |                          |       |
|--------------|--------------------------|----------------------------|-----------------------|--------------------------|-------|
| <b>PLSS:</b> | T09N, R11E, Sec. 6 (M)   | <b>Accuracy:</b>           | specific area         | <b>Area (acres):</b>     | 378   |
| <b>UTM:</b>  | Zone-10 N4282348 E690277 | <b>Latitude/Longitude:</b> | 38.66928 / -120.81286 | <b>Elevation (feet):</b> | 1,600 |

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|                        |                       |
|------------------------|-----------------------|
| <b>County Summary:</b> | <b>Quad Summary:</b>  |
| El Dorado              | Placerville (3812067) |





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



#### Sources:

|            |  |
|------------|--|
| BEL35S0004 | BELSHAW, C. - BELSHAW #824 DS #493776 1935-06-XX   |
| BEL35S0007 | BELSHAW, C. - BELSHAW #837 JEPS #29384 1935-06-01  |
| BEL35S0015 | BELSHAW, C. - BELSHAW #842 CAS #444963 1935-06-XX  |
| CLA92F0002 | CLARK, G. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 1992-03-21  |
| CLA92F0004 | CLARK, G. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 1992-03-21  |
| GAN64S0009 | GANKIN, R. & G. STEBBINS - GANKIN SN SBBG #25399, DAV #52872, CAS #475674 1964-09-29                                     |
| GAN65S0008 | GANKIN, R. - GANKIN #424 DAV #52877 1965-03-24   |
| GAN65S0018 | GANKIN, R. - GANKIN #421 DAV #52876 1965-03-24   |
| GAN65S0019 | GANKIN, R. - GANKIN #425 DAV #52878 1965-03-24   |
| GAN65S0020 | GANKIN, R. - GANKIN #422 DAV #52881 1965-03-24   |
| GOG04F0001 | GOGOL-PROKURAT, M. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 2004-06-21   |
| GOG04F0002 | GOGOL-PROKURAT, M. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 2004-06-21   |
| GRA05I0002 | GRABER, D. - PHOTOS OF ARCTOSTAPHYLOS NISSENANA, CALPHOTOS ID: 0000 0000 0111 1717, 1720, 1724, 1725 2005-01-20          |
| GRA05U0001 | GRABER, D. - EMAIL FROM D. GRABER RE: NISSENAN MANZANITA POPULATION COLLAPSE 2005-03-22                                  |
| KEE93S0055 | KEELEY, J. - KEELEY #24935-24944, 24947, 24948, 24950, 24951, 24953-24955 RSA #633222-633239 1993-09-13                  |
| KNI62S0001 | KNIGHT, W. - KNIGHT #233 OBI #14608 & #14609 1962-12-XX  |
| KNI62S0002 | KNIGHT, W. & I. KNIGHT - KNIGHT SN CAS #433842 1962-04-14  |
| KNI65S0004 | KNIGHT, W. - KNIGHT #1208 CAS #459561 1965-11-03   |
| KNI66A0001 | KNIGHT, W. - THE NATURE AND DISTRIBUTION OF ARCTOSTAPHYLOS NISSENANA. FOUR SEASONS, VOLUME I #4. 1966-02-25              |
| RAE78F0015 | RAE, S. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 1978-07-07  |
| STE80M0001 | STEBBINS - MAP: ELDORADO DIAMOND SPRINGS AREA FOR ARCTOSTAPHYLOS NISSENANA. 1980-03-XX                                   |
| THO64S0009 | THORNE, R. & P. EVERETT - THORNE #33740 RSA #167618 & #770901, CAS #581048, DS #509773, GH #350793, LA #81890 1964-04-16 |
| THO64S0032 | THORNE, R. & P. EVERETT - THORNE #33741 RSA #167607 1964-04-16   |
| THO64S0033 | THORNE, R. & P. EVERETT - THORNE SN SBBG #21957 SD #60414 1964-04-16   |
| TUC65S0002 | TUCKER, J. ET AL. - TUCKER #3814 RSA #273039 & 273040, DAV #14760 - 14785 1965-03-24                                     |
| TUC65S0003 | TUCKER, J. ET AL. - TUCKER #3815 DAV #14741 TO 14754, 14759, 52874 & 52875 1965-03-24                                    |
| WAL74S0007 | WALLACE, G. - WALLACE #1339 UC #1424946, RSA #252247, DS #733199 1974-12-21  |
| WIE32S0001 | WIESLANDER, A. - WIESLANDER #255 JEPS #29348 RSA #139611 1932-03-19  |
| WIE36S0015 | WIESLANDER, A. - WIESLANDER #693 RSA #17271 & #121329 1936-09-07   |
| WIENDM0001 | WIESLANDER, A. - DIGITIZATION OF WIESLANDER'S VEGETATION TYPE MAPS FROM THE 1930S 193X-XX-XX                             |
| WIL34S0001 | WILSON, R. - WILSON #80 RSA #121326 1934-11-15   |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 12666                 | EO Index:                | 20113      |
| Key Quad:          | Placerville (3812067) | Element Code:            | PDERI040V0 |
| Occurrence Number: | 2                     | Occurrence Last Updated: | 2008-12-09 |

|                      |                                 |      |                  |              |                    |                                     |
|----------------------|---------------------------------|------|------------------|--------------|--------------------|-------------------------------------|
| Scientific Name:     | <i>Arctostaphylos nissenana</i> |      |                  | Common Name: | Nissenan manzanita |                                     |
| Listing Status:      | Federal:                        | None | Rare Plant Rank: | 1B.2         | Other Lists:       | BLM_S-Sensitive<br>USFS_S-Sensitive |
|                      | State:                          | None |                  |              |                    |                                     |
| CNDDB Element Ranks: | Global:                         | G1   |                  |              |                    |                                     |
|                      | State:                          | S1   |                  |              |                    |                                     |

|   |   |
|---|---|
| General Habitat:                          | Micro Habitat:  |
| CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL. | USUALLY ON METAMORPHICS, ASSOCIATED W/ OTHER CHAPARRAL SPECIES. 485-1005 M. |

|                     |                 |                  |                           |
|---------------------|-----------------|------------------|---------------------------|
| Last Date Observed: | 1938-04-12      | Occurrence Type: | Natural/Native occurrence |
| Last Survey Date:   | 1938-04-12      | Occurrence Rank: | Unknown                   |
| Owner/Manager:      | UNKNOWN         | Trend:           | Unknown                   |
| Presence:           | Presumed Extant |                  |                           |

**Location:**  
1-2 MILES SE OF DIAMOND SPRINGS, HEAD OF MARTINEZ CREEK.

**Detailed Location:**  
MAPPED ACCORDING TO T-R-S ON A JEPSON COLLECTION LABEL IN SECTION 29. A 1935 JENSEN COLLECTION FROM "1 MI SE OF DIAMOND SPRINGS" IN SECTION 32 ALSO ATTRIBUTED TO THIS SITE BUT MAY BE TO THE SOUTH OF THE MAPPED AREA.

**Ecological:**

**Threats:**

**General:**  
UNKNOWN NUMBER OF PLANTS IN 1935 & 1938. NEEDS FIELDWORK. SITE MAY ACTUALLY BE REFERENCING EO #1 TO THE SW; NOTE ON JEPSON COLLECTION LABEL INDICATES COLLECTION WAS LIKELY AT SAME SITE AS WIESLANDER TYPE MAP PROJECT WHICH IS CNDDB EO #1.

|       |                          |                     |                       |                   |       |
|-------|--------------------------|---------------------|-----------------------|-------------------|-------|
| PLSS: | T10N, R11E, Sec. 29 (M)  | Accuracy:           | non-specific area     | Area (acres):     | 608   |
| UTM:  | Zone-10 N4284878 E692446 | Latitude/Longitude: | 38.69160 / -120.78723 | Elevation (feet): | 1,800 |

|                 |                       |
|-----------------|-----------------------|
| County Summary: | Quad Summary:         |
| El Dorado       | Placerville (3812067) |

**Sources:**

|            |  |
|------------|--|
| JEN35S0002 | JENSEN, H. - JENSEN #403 RSA #121325 1935-04-26  |
| JEP38S0001 | JEPSON, W. - JEPSON #18641 RSA #170178 & #20328, SD #58449, UCR #58377, CAS #459477, DS #501723, SEINET #3451937, MWI #14978, UCSB #24676 1938-04-12 |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | 12688                 | <b>EO Index:</b>                | 24343      |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | PDERI040V0 |
| <b>Occurrence Number:</b> | 3                     | <b>Occurrence Last Updated:</b> | 2017-03-03 |

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|                              |  |                         |                                     |
|------------------------------|--|-------------------------|-------------------------------------|
| <b>Scientific Name:</b>      | <i>Arctostaphylos nissenana</i>            | <b>Common Name:</b>     | Nissenan manzanita                  |
| <b>Listing Status:</b>       | <b>Federal:</b> None<br><b>State:</b> None | <b>Rare Plant Rank:</b> | 1B.2                                |
| <b>CNDDDB Element Ranks:</b> | <b>Global:</b> G1<br><b>State:</b> S1      | <b>Other Lists:</b>     | BLM_S-Sensitive<br>USFS_S-Sensitive |

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|   |   |
|---|---|
| <b>General Habitat:</b>                   | <b>Micro Habitat:</b>   |
| CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL. | USUALLY ON METAMORPHICS, ASSOCIATED W/ OTHER CHAPARRAL SPECIES. 485-1005 M. |

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|                            |  |                            |                           |
|----------------------------|--|----------------------------|---------------------------|
| <b>Last Date Observed:</b> | 1992-03-27   | <b>Occurrence Type:</b>    | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 2004-06-21   | <b>Occurrence Rank:</b>    | Poor                      |
| <b>Owner/Manager:</b>      | PVT  | <b>Trend:</b>              | Decreasing                |
| <b>Presence:</b>           | Presumed Extant  |                            |                           |
| <b>Location:</b>           | SPANISH RAVINE, PLACERVILLE.   |                            |                           |
| <b>Detailed Location:</b>  | 3 BLOCKS S ON SPANISH RAVINE RD THEN LEFT ON DIRT ROAD, UPHILL 100 YARDS. LOCATED ON FLAT SLATE ROCK ABOUT HALF WAY UP THE SLOPE. EXACT LOCATION UNK; MAPPED AS BEST GUESS ALONG THE E SIDE OF SPANISH RAVINE; NO MAP PROVIDED W/ ORIGINAL DATA. |                            |                           |
| <b>Ecological:</b>         | IN CLEARING IN CHAPARRAL SURROUNDED BY ARCTOSTAPHYLOS VISCIDA WITH QUERCUS AND PINUS. RED SEDIMENTARY SOILS.   |                            |                           |
| <b>Threats:</b>            | POSSIBLE FUTURE SUBDIVISION PLANNED (1992). PLANTS MAY HAVE BEEN SHADED OUT (2004).  |                            |                           |
| <b>General:</b>            | 12 PLANTS IN 1944, 5 IN 1956, 8 IN 1992. NO REPRODUCTION OBSERVED BY MATURE PLANTS IN 1992. NO PLANTS SEEN IN 2004; VEGETATION WAS VERY DENSE, A. NISSENANA MAY HAVE BEEN SHADED OUT. HISTORIC COLLECTIONS FROM "PLACERVILLE" ALSO ATTRIB HERE.  |                            |                           |
| <b>PLSS:</b>               | T10N, R11E, Sec. 17, NE (M)  | <b>Accuracy:</b>           | non-specific area         |
| <b>UTM:</b>                | Zone-10 N4288800 E692635   | <b>Latitude/Longitude:</b> | 38.72688 / -120.78397     |
| <b>Area (acres):</b>       | 39   |                            |                           |
| <b>Elevation (feet):</b>   | 2,100  |                            |                           |
| <b>County Summary:</b>     | <b>Quad Summary:</b>   |                            |                           |
| El Dorado                  | Placerville (3812067)  |                            |                           |





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



#### Sources:

|            |   |
|------------|---|
| BAC55S0009 | BACIGALUPI, R. & G. ROBBINS - BACIGALUPI #5166 JEPS #13546, CAS #581049 1955-05-22  |
| EAS35S0006 | EASTWOOD, A. & J. HOWELL - EASTWOOD #1934 POM #222731, SBBG #28449, UC #577216, A #350794, CAS #220017, DS #240433 1935-02-10 |
| EAS35S0029 | EASTWOOD, A. & J. HOWELL - EASTWOOD #1935 CAS #220018 1935-02-10  |
| GOG04F0003 | GOGOL-PROKURAT, M. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 2004-06-21  |
| JEN36S0001 | JENSEN, H. - JENSEN #427 SD #49822 1936-06-04   |
| JEN36S0002 | JENSEN, H. - JENSEN #426 DAV #52882 1936-06-04  |
| JEP38S0003 | JEPSON, W. - JEPSON #18609 JEPS #2741, NY #9757, RSA #279414, UC #1281402, GH #14682, OBI #14607 1938-04-07                   |
| KNI66A0001 | KNIGHT, W. - THE NATURE AND DISTRIBUTION OF ARCTOSTAPHYLOS NISSENANA. FOUR SEASONS, VOLUME I #4. 1966-02-25                   |
| MAS45S0006 | MASON, H. - MASON SN RSA #64472, DS #314495 1945-02-XX  |
| RAV56S0002 | RAVEN P. & T. ROBBINS - RAVEN #9087 UC #1094305, SBBG #54671, DS #393223, SFV #2648 1956-04-29                                |
| ROB43S0002 | ROBBINS, G. - ROBBINS #971 JEPS #15038, UC #747683, RSA #32124, SBBG #19361, DS #308747, GH #350798 & #350799 1943-03-28      |
| ROB44S0002 | ROBBINS, G. - ROBBINS #1482 UC #747668, A #350795, CAS #319087, GH #350796 1944-02-06   |
| ROB44S0005 | ROBBINS, G. - ROBBINS #1483 CAS #319093 & #333701, GH #350792 1944-02-06  |
| SMI92F0003 | SMITH, L. - FIELD SURVEY FORM FOR ARCTOSTAPHYLOS NISSENANA 1992-03-27   |
| WAT35S0001 | WATKINS, W. - WATKINS SN DAV #52873 1935-01-29  |
| WAT35S0002 | WATKINS, W. - WATKINS SN POM #222733, A #350905, CAS #222959, DS #240437 1935-05-01   |
| WAT35S0005 | WATKINS, W. - WATKINS SN CAS #219858 1935-01-XX   |



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



|                           |                       |                                 |            |
|---------------------------|-----------------------|---------------------------------|------------|
| <b>Map Index Number:</b>  | A3853                 | <b>EO Index:</b>                | 105507     |
| <b>Key Quad:</b>          | Placerville (3812067) | <b>Element Code:</b>            | PDERI040V0 |
| <b>Occurrence Number:</b> | 14                    | <b>Occurrence Last Updated:</b> | 2017-03-03 |

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|                              |  |                         |                                     |
|------------------------------|--|-------------------------|-------------------------------------|
| <b>Scientific Name:</b>      | <i>Arctostaphylos nissenana</i>            | <b>Common Name:</b>     | Nissenan manzanita                  |
| <b>Listing Status:</b>       | <b>Federal:</b> None<br><b>State:</b> None | <b>Rare Plant Rank:</b> | 1B.2                                |
| <b>CNDDDB Element Ranks:</b> | <b>Global:</b> G1<br><b>State:</b> S1      | <b>Other Lists:</b>     | BLM_S-Sensitive<br>USFS_S-Sensitive |

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|   |   |
|---|---|
| <b>General Habitat:</b>                   | <b>Micro Habitat:</b>   |
| CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL. | USUALLY ON METAMORPHICS, ASSOCIATED W/ OTHER CHAPARRAL SPECIES. 485-1005 M. |

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|                            |                 |                         |                           |
|----------------------------|-----------------|-------------------------|---------------------------|
| <b>Last Date Observed:</b> | 2013-03-14      | <b>Occurrence Type:</b> | Natural/Native occurrence |
| <b>Last Survey Date:</b>   | 2013-03-14      | <b>Occurrence Rank:</b> | Unknown                   |
| <b>Owner/Manager:</b>      | UNKNOWN         | <b>Trend:</b>           | Unknown                   |
| <b>Presence:</b>           | Presumed Extant |                         |                           |

**Location:**  
WEST SIDE OF FAITH LANE, ABOUT 0.25 MILE SOUTH OF PLEASANT VALLEY ROAD/HWY 49, DIAMOND SPRINGS.

**Detailed Location:**  
MAPPED ACCORDING TO 2013 ROBINSON COORDINATES.

**Ecological:**  
AREA OF CHAPARRAL AND PINE-OAK WOODLAND. ARCTOSTAPHYLOS VISCIDA IS GROWING NEARBY AND SOME PLANTS APPEAR TO BE HYBRIDS.

**Threats:**  
AREA IS SUBSTANTIALLY DISTURBED BY EARTHWORK, DIRT ROADS, OFF-ROAD ACTIVITY.

**General:**  
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 2013 ROBINSON COLLECTION.

|              |                             |                            |                      |                          |       |
|--------------|-----------------------------|----------------------------|----------------------|--------------------------|-------|
| <b>PLSS:</b> | T10N, R10E, Sec. 25, SE (M) | <b>Accuracy:</b>           | 80 meters            | <b>Area (acres):</b>     | 5     |
| <b>UTM:</b>  | Zone-10 N4284642 E689705    | <b>Latitude/Longitude:</b> | 38.69007 / -120.8188 | <b>Elevation (feet):</b> | 1,760 |

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|                        |                       |
|------------------------|-----------------------|
| <b>County Summary:</b> | <b>Quad Summary:</b>  |
| El Dorado              | Placerville (3812067) |

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**Sources:**  
ROB13S0002 ROBINSON, J. - ROBINSON #1 DAV #162395 2013-03-14



Occurrence Report  
California Department of Fish and Wildlife  
California Natural Diversity Database



|                    |                       |                          |            |
|--------------------|-----------------------|--------------------------|------------|
| Map Index Number:  | 49957                 | EO Index:                | 50044      |
| Key Quad:          | Placerville (3812067) | Element Code:            | PDROS0W0C0 |
| Occurrence Number: | 12                    | Occurrence Last Updated: | 2003-01-29 |

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|                       |                              |                  |                                     |
|-----------------------|------------------------------|------------------|-------------------------------------|
| Scientific Name:      | <i>Horkelia parryi</i>       | Common Name:     | Parry's horkelia                    |
| Listing Status:       | Federal: None<br>State: None | Rare Plant Rank: | 1B.2                                |
| CNDDDB Element Ranks: | Global: G2<br>State: S2      | Other Lists:     | BLM_S-Sensitive<br>USFS_S-Sensitive |

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|                                 |  |
|---------------------------------|--|
| General Habitat:                | Micro Habitat:   |
| CHAPARRAL, CISMONTANE WOODLAND. | OPENINGS IN CHAPARRAL OR WOODLAND; ESPECIALLY KNOWN FROM THE IONE FORMATION IN AMADOR COUNTY. 85-1115 M. |

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|                     |   |                     |                           |
|---------------------|---|---------------------|---------------------------|
| Last Date Observed: | 1923-05-XX  | Occurrence Type:    | Natural/Native occurrence |
| Last Survey Date:   | 1923-05-XX  | Occurrence Rank:    | Unknown                   |
| Owner/Manager:      | UNKNOWN   | Trend:              | Unknown                   |
| Presence:           | Presumed Extant   |                     |                           |
| Location:           | PLACERVILLE.  |                     |                           |
| Detailed Location:  | EXACT LOCATION UNKNOWN; MAPPED IN GENERAL VICINITY OF PLACERVILLE BY CNDDDB.          |                     |                           |
| Ecological:         |   |                     |                           |
| Threats:            |   |                     |                           |
| General:            | ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1923 COLLECTION BY KING. NEEDS FIELDWORK. |                     |                           |
| PLSS:               | T10N, R11E, Sec. 07 (M)   | Accuracy:           | 1 mile                    |
| UTM:                | Zone-10 N4289067 E691435  | Latitude/Longitude: | 38.72955 / -120.79770     |
| Area (acres):       | 0   |                     |                           |
| Elevation (feet):   | 1,860   |                     |                           |
| County Summary:     | Quad Summary:   |                     |                           |
| El Dorado           | Placerville (3812067)   |                     |                           |
| Sources:            |   |                     |                           |
| KIN23S0001          | KING, A. - KING SN CAS #69796 1923-05-XX  |                     |                           |

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

El Dorado County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713



Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Reptiles

| NAME   | STATUS                     |
|--|----------------------------|
| <b>Northwestern Pond Turtle</b> <i>Actinemys marmorata</i><br>Wherever found<br>No critical habitat has been designated for this species.<br><a href="https://ecos.fws.gov/ecp/species/1111">https://ecos.fws.gov/ecp/species/1111</a> | <b>Proposed Threatened</b> |

## Amphibians

| NAME  | STATUS            |
|---|-------------------|
| <b>California Red-legged Frog</b> <i>Rana draytonii</i><br>Wherever found<br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br><a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a> | <b>Threatened</b> |
| <b>Foothill Yellow-legged Frog</b> <i>Rana boylei</i><br>No critical habitat has been designated for this species.<br><a href="https://ecos.fws.gov/ecp/species/5133">https://ecos.fws.gov/ecp/species/5133</a>   | <b>Endangered</b> |

## Insects

| NAME   | STATUS           |
|--|------------------|
| <b>Monarch Butterfly</b> <i>Danaus plexippus</i><br>Wherever found<br>No critical habitat has been designated for this species.<br><a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a> | <b>Candidate</b> |

## Flowering Plants

| NAME  | STATUS            |
|---|-------------------|
| <b>Lassics Lupine</b> <i>Lupinus constancei</i><br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br><a href="https://ecos.fws.gov/ecp/species/7976">https://ecos.fws.gov/ecp/species/7976</a> | <b>Endangered</b> |

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4062>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>



There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME  | BREEDING SEASON        |
|---|------------------------|
| <b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a> | Breeds Jan 1 to Aug 31 |
| <b>Golden Eagle</b> <i>Aquila chrysaetos</i><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>      | Breeds Jan 1 to Aug 31 |

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

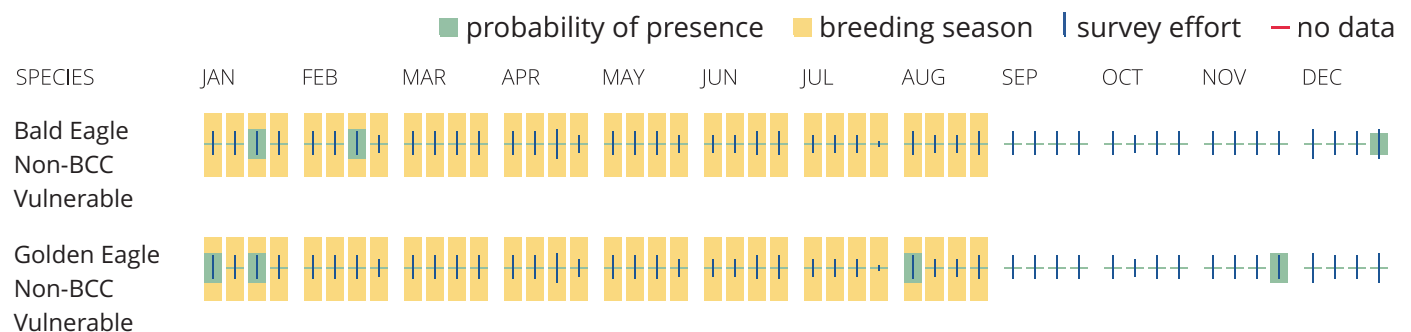
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>

- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME  | BREEDING SEASON         |
|---|-------------------------|
| <b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a> | Breeds Jan 1 to Aug 31  |
| <b>Bullock's Oriole</b> <i>Icterus bullockii</i><br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA   | Breeds Mar 21 to Jul 25 |
| <b>California Gull</b> <i>Larus californicus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  | Breeds Mar 1 to Jul 31  |



|   |                         |
|---|-------------------------|
| <p><b>California Thrasher</b> <i>Toxostoma redivivum</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>  | Breeds Jan 1 to Jul 31  |
| <p><b>Cassin's Finch</b> <i>Haemorhous cassinii</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9462">https://ecos.fws.gov/ecp/species/9462</a></p>  | Breeds May 15 to Jul 15 |
| <p><b>Golden Eagle</b> <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p> | Breeds Jan 1 to Aug 31  |
| <p><b>Northern Harrier</b> <i>Circus hudsonius</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p><a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a></p>  | Breeds Apr 1 to Sep 15  |
| <p><b>Nuttall's Woodpecker</b> <i>Dryobates nuttallii</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p><a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>   | Breeds Apr 1 to Jul 20  |
| <p><b>Oak Titmouse</b> <i>Baeolophus inornatus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>   | Breeds Mar 15 to Jul 15 |
| <p><b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>   | Breeds May 20 to Aug 31 |
| <p><b>Santa Barbara Song Sparrow</b> <i>Melospiza melodia graminea</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p><a href="https://ecos.fws.gov/ecp/species/5513">https://ecos.fws.gov/ecp/species/5513</a></p>  | Breeds Mar 1 to Sep 5   |

Western Screech-owl *Megascops kennicottii cardonensis*  
This is a Bird of Conservation Concern (BCC) only in particular  
Bird Conservation Regions (BCRs) in the continental USA

Breeds Mar 1 to Jun 30

Wrentit *Chamaea fasciata*  
This is a Bird of Conservation Concern (BCC) throughout its  
range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

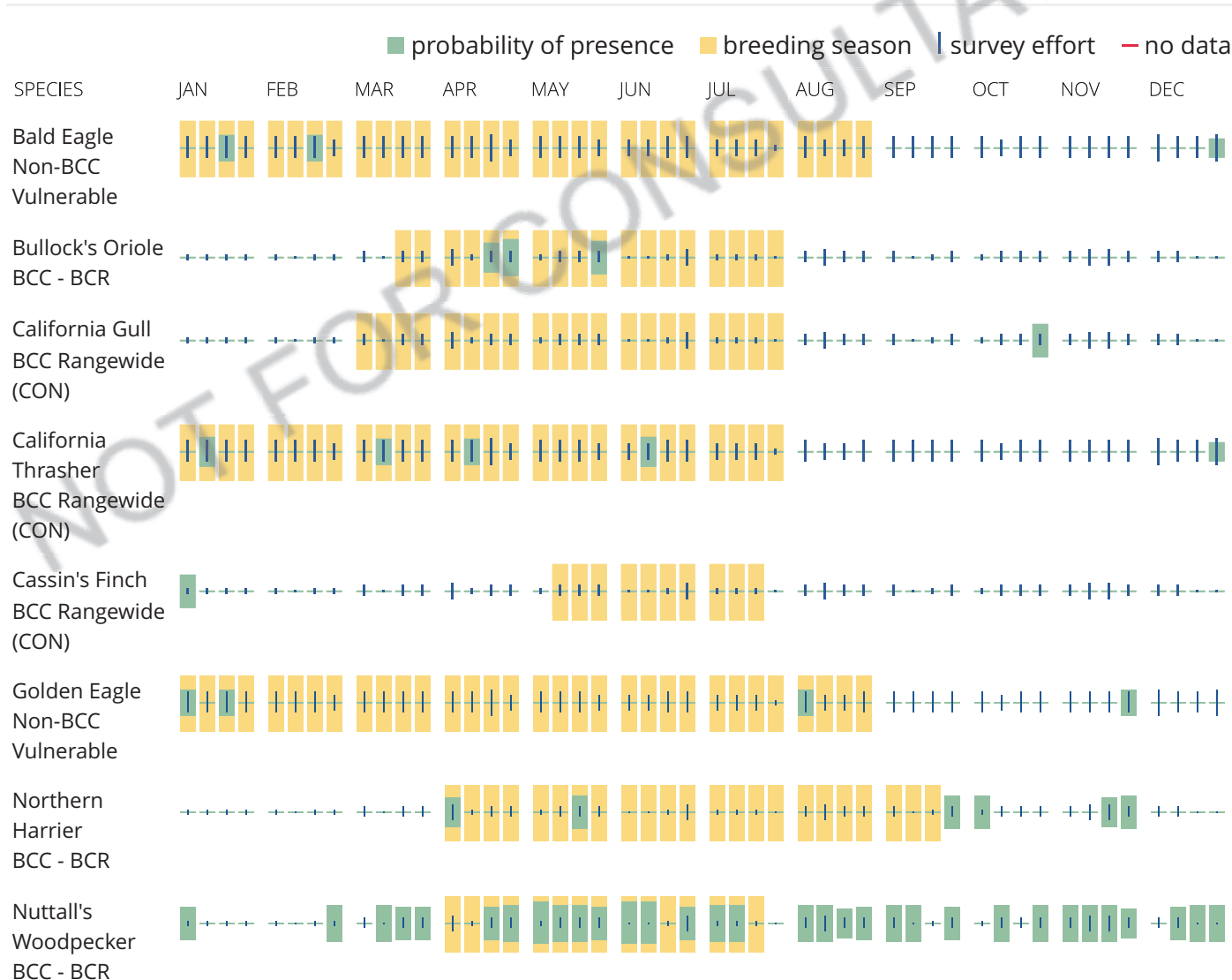
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

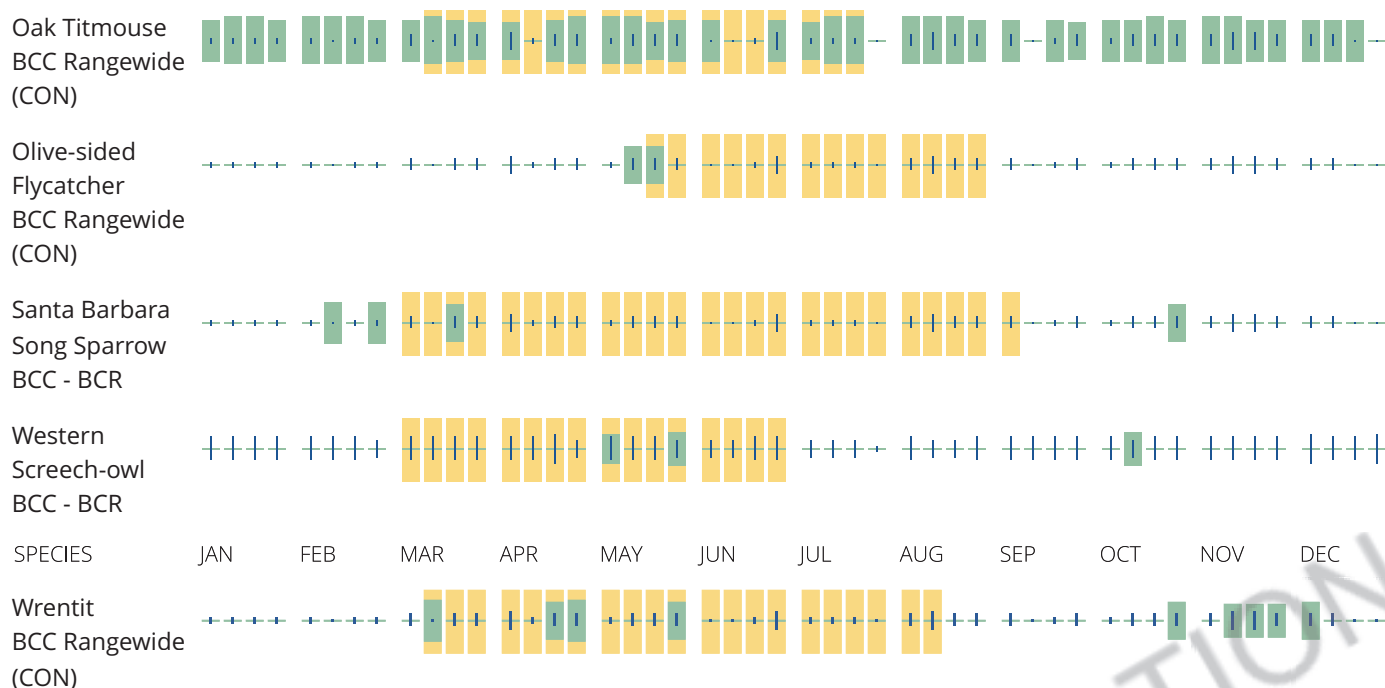
### No Data (-)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**



The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

## Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



LOCATION DIAMOND SPRINGS CA

Established Series  
Rev. JHR/GMK/LCL  
02/2003

## DIAMOND SPRINGS SERIES

Typically Diamond Springs soils have pale brown and very pale brown, medium and very strongly acid A horizons and very pale brown, very strongly acid, clay loam B2t horizons that grade to weathered fine grained acid igneous rock.

**TAXONOMIC CLASS:** Fine-loamy, mixed, semiactive, mesic Typic Haploxerults

**TYPICAL PEDON:** Diamond Springs very fine sandy loam - oak, grass, ponderosa pine. (Colors are for dry soil unless otherwise stated.)

**A11**--0 to 3 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; moderate medium granular structure; slightly hard, friable, nonsticky, nonplastic; many very fine and fine roots; many very fine and fine tubular and interstitial pores; moderately acid (pH 6.0); abrupt wavy boundary. (3 to 5 inches thick)

**A12**--3 to 9 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky, slightly plastic; common very fine, many medium, and few coarse roots; many very fine and fine, common medium tubular pores; few krotovinas; very strongly acid (pH 5.0); clear wavy boundary. (2 to 10 inches thick)

**B1t**--9 to 14 inches; very pale brown (10YR 8/4) clay loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, sticky, plastic; common very fine and fine, many medium roots; many very fine and fine, common medium tubular pores; common thin clay films lining pores; few krotovinas; very strongly acid (pH 5.0); clear wavy boundary. (0 to 7 inches thick)

**B21t**--14 to 20 inches; very pale brown (10YR 8/4, 7/4) clay loam, yellowish brown (10YR 6/4) moist; massive; hard, firm, sticky, plastic; few fine, common medium roots; many very fine and fine, common medium tubular pores; many moderately thick clay films lining pores and as bridges; very strongly acid (pH 4.5); gradual smooth boundary. (6 to 13 inches thick)

**B22t**--20 to 28 inches; very pale brown (10YR 8/4) clay loam, light yellowish brown (10YR 6/4) moist; massive; very hard, firm, very sticky, plastic; few fine roots; common very fine and few fine pores; continuous moderately thick, light brown (7.5YR 6/4) clay films lining pores and as bridges; very strongly acid (pH 4.5); clear wavy boundary. (5 to 14 inches thick)

**C1**--28 to 36 inches; white (10YR 8/2) clay loam, very pale brown (10YR 7/4) moist; massive; very hard, firm, sticky, plastic; few fine roots; common very fine and fine pores; many moderately thick clay films lining pores and as bridges; very strongly acid (pH 4.8); clear wavy boundary. (2 to 10 inches thick)

**C2**--36 to 40 inches; white (10YR 8/2) with brownish yellow (10YR 6/6) mineral grains, coarse sandy clay loam, very pale brown (10YR 7/4) moist; massive; very hard, firm, sticky, plastic; many moderately thick and thick clay films in fracture planes; strongly acid (pH 5.5); clear irregular boundary. (3 to 6 inches thick)

**C3**--40 to 50 inches; well weathered meta-dacite with few clay films in rock fractures.

**TYPE LOCATION:** El Dorado County, California; 0.5 miles west of El Dorado, 75 feet east of Missouri Flat Road, 0.1 mile west and 0.15 mile south of the apparent NE corner of sec. 34, T. 10N., R. 10E., MDM.

**RANGE IN CHARACTERISTICS:** Depth to a paralithic contact of weathered rock is 25 to 40 inches. The mean annual soil temperature at a depth of 20 inches is about 55 to 59 degrees F. The soil between depths of about 5 and 15 inches usually is continually dry in all parts from late May or June until some time in October and is moist in the same or all parts all the rest of the year. Some pedons have as much as 10 percent rock fragments in some or all horizons. Some pedons have 0 to 5 percent of the surface covered by stones or cobblestones without stones lower in the profile.

The A horizon is very pale brown or light brownish gray to brown (10YR 6/2, 6/3, 7/3, 6/4, 5/2; 7.5YR 6/2, 6/4, 5/2). Moist values are two units lower. Dry value of 5 and moist value of 3 is confined to the upper 3 to 7 inches in those pedons having these values. The A horizon is sandy loam to very fine sandy loam. It has weak or moderate granular or medium to fine subangular blocky structure or the A horizon is massive in some or all parts. The A horizon is slightly to very strongly acid. Its lower boundary is gradual or clear and in addition some pedons have a transitional A3 or B1 horizon.

The B2t horizon is very pale brown to reddish yellow (10YR 7/2, 7/3, 7/4, 8/4, 6/3, 6/4; 7.5YR 6/4, 7/4, 7/6, 5/6, 5/8.) Some pedons have coarse blotches of redder color (5YR 5/6 or 5/8). The B2t horizon is heavy loam, sandy clay loam, clay loam or silty clay loam. It has weak angular blocky or weak to moderate subangular blocky structure or the horizon is massive in some or all parts. This horizon is strongly or very strongly acid and has base saturation of about 20 to 35 percent.

**COMPETING SERIES:** These are the [Goldridge](#), [Josephine](#), [Lyonsville](#) and Stump Springs series. Goldridge soils lack a paralithic contact and lack strong brown colors and dry value of 6 or 7 in the B2t horizon. Josephine soils have a paralithic contact 40 to 60 inches below the surface. Lyonsville soils have a mean annual soil temperature of less than 47 degrees F. Stump Springs soils have an abrupt A-B2t horizon boundary and a base saturation of more than 35 percent in the argillic horizon.

**GEOGRAPHIC SETTING:** Diamond Springs soils are on gentle to steep slopes at elevations of 1,000 to 4,000 feet. They formed in residuum weathered from fine grained metamorphosed acid igneous and rhyolitic rocks. The climate is subhumid mesothermal with warm dry summers and cool moist winters. Mean annual precipitation is 30 to 50 inches, much of which is rain. The mean annual temperature is about 54 degrees F., average January temperature about 41 degrees F., and average July temperature about 66 degrees F. The freeze-free season is about 140 to 240 days.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the [Auberry](#), [Auburn](#), [Boomer](#), [Chaix](#), [Goulding](#) and [Kanaka](#) soils. Auberry soils have a base saturation of 50 to 75 percent and a paralithic contact 40 to 60 inches below the surface. Auburn soils have a lithic contact less than 20 inches below the surface. Boomer soils have hue of 5YR or redder in the argillic horizon. Chaix, Goulding and Kanaka soils lack an argillic horizon and Goulding soils have more than 35 percent rock fragments.

**DRAINAGE AND PERMEABILITY:** Well-drained; medium to rapid runoff; moderate or moderately slow permeability.

8/15/24, 1:11 PM

Official Series Description - DIAMOND\_SPRINGS Series

**USE AND VEGETATION:** Used mainly for deciduous orchards, woodland and annual range. Native vegetation is live oak, blue oak, black oak, ponderosa pine, Douglas-fir, white fir and Digger pine with an understory of brush, annual grasses, and forbs.

**DISTRIBUTION AND EXTENT:** Central and northern Sierra Nevada and Cascade Mountains of California. The series is moderately extensive.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Davis, California

**SERIES ESTABLISHED:** Placerville Area, California, 1927.

**REMARKS:** The Diamond Springs soils were formerly classified as Red-Yellow Podzolic soils.

The activity class was added to the classification in February of 2003. Competing series were not checked at that time. - ET

OSD scanned by SSQA. Last revised by state on 10/72.

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National Cooperative Soil Survey  
U.S.A.


## **Cal Gov Code § 65913.4**

Deering's California Codes are current through the 2024 Regular Session Ch 164

***Deering's California Codes Annotated > GOVERNMENT CODE (§§ 1 — 500000–500049) > Title 7 Planning and Land Use (Divs. 1 — 3) > Division 1 Planning and Zoning (Chs. 1 — 13) > Chapter 4.2 Housing Development Approvals (§§ 65913 — 65914.8)***

### **Notice**

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 This section has more than one version with varying effective dates.

### **§ 65913.4. Application for development subject to streamlined approval process; Notification of conflict; Design review or public oversight; Parking standards; Approval [Effective until January 1, 2025; Repealed effective January 1, 2036]**

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(a) Except as provided in subdivision (r), a development proponent may submit an application for a development that is subject to the streamlined, ministerial approval process provided by subdivision (c) and is not subject to a conditional use permit or any other nonlegislative discretionary approval if the development complies with subdivision (b) and satisfies all of the following objective planning standards:

- (1) The development is a multifamily housing development that contains two or more residential units.
- (2) The development and the site on which it is located satisfy all of the following:

(A) It is a legal parcel or parcels located in a city if, and only if, the city boundaries include some portion of either an urbanized area or urban cluster, as designated by the United States Census Bureau, or, for unincorporated areas, a legal parcel or parcels wholly within the boundaries of an urbanized area or urban cluster, as designated by the United States Census Bureau.

(B) At least 75 percent of the perimeter of the site adjoins parcels that are developed with urban uses. For the purposes of this section, parcels that are only separated by a street or highway shall be considered to be adjoined.

(C)

- (i) A site that meets the requirements of clause (ii) and satisfies any of the following:

(I) The site is zoned for residential use or residential mixed-use development.

(II) The site has a general plan designation that allows residential use or a mix of residential and nonresidential uses.

(III) The site meets the requirements of Section 65852.24.

- (ii) At least two-thirds of the square footage of the development is designated for residential use. Additional density, floor area, and units, and any other concession, incentive, or waiver of development standards granted pursuant to the Density Bonus Law in Section 65915 shall be included in the square footage calculation. The square footage of the development shall not include underground space, such as basements or underground parking garages.



**(3)**

**(A)** The development proponent has committed to record, prior to the issuance of the first building permit, a land use restriction or covenant providing that any lower or moderate income housing units required pursuant to subparagraph (B) of paragraph (4) shall remain available at affordable housing costs or rent to persons and families of lower or moderate income for no less than the following periods of time:

- (i)** Fifty-five years for units that are rented.
- (ii)** Forty-five years for units that are owned.

**(B)** The city or county shall require the recording of covenants or restrictions implementing this paragraph for each parcel or unit of real property included in the development.

**(4)** The development satisfies clause (i) or (ii) of subparagraph (A) and satisfies subparagraph (B) below:

**(A)**

**(i)** For a development located in a locality that is in its sixth or earlier housing element cycle, the development is located in either of the following:

**(I)** In a locality that the department has determined is subject to this clause on the basis that the number of units that have been issued building permits, as shown on the most recent production report received by the department, is less than the locality's share of the regional housing needs, by income category, for that reporting period. A locality shall remain eligible under this subclause until the department's determination for the next reporting period.

**(II)** In a locality that the department has determined is subject to this clause on the basis that the locality did not adopt a housing element that has been found in substantial compliance with housing element law (Article 10.6 (commencing with Section 65580) of Chapter 3) by the department. A locality shall remain eligible under this subclause until such time as the locality adopts a housing element that has been found in substantial compliance with housing element law (Article 10.6 (commencing with Section 65580) of Chapter 3) by the department.

**(ii)** For a development located in a locality that is in its seventh or later housing element cycle, is located in a locality that the department has determined is subject to this clause on the basis that the locality did not adopt a housing element that has been found in substantial compliance with housing element law (Article 10.6 (commencing with Section 65580) of Chapter 3) by the department by the statutory deadline, or that the number of units that have been issued building permits, as shown on the most recent production report received by the department, is less than the locality's share of the regional housing needs, by income category, for that reporting period. A locality shall remain eligible under this subparagraph until the department's determination for the next reporting period.

**(B)** The development is subject to a requirement mandating a minimum percentage of below market rate housing based on one of the following:

**(i)** The locality did not adopt a housing element pursuant to Section 65588 that has been found in substantial compliance with the housing element law (Article 10.6 (commencing with Section 65580) of Chapter 3) by the department, did not submit its latest production report to the department by the time period required by Section 65400, or that production report submitted to the department reflects that there were fewer units of above moderate-income housing issued building permits than were required for the regional housing needs assessment cycle for that reporting period. In addition, if the project contains more than 10 units of housing, the project does one of the following:

## Cal Gov Code § 65913.4

(I) For for-rent projects, the project dedicates a minimum of 10 percent of the total number of units, before calculating any density bonus, to housing affordable to households making at or below 50 percent of the area median income. However, if the locality has adopted a local ordinance that requires that greater than 10 percent of the units be dedicated to housing affordable to households making below 50 percent of the area median income, that local ordinance applies.

(II) For for-sale projects, the project dedicates a minimum of 10 percent of the total number of units, before calculating any density bonus, to housing affordable to households making at or below 80 percent of the area median income. However, if the locality has adopted a local ordinance that requires that greater than 10 percent of the units be dedicated to housing affordable to households making below 80 percent of the area median income, that local ordinance applies.

## (III)

(ia) If the project is located within the San Francisco Bay area, the project, in lieu of complying with subclause (I) or (II), may opt to abide by this subclause. Projects utilizing this subclause shall dedicate 20 percent of the total number of units, before calculating any density bonus, to housing affordable to households making below 100 percent of the area median income with the average income of the units at or below 80 percent of the area median income. However, a local ordinance adopted by the locality applies if it requires greater than 20 percent of the units be dedicated to housing affordable to households making at or below 100 percent of the area median income, or requires that any of the units be dedicated at a level deeper than 100 percent. In order to comply with this subclause, the rent or sale price charged for units that are dedicated to housing affordable to households between 80 percent and 100 percent of the area median income shall not exceed 30 percent of the gross income of the household.

(ib) For purposes of this subclause, "San Francisco Bay area" means the entire area within the territorial boundaries of the Counties of Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, and Sonoma, and the City and County of San Francisco.

(ii) The locality's latest production report reflects that there were fewer units of housing issued building permits affordable to either very low income or low-income households by income category than were required for the regional housing needs assessment cycle for that reporting period, and the project seeking approval dedicates 50 percent of the total number of units, before calculating any density bonus, to housing affordable to households making at or below 80 percent of the area median income. However, if the locality has adopted a local ordinance that requires that greater than 50 percent of the units be dedicated to housing affordable to households making at or below 80 percent of the area median income, that local ordinance applies.

(iii) The locality did not submit its latest production report to the department by the time period required by Section 65400, or if the production report reflects that there were fewer units of housing affordable to both income levels described in clauses (i) and (ii) that were issued building permits than were required for the regional housing needs assessment cycle for that reporting period, the project seeking approval may choose between utilizing clause (i) or (ii).

## (C)

(i) A development proponent that uses a unit of affordable housing to satisfy the requirements of subparagraph (B) may also satisfy any other local or state requirement for affordable housing, including local ordinances or the Density Bonus Law in Section 65915, provided that the development proponent complies with the applicable requirements in the state or local law.



If a local requirement for affordable housing requires units that are restricted to households with incomes higher than the applicable income limits required in subparagraph (B), then units that meet the applicable income limits required in subparagraph (B) shall be deemed to satisfy those local requirements for higher income units.

(ii) A development proponent that uses a unit of affordable housing to satisfy any other state or local affordability requirement may also satisfy the requirements of subparagraph (B), provided that the development proponent complies with applicable requirements of subparagraph (B).

(iii) A development proponent may satisfy the affordability requirements of subparagraph (B) with a unit that is restricted to households with incomes lower than the applicable income limits required in subparagraph (B).

(D) The amendments to this subdivision made by the act adding this subparagraph do not constitute a change in, but are declaratory of, existing law.

(5) The development, excluding any additional density or any other concessions, incentives, or waivers of development standards for which the development is eligible pursuant to the Density Bonus Law in Section 65915, is consistent with objective zoning standards, objective subdivision standards, and objective design review standards in effect at the time that the development is submitted to the local government pursuant to this section, or at the time a notice of intent is submitted pursuant to subdivision (b), whichever occurs earlier. For purposes of this paragraph, "objective zoning standards," "objective subdivision standards," and "objective design review standards" mean standards that involve no personal or subjective judgment by a public official and are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official before submittal. These standards may be embodied in alternative objective land use specifications adopted by a city or county, and may include, but are not limited to, housing overlay zones, specific plans, inclusionary zoning ordinances, and density bonus ordinances, subject to the following:

(A) A development shall be deemed consistent with the objective zoning standards related to housing density, as applicable, if the density proposed is compliant with the maximum density allowed within that land use designation, notwithstanding any specified maximum unit allocation that may result in fewer units of housing being permitted.

(B) In the event that objective zoning, general plan, subdivision, or design review standards are mutually inconsistent, a development shall be deemed consistent with the objective zoning and subdivision standards pursuant to this subdivision if the development is consistent with the standards set forth in the general plan.

(C) It is the intent of the Legislature that the objective zoning standards, objective subdivision standards, and objective design review standards described in this paragraph be adopted or amended in compliance with the requirements of Chapter 905 of the Statutes of 2004.

(D) The amendments to this subdivision made by the act adding this subparagraph do not constitute a change in, but are declaratory of, existing law.

(E) A project that satisfies the requirements of Section 65852.24 shall be deemed consistent with objective zoning standards, objective design standards, and objective subdivision standards if the project is consistent with the provisions of subdivision (b) of Section 65852.24 and if none of the square footage in the project is designated for hotel, motel, bed and breakfast inn, or other transient lodging use, except for a residential hotel. For purposes of this subdivision, "residential hotel" shall have the same meaning as defined in [Section 50519 of the Health and Safety Code](#).

(6) The development is not located on a site that is any of the following:

(A)



- (i) An area of the coastal zone subject to paragraph (1) or (2) of subdivision (a) of [Section 30603 of the Public Resources Code](#).
- (ii) An area of the coastal zone that is not subject to a certified local coastal program or a certified land use plan.
- (iii) An area of the coastal zone that is vulnerable to five feet of sea level rise, as determined by the National Oceanic and Atmospheric Administration, the Ocean Protection Council, the United States Geological Survey, the University of California, or a local government's coastal hazards vulnerability assessment.
- (iv) In a parcel within the coastal zone that is not zoned for multifamily housing.
- (v) In a parcel in the coastal zone and located on either of the following:
  - (I) On, or within a 100-foot radius of, a wetland, as defined in Section 30121 of the Public Resources Code.
  - (II) On prime agricultural land, as defined in [Sections 30113 and 30241 of the Public Resources Code](#).
- (B) Either prime farmland or farmland of statewide importance, as defined pursuant to United States Department of Agriculture land inventory and monitoring criteria, as modified for California, and designated on the maps prepared by the Farmland Mapping and Monitoring Program of the Department of Conservation, or land zoned or designated for agricultural protection or preservation by a local ballot measure that was approved by the voters of that jurisdiction.
- (C) Wetlands, as defined in the United States Fish and Wildlife Service Manual, Part 660 FW 2 (June 21, 1993).
- (D) Within a very high fire hazard severity zone, as determined by the Department of Forestry and Fire Protection pursuant to Section 51178, or within the state responsibility area, as defined in Section 4102 of the Public Resources Code. This subparagraph does not apply to sites that have adopted fire hazard mitigation measures pursuant to existing building standards or state fire mitigation measures applicable to the development, including, but not limited to, standards established under all of the following or their successor provisions:
  - (i) [Section 4291 of the Public Resources Code](#) or Section 51182, as applicable.
  - (ii) [Section 4290 of the Public Resources Code](#).
  - (iii) Chapter 7A of the California Building Code (Title 24 of the California Code of Regulations).
- (E) A hazardous waste site that is listed pursuant to Section 65962.5 or a hazardous waste site designated by the Department of Toxic Substances Control pursuant to [Section 25356 of the Health and Safety Code](#), unless either of the following apply:
  - (i) The site is an underground storage tank site that received a uniform closure letter issued pursuant to subdivision (g) of [Section 25296.10 of the Health and Safety Code](#) based on closure criteria established by the State Water Resources Control Board for residential use or residential mixed uses. This section does not alter or change the conditions to remove a site from the list of hazardous waste sites listed pursuant to Section 65962.5.
  - (ii) The State Department of Public Health, State Water Resources Control Board, Department of Toxic Substances Control, or a local agency making a determination pursuant to subdivision (c) of [Section 25296.10 of the Health and Safety Code](#), has otherwise determined that the site is suitable for residential use or residential mixed uses.
- (F) Within a delineated earthquake fault zone as determined by the State Geologist in any official maps published by the State Geologist, unless the development complies with applicable seismic protection building code standards adopted by the California Building Standards Commission under



# Wetlands Classification System

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**Citation:** 660 FW 2

**FWM Number:** 92

**Date:** Jun 21, 1993

**Originating Office:** Division of Environmental Review

**2.1 Purpose.** The purpose of this chapter is to provide guidance on using definitions and classifications of wetlands within the U.S. Fish and Wildlife Service (Service).

**2.2 Scope.** The Service's definition and classification system provides standardization of concepts and terms used to describe the biological limit of wetland types found in the United States, and is used nationwide by many Federal, State, and local agencies as part of the management of their wetland resources. In addition, other countries use this system as the basis for their own wetland definition and classification. However, there is not universal acceptance. Some Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner and extent than covered by this wetland definition and classification for their agency's regulatory purposes.

**2.3 Policy.** Service personnel will use the Service's wetlands definition and classification system to describe wetland resources.

## **2.4 Wetlands Definition and Classification System.**

**A. Reference.** The Service's wetlands definition and classification system is found in "Classification of Wetlands and Deepwater Habitats of the United States" by L.M. Cowardin, V. Carter, F.C. Golet, and E.T. LaRoe, which was published by the Service in 1979 (FWS/OBS-79/31, 131pp.)

**B. Adoption.** The system was officially adopted by the Service on September 15, 1980. The document is authorized as a handbook to the FWM and may be changed only by the Director.

**C. Supersession.** The current system superseded "Wetlands of the United States" by S.P. Shaw and C.G. Fredine which was published by the Service in 1956 (FWS Circular 39.)

**D. Availability.** Due sustained high demand, the publication was reprinted in 1992. Copies for official use are available from the Service Publications Unit (OTE) located in Arlington, Virginia. Regional and Field Offices also have copies. Copies are available for sale from: Superintendent of Documents, U.S.

## 2.5 Definitions.

**A. Wetlands.** Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (plants specifically adapted to live in wetlands); (2) the substrate is predominantly undrained hydric (wetland) soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

**B. Classification System.** The classification system is structured as a hierarchy in which descriptive categories proceed from the general to the specific. These categories are: System, Subsystem, Class, Subclass, Dominance Type, and Modifiers.

**(1) System.** A System is a complex of wetlands and deep water habitats that share the influence of similar hydrologic, geomorphic, chemical, or biological factors. There are five Systems: Marine, Estuarine, Riverine, Lacustrine, and Palustrine.

**(2) Subsystem.** A Subsystem is a subdivision of the System category that further describes the System in terms of the degree of submergence, water level, water gradient, water velocity, type of substrate, or extent of floodplain development. The Palustrine System, which contains most of the freshwater wetlands found in the United States, does not have a Subsystem.

**(3) Class.** The Class describes the general appearance of the habitat in terms of either the dominant life form of the vegetation or the physiography and composition of the substrate. For example, Classes under the Palustrine System are: Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Unconsolidated Shore, Moss-Lichen Wetland, Emergent Wetland, Scrub-Shrub Wetland, and Forested Wetland.

**(4) Subclass.** The Subclass describes finer differences in life forms or non-vegetated substrates and is named on the basis of the predominant life form or substrate type present. For example, Subclasses under the Forested Wetland Class are: Broad-Leaved Deciduous, Needle-leaved Deciduous, Broad-Leaved Evergreen, Needle-Leaved Evergreen, and Dead.

**(5) Dominance Type.** The Dominance Type is based upon the dominant plant or animal species. In the Palustrine Forested Wetland classification, examples of Dominance Types under the Broad-Leaved Deciduous Subclass are: red maple (*Acer rubrum*) and swamp white oak (*Quercus bicolor*).

**(6) Modifiers.** Modifiers are applied at the Class level and below to more accurately describe a wetland. These Modifiers are: Water Regime, Water Chemistry, Soil, and Special Modifiers.

**(a) Water Regime.** The Water Regime Modifiers are grouped under two major headings: tidal or nontidal. Each is further divided to describe the periodicity of surface inundation. Examples of Water Regime Modifiers under the nontidal heading are: Permanently Flooded, Intermittently Exposed, Semipermanently Flooded, Seasonally Flooded, Saturated, Temporarily Flooded, Intermittently Flooded, and Artificially Flooded.

**(b) Water Chemistry.** The Water Chemistry Modifiers are divided into salinity or hydrogen ion concentration (pH) categories. Salinity Modifiers are grouped into coastal and inland categories. The Salinity Modifiers for inland areas are: Hypersaline, Eusaline, Mixosaline, and Fresh. Hydrogen ion concentration modifiers are: Acid, Circumneutral, and Alkaline.

**(c) Soil.** The Soil Modifiers are either mineral or organic soil.

**(d) Special Modifiers.** Special Modifiers are used to describe wetlands that are man-made or have been altered by the activities of man or beavers. Examples of Special Modifiers are: Excavated, Impounded, Diked, Partly Drained, Farmed, or Artificial.

**C. Geomorphic.** The term geomorphic means of or relating to the form of the earth or its solid surface features.

**D. Lacustrine.** The Lacustrine System includes wetlands and deep water habitats with all of the following characteristics:

**(1)** situated in a topographic depression or a dammed river channel; **(2)** lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; and **(3)** total area exceeds 8 ha (20 acres). Similar wetland and deepwater habitats totaling less than 8 ha are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin exceeds 2 m (6.6 feet) at low water. Lacustrine waters may be tidal or nontidal, but ocean-derived salinity is always less than 0.5 parts per thousand.

**E. Palustrine.** The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 parts per thousand. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: **(1)** area less than 8 ha (20

acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 m (6.6 feet) at low water; and (4) salinity due to ocean-derived salts is less than 0.5 parts per thousand.

**F. Eusaline.** Eusaline is the term used to characterize waters with salinity of 30 to 40 parts per thousand due to land-derived salts.

**G. Mixosaline.** Mixosaline is the term used to characterize waters with salinity of 0.5 to 30 parts per thousand due to land-derived salts.

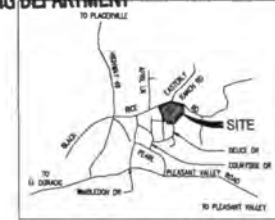




# RECEIVED

NOV 14 2024

## EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT



VICINITY MAP  
NEXT TO SCALE

### PROJECT INFORMATION

**DEVELOPER/APPLICANT**  
ONE FOUNDATION  
8715 LINDEN VILLAGE DRIVE, SUITE 101  
SACRAMENTO, CA 95827  
916-444-4800  
CONTACT: SERGIO BUEZANO

### PLANNING & ENGINEERING

MILLENNIUM PLANNING & ENGINEERING  
4715 SUTTER BLVD, SUITE 210  
DANFORTH, CA 94618  
530-448-6703  
CONTACT: JILLIAN SPARKS, P.E.

### SITE ADDRESS

750 BLACK RICE ROAD  
PLACERVILLE, CA 95667

### APN

021-087-008

### SITE AREA

PARCEL 8 = 3.71 ACRES

### GENERAL PLAN

RP - REGIONAL RESIDENTIAL  
MR - METRO DENSITY RESIDENTIAL

### ZONING

RP - REGIONAL RESIDENTIAL  
MR - METRO DENSITY RESIDENTIAL

### WATER SERVICE

EL DORADO REGIONAL DISTRICT

### ELECTRIC SERVICE

PG&E

### SEWER SERVICE

EL DORADO REGIONAL DISTRICT

### GAS

PG&E

### SCHOOL DISTRICT

EL DORADO DISTRICT

### FIRE PROTECTION

EL DORADO DISTRICT

### BASIS OF ELEVATIONS

MEAN SEA LEVEL 1287.00 (2008)

### BENCHMARK

DATA POINT PLANT, SHEET 1, 640.42

### BUILDINGS

(1) BUILDING (2) BEDROOM (1) BEDROOM  
(2) BUILDING (2) BEDROOM (2) BEDROOM

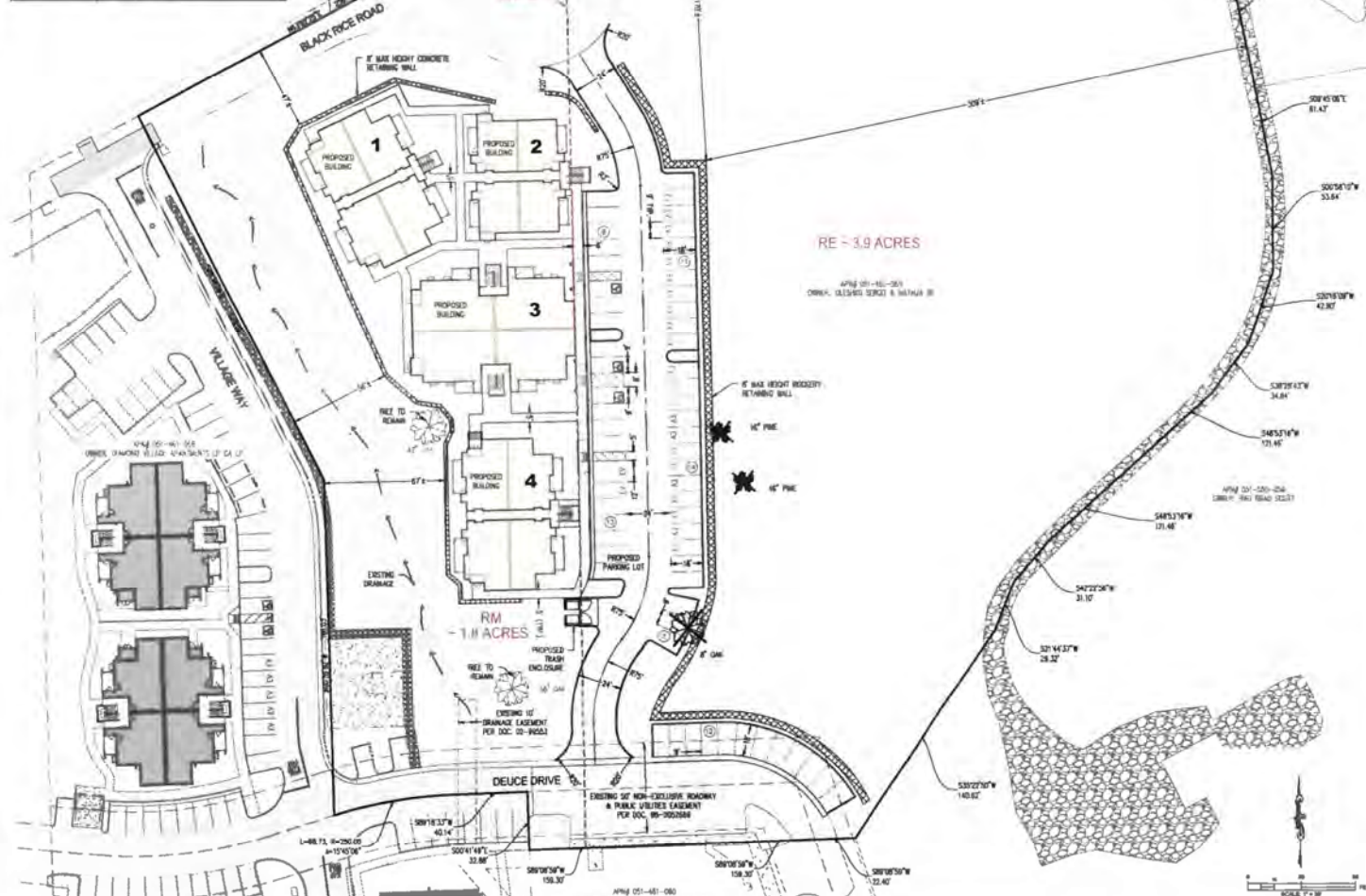
### PARKING STATISTICS

PARKING SPACES: 24, 2, 24, 81

### SHEET INDEX

C1.0 PRELIMINARY SITE PLAN  
C2.0 PRELIMINARY GRADING & DRAINAGE PLAN  
C3.0 PRELIMINARY UTILITY PLAN

| LEGEND |                                   |
|--------|-----------------------------------|
|        | PROPERTY LINE                     |
|        | PROPOSED VERTICAL CURVE           |
|        | PROPOSED CURB AND GUTTER          |
|        | EXISTING DRAINAGE                 |
|        | EXISTING ROADWAY AREA             |
|        | PROPOSED SIDEWALK                 |
|        | PROPOSED ASPHALT PAVEMENT         |
|        | SLOPES TO REMOVE (SLOPES REMOVED) |
|        | PROPOSED RETAINING WALL           |
|        | EXISTING ZONING LINE              |
|        | EXISTING EASEMENT                 |



APPROVED

EL DORADO COUNTY  
PLANNING COMMISSION

DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

*RCR*

DR24-0008/Diamond Springs Village Apartments - Phase II  
Exhibit R - Preliminary Site Plan

MILLENNIUM  
PLANNING & ENGINEERING

4715 SUTTER BLVD, SUITE 210  
DANFORTH, CA 94618  
530-448-6703

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# DIAMOND VILLAGE APARTMENTS II

750 BLACK RICE ROAD, EL DORADO COUNTY, CALIFORNIA  
APN# 051-461-069



## PARKING LOT SHADE CALCULATIONS

| Tree: Pistache/Oak         |     |     |                   |
|----------------------------|-----|-----|-------------------|
| Coverage                   | Qty | sf  | Total Square Feet |
| 100%                       | 1   | 962 | 962               |
| 75%                        | 0   | 721 | 0                 |
| 50%                        | 15  | 481 | 7,215             |
| 25%                        | 0   | 240 | 0                 |
| Total Shade Provided:      |     |     | 8,177             |
| Parking Surface Area:      |     |     | 15,898            |
| Shade Percentage Provided: |     |     | 51.4%             |

## PRELIMINARY LANDSCAPE NOTES

1. PLANTING SHALL CONFORM TO LOCAL REQUIREMENTS FOR LANDSCAPE SITE DEVELOPMENT.
2. FINAL PLANTING AND IRRIGATION DESIGN PLANS SHALL BE PROVIDED DURING THE PERMIT PHASE OF DESIGN.
3. ALL EXISTING TREES SHALL BE PROTECTED FROM DAMAGE OR INJURY.
4. NO PARKING OR STACKING OF CONSTRUCTION MATERIAL IS ALLOWED WITHIN THE DRIFPING OF AN EXISTING TREE.
5. ALL PLANT MATERIAL SHALL COMPLY WITH ANSI Z601 'STANDARD FOR NURSERY STOCK'.
6. ROOT BARRIERS SHALL BE PROVIDED FOR ALL TREES WITHIN ANY PLANTING AREAS THAT ARE LESS THAN 10' WIDE.
7. ALL PLANTER AREAS SHALL RECEIVE A 3" LAYER OF BARK MULCH.
8. A SOIL TEST SHALL BE PROVIDED DURING CONSTRUCTION (AFTER GRADING OPERATIONS ARE CONCLUDED) TO DETERMINE SOIL FERTILITY AND ACTUAL SOIL AMENDMENTS TO BE ADDED DURING PLANTING.
9. NO TURF IS PROPOSED.
10. NATURAL SLOPES ON SITE DO NOT EXCEED 5% IN ELEVATION.

## PLANT LEGEND

| SYM   | BOTANICAL/ COMMON NAME                                 | SIZE    | QTY | WATER USE | HTxWD    |
|---|--|---------|-----|-----------|----------|
|   | TREES  |         |     |           |          |
|   | OLEA EUROPAEA 'WILSONII' / FRUITLESS OLIVE (EVERGREEN) | 15 GAL  | 9   | LOW/MED   | 18'x18'  |
|   | LAGERSTROEMIA NATCHEZ/ CRAPE MYRTLE                    | 15 GAL  | 5   |           |          |
|   | PRUNUS CERASIFERA 'KRAUTER VESUVIUS' / FLOWERING PLUM  | 15 GAL  | 6   |           |          |
|   | PISTACHIA CHINENSIS/ CHINESE PISTACHE                  | 15 GAL  | 10  | LOW       | 35'x35'  |
|   | QUERCUS WILSONII/ INTERIOR LIVE OAK (EVERGREEN)        | 24" BOX | 12  |           |          |
| NOTE: 42 TREES PROPOSED. 50% (21) EVERGREEN SPECIES REQUIRED. 21 EVERGREEN SPECIES PROPOSED (OLIVE AND OAK) |  |         |     |           |          |
|   | SHRUBS   |         |     |           |          |
|   | CRISTUS LADANIFER/ CRIMSON SPOT ROCKROSE               | 5 GAL   | 60  | LOW       | 4'x4'    |
|   | MAHONIA AQUIFOLIA/ OREGON GRAPE                        | 1 GAL   | 188 | LOW       | 36"x36"  |
|   | IRIS DOUGLASSIANA/ DOUGLAS IRIS                        | 1 GAL   | 49  | LOW       | 24"x24"  |
|   | LAVANDULA ANGUSTIFOLIA/ ENGLISH LAVENDER               | 5 GAL   | 40  | LOW       | 3'x3'    |
|   | MUEHLENBERGIA RIGENS/ DEER GRASS                       | 5 GAL   | 145 | LOW       | 4'x4'    |
|   | NANDINA 'GULF STREAM' / COMPACT HEAVENLY BAMBOO        | 1 GAL   | 50  | LOW       | 30"x30"  |
|   | ROSMARINUS OFFICINALIS TUSCAN BLUE/ ROSEMARY           | 1 GAL   | 28  | LOW       | 5'x3'    |
|   | GROUND COVER   |         |     |           |          |
|   | ACHILLEA MILLEFOLIUM / YARROW                          | 1 GAL   | --  | LOW       | 18" O.C. |
|   | HELICTOTRICHON SEMPERVIRENS / BLUE OAT GRASS           | 1 GAL   | --  | LOW       | 36" O.C. |
|   | ROSMARINUS OFFICINALIS 'PROSTRATUS' / DWARF ROSEMARY   | 1 GAL   | --  | LOW       | 48" O.C. |
| NOTE: ALL SHRUBBERY SPECIES PROPOSED ARE EVERGREEN SELECTIONS PER THE COUNTY APPROVED PLANT LIST.           |  |         |     |           |          |

## PRELIMINARY LANDSCAPE PLAN

DECEMBER 11, 2024

APPROVED

EL DORADO COUNTY  
PLANNING COMMISSION

DATE: January 9, 2025

EXECUTIVE SECRETARY: Karen L. Garner

DR24-0008/Diamond Springs Village Apartments - Phase II  
Exhibit S - Preliminary Landscaping Plans

SHEET

P1

OF

TOTAL

1

