1. Install streetlight standards at intersections including "L" and "T" types. Per standard drawings 301 through 310 in accordance with the appropriate right-of-way.

2. Street classification, the respective lighting levels, and streetlight standard application is listed in Table 1 below. Actual luminaire wattage and/or streetlight standard spacing may be varied by the engineer, when supported by an approved lighting study in accordance with the IES recommended practice for roadway lighting in order to meet current and future traffic control needs and approved by the respective agency. For LED fixtures, average levels are maintained levels at a 0.92 maintenance factor in footcandles measured horizontally at ground level.

3. New streetlight standards installed adjacent to or opposite from existing streetlights shall match the existing location, spacing, pole and luminaire types unless otherwise directed by the engineer.

4. Streetlight standards installed on 60' or less right-of-ways may be installed on either side of roadway as directed by the engineer.

5. Traffic signal foundations and adaptor plates may be required at intersections as directed by the engineer.

6. At least one streetlight shall be required in the bulb section of a cul-de-sac or hammerhead. Location shall be as required by the engineer.

7. For a specific fixture to be approved, an independent evaluation with the AGi32 lighting modeling software program (or other software approved by the agency) shall be submitted for review by the agency. The IES photometric file shall be loaded into the model and all requisite inputs shall conform to the location, height, and other associated factors designated in drawings 301 through 310 in accordance with the appropriate right-of-way.

<table>
<thead>
<tr>
<th>ROADWAY CLASS</th>
<th>R.O.W. WIDTHS</th>
<th>ROADWAY LIGHTING ILLUMINANCE LEVELS</th>
<th>SIDEWALK / WALKWAY ILLUMINANCE LIGHTING LEVELS</th>
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</thead>
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<tr>
<td></td>
<td>MIN. AVG. UNIFORMITY AVG./MIN.</td>
<td>MIN. ILLUMINANCE</td>
<td>UNIFORMITY AVG./MIN.</td>
</tr>
<tr>
<td>ARTERIAL</td>
<td>100' OR GREATER</td>
<td>1.58 FC</td>
<td>3:1</td>
</tr>
<tr>
<td>MAJOR COLLECTOR</td>
<td>80' TO 99'</td>
<td>0.84 FC</td>
<td>4:1</td>
</tr>
<tr>
<td>MINOR COLLECTOR</td>
<td>60' TO 79'</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
<tr>
<td>RESIDENTIAL</td>
<td>51' OR LESS</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
</tbody>
</table>

Table 1

Required illuminance values for roadways

Agency Approved B C H L M N

Specification Reference

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

Supplemental Drawing

Streetlight location
L.E.D. Lighting Standards
And General Notes

Date 07-01-14 DWG. No. 300.S3 Sheet 1 of 2
8. FOR EACH FIXTURE ASSESSED, UPON DEMONSTRATION OF THE ADEQUATE ILLUMINATION CAPABILITY THROUGH THE COMPUTER MODEL ON THE SPECIFIC ROADWAY TYPE, THE VENDOR SHALL DELIVER THE REQUESTED NUMBER OF LUMINAIRES OF THAT TYPE FOR FURTHER AGENCY EVALUATION. THEY WILL BE EVALUATED ON THE CRITERIA NOTED IN THE FOLLOWING SECTION, THROUGH THE AGENCY MAY INCLUDE ADDITIONAL REQUIREMENTS. FINAL APPROVAL AND ACCEPTANCE OF THE RESPECTIVE LUMINAIRES FOR A SPECIFIC APPLICATION SHALL BE AT THE SOLE DISCRETION OF THE PURCHASING AGENCY.

9. THE FOLLOWING LIST REPRESENTS THE CRITERIA UPON WHICH EACH LUMINIAIRE SHALL BE EVALUATED. THE AGENCY MAY INCLUDE ADDITIONAL ITEMS FOR EVALUATION AT ITS SOLE DISCRETION.

- COLOR RENDERING INDEX
- ENERGY EFFICIENCY
- AESTHETICS
- QUALITY OF CONSTRUCTION
- WEATHERPROOFING
- IP65 RATING
- DURABILITY
- EASE OF MAINTENANCE
- EASE OF INSTALLATION
- WEIGHT
- POWER CONSUMPTION
- COLOR TEMPERATURE (CCT)
- LIFE OF FIXTURE AND INDIVIDUAL COMPONENTS
- LENGTH OF WARRANTY LUMINAIRE FIXTURE, LED’S, AND BALLAST
- INITIAL COST
- LIFE CYCLE COST
- LM 79, LM 80
- BUG RATING (BACKLIGHTING, UPLIGHTING, GLARE)
- TRANSIENT VOLTAGE SURGE SUPPRESSION - SPD (SURGE PROTECTION DEVICE)

### TABLE 2

#### REQUIRED ILLUMINANCE VALUES FOR SIGNALIZED INTERSECTIONS

<table>
<thead>
<tr>
<th>ROADWAY CLASS</th>
<th>R.O.W. WIDTHS</th>
<th>MIN. AVE. ILLUMINANCE BY PEDESTRIAN AREA CLASSIFICATION</th>
<th>SIDEWALK / WALKWAY LIGHTING LEVELS</th>
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<tbody>
<tr>
<td></td>
<td>HIGH</td>
<td>MEDIUM</td>
<td>LOW</td>
</tr>
<tr>
<td>ARTERIAL / ARTERIAL</td>
<td>100' OR GREATER BY 100' OR GREATER BY</td>
<td>3.4 FC</td>
<td>2.6 FC</td>
</tr>
<tr>
<td>ARTERIAL / MAJOR COLLECTOR</td>
<td>100' OR GREATER BY 80' OR GREATER BY</td>
<td>2.9 FC</td>
<td>2.2 FC</td>
</tr>
<tr>
<td>ARTERIAL / MINOR COLLECTOR - RESIDENTIAL</td>
<td>100' OR GREATER BY 79' OR LESS</td>
<td>2.6 FC</td>
<td>2.0 FC</td>
</tr>
<tr>
<td>MAJOR COLLECTOR / MAJOR COLLECTOR</td>
<td>80' - 99' BY 80' - 99'</td>
<td>2.4 FC</td>
<td>1.8 FC</td>
</tr>
<tr>
<td>MAJOR COLLECTOR / RESIDENTIAL</td>
<td>80' - 99' BY 79' OR LESS</td>
<td>2.1 FC</td>
<td>1.6 FC</td>
</tr>
</tbody>
</table>

### SPECIFICATION REFERENCE

- UNIFORM STANDARD DRAWINGS
  - CLARK COUNTY AREA
- SUPPLEMENTAL DRAWING
- STREETLIGHT LOCATION
  - L.E.D. LIGHTING STANDARDS AND GENERAL NOTES

<table>
<thead>
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<th>DATE</th>
<th>DWG. NO.</th>
<th>SHEET</th>
</tr>
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<tbody>
<tr>
<td>07-01-14</td>
<td>300.S3</td>
<td>2</td>
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