



## ADDENDUM NO. 1

**WASHINGTON STATE PARKS AND RECREATION COMMISSION  
CAPE DISAPPOINTMENT STATE PARK  
WELCOME CENTER AND ENTRANCE IMPROVEMENTS  
SW-C1124**

DATE: July 21, 2025

**ATTENTION TO PLANHOLDERS OF RECORD.** The following revisions are hereby made a part of the Contract Documents. Please be sure to acknowledge all Addenda on the Bid Form.

### **PROJECT MANUAL**

#### **I. CHANGES TO THE SPECIFICATIONS**

The following addition to the Project manual shall be incorporated into the bid proposal and subsequent construction:

Add Section 265100 - Lighting

Attachments:

— Section 265100 - Lighting (10 pages)

*Brett Taylor*

Brett Taylor, Procurement Coordinator  
Contracts and Grants Program

07/21/25

Date

**END OF ADDENDUM NO. 1**

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**SECTION 265100 – LIGHTING**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Work Included:
  - 1. Luminaires
  - 2. LED Drivers
  - 3. Lamps
- B. Provide wiring for complete and operating lighting system.

**1.02 RELATED SECTIONS**

- A. Contents of Division 26, Electrical and Division 01, General Requirements apply to this Section.

**1.03 REFERENCES AND STANDARDS**

- A. References and Standards as required by Section 260000, Electrical Basic Requirements and Division 01, General Requirements.
- B. In addition, meet the following:
  - 1. NECA 500 – Commercial Lighting.
  - 2. UL 8750 – Light Emitting Diode (LED) equipment for use in lighting products.

**1.04 SUBMITTALS**

- A. Submittals as required by Section 260000, Electrical Basic Requirements and Division 01, General Requirements.
- B. In addition, provide:
  - 1. Submit product data for:
    - a. LED Luminaires: Electrical ratings, dimensions, mounting, material, clearances, terminations, wiring, connection diagram, LM-79 photometric data, LM-80 lumen depreciation data.
    - b. LED Drivers
    - c. Lamps
  - 2. Submittal Cutsheets: Highlight, circle or otherwise graphically indicate which option(s) are being selected for the products submitted. Cutsheets that are not edited to indicate

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which products and options are submitted for this project or that list only catalog numbers to identify submitted options are not acceptable.

3. Specified manufacturers are approved to submit bid. However, inclusion does not relieve manufacturer from supplying product as described.
4. Provide the following operating and maintenance instructions as required by Section 260000, Electrical Basic Requirements:
  - a. Luminaires
  - b. LED Drivers
  - c. Lamps

**1.05 QUALITY ASSURANCE**

- A. Quality assurance as required by Section 260000, Electrical Basic Requirements and Division 01, General Requirements.
- B. In addition, meet the following:
  1. Provide luminaires acceptable to code authority for application and location installed.
  2. Comply with applicable ANSI standards.
  3. Comply with applicable NEMA standards.
  4. Provide luminaires and lampholders that comply with UL standards and have been listed and labeled for location and use indicated by a testing agency acceptable by the AHJ (e.g., UL, ETL, and the like).
  5. Comply with NEC as applicable to installation and construction of luminaires.
  6. Comply with fallout and retention requirements of IBC for diffusers, baffles, and louvers.
  7. Provide LED luminaires from the same manufacturer and manufacturing LED source batch for similar applications (e.g., all LED downlights from a single manufacturer and batch, all linear LED products from single manufacturer and batch).

**1.06 WARRANTY**

- A. Warranty as required by Section 26 00 00, Electrical Basic Requirements and Division 01, General Requirements.
- B. In addition, provide:
  1. LED Luminaire Manufacturer's Warranty: Not less than 5 years for luminaire based on date of substantial completion. Includes normal cost of labor to replace luminaire. Replacement luminaire will match physical dimensions, physical appearance, chromaticity, lumen output and photometric characteristics of original installed equipment.

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**PART 2 - PRODUCTS**

**2.01 MANUFACTURERS**

**A. Luminaires:**

1. Reference description and manufacturers in Luminaire Schedule on Drawings.
2. Or approved equivalent.

**B. LED Drivers:**

1. Indoor Drivers:
  - a. eldoLED Series
  - b. Advance/Philips
  - c. Osram Sylvania
  - d. Or approved equivalent.
2. Outdoor Drivers:
  - a. Advance/Philips
  - b. Osram Sylvania
  - c. LG
  - d. Or approved equivalent.

**C. Lamps:**

1. LED (Light Emitting Diode) Lamps:
  - a. Nichia
  - b. Cree
  - c. Osram Sylvania
  - d. GE Lumination
  - e. Or approved equivalent.
2. Unless specific manufacturer not shown on this list is indicated in the Luminaire Schedule.
3. Special types as indicated in Luminaire Schedule.
4. Or approved equivalent.

**2.02 LUMINAIRES**

- A. Luminaires: Reference description and manufacturers in Luminaire Schedule on Drawings.
- B. Where recessed luminaires are installed in cavities intended to be insulated, provide IC rated luminaires or other code approved installation.
- C. UL label luminaires installed under canopies, roof or open porches, and similar damp or wet locations, as suitable for damp or wet location.

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- D. Suspended luminaires: Provide minimum 24-inch adjustability in aircraft cable length where used.
- E. Recessed Luminaires: Frame compatible with ceiling material installed at particular luminaire location. Provide proper factory trim and frame for luminaire to fit location and ceiling material. Verify with Architectural Reflected Ceiling Plan prior to submittals.
- F. Finishes:
  - 1. Manufacturer's standard finish (unless otherwise indicated) over corrosion resistant primer.
  - 2. Interior Light Reflecting Finishes: White or specular finish with not less than 85 percent reflectance.
  - 3. Exterior Finishes: As detailed in Luminaire Schedule or on Drawings. Refer cases of uncertain applicability to Architect for resolution prior to release for fabrication.
- G. Light Transmitting Components:
  - 1. Plastic diffusers, molded or extruded of 100 percent virgin acrylic.
  - 2. Prismatic acrylic, extruded, flat diffusers, 0.125-inch overall thickness, unless otherwise noted.
- H. LED Luminaires:
  - 1. UL listing of luminaire includes drivers, transformers, enclosures, rated wire, communications devices and accessories needed for a complete and functional system.
  - 2. LM-79: Testing and measurement of absolute photometry, chromaticity (CCT) and luminaire power. Report provided by DOE certified independent testing laboratory. CCT as specified in Luminaire Schedule.
  - 3. Standards: ANSI C78.377, LM-79 and LM-82 compliant for performance characteristics, photometry, colorimetry, efficacy and thermal characteristics.
  - 4. LM-80 + TM-21: Testing and measurement, and statistical prediction of LED lamp life. Report provided by DOE certified independent testing laboratory.
  - 5. LEDs in one module/luminaire: Supplied from same batch/bin and fall within 3-step MacAdam Ellipse, or as described in Luminaire Schedule, whichever is the more stringent requirement.
  - 6. Provide luminaires with integral LED thermal management system (heat sinking).
  - 7. Luminaires to be equipped with an LED driver that accepts 120V through 277V, 50Hz to 60Hz (universal). Component-to-component wiring within the luminaire will carry no more than 80 percent of rated current and be listed by UL for use at 600VAC at 302 degrees F/150 degrees C or higher. Plug disconnects to be listed by UL for use at 600VAC, 15A or higher.
  - 8. Provide luminaires with individual LED arrays/modules and drivers that are accessible and replaceable from exposed side of the luminaire.

**2.03 LED DRIVERS**

- A. General:

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1. Performance: Meet dimming range called out in Luminaire Schedule, free from perceived flicker or visible stroboscopic flicker, smooth and continuous change in level (no visible steps in transitions), natural square law response to control input, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment. Demonstration of this compliance to dimming performance will be necessary for substitutions or prior approval.
  2. Ten-year expected life while operating at maximum case temperature and 90 percent non-condensing relative humidity.
  3. Minimum efficiency of 85 percent, power factor greater than or equal to 0.90, compliance with reduction of hazardous substances (RoHS). Rated for operating temperature range of area in which driver is installed.
  4. Limit inrush current to minimize breaker tripping.
    - a. Base specification: NEMA 410 standard for inrush current for electronic drivers.
    - b. Preferred Specification: Meet or exceed 30 milliamp-squared-seconds at 277VAC for up to 50 watts of load and 75 amps at 240 microseconds at 277VAC for 100 watts of load.
  5. Withstand up to a 1,000 volt surge without impairment of performance as defined by ANSI C62.41 Category A.
  6. No visible change in light output with a variation of plus/minus 10 percent line voltage input.
  7. Total Harmonic Distortion less than 10 percent and meet ANSI C82.11 maximum allowable THD requirements at full output. THD at no point in the dimming curve allows imbalance current to exceed full output THD.
  8. Support automatic adaptation, allowing for future luminaire upgrades and enhancements and deliver improved performance:
    - a. Adjustment of forward LED voltage, supporting 3V through 55V.
    - b. Adjustment of LED current from 150mA to 1.4A at the 100 percent control input point in increments of 1mA.
    - c. Adjustment for operating hours to maintain constant lumens (within 5 percent) over the 50,000 hour design life of the system, and deliver up to 20 percent energy savings early in the life cycle.
  9. Operate for a (+/- 10 percent) supply voltage of 120V through 277VAC at 60Hz.
  10. UL Recognized under the component program and modular for simple field replacement. Drivers that are not UL Recognized or not suited for field replacement will not be considered.
  11. Ability to provide no light output when the analog control signal drops below 0.3 V, or the DALI/DMX digital signal calls for light to be extinguished and consume 0.5 watts or less in this standby. Control dead band between 0.3V and 0.65V included to allow for voltage variation of incoming signal without causing noticeable variation in luminaire to luminaire output.
- B. Light Quality:
1. Over the entire range of available drive currents, driver to provide step-free, continuous dimming to black from 100 percent to 0.1 percent and 0 percent relative light output, or 100 percent to 1 percent light output and step to 0 percent where indicated. Driver to respond similarly when raising from 0 percent to 100 percent.

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- a. Driver must be capable of 20 bit dimming resolution for white light LED drivers or 15 bit resolution for RGBW LED drivers.
  2. Driver must be capable of configuring a linear or logarithmic dimming curve, allowing fine grained resolution at low light levels.
  3. Drivers to track evenly across multiple luminaires at all light levels, and must have an input signal to output light level that allows smooth adjustment over the entire dimming range.
  4. Driver and luminaire electronics to deliver illumination that is free from objectionable flicker as measured by flicker index (ANSI/IES RP-16-10). At all points within the dimming range from 100 percent to 0.1 percent luminaire will have:
    - a. LED dimming driver to provide continuous step-free, flicker free dimming similar to incandescent source.
    - b. Base specification: Based on IEEE PAR1789, minimum output frequency should be greater than 1250 Hz.
    - c. Preferred specification: Flicker index to be equal to incandescent, less than 1 percent at all frequencies below 1000 Hz.
- C. Control Input:
1. Provide control protocol to match lighting control system specified for use with luminaire.
  2. 4-Wire (0-10V DC Voltage Controlled) Dimming Drivers:
    - a. Meet IEC 60929 Annex E for General White Lighting LED drivers.
    - b. Connect to devices compatible with 0 to 10V Analog Control Protocol, Class 2, capable of sinking 0.6 ma per driver at a low end of 0.3V. Limit the number of drivers on each 0-10V control output based on voltage drop and control capacity.
    - c. Meet ESTA E1.3 for RGBW LED drivers.

**2.04 LAMPS**

- A. Provide lamps for luminaires.
- B. Provide lamp catalogued for specified luminaire type.
- C. Incandescent Lamps: Not allowed unless noted in Luminaire Schedule.
- D. LED (Light Emitting Diode):
  1. LED manufacturer will include, but not be limited to, light source, luminaire, power supply and control interface with added components as needed for complete and functioning system.
    - a. Comply with ANSI chromaticity standard for classifications of color temperature. See Luminaire Schedule for specified LED lamp color and color temperature. UL or ETL listed and labeled.
    - b. Luminaire testing per IESNA LM-79 and LM-80 procedures.

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- c. Lamp life for white LEDs: 50,000 plus hours with lamp failure occurring when LED produces 70 percent of initial rated lumens.
  - d. Lamp life for color LEDs: 30,000 plus hours with lamp failure occurring when LED produces 50 percent of its initial rated lumens.
  - e. LED Drivers: Reverse polarity protection, open circuit protection, require no minimum load. Minimum 80 percent efficiency. Class A noise rating.
  - f. Dimming: LED system capable of full and continuous dimming.
  - g. Correlated Color Temperature (CCT): See Luminaire Schedule for selection of color temperature for each luminaire. Ranges given below reflect maximum allowable tolerances for color temperature range for each nominal CCT.
    - 1) Nominal CCT:
      - (a) 2700 K ( $2725 \pm 145$ )
      - (b) 3000 K ( $3045 \pm 175$ )
      - (c) 3500 K ( $3465 \pm 245$ )
      - (d) 4000 K ( $3985 \pm 275$ )
  - h. Color Rendering Index (CRI) to be greater than or equal to 80.
2. Special types as indicated in Luminaire Schedule.

**PART 3 - EXECUTION**

**3.01 GENERAL INSTALLATION REQUIREMENTS**

- A. Install per manufacturer's written installation instructions and requirements.
- B. Install luminaires securely, in neat and workmanlike manner.
- C. Install luminaires of types indicated where shown and at indicated heights in accordance with manufacturer's written instructions and with recognized industry practices to ensure that luminaires comply with requirements and serve intended purposes.
- D. Wiring:
  - 1. Recessed luminaires to be installed using flexible metallic conduit with luminaire conductors spliced to branch circuit conductors in nearby accessible junction box over ceiling. Junction box fastened to building structural member within 6-feet of luminaire.
  - 2. Luminaires for lift out and removal from ceiling pattern without disconnecting conductors or defacing ceiling materials.
  - 3. Flexible connections where permitted to exposed luminaires; neat and straight, without excess slack, attached to support device.
  - 4. Install junction box, flexible conduit and high temperature insulated conductors for through wiring of recessed luminaires.
- E. Relamp luminaires which have failed lamps at substantial completion.
- F. Replace LED drivers deemed as excessively noisy by Architect, Engineer, or Owner.



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- G. Install suspended luminaires and exit signs using pendants supported from swivel hangers. Provide pendant length required to suspend luminaire at indicated height.
- H. Support luminaires larger than 2- by 4-foot size independent of ceiling framing.
- I. Locate recessed ceiling luminaires as indicated on architectural reflected ceiling plan.
- J. Install surface mounted luminaires and exit signs plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- K. Exposed Grid Ceilings:
  - 1. Support surface mounted luminaires in grid ceiling directly from building structure.
  - 2. Provide auxiliary members spanning ceiling grid members to support surface mounted luminaires.
  - 3. Fasten surface mounted luminaires to ceiling grid members using bolts, screws, rivets, or suitable clips.
- L. Install recessed luminaires to permit removal from below.
- M. Install recessed luminaires using accessories and firestopping materials to meet regulatory requirements for fire rating.
- N. Install clips to secure recessed grid-supported luminaires in place.
- O. Install wall mounted luminaires, emergency lighting units, and exit signs at height as indicated on Architectural Drawings.
- P. Install accessories furnished with each luminaire.
- Q. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.
- R. Bond products and metal accessories to branch circuit equipment grounding conductor.
- S. Install specified lamps in each emergency lighting unit, exit sign, and luminaire.
- T. Where manufactured wiring assemblies are used, ensure that wiring assembly manufacturer sends components to appropriate luminaire manufacturer for respective installation of proper components.
- U. Coordination:
  - 1. Coordination of Conditions: Coordinate ceiling construction, recessing depth and other construction details prior to ordering luminaires for shipment. Refer cases of uncertain applicability to Architect for resolution prior to release of luminaires for shipment. Where luminaires supplied do not match ceiling construction, replace luminaires at no cost to Owner.
  - 2. Electrical drawings are schematic, identifying quantity and type of luminaires used and their approximate location, but are not to be used for dimensional purposes. Reference architectural drawings for exact locations, including mounting heights.

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3. Provide lighting indicated on Drawings with luminaire of the type designated and appropriate for location.
4. Provide LED luminaires with driver compatible to lighting control system as shown in drawings and as specified.
5. Where remote drivers are required, ensure adequate accessibility to driver. Upsize conductors between luminaire and driver to accommodate voltage drop.

V. Field Quality Control:

1. Perform field inspection in accordance with Division 01, General Requirements.
2. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

W. Cleaning:

1. Clean electrical parts to remove conductive and deleterious materials.
2. Remove dirt and debris from enclosures.
3. Clean paint splatters, dirt, dust, fingerprints, and debris from luminaires.
4. Clean photometric control surfaces as recommended by manufacturer.
5. Clean finishes and touch up damaged finishes per by manufacturer's instructions.

X. Demonstrate luminaire operation for minimum of two hours.

3.02 LUMINAIRES

- A. Install per manufacturer's written installation instructions and requirements.
- B. Align, mount and level luminaires uniformly. Use ball hangers for suspended stem mounted luminaires.
- C. Avoid interference with and provide clearance from equipment. Where indicated locations for luminaires conflict with locations for equipment, change locations for luminaire by minimum distance necessary as directed by Architect.
- D. Suspended Luminaires: Mounting heights indicate clearances between bottom of luminaire and finished floors.
- E. Emergency Egress Luminaires: Provide unswitched circuit for battery charging and autotransfer circuiting for exit signs and luminaires with integral batteries. Where test switch cannot be integral to luminaire, mount remote test switch flush-to-ceiling and adjacent to egress luminaire.
- F. Interior Luminaire Supports:
  1. Support Luminaires: Anchor supports to structural slab or to structural members within a partition, or above a suspended ceiling.
  2. Maintain luminaire positions after cleaning and relamping.
  3. Support luminaires without causing ceiling or partition to deflect.
  4. Provide mounting supports for recessed and pendant mounted luminaires as required by IBC.

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G. Adjusting:

1. Aim and adjust luminaires as indicated.
2. Focus and adjust floodlights, spotlights and other adjustable luminaires, with Architect, at such time of day or night as required.
3. Align luminaires that are not straight and parallel/perpendicular to structure.
4. Position exit sign directional arrows as indicated.

3.03 LED DRIVERS

- A. Install lamps per manufacturer's installation instructions and requirements.
- B. Where driver is remote mounted, size wiring based on type of driver, driver distance from luminaire, and voltage/power level, and manufacturer's installation instructions.
- C. Protect 0-10V input from line voltage mis-connection, and so it will be immune and the output unresponsive to induced AC voltage on the control leads.

END OF SECTION