LED Conversion Project

Construction Specifications

and

Contract Documents

PWP DO 2026-081

November 5, 2025

FOR

Douglas County School District
1638 Mono Avenue
Minden, NV 89423

TABLE OF CONTENTS

DIVISION		PAGE
1.	**ADVERTISEMENT FOR BIDS**	AB-1
2.	**INSTRUCTIONS TO BIDDERS**.....	IB-1
3.	**BID FORM and ATTACHMENTS**	BF-1

i. Bid Form and Bid Schedule
ii. 5% List
iii. 1% List
iv. 5% Bid Bond
v. Contractor's Qualification Statement
vi. Non-Collusion Affidavit
vii. Affidavit of Compliance.

4.	**AGREEMENT**.....	AG-1
5.	**PERFORMANCE AND PAYMENT BONDS.**	
6.	**GENERAL CONDITIONS**	GC-1

ADVERTISEMENT FOR BIDS

1. Separate sealed bids will be received by the Douglas County School District care of Douglas County Project Manager, Minden, Nevada, for the work as set forth in the Bid Documents for the **LED Conversion Project**. The bids shall be received on or before **10:00am January 8, 2026** at Douglas County Parks and Weed Office, 1323 Waterloo Lane, Gardnerville, NV 89410. Bids will be subsequently opened and read aloud at **10:01am** at Douglas County Parks and Weed Office, 1323 Waterloo Lane, Gardnerville, NV 89410. The apparent successful low bidder will be announced at the bid opening on **January 8, 2026**, followed by a thorough review by the District to ensure bid as responsive and responsible. The District will make a recommendation for award to the Board of Trustees on **January 9, 2026**. It is anticipated that the Board of Douglas County School District will consider award of the contract at their scheduled meeting held on **January 15, 2026.**

2. The scheduled work for the LED Conversion Project is located at **Jacks Valley Elementary and CC Meneley Elementary Schools** and consists of **Removing Existing Light Fixtures and Replaccing them with LED.** The estimate for this work is **$400,000.**

3. No proposal will be considered unless accompanied by a bid security in the form of a Certified or Cashier's Check, or Bid Bond, in an amount not less than five percent (5%) of the bid.

4. Bid Documents may be examined on the Douglas County School District website.

5. Copies of the Bid Documents will be available starting at **8:00 am November 5, 2025** & may be obtained at the Douglas County School District's website for free at:
https://dcsd.net/pf4/cms2/view_page?d=x&group_id=1537427840345&vdid=pi21dd2099gio
under **Construction Bid Documents** and the heading entitled **LED Conversion Project.**
The minimum licensing requirement is set forth by the Nevada State Contractors Board, the contractor must capable of being bonded for this project. Contractors may register their intent to submit a bid by sending an email to Scott McCullough, Project Manager at smccullough@douglasnv.us (SUBJECT LINE **LED Conversion Project**) **prior to January 6, 2026**. Registration as a digital subscriber is necessary to receive notifications via email to the project from the Owner's website where all documents and addenda will be posted.

6. Douglas County School District contact: Scott McCullough, Project Manager
Phone: (775) 790-5212

7. The Prevailing Wage Rate as established by the State Labor Commission shall be paid on projects with a contract price of $100,000 or more. The State Labor Commissioner has assigned Public Works Project Number to this project, It is **DO-2026-081**

8. NRS 338.147 provides for a 5 percent bidder preference to bidders who qualify for the preference. The requirements for the preference are detailed in the contract documents.

9. A **prebid conference** will be not be held for this project.

10. The project will not require a building permit for construction.

Douglas County School District

By: Phil Demus Dated: 11/05/2025
Director of Facilities

TABLE OF CONTENTS
FOR INSTRUCTIONS TO BIDDERS

Page

Article 1 - Defined Terms IB1
Article 2 - Copies of Bidding Documents IB1
Article 3 - Qualifications of Bidders IB1
Article 4 - Examination of Bidding Documents, Other Related Data, and Site IB2
Article 5 - Pre-bid Conference IB4
Article 6 - Site and Other Areas IB4
Article 7 - Interpretations and Addenda IB4
Article 8 - Bid Security IB5
Article 9 - Contract Times IB5
Article 10 - Liquidated Damages IB5
Article 11 - Substitute and "Or-Equal" Items IB5
Article 12 - Subcontractors, Suppliers and Others IB6
Article 13 - Preparation of Bid IB6
Article 14 - Basis of Bid; Evaluation of Bids IB7
Article 15 - Submittal of Bid IB7
Article 16 - Modification and Withdrawal of Bid IB7
Article 17 - Opening of Bids IB8
Article 18 - Bids to Remain Subject to Acceptance IB8
Article 19 - Award of Contract IB8
Article 20 - Contract Security IB9
Article 21 - Signing of Agreement IB9
Article 22 - Retainage IB9
Article 23 - State Industrial Insurance System IB9
Article 24 – Appeal by Bidders IB9
Article 25 – Laws and Regulations IB10

1.0 Defined Terms

1.1 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof

A. ARCHITECT / ENGINEER – The Architect contracted by OWNER to perform design and engineering work for OWNER.

B. BIDDER – The individual or entity who submits a Bid directly to OWNER.

C. CONTRACTOR – The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the Work contracted and for payment of all legal debts pertaining to the Work who acts directly or through lawful agents or employees to complete the Work.

D. ISSUING OFFICE – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

E. OWNER – OWNER is Douglas County School District Board of Trustees, Nevada as represented by its designee. Where the word "approval" is mentioned, approval shall mean action by the Board of Trustees or its Chief Financial Officer. The term OWNER shall also mean the contracting agency signatory to the Contract.

F. PROJECT MANAGER – The individual nominated by OWNER to act on behalf of OWNER for the day to day activities during the course of the Contract. However, the Project Manager has limited authority, and cannot amend or alter the Contract in any manner, nor can he amend or alter any financial obligations of OWNER.

G. SUCCESSFUL BIDDER – The lowest responsible BIDDER submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

2.0 Copies of Bidding Documents

2.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from the Issuing Office or the Douglas County School District's website for free at:

http://dcsd.k12.nv.us/main.aspx?pageid=262&lastpageid=143&lastpagename=Business Services under **Construction Bid Documents** and the heading entitled **LED Conversion Project**

2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ARCHITECT / ENGINEER assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 OWNER and ARCHITECT / ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3.0 Qualifications of Bidders

3.1 To demonstrate BIDDER's qualifications to perform the Work, each BIDDER must submit a completed Statement of BIDDER's Experience and Financial Qualifications on the Bid Form.

4.0 Examination of Bidding Documents, Other Related Data, and Site

4.1 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

i. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ARCHITECT / ENGINEER has used in preparing the Bidding Documents.

ii. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that ARCHITECT / ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by OWNER to any BIDDER on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which BIDDER is entitled to rely as provided in ARTICLE 28.0 SITE CONDITIONS of the General Conditions has been identified and established. BIDDER is responsible for any interpretation or conclusion BIDDER draws from and "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

4.2 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ARCHITECT / ENGINEER by owners of such Underground Facilities including OWNER, or others. OWNER and ARCHITECT / ENGINEER do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions, if any.

4.3 *Hazardous Environmental Condition*

A. The Supplementary Conditions, if any, identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ARCHITECT / ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by OWNER to any BIDDER on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which BIDDER is entitled to rely as provided in ARTICLE 30.0 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE of the General Conditions has been identified and established. BIDDER is responsible for any interpretation or conclusion BIDDER draws from and "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

4.4 Provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERs with respect to subsurface conditions, other physical conditions and Underground Facilities – if any – and possible changes in the Bidding Documents due to differing or

unanticipated conditions appear in ARTICLES 28.0 SITE CONDITIONS and 29.0 DIFFERING SITE CONDITIONS of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERs with respect to a Hazardous Environmental Conditions at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in ARTICLE 30.0 HAZARDOUS ENFIRONMENTAL CONDITIONS AT SITE of the General Conditions.

4.5 On request, OWNER will provide each BIDDER access to the site to conduct such examinations, investigations, explorations, tests and studies as BIDDER deems necessary for submission of a Bid. BIDDER shall fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.

4.6 Reference may be made to ARTICLE 65.0 SEPARATE CONTRACTS of the General Conditions for the identification of the general nature of work that is to be performed at the site by OWNER or others (such as utilities and other prime contractors) that relates to the work for which a Bid is to be submitted. On request, OWNER will provide to each BIDDER for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.7 It is the responsibility of each BIDDER before submitting a Bid to:

A. Examine and carefully study the Bidding Documents, including any Addenda and other related data identified in the Bidding Documents;

B. Visit the Site to become familiar with and satisfy BIDDER as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. Become familiar with and satisfy BIDDER as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance of the Work;

D. Carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which may have been identified as provided in ARTICLE 28.0 SITE CONDITIONS of the General Conditions, and carefully study all reports and drawings of a Hazardous Environmental Condition, if any, at the Site which have been identified in ARTICLE 30.0 HAZARDOUS ENFIRONMENTAL CONDITIONS AT SITE of the General Conditions.

E. Obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

G. Become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. Correlate the information known to BIDDER, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

I. Promptly give PROJECT MANAGER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER discovers in the Bidding Documents and confirm that the written resolution thereof by ARCHITECT / ENGINEER is acceptable to BIDDER; and

J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.8 The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying the specific means, methods, techniques, sequences or procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that BIDDER has given PROJECT MANAGER written notice of all conflicts, errors, ambiguities and discrepancies that BIDDER has discovered in the Contract Documents and the written resolutions thereof by ARCHITECT / ENGINEER is acceptable to BIDDER, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

5.0 Pre-bid Conference

5.1 **A pre-bid conference will be not be held.** Representatives of OWNER and ARCHITECT / ENGINEER will be present to discuss the Project. All BIDDERS are strongly encouraged to attend the pre-bid meeting in order to be eligible to submit a bid. All major subcontractors are strongly encouraged to attend. ARCHITECT / ENGINEER will transmit to all prospective BIDDERs of record such Addenda as ARCHITECT / ENGINEER considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

6.0 Site and Other Areas

6.1 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

7.0 Interpretations and Addenda

7.1 All questions about the meaning or intent of the Bidding Documents are to be directed to PROJECT MANAGER on the Request for Information Form. Send all such requests to PROJECT MANAGER via email using the form to be provided by PROJECT MANAGER. *No other method will be accepted*. Interpretations or clarifications considered necessary by PROJECT MANAGER in response to such questions will be issued by Addenda mailed or delivered via email to all parties recorded by PROJECT MANAGER as having received the Bidding Documents. Questions received less than three days prior to the date for opening of

Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.2 Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ARCHITECT / ENGINEER.

8.0 Bid Security

8.1 A Bid must be accompanied by Bid security in the form of a Bid Bond (on form attached) issued by a surety meeting the requirements of Section 3.4 Bond Requirements of the General Conditions.

8.2 The Bid Bond of the Successful BIDDER will be retained until such BIDDER has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid Bond will be returned. If the Successful BIDDER fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid Bond of that BIDDER will be forfeited. The Bid Bond of other BIDDERs whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid Bonds furnished by such BIDDERs will be returned.

8.3 Bid Bonds of other BIDDERs whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

9.0 Contract Times

9.1 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) also completed and ready for final payment are set forth in the Agreement.

A. Work shall be substantially complete per the seven mobilizations as conveyed in the plans days of issuance of Notice to Proceed.

B. Work shall be completed and ready for final payment within **30** days of issuance of Certificate of Substantial Completion.

10.0 Article 10 - Liquidated Damages

10.1 Provisions for liquidated damages, if any, are set forth in ARTICLE 12.0 LIQUIDATED DAMAGES of the General Conditions.

11.0 Substitute and "Or-Equal" Items

11.1 The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ARCHITECT / ENGINEER, application for such acceptance will not be considered by ARCHITECT / ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ARCHITECT / ENGINEER is set forth in ARTICLE 38.0 SUBSTITUTIONS of the General Conditions.

12.0 Subcontractors, Suppliers and Others

12.1 Each BIDDER must submit a completed List of Subcontractors on the Form furnished with the completed Bid Form. The apparent Successful BIDDER, and any other BIDDER so requested, shall within seven days after the Bid opening submit to OWNER supplemental information in the form of an experience statement with the pertinent information regarding similar projects and other evidence of qualification of each Subcontractor, Supplier, person or organization if requested by OWNER or ARCHITECT / ENGINEER. IF OWNER or ARCHITECT / ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given request apparent Successful BIDDER to submit an acceptable substitute, in which case apparent Successful BIDDER shall submit an acceptable substitute, BIDDER's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution and OWNER may consider such price adjustment in evaluating Bids and making the contract award.

12.2 If apparent Successful BIDDER declines to make any such substitution, OWNER may award the Contract to the next lowest BIDDER that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid Bond of any BIDDER. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ARCHITECT / ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ARCHITECT / ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in ARTICLE 22.0 SUBCONTRACTORS of the General Conditions.

12.3 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

13.0 Preparation of Bid

13.1 The Bid Form is included with the Bidding Documents. Additional copies may be obtained from PROJECT MANAGER

13.2 All blanks on the Bid Form and Bid Schedule must be completed by printing in ink or by typewriter and the Bid signed. A bid price shall be indicated for each Bid item listed therein.

13.3 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

13.4 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown below the signature.

13.5 A bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

13.6 A Bid by an individual shall show the BIDDER’s name and official address.

13.7 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venturer must be shown below the signature.

13.8 All names must be typed or printed in black ink below the signatures.

13.9 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

13.10 The address and telephone number for communications regarding the Bid must be shown.

13.11 The Bid shall contain evidence of BIDDER's authority and qualification to do business in the state where the Project is located. BIDDER's state contractor license number for the state of the Project, if any, must also be shown on the Bid Form.

14.0 Basis of Bid; Evaluation of Bids

14.1 *Lump Sum Price*

A. BIDDERs shall submit a Bid on a Lump Sum basis for each item of Work listed in the Bid Schedule.

14.2 The Bid price shall include such amounts as the BIDDER deems proper for Special Allowances, if any, named in the Contract Documents as provided in Section 6.2 Special Allowances of the General Conditions.

15.0 Submittal of Bid

15.1 Each prospective BIDDER is furnished one copy of the Bidding Documents with one separate unbound copy each of the Bid Form, and if required, the Bid Bond. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following data:

A. List of Subcontractors

B. Construction Contractor's Qualification Statement for Construction

C. Non-Collusion Affidavit

15.2 A bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of BIDDER, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "**BID ENCLOSED**." A mailed Bid shall be addressed to **Douglas County School District, 1638 Mono Avenue, Minden, NV 89423**.

16.0 Modification and Withdrawal of Bid

16.1 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.2 If, within twenty-four hours after Bids are opened any BIDDER files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid,

*OWNER may, **in its sole discretion**, choose to not accept the Bid and return the same to BIDDER*. Thereafter, that BIDDER will be disqualified from further bidding on the Work.

17.0 Opening of Bids

17.1 Bids will be opened at the time and place indicated in the advertisement or invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to BIDDERs after the opening of Bids.

18.0 Bids to Remain Subject to Acceptance

18.1 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but OWNER may, in its sole discretion, release any Bid and return the Bid Bond prior to the end of this period.

19.0 Award of Contract

19.1 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. OWNER further reserves the right to reject the Bid of any BIDDER whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER may also reject the Bid of any BIDDER if OWNER believes that it would not be in the best interest of the Project to make an award to that BIDDER. OWNER also reserves the right to waive all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful BIDDER.

19.2 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any BIDDER has an interest in more than one Bid for the Work may be cause for disqualification of that BIDDER and the rejection of all Bids in which that BIDDER has an interest.

19.3 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.4 In evaluating BIDDERs, OWNER will consider the qualifications of BIDDERs and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the General Conditions.

19.5 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications and financial ability of BIDDERs, proposed Subcontractors, Suppliers individuals, or entities to perform the Work in accordance with the Contract Documents.

19.6 If the Contract is to be awarded, OWNER will award the Contract to lowest BIDDER whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project. Pursuant to NRS 338.145, the OWNER will not award the contract to any BIDDER who, at the time of opening of Bids, is not licensed under the provisions of Chapter 624 of the Nevada Revised Statutes or if the contract would exceed the limit of its license. The BIDDERs attention is directed to NRS 624.230 which declares that, “any bid submitted by a person who is neither licensed nor exempted from licensure as provided in this chapter at the time the bid is submitted is void.”

19.7 NRS 338.0117 provides for a 5 percent BIDDER preference to BIDDERs who qualify for the preference and have a Certificate of Eligibility as required by NRS 338.147. Refer to ARTICLE 73.0 BIDDER PREFERENCE for the requirements which must be met by a BIDDER under this statute.

19.8 The project requires permits prior to construction that the OWNER intends to obtain. In the event the permits are not granted the contract will not be awarded. At a minimum, these permits include:

A. No Permit Required

20.0 Contract Security

20.1 Section 3.4 Bond Requirements of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment Bonds and insurance. When the Successful BIDDER delivers the executed Agreement to OWNER, it must be accompanied by such Bonds.

21.0 Signing of Agreement

21.1 When OWNER gives a Notice of Award to the Successful BIDDER, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement attached thereto. Within 15 days thereafter, Successful BIDDER shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within 10 days thereafter, OWNER shall deliver one fully signed counterpart to Successful BIDDER with a complete set of drawings with appropriate identification.

22.0 Retainage

22.1 Provisions concerning retainage and Contractors' rights to deposit securities in lieu of retainage are set forth in ARTICLE 10.0 PROGRESS PAYMENT APPLICATIONS in the General Conditions.

23.0 State Industrial Insurance System

23.1 Contractor agrees to provide proof of insurance prior to the performance of any work under this contract, and to maintain required workers compensation coverage throughout the entire term of the contract. Refer to ARTICLE 15.0 INSURANCE in the General Conditions.

24.0 Appeal by Bidders

24.1 Any BIDDER may appeal a pending bid award prior to award by OWNER. The appellant must:

A. Submit a written protest to PROJECT MANAGER within five (5) workdays after the bid opening.

B. Describe, in the written protest, the issues to be addresses on appeal.

C. Post, with the written protest, a bond with a surety and insurance company that is authorized to do business in the State of Nevada and shall have an A.M. Best rating

of A-VII or better. OWNER will hold the bond until a determination is made on the appeal.

D. Post the bond in the amount of 25% of the total dollar value of the appellant's bid, up to a maximum bond or other security amount of $250,000.00.

E. Not seek any type of judicial intervention until OWNER has rendered its final decision on the protest.

F. OWNER will stay award actions until after PROJECT MANAGER has responded in writing to the protest. If the appellant is not satisfied with the response, the appellant may then protest to Douglas County School District Board of Trustees, who will render a final decision for the OWNER. No bid protests will be heard by the Board of Trustees unless BIDDER has followed the appeal process.

24.2 If an appeal is granted, the full amount of the posted bond or security will be returned to the appellant. If the appeal is denied or not upheld, a claim may be made against the bond for expenses suffered by the OWNER because of the unsuccessful appeal.

24.3 OWNER is not liable for any costs, expenses, attorney's fees, loss of income, or other damages sustained by the appellant in a bid process.

25.0 Laws and Regulations

25.1 Contractor shall acknowledge by submittal of this Bid that the Laws and Regulations regarding Douglas County Prevailing Wages shall be met by this Contract.

25.2 The following NRS Statute will be enforced for this project.

A. NRS 338.125 Fair employment practices: Contents of contracts concerning public works; break of contract.

i. It is unlawful for any contractor in connection with the performance of work under a contract with a public body, when payment of the contract price, or any part of such payment, is to be made from public money, to refuse to employ or to discharge from employment any person because of his or her race, color, creed, national origin, sex, sexual orientation, gender identity or expression, or age, or to discriminate against a person with respect to hire, tenure, advancement, compensation or other terms, conditions or privileges of employment because of his or her race, creed, color, national origin, sex, sexual orientation, gender identity or expression, or age.

ii. Contracts between contractors and public bodies must contain the following contractual provisions:

> "In connection with the performance of work under this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, sexual orientation, gender identity or expression, or age, including without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including, without limitation, apprenticeship."

iii. The contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

iv. Any violation of such provision by a contractor constitutes a material breach of contract

BID FORM

PROJECT IDENTIFICATION: **LED Conversion Project**

CONTRACT IDENTIFICATION AND NUMBER: PWP 2026-081

THIS BID IS SUBMITTED TO: Douglas County School District
1638 Mono Avenue
Minden, NV 89423

1.01 The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 60 days after the day of Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

3.01 In submitting this Bid, BIDDER represents, as set forth in the Agreement, that:

A. BIDDER has examined and carefully studied the Bidding Documents and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

B. BIDDER has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. BIDDER has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in ARTICLE 28.0 SITE CONDITIONS of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in ARTICLE 30.0 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE of the General Conditions.

E. BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground

Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER, and safety precautions and programs incident thereto.

F. BIDDER does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. BIDDER is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. BIDDER has given PROJECT MANAGER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER has discovered in the Bidding Documents, and the written resolution thereof by ARCHITECT / ENGINEER is acceptable to BIDDER.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work for which this Bid is submitted.

4.01 BIDDER further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any individual or entity to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

5.01 CONTRACTOR agrees to all terms and conditions of the Nevada Revised Statutes (NRS), the Nevada Administrative Code (NAC) and local law as may apply to this Contract and to the work performed under this Contract and agrees to comply with all such applicable laws and regulations.

Changes in Laws or Regulations not known at the time of opening Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time or performance of the Work may be the subject of an adjustment in Contract Price or Contract Time. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any of any such adjustment, a Claim may be made therefore as provided in Article 13.1 Claims and Disputes of the General Conditions. These statutes include, but are not limited to:

A. NRS 338.020 Hourly and daily rate of wages must not be less than prevailing wage in county.

B. NRS 338.080 Exemptions

C. NRS 338.141 Bids to include certain information concerning subcontractors and prime contractors. (*To be deemed a responsive bid, the list of subcontractors' form must be submitted even if no subcontractors are required to be listed.*)

D. NRS 338.147 Award of contract to contractor who submits best bid.

5.02 The entire set of Nevada Revised Statutes is available for review on-line at http://leg.state.nv.us/law1.cfm.

6.01 BIDDER will complete the Work in accordance with the Contract Documents for the following prices:

SEE ATTACHED BID SCHEDULE

7.01 BIDDER agrees that the Work will be substantially completed and completed and ready for final payment in accordance with Article 11.0 FINAL PAYMENT of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

7.02 BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

8.01 The following documents are attached to and made a condition of this Bid:

A. Bid Form;
B. Bid Schedule;
C. A tabulation of Subcontractors, Suppliers and other individuals and entities required to be identified in this Bid;
D. A tabulation of Subcontractors, Suppliers and other individuals and entities required to be identified within two hours of the bid opening;
E. Bid Bond (or Certified or Cashier's Check);
F. Construction Contractor's Qualification Statement
G. Non-Collusion Affidavit
H. Affidavit of Compliance

9.01 Communications concerning this Bid shall be addressed to:
(Contractor's mailing address to be filled in by Bidder)

_____

_____

_____

_____

10.01 The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SUBMITTED on _____, 20_____.

NV State Contractor License No._____ Class _____

If BIDDER is:

An Individual

Name (typed or printed)_____

By _____(SEAL)

(*Individual's Signature*)

Doing business as:_____

Business address:_____

_____

Phone No.:_____ Fax No.:_____

A Partnership

Partnership Name _____(SEAL)

By _____

(*Signature of General Partner – attach evidence of authority to sign*)

Name (typed or printed):_____

Business address:_____

_____

Phone No.:_____ Fax No.:_____

A Corporation

Corporation Name:_____(SEAL)

State of Incorporation:_____

Type (General Business, Professional, Service, Limited Liability):_____

By:_____

(Signature -- attach evidence of authority to sign)

Name (typed or printed):_____

Title:_____(Corporate Seal)

Attest:_____

(Signature of Corporate Secretary)

Business Address:_____

_____

Phone No.:_____ Fax No.:_____

Date of Qualification to do business is_____

A Joint Venture

Joint Venturer Name:_____(SEAL)

By:_____

(Signature of joint venturer partner -- attach evidence of authority to sign)

Name (typed or printed):_____

Title:_____

Business Address:_____

_____

Phone No.:_____ Fax No.:_____

Joint Venturer Name:_____(SEAL)

By:_____

(Signature -- attach evidence of authority to sign)

Name (typed or printed):_____

Title:_____

Business Address:_____

_____

Phone No.:_____ Fax No.:_____

Phone and FAX Number, and Address for receipt of official communications:

_____

_____

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

BID SCHEDULE

LED Conversion Project

Lump Sum Basis

1. CCMES Bid Price $_____

2. JVES Bid Price $_____

Total Lump Sum Bid Price (Items 1-2) $_____

Total Lump Sum Bid Price (Written)_____

_____

CHECK ONE:

[ ] We qualify and claim the Preferential Bidder Status as specified in NRS 338.147, and have attached the Affidavit of Compliance and submitted a valid Certificate of Eligibility in accordance with the requirements of NRS 338.147 as referenced in Article 73.0 Bidder Preference General Condition.

[ ] We do not qualify for the Preferential Bidder Status as specified in NRS 338.147.

LIST OF SUBCONTRACTORS
(to be submitted with bid)

The name and address of each subcontractor who will be paid at least 5 percent of the prime contractor's total bid shall be listed below. To be deemed a responsive bid, this form must be submitted even if no subcontractors are required to be listed. In that case, the bidder should state "None" (or similar language stating that no subcontractors need to be listed) in the space below. (Refer to NRS 338.141). Contractor shall list themselves for all work to be self performed.

Name	Address of Subcontractor	Portion of Work

LIST OF SUBCONTRACTORS
(to be submitted after bid opening)

Within two hours after the completion of the opening of the bids, the General Contractors who submitted the three lowest bids must provide a list of each subcontractor who will provide labor or a portion of the work or improvement to the contractor for which the subcontractor will be paid an amount exceeding one percent of the prime contractor's bid or $50,000, whichever is greater, and the number of the license issued to the subcontractor, pursuant to NRS chapter 624. **If a General Contractor fails to submit such a list within the required time, his bid shall be deemed not responsive.** To be deemed a responsive bid, this form must be submitted even if no subcontractors are required to be listed. In that case, the bidder should state "None" (or similar language stating that no subcontractors need to be listed) in the space below. (Refer to NRS 338)

Subcontractor/Address/Nevada License No.	**Dollar Value and description of work**

5% BID BOND

BIDDER (Name and Address):

_____
_____
_____

SURETY (Name and Address of Principal Place of Business):

_____
_____
_____

OWNER (Name and Address):

_____
_____
_____

BID

BID DUE DATE:_____

PROJECT (Brief Description Including Location):

_____
_____
_____

BOND

BOND NUMBER:_____

DATE: (Not later than Bid Due Date): _____

PENAL SUM: _____ _____
(Words) (Figures)

IN WITNESS WHEREOF, Surety and Bidder, Intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause the Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	SURETY
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature and Title	Signature and Title (Attach Power of Attorney)
Attest: _____	Attest: _____
Signature and Title	Signature and Title

Note: (1) Above addresses are to be used for giving required notice.
(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents.

3. This obligation shall be null and void if:

   3.1. OWNER accepts Bidder's bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents, or

   3.2 All bids are rejected by OWNER, or

   3.3 OWNER fails to issue a notice of award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this bond will be due and payable upon default by Bidder and Within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by OWNER and Bidder, provided that the time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid Due Date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety, and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

CONSTRUCTION CONTRACTOR'S QUALIFICATION STATEMENT

Submitted by:

Name of Organization _____

Name of Individual _____

Title _____

Address _____

_____

_____

Telephone _____

Submitted to:

Name _____

Address _____

_____

_____

Telephone _____

Project Name and Description (if applicable)

_____

_____

_____

_____

_____

Contractor' General Business Information

Check If:

☐ Corporation ☐ Partnership ☐ Joint Venture ☐ Sole Proprietorship

If Corporation:

a. Date and State of Incorporation

_____

_____

b. List of Executive Officers

Name Title

_____

_____

_____

If Partnership:

a. Date and State of Organization

_____

_____

b. Names of Current General Partners

_____

_____

c. Type of Partnership

☐ General ☐ Publicly Traded

☐ Limited ☐ Other (describe): _____

If Joint Venture:

a. Date and State of Organization

_____

_____

b. Name, Address and Form of Organization of Joint Venture Partners: (Indicate managing partner by an asterisk *)

_____

_____

_____

1. On Schedule A, attached, list major engineered construction projects completed by this organization in the past five (5) years. (If joint venture, list each participant's projects separately).

2. On Schedule B, attached, list current projects under construction by this organization, (If joint venture, list each participant's projects separately).

3. On Schedule C, attached, provide details of the construction experience of the principal individuals of your organization directly involved in construction operations.

4. Does your organization possess a valid State of Nevada contractor's license of a class corresponding to the work to be performed?

☐ Yes ☐ No

If yes, list the license number(s) and classification(s).

_____

_____

_____

5. List the licensed categories of work that your company normally performs with its own workforce._____

_____

_____

_____

6. If required, can your organization provide a bid bond for this project? ☐ Yes ☐ No

7. What is your approximate total bonding capacity?

☐ $500,000 to $2,000,000

☐ $2,000,000 to $5,000,000

☐ $5,000,000 to $10,000,000

☐ $10,000,000 or more

8. Name of surety company and name, address, and phone number of agent.

_____

_____

_____

9. Does your organization have the ability to obtain and maintain insurance coverage for public liability and property damage, and all other insurance as specified and for the limits required in the contract documents?

☐ Yes ☐ No

10. Is your organization a member of a controlled group of corporations as defined in I.R.C. Sec. 1563?

☐ Yes ☐ No

If yes, show names and addresses of affiliated companies.

_____

_____

11. Has your organization ever failed to complete any construction contract awarded to it?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

12. Has any Corporate officer, partner, joint venture participant or proprietor ever failed to complete a construction contract awarded to him or her in their own name or when acting as a principal of another organization?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

13. In the last five years, has your organization ever failed to substantially complete a project in a timely manner?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

14. Does your organization now have any legal suits or arbitration claims pending or outstanding against it or any officers?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

15. Has your organization had a contract partially or completely terminated for default (cause) within the past five years?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

16. Has your organization been disqualified from being awarded a contract pursuant to NRS 338.017 or 338.13895?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

17. Has your organization been convicted of a violation for discrimination in employment during the 2 years immediately preceding the date of application?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

18. Has your organization been disciplined or fined by the State of Nevada Contractor's Board or another state or federal agency for conduct that relates to the ability to perform the work required for this project?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

19. Does your organization have a safety program that complies with the requirements of NRS Chapter 618?

☐ Yes ☐ No

20. Describe the permanent safety program you maintain within your organization. Use attachment if necessary.

_____

_____

_____

_____

21. During the 5 years immediately preceding the date of this bid, has your organization filed as a debtor under the provisions of the United States Bankruptcy Code?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

22. During the 5 years immediately preceding the date of this bid, has your organization, as a result of causes within the control of your organization or a subcontractor or supplier of your organization, failed to perform any contract:

(a) In the manner specified by the contract and any change orders initiated or approved by the person or governmental entity that awarded the contract or its authorized representative?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

(b) Within the time specified by the contract unless extended by the person or governmental entity that awarded the contract or its authorized representative?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

(c) For the amount of money specified in the contract or as modified by any change orders initiated or approved by the person or governmental entity that awarded the contract or its authorized representative?

☐ Yes ☐ No

If yes, describe circumstances and provide details on attachment.

23. Furnish the following information with respect to an accredited banking institution familiar with your organization.

Name of Bank _____

Address _____

_____

_____

Account Manager _____

Telephone _____

I hereby certify that the information submitted herewith, including any attachment is true to the best of my knowledge and belief.

_____

By: _____

Title: _____

Dated: _____

Schedule A – List of Major Construction Projects Completed in the Past Five (5) Years

Name, Location and Description of Project	Owner	Design Engineer	Date Completed	Contract Price	Reference/Contact & Address & Phone

Schedule B – List of Current Projects Under Construction

Name, Location and Description of Project	Owner	Design Engineer	Contract Price	Amount Completed	Date of Scheduled Completion	Reference/Contact & Address & Phone

Schedule C - Construction Experience of Principal Individuals Involved in Construction Operations

Name	Position	Date started with this organization	Date started in construction	Prior positions and experience in construction

This Affidavit to be Fully Executed

NON-COLLUSION AFFIDAVIT

STATE OF)_____
)ss.
COUNTY OF)_____

_____, affiant,

the _____
(President, Secretary, Manager, Owner, or Representative of)

_____
Name of Company or Corporation or Owner

the person, corporation, or company who makes the accompanying Bid, having first been duly sworn, deposes and says:

That such Bid is genuine, and not sham or collusive, nor made in the interest or behalf of any person not herein named, and that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding, and that the Bidder has not in any manner sought by collusion to secure for itself an advantage over any other Bidder.

_____
Signature of: President, Secretary
Manager, Owner, or Representative

Subscribed and sworn to before me

this _____day of _____, 2013.

_____

Signature of Notary Public in and

for the County of_____

State of _____

This Affidavit to be Fully Executed

AFFIDAVIT OF COMPLIANCE

Affiant, _____ being first duly sworn, deposes and states upon personal knowledge and under penalty of perjury as follows:
(Name)

1. I am the _____ of the _____ and have held that position since _____. I have the authority to make the representations contained herein on behalf of _____
(Title) (Company Name) (Year) (Company Name)
2. I have personal knowledge of the matters set forth herein and if called upon to testify could and would competently testify consistent with the matters set forth in this Affidavit.

3. In connection with the bid for _____ (Project) I certify on behalf of _____ that for the duration of this Project:
(Project Name/PWP Number) (Company Name)
   a. At least 50% of all workers employed on this Project by _____, including any workers employed by any subcontractor engaged on this Project, will hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles; and,
(Company Name)

   b. All vehicles used primarily for this Project will be registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the Department of Motor Vehicles pursuant to Nevada Revised Statutes Section 706.826; or will be registered in the State of Nevada; and,

   c. At least 50% of the design professionals working on this Project, employed by _____ and any design professionals employed by any subcontractor engaged on this Project, will have a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles; and,
(Company Name)

   d. _____ as well as any subcontractor engaged on this Project will maintain and make available for inspection within this State our records concerning payroll relating to this Project
(Company Name)

Per NRS 338.147, a valid Certificate of Eligibility issued by the State Contractors' Board (NRS 338.0017) shall be attached to the bid at the time of submittal, and this Affidavit of Compliance must be filed within two (2) hours of bid opening in order to receive preference in bidding

Further Affiant Saith Naught

Dated this _____day of _____, 20___,

Signature

_____

Title

_____

(Print)

ACKNOWLEDGMENT

State of _____

County of _____

Subscribed and sworn to before me this

_____day of _____, 20___

My Commission Expires _____.

Signature

_____

(Notary Seal)

AGREEMENT
BETWEEN
DOUGLAS COUNTY SCHOOL DISTRICT
AND
XXX
ON THE BASIS OF A STIPULATED PRICE

Whereas, **Douglas County School District** (hereinafter "OWNER") is a political subdivision of the State of Nevada, and is statutorily authorized to enter into contracts for construction projects, and;

Whereas **XXX** (hereinafter "CONTRACTOR") is a construction company licensed as a specialty contractor in Nevada, and;

Whereas CONTRACTOR has submitted a bid in accord with the **LED Conversion Project** Construction Specifications and Contract Documents (hereinafter "CONTRACT DOCUMENTS") as prepared by OWNER; and

Whereas, CONTRACTOR submitted a responsive and responsible Bid in the amount of:

$ 000,000.00 for **LED Conversion Project** Construction Project as outlined in the CONTRACT DOCUMENTS. The Bid is for furnishing of all materials and all labor, tools, and appliances and all expense, direct or indirect, connected with the proper execution of the Work and of maintaining the same until it is accepted by OWNER. Therefore, OWNER will pay and CONTRACTOR shall accept as full compensation therefore the above total, not to exceed sum.

Now therefore, it is the intention of OWNER and CONTRACTOR to enter into a Contract to have CONTRACTOR complete all of the work as specified or indicated in the CONTRACT DOCUMENTS.

ARTICLE 1 – WORK

1.01 CONTRACTOR shall complete all Work as specified or indicated in the CONTRACT DOCUMENTS. The term "Work" includes all labor, materials, services, equipment, tools, transportation, power, water, permanent and temporary utilities, connections, provisions for safety, and all incidental and other things necessary to produce the finished construction of the Project as described by the CONTRACT DOCUMENTS. CONTRACTOR agrees to provide all labor, materials, equipment, tools and services necessary, and to do everything required by the CONTRACT DOCUMENTS as necessary to complete all Work required for the Project within the time specified for Substantial Completion of the Work. The Work is generally described as follows:

LED Conversion Project

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the CONTRACT DOCUMENTS may be the whole or only a part is generally described as follows:

LED Conversion Project

ARTICLE 3 – ENGINEER / ARCHITECT

The Project has been designed by **PK Electrical**

3.01

Who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the CONTRACT DOCUMENTS in connection with completion of the Work in accordance with the CONTRACT DOCUMENTS.

The Project will be administered by:

Scott McCullough, Project Manager
Douglas County
1323 Waterloo Lane
Gardnerville, NV 89410

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. Time is of the essence, and CONTRACTOR acknowledges that the time for completion of the Work is sufficient for it to perform all the Work. In case of failure on the part of CONTRACTOR to complete the Work or any separable part thereof within the time(s) specified in the CONTRACT DOCUMENTS or within such additional time(s) as may be granted by formal action of the Douglas County School District Board of Trustees, OWNER reserved the right to require CONTRACTOR pay to OWNER, as liquidated damages, the sum(s) indicated in **ARTICLE 12.0 LIQUIDATED DAMAGES** of the General Conditions. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the CONTRACT DOCUMENTS are of the essence of this Contract.

4.02 *Dates for Substantial Completion*

A. The Work and all requirements of the CONTRACT DOCUMENTS will be completed August 15, 2026

4.03 *Final Payment*

A. As provided in **ARTICLE 11.0 FINAL PAYMENT** of the General Conditions, when the Work and all requirements of the CONTRACT DOCUMENTS are fully and satisfactorily completed, the OWNER will pay to CONTRACTOR a final payment consisting of the remaining unpaid balance of the Contract Sum due CONTRACTOR. The acceptance of the final payment by the CONTRACTOR shall constitute a full and final release and waiver of all CONTRACTOR claims and rights of claim against the OWNER relating or pertaining to the Work.

Acceptance of the final payment by the CONTRACTOR shall terminate the OWNER-CONTRACTOR Construction Agreement after which time the applicable terms and conditions for Warranties and Insurance shall continue to apply.

4.04 *Liquidated Damages*

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER **five-hundred dollars ($500)** for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or

fail to complete the remaining Work within the time specified in paragraph 4.02 for completion and readiness for final payment or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **two hundred and fifty dollars ($250)** for each day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

B. In the event that CONTRACTOR fails to pay OWNER the specified liquidated damages amount within thirty (30) days of CONTRACTOR's being notified of said damages, OWNER may deduct the amount of the assessed liquidated damages from the final payment or retention withheld pursuant to **ARTICLE 11.0 FINAL PAYMENT** of the General Conditions.

ARTICLE 5 – CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the CONTRACT DOCUMENTS an amount in current funds equal to the sum of the amounts determined below:

A. For all Unit Price Work, an amount equal to the stipulated sum of the established Unit Price for each separately identified item of Unit Price Work times the estimated quantity of that item, as indicated in the attached Bid Schedule;

B. As provided in **ARTICLE 7.0 UNIT PRICE WORK** of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 CONTRACTOR shall submit Applications for Payment in accordance with **ARTICLE 10.0 PROGRESS PAYMENT APPLICATIONS** of the General Conditions. Applications for Payment will be processed by ENGINEER and OWNER as provided in **ARTICLE 10.0 PROGRESS PAYMENT APPLICATIONS** General Conditions.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in **ARTICLE 10.0 PROGRESS PAYMENT APPLICATIONS** of the General Conditions shall bear interest at the rate that was in place at the time of the execution of the project. The interest rate shall be determined by the interest rate paid by Bank of America, Minden branch on a certificate of deposit time deposit.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce OWNER to enter into this Contract, CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the CONTRACT DOCUMENTS and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR has carefully studied all: (1) Reports of explorations and tests of subsurface conditions or contiguous to the Site and all drawings of physical

conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (with the exception of Underground Facilities) which have been identified in the Bidding Documents and Specifications and (2) reports and drawings of Hazardous Environmental Condition, if any, at the Site which has been identified in the Bidding Documents and Specifications.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress or performance of the Work or which relate to any aspect of the means, methods or techniques or procedures of construction engaged by CONTRACTOR, including applying precise means, methods and techniques or procedures of construction, if any, expressly required by the CONTRACT DOCUMENTS to be employed by CONTRATOR, and safety precautions and programs incident thereto.

F. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the CONTRACT DOCUMENTS with respect to Underground Facilities at or contiguous to the site.

G. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction, if any, expressly required by the CONTRACT DOCUMENTS to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

H. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the CONTRACT DOCUMENTS.

I. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the CONTRACT DOCUMENTS.

J. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the CONTRACT DOCUMENTS and all additional examinations, investigations, explorations, tests, studies, and data with the CONTRACT DOCUMENTS.

K. CONTRACTOR has given OWNER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the CONTRACT DOCUMENTS, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

L. The CONTRACT DOCUMENTS are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The CONTRACT DOCUMENTS consist of the following:

1. This Contract Agreement (pages 1 to 11, inclusive);

2. Performance Bond (pages _____ to ____, and attachments inclusive);

3. Payment Bonds (pages_____ to ____, and attachments inclusive);

4. General Conditions (pages 1 to60, inclusive, attached and incorporated);

5. ~~Supplementary Conditions~~:

6. Addenda (numbers inclusive); None

7. CONTRACTOR's Bid (pages 1 to 8, inclusive, attached and incorporated);

8. Notice to Proceed (pages_____ to ____ inclusive attached and incorporated).

9. In addition, the following items, which are not exhibits to this Contract, are incorporated by reference and shall constitute part of the CONTRACT DOCUMENTS:

   a. Contract Drawings consisting of a cover sheet and sheets inclusive with each sheet bearing the following general title **LED Conversion Project**

   b. Construction Schedule submitted pursuant to **ARTICLE 18.0 PROGRESS PAYMENT APPLICATIONS** of the General Conditions, and any amendments approved by OWNER;

   c. Current Prevailing Wage Rates, Douglas County, Nevada.

10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

    a. Written Amendments

    b. Work Change Directives

    c. Change Order(s)

B. The documents listed in 09.01.A are attached to this Contract, except as expressly noted otherwise above.

C. There are no CONTRACT DOCUMENTS other than those listed above in ARTICLE 9.

D. This Contract embodies the entire agreement between OWNER and CONTRACTOR and supersedes all other writings, oral agreements, or representations. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth herein. No changes, amendments or modifications of any of the terms or conditions of the CONTRACT DOCUMENTS shall be valid unless reduced to writing and signed by both parties.

E. The Bidding and CONTRACT DOCUMENTS include various divisions, sections and conditions, which are essential parts for the Work to be provided by the successful Bidder. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Work. In case of discrepancy, the following precedence will govern:

- Contract Agreement
- Performance Bonds
- Payment Bonds
- General Conditions
- Special Conditions
- Addenda
- Construction Specifications
- CONTRACTOR's Bid
- List of Drawings
- Contract Drawings
- Construction Schedule submitted pursuant to **ARTICLE 18.0 CONSTRUCTION SCHEDULE AND DATA** of the General Conditions, and any amendments approved by OWNER
- Current Prevailing Wage Rates, Douglas County, Nevada

Addenda, Change Orders and Supplemental Agreements will take precedence over any of the above. Detailed plans shall have precedence over general plans.

CONTRACTOR shall take no advantage of any apparent error or omission in the Bidding Documents. In the event CONTRACTOR discovers such an error or omission, CONTRACTOR shall immediately notify OWNER. OWNER will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Bidding Documents.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this will have the meanings indicated in the General Conditions.

10.02. *Rights and Remedies*

A. The duties and obligations imposed by the CONTRACT DOCUMENTS and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law..

10.03 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the CONTRACT DOCUMENTS.

10.04 *Successors and Assigns*

A. OWNER and CONTRACTOR each binds themselves, their partners, successors, assignees and legal representatives to the other party hereto and to the partners, successors, assignees and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the CONTRACT DOCUMENTS.

No party shall assign, transfer or delegate any rights, obligations or duties under this Contract without the prior written consent of the other parties for which approval may be withheld for any reason or for no reason whatsoever. CONTRACTOR shall not assign, transfer, convey or otherwise dispose of the CONTRACT DOCUMENTS or its

right, title or interest in or to the same or any part thereof, without prior consent of OWNER and concurred to by the sureties.

10.05 *Severability*

A. Any provision or part of the CONTRACT DOCUMENTS held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the CONTRACT DOCUMENTS shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.06 *Legal*

A. This Contract shall be administered and interpreted under the laws of the State of Nevada. This Contract shall not be construed for or against any party by reason of who drafted the provisions set forth herein. Any action at law, suit in equity or judicial proceeding for the enforcement of this Contract or any of the CONTRACT DOCUMENTS must be litigated in the Ninth Judicial District Court of Nevada.

B. The CONTRACT DOCUMENTS and the various provisions thereof are severable. Should any part, clause, provisions or terms be declared invalid, ineffective, or unenforceable, the remaining provisions of the CONTRACT DOCUMENTS shall remain in full legal force and effect.

10.07 *Notices*

A. All notices, documents and or payments regarding this Contract and Contract shall be sent to the following:

OWNER REPRESENTATIVE	**CONTRACTOR**
Douglas County	
Attn: Scott McCullough, Project Manager	
1323 Waterloo Lane	
Gardnerville, NV 89410	

10.08 *Effective Date of the Contract*

A. Both OWNER and CONTRACTOR agree that this Contract as outlined in the CONTRACT DOCUMENTS become effective immediately upon the signing of this Contract by both parties. CONTRACTOR shall commence the Work to be performed under this Contract on the date set by OWNER in the written Notice to Proceed, continuing the Work with diligence and shall complete the entire Work in accordance with **ARTICLE 18.0 CONSTRUCTION SCHEDULE AND DATA** of the General Conditions. Further, in the event interim milestone completion dates are established in **ARTICLE 18.0 CONSTRUCTION SCHEDULE AND DATA** of the General Conditions for separable portions of the Work, CONTRACTOR agrees to complete said separable portions of the Work in accordance with said milestone dates.

10.09 *Cancellation of the Contract*

A. OWNER reserves the right to cancel the Contract awarded for any reason with seven (7) days written notice to CONTRACTOR. OWNER will be responsible to pay CONTRACTOR for Work completed up to this point, or for Work performed in conjunction with this Contract.

10.10 *Agreement Modification*

A. This Contract embodies the entire agreement between OWNER and CONTRACTOR and supersedes all other writings, oral agreements, or representations. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth herein. No changes, amendments or modifications of any of the terms or conditions of the CONTRACT DOCUMENTS shall be valid unless reduced to writing and signed by both parties.

ARTICLE 11 – INDEMNIFICATION

11.01 To the fullest extent permitted by law, CONTRACTOR shall defend, indemnify, and hold harmless OWNER, and its agents, employees, and members of the Board of Trustees from and against all claims, damages, losses, and expenses, including, but not limited to attorneys' fees arising out of or resulting from performance of this Contract, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property caused by the negligent acts or omissions of CONTRACTOR, a Subcontractor, anyone directly or indirectly employed by them for whose acts they may be liable, regardless of whether such claim, damage, loss, or expense is caused in part by OWNER indemnified hereunder. However, in no event shall CONTRACTOR be required to indemnify OWNER for claims, damages, loss or expenses arising out of OWNER's sole negligence. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Article.

In any and all claims against OWNER, its agents, employees, or any of the members of the Board of Trustees by any employee of CONTRACTOR, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the first paragraph of this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

CONTRACTOR's obligations of this Article shall not extend to the liability of the ENGINEER or its employees arising out of (a) the preparation or approval of maps, sketches, opinions, reports, surveys, CCOs, designs, or specifications, or (b) the giving of or the failure to give directions or instructions by the ENGINEER or its employees provided such giving or failure to give is the primary cause of injury or damage.

ARTICLE 12 – PATENT INDEMNITY

12.01 CONTRACTOR hereby indemnifies and shall defend and hold harmless OWNER and its agents, employees, and members of the Board of Trustees respectively from and against all claims, losses, costs, damages, and expenses, including attorney's fees, incurred by OWNER and its agents, employees, and members of the Board of Trustees respectively, as a result of or in connection with any claims or actions based upon infringement or alleged infringement of any patent and arising out of the use of the equipment or materials furnished under the CONTRACT DOCUMENTS by CONTRACTOR, or out of the processes or actions employed by, or on behalf of CONTRACTOR in connection with the performance of the CONTRACT DOCUMENTS. CONTRACTOR shall, at its sole expense, promptly defend against any such claim or action unless directed otherwise by OWNER or its representatives provided that OWNER or its representatives shall have notified CONTRACTOR upon becoming aware of such claims or actions, and provided further that CONTRACTOR's aforementioned obligations shall not apply to equipment, materials, or processes furnished or specified by OWNER or and its agents, employees, and members of the Board of Trustees.

CONTRACTOR shall have the right, in order to avoid such claims or actions, to substitute at its expense non-infringing equipment, materials, or processes, or to modify such infringing equipment, materials and processes so they become non-infringing, or obtain the necessary licenses to use the infringing equipment, material or processes, provided that such

substituted and modified equipment, materials and processes shall meet all the requirements and be subject to all the provisions of this Contract.

ARTICLE 13 – INDEPENDENT CONTRACTOR

13.01 The parties agree that CONTRACTOR is an independent contractor and that this Contract is entered into in accordance with Nevada law that CONTRACTOR is not an employee of OWNER, and that there shall be no:

1. Withholding of income taxes by OWNER;
2. Industrial insurance coverage provided by OWNER;
3. Participation in group insurance plans which may be available to employees of OWNER;
4. Participation or contribution by either the independent contractor or OWNER to the Public Employees Retirement System;
5. Accumulation of vacation leave or sick leave;
6. Unemployment compensation coverage provided by OWNER.

CONTRACTOR represents that it is fully experienced and properly qualified to perform the class of work provided for herein, and that it is properly licensed, equipped, organized and financed to perform such work. CONTRACTOR shall act as an independent contractor and not as the agent of OWNER in performing the Contract and is responsible for maintaining complete control over its employees and all of its suppliers and Subcontractors. Nothing contained in this Contract or any Subcontract awarded by CONTRACTOR shall create any contractual relationship between any such supplier or Subcontractor and OWNER. However, each subcontract and supplier agreement entered into by CONTRACTOR, relative to the CONTRACT DOCUMENTS, shall bind such Subcontractor or supplier to the same terms and conditions as appear in the CONTRACT DOCUMENTS. CONTRACTOR shall perform all work in accordance with its own methods subject to strict compliance with the CONTRACT DOCUMENTS.

ARTICLE 14 – FAIR EMPLOYMENT PRACTICES

14.01 In connection with the performance of work under this Contract, CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin or ancestry, sex, sexual orientation, gender identity or expression, religion, disability, or age. Such agreement shall include, but not be limited to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. CONTRACTOR further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of such provision by CONTRACTOR shall constitute a material breach of this Contract.

ARTICLE 15 – INSURANCE REQUIREMENTS

15.01 Certificates of Iinsurance evidencing the required coverage, as stipulated in the General Conditions of the CONTRACT DOCUMENTS, shall be filed with OWNER prior to CONTRACTOR mobilizing onto the Project site and prior to commencement of any work on the Project.

ARTICLE 16 – BONDS AND GUARANTY

16.01 CONTRACTOR shall furnish a performance bond, payment bond and guarantee bond in the form attached hereto and in accordance with the requirements set forth in Article 3.4 Bond Requirements of the General Conditions.

ARTICLE 17 – STATUTORY REQUIREMENTS

17.01 CONTRACTOR agrees to all terms and conditions of the Nevada Revised Statutes (NRS), the Nevada Administrative Code (NAC) and local law as may apply to this Contract and to the work performed under this Contract and agrees to comply with all such applicable laws and regulations.

Changes in Laws or Regulations not known at the time of opening Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time or performance of the Work may be the subject of an adjustment in Contract Price or Contract Time. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any of any such adjustment, a Claim may be made therefore as provided in Article 13.1 Claims and Disputes of the General Conditions.

ARTICLE 18 – INFORMATION ACCESS

18.01 The books, records, documents, and accounting procedures and practices of CONTRACTOR relevant to this Contract shall be subject to inspection, examination and audit by OWNER, its agents and representatives, and the State of Nevada during the course of this project and for 3 years after its completion.

ARTICLE 19 – EXAMINATION OF DOCUMENTS

19.01 Execution of this Contract by each party shall constitute the representation by each such party that it has examined the contents of all the CONTRACT DOCUMENTS, including, but not limited to, General Conditions of the CONTRACT DOCUMENTS, that it has read and understands the same, and specifically agrees to be bound thereby.

SIGNATURE PAGE FOLLOWS

REST OF PAGE LEFT BLANK

IN WITNESS WHEREOF, OWNER and CONTRACTOR have caused this Contract for the **LED Conversion Project** to be executed and intend to be bound by the provisions of this Contract as well as the Contract set forth in the CONTRACT DOCUMENTS.

CONTRACTOR: _____

By: _____

Printed Name: _____

Title: _____

Date: This _____ day of _____, 2026.

OWNER: DOUGLAS COUNTY SCHOOL DISTRICT

By: _____

Printed Name: Frankie Alvarado

Superintendent

Date: This _____ day of _____, 2026.

CONSTRUCTION PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the following two pages, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature:_____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:
(Attach Power of Attorney)

Space provided below for signatures of additional parties, if required)

CONTRACTOR AS PRINCIPAL

Company:_____ Corp. Seal)

Signature:_____

Name and Title:

_____

SURETY

Company:_____(Corp. Seal)

Signature:_____

Name and Title:

_____
(Attach Power of Attorney)

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Construction Contract, the Surety and the CONTRACTOR shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1 The OWNER has notified the CONTRACTOR and the Surety at its address described in Paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2 The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1 The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the OWNER and the CONTRACTOR selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the OWNER the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new CONTRACTOR and with reasonable promptness under the circumstances:

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER, If the Surety proceeds as provided in paragraph 4.4 , and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Construction Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3, above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Construction Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the CONTRACTOR for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by Law, the Minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Construction Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Construction Contract.

12.2. Construction Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CONSTRUCTION PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the following two pages, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature:_____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:
(Attach Power of Attorney)

Space provided below for signatures of additional parties, if required)

CONTRACTOR AS PRINCIPAL

Company:_____ Corp. Seal)

Signature:_____

Name and Title:

_____

SURETY

Company:_____(Corp. Seal)

Signature:_____

Name and Title:

_____
(Attach Power of Attorney)

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the CONTRACTOR:

4.2.1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in he claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

4.2.2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR has indicated the claim will be paid directly or indirectly; and

4.2.3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by Paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety that is sufficient compliance.

6. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

7. Amounts owed by the OWNER to the CONTRACTOR under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Construction Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the work.

8. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Construction Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

9. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

10. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

11. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page. Actual receipt of

notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

12. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or the legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

13. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

14. DEFINITIONS

14.1 Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms “labor, materials or equipment” that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the CONTRACTOR and the CONTRACTOR’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

14.2 Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

14.3 OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

DOUGLAS COUNTY SCHOOL DISTRICT
MINDEN, DOUGLAS COUNTY, NEVADA

GENERAL CONDITIONS

TABLE OF CONTENTS

GC NO.	TITLE	PAGE
1.0	DEFINITIONS	1
2.0	AUTHORIZED REPRESENTATIVES	9
3.0	CONTRACT EXECUTION	9
4.0	POST-AWARD	12
5.0	SCHEDULE OF VALUES	12
6.0	PAYMENT TERMS AND DEFINITIONS	12
7.0	UNIT PRICE WORK	12
8.0	PRICING OF CHANGES	13
9.0	BACKCHARGES	14
10.0	PROGRESS PAYMENT APPLICATIONS	15
11.0	FINAL PAYMENT	16
12.0	LIQUIDATED DAMAGES	17
13.0	CONTRACT INTERPRETATION	17
14.0	DISCOVERY OF CONFLICTS, ERRORS, OMISSIONS OR DESCREPANCIES	19
15.0	INSURANCE	19
16.0	OWNER'S RESPONSIBILITIES	22
17.0	CONTRACT TIME	22
18.0	CONSTRUCTION SCHEDULE AND DATA	23
19.0	CHANGES	24
20.0	PROGRESS	27
21.0	CONSTRUCTION PROGRESS MEETINGS	27
22.0	SUBCONTRACTORS	27
23.0	LABOR, PERSONNEL AND WORK RULES	28
24.0	NEVADA PREVAILING WAGE RATES	29
25.0	CERTIFIED PAYROLLS	29
26.0	PERMITS AND FEES	29
27.0	TAXES	29
28.0	SITE CONDITIONS	29
29.0	DIFFERING SITE CONDITIONS	30
30.0	HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE	30
31.0	STANDARDS AND CODES	32

32.0 CONTRACTOR's FIELD OFFICE (NA) 32
33.0 TOILET FACILITIES 33
34.0 NEVADA OSHES REQUIREMENT 33
35.0 SAFETY 34
36.0 REQUESTS FOR INFORMATION 37
37.0 CONTRACTOR-FURNISHED SUBMITTALS AND SAMPLES 37
38.0 SUBSTITUTIONS 39
39.0 INSPECTION: REJECTION OF MATERIALS AND WORKMANSHIP 39
40.0 TESTING BY CONTRACTOR 41
41.0 TESTING BY OWNER 42
42.0 AS-BUILT RECORDS 42
43.0 OWNER-FURNISHED DRAWINGS AND TECHNICAL SPECIFICATIONS 43
44.0 CONTRACTOR-FURNISHED MATERIALS, EQUIPMENT AND WORKMANSHIP 43
45.0 LINES AND GRADES 44
46.0 ACCESS TO WORK AREAS 44
47.0 CONTRACTOR INGRESS AND EGRESS 44
48.0 DELIVERY, UNLOADING AND STORAGE 45
49.0 CONTRACTOR's WORK AREA 45
50.0 CONTRACTOR's PLANT, EQUIPMENT AND FACILITIES 45
51.0 RESPONSIBILITY FOR WORK SECURITY 45
52.0 PROTECTION OF WORK IN PROGRESS, MATERIALS, EQUIPMENT AND PROPERTY 46
53.0 PROJECT SITE PROTECTION 46
54.0 DISPOSAL OF MATERIAL OUTSIDE JOBSITE PROPERTY 47
55.0 PROJECT SIGNS, PUBLICITY AND ADVERTISING 47
56.0 UTILITIES 47
57.0 COMMERCIAL ACTIVITES 49
58.0 USE OF COMPLETED PORTIONS OF WORK 49
59.0 CONTRACT CLOSEOUT 49
60.0 WARRANTY 51
61.0 EXAMINATION OF CONTRACTOR's RECORDS 52
62.0 SURVIVABILITY 52
63.0 OWNERSHIP AND USE OF DOCUMENTS 52
64.0 COOPERATION WITH OTHERS 53
65.0 SEPARATE CONTRACTS 53
66.0 TERMINATION BY CONTRACTOR 53
67.0 TERMINATION FOR DEFAULT 54
68.0 OPTIONAL TERMINATION 55

69.0 SUSPENSION 56
70.0 CLAIMS FOR DAMAGES 57
71.0 NOTICES 57
72.0 CONTRACTOR CORRESPONDENCE 57

GENERAL CONDITIONS

1.0 DEFINITIONS

1.1 Access Road – The right-of-way, the roadway and all improvements constructed thereon connecting the Jobsite to a public highway

1.2 Addenda – Written or graphic instruments issued by OWNER during the bidding process. Addenda will become part of the Contract Documents when the Contract is executed. CONTRACTOR (and its Subcontractors), upon receiving Addenda, shall insert same into the base bid documents.

1.3 An Additive or Deductive Bid Item – An amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Contract Documents, is accepted by OWNER. Additive Alternate Items may be exercised by OWNER with the award of the project. Award may be for only the Base Bid, Base Bid plus Additive Alternate(s), Base Bid minus Deductive Alternate(s), or a combination of Base Bid plus Additive Alternate(s) minus Deductive Alternate(s).

1.4 Advertisement – A public announcement, as required by local law, inviting Statement of Qualifications for work to be performed and materials to be furnished.

1.5 Architect – The Architect contracted by OWNER to perform design and engineering work for OWNER.

1.6 ASTM – The American Society for Testing and Materials.

1.7 Award – The acceptance, by OWNER, of CONTRACTOR's Bid for construction services.

1.8 Calendar Day – Every day on the calendar including day one, NTP, to and including Substantial Completion of all the work to be performed. A Calendar Day shall be understood to be any day of the year, including weekends and holidays.

1.9 Certificate of Substantial Completion – This Certificate may be issued upon successful completion of Milestone(s) and/or specific portions of the Work that OWNER requested for early occupancy.

1.10 Construction Change Directive (CCD) – A written directive to CONTRACTOR, signed by OWNER and Architect, which shall serve as formal and binding direction for CONTRACTOR to proceed with a defined change in the Work. The directive may be implemented when deemed necessary as an interim action until a Contract Change Order can be formally assessed and executed. Upon receipt of a CCD, CONTRACTOR shall promptly proceed with the directed changes.

1.11 Contract – The written agreement covering the Work to be performed. The awarded Contract shall include the Contract Documents as listed in **ARTICLE 9 of the executed Agreement**.

1.12 Contract Change Order (CCO) – The conforming document which formally establishes the total Contract value and Contract duration at the close of the Contract. A CCO is an amendment to OWNER-CONTRACTOR Construction Contract and is a written order to CONTRACTOR signed by OWNER and CONTRACTOR, which is issued after the execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum or the Contract Time.

1.13 Contract Change Request (CCR) – A formal request to OWNER, initiated by CONTRACTOR

by submittal of a Request For Contract Change (RFCC), to propose a change to the Contract and, once approved, will authorize payment for the approved change.

1.14 Contract Control Schedule (CCS) – The schedule developed by CONTRACTOR designed to provide the control level guideline of contract execution for the duration of Contract.

1.15 Contract Item (Pay Item) – A specific unit of work for which a price is provided in the Contract.

1.16 CONTRACTOR – The individual or entity with whom OWNER has entered into the executed Agreement. CONTRACTOR is not responsible for providing, nor does CONTRACTOR control, the Project design and contents of the design documents.

1.17 Contract Price – The successful bidder was selected based on the lowest responsible and responsive bid, and OWNER and CONTRACTOR have a binding contract for the Work at the agreed Contract Price. The total compensation payable to CONTRACTOR for performing the Work, subject to modification by Contract Change Order.

1.18 Contract Time – The number of calendar days stated in the proposal, allowed for completion of the Contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the Contract shall be completed by that date.

1.19 Cost of the Work – The term “Cost of the Work” shall mean the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of the Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Section 1.19.8.

1.19.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs of employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

1.19.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

1.19.3 Payments made by CONTRACTOR to Subcontractors for Work performed by

Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this Section 1.19.

1.19.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

1.19.5 Costs of materials billed to OWNER in excess of those actually installed but required to provide reasonable allowance for waste and for spoilage. Unused excess, billed materials, if any, shall be handed over to OWNER at the completion of the work or, at OWNER's option, shall be sold by CONTRACTOR. Any amounts realized from such sales shall be credited to OWNER as a deduction from the Cost of the Work.

1.19.6 ***Does not include*** the cost of fees of testing laboratories for tests required by the Contract Documents and paid for by OWNER, ***except*** those related to defective or nonconforming work for which reimbursement is excluded by CONTRACTOR Contract for Construction, ARTICLE 40.0 TESTING BY CONTRACTOR, or other provisions of the Contract Documents.

1.19.7 Supplemental costs including the following:

1.19.7.1 The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

1.19.7.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

1.19.7.3 Rentals of all construction equipment and machinery, exclusive of hand tools owned by workers, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. Rental rates shall be determined as follows:

1.19.7.3.1 The base rates shall be those established in publications and revisions thereto entitled "Rental Rate Blue Book for Construction Equipment" or the "Rental Rate Blue Book for Older Construction Equipment" as published by K-III, 1735 Technology Drive, Suite 401, San Jose, CA 95110-1313, Phone (408) 467-6700.

1.19.7.3.2 The hourly rate to be paid shall be the monthly rate multiplied by an average regional adjustment factor of 1.05, divided by 176, multiplied by the appropriate rate

adjustment factor, plus the estimated operating cost per hour shown therein, rounded to the nearest $0.10.

1.19.7.3.3 Attachments (e.g. tractor with ripper and dozer or tractor with loader and backhoe) will be included in the hourly rental rate only when deemed essential to the work as determined the Engineer. When multiple attachments are approved for use and are being used interchangeably, the attachment having the higher rental rate shall be the only one included for payment.

1.19.7.3.4 No direct payment will be made for necessary accessories (including replenishing blades, augers, teeth, hoses, bits, etc.) if not listed in the Rental Rate Blue Book.

1.19.7.3.5 No compensation will be allowed for shop tools having a daily rental rate of less than $10 of the Rental Rate Blue Book as set forth in Section 1.19.7.3.1.

1.19.7.3.6 If ordered to use equipment not listed in the aforementioned publications, the Engineer will establish a rental rate for such equipment. CONTRACTOR shall furnish cost data that might assist in the establishment of such rental rate.

1.19.7.3.7 Payment will be made for the actual time that such equipment is in operation on the work.

1.19.7.3.8 Authorized standby time for idle equipment shall be paid at 50% of the specified rate, less the estimated operating cost per hour. No markup will be added for overhead and profit.

1.19.7.3.9 Rental rate paid as above provided shall include the cost of fuel, oil, lubrication, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. CONTRACTOR shall provide the Engineer with a complete Force Account Equipment Listing (Nevada Department of Transportation Form 040-033) for each piece of equipment utilized.

1.19.7.4 Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

1.19.7.5 All discounts for prompt payment, volume buying, all trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment, shall be credited to the Cost of the Work.

1.19.7.6 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

1.19.7.7 Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work, provided such losses and damages have resulted from causes other than

negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

1.19.7.8 Costs to receive, store and install any OWNER furnished equipment or materials as called for in this Contract.

1.19.7.9 All discounts for prompt payment, volume buying, all trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment, shall be credited to the Cost of the Work.

1.19.7.10 The cost of utilities, fuel, and sanitary facilities at the Site.

1.19.7.11 Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

1.19.7.12 When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim

1.19.7.13 When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

1.19.8 **Costs Excluded**: The term Cost of the Work shall not include any of the following items:

1.19.8.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Section 1.19.1 or specifically covered by Section 1.19.4, all of which are to be considered administrative costs covered by CONTRACTOR's fee.

1.19.8.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR’s office at the Site.

1.19.8.3 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to costs for the correction of damaged, defective or nonconforming work, disposal and replacement of materials and equipment incorrectly ordered or supplied, and making good all damage to property not forming part of the Work.

1.19.8.4 Other overheard or general expense costs of any kind and the costs of

any item not specifically and expressly included in Sections 1.19.1 through 1.19.7.

1.20 Defective – Refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents or does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior final payment of the Contract.

1.21 Drainage System – The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the Project area.

1.22 Drawings – The official drawings or exact reproductions, approved by OWNER, which show the location, character, dimensions and details of the Project and the Work to be done and which are to be considered as part of the Contract.

1.23 Equipment – All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the Work.

1.24 Final Completion – When the Work in the Contract is complete in accordance the Contract Documents, as modified by any contract changes, and OWNER accepts the Work as being complete.

1.25 Jobsite – The location where construction activity is performed under this Contract.

1.26 Inspector – A representative of OWNER, assigned to make all necessary inspections and/or tests of the Work performed or being performed, or of the material furnished or being furnished by CONTRACTOR. The Inspector may be the Project Manager in certain circumstances.

1.27 Intention of Terms – Whenever, in these specifications or on the plans, the words "directed", "required", "permitted", "ordered", "designated", "prescribed", or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of OWNER is intended; and similarly, the words "approved", "acceptable", "satisfactory", or words of like import, shall mean approved by, or acceptable to, or satisfactory to OWNER, subject in each case to the final determination of OWNER.

1.27.1 “At CONTRACTOR’S expense" or "to CONTRACTOR’s account" shall mean that the costs incurred by CONTRACTOR in performing any work or for furnishing any material or equipment will not be reimbursed by OWNER.

1.27.2 Any reference to a specific requirement of a numbered paragraph of the Technical Specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such reference.

1.28 Labor and Material Payment Bond – The approved form of security furnished by CONTRACTOR and its surety as a guaranty that it will pay in full all bills and accounts for materials and labor used in the construction of the Work.

1.29 Laboratory – The official testing laboratories of OWNER or such other laboratories as may be designated by OWNER.

1.30 Latent Defect – A hidden or concealed deficiency or fault in the Work, which OWNER, until its discovery, has no knowledge, or which, in the exercise of reasonable care, OWNER could have had no knowledge.

1.31 Materials – Any substance specified for use in the construction of the Work.

1.32 Milestone – A scheduled event signifying the completion of a deliverable or a related set of deliverables.

1.33 Mobilization – Preparatory work, furnishing required submittals and performing operations to commence project work, including but not limited to, all work necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of temporary offices, buildings, safety equipment, sanitary, and other facilities, as required by the Contract, State and local laws and regulations.

1.34 Monthly Progress Pay Estimate – The means by which CONTRACTOR applies for and receives approval of its monthly payments for work accomplished to date.

1.35 Nevada Revised Statutes (NRS) – The current codified laws of the State of Nevada; for purposes of contractual obligations, this definition will encompass the Nevada Revised Statutes, the Statutes of Nevada and the Nevada Administrative Code (NAC).

1.36 Non-Compliance Reports (NCR) – The document that informs CONTRACTOR of any CONTRACTOR infraction of the Contract Documents that negatively affects cost, scheduling, or quality of work.

1.37 Notice of Award – A written notice to CONTRACTOR from OWNER notifying CONTRACTOR that a Contract for the Work now exists between OWNER and CONTRACTOR.

1.38 Notice To Proceed (NTP) – A written notice to CONTRACTOR to begin the actual Contract Work on a specified date. If applicable, the NTP shall state the date on which the Contract time begins.

1.39 OWNER – OWNER is Board of Trustees of Douglas County School District, Minden, Nevada as represented by its designee. Where the word "approval" is mentioned, approval shall mean action by the Board of Trustees or its Chief Financial Officer. The term OWNER shall also mean the contracting agency signatory to the Contract.

1.40 Pavement – The combined surface course, base course, and sub base course, if any, considered as a single unit.

1.41 Performance Bond – The approved form of security furnished by CONTRACTOR and its surety as a guaranty that CONTRACTOR will complete the Work in accordance with the terms of the Contract.

1.42 Project – The agreed scope of work with respect to referenced project name and Jobsite specified in the Contract.

1.43 Project Manager – The individual nominated by OWNER to act on behalf of OWNER for the day to day activities during the course of the Contract. However, the Project Manager has limited authority, and cannot amend or alter the Contract in any manner, nor can he amend or alter any financial obligations of OWNER.

1.44 Proposal – A complete and properly signed offer to do the Work or designated portion thereof for the sums stipulated therein submitted in accordance with the Bidding Documents.

1.45 Punch List – A list, made near the Substantial Completion of the Work, that indicates items to be finished or the Work to be performed by CONTRACTOR or Subcontractor in order to complete the Work as specified in the Contract Documents.

1.46 Quantity Adjustment (QA) – This is a system for adjusting the estimated quantities displayed in the Bid Form (unit price contract), as a field count determines actual quantities.

1.47 Quantity Verification – The method by which CONTRACTOR quantifies the amount of work accomplished during the current billing period for a particular work activity.

1.48 Request for Contract Change (RFCC) – Formal method of notification to request a change in Contract scope.

1.49 Request for Information (RFI) – Formal means of requesting information/clarification regarding Contract requirements.

1.50 Samples – samples are physical examples furnished by CONTRACTOR to illustrate materials, equipment, finishes, or workmanship, and to establish standards by which the Work will be judged.

1.51 Structures – OWNER facilities such as culverts; catch basins; inlets; retaining walls; cribbing; storm and sanitary sewer lines; water lines; under drains; electrical ducts, manholes, hand holes, lighting fixtures and bases; transformers; flexible and rigid pavements; buildings; vaults; and, other manmade features of the Project that may be encountered in the Work and not otherwise classified herein.

1.52 Subcontractor means a person who:

1.52.1 Is licensed pursuant to the provisions of Chapter 624 of NRS or performs such work that he is not required to be licensed pursuant to Chapter 624 of NRS; and

1.52.2 Contracts with a CONTRACTOR, another Subcontractor or a supplier to provide labor, material or services for a construction project.

1.53 Subgrade – The soil that forms the pavement foundation.

1.54 Submittals and Shop Drawings – Submittals and shop drawings are drawings, diagrams, illustrations, performance charts, brochures, samples, and other data which are prepared by CONTRACTOR or any Subcontractor, manufacturer, supplier, or distributor which illustrate some portion of the Work.

1.55 Substantial Completion – The stage in the progress of the Work, or a designated portion thereof, when construction is sufficiently complete in accordance with the Contract Documents, so that OWNER can occupy and/or utilize the Work (or portion thereof) for its intended use.

1.56 Supplemental Agreement – A written agreement between CONTRACTOR and OWNER covering work that is requested by OWNER which is not related to the scope of the originally awarded Contract. The cost of this work shall be priced by CONTRACTOR in accordance with ARTICLE 19.0 - CHANGES.

1.57 Surety – The corporation, partnership, or individual, other than CONTRACTOR, executing a Bid Payment, Performance or Guaranty Bonds which are furnished to OWNER by CONTRACTOR.

1.58 Technical Specifications – A part of the Contract containing the written directions and requirements for completing the Work. Standards for specifying materials or testing, which are cited in the Technical Specifications by reference, shall have the same force and effect as if included in the Contract physically.

1.59 Work – Includes, but is not limited to the furnishing of all labor, materials, equipment, tools, supplies and incidentals and the installation of all materials and equipment necessary to fully and completely accomplish all duties and obligations imposed by the Contract.

1.60 Work Day – A working day shall be any day on which the normal working forces of CONTRACTOR may proceed with regular work for at least six (6) hours toward completion of the Contract.

2.0 AUTHORIZED REPRESENTATIVES

Before starting the Work, CONTRACTOR shall designate a competent, authorized representative acceptable to OWNER to represent and act for CONTRACTOR and shall inform OWNER, in writing, of the name and address of such representative together with a clear definition of the scope of his authority to represent and act for CONTRACTOR and shall specify any and all limitations of such authority. CONTRACTOR shall keep OWNER informed of any subsequent changes in the foregoing. Such representative shall be present or duly represented at the site of the Work at all times when the Work is actually in progress. During periods when the Work is suspended, arrangements for an authorized representative acceptable to OWNER shall be made for any emergency work, which may be required. All notices, determinations, instructions and other communications given to the authorized representative of CONTRACTOR shall be binding upon CONTRACTOR.

Before starting the Work, OWNER shall designate, in writing, a Project Manager to be the point of contact for OWNER. OWNER will notify CONTRACTOR in writing of the name of such representative, the representative's limits of authority and any subsequent changes. At all times when work is being performed under the Contract, there will be available a competent Project Manager who will have authority to act for OWNER within the scope of his authority, and to receive communications from CONTRACTOR.

3.0 CONTRACT EXECUTION

3.1 General:

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between OWNER and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral.

The Contract shall not be binding on either OWNER or CONTRACTOR until OWNER-CONTRACTOR Construction Contract and the Performance and Payment Bonds have been properly executed and submitted, and OWNER-CONTRACTOR Construction Contract has been approved and signed by OWNER or its designated representative.

Execution of OWNER-CONTRACTOR Construction Contract shall constitute CONTRACTOR's representation, under penalty of perjury, that CONTRACTOR has carefully examined the contents of all Contract Documents, which it has read and understands the same, and specifically agrees to be bound thereby. Additionally, execution of OWNER-CONTRACTOR Construction Contract by CONTRACTOR shall represent that it has inspected the site, familiarized itself with all local conditions, laws, and regulations under which the Work is to be performed and has correlated this knowledge with the requirements of the Contract Documents.

The Contract Documents shall not be construed to create a contractual relationship of any kind between Architect and CONTRACTOR, between OWNER and a Subcontractor, or between any persons or entities other than OWNER and CONTRACTOR. Architect shall, however, have authority to act on behalf of OWNER, to the extent provided in the Contract Documents.

The laws of the State of Nevada and the applicable rules and regulations of its departments, agencies, and institutions shall govern the Project and the Work. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted therein, and the Contract shall be read and enforced as though such provision were included therein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall be physically amended to make such insertion or correction.

The Contract Sum is the sum stated in OWNER-CONTRACTOR Construction Contract and is the total dollar amount payable by OWNER to CONTRACTOR for the complete and approved performance of the Work in strict accordance with the Contract Documents.

3.2 Laws and Regulations:

The Contract shall be administered and interpreted under the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. The parties consent to the exclusive jurisdiction of the Second Judicial District Court, Reno, Nevada for enforcement of this Contract. This Contract shall not be construed for or against any party by reason of who drafted the provisions set forth herein. If any part of this Contract is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said laws, but the remainder of this Contract shall remain in full force and effect.

CONTRACTOR and its employees and representatives shall at all times comply with all applicable laws, ordinances, statutes, rules or regulations in effect at the time the Work is performed under this Contract.

If, during the term of this Contract, there are any changed or new laws, ordinances or regulations not known or foreseeable at the time of signing this Contract which become effective and which affect the cost or time of performance of the Contract, CONTRACTOR shall immediately notify OWNER in writing and submit detailed documentation of such effect in terms of both time and cost of performing the Contract. Upon concurrence by OWNER as to the effect of such changes an adjustment in the compensation and/or time of performance will be made in accordance to ARTICLES 8.0 – PRICING OF CHANGES and 19.0 – CHANGES.

If CONTRACTOR discovers any discrepancy or inconsistency between this Contract and any law, ordinance, statute, rule, regulation, order or decree, CONTRACTOR shall immediately notify OWNER in writing.

3.3 Execution of the Contract:

CONTRACTOR is to execute two originals of the Contract, attach the Bonds and Certificates of Insurance and forward the same to OWNER.

If all the data submitted by CONTRACTOR under this Article is in accordance with the Contract Documents, OWNER shall have the Contract executed.

If CONTRACTOR fails to furnish all Bonds and Insurance Certificates within ten (10) days of the Notice of Award of Contract, OWNER reserves the right to reclassify CONTRACTOR's Proposal as non-responsive and OWNER may then bid the Contract per NRS 338.1696.

3.4 Bond Requirements:

3.4.1 CONTRACTOR shall furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder in such form and amount as OWNER may prescribe in accordance with the provisions of NRS 339.025. Bonds may be secured through CONTRACTOR's usual sources provided the surety must be authorized to do business in the State of Nevada.

3.4.2 Contract Required Bonds:

3.4.2.1 Labor and Material Payment Bond in the amount of 100% of the Contract price.

3.4.2.2 Performance Bond in the amount of 100% of the Contract price.

3.4.2.3 Sureties Agreement to provide Guaranty Bond in the amount of 100% of the Contract price upon Notice of Completion of the Work.

3.4.3 Form of Bonds:

3.4.3.1 The bonds shall be written on Performance Bond and Labor and Material Payment Bond Forms provided by OWNER.

3.4.3.2 CONTRACTOR shall require the attorney in fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney.

3.5 Signature Set of Contract Documents:
Prior to commencement of the Work, a complete set of conformed Contract Documents shall be examined by CONTRACTOR and OWNER for accuracy. This set of documents shall then be bound and sealed. CONTRACTOR and OWNER shall sign and date a cover sheet that lists the contents of the bound and sealed package.

This set of signed conformed Contract Documents will be held by OWNER for use as reference in the event of any conflict arising from the Contract Documents. OWNER and CONTRACTOR shall both be present in the event the bound and sealed package is ever opened.

3.6 Pre-Construction Conference:
OWNER will call a Pre-Construction Conference prior to issuance of NTP to CONTRACTOR.

The purpose of the Pre-Construction Conference will be to review various requirements of the Contract Documents, including safety and security.

CONTRACTOR shall be represented at this meeting to include CONTRACTOR's Authorized Representative, Project Manager, Superintendent, Schedule Manager and Safety and Quality Representatives.

3.7 Pre-Activity Meetings:
CONTRACTOR shall conduct a separate, on-site meeting with each Subcontractor and/or CONTRACTOR personnel on the Work to be accomplished by CONTRACTOR direct hire forces prior to commencement of the activity for the purpose of reviewing the Contract Documents. If a Subcontractor is engaged in several work activities or if CONTRACTOR is engaged in several direct hire activities, a meeting shall be conducted for each activity. OWNER shall be invited to each meeting.

No CONTRACTOR or Subcontractor work activity shall be included in a monthly Progress Pay Estimate until the above meetings have taken place.

3.8 Notice to Proceed:
When all the preceding conditions of this Article have been fulfilled, OWNER will issue NTP to CONTRACTOR.

4.1 POST-AWARD

CONTRACTOR shall include the General Conditions as attached to Contract in its contract with each Subcontractor working on this project.

CONTRACTOR shall not substitute any Subcontractor or person for a Subcontractor who is named in the Contract, unless:

(A) OWNER objects to the Subcontractor, requests in writing a change in the Subcontractor and pays any increase in costs resulting from the Change; or

(B) The substitution is approved by OWNER and is limited to the conditions allowed under state law. CONTRACTOR shall be responsible for any increase in costs as a result of such approved substitution.

CONTRACTOR shall re-issue the Disclosure of Ownership/Principals Form (Addenda, Attachment 1 – DISCLOSURE OF OWNERSHIP FORM) if, at any time during the Contract period, there are changes to the form, i.e., individuals are added to, or taken off, the list.

CONTRACTOR shall ensure that all subcontractors hold a state business license issued pursuant to NRS Chapter 76 as required under NRS 338.072.

5.0 SCHEDULE OF VALUES

Within fourteen (14) calendar days after the issuance of the NTP, CONTRACTOR shall submit to OWNER and Architect a schedule of values of the various portions of the Work, aggregating to the total Contract Sum, divided to facilitate payments to Subcontractors, prepared in a form acceptable to OWNER, and supported by such data to substantiate its correctness as OWNER may require. This schedule, when approved by OWNER and Architect, shall be the basis for each Progress Payment Application. The scheduled costs shall be itemized in accordance with the breakdown listed in the Contract Price and according to the list of defined components included in ARTICLE 6.0 PAYMENT TERMS AND DEFINITIONS.

6.0 PAYMENT TERMS AND DEFINITIONS

6.1 Cost of the Work – refer to definitions contained in ARTICLE 1.0 DEFINTIONS.

6.2 Special Allowances: Special Allowance for Permits, Fees, and Certificates. CONTRACTOR shall be reimbursed from the Special Allowance Account for actual cost of permits, fees, and certificates only, charged by the relevant regulatory agencies, to permit construction of the project and occupation thereof by OWNER upon completion. ARTICLE 26.0 PERMITS AND FEES and Section 3.4.1 describes the scope of CONTRACTOR's responsibility in this regard. CONTRACTOR shall purchase the permits, fees, and certificates and submit invoices/receipts for same with the next progress payment requisition to ensure timely reimbursement. CONTRACTOR shall be reimbursed for direct costs of the permits, fees, and certificates only, i.e., no markup shall be applied to the cost of the permits, fees, and certificates. Only those permits, fees, and certificates obtained by CONTRACTOR as required by the Contract are reimbursable from this Special Allowance.

If OWNER and CONTRACTOR are unable to reach an agreement as to the total cost of the Special Allowance work, the issue shall be resolved under the provisions of ARTICLE 13.0 CONTRACT INTERPRETATION.

7.0 UNIT PRICE WORK

7.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work,

initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of the Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by Architect.

7.2 Architect will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by CONTRACTOR, and the written decisions of Architect on such matters will be final, binding on OWNER and CONTRACTOR and not subject to appeal (except as modified by Architect to reflect changed factual conditions).

7.3 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

8.0 PRICING OF CHANGES

8.1 The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim subject to ARTICLE 13.0 CONTRACT INTERPRETATION.

8.2 The value of any the Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

8.2.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of ARTICLE 7.0 UNIT PRICE WORK); or

8.2.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit); or

8.2.3 Where the Work involved is not covered by unit prices contained in the Contract Documents an agreement to a lump sum is not reached under Section 8.2.2, on the basis of the cost of the Work (determined as provided in ARTICLE 1.0 DEFINITIONS) plus a CONTRACTOR's fee for overhead and profit (determined as provided in Section 8.3).

8.3 CONTRACTOR's Fee: CONTRACTOR's fee for overhead and profit shall be determined as follows:

8.3.1 A mutually acceptable fixed fee; or

8.3.2 If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

8.3.2.1 For costs incurred under Sections 1.19.1 and 1.19.2, CONTRACTOR's fee shall be 15 percent;

8.3.2.2 For costs incurred under Sections 1.19.3, CONTRACTOR's fee shall be five percent;

8.3.2.3 Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Section 8.3.2.1 is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such

Subcontractor under Sections 1.19.1 and 1.19.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

8.3.2.4 No fee shall be payable on the basis of costs itemized under Sections 1.19.4 through 1.19.7;

8.3.2.5 The amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

8.3.2.6 When both addition and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with Sections 8.3.2.1 through 8.3.2.4 inclusively.

9.0 BACKCHARGES

9.1 OWNER may in addition to any other amounts to be retained hereunder, retain from any sums otherwise owing to CONTRACTOR amounts sufficient to cover the full costs of any of the following:

9.1.1 CONTRACTOR'S failure to comply with any provision of this Contract or CONTRACTOR'S acts or omissions in the performance of any part of this Contract, including, but not limited to, violation of any applicable law, order, rule or regulation, including those regarding safety, hazardous materials or environmental requirements;

9.1.2 Correction of defective or nonconforming work by redesign, repair, rework, replacement or other appropriate means when CONTRACTOR states, or by its actions indicates, that it is unable or unwilling to proceed with corrective action in a reasonable time; and/or

9.1.3 Circumstances when OWNER agrees to or is required to take action or perform work for CONTRACTOR, such as cleanup, off-loading or completion of incomplete work.

9.2 OWNER may also backcharge against CONTRACTOR for work done or cost incurred to remedy these or any other CONTRACTOR defaults, errors, omissions or failures to perform or observe any part of this Contract. OWNER may, but shall not be required to, give CONTRACTOR written notice before performing such actions or work or incurring such cost.

The cost of backcharge work shall include:

9.2.1 Incurred labor costs including all payroll additives;

9.2.2 Incurred net delivered material costs;

9.2.3 Incurred lower-tier supplier and CONTRACTOR costs directly related to performing the corrective action;

9.2.4 Equipment and tool rentals at prevailing rates in the Jobsite area; and

9.2.5 A factor of twenty-five (25) percent applied to the total of Items 1 through 4 for OWNER's overhead, supervision and administrative costs.

9.3 The backcharge notice may request CONTRACTOR 's concurrence for OWNER to proceed

with the required action or work. CONTRACTOR's failure to concur shall not impair OWNER's right to proceed with the action or work under this or any other provision of this subcontract.

9.4 OWNER shall separately invoice or deduct from payments otherwise due to CONTRACTOR the costs as provided herein. OWNER's right to backcharge is in addition to any and all other rights and remedies provided in this Contract or by law. The performance of backcharge work by OWNER shall not relieve CONTRACTOR of any of its responsibilities under this Contract including but not limited to express or implied warranties, specified standards for quality, contractual liabilities and indemnifications, and meeting ARTICLE 18.0 CONSTRUCTION SCHEDULE AND DATA.

10.0 PROGRESS PAYMENT APPLICATIONS

Progress payments will be made in accordance with NRS 338.515. CONTRACTOR shall comply with NRS 338.550 through NRS 338.570 regarding payments made by CONTRACTOR to subcontractors and suppliers.

CONTRACTOR shall submit a Progress Payment Application at least 20 days before the date established for each progress payment, but not more than once each month, in the form required by OWNER. Each Progress Payment Application shall be accompanied by a current construction schedule, updated to reflect all change orders and/or changes in the Work.

Any request for partial or final payment shall specifically list the Work completed. All invoices submitted to OWNER must be made on company letterhead, reference the Purchase Order Number as submitted to CONTRACTOR under the NTP, and be in original format: OWNER will not authorize payments from carbon or Xerox copies.

Each Progress Payment Application shall correctly set forth the value of all the Work satisfactorily performed to date, less 10% of that amount as a retained percentage. Once the Work is 50% complete, OWNER may, at OWNER's discretion, reduce the amount of retention to 5% of the total Contract Sum. OWNER may pay the invoiced value, less retention, of materials properly stored on site or in approved, bonded, and insured facilities. In no event will CONTRACTOR be paid more than the listed value of each properly completed portion of the Work, less the required retention, until the entire Work has been successfully completed.

If payment is requested for materials or equipment not yet incorporated in the Work, but delivered and properly stored at the site or at a bonded and insured facility previously approved by OWNER in writing, such payment shall be conditioned upon submission by CONTRACTOR of documentation, satisfactory to OWNER, as deemed necessary to protect OWNER's interest, including applicable insurance and transportation to the job-site. The risk of loss for such materials or equipment shall remain with CONTRACTOR until final completion and acceptance of the Work.

CONTRACTOR guarantees that title to all Work, materials, and equipment covered by a Progress Payment Application, whether incorporated into the Project or not, has passed to OWNER prior to issuing the Progress Payment Application, free and clear of all liens, claims, security interests, or encumbrances, and that no Work, materials, or equipment covered by a Progress Payment Application has been acquired by CONTRACTOR, or by any other person, subject to an agreement under which an interest therein, or an encumbrance thereon is retained by the seller or otherwise imposed by CONTRACTOR or such other person. This provision shall not be construed to relieve CONTRACTOR of its sole responsibility for the care and protection of the Work, and to restore all damages thereto, nor shall serve as a waiver of the right of OWNER to require the fulfillment of all terms of the Contract Documents.

Upon receipt of each Progress Payment Application, and within seven (7) days time, OWNER and Architect will either approve the Progress Payment Application, modify the Progress Payment

Application for such amount as is determined to be properly due, or reject the Progress Payment Application.

OWNER may decline to approve any Progress Payment Application, or, because of subsequently discovered evidence or subsequent inspections, may nullify the whole or any part of a Progress Payment Application previously paid to such extent as may be necessary to protect OWNER from loss based on any of the following grounds. When the grounds are removed, payment shall be approved for the associated amount withheld.

10.1 Defective Work not remedied.
10.2 Claims filed or reasonable evidence indicating the probable filing of claims.
10.3 Failure of CONTRACTOR to make proper payments to Subcontractors or Suppliers.
10.4 Reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum.
10.5 Damage to a separate contractor.
10.6 Reasonable indication that the Work will not be completed within the Contract Time.
10.7 Unsatisfactory execution of the Work by CONTRACTOR.
10.8 Failure to maintain any insurance required by the Contract Documents.
10.9 Any other breach of the Contract Documents.

If OWNER should fail to pay CONTRACTOR within thirty (30) calendar days after the date that a Progress Payment Application is signed and approved for payment by OWNER, then CONTRACTOR may, after seven (7) additional calendar days, give written notice to OWNER and stop the Work until payment is received.

No payment by OWNER shall constitute an acceptance of any Work not in accordance with the Contract Documents, nor shall it relieve CONTRACTOR of full responsibility for correcting defective Work or materials found at any time prior to completion of the entire Work or during the guarantee period.

11.0 FINAL PAYMENT

When OWNER has received satisfactory evidence that all claims and obligations of CONTRACTOR have been paid, discharged, or waived, OWNER will make final payment to CONTRACTOR of all monies retained on all properly completed and accepted Work.

Issuance of final payment shall constitute a waiver of all claims by OWNER except those arising from any of the following:

11.1 Unsettled claims.
11.2 Guarantee or Warranty issues.
11.3 Faulty or defective Work
11.4 Failure of the Work to comply with the requirements of the Contract Documents.
11.5 Latent defects in the Work.

If any such claims remain unsatisfied after final payment is made, CONTRACTOR shall refund to OWNER all monies OWNER may be compelled to pay in discharging such claims and any costs related thereto.

The acceptance by CONTRACTOR of final payment shall constitute a full and complete release to OWNER of all claims by, and all liability to, CONTRACTOR for all things done or furnished in connection with the Work and for every act and neglect of OWNER and any others for whom OWNER is or may be responsible relating to or arising out of performance of the Work by CONTRACTOR. No payment, final or otherwise, shall operate to release CONTRACTOR or its Surety from any obligations under the Contract, or under the Performance and Payment Bonds.

As a condition of requesting or receiving final payment, CONTRACTOR shall submit all operation and maintenance manuals, guarantees, as-built drawings, surety release, and all other close-out documents as may be applicable under the Contract Documents.

12.0 LIQUIDATED DAMAGES

It is hereby mutually understood and agreed, by and between CONTRACTOR and OWNER, that the Contract Time, as specified in the Contract, is an essential condition of the Contract. It is further mutually understood and agreed that both the Work and the Contract Time shall commence on the starting date established in the NTP.

CONTRACTOR agrees that all of the Work shall be prosecuted regularly, diligently, and without interruption at a rate of progress that will ensure completion of the Work within the Contract Time.

If CONTRACTOR shall neglect, fail, or refuse to achieve Substantial Completion of the Work within the Contract Time, or a milestone before the milestone completion date, or otherwise fails to prosecute the Work by other deadlines required in the Contract Documents, then CONTRACTOR and its Surety do hereby agree, as part of the consideration for the Contract, to pay to OWNER, not as a penalty, but as liquidated damages, in the amount of **$500** for each and every excess calendar day that is required to achieve the stated deadline. The specified liquidated damages shall be OWNER'S sole and exclusive remedy for excess calendar days.

CONTRACTOR and OWNER mutually agree that in the event of a delay the actual damages to be suffered by OWNER are difficult to determine and accurately quantify, including but not limited to damages associated with school closures and incomplete or inadequate delivery of educational services to children as a result of a delay. Accordingly, CONTRACTOR, its Surety, and OWNER agree that the amount specified above for liquidated damages is the appropriate and best estimate of the damages that would actually be incurred by OWNER should the Work or any separable part thereof not be completed within the Contract Time.

Should the remaining balance of the Contract Sum be insufficient to cover the specified liquidated damages due OWNER, then OWNER shall have the right to recover such unrecovered liquidated damages from CONTRACTOR and/or its Surety.

Liquidated damages shall cease to be assessed on the date that Substantial Completion is achieved provided CONTRACTOR completes all punch list work within the time limit stipulated in the Certificate of Substantial Completion. If CONTRACTOR does not complete all of the punch list work within the time limit stipulated in the Certificate of Substantial Completion, the assessment of liquidated damages shall resume on the date that the stipulated time limit expires and shall continue until all such punch list work is completed.

13.0 CONTRACT INTERPRETATION

All questions or disputes CONTRACTOR may have concerning interpretation or clarification for the acceptable fulfillment of this Contract, and all disputes applicable under ARTICLE 67.0 – TERMINATION FOR DEFAULT, ARTICLE 14.0 – DISCOVERY OF CONFLICTS, ERRORS, OMISSIONS OR DESCREPANCIES, or ARTICLE 29.0 – DIFFERING SITE CONDITIONS, shall be submitted immediately in writing to OWNER for resolution.

OWNER shall render a decision resolving the question or dispute (hereafter "resolution") within thirty (30) calendar days, after receipt of the submission from CONTRACTOR. The resolution shall be considered final and conclusive. CONTRACTOR is obligated to proceed in a timely manner with the resolution therein.

If CONTRACTOR does not agree with the resolution, CONTRACTOR shall proceed in accordance with Section 13.1.

OWNER may, as required, issue to CONTRACTOR, clarifications to Contract. CONTRACTOR is obligated to proceed in a timely manner with instructions included therein.

If CONTRACTOR does not agree with clarification, CONTRACTOR shall proceed in accordance with Section 13.1.

CONTRACTOR is solely responsible for submitting instructions or interpretations and is solely liable for any cost and/or expense arising from its failure to do so. At all times, CONTRACTOR shall carry on the Work and maintain its progress schedule in accordance with the requirements of the Contract and any resolution or clarification, pending conclusion of any dispute.

13.1 Claims and Disputes

If CONTRACTOR disagrees with any resolution or clarification made by OWNER; if CONTRACTOR decides that work has been undertaken or cost has been incurred, that is outside scope Work of the Contract, CONTRACTOR shall file a claim with OWNER within thirty (30) calendar days after the resolution or clarification was rendered, or the work or cost was undertaken by CONTRACTOR.

All claims presented by CONTRACTOR shall include the following documentation in support of claims:

13.1.1 Specific provisions of the Contract that are pertinent to the claim.

13.1.2 A full description of the claim, with a narrative to support CONTRACTOR's position.

13.1.3 All costs associated with the claim shall be detailed as in ARTICLE 19.0 – CHANGES and ARTICLE 8.0 – PRICING OF CHANGES.

13.1.4 All time extensions associated with claim shall be detailed as in ARTICLE 19.0 – CHANGES and ARTICLE 8.0 – PRICING OF CHANGES.

13.1.5 Supporting documentation to substantiate claim, including schedules, graphs, charts, photographs and any other pertinent documentation or information.

13.2 Failure by CONTRACTOR to furnish all preceding data or to file Claim within specified thirty (30) calendar days shall constitute a waiver of claim by CONTRACTOR.

13.3 OWNER shall have thirty (30) calendar days after receipt of the claim, to respond to CONTRACTOR. OWNER response shall be considered final and conclusive unless CONTRACTOR files a written appeal to OWNER within thirty (30) calendar days of receipt of the response. CONTRACTOR's appeal shall state clearly and in detail the basis thereof.

13.4 OWNER shall consider CONTRACTOR's appeal and render a final decision thereon within thirty (30) calendar days of receipt of CONTRACTOR's appeal. If OWNER's final decision is not acceptable to CONTRACTOR, the matter shall be resolved through good faith negotiations between both parties. If, through good faith negotiations, the claim is not resolved within thirty (30) calendar days after OWNER's final decision, either Party may request mediation before any party commences litigation.

13.5 Any and all disputes of any kind that may arise between OWNER and CONTRACTOR under the Contract Documents that cannot initially be resolved to the satisfaction of both parties shall be submitted first to mediation to be conducted in a location that is agreeable to both parties utilizing the services of a mediator who is acceptable to both parties. All fees of the

mediator and related costs associated with mediation shall be split and paid equally by the parties.

13.6 In the event that the parties agree to forego mediation of their dispute(s), or that mediation is unsuccessful, then all disputes between them of any kind or nature arising out of or under the terms of the Contract Documents, or the performance of the Contract, and which arose prior to the termination of the guarantee period specified in the Contract, shall be determined exclusively by and through mandatory, binding arbitration conducted in Douglas County, Nevada (unless the parties agree upon a different location) pursuant to the Nevada Uniform Arbitration Act of 2000, NRS 38.276 et seq., (the "Act").

13.7 The parties shall, by agreement between them if possible, select one (1) person as arbitrator who has substantial experience in the area(s) of the disputed issues(s). If they cannot agree upon an arbitrator, either party may apply pursuant to NRS 38.226 to the Ninth Judicial District Court of the State of Nevada in Minden, Douglas County, Nevada to appoint an arbitrator. The arbitrator selected by either method shall have all of the powers set forth in the Act, and shall enter an award at the conclusion of the proceedings, including an award of reasonable attorney's fees and costs to the prevailing party. In no event, however, may the award include any tort or punitive damages. The arbitrator's fee and the cost of the arbitration proceeding itself shall initially be divided equally between the parties, but the arbitrator may award all or any part of the fee and costs of the proceeding to the prevailing party in his/her reasonable discretion.

14.0 DISCOVERY OF CONFLICTS, ERRORS, OMISSIONS OR DESCREPANCIES

Any conflicts or discrepancies, errors or omissions among the various Contract Documents shall be submitted immediately by CONTRACTOR to OWNER for clarification, under ARTICLE 13.0 – CONTRACT INTERPRETATION, and such clarification by OWNER shall be final. Any Work affected by such conflicts, discrepancies, errors or omissions which is performed by CONTRACTOR prior to clarification shall be at CONTRACTOR's risk and expense.

Local code requirements shall be standard except where the drawings and specifications dictate a more stringent requirement. Where conflicts exist, the most stringent requirements shall apply.

15.0 INSURANCE

15.1 During the term of this Contract, CONTRACTOR shall provide insurance as follows:

15.1.1 Contractor shall maintain statutory workers' compensation and employer's liability coverage in accordance with NRS 616B.030 and NRS 616B.627 for all its employees who will be engaged in the performance of the contract, including special coverage extensions where applicable. Nevada State Statutory limits shall be required. Waiver of Subrogation in Section 15.1.7 applies to this Article in full.

15.1.2 Automobile Liability Insurance for owned, hired, and non-owned autos with minimum limits as follows:

15.1.2.1 Bodily Injury: $1,000,000 per occurrence, and
Property Damage: $1,000,000 per occurrence

Or

15.1.2.2 Bodily Injury/Property Damage Combined: $1,000,000 per occurrence combined single limit

15.1.3 Commercial General Liability Insurance for operations of the insured project in a Form providing coverage not less than that of a standard Commercial General Liability insurance policy ("Occurrence Form" with a "Per Project" Aggregate Limit) for operations of CONTRACTOR and its Subcontractors, including Independent Contractors, Products and Completed Operations, Contractual Liability and Personal Injury Liability with Limits not less than:

Bodily Injury and Property Damage Combined:

General Aggregate	$2,000,000
Products/Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$1,000,000
Each Occurrence Limit	$1,000,000

15.1.4 Umbrella Liability Insurance that is excess of the primary automobile liability, employer's liability and general liability coverage's in a form that is as broad as the underlying coverage with limits not less than $4,000,000.

15.1.5 If Contract Price exceeds $5,000,000, Builder's Risk must be provided by CONTRACTOR. Builder's Risk or Course of Construction Insurance, insuring Risks of direct physical loss unless excluded. Coverage includes mechanical breakdown, property in transit, property at temporary storage location, earthquake, and flood (other than Zones A or V) subject to applicable sub-limits and insuring the interests of OWNER, CONTRACTORS, and their Subcontractors of any tier providing equipment, materials or services for the project. (Equipment is only covered if deemed to be incorporated as part of the project).

15.1.6 CONTRACTOR shall with provide evidence that the foregoing insurance is in force prior to commencement of the Work on this Contract.

15.1.7 OWNER and CONTRACTOR waive all rights against each other and any of their subcontractors, agents, employees, each of the other, for damages caused by fire or other causes of loss to the extent covered by property insurance, except such rights as they have the proceeds of such insurance held by OWNER as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

15.1.8 All insurance shall be on an occurrence basis and not a claims-made basis.

15.2 All required insurance coverage as stated herein will be evidenced by a current ACORD Form 25 Certificate(s) of Insurance; such Certificates will include, but will not be limited to, the following:

15.2.1 All Certificates for each insurance policy are to be signed by a person authorized by that insurer.

15.2.2 Each insurance company's rating as shown in the latest Best's Key Rating Guide will be fully disclosed and entered on the required Certificates of Insurance. The insurance companies must have a Best's Rating of at least A- VII or better in the latest edition of Best's Insurance Reports. The adequacy of the insurance supplied by CONTRACTOR (or its Subcontractors) including the rating and financial health of each insurance company providing coverage, is subject to the approval of OWNER, approval of which shall not be unreasonably withheld.

15.2.3 Said policies, except Worker's Compensation, shall name OWNER, its agents, employees, and members of the Board of Trustees as additional insureds. The policies will be primary and any other insurance carried by OWNER and/or CONTRACTOR shall be excess and not contributing therewith.

15.2.4 Each insurance policy supplied by CONTRACTOR (or its Subcontractors) must be endorsed to provide that the coverage will not be canceled or materially changed without prior written notice to OWNER. CONTRACTOR shall provide written notice by mail of any material change, suspension, voiding or reduction in coverage or in limits, of any insurance policy, which provides coverage required by this Contract. Said notice must be provided per policy provisions. This notice requirement does not waive the insurance requirements contained herein.

15.2.5 CONTRACTOR (or its Subcontractors) will furnish renewal certificates for the required insurance during the period of coverage required by this Contract.

15.2.6 CONTRACTOR (or its Subcontractors) will furnish renewal certificates for the same minimum coverages as required by this Contract. The notice for renewal will be submitted forty-five (45) days in advance of the expiration date shown on the Certificate of Insurance. A second request will be mailed if the Certificate is not received within ten (10) days. If, within twenty (20) days from the date of notice of renewal, the Certificate has still not been provided, OWNER may declare CONTRACTOR (or its subcontractors) in default of its obligations under this Article.

15.2.7 All deductibles and self-insured retentions will be fully disclosed in the Certificates of Insurance. CONTRACTOR (or its Subcontractors) is responsible for any deductible or self-insured retention contained within the insurance program.

15.3 Absence of Insurance:
In the event CONTRACTOR fails to provide OWNER with the insurance described in Sections 15.1 and 15.2, no Work shall commence on the contract site. If the coverage required by CONTRACTOR is canceled, all Work on the contract site shall stop immediately, until the problem is resolved.

15.4 Maintenance of Deductible:

15.4.1 If the loss is caused by CONTRACTOR (or its Subcontractors), CONTRACTOR will be responsible for maintenance of the deductible per each occurrence of a loss as follows:

15.4.1.1 If arising out of direct damage to property under course of construction or installation, whether or not insured by OWNER, the first $50,000.

15.4.1.2 If arising out of direct damage to property under course of construction or installation, whether or not insured by OWNER for perils of FLOOD and EARTH MOVEMENT, the first $100,000.

15.4.1.3 If arising out of property damage liability, including loss of use thereof, the first $5,000.

15.4.2 All deductibles under shall be paid by CONTRACTOR, directly to OWNER.

15.5 Claim Reporting:
CONTRACTOR shall immediately report any incident or claim, no later than twenty-four (24) hours after occurrence, to OWNER.

15.6 Costs and Markups for Insurance Claims:
All costs and markups for Work performed by CONTRACTOR, on insurance claims, as noted in this General Condition, shall be in accord with all the requirements of ARTICLE 19.0 - CHANGES.

15.7 Familiarity with Coverages:
It is CONTRACTOR's responsibility to familiarize itself with the coverages described in this General Condition.

15.8 OWNER's Insurance:
OWNER will be responsible for purchasing and maintain its own liability insurance and, at its option, may purchase and maintain such insurance as will protect OWNER against claims that may arise from operations under the Contract Documents.

16.0 OWNER'S RESPONSIBILITIES

OWNER will provide general administration of the Contract provided that such general administration shall not relieve CONTRACTOR of complete responsibility for the means and methods of construction and performance of the Work in accordance with the Contract Documents.

OWNER shall furnish site surveys describing the topography and physical characteristics, legal limits, and utility locations for the Project site.

Information or services under OWNER'S control shall be furnished by OWNER within a reasonable time to avoid delays in the orderly progress of the Work.

Prior to the start of construction, OWNER shall obtain all land and rights-of-way necessary for the carrying out and completion of the Work

17.0 CONTRACT TIME

The date of commencement of the Work is the date established in the NTP issued by OWNER. No Work shall be done at the project site prior to this date unless specifically directed by OWNER with the exception of mobilization and temporary utilities upon OWNER's approval.

CONTRACTOR shall begin the Work on the starting date established in the NTP. It shall perform the Work expeditiously with adequate forces and shall complete the Work within the Contract Time.

Normal working days are considered to be Monday through Friday, excluding holidays, between the hours of 7:00 am and 5:00 pm, or per City Ordinance and subject to approval by Project Manager. CONTRACTOR shall submit to OWNER its proposed working schedule for approval before commencing the Work. If CONTRACTOR desires to work on any weekend day, holiday, during any other hours of the day, or change its originally approved working schedule, it shall request and obtain OWNER's written approval at least 5 days in advance of the requested deviation.

OWNER reserves the right to stop CONTRACTOR activities during holidays or emergencies. OWNER reserves the right to vary or reduce the primary shift hours to accommodate special requests of the users of the Jobsite. OWNER reserves the sole right to determine the definition of a special request. CONTRACTOR shall use all reasonable means available to minimize demolition/construction noise generated through performance of the Work. OWNER reserves the right to temporarily suspend and reschedule performance of the Work should an adverse impact to OWNER's use of the jobsite be experienced as a result of excess noise.

In the event CONTRACTOR is requested to change Work schedules, stop Work, limit Work in its Work area(s) by any Federal, State, or local agency, other than OWNER, CONTRACTOR's compliance to any such request shall be at CONTRACTOR's sole discretion. Cost and schedule

impacts that CONTRACTOR may incur as a result of electing to implement any such requests shall be to CONTRACTOR's account.

It is expressly understood and agreed that the Contract Time is a reasonable and acceptable time for completion of the Work considering the requirements of the Contract Documents, the type and scope of the Project, and the usual industrial and labor conditions prevailing in the locality of the Project.

It is expressly understood and agreed that the Contract Time includes adequate time to allow for usual weather delays considering the climatic conditions in the area of the Project. No adjustments to the Contract Time will be allowed on the account of usual variations in weather. CONTRACTOR shall include adequate float or other allowance in construction schedule to accommodate weather conditions that may be associated with weather dependent Work.

The Contract Sum is based on the Contract Time specified in OWNER-CONTRACTOR Construction Contract and shall not be based on an early completion schedule. No additional compensation shall be granted to CONTRACTOR for delays to an early completion schedule and any such claim is hereby waived.

18.0 CONSTRUCTION SCHEDULE AND DATA

Within thirty (30) days after issuance of the NTP and prior to issuing any progress payment application, CONTRACTOR shall submit a construction schedule to OWNER and Architect for review. The schedule must be satisfactory to OWNER and Architect before the first payment application will be accepted. The schedule shall not exceed the Contract Time, shall be revised at appropriate intervals as required by the progress and conditions of the Work, and shall provide for performance and completion of the Project in accordance with the Contract Documents.

The construction schedule shall be organized to show progress for each trade and operation. As a minimum, the schedule shall show the order in which CONTRACTOR proposes to perform the Work, with the proposed starting and completion dates for all significant Milestones, and with available float for each activity of the Work. Activities which constitute critical path portions of the Work shall be clearly identified as such. The schedule will include procurement and delivery of major equipment and long lead items. The schedule will show testing, commissioning and training on equipment and systems. The schedule shall be promptly updated as necessary to reflect the Work required to implement each CCO and/or change in the Work. The schedule shall also include reasonable and orderly dates for issuance of all required submittals, allowing for reasonable notice and staged delivery of submittals to Architect.

CONTRACTOR shall conduct the Work at all times in such a manner and in such sequence as will assure the least interference with the Jobsite users. OWNER may require CONTRACTOR to finish a section in which the Work is in progress before Work is started on any additional sections if the opening of such section is essential to OWNER convenience.

CONTRACTOR shall not disrupt any OWNER Operations. Interface with OWNER Operations is integral to the successful performance of this Contract. CONTRACTOR shall not proceed with any portion of the Work without approved schedules and Work Plans in place. In addition, CONTRACTOR shall provide OWNER with seventy-two (72) hour notice prior to performance of any Work that will impact OWNER Operations.

CONTRACTOR shall utilize a form of project planner software acceptable to OWNER in writing, to create and manage the construction schedule. Submitted schedules and associated data shall be provided in both hard copy and electronic file format. Upon written request by OWNER, CONTRACTOR shall provide prompt responses to any questions regarding reasons or causes for changes to the construction schedule.

If requested by OWNER, CONTRACTOR shall submit a current/updated construction schedule with

each Progress Payment Application. If requested by OWNER it shall also include a brief narrative explaining if CONTRACTOR is on schedule and, if not, provide a recovery schedule for review by OWNER and Architect. The recovery schedule shall identify how CONTRACTOR proposes, at its sole expense, to overcome the associated delays and complete the Work within the Contract Time. Failure by CONTRACTOR to provide a current construction schedule when requested by OWNER shall be justification for OWNER to withhold value of uncompleted requirements.

19.0 CHANGES

19.1 Changes in the Wwork - General

19.1.1 OWNER's Project Manager and Architect shall have authority to order changes in the Work which do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Such changes shall be binding on CONTRACTOR.

19.1.2 OWNER, without invalidating the Contract, may order changes in the Work utilizing a CCD with the Contract Sum and/or the Contract Time being adjusted as deemed appropriate. CONTRACTOR shall comply with the provisions of Section 19.1.3 in the event that CONTRACTOR believes that a CCD has a potential impact on the Work.

19.1.3 Should any event or circumstance occur that CONTRACTOR believes may constitute a change in the Work entitling CONTRACTOR to an adjustment to the Contract Sum or the Contract Time, CONTRACTOR shall issue written notice and a request for a CCO to OWNER within five (5) days of the occurrence of such event or circumstance. Such written notice shall be issued by CONTRACTOR for any event or circumstance that CONTRACTOR knows, or should have known, to have a potential impact on the Work. The request shall describe in detail the related causes and any potential impact to the Work. CONTRACTOR shall also identify any anticipated adjustment to the Contract Sum and/or to the Contract Time as a result of such impact. Failure to submit such written notice and a request within the time stipulated and with the information required by this Article shall constitute a waiver by CONTRACTOR of the right to a CCO.

19.1.4 CONTRACTOR shall not proceed with changes to the Work without a CCD or a CCO. If CONTRACTOR proceeds with changes to the Work without proper written approval, it does so at its own risk.

19.1.5 Execution of a CCO shall be considered complete and final adjustment of the Contract Sum and the Contract Time and represents complete and final resolution of all matters related to, or arising out of, the CCO. Execution of a CCO by CONTRACTOR, or acceptance of payment by CONTRACTOR constitutes a complete waiver and release of all direct, indirect, consequential and impact costs and damages related to, or resulting from that CCO and its effect, if any, on unchanged Work, including, but not limited to jobsite overhead, home office overhead, interest or carrying charges on CONTRACTOR's investment, expenses arising from cost of capital, or for loss of use of, or under-utilization of labor, equipment, or facilities. The execution of each CCO, or acceptance of payment by CONTRACTOR shall constitute a full and complete settlement for all claims CONTRACTOR may have against OWNER for any damages and/or increased costs as a result of any delay, acceleration, hindrance, disruption, inefficiency, or other interference related to the CCO, and all previous CCOs. In estimating the effect of changes upon the cost of its Work and Schedule, CONTRACTOR shall ensure that he has properly accounted for all cost and time impacts and shall not later make any claim for reimbursement of impact costs allegedly resulting from the number, nature, or extent of CCOs. CONTRACTOR may not reserve the right to make further claims with regard to any executed CCO. Any attempt by CONTRACTOR to reserve such a

right shall be considered invalid and unenforceable.

19.1.6 All requests for changes in the Work shall be submitted to OWNER and Architect in sufficient detail to allow a complete analysis of all proposed costs. CONTRACTOR shall, upon request by OWNER or Architect, submit invoices for materials and equipment utilized in CCO Work. Labor rates, including fringe benefits, shall be in conformance with the applicable Prevailing Wage Rates for this Project.

19.1.7 CONTRACTOR shall, upon request by OWNER or Architect, submit detailed rationale and justification for labor rates utilized in CCO Work.

19.1.8 CONTRACTOR will not be entitled to a CCO for any Work that reasonably could have or should have been identified as necessary during CONTRACTOR's participation in the design review process as defined in OWNER-CONTRACTOR Pre-Construction Agreement.

19.2 Changes in the Wwork – Emergency

19.2.1 OWNER will issue written orders to CONTRACTOR for any changes provided that in the event of an emergency which OWNER determines endangers life or property, OWNER may issue oral orders to CONTRACTOR for any Work required by reason of such emergency. Such orders will be confirmed in writing as soon as practicable. Such orders, whether written or oral, may be accompanied by drawings and data as are necessary to show the extent of such ordered Work.

19.2.2 CONTRACTOR shall commence such changed Work so that all the dates set forth in CONTRACTOR's current construction schedule as approved by OWNER will be met, provided that in the event of an emergency which OWNER determines endangers life or property, CONTRACTOR shall commence such change as required by OWNER. Failure to commence any such change in a timely fashion shall entitle OWNER to invoke the provisions of ARTICLE 67.0 – TERMINATION FOR DEFAULT.

19.2.3 If CONTRACTOR intends to assert a proposal for an equitable adjustment under this clause, it must within ten (10) calendar days after receipt of notification of such change, as provided for in Section 19.1, provide written notification of such intent and within a further thirty (30) calendar days, pursuant to ARTICLE 8.0, PRICING OF CHANGES, submit to OWNER a written proposal setting forth the nature, schedule impact, and pricing in sufficient detail to permit thorough analysis and negotiation.

19.2.4 Any delay by CONTRACTOR in giving notice or presenting a proposal for adjustment under this clause shall be grounds for rejection of the proposal.

19.3 Contract Time Extensions

An extension in the Contract Time for a delay will be allowed only in the case that a full normal working day is lost. Delays will not be allowed for lost partial days or for lost non-working days.

All requests by CONTRACTOR for extensions of the Contract Time due to delays to the Work shall be made in writing to OWNER and Architect within five (5) calendar days after the start of the delay. Each CCO request shall describe in detail the event or events causing the delay, any related causes, and any impact to the Work. Failure to submit such requests within the stipulated time and with the information required by this paragraph shall constitute a waiver by CONTRACTOR of the right to an extension of the Contract Time on the basis of this event or issue.

If CONTRACTOR is delayed at any time in the progress of the Work by any act or neglect of

OWNER or Architect, or by any employee of either, by any separate contractor employed by OWNER, or by circumstances that are agreed to be beyond the control and without the fault of CONTRACTOR and its Subcontractors and suppliers, the Contract Time may be extended by CCO for such reasonable time as OWNER may determine.

CONTRACTOR may be entitled to compensation or damages from OWNER because of justifiable delay caused by OWNER, Architect, or any person working for either of them. OWNER may compensate CONTRACTOR for any damages resulting from any affirmative, willful act in bad faith performed by OWNER or its employees which unreasonably interferes with CONTRACTOR's ability to complete the Work within the Contract Time.

For cumulative delays that total five (5) days, CONTRACTOR may request an additional two (2) days to account for the associated non-working weekend days. Should CONTRACTOR request and be allowed a time extension which causes the Contract Time to end on a non-working day (on a weekend day or a holiday) the nonworking day(s) may be added to the Contract Time such that the Contract Time ends on a working day.

Extensions to the Contract Time will not be allowed for delays that do not affect the critical path for completion of the Work.

Extensions to the Contract Time will not be allowed for delays which could have been or may have been avoided by the exercise of care, prudence, foresight, and/or diligence by CONTRACTOR, or for delays resulting from correction of Work rejected as defective or as failing to conform to the Contract Documents. If the performance of such changes would result in an increase or decrease in the time required for completion of Work as shown on CONTRACTOR's approved construction schedule, CONTRACTOR shall revise the schedule to reflect the increase or decrease and submit such revised schedule to OWNER.

19.4 Force Majeure:

Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including without limitation, earthquakes, floods, winds, or storms. In such an event, the intervening cause must not be the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of the Contract after the intervening cause ceases. If applicable, CONTRACTOR may then submit claim for contract time extensions and Cost of the Work per this Article.

19.5 Payment for Changes:

It is expressly understood that no payment for change work will be made until the price of the change work has been approved by OWNER. Once approved, the price of the change work shall be added to the schedule of values and when the Work is completed, payment shall be included in CONTRACTOR's next Progress Pay Estimate, all in accordance with ARTICLES 6.0 PAYMENT TERMS AND DEFINITIONS, 7.0 UNIT PRICE WORK, 8.0 PRICING OF CHANGES, 9.0 BACKCHARGES, AND 10.0 PROGRESS PAYMENT APPLICATIONS.

19.6 CONTRACTOR's Certification of Claims:

CONTRACTOR shall provide the following certification signed by an authorized representative of CONTRACTOR with respect to any Claim for adjustment in the Contract Price:

> "I certify that this claim is made in good faith; that the supporting data is accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the adjustment in the Contract Price for which I believe OWNER is liable; that I understand Nevada law imposes

liability for damages and civil penalties for knowingly presenting or causing to be presented a false claim for payment or approval or knowingly making or using, or causing to be made or used, a false record or statement to obtain payment or approval of a false claim; and that I am duly authorized to certify this claim on behalf of CONTRACTOR."

Except as otherwise provide by law and notwithstanding any other provision contained in the Contract Documents to the contrary, either state or federal courts which are located in Nevada will have exclusive jurisdiction over any dispute, claim or question involving an allegation of a false claim and such dispute, claim or question will not be subject to arbitration.

20.0 PROGRESS

CONTRACTOR shall give OWNER full information in advance as to its plans for performing each part of the Work. If at any time during the progress of Work, CONTRACTOR's actual progress is inadequate to meet the requirements of the Contract, OWNER may so notify CONTRACTOR who shall thereupon take such steps as may be necessary to improve its progress. If within a reasonable period as determined by OWNER, CONTRACTOR does not improve performance to meet the currently approved contract construction schedule, OWNER may require an increase in CONTRACTOR's labor force, the number of shifts, overtime operations, additional days of work per week and an increase in the amount of construction plant; all without additional cost to OWNER. Neither such notice by OWNER nor OWNER's failure to issue such notice shall relieve CONTRACTOR of its obligation to achieve the quality of work and rate of progress required by the Contract.

Failure of CONTRACTOR to comply with the instructions of OWNER may be grounds for determination by OWNER that CONTRACTOR is not prosecuting its work with such diligence as will assure completion within the times specified. Upon such determination, OWNER may terminate CONTRACTOR's right to proceed with the performance of the Contract, or any separable part thereof, in accordance with the applicable provisions of this contract.

21.0 CONSTRUCTION PROGRESS MEETINGS

CONTRACTOR shall, as requested by OWNER, attend any and all meetings required by OWNER to discuss the Work under the Contract. Such meetings shall be conducted by Project Manager and recorded by Architect with minutes of each meeting distributed to OWNER and CONTRACTOR.

21.1 Pre-Construction Conference:

As soon as practicable after award of Contract and prior to commencing any Work, a pre-construction conference will be arranged. The purpose of said conference is to determine procedures related to smooth progress of the project and to review any items requiring clarification. Procedures for processing and distribution of all documents and correspondence related to the Contract will be established.

22.0 SUBCONTRACTORS

After submitting the required Subcontractor information to OWNER, CONTRACTOR shall not contract with any other Subcontractor nor change Subcontractors without proper justification and without the prior written approval of OWNER.

CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to CONTRACTOR by the terms of the General Conditions and the other Contract Documents. These provisions shall include, but shall not be limited to, the following:

22.1 Require that the Subcontractor's Work be performed in accordance with the requirements of

the Contract Documents and be guaranteed for a period of one year after the date of Substantial Completion, or as may be required in the Contract Documents.

22.2 Require that the Subcontractor's Work be performed in accordance with CONTRACTOR's construction schedule to ensure completion within the Contract Time.

22.3 Require that all claims by the Subcontractor for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the Work shall be submitted to CONTRACTOR in the time and manner provided in the Contract Documents for like claims by CONTRACTOR upon OWNER

CONTRACTOR shall pay each Subcontractor, within ten (10) calendar days after receipt of payment from OWNER, an amount equal to the percentage of completion allowed to CONTRACTOR on account of each Subcontractor's Work. CONTRACTOR shall also require that each Subcontractor make similar payments to each Sub-subcontractor.

CONTRACTOR shall be as fully responsible to OWNER for the acts and omissions of its Subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of the persons directly employed by them. If, through acts or neglect on the part of CONTRACTOR, any Subcontractor suffers loss or damage, CONTRACTOR agrees to settle with such Subcontractor. If such Subcontractor asserts any claim against OWNER on account of any damage alleged to have been sustained, OWNER shall notify CONTRACTOR, who shall indemnify, hold harmless, and defend OWNER against any such claim.

If CONTRACTOR fails to make appropriate payments to any Subcontractor, workers, or supplier, then OWNER may pay unpaid bills and/or withhold from CONTRACTOR's unpaid compensation a sum of money deemed reasonably sufficient to reimburse OWNER or pay any and all such claims until satisfactory evidence is furnished that all such liabilities have been fully discharged by CONTRACTOR, but in no event shall the provisions of this paragraph be construed to impose any obligations upon OWNER to CONTRACTOR, its Surety, Subcontractors, workers, or suppliers. In paying any unpaid bills of CONTRACTOR, OWNER shall be deemed the agent of CONTRACTOR, and any payment so made by OWNER, shall be considered as a payment made under the Contract by OWNER to CONTRACTOR, and OWNER shall not be liable to CONTRACTOR for any such payment made in good faith.

CONTRACTOR shall be responsible for the proper distribution of all insurance recoveries resulting from an insured loss under the Contract.

OWNER may upon request, furnish to any Subcontractor or supplier, information regarding payments to CONTRACTOR on account of Work done by such Subcontractor or supplier.

Neither OWNER nor Architect shall have any obligation to pay or to see to the payment of any monies to any Subcontractor, worker, or supplier, except as may otherwise be required by law.

23.0 LABOR, PERSONNEL AND WORK RULES

CONTRACTOR shall employ only competent and skilled personnel to perform the Work. CONTRACTOR shall, if requested to do so by OWNER, remove from the Jobsite any personnel of CONTRACTOR whom OWNER determines unfit or acting or working in violation of any provision of this Contract.

CONTRACTOR shall comply with and shall cooperate with OWNER in enforcing Jobsite conditions and job work rules which directly affect the performance of the Work including but not limited to starting and quitting time, smoking regulations, check-in and check-out procedures, Jobsite safety regulations and security regulations, emergency plans and procedures, and daily clean-up.

All CONTRACTOR personnel shall wear a CONTRACTOR company badge when on the Jobsite.

CONTRACTOR and subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring, and discrimination, including Chapter 338 of the Nevada Revised Statutes, which is entitled "Public Works and Planning". CONTRACTOR shall ensure that all employees on the Work are paid in accordance with entitled Prevailing Wage Rates as approved by the State Labor Commissioner for Douglas County, Nevada and the minimum Federal Wage Scale as determined by the Secretary of Labor, as displayed in this Contract. All Work necessary to be performed after regular working hours, on Sundays or legal holidays, shall be performed without additional expense to OWNER.

CONTRACTOR shall comply with the Copeland Anti Kick Back Act (18 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This act provides that each CONTRACTOR or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which it is otherwise entitled.

CONTRACTOR shall comply with the provisions of NRS 338.130 – Preferential employment in construction of public works. If the provisions of this Article are not complied with by CONTRACTOR, the Contract is void.

24.0 NEVADA PREVAILING WAGE RATES

OWNER is exempt from prevailing wage rates per 2015 Legislation, SB119 as enrolled affecting 338.080.

25.0 CERTIFIED PAYROLLS

Refer to Article 24.0.

26.0 PERMITS AND FEES

CONTRACTOR shall be responsible for coordination and obtaining of any and all permits paid by OWNER and certificates, required by the relevant regulatory agencies, applicable to constructing and, upon completion, utilization of this facility by OWNER including: Plan Check fee(s), Building Permit(s), Grading Permit(s), Drainage/Flood Control Permit(s), Electrical Permit(s), Mechanical Permit(s), Plumbing Permit(s), Dust Control Permit(s), Fire Protection Permit(s), Water/Sanitation Connection Fee(s), Temporary Occupancy Certificate(s), Permanent Occupancy Certificate, or Security Deposits. Refer to Section 6.2 for Payment.

27.0 TAXES

CONTRACTOR shall pay all taxes, levies, duties and assessments of every nature, which may be applicable to any Work under this Contract. The Contract Sum and any agreed variations thereof shall include all taxes imposed by law. CONTRACTOR shall make any and all payroll deductions required by law. CONTRACTOR shall defend, indemnify, and hold OWNER harmless from any liability on account of any and all such taxes, levies, duties, assessments and deductions.

28.0 SITE CONDITIONS

28.1 CONTRACTOR shall have the sole responsibility of satisfying itself concerning the nature and location of the Work and the general and local conditions, and particularly, but without limitation, with respect to the following:

28.1.1 Those affecting transportation, access, disposal, handling and storage of materials.

28.1.2 Availability and quality of labor, water and electric power.

28.1.3 Availability and condition of roads.

28.1.4 Climatic conditions, location of underground utilities, obstructions, obstacles or other materials, physical conditions at the Work sites and the Project area as a whole.

28.1.5 Topography and ground surface conditions.

28.1.6 Subsurface geology, and nature and quantity of surface and subsurface materials to be encountered.

28.1.7 Equipment and facilities needed preliminary to and during performance of the Contract.

28.1.8 All other matters, which can in any way affect performance of the Contract, or the cost associated with such performance.

28.1.9 The failure of CONTRACTOR to acquaint itself with any applicable condition will not relieve it from the responsibility for properly estimating either the difficulties or the costs of successfully performing the Contract.

28.2 All Soils Reports used in the preparation of bid documents are on file at the office of OWNER's Project Manager, 1638 Mono Avenue, Minden, NV 89423, and may be examined by CONTRACTOR. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which CONTRACTOR is entitled to rely as provided in this article has been identified and established, if any, in the Supplementary Conditions. CONTRACTOR is responsible for any interpretation or conclusion CONTRACTOR draws from and "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

29.0 DIFFERING SITE CONDITIONS

CONTRACTOR is completely responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Jobsite, and the character and extent of existing improvements and Work within or adjacent to the Jobsite.

If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Jobsite are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, CONTRACTOR must immediately give written notice of such conditions to OWNER and to Architect before the conditions are disturbed. If after investigation of the conditions, Architect finds that the conditions materially differ, Architect shall, after consultation with OWNER, make such changes in the Contract Documents as it may deem necessary. Any increase or decrease in cost resulting from such changes will be adjusted by Change Order.

Any condition for which an equitable adjustment is sought by CONTRACTOR must be shown by a preponderance of the evidence to pre-date the NTP. No equitable adjustment will be made for differing conditions attributable to weather or acts of God occurring subsequent to the NTP. No equitable adjustment will be made for differing conditions attributable to man if caused by CONTRACTOR or its subcontractors after NTP.

30.0 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE

30.1 Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Architect in preparation of the Contract Documents.

30.2 CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, Architect or any of Architect's Consultants with respect to:

30.2.1 The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or

30.2.2 Other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

30.2.3 Any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

30.3 CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

30.4 If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and Architect (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with Architect concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

30.5 CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in ARTICLE 13.0 – CONTRACT INTERPRETATION.

30.6 If after receipt of such written a notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in ARTICLE 13.0 – CONTRACT INTERPRETATION. OWNER may have such deleted portion of the Work performed by

OWNER'S own forces or others in accordance with ARTICLE 65 – SEPARATE CONTRACTS.

30.7 To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, Architect, Architect's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this Section 30.7 shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

30.8 To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, Architect, Architect's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this Section 30.8 shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

30.9 The provisions of ARTICLES 28.0 AND 29.0 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

31.0 STANDARDS AND CODES

Wherever references are made in the Contract to standards or codes in accordance with which Work is to be performed or tested, the edition or revision of the standards or codes current on the effective date of this Contract shall apply.

In case of conflict among any referenced standards and codes or between any referenced standards and codes and Technical Specifications, ARTICLE 13.0 – CONTRACT INTERPRETATION shall govern.

32.0 CONTRACTOR's FIELD OFFICE (if applicable)

32.1 Upon commencement of the Work, CONTRACTOR shall provide on or near the site a temporary field office for its own use (and for use by OWNER and others as required or appropriate). CONTRACTOR's field office shall contain at a minimum:

32.1.1 Minimum of 240 square feet of floor area and as appropriate to facilitate the required job site meetings, conference seating for 12.

32.1.2 Outside door with security lock.

32.1.3 Minimum of four electrical convenience outlets.

32.1.4 Adequate light fixtures and lamps (as necessary to provide a minimum of 100 foot-candles at the desktop and plan table).

32.1.5 Telephone line and a separate fax line.

32.1.6 Heating, ventilation, and air conditioning provisions as necessary to maintain an indoor temperature of 72°F.

32.1.7 Plan rack.

32.1.8 Plan table (3 feet x 6 feet minimum size).

32.1.9 First aid kit.

32.1.10 Computer data/network connection (with Internet access).

32.1.11 Conference table and chairs as necessary to accommodate the required construction progress meetings.

32.1.12 Copy machine.

32.1.13 Bottled water dispenser.

32.1.14 Additional hard hats for use by OWNER and Architect.

32.2 CONTRACTOR shall pay the cost of all utilities, including telephone and janitorial service, as required for the maintenance of the temporary field office until the completion of the Project.

32.3 The temporary field office shall remain the property of CONTRACTOR, and shall be completely removed at the completion of the Project.

32.4 All costs in connection with meeting all the requirements of this General Condition shall be borne by CONTRACTOR.

33.0 TOILET FACILITIES

CONTRACTOR shall provide and maintain in a clean and sanitary condition in a weatherproof building satisfactory toilet accommodations for all workers and for use by Architect and OWNER. Minimum toilet accommodations shall consist of a frost-proof chemical toilet or water closet with urinal. Temporary or portable toilet accommodations shall be completely removed upon completion of the Project. All costs in connection with meeting all the requirements of this General Condition shall be borne by CONTRACTOR.

34.0 NEVADA OSHES REQUIREMENT

Prior to commencement of construction activities, CONTRACTOR must verify if any project activity meets at least one (1) of the following four (4) criteria described by the Nevada Occupational Safety and Health Enforcement Section (OSHES):

34.1 A new or renovated building or renovated building or structure that has a ground floor which is more than thirty (30) feet above or below ground level;

34.2 A new building or structure which has an initial construction cost of $10,000,000.00 or more;

34.3 A new building or structure which, when completed, will be 50,000 square feet or more; or

34.4 A new building or structure which, when completed, will be more than sixty (60) feet above the ground, excluding any antenna, smokestack, flagpole or similar attachment.

If at least one (1) of the four (4) criteria is met, then CONTRACTOR must give written notice to OSHES in accordance with current Regulations for the Nevada Occupational Safety and Health Enforcement Program, Chapter 618. CONTRACTOR shall develop, maintain and submit all data required by OSHES throughout construction. CONTRACTOR shall forward copies to OWNER of all correspondence and data submitted to and received from OSHES relative to the subject project.

35.0 SAFETY

All costs in connection with meeting all the requirements of this General Condition shall be borne by CONTRACTOR.

35.1 Emergencies

In case of an emergency which threatens loss or damage to property, personal injury, or life safety, CONTRACTOR shall immediately take all feasible actions to prevent or mitigate such loss, damage, injury or death, without awaiting instructions from OWNER or Architect. CONTRACTOR shall notify OWNER and Architect in writing of such emergency at the first feasible opportunity.

The amount of reimbursement claimed by CONTRACTOR on account of any emergency action shall be determined in the manner provided in ARTICLE 19.0 CHANGES for claims.

CONTRACTOR shall maintain a current emergency telephone number list at the job site. The list shall include telephone numbers for CONTRACTOR's superintendent and for other responsible CONTRACTOR representatives that can be contacted after normal working hours in the event of an emergency. This list shall be prominently posted both inside and outside of CONTRACTOR's field office.

35.2 Safety, Sanitary, Medical:

CONTRACTOR shall, at all time, conduct all operations under this Contract in a manner to avoid the risk of endangerment to health, bodily harm to persons, and damage to property. CONTRACTOR shall comply with their written Project Safety and Health Program. CONTRACTOR shall, in accordance with CONTRACTOR's established practices, have sole responsibility for implementing its safety and health program, taking all safety and health precautions necessary and continuously inspect all equipment, materials and work to discover, determine and correct any conditions which might result in any safety risks or damage to any property. CONTRACTOR shall furnish all safety equipment and instructions required for the Work and shall maintain and furnish accident, injury and any other records and reports required by applicable laws and regulations or by OWNER

CONTRACTOR shall promptly and fully comply with and carry out safety, sanitary and medical requirements as prescribed by Federal, State or local laws or regulations, and CONTRACTOR shall take such other measures as may be necessary or required to assure that the safety and health of its employees, subcontractors, OWNER, its representatives and the general public will be safeguarded.

Before starting the Work, CONTRACTOR shall provide a written Safety Program for OWNER's review. Such program shall be subject to approval. Such review shall not relieve CONTRACTOR of its responsibility for safety nor shall such approval be construed as limiting in any manner CONTRACTOR's obligation to undertake any action which may be necessary or required to establish and maintain safe working conditions at the site. CONTRACTOR shall promptly comply with any directive from OWNER in connection with safety.

CONTRACTOR shall designate a Safety Officer, acceptable to OWNER.

CONTRACTOR shall hold "New Hire" safety orientations for all its employees and its

Subcontractors' employees to instruct them regarding the requirements of CONTRACTOR's safety and health program. CONTRACTOR shall furnish and cause its Subcontractors to furnish safety equipment to all employees and shall enforce the use of such equipment by the employees.

CONTRACTOR shall maintain all portions of Work in a neat, clean and sanitary condition at all times.

CONTRACTOR shall ensure that all Subcontractors shall, without expense to OWNER, comply with the foregoing.

35.3 Construction Safety Fencing:
Required construction fencing will vary during the various work stages of the project. CONTRACTOR shall remove all temporary construction fencing, to include post concrete encasement, at the completion of the Work.

35.4 Smoking:
Jobsite is to be tobacco free. Smoking, tobacco products, and smokeless cigarettes shall not be permitted or tolerated on Jobsite.

35.5 Fire Prevention:
CONTRACTOR shall conform to all Federal, State, and local laws and regulations pertaining to burning, fire prevention and control within or adjacent to the Jobsite. Necessary precautions to avoid and eliminate fire hazards shall be the responsibility of CONTRACTOR. This includes keeping the Jobsite area clear of all trash at all times.

All tarpaulins used for any purpose during construction of any Work shall be made of material resistant to fire, water and weather and shall bear UL labels. Lighting of any fires on premises is strictly forbidden.

CONTRACTOR shall provide portable fire extinguishers compatible with the hazard of each Work area and shall instruct its personnel in their location and use. Wherever welding and burning are conducted, no inflammable materials shall be allowed and a fire watch shall be provided by CONTRACTOR to be present during the burning and welding operation to ensure that protective measures are taken and that no fires result from such operation. The fire watch shall have fire extinguisher equipment readily available and know-how for proper use.

35.6 Pumping and Drainage:
Surface or sub-surface water or other fluid shall not be permitted to accumulate in excavations or under any structure. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved by OWNER and other public agencies having jurisdiction.

35.7 Permitting and Dust Control for Construction Activities:
CONTRACTOR, for the duration of the Contract, shall maintain all excavations, embankments, haul roads, access roads, plant sites, waste disposal areas, borrow areas, and all other Work areas free from dust. Separate payment will not be made for dust control unless specifically defined as a separate pay item.

If OWNER determines that dust from the Jobsite constitutes a hazard to Jobsite occupants, CONTRACTOR shall take immediate action to reduce the amount of dust to the satisfaction of OWNER. If CONTRACTOR does not respond immediately, OWNER reserves the right to undertake dust control at CONTRACTOR's expense.

CONTRACTOR shall contain all dust caused by interior demolition, modification and improvements and shall not allow encroachment into the existing building. This shall include, but is not limited to, the paint surface preparation requirements, paint overspray, paint fumes, carpet and tile adhesive materials, sealants, concrete and terrazzo add-mixtures, cleaning products, and solvents.

35.8 Illumination:

When any Work is performed at night or where daylight is shut off or obscured, CONTRACTOR shall, at its expense, provide artificial light sufficient to permit Work to be carried on efficiently, satisfactorily and safely, and to permit thorough inspection. During such time periods the access to the place of Work shall also be clearly illuminated. All wiring for electric light and power shall be installed and maintained in compliance with local code, securely fastened in place at all points, and shall be kept as far as possible from telephone wires, and signal wires.

Lighting circuits in buildings and for parking lots and outdoor walkways must be functional at all times, even if this requires temporary wiring (and temporary power source) to be installed by CONTRACTOR as part of the Work.

35.9 Cleaning Up:

CONTRACTOR shall, at all times, keep its Work areas in a neat, clean, and safe condition. Upon completion of any portion of the Work, CONTRACTOR shall promptly remove all of its equipment, construction plant, temporary structures and surplus materials not to be used at or near the same location during later stages of Work. Upon completion of the Work and before final payment is made, CONTRACTOR shall at its expense, satisfactorily dispose of all plant, buildings, rubbish, unused materials, and other equipment and materials belonging to it or used in the performance of the Work, and CONTRACTOR shall leave the premises in a neat, clean, and safe condition. In the event of CONTRACTOR's failure to comply with the foregoing, the same may be accomplished by OWNER at CONTRACTOR's expense.

35.10 Hazard Communication:

CONTRACTOR shall be aware of OSHA Federal Standard 29 CFR 1910.1200, Hazard Communication and 29 CFR 1910.1020(C), Access to Employee Exposure and Medical Records. CONTRACTOR's Safety Program shall address and include all aspects of the preceding OSHA rules, as well as any local or State hazard communication laws.

CONTRACTOR shall furnish to OWNER the MSDS Sheet on any material requiring same, for OWNER review and approval prior to said material being delivered to the site. CONTRACTOR shall specifically follow all the safety requirements listed on the MSDS Sheet.

35.11 Hazardous Materials:

During the course of construction, there may be hazardous materials discovered on the construction site. Such materials can be in the form of asbestos in structures, underground fuel storage units, contaminated soil or other unknown hazardous materials. CONTRACTOR shall immediately notify OWNER of any hazardous materials subsequently found on the site and shall not remove same without the permission of OWNER. OWNER shall be responsible for removal and abatement of any existing hazardous materials. See ARTICLE 30.0 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE.

If the hazardous material and subsequent contamination was caused by CONTRACTOR, CONTRACTOR shall remove said hazardous material and contaminated soils or materials from the site and shall dispose of same in accordance with all Federal, State or Local laws or regulations. Removal of such materials and contamination shall be monitored by a licensed hazardous materials laboratory, and said laboratory shall prepare a written report attesting to the complete removal of the contaminating material and resulting contamination, all to the

satisfaction of, and at no cost to, OWNER.

36.0 REQUESTS FOR INFORMATION

No Work shall be performed by CONTRACTOR without adequate drawings or specifications, or that is in conflict with or contrary to the Contract Documents. CONTRACTOR shall, upon discovering any discrepancy, conflict, or inconsistency in the Contract Documents, immediately submit a Request for Information (RFI) to Architect. Architect, upon receipt of any such request, will promptly investigate the circumstances and give appropriate instructions to CONTRACTOR, but will take such action only after consultation with OWNER. Until such written instructions are given, any Work done by CONTRACTOR, either directly or indirectly relating to such discrepancy, conflict, or inconsistency will be at CONTRACTOR's own risk, and CONTRACTOR shall bear all costs arising therefrom. CONTRACTOR shall maintain a sequential log of all RFIs.

CONTRACTOR shall report immediately to OWNER and Architect any discrepancy, conflict, or inconsistency that CONTRACTOR may discover, or should have discovered, in the Contract Documents. If CONTRACTOR performs any Work contrary to the Contract Documents, CONTRACTOR shall be solely responsible and shall bear all costs attributable thereto.

RFIs shall be limited to one specific issue or group of related issues and shall not address multiple issues. Architect will review and respond to RFIs within five (5) days from the date that the RFI is received by Architect. RFIs shall be issued by CONTRACTOR to Architect in a reasonable and orderly sequence such that they are not unreasonably grouped together and then delivered to the Architect.

37.0 CONTRACTOR-FURNISHED SUBMITTALS AND SAMPLES

Review and permission to proceed by OWNER as stated in this Contract does not constitute acceptance or approval of design details, calculations, analysis, test methods, certificates or materials developed or selected by CONTRACTOR and does not relieve CONTRACTOR from full compliance with contractual obligations.

Approval of a Submittal, which changes or modifies a Technical Specification, does not constitute approval of those changes or modifications unless same have been specifically identified and submitted in writing as a deviation from or substitution of the Technical Specification.

37.1 Drawings:

37.1.1 CONTRACTOR shall review, stamp, and submit to the Architect with reasonable promptness and in an orderly sequence so as to cause no delay in the Work, all Submittals and/or shop drawings required by the Contract Documents or subsequently required by the Architect.

37.1.2 CONTRACTOR's schedule shall include reasonable and orderly dates for issuance of all significant Milestones, to allow for reasonable notice and staged delivery of Submittals to the Architect, as required in ARTICLE 18.0 CONSTRUCTION SCHEDULE AND DATA.

37.1.3 CONTRACTOR's Submittals shall provide specific written notice of any deviation from the requirements of the Contract Documents. Failure to specifically identify such deviations shall be adequate grounds for withholding approval of the Submittal or voiding any prior acceptance or approval of the Submittal.

37.1.4 Submittals shall be properly identified as specified, or as the Architect may require.

By approving and issuing Submittals, CONTRACTOR thereby represents that it has determined and has verified all field measurements, field construction criteria, materials, catalog numbers and similar data, and has checked and coordinated each Submittal with the requirements of the Contract Documents.

37.1.5 The Architect will review Submittals within seven (7) days from the date that they are received for conformance with the Contract Documents. The review of a separate item shall not indicate approval of an assembly in which the item functions.

37.1.6 The review and approval of Submittals by the Architect shall not relieve CONTRACTOR from responsibility for errors or omissions in the Submittals.

37.1.7 CONTRACTOR shall correct Submittals as required by the Architect and shall resubmit the required number of corrected copies of Submittals until the Architect indicates that no further re-submittals are required. CONTRACTOR shall identify in writing all revisions made, in addition to identifying the corrections requested by the Architect on previous Submittals.

37.1.8 CONTRACTOR shall furnish required Submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than two Submittals. The Architect will record the time for reviewing subsequent Submittals, Samples or other items requiring approval and CONTRACTOR shall reimburse OWNER for Architect's charges for such time.

37.1.9 The number of Submittals provided and approved shall include one set for use by OWNER.

37.1.10 None of the Work requiring Submittals or shop drawings shall commence until the associated Submittals have been reviewed and approved by the Architect.

37.2 Operations and Maintenance Manuals:

CONTRACTOR shall furnish two (2) original of Operations and Maintenance (O&M) Manuals providing data on and operation and/or maintenance procedures for all incorporated material, equipment and finishes installed under this Contract.

All data to be included in the O&M Manuals shall be included in CONTRACTOR's submittals under this General Condition.

CONTRACTOR shall provide separate volumes for General, Mechanical and Electrical portions of the Work. Each volume shall be a three-inch (3"), three ring binder. The cover and spine of each volume shall be imprinted with name of project, OWNER, description of contents and date. All data shall be indexed as per the index of the Technical Specifications. All pages shall be 8-1/2 x 11 inches except for fold out pages of diagrams and manufacturer's literature. Include manufacturer's supplier's and subcontractor's names, addresses and telephone numbers, model numbers, proportions of mixes, furnish numbers and all pertinent information required for replacement ordering or duplication for each incorporated material, equipment and finishes installed under this Contract.

CONTRACTOR shall submit for approval by OWNER, a sample of the three-ring binder, appropriately inscribed, no later than NTP plus ninety (90) days.

Throughout the Contract submittal process, as an incorporated material, equipment or finishes submittal is reviewed and marked as Code 1, CONTRACTOR will place one (1) original of same in the O&M Manual. CONTRACTOR is advised that OWNER may request information from the O&M Manuals or request to review the Manuals during performance of the Contract, so it is imperative that CONTRACTOR develop and maintain the O&M Manuals

from the beginning of the project. Additionally, CONTRACTOR shall furnish two (2) compact disks (CD's) of the O&M Manuals. The O&M Manuals and CD's will be forwarded to OWNER at Substantial Completion of the Contract or portions of the Contract.

Until the O&M Manuals are revised to include all approved Submittals, CONTRACTOR shall perform all maintenance required on all items contained in the O&M Manuals.

37.3 Data:

Data to be submitted and approved shall include, but not be limited to complete descriptions of all materials, fabrications, manufactured items, construction methods and sequences, and system designs, as well as items under the General Conditions, Special Conditions and Compensation Conditions.

38.0 SUBSTITUTIONS

Any request by CONTRACTOR for material substitution of "an equal" item must be received by OWNER within seven (7) days after NTP as provided by Nevada Revised Statute.

Prior to proposing any substitute item, CONTRACTOR shall satisfy itself that the item proposed is, in fact, equal to that specified, that such item will fit into the space allocated, that such item affords comparable ease of operation, maintenance and service, that the appearance, longevity and suitability for the climate are comparable, and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution of such item will be in OWNER's interest. Replacement parts, maintenance parts and spare parts for all materials and equipment offered as a substitution shall be readily available for delivery to the Reno area within seventy-two (72) hours.

The burden of proof of equality of a proposed substitution for a specified item shall be upon CONTRACTOR. CONTRACTOR shall support its request with sufficient test data and other means to permit OWNER to make a fair and equitable decision on the merits of the proposal. CONTRACTOR shall provide Submittals, Samples, data and certificates for proposed substitute items as required by ARTICLE 44.0 – CONTRACTOR-FURNISHED SUBMITTALS AND SAMPLES accompanied by a Submittal Substitution Form. Any item by a manufacturer other than those specified or of brand name or model number or of generic species other than those specified will be considered a substitution. OWNER will be the sole judge of whether or not the substitution is equal in quality, utility and economy to that specified.

Materials and methods proposed as substitutions for specified items shall be supported by certification of their approval for use by any or all governmental agencies having jurisdiction over use of the specific material or method.

Substitutions may not be permitted in those instances where the products are designed to match artistic design, specific function or economy of maintenance.

Approval of a substitution shall not relieve CONTRACTOR from responsibility for compliance with all requirements of the Contract. CONTRACTOR shall bear the expense for any changes in other parts of the Work caused by any substitutions. If OWNER rejects CONTRACTOR's substitute item on the first submittal, CONTRACTOR may make only one additional request for substitution in the same category.

39.0 INSPECTION: REJECTION OF MATERIALS AND WORKMANSHIP

39.1 Quality:

CONTRACTOR shall be responsible for ensuring that all the Work is in complete compliance with the Contract Documents and applicable codes, and that all the Work is completed to the highest quality of workmanship.

CONTRACTOR shall develop and implement an appropriate quality assurance/quality control program for the Project. A detailed description of the program shall be furnished to OWNER and Architect for review and acceptance prior to submitting the first progress payment application.

CONTRACTOR shall provide to Project Manager and Architect a schedule of its internal and external consultant, subcontractor and supplier audits that are to be conducted to verify that all aspects of the Work are being conducted in accordance with the Contract requirements.

CONTRACTOR shall provide to Project Manager and Architect a schedule other items pertinent to Quality Control including testing and inspection, equipment and instrument calibration, training, and records retention.

CONTRACTOR shall, at CONTRACTOR's expense, perform all inspections required by the Contract Documents and shall notify OWNER in advance of such inspections to allow OWNER the opportunity to witness such inspections. All materials and equipment furnished and Work performed shall be properly inspected by CONTRACTOR and shall at all times be subject to quality surveillance, observations or quality audit by OWNER. CONTRACTOR shall provide safe and adequate facilities and all samples, drawings, lists and documents necessary for such quality surveillance, observation or quality audit. For this purpose OWNER shall be afforded full and free access to the shops, factories or places of business of CONTRACTOR and its Subcontractors and suppliers for such quality surveillance, observation or quality audit and to determine the status of the Work.

CONTRACTOR shall provide full and free access at all times for OWNER to conduct OWNER's own independent inspections and tests and those inspections and tests required in accordance with Douglas County Building Department requirements, and the requirements of any other authority having jurisdiction. Such inspections and tests shall not relieve CONTRACTOR of CONTRACTOR's obligation to conduct all inspections and tests required by the Contract Documents.

If CONTRACTOR covers all or any portion of the Work prior to any quality surveillance or test by OWNER, the cost of any necessary uncovering and replacing shall be borne by CONTRACTOR. Neither the failure to make such quality surveillance, observation or quality audit, nor to discover and require corrective action of defective workmanship, materials, or equipment, nor acceptance of or payment to CONTRACTOR for such Work, materials or equipment shall prejudice the rights of OWNER thereafter to correct or reject the same as hereinafter provided.

39.2 Rejection of Materials or Wworkmanship:

If any material, equipment or workmanship is determined by OWNER or Architect, either during performance of the Work or on final quality surveillance, or during any applicable warranty period, to be defective or not complying with the requirements of this Contract, OWNER shall notify CONTRACTOR by a written Non-Compliance Report that such material, equipment or Work is rejected and OWNER reserves the right to withhold payment on any such item. Thereupon, CONTRACTOR will, at its own expense, commence corrective Work within five (5) days of the Non-Compliance Report, and remove and replace or correct such defective material, equipment or Work by making the same comply strictly with all requirements of the Contract. If CONTRACTOR fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, OWNER may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to CONTRACTOR.

CONTRACTOR shall provide in writing to Project Manager and Architect specific steps and procedures that will be performed to rectify non-conformances raised and reported through NCRs. Where Work is related to or dependent on the Defective Work, CONTRACTOR shall

stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to OWNER. Where Work is rejected because of defective material or workmanship, CONTRACTOR shall stop like Work in other areas or locations on the Project until the matter is resolved and OWNER has approved corrective measures.

Should it be considered necessary or advisable by OWNER or Architect at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, CONTRACTOR shall on request promptly furnish all necessary facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of CONTRACTOR or Subcontractors, CONTRACTOR shall defray all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of CONTRACTOR's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and CONTRACTOR's cost of material and labor necessary for replacement including markup per ARTICLE 8.0 – PRICING OF CHANGES for overhead and profit shall be paid to CONTRACTOR and, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time. Notwithstanding the foregoing, CONTRACTOR shall be responsible for all costs and expenses in removing and replacing the Work if CONTRACTOR had covered the Work prior to any inspection or test contrary to the instructions of OWNER, Architect, or Project Inspector.

OWNER may issue NCRs on CONTRACTOR violations of the General Conditions, Special Conditions, Technical Specifications or Drawings. OWNER reserves the right to backcharge CONTRACTOR for any and all costs OWNER incurs as a result of an NCR in accordance with ARTICLE 9.0 - BACKCHARGES.

40.0 TESTING BY CONTRACTOR

CONTRACTOR shall, at CONTRACTOR's expense, perform all non-code required tests on all materials, equipment and Work performed as required by the Contract Documents. CONTRACTOR shall notify OWNER in advance of such tests to allow OWNER the opportunity to witness such tests. Evidence that materials and equipment furnished and Work performed have passed the required tests shall be furnished to OWNER, prior to payment of said materials, equipment or Work. Field testing of systems or parts of systems, as called for in the Technical Specifications or on the Drawings, to show compliance with the Contract Documents, shall be performed by CONTRACTOR, with OWNER witnessing said tests. Said tests shall be passed prior to final payment on the systems or parts of systems.

Field testing of systems or parts of systems, as called for in the Technical Specifications or on the Drawings, to show compliance with the Contract Documents, shall be performed by CONTRACTOR, with OWNER witnessing said tests. Said tests shall be passed prior to final payment on the systems or parts of systems.

CONTRACTOR shall forward to OWNER, with each Monthly Progress Pay Estimate, copies of all test results that were conducted in the pay period, which are required by CONTRACTOR's approved Quality Plan. Test results shall be accompanied by a computerized abstract of same, which shall list the Contract number, type of test, exact location from which the sample was obtained or tested, results of the test, date of test, whether the test met the requirements of the Contract and signed by CONTRACTOR's Authorized Representative.

Should tests in addition to those required by the Contract be desired by OWNER, CONTRACTOR will be advised in reasonable time to permit such testing. Such additional tests will be at OWNER's expense except as such additional tests are required due to CONTRACTOR's Work or materials having failed any initial test.

CONTRACTOR acknowledges that OWNER will charge to CONTRACTOR's account any re-tests or re-surveys that are required by the failure of any of CONTRACTOR's materials or Work. The cost of such re-testing or re-surveying shall be computed by taking the cost charged OWNER by the Materials Testing Contractor or the Verification Survey Contractor and adding a twenty-five (25) percent surcharge for OWNER's overhead and OWNER's Project Manager's overhead.

CONTRACTOR shall furnish samples as requested and shall provide reasonable assistance and cooperation as necessary to permit tests to be performed on materials or Work in place including reasonable stoppage of Work during testing.

CONTRACTOR shall furnish OWNER with certificates of compliance on materials prior to the use of those materials in the Work where required by the Technical Specifications.

CONTRACTOR shall conduct all quality control testing necessary to assure the product is in complete accord with the Contract Documents.

All tests performed under this Contract will utilize the ASTM test designation and procedure. Where other test procedures are required by the Technical Specifications, the equivalent ASTM test procedure will be performed for acceptance testing, unless otherwise directed by OWNER.

All testing shall be conducted in accordance with the ASTM testing procedure that is current at the time of award of the Contract.

41.0 TESTING BY OWNER

OWNER shall, at OWNER's expense, perform all code required tests on all materials, equipment and Work performed as required by the Contract Documents. OWNER shall notify CONTRACTOR in advance of such tests to allow CONTRACTOR the opportunity to witness such tests. Evidence that materials and equipment furnished and Work performed have passed the code required tests shall be furnished to CONTRACTOR.

42.0 AS-BUILT RECORDS

42.1 Drawings:

Progress Records - During construction, CONTRACTOR shall keep a marked-up-to-date set of full-size conformed drawings showing as-built conditions on the site as an accurate record of all Work as shown and Work as installed. These drawings shall be available to OWNER for inspection at any time.

As-built drawings include construction/erection drawings such as life-safety system drawings, mechanical shop drawings, etc. These drawings shall accurately reflect the as-built condition and shall be submitted as separate PDF files.

As-built data shall be recorded on the drawings in red pencil or ink. CONTRACTOR shall mark out with a single red line all superseded data and write in all as-built data.

42.2 Specifications:

Progress Records - During construction, CONTRACTOR shall keep a marked-up-to-date set of conformed specifications showing as-built conditions on the site annotated to clearly indicate all substitutions that are incorporated into the Work. Where selection of more than one product is specified, annotation shall show which product was installed. These specifications shall be available to OWNER for inspection at any time.

As-built data shall be recorded on the specifications in red pencil or ink. CONTRACTOR shall mark out with a single red line all superseded data and write in all as-built data.

42.3 Changes:
CONTRACTOR shall add to the Drawings and Specifications all information contained in Answers to Questions, Contract Clarifications, Contract Changes, and approved revised or amended Technical Submittals.

42.4 Final Submittal:
CONTRACTOR shall, at its expense, before Final Payment, furnish to OWNER all progress record drawings and specifications, duly certified in writing, as being correct and accurate.

43.0 OWNER-FURNISHED DRAWINGS AND TECHNICAL SPECIFICATIONS

This is a performance contract and the Drawings and Technical Specifications furnished or referenced are intended to provide CONTRACTOR with sufficient information to establish the final location of all equipment and material and the required Work to provide a fully operational system in accordance to the Drawings and Technical Specifications. Such Drawings, when used in connection with the Technical Specifications, contain information required for the preparation of detail drawings by CONTRACTOR.

CONTRACTOR shall, immediately upon receipt thereof, check all Drawings and Technical Specifications furnished and shall promptly notify OWNER of any errors, omissions, or discrepancies discovered in such drawings.

CONTRACTOR will be furnished, at no cost, one (1) print of the full-sized set of drawings, one (1) print of the half-sized set of drawings, and two (2) sets of the balance of the Contract Documents. In addition, CONTRACTOR will be furnished one (1) compact disk (CD) of the conformed Contract Documents.

44.0 CONTRACTOR-FURNISHED MATERIALS, EQUIPMENT AND WORKMANSHIP

Only new items of recent manufacture, of designated but in no event less than standard quality, free from defects, will be permitted on the Work. Rejected items shall be removed immediately from the Work and replaced with items of quality specified. Failure by OWNER to order removal of rejected materials and equipment shall not relieve CONTRACTOR from responsibility for quality and character of items used or from any other obligation under the Contract.

CONTRACTOR shall continuously check architectural and structural clearances for accessibility of equipment and mechanical and electrical systems. No allowance of any kind will be made for CONTRACTOR's negligence to foresee means of installing equipment into position inside structures.

No Work defective in construction or quality or deficient in any requirement of the drawings and specifications will be acceptable regardless of OWNER's failure to discover or to point out defects or deficiencies during construction; nor will the presence of inspectors on the Work relieve CONTRACTOR from responsibility for securing the quality and progress of Work as required by the Contract. OWNER shall notify CONTRACTOR of defective or unacceptable Work as soon as OWNER discovers such defective Work. Defective Work revealed within the time required by warranties shall be remedied in accordance with the ARTICLE 60.0 WARRANTY. No payment, whether partial or final, shall be construed as an acceptance of defective Work or improper materials.

CONTRACTOR shall waive "common practice" and "common usage" as construction criteria wherever details and specifications or governing codes and ordinances require greater quantity or better quality than common practices and common usage would require.

CONTRACTOR shall order and schedule delivery of materials in reasonable time to avoid delays in construction. If an item is found to be unavailable, CONTRACTOR shall notify OWNER immediately of recommended substitute(s) to permit OWNER's selection of a suitable substitute.

Replacement parts, maintenance parts and spare parts for all materials and equipment supplied by CONTRACTOR under this contract shall be readily available for delivery to the Reno area within seventy-two (72) hours. Any conflict with the Material Specifications and Contractor-furnished materials, equipment and workmanship should be submitted to the Project Manager in written form within forty-eight (48) hours of discovery.

OWNER will exercise sole authority for determining conformance of materials, equipment and systems with the requirements of the Contract. Review and approval of all items proposed by CONTRACTOR for incorporation into the Work will be by OWNER. This function by OWNER will apply both to approvals for the Contract as initially signed, and to approvals for changes to contract by modifications during progress of the Work.

Reference to manufacturers' names, brands and model number is to establish the type and quality desired; substitutions may not be permitted unless specifically noted otherwise. Such substitutions shall be subject to written approval.

When materials, equipment, or systems are specified by performance only, without reference to specific manufacturers, brands or models, CONTRACTOR shall submit its own choice for OWNER's review and approval, supported by sufficient evidence of conformity with the Contract Documents.

45.0 LINES AND GRADES

Survey control points as shown on the drawings will be established by OWNER.

CONTRACTOR shall complete the layout of all Work and shall be responsible for all requirements necessary for the execution of any Work in accordance with the locations, lines, and grades specified or shown on the drawings, subject to such modifications as OWNER may require as Work progresses.

If CONTRACTOR or any of its subcontractors or any of its representatives or employees move or destroy or render inaccurate any survey control point, other than required by the Contract Documents, those survey control points shall be replaced at CONTRACTOR's expense.

No separate payment will be made for survey work unless identified as a specific line item on the Bid Price Form.

46.0 ACCESS TO WORK AREAS

OWNER, and its duly Authorized Representatives and employees, and all duly authorized representatives of governmental agencies having jurisdiction over Work areas or any part thereof shall, at all reasonable times, for the purpose of determining compliance with Contract requirements, have access to such areas and the premises used by CONTRACTOR. CONTRACTOR shall also arrange for OWNER, it's said representatives and employees, to have access at all reasonable times to all places where equipment or materials are being manufactured, produced, or fabricated for use under the Contract.

47.0 CONTRACTOR INGRESS AND EGRESS

CONTRACTOR's access to the Work area will be permitted only through approaches, which will be designated by OWNER, and then only in such manner that CONTRACTOR's traffic will not interfere with OWNER's operations. CONTRACTOR shall, at all times, maintain controlled ingress and egress at the site. CONTRACTOR shall maintain unrestricted access to the Jobsite for access by emergency vehicles. CONTRACTOR personnel are not to enter into any areas of the Jobsite other than Work areas and areas of designated access.

48.0 DELIVERY, UNLOADING AND STORAGE

CONTRACTOR shall receive, unload, store in a secure place, and deliver from storage to the construction site all materials and plant equipment required for the performance of the Contract. The storage facilities and methods of storing shall meet OWNER's approval. Materials and equipment subject to degradation by outside exposure shall be stored in a weather-tight enclosure provided by CONTRACTOR.

49.0 CONTRACTOR's WORK AREA

All CONTRACTOR's Work areas on the Jobsite will be assigned by OWNER. CONTRACTOR shall confine its office, shops, storage, assembly and equipment and vehicle parking to the areas so assigned. Before commencing Work, CONTRACTOR shall provide a temporary office on the site of the Work, which shall have a telephone where a representative of CONTRACTOR may be reached at all times during normal working hours.

Because movement to and from a Work area is limited, CONTRACTOR shall have in the Work area all equipment it determines necessary, as well as a first aid station, drinking water facilities, radio communications, restroom facilities and any other items to support CONTRACTOR's activities.

Should CONTRACTOR find it necessary or advantageous to use any additional land outside the project site for any purpose whatever, CONTRACTOR shall, at its expense, provide and make its own arrangements for the use of such additional land.

50.0 CONTRACTOR's PLANT, EQUIPMENT AND FACILITIES

CONTRACTOR shall provide and use on any Work only such construction plant and equipment as are capable of producing the quality and quantity of Work and materials required by the Contract and within the time or times specified in the Contract.

Before proceeding with any Contract Work or with erection of any facilities, including but not limited to temporary structures, machinery, equipment, offices and warehouses, CONTRACTOR shall furnish OWNER with such information and drawings relative to such equipment, plant and facilities as OWNER may request. Upon written order of OWNER, CONTRACTOR shall discontinue operation of unsatisfactory plant and equipment or facilities and shall either modify the unsatisfactory items to meet OWNER approval or remove the unsatisfactory items from the site.

CONTRACTOR shall not remove construction plant or equipment from the site before the Work is finally accepted without OWNER's written approval. Such approval shall not be unreasonably withheld.

51.0 RESPONSIBILITY FOR WORK SECURITY

CONTRACTOR shall at all times conduct all operations under the Contract in a manner to avoid the risk of loss, theft or damage by vandalism, sabotage or other means to any property. CONTRACTOR shall promptly take all reasonable precautions, which are necessary and adequate against any conditions, which involve a risk of loss, theft or damage to any property. CONTRACTOR shall continuously inspect all its Work, materials, equipment and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination and correction of any such conditions.

CONTRACTOR shall prepare and maintain accurate reports of incidents of loss, theft or vandalism and shall furnish these reports to OWNER in a timely manner.

CONTRACTOR shall be responsible to obtain from OWNER copies of applicable school site security regulations, and shall comply with said regulations for the Jobsite and all applicable laws and regulations. Any costs associated with appropriate badging of personnel shall be borne solely by CONTRACTOR.

CONTRACTOR shall cooperate with OWNER on all security matters and shall promptly comply with any Project security requirements established by OWNER. Such compliance with these security requirements shall not relieve CONTRACTOR of its responsibility for maintaining proper security for the above noted items, nor shall it be construed as limiting in any manner CONTRACTOR's obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.

52.0 PROTECTION OF WORK IN PROGRESS, MATERIALS, EQUIPMENT AND PROPERTY

CONTRACTOR shall be responsible for and shall bear any and all risk of loss or damage to work in progress, all materials delivered to the site, and all materials and equipment involved in the Work until completion and final acceptance of Work under this Contract. Excluded from CONTRACTOR's responsibility is any loss or damage, which results from the sole active negligence of OWNER or its representatives.

Permanent openings or thoroughfares for the introduction of Work and materials to the structure and construction site shall be protected so that upon completion, the entire Work will be delivered to OWNER in proper, whole and unblemished condition.

52.1 Protection of Existing Property:

CONTRACTOR shall so conduct its operations as not to damage, close, or obstruct any utility installation, highway, road or other property until permits therefore have been obtained. If facilities are closed, obstructed, damaged or rendered unsafe by CONTRACTOR's operations, CONTRACTOR shall, at its expense, make such repairs and provide such temporary guards, lights and other signals as necessary or required for safety and as will be acceptable to OWNER.

Unless otherwise specifically provided in the Contract, CONTRACTOR shall not do any Work that would disrupt or otherwise interfere with the operation of any pipeline, telephone, electric transmission line, ditch or other structure, nor enter upon lands in their natural state until approved by OWNER. Thereafter, and before it begins such Work, CONTRACTOR shall give due notice to OWNER of its intention to start such Work. CONTRACTOR shall not be entitled to any extension of time or any extra compensation on account of any postponement, interference or delay caused by any such line, ditch or structure on or adjacent to the site of the Work.

CONTRACTOR shall preserve and protect all cultivated and planted areas, and vegetation such as trees, plants, shrubs and grass on or adjacent to the premises, which, as determined by OWNER, do not unreasonably interfere with the performance of this Contract. CONTRACTOR shall be responsible for damage to any such areas and vegetation and for unauthorized cutting of trees and vegetation, including without limitation damage arising from the performance of its Work through operation of equipment or stockpiling of materials. All costs in connection with any repairs or restoration necessary or required by reason of any such damage or unauthorized cutting shall be borne by CONTRACTOR.

53.0 PROJECT SITE PROTECTION

CONTRACTOR shall be responsible for repairs to any wall, floor or ceiling surface within the existing Building(s) that is damaged by CONTRACTOR's construction operations. The required repairs shall be made in accordance with relevant construction specifications or Douglas County Standard Specifications, whichever is the more stringent, and in a manner satisfactory to OWNER. OWNER

will be sole judge as to whether or not any areas have been damaged by CONTRACTOR and which specification is applicable.

If, in the opinion of OWNER, CONTRACTOR damages OWNER'S property and CONTRACTOR fails to take corrective action within five (5) days after receiving written notice of same, OWNER reserves the right to correct the violation. The cost of such correction shall be to the account of CONTRACTOR.

54.0 DISPOSAL OF MATERIAL OUTSIDE JOBSITE PROPERTY

CONTRACTOR shall make its own arrangements for disposal of materials outside the project and shall pay all costs involved.

CONTRACTOR shall remove all excavated material immediately from the Jobsite. No stockpiling of excavated materials shall be allowed at the project site. Materials resulting from demolition and from all excavations shall be removed immediately from Jobsite and hauled to an approved landfill.

When any material is to be disposed of outside the Jobsite property, CONTRACTOR shall first obtain a written permit from the property owner on whose property the disposal is to be made and it shall file in writing with OWNER said permit or the certified copy thereof together with a written release from the property owner absolving OWNER of any and all responsibility in connection with the disposal of material on said property.

When material is disposed of as above provided and the disposal location is visible from the project, CONTRACTOR shall dispose of the material in a neat and uniform manner to the satisfaction of OWNER.

Full compensation for all costs involved in disposing of material as specified in this Article, including all costs of hauling, shall be considered as included in the price paid for the Contract items of Work involving such material and no additional compensation will be allowed therefore.

No material that is to be disposed of outside the Jobsite property shall be stockpiled on OWNER's property longer than seven (7) days, unless otherwise approved by OWNER.

55.0 PROJECT SIGNS, PUBLICITY AND ADVERTISING

With the exception of the right reserved by OWNER to erect a sign in connection with the project and unless otherwise provided in the Contract Documents, CONTRACTOR shall not display or permit to be displayed on or about the project, any sign, trademark, poster or other advertising device, without prior written approval of OWNER.

CONTRACTOR shall not make any announcement or release any information concerning this Contract or the project or any part thereof to any member of the public, press or any official body, unless prior written consent is obtained from OWNER.

56.0 UTILITIES

56.1 Temporary Utilities:

CONTRACTOR shall be solely responsible for providing all necessary temporary utilities. CONTRACTOR shall pay all costs related thereto, including, but not limited to, applications, fees, permits, engineering, and any other costs as may be required to acquire temporary utilities. OWNER will not be responsible for any delays or costs related to obtaining temporary utilities.

CONTRACTOR shall be responsible for procuring site/public utilities for CONTRACTOR's field office, staging area and construction operations. CONTRACTOR shall make

arrangements with the applicable Utility Companies to provide services and CONTRACTOR shall bear all costs associated with procuring, maintaining and removing said utilities. CONTRACTOR shall also bear all time and usage utility charges for CONTRACTOR's field office, staging area and construction operations.

Temporary utilities may be connected to OWNER's existing metered utilities only with OWNER's and utility company's written authorization. Any connection to OWNER's existing utilities shall be separately metered to allow for proper allocation of utility costs, unless another arrangement is specifically agreed to and authorized by OWNER in writing.

Prior to final acceptance of the Work, CONTRACTOR shall, at its expense, satisfactorily remove and dispose of all temporary facilities for construction utilities and that upon removal and disposal of all temporary facilities, CONTRACTOR shall restore OWNER'S property to OWNER'S satisfaction.

56.2 Interruption of Existing Utility Services:

If CONTRACTOR needs to interrupt any existing services, such as, but not limited to electrical power, existing security hardware signals, telephone, water main, sanitary sewer, storm sewer, etc., CONTRACTOR shall notify OWNER, in writing, not less than three (3) full business days (a business day is defined as Monday through Friday, excluding holidays) prior to the planned interruption. OWNER will review such request, coordinate same and reply to CONTRACTOR, in writing, prior to the planned interruption time. CONTRACTOR shall not proceed with any planned utility interruption without written permission to do so from OWNER.

CONTRACTOR shall use the latest technology for locating embedded utilities prior to commencing with saw cutting, drilling or coring operations. CONTRACTOR shall perform the Work for the new plumbing, HVAC, electrical and control systems tie-ins or interruptions to existing facility services between the hours of 10:00 p.m. and 07:00 a.m.

In the event of any accidental interruption of any utility service, CONTRACTOR shall immediately undertake the following:

56.2.1 Make every possible effort to immediately restore the disrupted utility, even if on a temporary basis.

56.2.2 Call Project Manager immediately and report and describe the incident.

56.2.3 Execute a Report of Utility Interruption within twenty-four (24) hours of the incident and forward the executed report to the Project Manager.

In the event of an accidental utility interruption, after completing the Report of Utility Interruption, CONTRACTOR shall submit to OWNER a proposed permanent repair plan, which, upon execution, will restore the damaged utility to like new in every way. Once the repair plan is approved by OWNER, CONTRACTOR shall proceed with a permanent repair of the interruption.

56.3 Transition:

CONTRACTOR shall be solely responsible for providing temporary heating, cooling, and/or ventilation as required to prevent degradation or damage to the Work. The permanent heating, cooling, and air handling systems shall not be utilized for the purpose of temporary heating, cooling, or ventilation until OWNER approves of such use in writing. In no case shall the permanent heating, cooling, or air handling systems be operated until they are complete, including formal start-up, check-out, and testing and balancing. Utilization of any of the permanent heating, cooling, or air handling systems prior to Substantial Completion shall not

impact the specified warranty for such equipment which shall begin on the date of Substantial Completion in accordance with ARTICLE 60.0 WARRANTY.

57.0 COMMERCIAL ACTIVITES

CONTRACTOR shall not establish any commercial activity or issue concessions or permits of any kind to third parties for establishing commercial activities on lands owned or controlled by OWNER. CONTRACTOR shall not allow its employees to engage in any commercial activities on the site.

58.0 USE OF COMPLETED PORTIONS OF WORK

Whenever, as determined by OWNER, any portion of the Work performed by CONTRACTOR is in a condition suitable for use, OWNER may initiate a Certificate of Substantial Completion for that portion and take possession of or use such portion.

Such use by OWNER shall in no case be construed as constituting final acceptance, and shall neither relieve CONTRACTOR of any of its responsibilities under the Contract, nor act as a waiver by OWNER of any of the conditions thereof, provided, that CONTRACTOR shall not be liable for the cost of repairs, rework, or renewals which may be required due to ordinary wear and tear resulting from such use. However, if such use increases the cost or delays the completion of remaining portions of Work, CONTRACTOR shall be entitled to an equitable adjustment in its compensation and/or schedule under this Contract.

No failure by OWNER to insist upon the strict performance of any provision of this Contract or to exercise any right or remedy consequent upon a breach by CONTRACTOR thereof, and no acceptance of all or any part of the Work or other action by OWNER preventing the continuance of any such breach shall constitute a waiver of any such breach or any subsequent breach of such provision.

If, as a result of CONTRACTOR's failure to comply with the provisions of the Contract, such use proves to be unsatisfactory to OWNER, OWNER shall have the right to continue such use until such portion of Work can, without injury to OWNER, be taken out of service for correction of defects, errors, omissions, or replacement of unsatisfactory materials or equipment, as necessary for such Work to comply with the Contract; provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed twelve months unless otherwise mutually agreed upon in writing between the parties.

CONTRACTOR shall not use any permanently installed equipment unless such use is approved by OWNER in writing. Where CONTRACTOR's written request is granted for the use of certain equipment, CONTRACTOR shall properly use and maintain, and upon completion of its use, and at its expense, recondition such equipment to the satisfaction of OWNER.

If OWNER furnishes an operator for such equipment, such operator's services shall be performed under the complete direction and control of CONTRACTOR and shall be considered CONTRACTOR's employee for all purposes other than the payment of such operator's wages, workmen's compensation or other benefits paid directly or indirectly by OWNER.

59.0 CONTRACT CLOSEOUT

59.1 Substantial Completion

59.1.1 When CONTRACTOR determines that the Work is complete in accordance with the Contract Documents, as modified by any contract changes, and OWNER accepts the Work as being substantially complete, CONTRACTOR shall submit a Certificate of Substantial Completion for OWNER review and acceptance after the following criteria have been met:

59.1.1.1 If applicable, CONTRACTOR has obtained a Certificate of Occupancy with no restrictions thereon,

59.1.1.2 If applicable, Work requiring a building permit has been inspected and accepted by the issuing body,

59.1.1.3 All Work shown on the Contract Documents and changes thereto, have been completed.

59.1.2 If, in the opinion of OWNER, the above conditions have been met, OWNER shall approve and return the Certificate of Substantial Completion to CONTRACTOR. At the same time, OWNER and Architect will prepare and issue to CONTRACTOR, a Punch List of items to be corrected. Refer to Section 59.2 for Punch List performance requirements.

59.1.3 Failure to include any item on the Punch List will not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents.

59.1.4 Subsequent to receipt of the Certificate of Substantial Completion, CONTRACTOR shall provide the following items to OWNER, prior to issuance of the Notice of Final Completion (refer to Section 59.3) unless otherwise amended by OWNER.

59.1.4.1 Final Operations and Maintenance Manuals.

59.1.4.2 All warranty and guaranty formats.

59.1.4.3 Certified As-Built records.

59.1.4.4 All Non-Compliance Reports, whether open or closed.

59.1.4.5 All approved Submittals.

59.1.4.6 All CONTRACTOR Certified Payrolls as received and approved.

59.1.4.7 Open CCRs requiring CONTRACTOR action.

59.1.4.8 General Conditions, Attachment "A" (*if applicable*; refer to ARTICLE 73.0 BIDDER PREFERENCE).

59.1.4.9 All known CONTRACTOR claims; quantified as to context and cost.

59.1.4.10 Any additional data required by the Contract.

59.1.5 CONTRACTOR shall be allowed ninety (90) calendar days after receipt of the Certificate of Substantial Completion to reconcile all outstanding items as listed above. OWNER reserves the right to impose any charges attributable to additional administration of the Contract beyond the ninety (90) day period.

59.2 Punch List:

CONTRACTOR shall notify OWNER in writing when all the items on the Punch List have been corrected. OWNER is obligated only to re-inspect the items on the Punch List one time. OWNER reserves the right to charge CONTRACTOR for the cost of subsequent re-inspection(s).

CONTRACTOR has thirty (30) calendar days, from the date of receipt of a Punch List, in which to correct the items listed on same. After the thirty (30) day period has expired, OWNER reserves the right to have other parties complete the correction of uncorrected items, chargeable to CONTRACTOR's account.

The Punch List shall be attached to the Certificate of Substantial Completion for CONTRACTOR completion.

59.3 Notice of Final Completion:

When CONTRACTOR considers the Work fully completed, it shall submit written notice to OWNER and Architect confirming that all the items listed in Sections 59.1 and 59.2 have been completed and the documents listed below have been received and accepted, OWNER will execute a Notice of Final Completion.

59.3.1 A written notice that all conditions of the Contract have been concluded.

59.3.2 A final billing for the Contract including release of retention.

The Notice of Final Completion will be executed after Architect and OWNER perform a final inspection of the Work. If the Work is found to be incomplete or defective, CONTRACTOR will be notified in writing and provided with a list of observed deficiencies. OWNER may withhold such payment as deemed appropriate to ensure the correction of the deficiencies. Should CONTRACTOR fail to promptly correct the deficiencies noted in the final punch list, OWNER may, upon seven (7) days written notice to CONTRACTOR, hire another contractor to correct such deficiencies, notify CONTRACTOR's Surety, and/or otherwise complete or correct the listed deficiencies, at CONTRACTOR's expense.,

When the Work and provisions of the Contract Documents are fully and satisfactorily completed, OWNER will pay to CONTRACTOR a final payment consisting of the remaining unpaid balance of the Contract Sum due CONTRACTOR.

Upon receipt of final payment, CONTRACTOR shall be deemed to have released of all claims against OWNER arising under or by virtue of this Contract.

59.4 Commencement of Wwarranties and Guarantees

All warranties and guarantees and other applicable requirements designated in the Contract shall commence on the date of Final Completion, unless noted otherwise, except that OWNER, upon written request from CONTRACTOR, may approve earlier commencement dates for systems or equipment.

60.0 WARRANTY

Defective design issues are not covered under this Article and OWNER is responsible for all costs associated with defective design that can be documented and justified. CONTRACTOR should immediately document such issues and issue notification to OWNER under ARTICLE 19.0 CHANGES.

However, should CONTRACTOR perform WORK contrary to the Contract Documents and without a CCD or CCO per ARTICLE 19.0 CHANGES, the WORK shall be deemed an unauthorized redesign and shall be at CONTRACTOR's risk and expense.

Unless otherwise provided elsewhere in the Contract, all materials and equipment incorporated into any Work covered by the Contract shall be new and, where not specified, of the most suitable grade of their respective kinds for their intended use, and all workmanship shall be in accordance with construction practices acceptable to OWNER. CONTRACTOR warrants all equipment, materials, and labor furnished or performed under this Contract against defects in materials and workmanship

(unless furnished by OWNER), for a period of twelve months (unless longer guarantees or warranties are provided for elsewhere in the Contract or in the manufacturer's standard warranty, in which case the longer periods of time shall prevail) from and after Final Completion, unless noted otherwise, under the Contract, regardless of whether the same were furnished or performed by CONTRACTOR or by any of its Subcontractors. Upon receipt of written notice from OWNER of any defect in any such equipment, materials, or labor during the applicable warranty period, due to unauthorized re-design, materials or workmanship, the affected item or parts thereof shall be redesigned, repaired or replaced by CONTRACTOR at a time acceptable to OWNER.

CONTRACTOR shall perform such tests as OWNER may require to verify that any unauthorized redesign, repairs and replacements comply with the requirements of the Contract Documents. All costs incidental to such unauthorized redesign, repair, replacement and testing, including the removal, replacement and reinstallation of equipment and materials necessary to gain access, shall be borne by CONTRACTOR.

Where such redesigned, repaired or replaced Work is performed less than one year from the end of the warranty period, CONTRACTOR warrants such redesigned, repaired or replaced Work against defective design, materials and workmanship for a period of twelve months from and after the date of acceptance thereof. Where such redesigned, repaired or replaced Work is performed more than one year from the end of the warranty period, CONTRACTOR warrants such redesigned, repaired or replaced Work against defective design, materials and workmanship from and after the date of acceptance thereof until completion of the warranty period.

Should CONTRACTOR fail to promptly make the necessary redesign, repair, replacement and tests, OWNER may perform or cause to be performed the same at CONTRACTOR's expense. CONTRACTOR and its surety or sureties shall be liable for the satisfaction and full performance of the warranties as set forth herein.

61.0 EXAMINATION OF CONTRACTOR's RECORDS

Both parties agree that OWNER shall, until the expiration of six (6) years after final payment under this contract, have access to, and the right to examine any directly pertinent books, documents, papers and records of CONTRACTOR involving transactions relating to this contract, and to make excerpts and transcriptions thereof.

62.0 SURVIVABILITY

The terms and conditions of this Contract regarding confidentiality, indemnification, warranties, payment, dispute resolution and all others that by their sense and context are intended to survive the expiration of this Contract, will survive the expiration or termination of this Contract howsoever caused.

63.0 OWNERSHIP AND USE OF DOCUMENTS

Any drawings, reports, studies, photographs, negatives, or other documents prepared by CONTRACTOR in the performance of its obligations under this Contract shall be the exclusive property of OWNER and all such materials shall be remitted to OWNER by CONTRACTOR upon completion, termination, or cancellation of this Contract. CONTRACTOR shall not use, willingly allow, or cause to have such materials used for any purpose other than the performance of CONTRACTOR's obligations under this Contract, without the prior written consent of OWNER.

Copies of the Contract Documents which are reasonably necessary for the proper execution, progress, and satisfactory completion of the Work shall be provided to CONTRACTOR by OWNER. Copies so furnished are not to be used by CONTRACTOR on any other project, and with the exception of one set for CONTRACTOR's records, are to be returned to OWNER at the completion or termination of the Work.

64.0 COOPERATION WITH OTHERS

OWNER and other contractors and subcontractors may be working at the site during the performance of this Contract, and CONTRACTOR's Work may be interfered with as a result of such concurrent activities. CONTRACTOR shall fully cooperate with OWNER and other contractors to avoid any delay or hindrance of their work. OWNER may require that certain facilities be used concurrently by CONTRACTOR and other persons and CONTRACTOR shall comply with such requirements.

Any costs caused by defective or ill-timed work of others shall be borne by CONTRACTOR unless CONTRACTOR gives written notice to OWNER if reasonably possible prior to proceeding with the works. CONTRACTOR shall notify OWNER of any latent defect within seven (7) days of its discovery.

65.0 SEPARATE CONTRACTS

OWNER reserves the right to award other separate contracts in connection with other portions of the Project.

CONTRACTOR shall afford OWNER's separate contractors' reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly interface and coordinate CONTRACTOR's Work with theirs.

If any part of CONTRACTOR's Work depends on the proper execution of the work of any separate contractor, CONTRACTOR shall inspect and promptly report to OWNER and Architect in writing any discrepancies or defects in such other work. Failure of CONTRACTOR to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive its Work, except as to defects which may develop in the other separate contractor's Work after the execution of CONTRACTOR's Work.

CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to fit it to receive or be received by the work of other contractors as indicated in, or reasonably implied by, the Contract Documents. CONTRACTOR shall not endanger or alter the work of any other contractor.

Should CONTRACTOR cause damage to the Work or property of any separate contractor on the Project, CONTRACTOR shall, upon written notice, settle with the other contractor. If the separate contractor makes any kind of a claim, legal or otherwise, against OWNER on account of any damage alleged to have been sustained, OWNER shall notify CONTRACTOR who, at its sole expense, shall defend the proceedings and pay all costs in connection therewith, including, but not limited to, all court costs and attorney fees, and any judgments against OWNER arising therefrom.

If a dispute arises between CONTRACTOR and a separate contractor as to their responsibility for any costs or damages to the Project, OWNER may assign and charge such costs or damages to CONTRACTOR and/or the separate contractor as OWNER, in its sole discretion, determines to be appropriate.

66.0 TERMINATION BY CONTRACTOR

CONTRACTOR may, upon seven (7) days written notice, terminate the Contract after the Work is stopped for a period of sixty (60) consecutive days through no act or fault of CONTRACTOR, or of a Subcontractor, or their employees or agents, or due to issuance of a court order or other order from a public authority having jurisdiction.

If CONTRACTOR terminates the Contract under the terms of the previous paragraph, it may recover from OWNER payment for Work completed and approved, including reasonable overhead and profit earned through the date of termination. CONTRACTOR will not be entitled to overhead and profit on any unperformed Work.

67.0 TERMINATION FOR DEFAULT

67.1 Notwithstanding any other provisions of the Contract, CONTRACTOR shall be considered in default of its contractual obligations under the Contract if it:

67.1.1 Performs Work which fails to conform to the requirements of the Contract;

67.1.2 Fails to make progress so as to endanger performance of the Contract;

67.1.3 Abandons or refuses to proceed with any of the Work, including modifications directed pursuant to ARTICLE 19.0 CHANGES;

67.1.4 Fails to fulfill or comply with any of the terms of the Contract;

67.1.5 Engages in behavior that is dishonest, fraudulent or constitutes a conflict of interest with CONTRACTOR's obligations under the Contract; or if

67.1.6 CONTRACTOR becomes insolvent or makes a general assignment for the benefit of creditors or reasonable grounds for insecurity arise with respect to CONTRACTOR's performance.

67.2 Upon the occurrence of any of the foregoing, OWNER shall notify CONTRACTOR in writing of the nature of the failure and of OWNER's intention to terminate the Contract for default. If CONTRACTOR does not cure such failure within seven (7) calendar days from receipt of notification, or sooner if safety is involved, or fails to provide satisfactory evidence that correction of such default has commenced and will be corrected within a reasonable time, OWNER may, by written notice to CONTRACTOR and without notice to CONTRACTOR's sureties, if any, terminate in whole or in part CONTRACTOR's right to proceed with the Work and OWNER may prosecute the Work to completion by contract or by any other method deemed expedient. OWNER may take possession of and utilize any data, designs, licenses, equipment, materials, plant, tools, and property of any kind furnished by CONTRACTOR and necessary to complete the Work.

67.3 CONTRACTOR and its sureties, if any, shall be liable for all costs in excess of the Contract price for such terminated Work reasonably and necessarily incurred in the completion of the Work, including, but not limited to, cost of administration, orders contracts, or subcontracts awarded to others for completion.

67.4 Upon termination for default, CONTRACTOR shall:

67.4.1 Immediately discontinue work on the date and to the extent specified in the notice and place no further orders or subcontracts to the extent that they relate to the performance of the terminated Work;

67.4.2 Inventory, maintain and turn over to OWNER all data, designs, licenses, equipment, materials, plant, tools, and property furnished by CONTRACTOR or provided by OWNER for performance of the terminated Work. This includes all warranties and guarantees required by ARTICLE 60.0 WARRANTY.

67.4.3 Promptly make every reasonable effort to obtain cancellation terms satisfactory to OWNER of all orders and subcontracts, rentals, or any other agreements existing for performance of the terminated Work or assign those agreements as directed by OWNER;

67.4.4 Cooperate with OWNER in the transfer of information and the disposition of Work in

progress so as to mitigate damages;

67.4.5 Comply with other reasonable requests from OWNER regarding the terminated Work; and

67.4.6 If applicable, continue to perform in accordance with all of the terms and conditions of this Contract such portion of the Work that is not terminated.

67.5 If, after termination pursuant to this clause, it is determined for any reason that CONTRACTOR was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to ARTICLE 68.0 – OPTIONAL TERMINATION.

67.6 The rights and remedies of OWNER provided in this Article are in addition to any other rights and remedies provided by law or under this Contract.

68.0 OPTIONAL TERMINATION

68.1 OWNER may, at its option, terminate for its convenience any of the Work under the Contract in whole or, from time to time, in part, at any time by written notice thereof to CONTRACTOR. Such notice shall specify the extent to which the performance of the Work is terminated and the effective date of such termination. Upon receipt of any such notice, CONTRACTOR shall, unless the notice requires otherwise:

68.1.1 Immediately discontinue the Work on the date and to the extent specified in the notice and place no further orders or subcontracts for materials, services, or facilities, other than as may be necessary or required for completion of such portion of the Work under the Contract that is not terminated;

68.1.2 Promptly obtain assignment or cancellation upon terms satisfactory to OWNER of all orders and subcontracts to the extent they relate to the performance of the Work terminated or assign to OWNER those orders and subcontracts and revoke agreements specified in such notice;

68.1.3 Assist OWNER, as specifically requested in writing, in the maintenance, protection and disposition of Work in progress, plant, tools, equipment, property and materials acquired by CONTRACTOR or furnished by OWNER under the Contract; and

68.1.4 If applicable, complete performance of any Work that is not terminated.

68.2 Upon any such termination, CONTRACTOR shall waive any claims for damages from the optional termination, including loss of anticipated profits, on account thereof, but as the sole right and remedy of CONTRACTOR, OWNER shall pay CONTRACTOR in accordance with the following provisions, provided, however, that those provisions of the Contract which by their very nature survive final acceptance under the Contract shall remain in full force and effect after such termination:

68.2.1 All Contract amounts due and not previously paid to CONTRACTOR for Work completed in accordance with the Contract prior to such notice

68.2.2 All reasonable costs for Work thereafter performed as specified in such notice.

68.2.3 Reasonable administrative costs of settling and paying claims arising out of the termination of Work under orders or subcontracts as provided in Section 68.1.2 above.

68.2.4 The verifiable costs incurred pursuant to Section 68.1.3 above.

68.2.5 Overhead and profit on Items 2 through 4 of this Section 68.2 per Section 8.3.

68.3 CONTRACTOR shall submit within thirty (30) days after receipt of notice of optional termination, a proposal for an adjustment to the Contract price including all incurred costs described herein. OWNER shall review, analyze, and verify such proposal, and negotiate an equitable adjustment, and the Contract shall be amended in writing accordingly.

68.4 The rights and remedies of OWNER provided in this Article are in addition to any other rights and remedies provided by law or under this Contract.

69.0 SUSPENSION

69.1 OWNER may, at its sole option, decide to suspend at any time, from time to time, the performance of all or any portion of the Work to be performed under the Contract. CONTRACTOR will be notified of such decision by OWNER in writing. Such notice of suspension of Work may designate the amount and type of plant, labor and equipment to be committed to the Jobsite. During the period of suspension, CONTRACTOR shall use its best efforts to utilize its plant, labor and equipment in such a manner as to minimize costs associated with suspension.

69.2 Upon receipt of any such notice, CONTRACTOR shall, unless the notice requires otherwise:

69.2.1 Immediately discontinue work on the date and to the extent specified in the notice;

69.2.2 Place no further orders or subcontracts for material, services, or facilities with respect to suspended Work other than to the extent required in the notice;

69.2.3 Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to OWNER, of all orders, subcontracts and rental agreements to the extent they relate to performance of Work suspended;

69.2.4 Continue to protect and maintain the Work including those portions on which work has been suspended; and

69.2.5 Take any other reasonable steps to minimize costs associated with such suspension.

69.3 As full compensation for such suspension CONTRACTOR will be reimbursed for the following verifiable costs (without profit), without duplication of any item, to the extent that such costs directly result from such suspension of Work:

69.3.1 A standby charge to be paid to CONTRACTOR during the period of suspension of Work which standby charge shall be sufficient to compensate CONTRACTOR for keeping, to the extent required in the notice, its organization and equipment committed to the Work in a standby status;

69.3.2 All reasonable and documented costs associated with mobilization and demobilization of CONTRACTOR's plant, forces and equipment;

69.3.3 An equitable amount to reimburse CONTRACTOR for the cost of maintaining and protecting that portion of the Work upon which work has been suspended; and

69.3.4 If, as a result of any such suspension of Work, the cost to CONTRACTOR of subsequently performing work is increased or decreased, an equitable adjustment

will be made in the cost of performing the remaining portion of Work.

69.4 Upon receipt of notice to resume suspended Work, CONTRACTOR shall immediately resume performance of the suspended Work to the extent required in the notice.

69.5 If CONTRACTOR intends to assert a claim for equitable adjustment under this clause it must, pursuant to ARTICLE 19.0 – CHANGES, and within ten (10) calendar days after receipt of notice to resume work, submit the required written notification of claim and within twenty (20) calendar days thereafter its written proposal setting forth the impact of such suspension.

69.6 No adjustment shall be made for any suspension to the extent that performance would have been suspended, delayed, or interrupted by any CONTRACTOR's non-compliance with requirements of this Contract.

70.0 CLAIMS FOR DAMAGES

Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of the other party's employees, agents, or others for whose acts it is legally liable, claim shall be made in writing to such other party within seven (7) days after the first knowledge of such injury or damage, and shall be resolved pursuance to Sections 13.5 through 13.7.

Any costs to OWNER caused by defective or ill-timed Work performed by CONTRACTOR shall be paid by CONTRACTOR.

71.0 NOTICES

Any notices provided for hereunder shall be in writing and may be served either personally on the Authorized Representative of the receiving party at the job site or by registered mail to that party at the addresses shown below:

OWNER: Douglas County School District
1638 Mono Avenue
Minden, NV 89423

Authorized Representative – Scott McCullough, Project Manager

CONTRACTOR: NAME AND ADDRESS

These addresses may be changed by either of the parties by written notice to the other.

OWNER and any person or entity designated by OWNER has the authority to represent OWNER for the purposes of compliance under NRS 338.525 and NRS 338.535.

72.0 CONTRACTOR CORRESPONDENCE

All CONTRACTOR correspondence to OWNER pertaining to this Contract shall be numbered sequentially, grouped by letter or letter of transmittal, commencing with the Number 001, signed by CONTRACTOR's Authorized Representative. Any correspondence not so numbered or so signed by the Authorized Representative shall be returned to CONTRACTOR and shall not be recognized as Contract correspondence and shall not be considered to be notice to OWNER of anything and shall not require OWNER to take action or to respond. Any documents being transmitted electronically

need to be PDF searchable text.

All CONTRACTOR correspondence to OWNER shall be transmitted through OWNER specified system.

73.0 BIDDER PREFERENCE (Remove if not applicable)

73.1 If CONTRACTOR submitted with its bid a signed and notarized Certificate of Eligibility as require by NRS 338.147, and the Affidavit of Compliance per NRS 338.0017, CONTRACTOR agrees that for the duration of the project:

73.1.1 At least 50% of all workers hold a valid driver's license or identification card issued by the Department of Motor Vehicles;

73.1.2 All vehicles used primarily for the Work will be registered in the State of Nevada, or registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the Department of Motor Vehicles (DMV) pursuant to NRS 706.826;

73.1.3 At least 50% of all design professionals working on the public work hold a valid driver's license or identification card issued by the Department of Motor Vehicles;

73.1.4 At least 25% of all suppliers used for the public work are located in this state, unless otherwise provided by law; and

73.1.5 CONTRACTOR shall maintain and make available for inspection, within the State, CONTRACTOR'S records concerning payroll relating to the public work

73.2 No later than July 10 of each year, or upon project close-out, whichever occurs first, CONTRACTOR will provide to OWNER a completed Attachment "A" that describes how it has met the requirements of this Article for the period July 1 through June 30 or applicable portion thereof.

73.3 Failure to comply with the requirements of this Article is a material breach of the contract and OWNER may recover, by civil action against the party responsible for the failure, liquidated damages in the amount of one (1) percent of the cost of the largest contract to which it is a party.

The right to recover liquidated damages by OWNER may be enforced directly against the party that causes the material breach. No other party to the contract is liable to OWNER for liquidated damages.

73.4 A person or entity who believes that CONTRACTOR that obtained a preference in bidding by submitting with its Bid a signed and notarized Affidavit has failed to comply with a requirement certified in the Affidavit, may file a written objection with OWNER that sets forth proof or substantiating evidence to support the belief of the person or entity that CONTRACTOR has failed to comply.

If OWNER receives a written objection from a person or entity that a CONTRACTOR who submitted an Affidavit with its Bid has failed to comply with a requirement certified in the Affidavit, OWNER shall determine whether the objection is accompanied by the required proof or substantiating evidence. If OWNER determines that the objection is not accompanied by the required proof or substantiating evidence, OWNER shall dismiss the objection. If he OWNER determines that the objection is accompanied by the required proof or substantiating evidence or if OWNER on its own initiative determines that the required proof or substantiating evidence exists, OWNER shall determine whether CONTRACTOR

has failed to comply with a requirement certified in the Affidavit of CONTRACTOR. If OWNER determines that CONTRACTOR has failed to comply with a requirement certified in his Affidavit, OWNER may seek to recover by civil action liquidated damages for material breach of the Contract in the amount of 1 percent of the largest contract to which CONTRACTOR is a party.

CONSTRUCTION PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the following two pages, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature:_____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:
(Attach Power of Attorney)

Space provided below for signatures of additional parties, if required)

CONTRACTOR AS PRINCIPAL

Company:_____ Corp. Seal)

Signature:_____

Name and Title:

_____

SURETY

Company:_____(Corp. Seal)

Signature:_____

Name and Title:

_____
(Attach Power of Attorney)

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Construction Contract, the Surety and the CONTRACTOR shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1 The OWNER has notified the CONTRACTOR and the Surety at its address described in Paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2 The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1 The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the OWNER and the CONTRACTOR selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the OWNER the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new CONTRACTOR and with reasonable promptness under the circumstances:

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER, If the Surety proceeds as provided in paragraph 4.4 , and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Construction Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3, above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Construction Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the CONTRACTOR for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by Law, the Minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Construction Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Construction Contract.

12.2. Construction Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CONSTRUCTION PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the following two pages, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature:_____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:
(Attach Power of Attorney)

Space provided below for signatures of additional parties, if required)

CONTRACTOR AS PRINCIPAL

Company:_____ Corp. Seal)

Signature:_____

Name and Title:

_____

SURETY

Company:_____(Corp. Seal)

Signature:_____

Name and Title:

_____
(Attach Power of Attorney)

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the CONTRACTOR:

4.2.1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in he claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

4.2.2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR has indicated the claim will be paid directly or indirectly; and

4.2.3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by Paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety that is sufficient compliance.

6. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

7. Amounts owed by the OWNER to the CONTRACTOR under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Construction Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the work.

8. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Construction Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

9. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

10. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

11. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page. Actual receipt of

notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

12. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or the legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

13. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

14. DEFINITIONS

14.1 Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms “labor, materials or equipment” that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the CONTRACTOR and the CONTRACTOR’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

14.2 Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

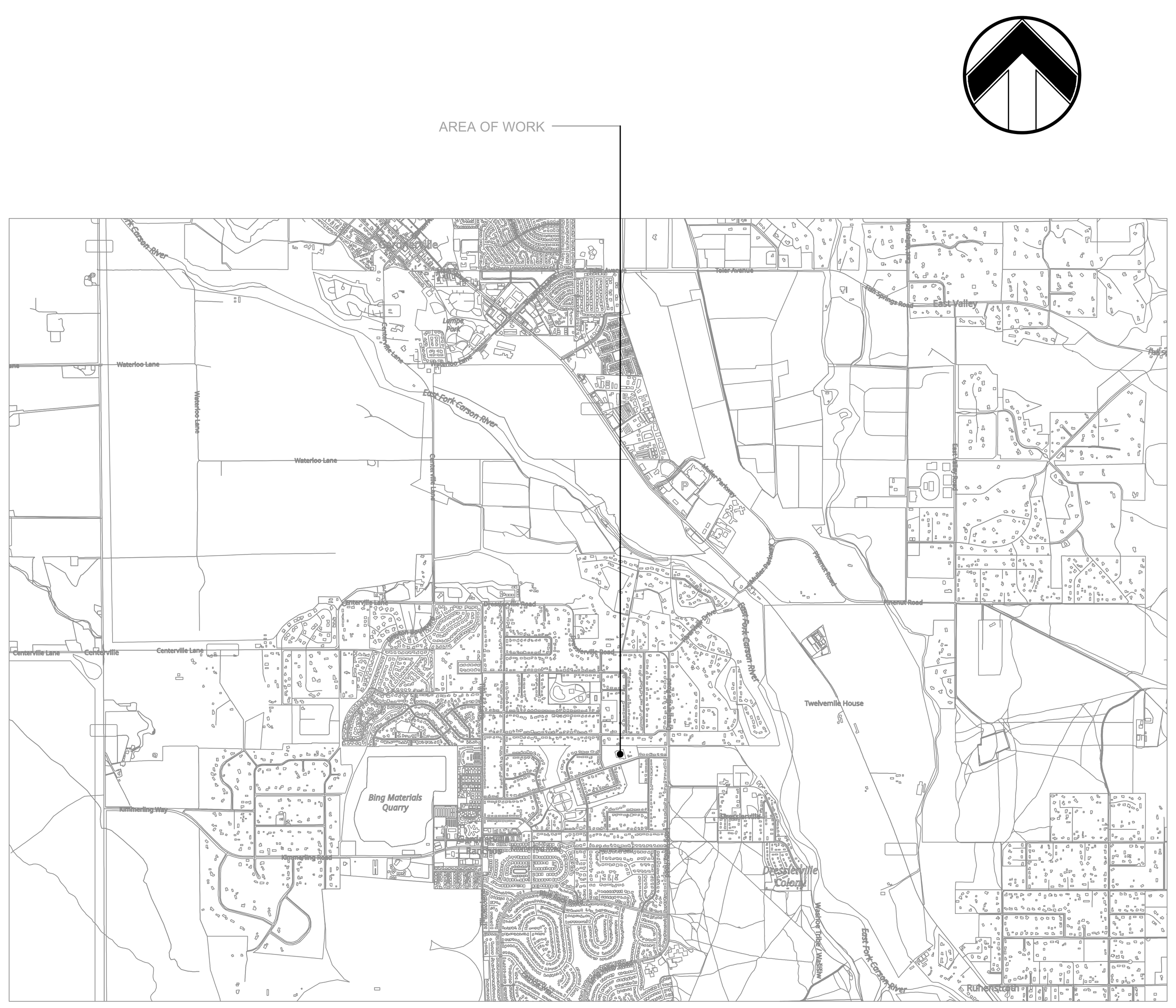
14.3 OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

DCSD CC MENELEY ELEMENTARY SCHOOL
LIGHTING RETROFIT

1446 MUIR DRIVE
GARDNERVILLE, NV 89460

ISSUE
07/15/2025

SITE MAP



PLEASE RECYCLE

OWNER

SCOTT MCCULLOUGH
DOUGLAS COUNTY SCHOOL DISTRICT PROJECT MANAGER
SMCCULLOUGH@DOUGLASNV.US
775-790-5212

SCOPE OF WORK

1. REPLACE ALL EXISTING LIGHTING FIXTURES SHOWN WITH NEW LIGHTING FIXTURES AS SCHEDULED ONE FOR ONE.
2. PROVIDE ALL NEW SUPPORTS, SPLAY WIRES AND ANCHORS APPROPRIATE FOR THE EXISTING CEILING AND SUPPORT TYPES.
3. INTERCEPT AND EXTEND ALL LIGHTING CIRCUITS AND CONTROLS TO NEW LIGTING FIXTURES SHOWN.
4. ALL DAMAGED CEILING TILES SHALL BE REPLACED WITH NEW OF EXACT TYPE AS EXISTING.
5. EXISTING SWITCHES, EMERGENCY LIGHTING ("BUG EYES"), OCCUPANCY SENSORS AND EXTERIOR LIGHTING SHALL REMAIN IN PLACE AND BE PROTECTED THROUGHOUT CONSTRUCTION. NO MODIFICATIONS TO THESE SYSTEMS UNLESS OTHERWISE NOTED.

CONSULTANT

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING
681 Sierra Rose Dr., Ste B | Reno, NV 89511 | 775.826.9010
4601 DTC Blvd., Ste 740 | Denver, CO 80237 | 720.481.3290
8112 Maryland Ave., Ste 400 | Clayton, MO
pkelectrical.com

DRAWING INDEX

SHEET	DESCRIPTION	
G0.1	COVER SHEET	●
E0.1	ELECTRICAL LEGEND AND IECC COMPLIANCE FORM	●
E0.2	ELECTRICAL SPECIFICATIONS	●
E0.3	DETAILS	●
E1.1	PARTIAL LIGHTING DEMOLITION PLAN	●
E1.2	PARTIAL LIGHTING DEMOLITION PLAN	●
E2.1	PARTIAL NEW LIGHTING PLAN	●
E2.2	PARTIAL NEW LIGHTING PLAN	●
	TOTAL SHEETS IN ISSUE:	8

APPLICABLE CODES AND REGULATIONS

2018 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
CURRENT NORTHERN NEVADA AMENDMENTS

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING
681 Sierra Rose Drive, Suite B | Reno, NV 89511 | 775.826.9010
4601 DTC Boulevard, Suite 740 | Denver, CO 80237 | 720.481.3290
pkelectrical.com

PROFESSIONAL ENGINEER - STATE OF NEVADA
JOSEPH E. GANSER
EXP: 06/30/27
ELECTRICAL
No 21011
07/15/2025

DCSD CC MENELEY ELEMENTARY SCHOOL
LIGHTING RETROFIT
1446 MUIR DRIVE
GARDNERVILLE, NV 89460

REVISIONS

SHEET TITLE
COVER SHEET

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25025
PROJECT MGR:	LI

G0.1

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title:
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Elementary School (School/University)	53340	0.81	43205
		Total Allowed Watts =	43205

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Elementary School (School/University 53340 sq ft.)				
LED 1: L1: 2x2: Other:	1	118	31	3634
LED 2: L2: 2X4: Other:	1	535	24	13000
LED 3: L3: CLX 48": Other:	1	56	18	1036
LED 4: L4: WL4: Other:	1	51	40	2014
LED 5: L5: LUX HIGH BAY: Other:	1	24	156	3742
LED 6: L6: 8" ROUND DOWNLIGHT: Other:	1	1	32	32
			Total Proposed Watts =	23459

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

LIGHTING FIXTURE SCHEDULE

LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION. THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS.

LIGHTING SYSTEM FOOTCANDLE LEVELS ARE BASED ON THE UTILIZATION OF STANDARD REFLECTANCES OF 80-50-20 (CEILING-WALL-FLOOR) PER I.E.S. (ILLUMINATED ENGINEERING SOCIETY). THE ROOM SURFACES ARE USED AS AN INTEGRAL COMPONENT OF THE LIGHTING SYSTEMS. THE REFLECTANCE OF THE SURFACE PAINT COLOR, MATERIAL, AND OTHER ROOM SURFACES, DIRECTLY AFFECTS THE DELIVERY OF LIGHT TO THE WORK PLANE. A SIGNIFICANT DROP IN OVERALL LIGHTING LEVELS WILL OCCUR IF REFLECTANCES ARE LOWERED. THE ARCHITECT/OWNER SHALL NOTIFY THE ENGINEER IMMEDIATELY IF FINISHES DO NOT FALL INLINE WITH THE REFLECTANCES MENTIONED ABOVE.

SUBSTITUTION: DEFINITIONS

- OR EQUAL = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS WILL BE ALLOWED. ENGINEER'S PRE-BID APPROVAL IS NOT REQUIRED. PROPOSED EQUAL FIXTURES ARE SUBJECT TO REVIEW DURING THE STANDARD SUBMITTAL PROCESS.
- NO EQUAL = PROVIDE SPECIFIED FIXTURE. SUBSTITUTIONS ARE NOT ALLOWED.
- SUBJECT TO REVIEW = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS MAY BE ALLOWED ONLY WITH ENGINEER'S APPROVAL. ALL SUBSTITUTIONS MUST BE SUBMITTED AS REQUIRED BY SPECIFICATIONS AND ACCOMPANIED WITH POINT BY POINT LIGHTING CALCULATIONS. DETERMINATION OF EQUAL IS ENGINEER'S SOLE DISCRETION.

TYPE	SYMBOL	DESCRIPTION AND MANUFACTURER
L1 31		2' X 2' ARCHITECTURAL RECESSED LED FIXTURE, STEEL CONSTRUCTION, WHITE POLYESTER POWDER COAT, FLANGED, 4000K, NON-DIMMING. LAMP: LED, 3566 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:PINNACLE ARCHITECTURAL LIGHTING LUCEN LU22A-840MO SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L2 24		2' X 4' ARCHITECTURAL RECESSED LED FIXTURE, STEEL CONSTRUCTION, WHITE POLYESTER POWDER COAT, FLANGED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 3155 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:PINNACLE ARCHITECTURAL LIGHTING LUCEN LU24A-840LO SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L3 18		4' LINEAR LED FIXTURE, STEEL CONSTRUCTION, MATTE WHITE POLYESTER POWDER COAT, SURFACE-MOUNTED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 3000 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LITHONIA LIGHTING CLX-L48-3000LM-HEF-FDL-MVOLT-40K-80CRI SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L4 40		4' LINEAR LED FIXTURE, STEEL CONSTRUCTION, MATEE WHITE POLYESTER POWDER COAT, SURFACE-MOUNTED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 4000 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LITHONIA LIGHTING WL4-40L-GZ1-LP840 SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L5 156		4' LINEAR LED HIGH-BAY FIXTURE, ALUMINUM HEAT SINK CHANNEL, ANODIZED ALUMINUM, SUSPENDED, 4000K, 10% 0-10V DIMMING. LAMP: LED, 24,010 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LUX DYNAMICS L-1-SA-840-4-U10-3/10-4P10-OC SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L6 32		8" ROUND LED DOWNLIGHT, SURFACE MOUNTED, ALUMINUM HOUSING, IP65, MATTE TRIM, 4000K, MATTE-DIFFUSED WITH MEDIUM WIDE DISTRIBUTION. LAMP: LED, 2,000LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:GOTHAM EVO EVO8VR-40/-20-AR-LD-MWD-FOL-277 SUBSTITUTIONS: ◉ OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL

ELECTRICAL LEGEND

- PANELBOARD: SURFACE MOUNTED
- PANELBOARD: FLUSH MOUNTED
- SWITCHBOARD OR DISTRIBUTION PANEL
- XF TRANSFORMER
- PULLBOX / VAULT
- MOTOR STARTER
- COMBINATION MOTOR STARTER
- COMBINATION MOTOR STARTER PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- F DISCONNECT SWITCH - FUSIBLE (FUSED PER EQUIP. NAMEPLATE)
- N DISCONNECT SWITCH - NON-FUSIBLE
- DISCONNECT SWITCH PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- VARIABLE FREQUENCY DRIVE
- VARIABLE FREQUENCY DRIVE PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- CB ENCLOSED CIRCUIT BREAKER
- GROUND ROD
- SHUNT TRIP STATION OR EMERGENCY PUSHBUTTON
- M REMOTE METER

- S SINGLE POLE SWITCH 48" AFF
- S_3 THREE WAY SWITCH 48" AFF
- S_4 FOUR WAY SWITCH 48" AFF
- S_K KEY OPERATED SWITCH 48"
- S_L SWITCH WITH LIGHTED HANDLE
- S_M MANUAL MOTOR STARTER
- S_P SWITCH WITH PILOT LIGHT 48" AFF
- S_T TIME WALL SWITCH EQUAL TO HUBBELL DT2000W 48" AFF
- D DIMMER OPERATED SWITCH 48" AFF
- OCCUPANCY SENSOR - WALL MOUNTED 48" AFF
- ^{D} 0-10V DIMMING OCCUPANCY SENSOR - WALL MOUNTED 48" AFF - EQUAL TO SENSOR SWITCH WSX-D
- OS OCCUPANCY SENSOR - CEILING MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- OS OCCUPANCY SENSOR - CORNER MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- CONTROL STATION
- CONTACTOR OR RELAY
- PC PHOTOELECTRIC CELL (ON ROOF FACING NORTH UNO)
- TC TIMECLOCK

- CONDUIT/RACEWAY IN WALL OR ABOVE CEILING
- CONDUIT/RACEWAY BELOW GRADE OR BELOW FLOOR
- BREAK OR RUN CONTINUES
- OH OVERHEAD SERVICE
- P PRIMARY
- S SECONDARY
- C COMMUNICATIONS OR SIGNAL
- T TELEPHONE
- TV TELEVISION
- LOW VOLTAGE AND/OR CONTROL WIRING
- EMERGENCY CIRCUIT
- CONDUIT/RACEWAY STUB OUT: MARK AND CAP (SITE)
- CONDUIT/RACEWAY SLEEVE

- SINGLE RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: HALF SWITCHED, +18" AFF
- DUPLEX RECEPTACLE GFI TYPE - 20A, 125V, NEMA 5-20 GFI, +18" AFF
- QUAD RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- ISOLATED GROUND TYPE RECEPTACLE (ORANGE TRIANGLE), 20A, 125V, NEMA 5-20IG, +18" AFF
- COMBO DUAL USB CHARGER / DUPLEX RECEPTACLE, 5.1A, (1) TYPE A & (1) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), 20A, 125V, NEMA 5-20R, +18AFF
- QUAD USB CHARGER, 5.1A, (2) TYPE A & (2) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), +18AFF
- SPECIAL PURPOSE RECEPTACLE: SEE DWGS FOR NEMA CONFIGURATION
- DUPLEX RECEPTACLE: FLOOR MOUNTED
- QUAD RECEPTACLE: FLOOR MOUNTED
- DUPLEX RECEPTACLE: CEILING MOUNTED
- QUAD RECEPTACLE: CEILING MOUNTED
- BLANK GFCI PROTECTIVE DEVICE IN READILY ACCESSIBLE LOCATION (LABEL PROTECTED DEVICES)
- DUPLEX "CLOCK" RECEPTACLE: 125V, NEMA 5-20R, +60" AFF
- $^{X"}$ DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS

- 7 THERMOSTAT (PROVIDED BY MECH. CONTRACTOR UNO)
- J JUNCTION BOX (SIZE AS REQUIRED UNO)
- 3 SHEET NOTE DESIGNATION
- F1 FIXTURE DESIGNATION: F1=TYPE (SEE FIXTURE SCH.)
- 3 REVISION DELTA: NUMBER REPRESENTS REVISION
- 1253 FEEDER DESIGNATION
- AHU 2 EQUIPMENT CONNECTION

- DATA / VOICE OUTLET: 18" AFF - 1 VOICE, 1 DATA JACK, 2 BLANKS
- DATA / VOICE OUTLET: FLOOR MOUNTED
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS
- TELEPHONE OUTLET: 18" AFF
- DATA OUTLET: 18" AFF
- DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- S SPEAKER
- TV TELEVISION OUTLET: 18" AFF (UNO)
- TELEPHONE TERMINAL BOARD (TTB)
- VC VOLUME CONTROL
- GROUNDING BAR

*** FIXTURE SCHEDULE HAS PRECEDENCE ***

- LENSED TROFFER
- VOLUMETRIC TROFFER
- FLANGED TROFFER
- SURFACE MOUNT TROFFER
- STRIP FIXTURE
- DOWNLIGHT
- WALL PACK
- POLE MOUNT
- EMERGENCY LIGHTING UNIT
- EXIT SIGN FIXTURE - SHADED AREA DENOTES LIGHTED FACE - ARROWS INDICATE DIRECTION
- SHADING INDICATES EGRESS FIXTURE

- GFI GROUND FAULT INTERRUPTER DEVICE
- M METERING DEVICE
- REMOTE METER
- ST SHUNT TRIP DEVICE
- TRANSFORMER
- CURRENT TRANSFORMER
- G GENERATOR
- # MOTOR - # INDICATES HP
- INTERRUPTER SWITCH
- GFI GROUND FAULT RELAY W/ CT OR SENSOR
- FUSE
- CIRCUIT BREAKER
- DRAWOUT CIRCUIT BREAKER
- A B TRANSFER SWITCH (A=AUTOMATIC, M=MANUAL) # FOR POLES 2, 3 OR 4
- SPD SURGE PROTECTION DEVICE

- NORMALLY OPEN (NO) CONTACT
- NORMALLY CLOSED (NC) CONTACT
- C COIL - VOLTAGE PER CONTROL DIAGRAMS
- PILOT LIGHT (LED) PUSH-TO-TEST. LETTER INDICATES COLOR (R=RED, G=GREEN, A=AMBER, Y=YELLOW)
- PILOT LIGHT (LED) NON PUSH-TO-TEST
- THERMAL OVERLOAD
- MAGNETIC OVERLOAD
- PUSH BUTTON NORMALLY OPEN (NO)
- PUSH BUTTON NORMALLY CLOSED (NC)
- H O A HAND-OFF-AUTO (HOA) SELECTOR SWITCH
- LIMIT SWITCH NORMALLY OPEN (NO)
- LIMIT SWITCH NORMALLY CLOSED (NC)
- R PUSH BUTTON ILLUMINATED (LED)

TICS = NO. OF #12 WIRES (UNO) IF MORE THAN TWO WITHIN RACEWAY. GROUNDING CONDUCTOR (NOT SHOWN) ALWAYS REQUIRED.
ISOLATED GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR
PHASE CONDUCTOR(S)

BRANCH CIRCUIT (WHEN TIC MARKS ARE NOT SHOWN) = (1) PHASE, (1) NEUTRAL AND (1) GROUNDING CONDUCTOR

HOMERUN TO PANELBOARD OR DEVICE

HA-(1,3,5,3N)G HOMERUN CIRCUIT DESIGNATION
GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR (N=1, 2N=2 NEUTRALS, 3N=3 NEUTRALS)
PHASE CONDUCTOR(S)
PANELBOARD DESIGNATION

HA-(1,3,5)G HOMERUN CIRCUIT DESIGNATION (3 PHASE CIRCUIT SHOWN)
GROUNDING CONDUCTOR
PHASE CONDUCTOR(S)
PANELBOARD DESIGNATION

NOTE: "(E)" IN HOMERUN INDICATES NEW HOMERUN TO EXISTING PANEL

A	AMPS
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMP INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BKR	BREAKER
C	CONDUIT/RACEWAY
CEC	CALIFORNIA ENERGY COMMISSION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT/RACEWAY ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DISTRIBUTION BOARD
DDC	DIRECT DIGITAL CONTROLLER
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
(F)	FUTURE
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT (STEEL)
FPEN	FUSE PER EQUIP. NAMEPLATE
GFI	GROUND FAULT INTERRUPT
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HSKP	HOUSEKEEPING
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
K	kcmil (300K = 300 kcmil)
KVA	KILOVOLT AMPS
KW	KILOWATT
LTG	LIGHTING
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MFG	MANUFACTURER
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MSB	MAIN SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHTLIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NVE	NV ENERGY
P	POLE
PH/Ø	PHASE
PV	PHOTOVOLTAIC
PNL	PANEL
PTC	PV USA TEST CONDITIONS
PWR	POWER
(R)	RELOCATE/RELOCATED
(RR)	REMOVE AND REPLACE
RAC	RIGID ALUMINUM CONDUIT
RFC	RIGID FIBERGLASS CONDUIT
RSC	RIGID STEEL CONDUIT
SE	SERVICE ENTRANCE
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
STC	STANDARD TEST CONDITIONS
SW	SWITCH
TE	TELECOM
TTB	TELEPHONE TERMINATION BOARD
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UNSW	UNSWITCHED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHER PROOF
(X)	EXISTING TO BE REMOVED
XFMR OR XF	TRANSFORMER

E = EQUIPMENT
H = ELECTRIC HEAT
K = KITCHEN EQUIP
L = LIGHTING
M = MOTOR
M1 = LARGEST MOTOR
R = RECEPTACLES

20 = SINGLE POLE CIRCUIT BREAKER
20/2 = TWO POLE CIRCUIT BREAKER
20/3 = THREE POLE CIRCUIT BREAKER
20A = ARC FAULT CIRCUIT BREAKER
20C = CONTROLLABLE CIRCUIT BREAKER
20G = GFI CIRCUIT BREAKER

NOTE: THIS IS A MASTER SYMBOL LIST. IT MAY BE THAT NOT ALL SYMBOLS SHOWN ARE USED WITHIN THIS SET OF PLANS. HEIGHTS GIVEN ARE TO TOP OF BOX.

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DCSD CC MENELEY ELEMENTARY SCHOOL LIGHTING RETROFIT

1446 MUIR DRIVE
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REVISIONS

SHEET TITLE
ELECTRICAL LEGEND

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25025
PROJECT MGR:	LI

E0.1

PLEASE RECYCLE

SECTION 260000 ELECTRICAL SPECIFICATIONS

ITEM | DESCRIPTION

PART 1 - GENERAL

1.1 SUMMARY
- THE WORK UNDER THIS DIVISION SHALL CONSIST OF ALL LABOR, MATERIALS, EQUIPMENT, SERVICES AND RELATED ACCESSORIES, ETC. NECESSARY AND REQUIRED TO COMPLETE ALL WORK AS SHOWN OR INFERRED ON THE DRAWINGS AND IN THE SPECIFICATIONS (CONTRACT DOCUMENTS).
- PROVIDE FIXED ELECTRICAL EQUIPMENT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- PROVIDE EQUIPMENT AND/OR WIRING NORMALLY FURNISHED OR REQUIRED FOR COMPLETE ELECTRICAL SYSTEMS BUT NOT SPECIFICALLY SPECIFIED ON THE DRAWINGS AND/OR IN SPECIFICATIONS, AS THOUGH SPECIFIED BY BOTH.
- ALL EQUIPMENT AND WIRING SHALL BE NEW, EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE.

1.2 RELATED WORK SPECIFIED ELSEWHERE

COORDINATION: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 26 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS AND ADDENDA.

1.3 ADOPTED CODES
- INTERNATIONAL BUILDING CODE (IBC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC).
- NATIONAL ELECTRICAL CODE (NEC) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
- INTERNATIONAL FIRE CODE (IFC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL.
- NATIONAL FIRE CODES (NFPA STANDARDS) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AS REFERENCED IN THE 2018 INTERNATIONAL FIRE CODE.
- INTERNATIONAL ENERGY CONSERVATION CODE (IECC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL. ASHRAE / IESNA STANDARD 90.1-2004 IS INCORPORATED BY REFERENCE.
- ALL APPLICABLE PROVISIONS OF THE NEVADA REVISED STATUTES (NRS) AND THE NEVADA ADMINISTRATIVE CODE (NAC), INCLUDING THOSE LISTED BELOW.
- THE MOST CURRENT REGULATIONS OF THE STATE FIRE MARSHAL, NEVADA DEPARTMENT OF PUBLIC SAFETY, CARSON CITY, NEVADA (NAC CHAPTER 477, STATE FIRE MARSHAL).
- THE MOST CURRENT EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA) PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE INCLUDING THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)

1.4 DEFINITIONS

PROVIDE	FURNISH, INSTALL, CONNECT AND TEST UNTIL COMPLETE
WIRE	FURNISH ALL NECESSARY WIRING, CONNECT AND TEST UNTIL COMPLETE
INSTALL	FURNISH, SET IN PLACE, WIRE AND TEST UNTIL COMPLETE
WORK	MATERIALS COMPLETELY INSTALLED, CONNECTED, AND TESTED UNTIL COMPLETE
EQUAL	ACCEPTABLE EQUAL AS DETERMINED BY THE ENGINEER

1.5 REQUIREMENTS OF REGULATORY AGENCIES
- OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK. COMPLY WITH ALL ORDINANCES PERTAINING TO WORK DESCRIBED HEREIN. PAY ALL EXPENSES ARISING FROM THE PROCUREMENT OF THESE CERTIFICATES AND INCLUDE IN THE BASE CONTRACT PRICE.
- INSTALL WORK UNDER THIS DIVISION PER DRAWINGS, SPECIFICATIONS, LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, (NFPA-70) INCLUDING LOCAL AMENDMENTS AND INTERPRETATIONS, LOCAL ADOPTED BUILDING CODES, AND ANY SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK WITHIN COMPLETE INSTALLATION. IN EVENT OF CONFLICT, INSTALL WORK PER MOST STRINGENT CODE REQUIREMENTS DETERMINED BY ENGINEER. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.
- ALL MATERIALS, PRODUCTS, DEVICES, FIXTURES, FORMS OR TYPES OF CONSTRUCTION INCLUDED IN THIS PROJECT SHALL MEET OR EXCEED THE PUBLISHED REQUIREMENTS OF NATIONAL ELECTRICAL CODE (NEC), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) AND NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA). ALL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABORATORIES (UL) LABEL OR EQUIVALENT FROM APPROVED INDEPENDENT TESTING LABORATORY.
- ARRANGE, PAY FEES FOR AND COMPLETE WORK TO PASS REQUIRED TESTS BY AGENCIES HAVING AUTHORITY OVER WORK. DELIVER TO ENGINEER COPIES OF THE CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES AND PROVIDE ORIGINAL COPY OF EACH CERTIFICATE TO OWNER.
- WHEN REQUIRED BY LAW OR REGULATIONS, THE GOVERNMENTAL AGENCY HAVING JURISDICTION FOR INSPECTIONS SHALL BE GIVEN REASONABLE NOTICE AND OPPORTUNITY TO INSPECT THE WORK. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE; AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT THEIR OWN EXPENSE.

1.6 DRAWINGS AND SPECIFICATIONS
- DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DURING THE BIDDING PERIOD. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF THEIR FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE ATTENTION OF THE CONSULTANT DURING THE BIDDING PERIOD OR BY REASON OF ANY ERROR ON THE CONTRACTOR'S PART.
- DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. DRAWINGS SHOW GENERAL RUN OF CIRCUITS AND APPROXIMATE LOCATION OF EQUIPMENT. THE CONTRACTOR SHALL REVIEW DRAWINGS OF ALL TRADES TO ASSURE COORDINATION PRIOR TO PLACEMENT OF WORK. RIGHT IS RESERVED TO CHANGE LOCATION OF EQUIPMENT AND DEVICES, AND ROUTING OF CONDUITS WITHIN 10 FEET, WITHOUT EXTRA COST TO OWNER (PRIOR TO ROUGH-IN).
- USE DIMENSIONS IN FIGURES, SHOP DRAWINGS, ETC. AND ACTUAL SITE MEASUREMENTS IN PREFERENCE TO SCALED DIMENSIONS. DO NOT SCALE DRAWINGS FOR EXACT SIZES OR LOCATIONS - USE DIMENSIONED DETAILS OR ACTUAL FIELD CONDITIONS. VERIFY ITEM MOUNTING HEIGHTS AS REQUIRED BY PROJECT CONDITIONS PRIOR TO ROUGH-IN.
- THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS IN MATTERS OF DIMENSIONS. DISCREPANCIES BETWEEN DIFFERENT DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING FOR DETERMINATION.
- LAYOUT EQUIPMENT AS SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE. VERIFY ACCESS REQUIREMENTS FOR EQUIPMENT ACTUALLY FURNISHED,AND ADJUST LAYOUT TO COMPLY WITH NEC 110. RIGHT IS RESERVED TO CHANGE LAYOUT WITHIN 10 FEET WITHOUT ADDITIONAL COST (PRIOR TO ROUGH-IN).
- ALL DEVICES, LIGHT FIXTURES, ETC. LOCATED IN CEILING TILES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS SPECIFICALLY NOTED OR APPROVED TO DO OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE TO FIELD MEASURE AND CONFIRM THE MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, DOORWAYS, AND OTHER ARCHITECTURAL, MECHANICAL OR STRUCTURAL WORK. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.
- EXECUTION OF CONTRACT IS EVIDENCE THAT CONTRACTOR HAS EXAMINED ALL EXISTING CONDITIONS, DRAWINGS AND SPECIFICATIONS RELATED TO WORK, AND IS INFORMED AS TO EXTENT AND CHARACTER OF WORK. LATER CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- ALL WORK CALLED FOR IN THIS SECTION OF THE PLANS AND SPECIFICATIONS SHALL BE PERFORMED UNDER THIS SECTION, REGARDLESS OF WHETHER SUCH WORK MAY ALSO HAVE BEEN CALLED FOR IN OTHER SECTION(S). DISCREPANCIES IN OR CONFLICTS AMONG THE VARIOUS PARTS OF THE CONTRACT DRAWINGS SHALL NOT RELIEVE CONTRACTOR OF THEIR OBLIGATION TO PERFORM.
- NO ATTEMPT HAS BEEN MADE TO ESTABLISH THE REQUIRED SECTIONS OR SPLITS OF EQUIPMENT RELATIVE TO THE SIZE OF ACCESS INTO THE SPACE, BUILDING, ETC. CONTRACTOR SHALL ESTABLISH ALL SAID SPLITS, SECTIONS, ETC. NECESSARY TO INSTALL EQUIPMENT COMPLETE WITHOUT UNDUE DISASSEMBLY OF EQUIPMENT OR DEMOLITION OF BUILDING PARTS AT SITE OF WORK.
- CHARGES FOR EXTRA WORK ARE NOT ALLOWED UNLESS WORK IS AUTHORIZED BY WRITTEN ORDER FROM THE OWNER'S REPRESENTATIVE APPROVING CHARGES FOR WORK.
- CHECK ALL DOOR SWINGS SO LIGHTING CONTROL DEVICES ARE NOT LOCATED BEHIND DOORS. RELOCATE DEVICES AS REQUIRED WITH THE CONSULTANT'S REVIEW.

1.7 COPYRIGHT

THESE PLANS, SPECIFICATIONS, AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF PK ELECTRICAL. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO PK ELECTRICAL. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF PK ELECTRICAL AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF PK ELECTRICAL.

1.8 SUBMITTALS

BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT SIX COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, LIGHTING CONTROLS, SWITCHGEAR, PANELS, CIRCUIT BREAKERS, MOTOR CONTROLLERS, DISCONNECTS WIRING DEVICES, PLATES, RACEWAYS AND FITTINGS, ETC. PROPOSED FOR THIS PROJECT.

1.9 SUBSTITUTIONS

PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER. SUBSTITUTIONS MUST BE SUBMITTED A MINIMUM OF 10 WORKING DAYS PRIOR TO BID FOR CONSIDERATION. PROPOSED SUBSTITUTIONS PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED. BID SUBSTITUTED MATERIAL WILL ONLY BE ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.

1.10 EXAMINATION OF SITE AND EXISTING CONDITIONS

BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.

1.11 EXISTING OUTLETS

EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.

1.12 EXISTING SWITCHGEAR

REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. MATCH AIC RATINGS. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.

1.13 EXISTING PANELBOARDS
- WHERE ADDITIONAL CIRCUITS ARE NEEDED REUSE CIRCUITS AVAILABLE FOR REUSE. INSTALL NEW BREAKERS AS INDICATED ON DRAWINGS. MATCH AIC RATINGS.
- TAG UNUSED CIRCUITS AS SPARE.
- WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING PROJECT AREA ARE NOT IN USE OR OVERLOADED.
- REMOVE EXISTING WIRE NO LONGER IN USE FROM PANEL TO EQUIPMENT.
- PROVIDE NEW UPDATED TYPED DIRECTORIES.

PART 2 - PRODUCTS

2.1 MATERIALS
- ALL MATERIAL SHALL BE NEW, AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC 70, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.
- ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.
- ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.

2.2 CIRCUITING

ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS SHALL BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM-24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE AND CONCRETE SLAB TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. FMC MAY BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURE FROM J-BOX. FIXTURE WHIPS MAY NOT EXCEED 6' IN LENGTH. METAL CLAD CABLE (TYPE MC) WILL BE ACCEPTABLE FOR SINGLE CIRCUIT BRANCH CIRCUITING, FLEXIBLE WHIPS FROM JUNCTION BOXES TO LIGHTING FIXTURES AND WITHIN CASEWORK. TYPE MC CABLE MAY NOT BE USED FOR HOMERUNS. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY. CONNECT PUMP MOTORS WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT.

2.3 WIRING
- WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG. WHERE ALUMINUM IS ALLOWED, WIRE SHALL BE TERMINATED IN AN INSULATED CU/AL RATED COMPRESSION TERMINAL FITTING (MAC-ADAPT OR EQUAL). INSULATION SHALL BE THW, THWN OR THHN.
- UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE WHITE (120V) OR GREY (277V) AND PHASE WIRES SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C) FOR A 120/208 VOLT SYSTEM AND BROWN (PHASE A), ORANGE (PHASE B), AND YELLOW (PHASE C) FOR A 277/480 VOLT SYSTEM.

2.4 WIRING DEVICES

WIRING DEVICES SHALL BE AS FOLLOWS:
- RECEPTACLES - 120V, 20A, NEMA 5-20R, SPECIFICATION GRADE, SIDE AND BACK WIRED WITH CLAMP TYPE TERMINALS, NYLON, WHITE, 2 POLE, 3 WIRE GROUNDING.
- SWITCHES - 120V/277V, 20A, WHITE, HEAVY DUTY, SILENT TYPE SPECIFICATIONS GRADE.
- DEVICE PLATE SHALL BE NYLON, WHITE COLOR WITH MATCHING SCREWS.
- RECEPTACLES IN WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED SUITABLE FOR WET LOCATIONS WHILE IN USE AND UL LISTED EQUAL TO TAY MAC SPECIFICATIONS GRADE.

PART 3 - EXECUTION

3.1 VISIT TO SITE

VISIT SITE, AND SURVEY EXISTING CONDITIONS AFFECTING WORK PRIOR TO BID. INCLUDE NECESSARY MATERIALS AND LABOR TO ACCOMPLISH THE ELECTRICAL WORK, INCLUDING RELOCATION OF EXISTING SERVICES AND UTILITIES ON BUILDING SITE IN BID. NO CONSIDERATION SHALL BE GIVEN TO FUTURE CLAIMS DUE TO EXISTING CONDITIONS. ANY DISCREPANCIES OR INTERFERENCES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

3.2 WORKMANSHIP
- ALL WORK PERFORMED SHALL BE FIRST CLASS WORK IN EVERY ASPECT. THE WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO COMPLY WITH NECA'S "STANDARD OF INSTALLATION."
- IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, FURNISH AND INSTALL ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THAT ALL SYSTEMS ARE COMPLETE AND OPERATIVE.
- ALL WORK UNDER THIS SECTION SHALL BE PERFORMED IN COOPERATION WITH THE WORK PERFORMED UNDER ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR THE PROJECT IN ORDER TO AVOID INTERFERENCE WITH OTHER WORK AND TO SECURE THE PROPER INSTALLATION OF ALL WORK. REFER THE DRAWINGS AND SPECIFICATIONS COVERING THE WORK TO BE PERFORMED UNDER ALL SECTIONS, SO THAT THE RELATION AND EXTENT OF THE WORK OF THIS SECTION WITH RESPECT TO THE WORK OF ALL OTHER SECTIONS IS UNDERSTOOD. GIVE RIGHT OF WAY TO RACEWAYS AND PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.
- CONDUIT SYSTEMS MUST BE COMPLETE PRIOR TO INSTALLATION OF WIRING.

3.3 CHANGE ORDERS
- ADDITIONAL WORK MAY BE REQUIRED ON THE PROJECT WHICH IS OUTSIDE THE SCOPE OF THE CONTRACT. SUCH ADDITIONAL WORK WILL BE DESCRIBED IN SUPPLEMENTAL INSTRUCTIONS AND/OR CLARIFICATIONS, TO BE ESTIMATED AND PRICED BY THE CONTRACTOR, AND ACCEPTED BY THE OWNER, PRIOR TO COMMENCING WORK. PROPOSALS SHALL INCLUDE A LIST OF QUANTITIES OF ALL MATERIAL BEING USED WITH UNIT COSTS BROKEN DOWN INTO MATERIAL AND LABOR COSTS PER UNIT. CONTRACTOR SHALL PROVIDE ACTUAL EQUIPMENT QUOTES WHEN REQUESTED BY ENGINEER.
- MATERIAL COSTS AND LABOR UNITS SHALL NOT EXCEED THE LATEST EDITION OF RS MEANS ELECTRICAL COST DATA.
-

3.4 GUARANTEE
- FURNISH THE OWNER A WRITTEN GUARANTEE, STATING THAT IF THE WORKMANSHIP AND/OR MATERIAL EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN (1) YEAR AFTER THE FINAL ACCEPTANCE BY THE OWNER, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED. SUBMIT WITH OPERATION AND MAINTENANCE MANUALS.
- OBTAIN FROM THE VARIOUS MANUFACTURERS OR VENDORS GUARANTEES OR WARRANTIES FOR THEIR PARTICULAR EQUIPMENT OR COMPONENTS, AND DELIVER THEM TO THE OWNER. ALL GUARANTEES AND WARRANTIES PROVIDED SHALL BE REFERENCED TO THIS PROJECT.
- IN EVENT THAT SYSTEMS ARE PLACED IN OPERATION IN SEVERAL PHASES AT THE OWNER'S REQUEST, GUARANTEE WILL BEGIN ON DATE EACH SYSTEM OR ITEM OF EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER. PROVIDE O&M MANUALS FOR ALL EQUIPMENT WHEN EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER.
- ALL GUARANTEES AND WARRANTIES SHALL INCLUDE LABOR AND MATERIAL AT THE SITE OF INSTALLATION FOR THE DURATION OF THE GUARANTEE PERIOD.

3.5 OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)
- AT ALL OBSERVATIONS OF WORK, OPEN PANEL COVERS, JUNCTION BOX COVERS, PULL BOX COVERS, DEVICE COVERS, AND OTHER EQUIPMENT WITH REMOVABLE PLATES FOR OBSERVATION AS REQUESTED BY AHJ OR ENGINEER. PROVIDE SUFFICIENT PERSONNEL TO EXPEDITE COVER REMOVAL AND REPLACEMENT.
- CONTRACTOR TO DEMONSTRATE OPERATION OF NEW EQUIPMENT AND/OR SYSTEMS TO SATISFACTION OF OWNER/ENGINEER. CONTRACTOR TO HAVE MANUFACTURER AVAILABLE FOR DEMONSTRATION OF EQUIPMENT AND/OR SYSTEMS WHERE REQUESTED BY OWNER/ENGINEER. FURNISH AFFIDAVIT SIGNED BY OWNER'S REPRESENTATIVE INDICATING THAT DEMONSTRATION OF OPERATION HAS BEEN PERFORMED.

3.6 COOPERATION
- CAREFULLY COORDINATE WORK WITH OTHER CONTRACTORS AND SUBCONTRACTORS. REFER CONFLICTS BETWEEN TRADES TO ENGINEER. PROVIDE NECESSARY INFORMATION TO OTHER TRADES FOR SUCH COORDINATION. SUCH INFORMATION SHALL INCLUDE SHOP DRAWINGS, PRODUCT DATA AND ALL OTHER REQUIRED DATA. PROVIDE A SYSTEM ERECTION/COORDINATION DRAWING SHOWING ELECTRICAL, HVAC, PLUMBING AND ARCHITECTURAL FOR INSTALLATION IN CONGESTED AREAS, WHEN REQUESTED.
- WHENEVER SUCH INFORMATION IS NOT PROVIDED IN A TIMELY MANNER OR WHENEVER SUCH INFORMATION IS INCORRECT, THIS CONTRACTOR SHALL BEAR ALL COSTS FOR PROVIDING OR CORRECTING AFFECTED WORK OF RELATED TRADES WITH NO CHANGE TO THE CONTRACT PRICE OR CONSTRUCTION SCHEDULE.
- WORK TO BE INSTALLED AS PROGRESS OF PROJECT WILL ALLOW. SCHEDULE OF WORK DETERMINED BY GENERAL CONTRACTOR, OWNER, AND/OR ARCHITECT/ENGINEER.

3.7 DELIVERY, STORAGE AND HANDLING
- DELIVER EQUIPMENT AND MATERIALS TO JOB SITE IN ORIGINAL, UNOPENED, LABELED CONTAINER. PRODUCTS SHALL BE PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS AND OTHER INFORMATION NEEDED FOR IDENTIFICATION. STORE TO PREVENT DAMAGE AND INJURY. STORE MATERIALS TO PREVENT CORRODING. STORE FINISHED MATERIALS AND EQUIPMENT TO PREVENT STAINING AND DISCOLORING. STORE MATERIALS AFFECTED BY CONDENSATION IN WARM DRY AREAS. PROVIDE HEATERS. CONTRACTOR SHALL VERIFY THE AVAILABILITY OF ON SITE STORAGE SPACE, IF NO ON SITE STORAGE SPACE IS AVAILABLE THEN THE CONTRACTOR SHALL COVER THE COST FOR OFF SITE STORAGE. MATERIALS STORED AT THE PROJECT SITE THAT BECOMES SOILED WITH CONSTRUCTION DIRT, CONCRETE, OR MOISTURE SHALL BE REMOVED FROM THE SITE AND REPLACED WITH NEW. DO NOT INSTALL SOILED MATERIAL.
- INSTALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. CONFLICTS BETWEEN CONTRACT DOCUMENTS AND THESE RECOMMENDATIONS SHALL BE REFERRED TO ENGINEER FOR REMEDY.
- ELECTRICAL OR ELECTRONIC EQUIPMENT THAT HAS BEEN DAMAGED, EXPOSED TO WEATHER OR IS, IN THE OPINION OF THE ENGINEER OR ARCHITECT, OTHERWISE UNSUITABLE BECAUSE OF IMPROPER FABRICATION, STORAGE OR INSTALLATION SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR AT HIS EXPENSE.

3.8 ANCHORS
- PROVIDE ANCHORS FOR ALL EQUIPMENT, RACEWAYS, HANGERS, ETC. TO SAFELY SUPPORT WEIGHT OF ITEM INVOLVED PLUS 100% FOR DEAD LOADS. LIVE LOADS SHALL BE CONSIDERED IN ADDITION TO DEAD LOADS.
- ANCHORS TO CONSIST OF EXPANSION TYPE DEVICES SIMILAR TO "REDHEAD" OR LEAD EXPANSION ANCHORS. PLASTIC ANCHORS ARE NOT ACCEPTABLE.
- USE PRESET ANCHOR STEEL INSERTS IN CONCRETE SLABS. PROVIDE PRESET ANCHOR SIZE AND TYPE FOR ANTICIPATED OR SPECIFIED ROD/BOLT SIZE AND LIVE/DEAD LOAD.

3.9 CLEANING AND PAINTING
- CLEAN EQUIPMENT FURNISHED IN THIS DIVISION AFTER COMPLETION OF WORK. CLEAN WIPE THE INTERIOR OF ALL CONDUIT, PULLBOXES, JUNCTION BOXES, OUTLET BOXES, AND PANELBOARD BACKBOXES SOILED WITH DIRT AND DEBRIS PRIOR TO INSTALLATION OF WIRING.

TOUCH-UP OR RE-PAINT DAMAGED PAINTED FINISHES AS DETERMINED BY THE ENGINEER.

3.10 RECORD DRAWINGS
- CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE-SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM. ALSO INCLUDE THE FOLLOWING INFORMATION:
  - EXACT ROUTING OF ALL CONDUITS LARGER THAN ONE INCH.
  - EXACT LOCATION OF ALL SERVICE GROUNDING/ BONDING CONNECTIONS.
  - CONTRACTORS NAME, ADDRESS, AND TELEPHONE NUMBER.

RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT. ELECTRICAL SYSTEM TESTING

PRIOR TO PLACING IN SERVICES, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED. PROVIDE GFI TESTING FOR SERVICE SWITCHBOARD. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING FIRM DEEMED BY THE OWNER AS QUALIFIED TO PERFORM INTERNATIONAL ELECTRICAL TESTING ASSOCIATION TESTING. TESTING SERVICES SHALL BE PAID FOR AND COORDINATED BY THE CONTRACTOR. NETA TESTING PROCEDURES AND REQUIREMENTS FOR TESTED VALUES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE NETA ACCEPTANCE TESTING SPECIFICATIONS. ANY DEFICIENCIES OR FAILURES DISCOVERED DURING THE NETA TESTING PROCEDURES SHALL BE PROMPTLY CORRECTED BY THE ENSURE TIMELY COMPLETION OF THE PROJECT AND TO MINIMIZE THE TIME REQUIRED FOR THE INDEPENDENT TESTING FIRM TO COMPLETE THEIR WORK.

TESTING REQUIREMENTS SHALL BE AS FOLLOWS:
- GROUNDING SYSTEM
- GROUND FAULT PROTECTION
- CIRCUIT BREAKERS (OVER 100A)
- LOW VOLTAGE FEEDERS (UP TO 600 VOLTS) SERVING LOADS OF 100 AMPS OR GREATER
- MAIN SWITCHBOARD; DISTRIBUTION BOARDS; BRANCH CIRCUIT PANELS.
- LIGHTING CONTROL SYSTEMS
- FIRE ALARM SYSTEM

3.11 SUSPENDED CEILING SYSTEMS

ALL LAY-IN FIXTURES SHALL BE INDEPENDENTLY SUPPORTED BY TWO #12 SLACK WIRES ATTACHED TO TWO OPPOSITE CORNERS OF THE FIXTURE PER IBC & NEC REQUIREMENTS. THESE WIRES SHALL BE SECURED TO THE STRUCTURAL FRAMING SUCH THAT FAILURE OF THE SUSPENDED CEILING SHALL NOT ALLOW THE FIXTURE TO DROP.

3.12 ONGOING OPERATION

CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF, AND WORKERS. INTERRUPTIONS OF EXISTING POWER, COMMUNICATIONS OR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY GENERAL CONTRACTOR / OWNER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.

3.13 FLEXIBLE CONNECTIONS

PROVIDE FLEXIBLE ELECTRICAL CONDUIT AND CONDUCTORS HAVING A SLACK, 90-DEGREE BEND OR LOOP IN ANY PLANE BETWEEN CONNECTIONS AT ALL VIBRATION ISOLATED EQUIPMENT AND THE FIRST ATTACHMENT TO BUILDING STRUCTURE OR CABINETS, PANELS OR BOXES MOUNTED THEREON.

3.14 DISPOSAL PROCEDURES (FLUORESCENT BULBS, BALLASTS, AND LIGHT FIXTURES)
- THESE MATERIALS DO NOT REQUIRE SPECIAL TRAINING TO REMOVE OR PACKAGE.
- THE CONTRACTOR SHALL CONTRACT WITH WASTE MANAGEMENT LAMPTRACKER OR SIMILAR RECYCLING COMPANY TO RECYCLE THE LAMPS (FLUORESCENT BULBS) AND BALLASTS REMOVED DURING THE PROJECT. THE COSTS TO RECYCLE THESE MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL AND COSTS OF NON-REGULATED MATERIALS (LIGHT FIXTURES) IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO RECYCLE AS MUCH MATERIAL AS POSSIBLE.

3.15 SALVAGE

ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

3.16 SEISMIC PROTECTION
- THIS PROJECT IS SUBJECT TO THE SEISMIC BRACING REQUIREMENT OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION. THE FOLLOWING CRITERIA ARE APPLICABLE TO THIS PROJECT:
  SEISMIC USE GROUP: II; SEISMIC CLASS CATEGORY: D; SEISMIC DESIGN CATEGORY: D.
- IT IS RECOMMENDED THAT THE CONTRACTOR ENLIST THE SERVICES OF A QUALIFIED SEISMIC BRACING VENDOR/ SUPPLIER. PROVIDE BRACING FOR IDENTIFIED EQUIPMENT AND SYSTEM.
- ELECTRICAL EQUIPMENT: ELECTRICAL EQUIPMENT SHALL INCLUDE THE FOLLOWING ITEMS TO THE EXTENT REQUIRED ON THE DRAWINGS OR IN OTHER SECTIONS OF THESE SPECIFICATIONS TO BE SEISMICALLY PROTECTED:
  LIGHT FIXTURES, TRANSFORMERS, SWITCHBOARDS, PANELBOARDS.
- ELECTRICAL SYSTEMS: THE FOLLOWING ELECTRICAL SYSTEMS SHALL BE SEISMICALLY PROTECTED IN ACCORDANCE WITH THIS SPECIFICATION:
  LIGHTING, POWER, SECURITY, COMMUNICATIONS AND FIRE ALARM.
- CONDUITS REQUIRING NO SPECIAL SEISMIC RESTRAINTS: SEISMIC RESTRAINTS MAY BE OMITTED FROM ELECTRICAL CONDUIT LESS THAN 2-1/2 INCHES TRADE SIZE. ALL OTHER INTERIOR CONDUIT SHALL BE SEISMICALLY PROTECTED AS SPECIFIED.

END OF SECTION 260000

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JOSEPH E. GANSER
EXP: 06/30/27
ELECTRICAL
No 21011
07/15/2025

DCSD CC MENELEY ELEMENTARY SCHOOL
LIGHTING RETROFIT
1446 MUIR DRIVE
GARDNERVILLE, NV 89460

REVISIONS

SHEET TITLE
ELECTRICAL SPECIFICATIONS

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25025
PROJECT MGR:	LI

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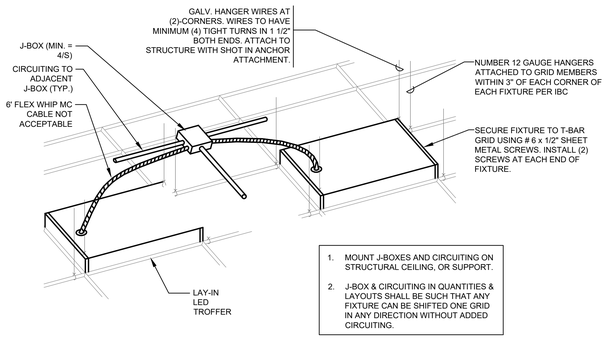
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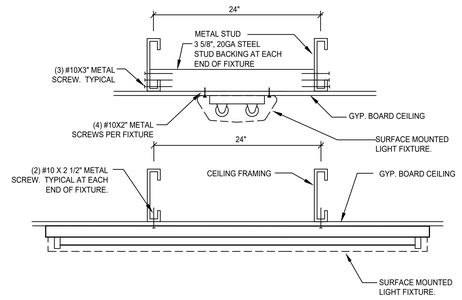
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B / E0.3

FIXTURE MOUNTING DETAIL @ T-BAR CEILING

SCALE: NONE



A / E0.3

SURFACE MOUNTED LIGHT FIXTURE DETAIL

SCALE: NONE

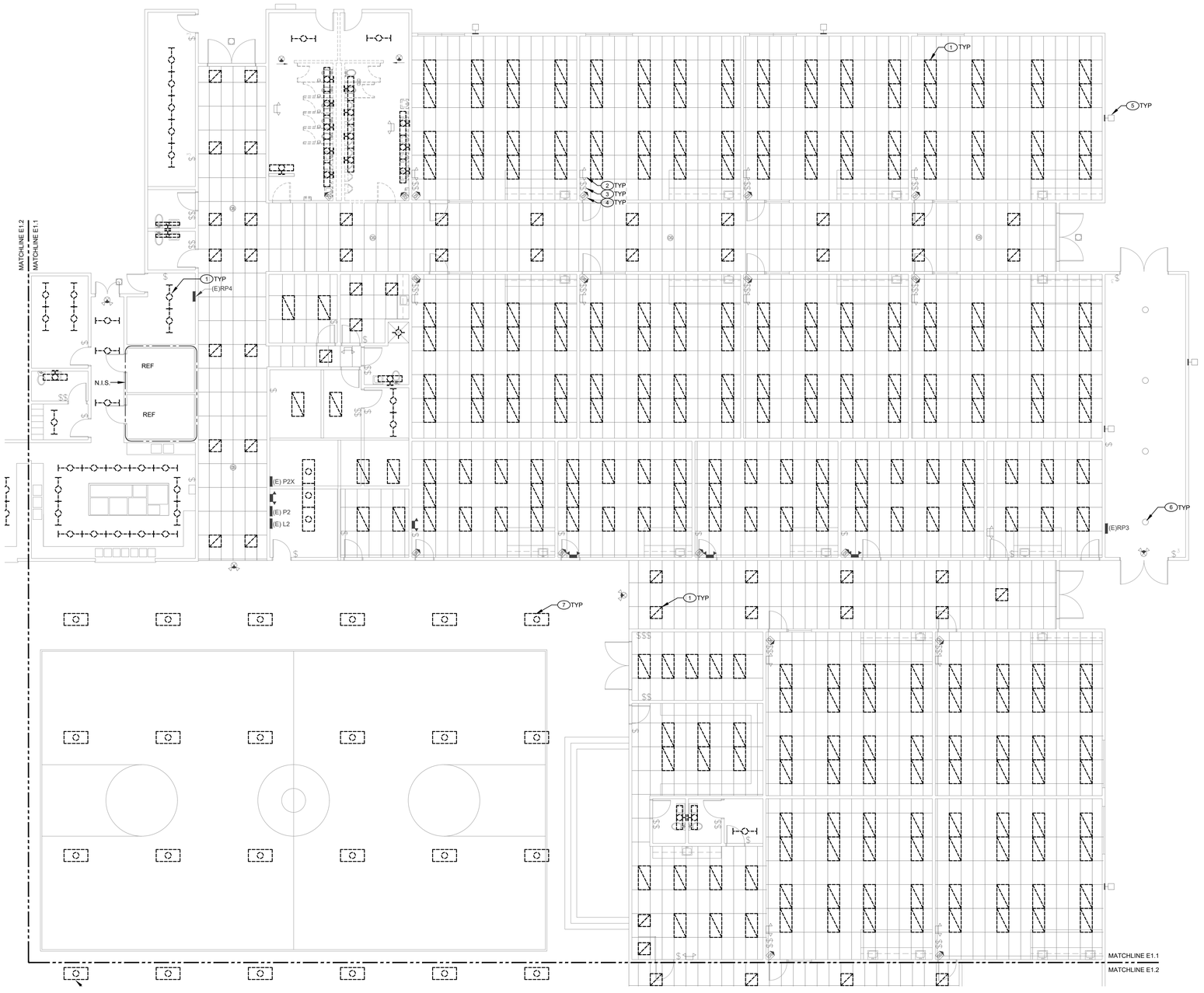
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GENERAL NOTES

1. THIS DRAWING REPRESENTS THE EXISTING LIGHTING SYSTEMS WITHIN THE EXISTING BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND REWIRING ALL EQUIPMENT AS INDICATED ON THE DRAWINGS.
2. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED AND (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
3. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.
4. EXISTING CIRCUITS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.
5. THE CONTRACTOR MAY SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATIONS IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.
6. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARDED AND ABANDONED MATERIALS LEFT OVER FROM DEMOLITION AND INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUIT, FASTENERS, AND BOXES.
7. CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES AFFECTED BY THE REMOVAL OF FIXTURES, CONDUIT, AND SUPPORT HARDWARE. RESTORE ALL AREAS TO MATCH ADJACENT FINISHES AND CONDITIONS. COORDINATE FINAL SURFACE FINISHES WITH OWNER (DCSD).
8. COORDINATE LIGHTING CONTROL REQUIREMENTS TO MAINTAIN FUNCTIONALITY WITH EXISTING SWITCHING AND DIMMING SYSTEMS.
9. PROVIDE TEMPORARY LIGHTING IF REQUIRED TO MAINTAIN ILLUMINATION IN OCCUPIED AREAS DURING INSTALLATION.
10. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OR UNFORESEEN CONDITIONS ARE ENCOUNTERED DURING THE RETROFIT PROCESS.

SHEET NOTES

1. REMOVE EXISTING FIXTURES AS INDICATED BY DASHED LINES. MAINTAIN ASSOCIATED CONDUIT AND CONDUCTORS FOR CONNECTIONS TO NEW FIXTURE. SEE NEW WORK PLAN.
2. EXISTING EMERGENCY LIGHTING TO REMAIN – PROTECT IN PLACE.
3. EXISTING LIGHTING CONTROLS AND SWITCHES TO REMAIN – PROTECT IN PLACE.
4. EXISTING OCCUPANCY SENSORS TO REMAIN – PROTECT IN PLACE.
5. EXISTING EXTERIOR LIGHTING TO REMAIN – PROTECT IN PLACE.
6. EXISTING STORAGE SCREW-IN LIGHT BULB BASE TO REMAIN – PROTECT IN PLACE.
7. REMOVE EXISTING LIGHT FIXTURE, SUPPORTS, AND FLEX WHIP BACK TO NEAREST ACCESSIBLE JUNCTION BOX. CAP AND LABEL CONDUCTORS PER CODE FOR REUSE. FIXTURE TO BE REPLACED WITH NEW LED UNIT PER NEW WORK PLAN. PATCH AND REPAIR ANY SURFACES AFFECTED BY DEMOLITION.



A E1.1 PARTIAL LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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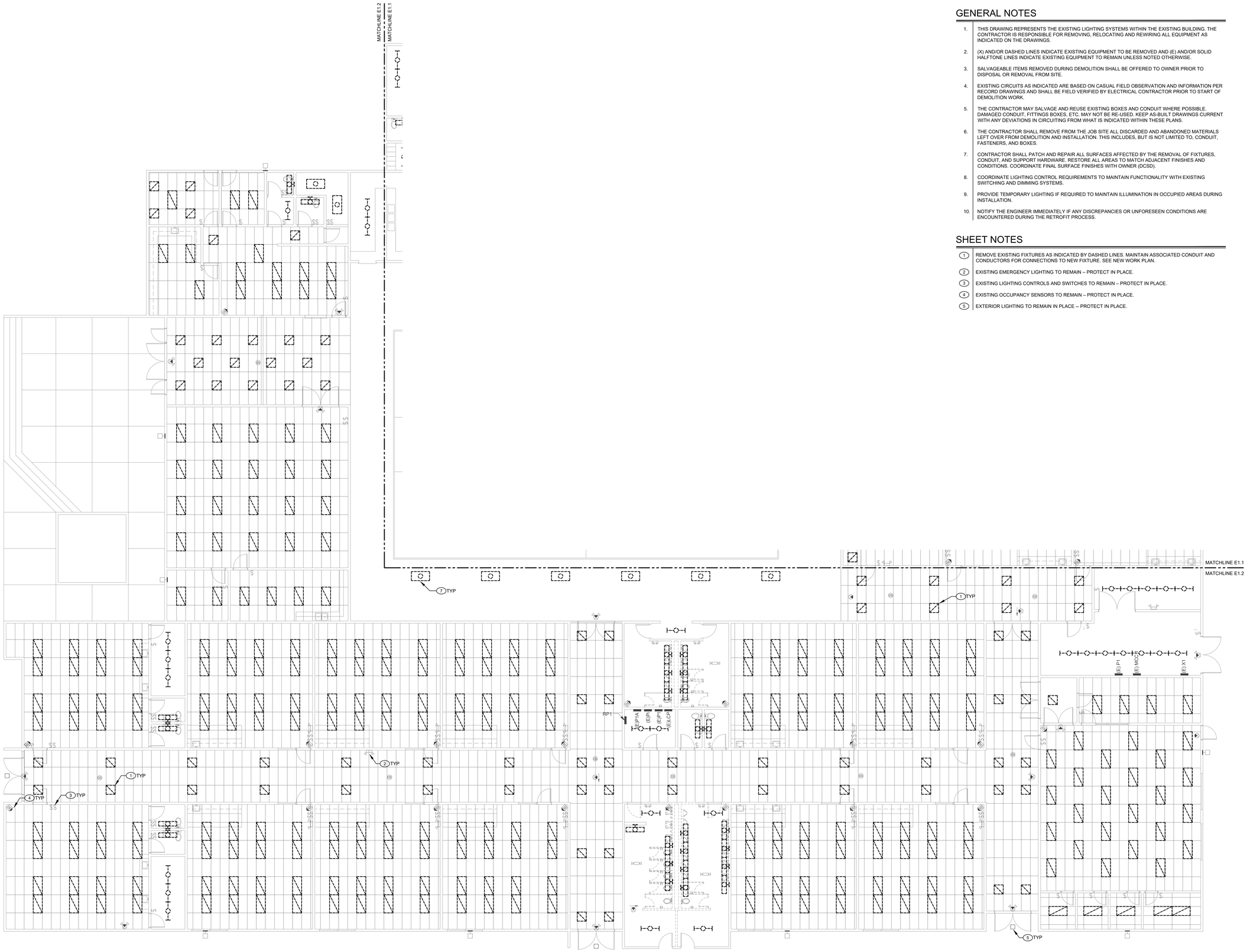
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PARTIAL LIGHTING DEMOLITION PLAN

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PROJECT MGR:	LI

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A
E1.2
PARTIAL LIGHTING DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. THIS DRAWING REPRESENTS THE EXISTING LIGHTING SYSTEMS WITHIN THE EXISTING BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND REWIRING ALL EQUIPMENT AS INDICATED ON THE DRAWINGS.
2. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED AND (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
3. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.
4. EXISTING CIRCUITS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.
5. THE CONTRACTOR MAY SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATIONS IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.
6. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARDED AND ABANDONED MATERIALS LEFT OVER FROM DEMOLITION AND INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUIT, FASTENERS, AND BOXES.
7. CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES AFFECTED BY THE REMOVAL OF FIXTURES, CONDUIT, AND SUPPORT HARDWARE. RESTORE ALL AREAS TO MATCH ADJACENT FINISHES AND CONDITIONS. COORDINATE FINAL SURFACE FINISHES WITH OWNER (DCSD).
8. COORDINATE LIGHTING CONTROL REQUIREMENTS TO MAINTAIN FUNCTIONALITY WITH EXISTING SWITCHING AND DIMMING SYSTEMS.
9. PROVIDE TEMPORARY LIGHTING IF REQUIRED TO MAINTAIN ILLUMINATION IN OCCUPIED AREAS DURING INSTALLATION.
10. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OR UNFORESEEN CONDITIONS ARE ENCOUNTERED DURING THE RETROFIT PROCESS.

SHEET NOTES

1. REMOVE EXISTING FIXTURES AS INDICATED BY DASHED LINES. MAINTAIN ASSOCIATED CONDUIT AND CONDUCTORS FOR CONNECTIONS TO NEW FIXTURE. SEE NEW WORK PLAN.
2. EXISTING EMERGENCY LIGHTING TO REMAIN – PROTECT IN PLACE.
3. EXISTING LIGHTING CONTROLS AND SWITCHES TO REMAIN – PROTECT IN PLACE.
4. EXISTING OCCUPANCY SENSORS TO REMAIN – PROTECT IN PLACE.
5. EXTERIOR LIGHTING TO REMAIN IN PLACE – PROTECT IN PLACE.

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PARTIAL LIGHTING DEMOLITION PLAN

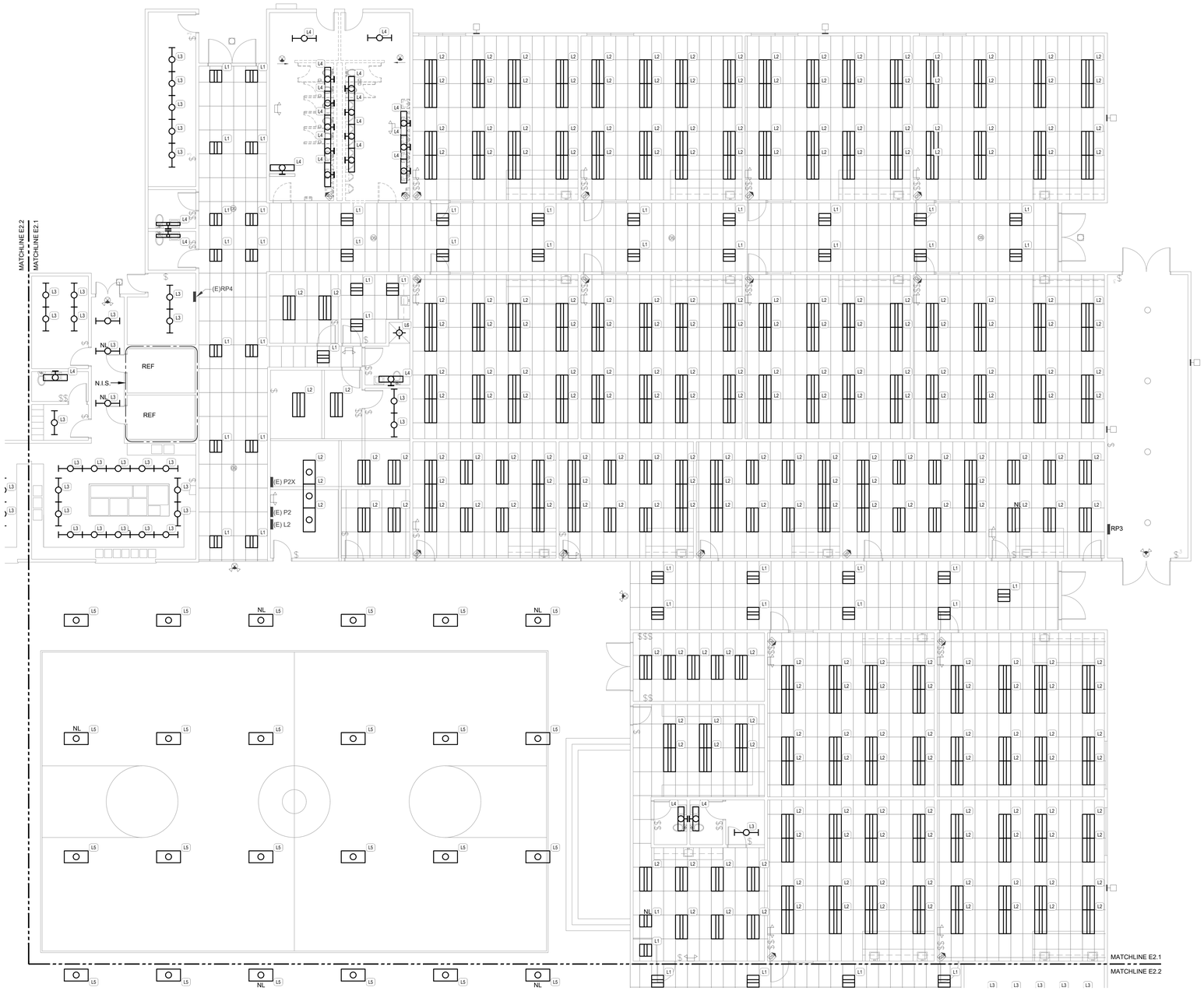
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NEW WORK GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING FIXTURE LOCATIONS, CIRCUITRY, AND CEILING CONSTRUCTION PRIOR TO STARTING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. INSTALL NEW FIXTURES ON A 1:1 BASIS AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED.
4. REUTILIZE EXISTING BRANCH CIRCUITS MADE AVAILABLE DURING DEMOLITION FOR NEW FIXTURES. RE-IDENTIFY CIRCUIT CONDUCTORS AS REQUIRED.
5. VERIFY EXISTING WIRING CONDITION PRIOR TO REUSE. REPLACE DAMAGED CONDUCTORS OR DEVICES AS NECESSARY.
6. PROVIDE NEW MOUNTING HARDWARE, SUPPORTS, AND ACCESSORIES FOR NEW FIXTURES AS REQUIRED BY MANUFACTURER AND CODE.
7. PATCH, REPAIR, AND PAINT CEILING AREAS AFFECTED BY FIXTURE REMOVAL OR INSTALLATION TO MATCH ADJACENT FINISHES.



A E2.1 PARTIAL NEW LIGHTING PLAN

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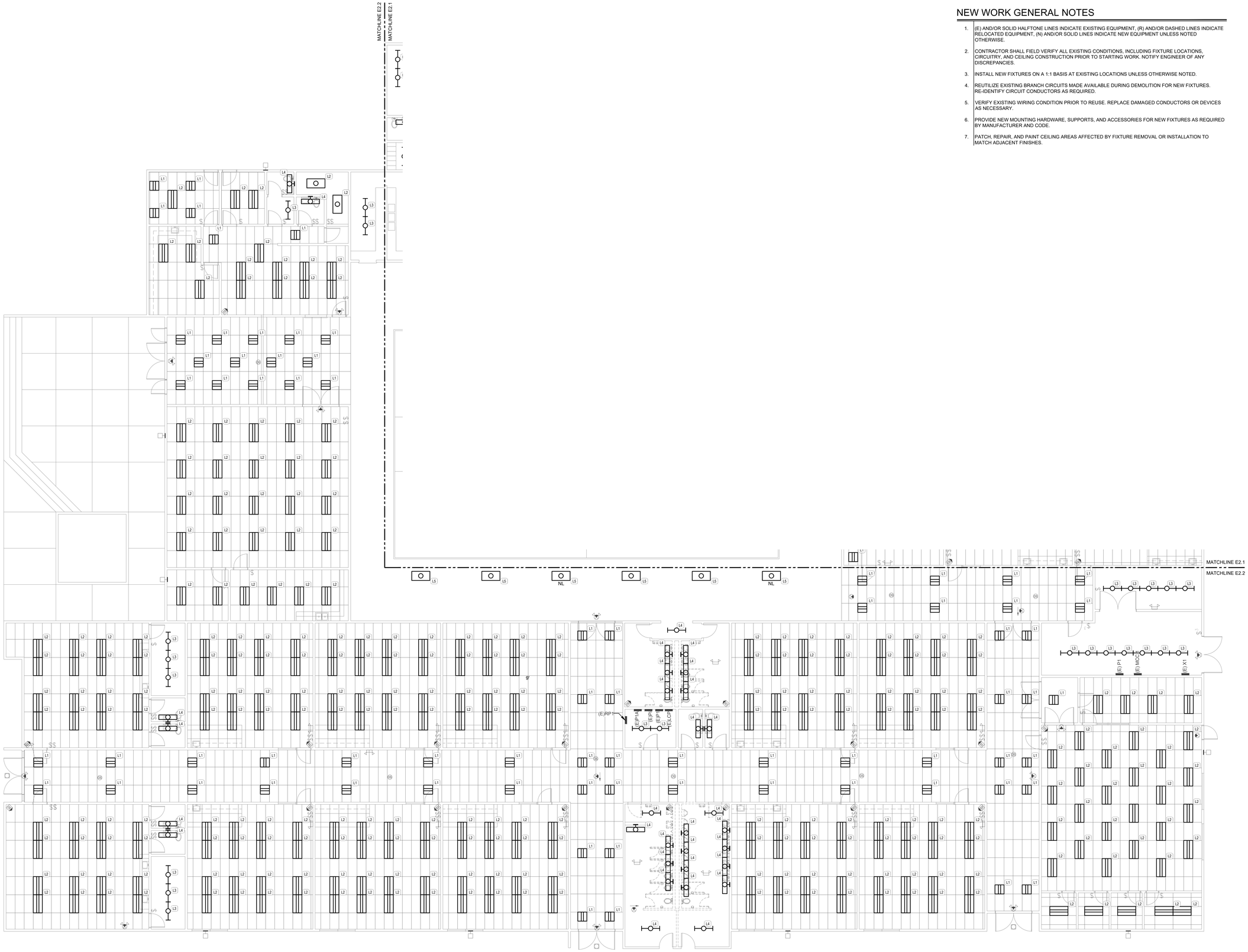
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A E2.2 PARTIAL NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

NEW WORK GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING FIXTURE LOCATIONS, CIRCUITRY, AND CEILING CONSTRUCTION PRIOR TO STARTING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. INSTALL NEW FIXTURES ON A 1:1 BASIS AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED.
4. REUTILIZE EXISTING BRANCH CIRCUITS MADE AVAILABLE DURING DEMOLITION FOR NEW FIXTURES. RE-IDENTIFY CIRCUIT CONDUCTORS AS REQUIRED.
5. VERIFY EXISTING WIRING CONDITION PRIOR TO REUSE. REPLACE DAMAGED CONDUCTORS OR DEVICES AS NECESSARY.
6. PROVIDE NEW MOUNTING HARDWARE, SUPPORTS, AND ACCESSORIES FOR NEW FIXTURES AS REQUIRED BY MANUFACTURER AND CODE.
7. PATCH, REPAIR, AND PAINT CEILING AREAS AFFECTED BY FIXTURE REMOVAL OR INSTALLATION TO MATCH ADJACENT FINISHES.

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING
683 Sierra Rose Drive, Suite B | Reno, NV 89511 | 775.826.9010
4601 DTC Boulevard, Suite 740 | Denver, CO 80237 | 720.481.3290
pkelectrical.com

PROFESSIONAL ENGINEER-STATE OF NEVADA
JOSEPH E. G. CAMSON
No 21037
ELECTRICAL
07/15/2025

DCSD CC MENELEY ELEMENTARY SCHOOL LIGHTING RETROFIT

1446 MUIR DRIVE
GARDNERVILLE, NV 89460

REVISIONS

SHEET TITLE
PARTIAL NEW LIGHTING PLAN

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25025
PROJECT MGR:	LI

E2.2

PLEASE RECYCLE

Lighting Cut Sheets

DCSD CC Meneley Elementary School
Lighting Retrofit

100% Construction Documents

July 15, 2024

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING

PINNACLE
ARCHITECTURAL LIGHTING®

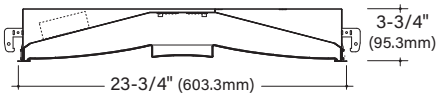
Project Name _____

Date _____ Type _____



LUCEN LU22

2x2 Architectural Recessed



Key Features

- Pre-painted formed 22 gauge cold rolled steel housing
- Highly reflective die-formed white painted reflector
- Wiring access available on both ends and top of housing
- LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL Listed, LO, MO, and HO lumen packages are IC Rated
- Pre-painted fixtures are to be used in dry locations only
- For damp location, must specify Paint After Fabrication (PAF) in the Options section of the luminaire specification
- Maximum fixture weight is 15 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Buy American Act compliant
- Indigo-Clean available, see Indigo-Clean specification sheets for details

Example Part #: LU22-A-830HO-G1-U-OL2-1-0-W

LU22 - [SHIELDING] - [CRI, CCT & OUTPUT] - [MOUNTING] - [VOLTAGE] - [DRIVER] - [CIRCUITING] - [BATTERY & EMERGENCY] - [FINISH] - [FIXTURE OPTIONS] - [CONTROLS]

SHIELDING (__)

A - Satine Lens QS
W - White Rails QS
S - Silver Rails QS
Shielding pg. 2

CRI, CCT & OUTPUT (_____) QS[1]

_27__ - 2700K
_30__ - 3000K
_35__ - 3500K
_40__ - 4000K
CL_____ - Custom Lumens
CW_____ - Custom Watts
Lumen Output pg. 2

MOUNTING (_____)

G1 - 15/16" Grid QS
G9 - 9/16" Grid QS
GS - Screw Slot Grid QS
FL - Flanged
S - Surface Mount
Mounting pg. 3

VOLTAGE (_)

U - Universal *(120 thru 277V)* QS
1 - 120V QS
2 - 277V QS
3 - 347V
Voltage pg. 3

DRIVER (___)

OL2 - Osram *(1%, 0-10v, standard)* QS
OL3 - Osram 347v *(10%, 0-10v)*
EE1 - eldoLED ECOdrive *(1%, 0-10v)*
ES1 - eldoLED ECOdrive *(1%, 0-10v)*
LH1 - Lutron Hi-lume *(1%, EcoSystem)* QS
L51 - Lutron 5-Series *(5%, EcoSystem)*
PL2 - Advance Xitanium *(1%, 0-10v)* QS
PR1 - Advance Xitanium SR
ND - Non-Dimming
Driver pg. 3

CIRCUITING (_)

1 - Single Circuit QS
E - Emergency *(entire fixture)* QS
N - Night Light *(entire fixture)* QS
Circuiting pg. 4

BATTERY & EMERGENCY (___)

0 - None QS
1P - Bodine 10W QS
1I - Iota 10W QS
1IC - Iota 10W, CEC Listed
1A - Acuity Power Sentry 10W
1G - Bodine GTD
Battery and Emergency pg. 4

FINISH (__)

W - White QS
Finish pg. 4

FIXTURE OPTIONS[2] (____)

QS - QuickShip QS
TW - Through-wiring
CP - Chicago Plenum QS
AM - Antimicrobial Paint
FW6 - 6' Flex Whip QS
GLR - Fast Blow Fusing QS
GMF - Slow Blow Fusing
PAF - Paint after fabrication
Fixture Options pg. 4

CONTROLS[3] (___)

DLMFC - Wattstopper DLM *(wired)*
NLIGHT - Acuity nLight *(wired)*
EASYS - Philips EasySense *(wireless)*
SNSLM - Osram Sensilum *(wireless)*
WVLX - Eaton WaveLinx *(wireless)*
VDO - Lutron Vive Sensor *(wireless)*
VRF - Lutron Vive Connected *(wireless)*
Controls pg. 5

*Not all products qualify for DLC listing. For a complete listing of the LUCEN products that qualify for DLC, please go to the DLC website. [1]When specifying CRI, CCT & OUTPUT the first _ is for specifying either **8** - 80CRI or **9** - 90CRI The ending _ _ are for specifying output, example **HO** - High Output. See output charts for more information. For Quickship CRI, CCT & Output see chart on page 4 [2]QS must be used in fixture options section of part number to qualify. [3]Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**). NLTAIR_ options have visible antenna See Controls chart on page 5 for driver options and more information.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Shielding

- Single piece extruded diffuse lens with convex wings and articulated center spine
- Fully luminous housing with optimal glare control
- Highly reflective white reflectors maintain uniform lens brightness

Ordering Code

A	**W**	**S**
Satine Lens	Satine Lens with White Trim	Satine Lens with Silver Trim







Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.
- 80 CRI = R9≥19 and 90 CRI = R9≥61
- Not all products qualify for DLC listing. For a complete listing of the EV3D products that qualify for DLC, please go to the DLC website.

Custom Output - Lumens OR Wattage

CL_ _ _ _ _	Specify CRI, CCT and desired lumens (i.e. CL8351200)	*Specify lumens between standard offering listed below. Lumens are specified per color temp*
CW_ _ _ _ _	Specify CRI, CCT and desired wattage (i.e. CW94015)	*Specify watts between standard offering listed below*

80 CRI

	Color	Output	Watts	Shielding **A** Satine Lens		**W** White Trim		**S** Silver Trim	
				Lumens	*LPW*	*Lumens*	*LPW*	*Lumens*	*LPW*
830LO	3000K	Low	19.6	2132	108.8	1923	98.1	1814	92.6
830MO	3000K	Middle	30.8	3322	107.9	2996	97.3	2827	91.8
830HO	3000K	High	42.1	4287	101.8	3867	91.9	3648	86.7
835LO	3500K	Low	19.6	2191	111.8	1976	100.8	1865	95.1
835MO	3500K	Middle	30.8	3414	110.8	3079	100.0	2905	94.3
835HO	3500K	High	42.1	4406	104.7	3974	94.4	3750	89.1
840LO	4000K	Low	19.6	2286	116.6	2062	105.2	1945	99.3
840MO	4000K	Middle	30.8	3566	115.8	3217	104.4	3035	98.5
840HO	4000K	High	42.1	4627	109.9	4174	99.1	3938	93.5

90 CRI

927LO	2700K	Low	19.6	1777	90.7	1603	81.8	1512	77.2
927MO	2700K	Middle	30.8	2769	89.9	2497	81.1	2356	76.5
927HO	2700K	High	42.1	3573	84.9	3223	76.6	3041	72.2
930LO	3000K	Low	19.6	1964	100.2	1772	90.4	1671	85.3
930MO	3000K	Middle	30.8	3060	99.4	2760	89.6	2604	84.5
930HO	3000K	High	42.1	3949	93.8	3562	84.6	3361	79.8
935LO	3500K	Low	19.6	1970	100.5	1777	90.7	1676	85.5
935MO	3500K	Middle	30.8	3070	99.7	2769	89.9	2613	84.8
935HO	3500K	High	42.1	3961	94.1	3573	84.9	3371	80.1
940LO	4000K	Low	19.6	2040	104.1	1840	93.9	1736	88.6
940MO	4000K	Middle	30.8	3181	103.3	2869	93.2	2707	87.9
940HO	4000K	High	42.1	4128	98.1	3723	88.4	3513	83.4

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

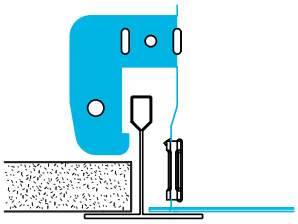
Mounting

- LUCEN is offered with a universal flange for all grid types. See below for fixture placement in relation to the tile for each grid type
- Grid retention clips integral to housing and require mechanical attachment
- Tie off fixture to structure with retention wires
- Refer to installation instructions during installation at the jobsite
- Approved for dry/damp location when PAF is specified
- Maximum fixture weight is 15lbs - Surface Mount Box adds 10 lbs

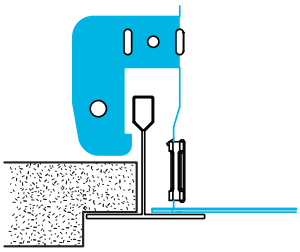
G1

1" Grid Mount

Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.



Standard Tile

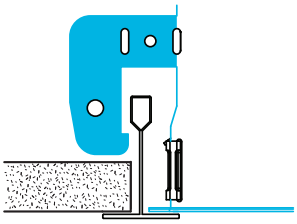


Tegular Tile

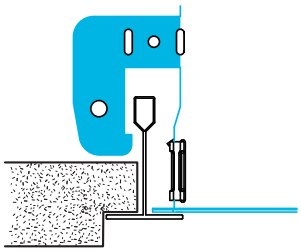
G9

9/16" Grid Mount

Works with 9/16" grid ceiling type. For tegular tile installations, fixture position will not be flush to the bottom of the tile. See tegular tile profile image below.



Standard Tile

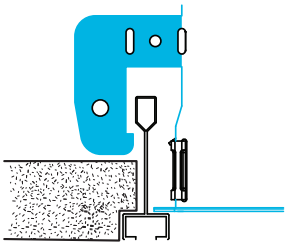


Tegular Tile

GS

Screw Slot Mounting

Works with screw slot and bolt slot grid ceiling types.

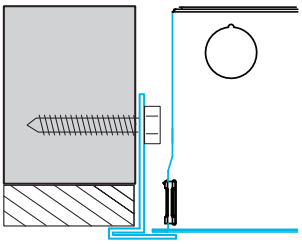


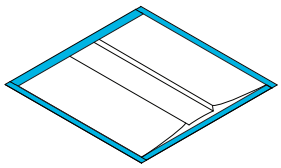
Tegular Tile

FL

Flange Kit

A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.

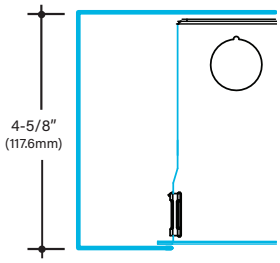


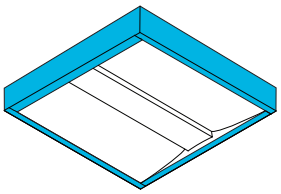


S

Surface Mount

Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs





Voltage

- Some LUCEN configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = OL2
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more Driver options, see Pinnacle Resource Guide
- Some LUCEN configurations will not accommodate all driver options; consult with factory

OL2	Osram Optotronic 1%, 0-10v, nominal 1% dimming range
OL5	Osram Optotronic 1%, 0-10v, AUX
OD1	Osram Optotronic 1%, DEXAL
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE6	eldoLED ECOdrive 1%, for nLight Air Wireless
ES1	eldoLED SOLOdrive 0%, 0-10v Logarithmic
ES6	eldoLED SOLOdrive 0%, *for nLight Air Wireless*
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
L51	Lutron 5-Series 5%, EcoSystem, LDE5
PL2	Advance Xitanium 1%, 0-10v
PR1	Advance Xitanium SR, *requires EASY, VDO, or VRF*
ND	Non-Dimming

Circuiting

- Select fixture circuiting from options below
- Some LUCEN configurations will not accommodate all circuiting options; consult with factory

1	Single Circuit
E	Emergency Circuit only *(uses nIO EZ PH ER with NLIGHT)*
N	Night Light Circuit only

Battery & Emergency

- Select battery or emergency options if required
- Battery duration is 90 minutes
- Test button is integral to fixture
- For more Battery options, see Pinnacle Resource Guide

0	No Battery
1P	Bodine 10w Integral, *CEC Listed*
1I	Iota 10w Integral
1IC	Iota 10w Integral, *CEC Listed*
1G	Bodine GTD
1A	Acuity Power Sentry 10W Integral *(required eldoLED driver)*

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 10 (watts) x 92.3 (LPW) = 923 battery lumen output

Battery & Emergency Ordering Examples

- Single circuit, 10w integral battery Ordering Code: 1-1P
- Emergency circuit only, 10w integral battery Ordering Code: E-1P

Finish

- Powder-coat white painted finish on exposed trim

W	White

Fixture Options

- Additional options to enhance the fixture and finish of the product

QS	10 Day Quick Ship
TW	Through-Wiring
CP	Chicago Plenum
AM	Antimicrobial Paint
FW6	Flex Whip 6'
FW12	Flex Whip 12'
GLR	Internal Fast Blow Fuse
GMF	Internal Slow Blow Fuse
PAF	Paint after fabrication

Quick Ship

Shielding	Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens **W** White Rails **S** Silver Rails	80 CRI, All color temperatures, all lumen packages *See pg 4*	**G1** 1" Grid **G9** 9/16" Grid **GS** Screw Slot	**U** Universal **1** 120v **2** 277v	**OL2** Osram 0-10v, 1% **PL2** Advance Xitanium 0-10v, 1% **LH1** Lutron LDE1 **ND** Non Dimming	**1** Single **E** Emergency **N** Night Light	**1P** Bodine 10w Integral **1I** Iota 10w Integral	**W** White	**CP** Chicago Plenum **FW6** Flex Whip 6' 18-gauge **GLR** Internal Fast-Blow Fuse

Consult Factory for projects that are larger than 200 units.

Controls

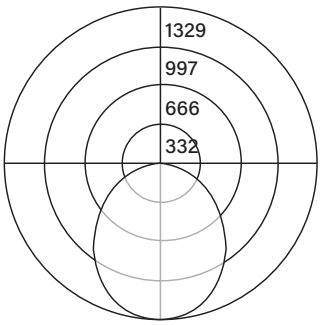
- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready; commissioning by others
- Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**)
- Contact factory for any non-standard configurations for layout, placement, or EM options
- Controls only compatable with Satine Lens.
- Must specify required driver in Driver Section

	Solution	Components	Network/Sensor	Connection	Required Drivers	Limitations
DLMFC	Legrand Wattstopper DLM	LMFC-011	Digital Lighting Management (DLM)	Wired, two RJ45 ports	Any 0-10v	Not available with Battery
NLIGHT	Acuity nLight	nIO EZ PH / nIO EZ PH ER	nLight	Wired, two RJ45 ports	EE2, ES2	Not available with 347 volt
EASYS	Philips EasySense	SNS-200	Daylight/PIR Occupancy	Wireless to switches	PR1	Not available with 347 volt
SNSLM	Osram Sensilum	EN-CLM-PIR-DD-ZB	Encelium, Daylight/PIR Occupancy	Wireless	OD1, OL5	Not available with 347 volt
WLVX	Eaton WaveLinx	SWPD1, MSP3IVMVDC1	WaveLinx WCL, Daylight	Wireless	Any 0-10v	Not available with 347 volt
VDO	Lutron Vive Sensor	DFCSJ-OEM-OCC	Vive, Daylight/PIR Occupancy	Wireless	OD1, PR1	Not available with 347 volt
VRF	Lutron Vive Connected	DFCSJ-OEM-RF	Vive	Wireless	OD1, PR1	Not available with 347 volt

Photometrics

Satine Lens

Test #	ITL88919
Catalog #	LU22A-840MO
Lumens	3566 lm
Watts	30.8 W
Efficacy	116 LPW



Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1329	1329	1329	1329	1329
5	1324	1324	1324	1324	1323
10	1304	1303	1302	1302	1303
15	1271	1269	1266	1263	1264
20	1221	1219	1214	1210	1210
25	1158	1156	1149	1145	1145
30	1084	1080	1074	1072	1073
35	999	994	990	992	996
40	905	902	901	909	916
45	803	803	809	823	832
50	700	702	713	732	743
55	596	600	617	637	648
60	493	500	522	540	550
65	392	403	426	443	453
70	294	309	334	348	357
75	201	219	244	256	266
80	118	136	159	170	178
85	48	63	78	80	84
90	0	0	0	0	0

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3633	3661	3765
55	3325	3442	3615
65	2968	3225	3429
75	2485	3016	3288
85	1762	2863	3084

For all available IES files, please visit our website at pinnacle-ltg.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

Approvals & Certifications

Construction: Formed 20 gauge cold rolled steel housing. Highly reflective die-formed white painted reflector. Wiring access available on top of housing. Captive and hinged center lens swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Co-extruded acrylic lens with ribbed side channels evenly illuminates the side reflector giving the appearance of a fully luminous aperture. Available with standard satine lens or optional clear lens with linear slot or round perf insert.

Mounting: Designed to install into acoustical grid and inaccessible ceilings. Specify G1, G9 or GS for acoustical grid ceiling. Specify FL for inaccessible ceilings. Grid retention clips integral to housing and require mechanical attachment. Tie off fixture to structure with retention wires. Maximum fixture weight is 28 lbs

LED: 25ºC test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 107,300 hours and L90 = 32,000 hours. MacAdam 3-Step Ellipses. Not all products are lighting facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

CRI, CCT & Output: Four lumen packages available. Low (LO), Medium (MO), High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on Color Temperature & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

Voltage: Universal (U), 120 volt (1) and 277 volt (2). Some LUCEN configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Osram 0-10V, 1% = OL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25C ambient operating conditions. Ambient operating range: -20°F/-30°C to 91°F/33°C.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some LUCEN configurations will not accommodate all circuiting options, consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture.

Finish: Powder-coat white painted finish on exposed trim.

Controls: DLM utilizes wired network connections for digital control through switching and dimming. nLight Air rES7 sensor provides wireless control, daylight harvesting and occupancy detection with PIR or PDT using eldoLED LED drivers. nLight Air rIO module provides wireless control using eldoLED LED drivers. EasySense sensor provides daylight harvesting and PIR occupancy detection using the SR LED driver; the Philips app provides advanced configurations. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. WaveLinx Connected Lighting sensor provides wireless control and daylight harvesting using 0-10V LED drivers. Lutron Vive sensor provides wireless control, daylight harvesting and PIR occupancy detection using DEXAL or SR LED drivers. Lutron Vive module provides wireless control using DEXAL or SR LED drivers.

Labels: UL and cUL Listed. LO, MO, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

Fixture Weight: 15 lbs maximum - Surface Mount Box adds 10 lbs.

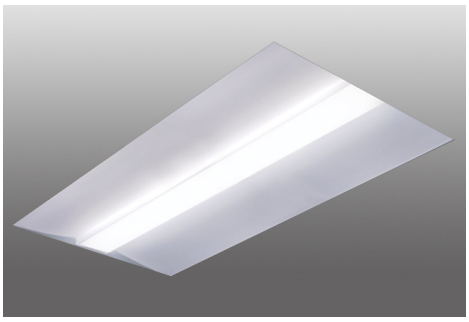
Buy American Act Compliant

Warranty: LUCEN LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

PINNACLE ARCHITECTURAL LIGHTING®

Project Name _____

Date _____ Type _____



LUCEN LU24

2x4 Architectural Recessed



Key Features

- Formed 22 gauge cold rolled steel housing
- Highly reflective die-formed white painted reflector
- Wiring access available on both ends and top of housing
- LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL Listed, LO, MO, aend HO lumen packages are IC Rated
- Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Indigo-Clean available, see Indigo-Clean specification sheets for details

Example Part #: LU24-A-830HO-G1-U-FSD-1-0-W

LU24 - [SHIELDING] - [CRI, CCT & OUTPUT] - [MOUNTING] - [VOLTAGE] - [DRIVER] - [CIRCUITING] - [BATTERY & EMERGENCY] - [FINISH] - [FIXTURE OPTIONS] - [CONTROLS]

SHIELDING (__)

A - Satine Lens QS
W - White Rails QS
S - Silver Rails QS
Shielding pg. 2

SOURCE QS[1] (_ _ _ _ _ _)

_27__ - 2700K
_30__ - 3000K
_35__ - 3500K
_40__ - 4000K
CL_ _ _ _ _ _ - Custom Lumens
CW_ _ _ _ _ _ - Custom Watts
MOD - Mod options available
Lumen Output pg. 2

MOUNTING (_ _ _ _ _ _)

G1 - 15/16" Grid QS
G9 - 9/16" Grid QS
GS - Screw Slot Grid QS
FL - Flanged
S - Surface Mount
Mounting pg. 3

VOLTAGE (_)

U - Universal *(120 thru 277V)* QS
1 - 120V QS
2 - 277V QS
3 - 347V
Voltage pg. 3

DRIVER (_ _ _)

FSD - Factory Select Driver *(1%, 0-10v)* QS
PL2 - Advance Xitanium *(1%, 0-10v)* QS
OL4 - eldoLED Optotronic 347v *(1%, 0-10v)*
EE1 - eldoLED ECOdrive *(1%, 0-10v)*
ES1 - eldoLED SOLOdrive *(0.1%, 0-10v)*
LH1 - Lutron Hi-lume *(1%, EcoSystem)*
PR1 - Advance Xitanium SR
OL2 - eldoLED Optotronic *(1%, 0-10v, standard)* QS
MOD - Mod options available
Driver pg. 4

CIRCUITING (_)

1 - Single Circuit QS
E - Emergency *(entire fixture)* QS
N - Night Light *(entire fixture)* QS
Circuiting pg. 4

BATTERY & EMERGENCY (_ _ _)

0 - None QS
FSB - Factory Select Battery QS
FSG - Factory Select ALCR
1P - Bodine 10W QS
1IC - Iota 10W, CEC Listed QS
GI - Iota ETS DR
GB - Bodine GTD
Battery and Emergency pg. 4

FINISH (_ _)

W - White QS
MOD - Mod options available
Finish pg. 5

FIXTURE OPTIONS[2] (_ _ _ _)

QS - QuickShip QS
TW - Through-wiring
CP - Chicago Plenum
AM - Antimicrobial Paint
FW6 - 6' Flex Whip QS
GLR - Fast Blow Fusing QS
GMF - Slow Blow Fusing
BA - Buy American Act compliant
MOD - Mod options available
Fixture Options pg. 5

CONTROLS[3] (_ _ _)

DLMFC - Wattstopper DLM *(wired)*
DLMFS - Wattstopper LLLC *(wireless)*
EASYS - Philips EasySense *(wireless)*
SNSLM - Encelium Sensilum *(wireless)*
WVLX - Eaton WaveLinx *(wireless)*
VDO - Lutron Vive Sensor *(wireless)*
VRF - Lutron Vive Connected *(wireless)*
ENL - Enlighted, "C" Connected Lighting or "I" IOT
ENL2 - Enlighted 2-Wire, "C" Connected Lighting or "I" IOT
MOD - Mod options available
Controls pg. 6

[1]When specifying SOURCE the first _ is for specifying either 8 - 80CRI, 9 - 90CRI. The ending _ _ are for specifying output, example HO - High Output. See output charts for more information. [2]If specifying QS, QS must be used in fixture options section of part number to qualify. [3]Controls can only be used with Single Circuit (1) or Emergency Circuit (E). See Controls chart on page 5 for driver options and more information

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Shielding

- Single piece extruded diffuse lens with convex wings and articulated center spine
- Fully luminous housing with optimal glare control
- Highly reflective white reflectors maintain uniform lens brightness

Ordering Code

A	**W**	**S**
Satine Lens	Satine Lens with White Trim	Satine Lens with Silver Trim







Source

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.
- 90 CRI = R9≥50

Custom Output- Lumens OR Wattage

CL_ _ _ _ _	Specify CRI, CCT and desired lumens (i.e. CL8351200)	*Specify lumens between standard offering listed below. Lumens are specified per color temp*
CW_ _ _ _ _	Specify CRI, CCT and desired wattage (i.e. CW94015)	*Specify watts between standard offering listed below*

80 CRI

	Color	Output	Watts	Shielding **A** Satine Lens		**W** White Trim		**S** Silver Trim	
				Lumens	*LPW*	*Lumens*	*LPW*	*Lumens*	*LPW*
830LO	3000K	Low	24.3	2937	120.9	2650	109.0	2500	102.9
830MO	3000K	Middle	32.2	3888	120.7	3507	108.9	3309	102.8
830HO	3000K	High	40.8	4788	117.4	4319	105.9	4075	99.9
830VHO	3000K	Very High	63.9	6958	108.9	6276	98.2	5921	92.7
835LO	3500K	Low	24.3	3019	124.2	2723	112.1	2569	105.7
835MO	3500K	Middle	32.2	3996	124.1	3604	111.9	3401	105.6
835HO	3500K	High	40.8	4921	120.6	4439	108.8	4188	102.6
835VHO	3500K	Very High	63.9	7151	111.9	6450	100.9	6086	95.2
840LO	4000K	Low	24.3	3155	129.8	2846	117.1	2685	110.5
840MO	4000K	Middle	32.2	4178	129.8	3769	117.0	3555	110.4
840HO	4000K	High	40.8	5169	126.7	4662	114.3	4399	107.8
840VHO	4000K	Very High	63.9	7482	117.1	6749	105.6	6367	99.6

90 CRI

927LO	2700K	Low	24.3	2448	100.8	2208	90.9	2084	85.7
927MO	2700K	Middle	32.2	3241	100.6	2923	90.8	2758	85.6
927HO	3500K	High	40.8	3991	97.8	3600	88.2	3396	83.2
927VHO	3500K	Very High	63.9	5799	90.8	5231	81.9	4935	77.2
930LO	3000K	Low	24.3	2706	111.4	2441	100.4	2303	94.8
930MO	3000K	Middle	32.2	3581	111.2	3230	100.3	3047	94.6
930HO	3000K	High	40.8	4410	108.1	3978	97.5	3753	92.0
930VHO	3000K	Very High	63.9	6409	100.3	5781	90.5	5454	85.4
935LO	3500K	Low	24.3	2715	111.7	2449	100.8	2310	95.1
935MO	3500K	Middle	32.2	3593	111.6	3241	100.6	3058	95.0
935HO	3500K	High	40.8	4424	108.4	3990	97.8	3765	92.3
935VHO	3500K	Very High	63.9	6429	100.6	5799	90.8	5471	85.6
940LO	4000K	Low	24.3	2815	115.8	2539	104.5	2396	98.6
940MO	4000K	Middle	32.2	3727	115.7	3362	104.4	3172	98.5
940HO	4000K	High	40.8	4611	113.0	4159	101.9	3924	96.2
940VHO	4000K	Very High	63.9	6674	104.4	6020	94.2	5680	88.9

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Direct Source: MOD Options

- Specify **MOD** in the part number for any of the below options
- All RGB_ Source Options will require specific driver and control
- Consult factory for **MOD** specification details, pricing, and lead-time information

		Required Driver	Required Control
MOD	Color Changing RGB LED	EC1/EC4	DMX
	Color Changing RGB-W LED	EC1/EC4	DMX
	2 Channel Tunable White		
	Dynamic BIOS		

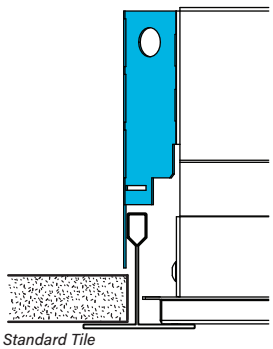
Mounting

- LUCEN is offered with a universal flange for all grid types. See below for fixture placement in relation to the tile for each grid type
- Grid retention clips integral to housing and require mechanical attachment
- Tie off fixture to structure with retention wires
- Refer to installation instructions during installation at the jobsite
- Maximum fixture weight is 25lbs - Surface Mount Box adds 10 lbs

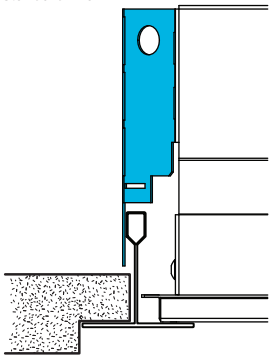
G1

1" Grid Mount

Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.



Standard Tile

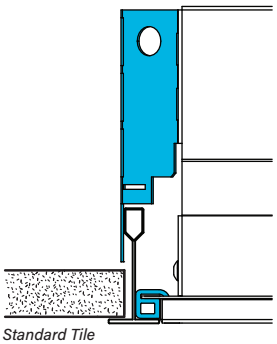


Tegular Tile

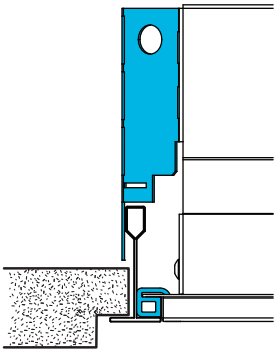
G9

9/16" Grid Mount

Works with 9/16" grid ceiling type. For tegular tile installations, fixture position will not be flush to the bottom of the tile. See tegular tile profile image below.



Standard Tile

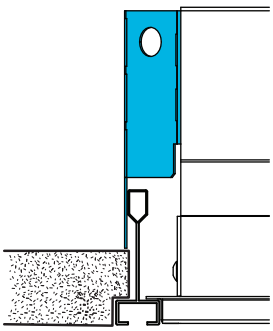


Tegular Tile

GS

Screw Slot Mounting

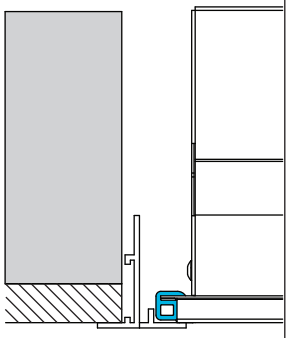
Works with screw slot and bolt slot grid ceiling types.

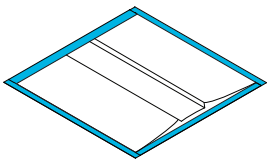


FL

Flange Kit

A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.

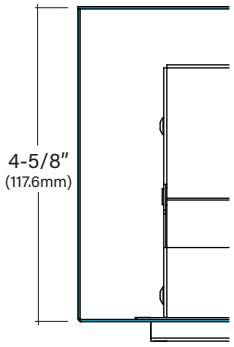


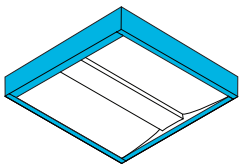


S

Surface Mount

Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs





Voltage

- Some LUCEN configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more Driver options, see Pinnacle Resource Guide
- Some LUCEN configurations will not accommodate all driver options; consult with factory

0-10V Drivers	
FSD	Factory Select Driver 1%, 0-10v
PL2	Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	eldoLED Optotronic, 1%, 0-10v
OL4	eldoLED Optotronic 347v, 1% 0-10v (requires 347v)
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0.1% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
OL5	eldoLED Optotronic 1%, 0-10v, AUX
PL5	Advance Xitanium 1%, 0-10v, AUX
DALI Drivers	
OD1	eldoLED Optotronic 1%, DEXAL
EE3	eldoLED ECOdrive .1%, DALI (logarithmic)
ES3	eldoLED SOLOdrive .1%, DALI (logarithmic)
Lutron Drivers	
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
Alternate Drivers	
PS1	Signify Advance Xitanium Step Dimming 50%/100%
PR1	Philips Advance Xitanium SR, requires EASYS, VDO or VRF
EH1	ELV 120v only, 0-10v universal
OD1	eldoLED Optotronic 1%, DEXAL

Driver: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Power Over Ethernet

Circuiting

- Select fixture circuiting from options below
- Some LUCEN configurations will not accommodate all circuiting options; consult with factory

1	Single Circuit
E	Emergency Circuit only *(uses nIO EZ PH ER with NLIGHT)*
N	Night Light Circuit only

Battery & Emergency

- Select battery or emergency options if required
- Battery duration is 90 minutes
- Test button is integral to fixture
- For more Battery options, see Pinnacle Resource Guide

0	No Battery
FSB	Factory Select Battery (10w option)
FSBST	Factory Select Battery (10w, Self Testing)
1P	Bodine 10w Integral, *CEC Listed*
1IC	Iota 10w Integral, *CEC Listed*
FSG	Factory Select Automatic Load Control Relay (ALCR), UNV
GI	Emergency Transfer Switch (ETS) DR Emergency Control Device, UNV
GB	Bodine GTD, Generator Transfer Device, 120v or 277v

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 10 (watts) x 92.3 (LPW) = 923 battery lumen output

Battery & Emergency Ordering Examples

- Single circuit, 10w integral battery — Ordering Code: 1-1P
- Emergency circuit only, 10w integral battery — Ordering Code: E-1P

Finish

- Powder-coat white painted finish

W	White

Finish: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Wood Grain
	Acoustic
	Metallic Silver
	Textured Black
	Bronze
	Graphite
	Custom Color

Fixture Options

- Additional options to enhance the fixture and finish of the product

QS	Quick Ship
TW	Through-Wiring
CP	Chicago Plenum
AM	Antimicrobial Paint
FW6	Flex Whip 6'
GLR	Internal Fast Blow Fuse
GMF	Internal Slow Blow Fuse
BA	Buy American Act Compliant

Fixture Options: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Remote Driver
	End Power Feed

Quick Ship

Shielding	Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens **W** White Rails **S** Silver Rails	80 CRI, All color temperatures, all lumen packages *See pg 4*	**G1** 1" Grid **G9** 9/16" Grid **GS** Screw Slot	**U** Universal **1** 120v **2** 277v	**FSD** Factory Select Driver *(1%, 0-10v)* **PL2** Advance Xitanium 0-10v, 1% **OL2** Osram 0-10v, 1%	**1** Single **E** Emergency **N** Night Light	**FSB** Factory Select Battery **1P** Bodine 10w Integral **1IC** Iota 10w Integral	**W** White	**CP** Chicago Plenum **FW6** Flex Whip 6' 18-gauge **GLR** Internal Fast-Blow Fuse

Consult Factory for projects that are larger than 200 units.

Controls

- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready; commissioning by others
- Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**)
- Contact factory for any non-standard configurations for layout, placement, or EM options
- Controls only compatible with Satine Lens.
- Must specify required driver in Driver Section

	Solution	Components	Network/Sensor	Connection	Required Drivers	Limitations
DLMFC	Legrand Wattstopper DLM	LMFC-011	Digital Lighting Management (DLM)	Wired, two RJ45 ports	OL2, OL4	Not available with Battery
DLMFS	Legrand Wattstopper LLLC	LMFS-601-W / LMFI-111	Wireless DLM Fixture Sensor	Wireless	OD1, PR1, 0-10v	0-10v requires interface
EASYS	Philips EasySense	SNS-210	Daylight/PIR Occupancy	Wireless to switches	PR1	Not available with 347 volt
SNSLM	Encelium Sensilum	EN-CLM-PIR-DD-ZB	Encelium, Daylight/PIR Occupancy	Wireless	OD1, OL5	Not available with 347 volt
WLVX	Eaton WaveLinx	SWPD1, MSP3IVMVDC1	WaveLinx WCL, Daylight	Wireless	Any 0-10v	Not available with 347 volt
VDO	Lutron Vive Sensor	DFCSJ-OEM-OCC	Vive, Daylight/PIR Occupancy	Wireless	OD1, PR1	Not available with 347 volt
VRF	Lutron Vive Connected	DFCSJ-OEM-RF	Vive	Wireless	OD1, PR1	Not available with 347 volt
ENLI	Enlighted IOT	SU-5E-IOT, CU-4E	Enlighted, Daylight/PIR Occupancy	Wireless	Any 0-10v	Not available with 347 volt
ENLC	Enlighted Connected Lighting	SU-5E-CL, CU-4E	Enlighted, Daylight/PIR Occupancy	Wireless	Any 0-10v	Not available with 347 volt
ENL2I	Enlighted 2-Wire IOT	KIT-SU-5E-D-IOT	Enlighted, Daylight/PIR Occupancy	Wireless	OD1 OR PR1	Not available with 347 volt
ENL2C	Enlighted 2-Wire Connected Lighting	KIT-SU-5E-D-CL	Enlighted, Daylight/PIR Occupancy	Wireless	OD1 OR PR1	Not available with 347 volt

Controls: MOD Options

- Specify **MOD** in the part number for any of the below options
- **Control** Options may require specific driver. Refer to the chart below
- Consult factory for **MOD** specification details, pricing, and lead-time information

		Required Driver
MOD	Encelium Sensilum	OD1, OL5
	Acuity nLight Air Wireless Connected	EE6, ES6

Approvals & Certifications

Construction: Formed 22 gauge cold rolled steel housing. Highly reflective die-formed reflectors maintain uniform lens brightness. Wiring access on both sides and top of housing. Housing designed to maintain optimal temperature of LED diodes and driver. Captive door frame swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Single piece extruded diffuse lens with convex wings and articulated center spine creating a fully luminous housing with optimal glare control. Available with standard satine lens or optional white or silver lens side rails.

Mounting: Designed to install into acoustical grid and inaccessible ceilings. Specify G1, G9 or GS for acoustical grid ceiling. Specify FL for inaccessible ceilings. Grid retention clips integral to housing and require mechanical attachment. Tie off fixture to structure with retention wires. Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs.

LED: 25ºC test environment. Lumen output/wattage has a margin of +/- 5%. Luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 134,700 hours and L90 = 40,100 hours. MacAdam 3-Step Ellipses. Not all products are lighting facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

Color & Lumen Output: Four lumen packages available. Low (LO), Medium (MO), High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 90 CRI = R9≥50.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some LUCEN configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Advance Xitanium 0-10V, 1% = PL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 95°F/35°C. For more driver options, see Pinnacle Resource Guide. Some LUCEN configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some LUCEN configurations will not accommodate all circuiting options, consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture. For more Battery options, see Pinnacle Resource Guide.

Finish: Powder-coat white painted finish on exposed trim.

Controls: DLM utilizes wired network connections for digital control through switching and dimming. nLight Air rES7 sensor provides wireless control, daylight harvesting and occupancy detection with PIR or PDT using eldoLED LED drivers. nLight Air rIO module provides wireless control using eldoLED LED drivers. EasySense sensor provides daylight harvesting and PIR occupancy detection using the SR LED driver; the Philips app provides advanced configurations. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. WaveLinx Connected Lighting sensor provides wireless control and daylight harvesting using 0-10V LED drivers. Lutron Vive sensor provides wireless control, daylight harvesting and PIR occupancy detection using DEXAL or SR LED drivers. Lutron Vive module provides wireless control using DEXAL or SR LED drivers.

Labels: UL and cUL 1598 listed. LO, MO, and HO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

Fixture Weight: 25 lbs maximum - Surface Mount Box 10 lbs.

Warranty: LUCEN LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — The CLX is a linear lighting solution that is available in multiple lengths, lumen packages and distributions. Designed for versatility, the CLX can address virtually any indoor lighting need. The CLX is also offered in standard and high efficacy configurations and capable of being continuous row mounted or installed as a stand-alone fixture. Ideal for uplight and downlight in commercial, retail, manufacturing, warehouse, and display applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Channel and cover are formed from code-gauge cold-rolled steel. Housing and lens endcaps are injection molded plastic to provide a more architectural look and feel. The endcaps come standard with a 7/8" knock out for continuous mounting but can be ordered without.

Finish: Paint options include high-gloss, baked white polyester (WH), galvanized (GALV), matte black (MB) and smoke gray (SKGY). Five-stage iron phosphate pre-treatment ensures superior paint adhesion and rust resistance.

OPTICS — Offered with acrylic lens and less lens configurations. Provides a choice of optical distributions including, wide, narrow, and aisle.

Models with wide diffuse lens provide up to 12% uplight. Please check the IES file for specific uplight value.

ELECTRICAL — Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Optional internal pluggable wiring harness for reduced labor cost in row mounting applications. (See PLR_ ordering information on page 9.) Electronic LED driver is multi-volt input and 0-10V dimming standard (see Operational Data on page 6 for actual wattage consumption). This fixture is designed to withstand a maximum line surge of 2.5kV at 0.75kA combination wave for indoor locations, for applications requiring higher level of protection additional surge protection must be provided. Color Variation within 3-step MacAdam ellipse (3SDCM).

L70>100,000 hours at 25˚C.

LEDs provide nominal 80 CRI or 90 CRI at 3000 K, 3500 K,4000 K, or 5000 K.

Lumen output up to 2,500 lumens per foot.

INSTALLATION — Fixture may be ceiling or wall mounted (with or without THCLX hanger or angle mounted with CLXANGBKT), pendant or stem mounted with appropriate mounting options.

WARNING — Removing the lens and opening the fixture during installation exposes the LEDs, putting them at risk for damage.

If you plan to surface mount the fixture, we recommend using the THCLX. This eliminates the need to open the fixture.

If you plan to continuous row mount, we recommend using the PLR wiring harness option. This eliminates the need to open the fixture.

Damage to the LEDs caused during installation will not be covered under the warranty.

LISTINGS — CSA certified to US and Canadian safety standards. For use in damp locations between -4°F (-20°C) and 104°F (40°C). Optional High Ambient (HA) ranging to 122°F(50°C) available on certain lumen packages (See ambient temperature chart for additional information).
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 to confirm which versions are qualified.

GOVERNMENT PROCUREMENT — BAA – Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also 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 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

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 ℃.
Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

Stock Part Number	UPC
CLX L48 3000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525816
CLX L48 3000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525885
CLX L48 5000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525939
CLX L48 5000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525908
CLX L96 6000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525861
CLX L96 6000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525915
CLX L96 10000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525922
CLX L96 10000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525830
CLX L48 3000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525960
CLX L48 3000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525892
CLX L48 5000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525854
CLX L48 5000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525946
CLX L96 6000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525878
CLX L96 6000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525823
CLX L96 10000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525953
CLX L96 10000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525847

LED Linear

CLX

24", 36", 48" and 96" Lengths



Flat Diffuse Lens



Round Diffuse Lens



Wide Diffuse Lens



CLX with Reflector

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning when used with Acuity Brands controls products.
All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specifications for chromatic consistency – including color rendering, color fidelity, and color temperature tolerance around standard CIE chromaticity coordinates.

To learn more about Acuity A+ standards, specifications, and testing visit www.acuitybrands.com/aplus.

design select

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.
*See ordering tree for details

Design Select options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: CLX L48 5000LM SEF WDL MVOLT GZ10 40K 80CRI WH

Series	Length	Nominal lumens	Performance package	Louver	Lens
CLX LED linear	L24 24"	1500LM 1,500 lumens 2000LM 2,000 lumens 2500LM 2,500 lumens 3500LM 3,500 lumens 4500LM 4,500 lumens 5000LM 5,000 lumens	SEF Standard efficiency ‡ HEF Premium efficiency ‡	(Blank) Less louver SBLW Straight blade louver, white ‡ SBLMB Straight blade louver, matte black ‡ SBLGV Straight blade louver, galvanized ‡ SBLSKGY Straight blade louver, smoke gray ‡	L/Lens Less lens FDL Flat diffuse ‡ RDL Round diffuse ‡ WDL Wide diffuse ‡
	L36 36"	2250LM 2,250 lumens 3000LM 3,000 lumens 3750LM 3,750 lumens 5250LM 5,250 lumens 6750LM 6,750 lumens 7500LM 7,500 lumens			
	L48 48"	3000LM 3,000 lumens 4000LM 4,000 lumens 5000LM 5,000 lumens 7000LM 7,000 lumens 9000LM 9,000 lumens 10000LM 10,000 lumens			
	L96 96"	6000LM 6,000 lumens 8000LM 8,000 lumens 10000LM 10,000 lumens 14000LM 14,000 lumens 18000LM 18,000 lumens 20000LM 20,000 lumens			

Distribution	Voltage		Driver ‡	Glare Reflector	Color temperature	Coloring rendering index
(Blank) General ND Narrow ‡ WD Wide ‡ AD2 Aisle, 24° off center ‡	MVOLT 120-277V ‡ 120 120V 208 208V ‡ 240 240V ‡	277 277V 347 347V ‡ 480 480V ‡	GZ1 Generic 0-10V, dims to 1% ‡ GZ10 Generic 0-10V, dims to 10% ‡ EZ1 eldoLED 0-10V, dims to 1% ‡	(blank) No reflectors LUGR Reflectors for additional glare reduction ‡	30K 3000 K 35K 3500 K 40K 4000 K 50K 5000 K	80CRI 80 CRI 90CRI 90 CRI

Options

E10W	Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS ‡
E10WSTAR	Emergency battery pack, Enabled with STAR ‡
BGTD	Generator transfer device, not available with E10W ‡
OCS	5', 18/3 Reloc selectable One Pass cable (fixture will bear dry location label) ‡
HA	High ambient, for use in ambient temperatures up to 50°C ‡
EPNKO	Decorative endplate, no knock out ‡
OUTCTR	Wiring leads pulled through back center of fixture ‡
OUTEND	Wiring leads pulled through end of fixture ‡
Cord Sets: ‡	
CS1W	6' Staight blade plug, 120V ‡
CS3W	NEMA twist-lock plug, 120V ‡
CS7W	Staight blade plug, 277V ‡
CS11W	NEMA twist-lock plug, 277V ‡
CS25W	NEMA twist-lock plug, 347V ‡
CS97W	NEMA twist-lock plug, 480V ‡
CS93W	600V SEOOW white cord, no plug (no voltage required)
CS6WG16ST0WD5D	6' white cord, 16/5, no plug, includes low voltage dimming wires (no voltage required) ‡
PLR___	Plug-in wiring, see page 9 for ordering information
PLR1G	Plug-in wiring, single circuit, Ground
PLR1LVG	Plug-in wiring, single circuit, low-voltage dimming, Ground ‡
RRL___	RELOC®-ready luminaire. See page 14 for ordering information
SPD	Surge protection device, provides up to 6kV protection ‡
BAA	Buy America(n) Act and/or Build America Buy America Qualified
nLight® Wireless:	
NLTAIR2 RES7	nLight AIR Generation 2 enabled PIR integral occupancy sensor with automatic dimming photocell ‡
NLTAIR2 RES7EM	nLight AIR Generation 2 enabled PIR integral occupancy sensor with automatic dimming photocell and UL924 Emergency operation, via power interrupt detection ‡
NLTAIR2 RES7PDT	nLight AIR Generation 2 enabled dual technology integral occupancy sensor with automatic dimming photocell ‡
NLTAIR2 RES7PDTEM	nLight AIR Generation 2 enabled dual technology integral occupancy sensor with automatic dimming photocell and UL924 Emergency operation, via power interrupt detection ‡
NLTAIR2 RIO	No sensor control ‡
NLTAIR2 RIOEM	No sensor, Control Input function only and UL924 Emergency operation, via power interrupt detection ‡
nLight® Wired:	
N100	nLight® without lumen management
N100EMG	nLight® without lumen management For use with generator supply EM power ‡
NES7	nLight® nES 7 PIR integral occupancy sensor ‡
NESPDT7	nLight® nES PDT 7 dual technology integral occupancy control ‡
NES7ADCX	nLight® nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell ‡
NESPDT7ADCX	nLight® nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell ‡
Individual controls: ‡	
MSD7	PIR integral occupancy sensor
MSDPDT7	PDT 7 dual technology integral occupancy control
MSD7ADC	PIR integral occupancy sensor with automatic dimming control photocell
MSDPDT7ADC	PDT integral occupancy sensor with automatic dimming control photocell

Finish

WH	White
GALVW	Galvanized with white lens end caps
GALVB	Galvanized with black lens end caps
MB	Matte black
SKGYW	Smoke gray with white lens end caps
SKGYB	Smoke gray with black lens end caps

See Accessories and footnotes on next page

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Accessories: *Order as separate catalog number.*

Mounting:

ZACVH M100	Adjustable 10' aircraft cable with Y hanger (1 pair)
ZAC120	One adjustable aircraft cable with canopy 120", white
ZACFP120	One adjustable aircraft cable with feed (3 conductor) and canopy, 120", white
ZACFPD120	One adjustable aircraft cable with feed (5 conductor) and canopy 120", white
ZAC240	One adjustable aircraft cable with canopy 240", white
ZACFP240	One adjustable aircraft cable with feed (3 conductor) and canopy, 240", white
ZACFPD240	One adjustable aircraft cable with feed (5 conductor) and canopy 240", white

SQ_	Swivel stem hanger (specify length in 2" increments up to 48") Ships White
THCLX ___	Tong hanger (Must specify color) (one pair) ‡
CLXANGBKT ____	Angle bracket, (Must specify color) (one pair) ‡
HC36 M12	Hanger chain, 36" (1 pair)

Wireguards:

WGCLX24 ___	24" wireguard qty 1, (Must specify color) ‡
WGCLX36 ___	36" wireguard qty 1, (Must specify color) ‡
WGCLX48 ___	48" wireguard qty 1, (Must specify color) ‡
WGCLX48 ___ J2	48" wireguard qty 2, (Must specify color) ‡
WGCLX48 ___ J25	48" wireguard qty 25, (Must specify color) ‡
WGCLX48 ___ J50	48" wireguard qty 50, (Must specify color) ‡

‡ Option Value Ordering Restrictions

Option value	Restriction
347V, 480V	Voltage selected utilizes a step-down transformer. Not available with L24 when ordered with N100. Not available with E10W or BGTD options.
BGTD	Not available with MVOLT, 208V or 240V. Not available with HA. Available with L48 or L96 only. Not available with E10W option. Not available with 208 or 240V. Not available Individual controls, NLight Wired, or NLight Wireless options.
CS1W, CS3W, CS7W, CS11W, CS25W, CS963W, CS97W	Not available with BGTD option. Must specify voltage. Not available with PLR options.
CS6WG16ST0WD5D	Not available with Individual controls, nLight wired networking, nLight wireless networking, nLight wireless zone control options.
Driver	When continuous row mounting, fixtures must all have the same driver selection.
E10W	Not available with OUTCR, Not available with HA. Not available with 347V or 480V. Not available with BGTD option. Requires SPD option. Not available with L24 or L36. Not available with L48 in combination with N100.
E10WSTAR	Not available with OUTCR. Not available with HA. Not available with 347V or 480V. Not available with BGTD option. Requires SPD option. Not available with L24 or L36.
EPNKO	Not available OUTEND.
EZ1	Not available with HA option. Not available with 5000LM, 7500LM.
FDL, RDL, WDL	Only available with general distribution. Not available with CLXRN accessories.
GZ1, GZ10	Not available with Individual controls, nLight wired networking, nLight wireless networking, nLight wireless zone control options.
HA	Not available with L24, L26. Not available with BGTD option. Not available with EZ1. Only available with L48 3000/4000/5000LM and L96 6000/8000/10000LM.
HEF	Not available with L48 3000LM and L96 6000LM
LUGR	Not available with L36 length. Only available with WH finish. Not compatible with THCLX Hanger or wireguard accessories. LUGR option required for some DLC premium qualifications - Please check the DLC Qualified Products List to determine if LUGR option is necessary to meet requirement. If mounting in continuous rows, ensure all models ordered with LUGR option if required on any configuration to ensure rows match in form factor. LUGR reflectors ship in standard fixture carton and are not sold as separate accessory - this option MUST be specified as part of the CLX model number.
MSD7, MSDPDT7, MSD7ADC, MSDPDT7ADC	Not available with any other control option. Requires EZ1. Sensor housing will be the same color as lens end caps.
N100, N100EMG	nLight EMG option requires a connection to existing nLight network. Power is provided from separate N100 enabled fixture.
ND, WD, AD2	Not available with CLXRN accessories. Available L/LENS only.
NES7, NESPDT7, NES7ADCX, NESPDT7ADCX	Not available with any other control option. Requires EZ1. Requires N100 or N100EMG option, N100EMG with NES7 requires RFA. Sensor housing will be the same color as lens end caps.
NLTAIR2 RES7(EM), NLTAIR2 RES7PDT(EM), NLTAIR2 RIO(EM)	Sensor housing will be the same color as lens end caps. For EM, see UL924 Sequence of Operation chart below.
OCS	Must specify voltage.
OUTCR	Not available with L24. Not available with PLR options.
OUTEND	Not available with PLR options.
PLR1LVG	Not available with Individual controls, NLight Wired, or NLight Wireless options. Refer to page 9 for more PLR details.
SBLW, SBLMB, SBLGV, SBLSKGY	When ordered with L24 only available with 1500LM or 2000LM in combination with GZ10 driver. Not for use with THCLX, CLXANGBKT or WGCLX accessories. Not available with RDL lens options.
SEF	Not available with EZ1 when ordered with L24 with 5000LM or L36 with 7500LM.
SPD	Required with E10W, BGTD.
THCLX ___, CLXANGBKT ____	Not available with louver or wireguards. THCLX___ not available with LUGR.
Wireguards	Not for use with LUGR option. For L96 fixtures, use qty 2 48" wireguards.

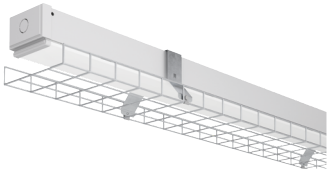
UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

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OPTIONS AND ACCESSORIES



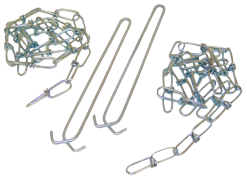
Wireguard
Ships separately from fixture:
96" fixture requires two WGCLX48.
Order as:
WGCLX24___
WGCLX36___
WGCLX48___



LUGR glare reflector
NOT available as accessory - must be specified as part of the fixture nomenclature. See ordering notes on page 3.



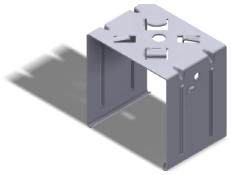
Aircraft Cable with Canopy
Available in 120" or 240"
Order as:
ZAC120
ZAC240



HANGER CHAIN
36" chain with Y hanger. ships as a pair
Order as:
HC36



ZACVH HANGER
10' Aircraft cable with Y hanger.
Order as:
ZACVH



Tong hanger
Ships as a pair
Order As:
THCLX___

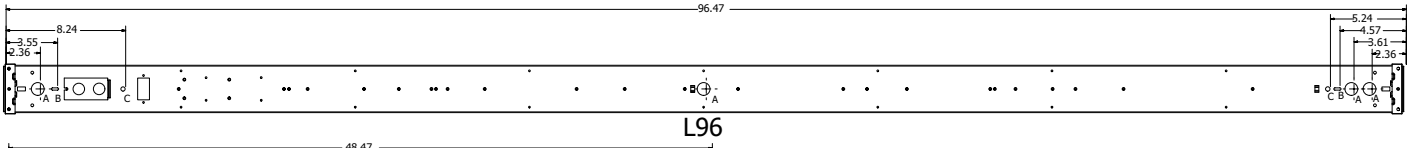
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DIMENSIONS

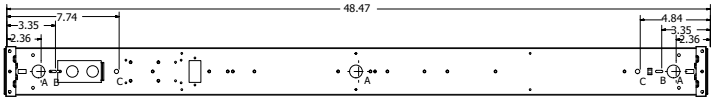
All dimensions are in inches (centimeters) unless otherwise indicated.
Dimensions may vary with options or accessories.

INTEGRATED SENSOR ADDS 2.0 INCHES TO STANDALONE FIXTURE LENGTH
HOUSING END CAP ADDS 0.236 INCHES TO FIXTURE LENGTH PER SIDE. DIMENSIONS BELOW INCLUDE ENDCAPS.

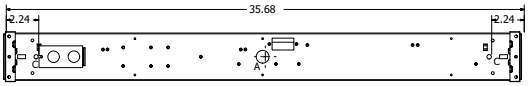
A - 7/8" KNOCK OUT
B - 0.5" by 0.16" SLOT
C - 0.3" DIA HOLE



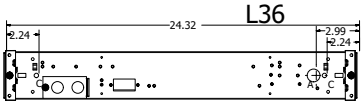
L96



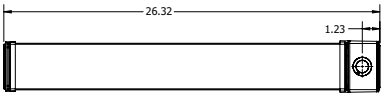
L48



L36



L24

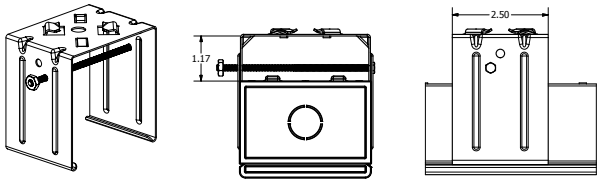


L24 WITH SENSOR

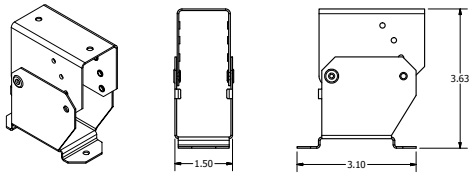
PALLET DIMENSIONS

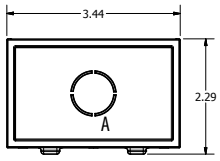
Length	Approx Weight	Fixtures per pallet	Pallet Dims (L X W X H)
L24	4 lb	100	54x46x37
L36	5 lb	80	54x46x37
L48	7.5 lb	64	54x46x37
L96	14 lb	64	98x46x37

THCLX - SHIPS TWO PER ORDER,
UTILIZES A #8 HEX HEAD SCREW AND NUT
FIXTURE SITS 1.3 INCHES FROM STRUCTURE WHEN MOUNTED

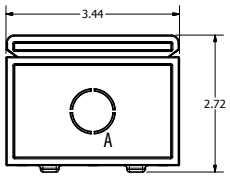


CLXANGBKT - SHIPS TWO PER ORDER
HOLES TO MOUNTING STRUCTURE ARE 0.175" DIA, 2.5" APART
FIXTURE SITS APPROXIMATELY 3.5" FROM STRUCTURE
WHEN MOUNTED HORIZONTAL TO STRUCTURE

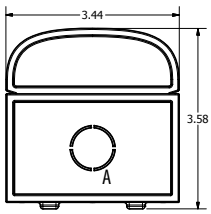




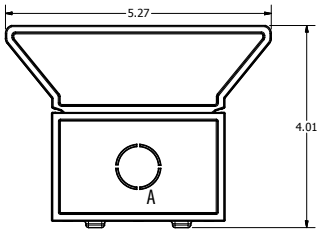
L/LENS



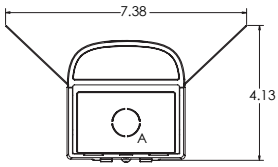
FDL



RDL



WDL



LUGR Reflector Option
- applies to all lens types

PHOTOMETRICS

See www.lithonia.com.

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POWER SENTRY EMERGENCY BATTERY PACKS

		SEF Emergency Lumens	HEF Emergency Lumens
E10W	Factory installable	1400	1500
PS1555LCP	Field installable, remote mount only	2000	2100

Note: For emergency lumen output of specific model, please consult factory. One board will be illuminated during emergency operation.

Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A	10W	90	1200	Title 20, Self Diagnostic
ILB CP10 HE AELR A	10W	90	1200	Title 20; Enabled with Self Testing, Automated Reporting (STAR)
ILBLP CP15 HE SD A	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic

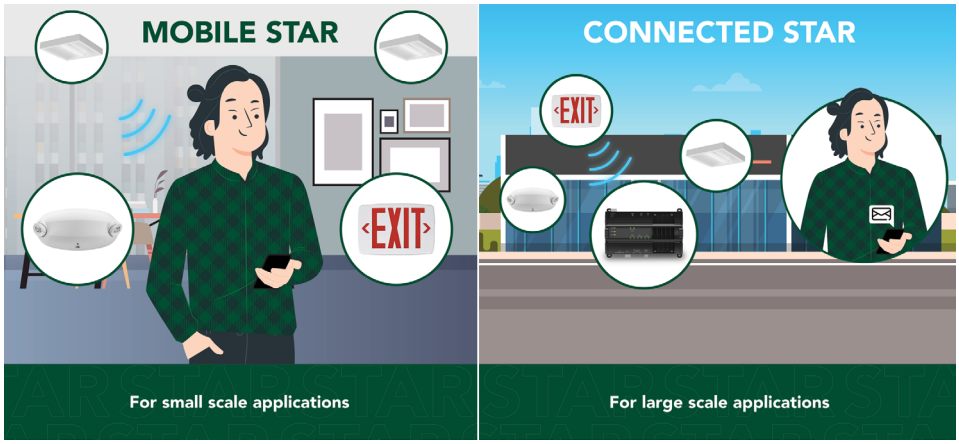
All the above are UL Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.
Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

Enabled with STAR

Emergency Lighting with Self-Testing Automated Reporting (STAR), enables self-testing and automated reporting to aid in life safety code compliance. Build your solution and choose your preferred deployment from Mobile STAR, where test data is logged in each individual unit and broadcast to the CIAIRity™+ app, or Connected STAR, where test data is logged in the STAR Gateway by IOTA® and emailed directly. **Leave the ladders, disruptions and written records behind with emergency lighting solutions with STAR!**

Life Safety Code NFPA 101 testing and reporting requirements for emergency lighting include:

- Testing for 30 seconds every 30 days
- Testing for 90 minutes once a year
- Record keeping and to report to the authority having local jurisdiction



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CLX CHARACTERISTICS

Nominal Lumen Package	Length	Wattage								Length	Width	Depth	Comparable Light Source
		Standard Efficiency				High Efficiency							
		120V	277V	347V	480V	120V	277V	347V	480V	Dimensions are shown in inches			
2500LM	24"	18.4	18.4	24.0	24.0	17.4	17.4	23.1	23.1	24	3.5	3.75	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
5000LM	24"	41.5	41.5	47.4	47.4	38.1	38.1	44.1	44.1	24	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
3750LM	36"	26.5	26.5	32.1	32.1	25.1	25.1	30.7	30.7	36	3.5	3.75	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
7500LM	36"	62.6	62.6	68.6	68.6	54.0	54.0	59.7	59.7	36	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
5000LM	48"	31.8	31.8	37.2	37.2	30.3	30.3	35.8	35.8	48	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
10000LM	48"	70.7	70.7	76.2	76.2	65.3	65.3	70.8	70.8	48	3.5	3.75	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
10000LM	96"	63.7	63.7	69.0	69.0	60.6	60.6	66.1	66.1	96	3.5	3.75	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
20000LM	96"	141.3	141.3	146.8	146.8	130.5	130.5	136.1	136.1	96	3.5	3.75	6-lamp 32W T8, 4-lamp 54W T5HO, 200W HID

Note: For wattage by configuration, please reference the CLX Operational Data Document.

Lumen Package	UGR Values of CLX L24 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
1500LM SEF	21.2	23.8	19.4	25.2	17.4	21.1	16.8	14	17.8	16.6	18.1	17.9	24.9	25.1
2000LM SEF	22.3	24.9	20.5	26.3	18.6	22.3	17.9	15.1	18.8	17.6	19.2	18.9	26.1	26.2
2500LM SEF	23.1	25.7	21.3	27.1	19.4	23.1	18.6	15.8	19.6	18.4	19.9	19.7	26.9	27
3500LM SEF	24.1	26.7	22.3	28.1	20.4	24.1	19.7	16.9	20.7	19.5	21	20.8	27.9	28.1
4500LM SEF	25.4	28	23.6	29.4	21.7	25.4	20.7	17.9	21.7	20.5	22	21.8	29.2	29.3
5000LM SEF	25.6	28.2	23.3	29.1	21.4	25.1	21	18.3	21.5	20.3	21.8	21.5	29.4	29.5
1500LM HEF	21.1	23.7	19.3	25.1	21.8	25.5	16.5	13.7	17.6	16.3	17.8	17.6	24.9	25
2000LM HEF	22.2	24.8	20.4	26.2	17.4	21.1	17.6	14.8	18.6	17.4	18.8	18.6	26	26.2
2500LM HEF	23	25.7	21.3	27	18.5	22.2	18.4	15.6	19.4	18.2	19.7	19.4	26.8	27
3500LM HEF	24.1	26.7	22.3	28.1	19.3	23	19.8	17	20.9	19.7	21.1	20.9	27.9	28
4500LM HEF	25.3	27.9	23.5	29.3	20.4	24.1	20.8	18	21.8	20.6	22.1	21.8	29.1	29.3
5000LM HEF	25.5	28.1	23.7	29.5	21.6	25.3	21.1	18.3	22.1	20.9	22.3	22.1	29.3	29.5

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

Lumen Package	UGR Values of CLX L36 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)							
	FDL		RDL		WDL		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
2250LM SEF	21.4	24.1	19.7	25.6	17.7	21.6	25.2	25.4
3000LM SEF	22.3	25	20.6	26.5	18.6	22.5	26.2	26.3
3750LM SEF	23.2	25.9	21.4	27.3	19.5	23.4	27	27.2
5250LM SEF	24.2	26.9	22.5	28.4	20.5	24.4	28	28.2
6750LM SEF	25.1	27.8	23.3	29.2	21.4	25.3	28.9	29
7500LM SEF	25.4	28.1	23.6	29.5	21.7	25.6	29.2	29.4
2250LM HEF	25	27.7	20.5	26.4	18.6	22.5	25.2	25.3
3000LM HEF	25.3	28	21.4	27.3	19.4	23.3	26.1	26.2
3750LM HEF	21.4	24.1	22.4	28.3	20.5	24.4	27	27.1
5250LM HEF	22.3	25	23.2	29.2	21.3	25.2	28	28.1
6750LM HEF	23.1	25.8	23.6	29.5	21.6	25.5	28.8	29
7500LM HEF	24.2	26.8	19.6	25.5	17.7	21.6	29.1	29.3

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values.
To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

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Lumen Package	UGR Values of CLX L48 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
3000LM SEF	21.8	24.5	19.7	25.3	18.6	23.4	19.2	16.5	20.2	19	20.6	20.3	24.8	25.6
4000LM SEF	22.8	25.5	20.7	26.3	19.6	24.4	20.3	17.5	21.2	20	21.6	21.4	25.8	26.6
5000LM SEF	23.6	26.3	21.4	27	20.4	25.2	21	18.2	21.9	20.7	22.3	22.1	26.6	27.3
7000LM SEF	24.8	27.6	22.7	28.3	21.6	26.5	22.3	19.6	23.3	22.1	23.7	23.4	27.8	28.6
9000LM SEF	25.6	28.4	23.5	29.1	22.5	27.3	23.2	20.4	24.1	22.9	24.5	24.3	28.6	29.4
10000LM SEF	26	28.7	23.8	29.5	22.8	27.6	23.6	20.8	24.5	23.3	24.9	24.7	29	29.8
3000LM HEF	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4000LM HEF	22.8	25.6	20.7	26.3	22.8	25.6	20.3	17.5	21.3	20.1	21.7	21.4	29.5	30.3
5000LM HEF	23.6	26.3	21.4	27	23.6	26.3	21	18.2	21.9	20.7	22.3	22.1	30.2	31
7000LM HEF	24.8	27.6	22.7	28.3	24.8	27.6	22.4	19.6	23.4	22.2	23.8	23.5	27.8	28.6
9000LM HEF	25.7	28.4	23.6	29.2	25.7	28.4	23.2	20.4	24.2	23	24.6	24.3	28.7	29.5
10000LM HEF	26	28.7	23.9	29.5	26	28.7	23.6	20.9	24.6	23.4	25	24.7	29	29.8

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

Lumen Package	UGR Values of CLX L96 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
6000LM SEF	21.8	24.6	19.7	25.4	17.9	22.4	19.3	16.5	20.2	19	20.6	20.4	24.8	25.6
8000LM SEF	22.8	25.5	20.7	26.4	18.8	23.4	20.3	17.6	21.2	20.1	21.6	21.4	25.8	26.6
10000LM SEF	23.6	26.3	21.4	27.2	19.6	24.2	21	18.3	21.9	20.8	22.3	22.1	26.5	27.3
14000LM SEF	24.8	27.6	22.7	28.5	20.9	25.5	22.4	19.6	23.3	22.1	23.7	23.5	27.8	28.6
18000LM SEF	25.7	28.4	23.5	29.3	21.7	26.3	23.2	20.5	24.1	23	24.5	24.3	28.6	29.4
20000LM SEF	26	28.7	23.9	29.6	22	26.6	23.6	20.9	24.5	23.4	24.9	24.7	29	29.7
6000LM HEF	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8000LM HEF	22.8	25.6	20.7	26.5	18.9	23.5	20.4	17.6	21.3	20.1	21.7	21.5	25.8	26.6
10000LM HEF	23.6	26.3	21.4	27.2	19.6	24.2	21	18.3	21.9	20.8	22.3	22.1	27	27.8
14000LM HEF	24.9	27.6	22.7	28.5	20.9	25.5	22.4	19.7	23.4	22.2	23.8	23.5	27.8	28.6
18000LM HEF	25.7	28.4	23.6	29.3	21.7	26.3	23.2	20.5	24.2	23	24.6	24.3	28.7	29.5
20000LM HEF	26	28.8	23.9	29.6	22.1	26.6	23.7	20.9	24.6	23.4	25	24.8	29	29.8

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

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AMBIENT TEMPERATURE RATINGS

Driver Package		GZ10			EZ1 or EOHN			Any Driver	
Length	**Lumen package**	**Direct Surface**	**THCLX/ Suspended**	**HA Option (Direct or Suspended)**	**Direct Surface**	**THCLX**	**Suspended 18"**	**Xpoint/ BGTD Direct Surface**	**E10W Suspended**
L24	1500LM	40C	40C	N/A	35C	35C	35C	N/A	N/A
	2000LM	40C	40C		35C	35C	35C		
	2500LM	40C	40C		35C	35C	35C		
	3000LM	40C	40C		40C	40C	40C		
	4500LM	40C	40C		35C	35C	40C		
	5000LM	40C	40C		25C	30C	35C		
L36	2250LM	40C	40C		40C	40C	40C		
	3000LM	40C	40C		40C	40C	40C		
	3750LM	40C	40C		40C	40C	40C		
	5250LM	40C	40C		35C	35C	40C		
	6750LM	30C	40C		35C	35C	40C		
	7500LM	30C	40C		25C	30C	35C		
L48	3000LM	40C	40C	50C	40C	40C	40C	35C	25C
	4000LM	40C	40C	50C	40C	40C	40C		
	5000LM	40C	40C	50C	35C	35C	40C		
	7000LM	30C	40C	N/A	35C	35C	40C		
	9000LM	30C	40C		25C	30C	35C		
	10000LM	30C	40C		25C	30C	35C		
L96	6000LM	40C	40C	50C	35C	35C	40C		
	8000LM	30C	40C	50C	35C	35C	40C		
	10000LM	30C	40C	50C	25C	30C	35C		
	14000LM	40C	40C	N/A	35C	35C	40C		
	18000LM	30C	40C		25C	30C	35C		
	20000LM	30C	40C		25C	30C	35C		

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RRL - RELOC®-Ready Luminaire

- RRL connectors can be used with Quick-Flex®, System 820 and OnePass® systems.
- Load side of connector factory installed to luminaire.
- 4-pole mating connector with push-in terminations allows for simple installation.
- Touch-safe design on both halves meets UL/CSA requirement.
- Wiping contact design allows safe disconnect under load.



ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: RRLA

Series		Wiring instructions	
RRL	RELOC®-ready luminaire	A	Hot conductor wired to position #1 (phase A)
		B	Hot conductor wired to position #2 (phase B)
		C	Hot conductor wired to position #3 (phase C) [1]

Compatible RELOC® Cables for Industrial Luminaires (ordered and shipped separately)



OCS



OCU



OD



DC



PT

Notes

1 C, ABE, and C12S options are not used with Quick-Flex QFC, QSFC, QPT, and QD.

PLUG-IN WIRING INFORMATION

Advanced plug-in system with two-circuit capability. Available on industrial and strip products and a variety of architectural products mounted in continuous rows. PLR22 (2-circuit) and crossover harness switches hot circuit serving next fixture in row. Reduces fixture types on job for alternating circuit applications (see example below.)

Easy one-step installation, saves up to 35% on labor costs. Expanded switching flexibility helps save energy.

Rows can be 50% longer with two-circuit systems. Polarized, lock-together nylon connectors prevent miswiring in the field. #12 THHN conductor, rated 600V, 90°C. White neutral wire included. Grounding accomplished by fixture in-row connectors.

CSA certified systems available with up to 2 circuits. G ground required.

Not for use with dedicated emergency circuits.

Note: Specifications subject to change without notice.



Wiring

PLR

Advanced 1 or 2-Circuit Plug-In

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Series	Number of hot wires		Branch circuits (PLR2A / PLR2B Only)				Dimming		Ground	
PLR22	(blank)	Not required for PLR22	(blank)	Not required for PLR22			(blank)	No Dimming	G	Ground (required)
PLR	1	Black	(blank)	Not required for PLR1			(blank)	No Dimming	G	Ground (required)
	2	Black and red	**Circuits to which driver is connected**		**Battery charging circuit (must be unswitched)**		LV	Low-voltage Dimming	G	Ground (required)
			(blank)	Not required for PLR22	(blank)	No battery charging circuit				
			A	Black wire	ELA	Battery pack wired to black wire				
			B	Red wire	ELB	Battery pack wired to red wire				

Typical Applications

Notes:

When specifying PLR1, you will not specify A or B as there is only a single hot wire which would be black in color.

- Multiple-circuit and single-circuit for longer continuous rows
- Multiple-circuit with alternating fixtures on separate circuits and 2-circuit PLR22
- Multiple circuit with night-lights located along row as desired

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LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — For wall or ceiling mounting, vertical or horizontal. The WL combines digital LED lighting and controls technologies with high-performance optical design to offer the most advanced wall-mount luminaire for general ambient lighting applications. High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable.

CONSTRUCTION — Housing is roll formed from code-gauge steel.

Refractor is retained in die cast ends providing secure installation and easy maintenance.

Decorative die-cast end caps provide added durability.

Finish: End caps are post-painted in white polyester powder coat for smooth finish. Post-painted channel available by selecting PAF option.

OPTICS — Impact modified linear faceted refractor. Optically engineered for superior light distribution and maximum efficacy.

Crescent-shape linear faceted refractor system obscures and integrates individual LED images and uniformly washes fixture surface with light.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000). The LEDs have a CRI of 82.

eldoLED driver options deliver choice of dimming range and choice for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Driver disconnect provided where required to comply with US and Canadian codes.

Optional nLight® embedded controls continuously monitor system performance and allow for constant lumen management function.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing energy waste created by the traditional practice of over-lighting.

SENSOR — Integrated sensor (individual control): Sensor Switch MSD7 (Passive Infrared (PIR)) integrated occupancy sensor photocell allows the luminaire to power off when the space is unoccupied. See page 4 for more details on the integrated sensor.

Integrated Sensor (nLight Wired Networking): The sensor is nLight-enabled, meaning it has the ability to communicate over an nLight network. When wired using CAT-5 cabling with other nLight-enabled sensors, power packs, or WallPods, an nLight control zone is created. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software. See page 4 for the nLight sensor options.

Interated Smart Sensor (nLight AIR Wireless Platform): The RES7 sensor is nLight AIR enabled, meaning it has the ability to communicate over the wireless nLight control platform. It is available with an automatic dimming photocell, and either a digital PIR or a dual technology occupancy sensor. It pairs to other luminaires and wall switches through our mobile app, CLAIRITY, which allows for simple sensor adjustment. See page 4 for more details on the Integrated Smart Sensor.

LISTINGS — CSA certified to meet U.S. and Canadian standards. Suitable for damp location.

Patents pending. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

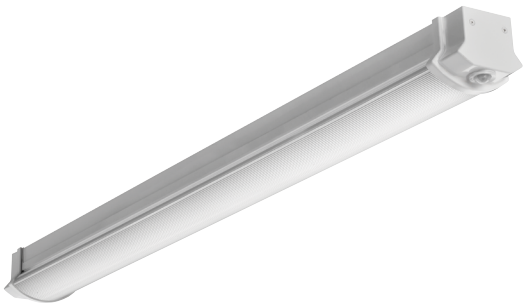
GOVERNMENT PROCUREMENT — BAA – Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also 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 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

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.

W SERIES

Wall bracket & Surface Mount LED



WL4

4'

LED

BAA BABA A+ CAPABLE DLC LISTED nLIGHT eldoLED

Embed nLight® controls today. Prepare for tomorrow.

Now	Tomorrow
User-friendly install	Scalability
Enhanced energy savings	Space configuration
Code compliance	Future-ready

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks when ordered with drivers marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

WL4 Wall Bracket & Surface Mount LED

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: WL4 30L EZ1 LP840

WL4					
Series	**Lumens** [1]	**Voltage**	**Driver**	**Color temperature**	**nLight Interface**
WL4 4' wall-mount LED	20L 2000 lumens 30L 3000 lumens 40L 4000 lumens	(blank) MVOLT 347 347V	EZ1 eldoLED dims to 1%, 0-10V EZB eldoLED dims to dark, 0-10V GZ1 Dims to 1% (0-10V dimming) [2] GZ10 Dims to 10% (0-10V dimming) [2] SLD Step-level dimming [3]	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	**nLight Wired** (blank) No nLight® interface N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power [4] N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power [4] **nLight Wireless** (blank) No nLight® interface NLTAIR2 nLight® Air Generation 2 enabled [5]

Control [6]	**Standby mode** [9]	**Options**	**Finish** [12]
nLight Wired (blank) No nLight control NES7 nLight® nES 7 PIR integral occupancy sensor [7] NESPDT7 nLight® nES PDT 7 dual technology integral occupancy control [7] NES7ADCX nLight® nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell [7] **nLight Wireless** RES7 nLight AIR control with PIR integral occupancy sensor and automatic dimming photocell RES7PDT nLight AIR control with PDT dual technology integral occupancy sensor and automatic dimming photocell **Individual Control** MSD7 Sensor Switch® MSD 7 PIR Integral Occupancy Control [8]	(blank) Fixture turns off when unoccupied DIM10 Fixture dims to approximately 10% light output when unoccupied DIM50 Fixture dims to approximately 50% light output when unoccupied NOC NOC Occupancy sensor disabled [10]	E7W 7W Emergency battery pack, constant power, Certified in CA Title 20 MAEDBS, User selectable Self-Diagnostic, AC Activate with Integral Test Switch (LINK) [11] E10W Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS, CA Title 20 MAEDBS, User selectable Self-Diagnostic, AC Activate with Integral Test Switch (LINK) [11] SC Surface conduit end cap provisions BAA Buy America(n) Act and/or Build America Buy America Qualified BDP Factory Installed Ballast Disconnect Plug [13]	(blank) White PAF Paint After Fabrication White

Notes
1. Approximate lumen output.
2. Not available with any Controls or sensor options.
3. Not available with nLight Interface or Controls.
4. nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture
5. Must order with RES7, RES7PDT, or module. Only availble with EZ1 driver.
6. See sensor options on page 4.
7. Requires N80, N100, N80EMG, or N100EMG.
8. Not available with nLight options or EZB.
9. Not available with nLight Wireless sensor options.
10. Can only be ordered in conjunction with EZ1, NLTAIR2, RES7/RES7PDT. Occupancy sensor disabled at factory but can be re-enabled upon commissioning.
11. Not available with 347V.
12. For additional paint finishes, refer to Architectural Colors.
13. Not available with E10WLCP.

COMMERCIAL INDOOR: One Lithonia Way Conyers, GA 30012 Phone: 1-800-705-SERV (7378) www.lithonia.com
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nLight® Wired Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 RJB / nCM PDT 9 RJB
On/Off & raise/lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM10 RJB / nCM PDT 10 RJB
Graphic touchscreen	nPOD GFX [color]	Wall switch with raise/lower	nWSX PDT LV DX [color]
Photocell controls	**Model number**	**Cat-5 cable (plenum rated)**	**Model number**
Full range dimming	nCM ADCX RJB	10' cable	CAT5 10FT J1
		30' cable	CAT5 30FT J1

nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.

Wall switches	Model number
On/Off single pole	rPODB [color] G2
On/Off two pole	rPODB 2P [color] G2
On/Off & raise/lower single pole	rPODB DX [color] G2
On/Off & raise/lower two pole	rPODB 2P DX [color] G2
On/Off & raise/lower single pole	rPODBZ DX WH G2

ORDERING INFORMATION

rCMS **Example:** RCMS PDT 10 AR G2

Series/Detection	Occupancy Detection	Lens (Required)	Operating Mode	Generation
RCMS nLight AIR occupancy and daylight sensor	(blank) PIR Detection PDT Dual Tech PIR/ Microphonics	10 Large Motion/Extended Range 360˚ 9 Small Motion/Extended Range 360˚ 6 High Bay 360˚ Lens	(blank) None AIR Auxiliary Relay	G2 Generation 2 compatibility

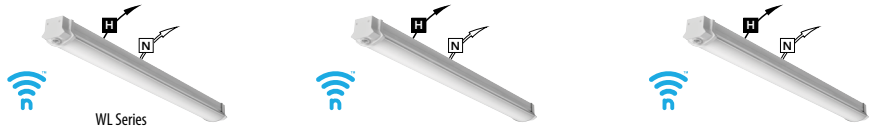


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nLight Platform

nLight embedded fixtures offer:	Customers get:
Manual Dimming	Convenience and visual comfort for occupants
Motion Sensing and/or Daylight Harvesting	Energy savings and code compliance
Fixture or Group Level Control	Ability to configure lighting to the space requirements
Flexibility	Ease of fixture moves, adds and changes
Wireless Wall Switch (nLight AIR Only)	Ease and flexibility of placement
Astronomical and Time of Day Scheduling	Energy savings and building security
Scalable Solution	nLight controls to grow with your business
Future-Ready	nLight platform to set foundation for future upgrades and capabilities

nLight Air Wireless

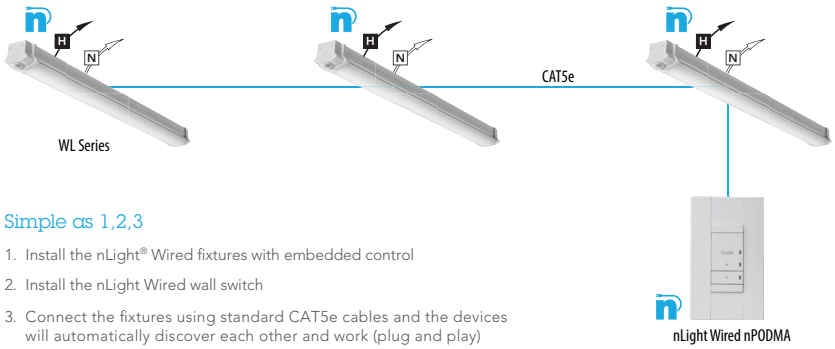


Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome



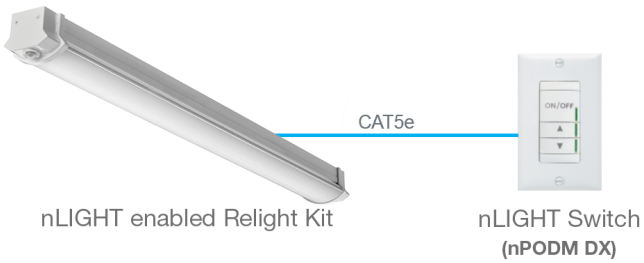
nLight Wired Networking



Simple as 1,2,3

1. Install the nLight® Wired fixtures with embedded control
2. Install the nLight Wired wall switch
3. Connect the fixtures using standard CAT5e cables and the devices will automatically discover each other and work (plug and play)

Basic nLight Zone



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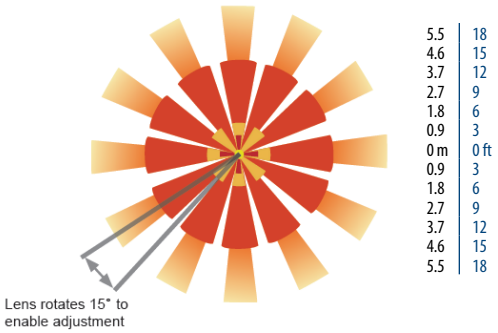
WL4 Wall Bracket & Surface Mount LED

Sensor Options					
Option	Automatic Dimming Photocell	Occupancy Sensing		nLight Wired Networking	nLight AIR Networking
		PIR	PDT		
MSD7		X			
NES7		X		X	
NES7ADCX	X	X		X	
NESPDT7			X	X	
RES7	X	X			X
RES7PDT	X	X	X		X

Sensor Coverage Pattern
Mini 360° Lens

- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor

9 FT Mounting



Integrated Sensor with Individual Control

The MSD7 PIR occupancy sensor is ideal for areas without obstructions and where daylight harvesting may be desired. Suggested applications include, but not limited to, hallways, corridors, storage rooms, and breakrooms or other areas where people are typically moving.

nLight Wired Networking

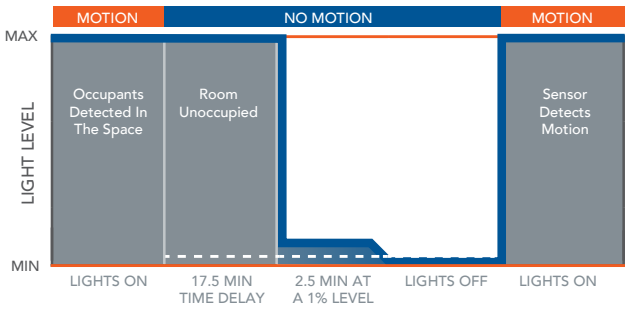
The nES 7 is ideal for small rooms without obstructions or areas with primarily walking motion. Ideal areas include hallways, corridors, storage rooms, and breakrooms. Additionally, the NES7ADCX includes an integrated photocell, which enables daylight harvesting controls.

For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy.

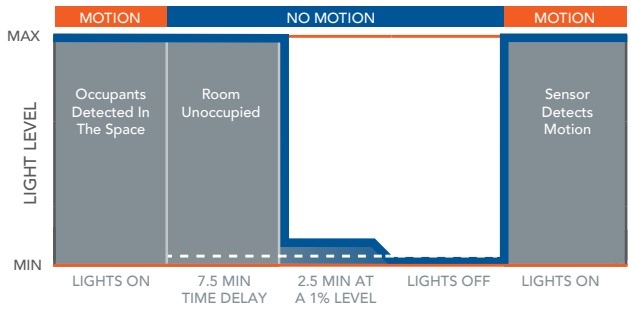
nLight AIR Wireless

nLight AIR is the ideal solution for retrofit or new construction spaces where adding additional wiring can be labor intensive and costly. nLight AIR is available with or without an integral sensor. The integrated RES7 or RES7PDT smart sensors are part of each luminaire in the nLight AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application.

Sequence of Operation



Sequence of Operation



*The presetting on the automatic dimming photocell is 5fc.

COMMERCIAL INDOOR: One Lithonia Way Conyers, GA 30012 Phone: 1-800-705-SERV (7378) www.lithonia.com
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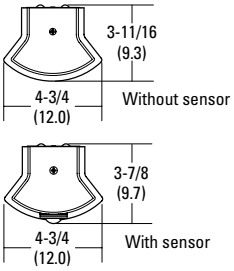
Performance Data			
Lumen package	**Input watts**	**Lumens**	**LPW**
20L LP830	18.7	2050	110
20L LP835	18.7	2152	115
20L LP840	18.7	2255	121
20L LP850	18.7	2410	129
30L LP830	28.2	2952	105
30L LP835	28.2	3095	110
30L LP840	28.2	3251	115
30L LP850	28.2	3239	115
40L LP830	39.5	3927	99
40L LP835	39.5	4124	104
40L LP840	39.5	4325	110
40L LP850	39.5	4571	116

DIMENSIONS

All dimensions are inches (centimeters) unless otherwise noted.

Specifications

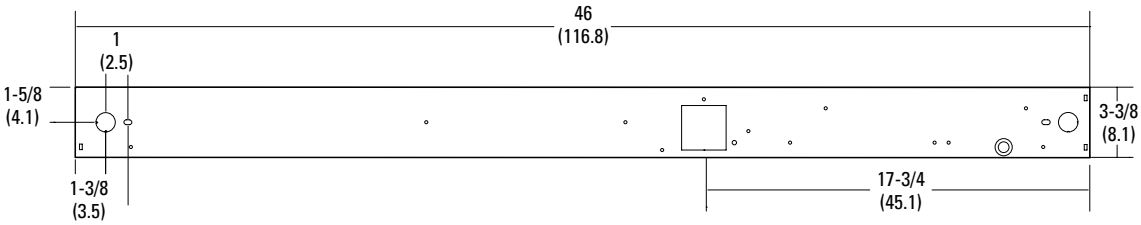
Length: with sensor - 50-15/16 (129.40)
without sensor - 46-13/16 (118.90)
Height: with sensor - 3-7/8 (9.7)
without sensor - 3-11/16 (9.3)
Width: 4-3/4 (12.1)



How to Calculate Estimated Lumens in Emergency Mode
Use the formula below to estimate the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Ouput power of emergency driver. P = 10W for E10WLCP option.
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

MOUNTING DATA

For unit installation; surface ceiling or wall mounting.



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IK10+ Series - High **Lumen** Family - Specification Sheet

The LUX IK10+ series features COMPETITIVE EFFICACY across a BROAD LUMEN RANGE We build the IK10+ from durable 6463 EXTRUDED ALUMINUM making it beautiful while maintaining terrific STABILITY and LONGEVITY



Performance

- Lumen output: **8,700 up to 200,000 lumens, approx.**
- Efficacy: **Up to 166 Lumens per Watt**
- L_{70} (per TM-21): **72,000 Hours**
- L_{70} (calculated): **147,000 Hours**
- Ambient Temp. Rating: **-40°F to 140°F (-40°C to 60°C)**
  Ambient temperature rating varies for auxiliary components
- Surge Protection: **6kV (10kV Option Available)**

Construction

- Extruded 6463 aluminum construction
- Stainless-steel hardware
- Bright dip anodized fixture body
- Isolated driver channels
- Thermally independent heat sink LED bars

Listing and Ratings

- UL 1598 for Dry, Damp, and Wet Locations
- ARRA/BAA Compliant (Made in America)
- BABA Compliant Options Available, Consult Factory
- IP55 Rated
- UL EPH Listed - NSF Rated
- 3G Vibration Rated
- Exceeds IK10 impact rating with polycarbonate lens
- IK10 rating does not apply to acrylic lenses

Warranty

- 10-Year Warranty on fixture body
- 5-Year Warranty on electronics
- For special requests, contact Factory

Applications

- Gymnasiums/Sports Facilities
- Warehouses
- Manufacturing/Industrial
- Arenas/Fieldhouses
- Natatoriums
- Hangars

Installation

- Aircraft cable suspension
- Surface mounting
- Rigid pendant mounting (with or without powerfeed)
- Adjustable yoke mount
- Tandem mounting available
- Custom mounts available, contact Factory

Optics

- Wide 120° beam angle LEDs
- Optional narrow optic for aisle or racking applications
- LED bars are rotatable to allow for custom distributions
- Diffusing lens available in clear and visually comfortable white
- Acrylic and polycarbonate lens materials available
- Lens offers up to 10% uplight

QuickShip®

IK10+ Quick Ship Available
Visit: www.luxdynamics.com

MADE IN THE USA · BUY AMERICAN BAA COMPLIANT · ARRA · c UL us · DLC QPL LISTED · IP55 · Natatorium Grade · WET LOCATION · IK10 · VIBRATION RATING 3G · UL LISTED EPH

IK10+ Series - High **Lumen** Family

LUX dynamics

Example Catalog Number:

L	3	D	A	850	2	U10

	Delivered lumens with 5000K color / Standard Distribution / CA lens	Some options may require additional driver channels in order to function. Consult Factory.	Defines the order of channels and BARs in the fixture frame. Please see configuration chart on specification sheet.	DLC listing for 850 and 840 color temperature. Other color temperatures available. Consult factory.	Typical fixture lengths shown below. Dimensions shown on pages 5 and 6. Fixture length affects lumen output.	Other driver options available. Consult Factory.
Series	**Number of BARS** L series only	**Number of Channels**	**Fixture Configuration**	**CRI / CCT**	**Length**	**Voltage and Dimming**
L High Lumen	**2' length** / **4' length** **1** 12,005lm / 24,010lm **2-18lm** 18,397lm / N/A **2-36lm** N/A / 36,794lm **2** 23,837lm / 47,674lm **3-30lm** 31,397lm / N/A **3** 35,249lm / 70,498lm **4** 47,237lm / 94,474lm **5** 58,857lm / 117,714lm **6** 71,151lm / 142,302lm **7** 83,182lm / 166,364lm **8** 95,538lm / 191,076lm	**S** Single **D** Double **T** Triple **Q** Quad	**A** **B** **C** **...** **A** defines standard configuration.	865 80CRI 6500K 857 80CRI 5700K **850** 80CRI 5000K **840** 80CRI 4000K **835** 80CRI 3500K 830 80CRI 3000K 827 80CRI 2700K 950 90CRI 5000K 940 90CRI 4000K 935 90CRI 3500K 927 90CRI 2700K **TW*** Tunable White **RGBW*** RBG with XXX GREYED options not stocked and may need additional lead time *Options significantly decrease lumen output, contact Factory for more information	**2** 2' (24.75") Standard (24.14") Narrow **4** 4' (47.81") Standard (46.34") Narrow	**U10** 120-277V 0-10V dimming 10% min. **U1** 120-277V 0-10V dimming 1% min. **H10** 347/480V 0-10V dimming 10% min. **H1** 347/480V 0-10V dimming 1% min. **DALI** 120-277V DALI control **DMX*** 120-277V DMX control **DP10** 277-480V 0-10V dimming 10% min. **Dimming curves and other operating characteristics may vary between models** *Option significantly decreases lumen output, contact Factory for more information

Some CRI, CCT and other output variations may affect DLC listing; contact LUX for further information.

Options and Accessories

Distribution

(leave blank) General Distribution
N Narrow optics

Narrow optic options vary
See page 6 and 8 for all narrow optic options

Lensing

(leave blank) No Lensing, bare LEDs
CA Clear acrylic diffuse lens
WA White acrylic diffuse lens
CP Clear polycarbonate diffuse lens
WP White polycarbonate diffuse lens

"2" or "4" denotes fixture length
Recommended (leave blank) with N distribution option
Recommended WA or WP options for visual comfort
DLC listing for CA, CP, and (leave blank) options

Lumen/Wattage Output

CFO Custom fixture output (specify custom lumen output or wattage lower than standard)

Direction of Light

(leave blank) BARs aimed down
I BARs aimed up
C Custom aiming

Consult with Factory for option "C"

BAR Locking

(leave blank) BARs fixed
R BARs rotatable (Not suitable for WET locations)

Recommended FIXED (BLANK) in high-abuse environments

Channel Access

T Lid opens from above fixture
B Lid opens from below fixture

Some options, including controls and mounting types, may require specific access, consult Factory for further information

Cord

(leave blank)	No cord provided	
3/10	3-wire, 10'cord	Standard white
4/10	4-wire, 10'cord	Standard white
5/10	5-wire, 10'cord	Standard white
6/10	6-wire, 10'cord	Standard white

Other cord lengths and multi-circuit wiring available
Cord routed through fixture endcap unless otherwise specified
1st digit: Number of wires, including ground, available from 3 through 6
2nd digit: Overall length, including strips, available from 10' through 30'

Emergency

E10 10-watt integral emergency battery (CA Title-20 compliant)
E15 15-watt integral emergency battery (CA Title-20 compliant)
E20 20-watt integral emergency battery (CA Title-20 compliant) not available on all configurations, consult Factory
E20R 20-watt non-integral emergency battery (CA Title-20 compliant) **must be field-installed**
E30R 30-watt non-integral emergency battery (CA Title-20 compliant) **must be field-installed**

Remote Mounting

(leave blank) Standard integral driver(s)
RMS Remote mount driver(s) - surface mount
RMC Remote mount driver(s) - cable mount
RNK Remote mount driver(s) - no enclosure kit provided

Restrictions may apply for certain applications, consult Factory

Options and Accessories Continued

Mounting

(leave blank)	No mounting hardware provided
10Y	Y-hanger AC cable up to 11' length, snap hook
4P10	4-point AC cable up to 10' length, hook
4P10S	Stainless steel 4-point AC cable up to 10' length, hook
SPM	Adapter to suspend luminaire below existing stem
MH1	Myer's hub 1-point, 3/4" GRC adapter, Galv. Steel
MH2	Myer's hub 2-point, 3/4" GRC adapter, Galv. Steel
MH1S	Myer's hub 1-point, 3/4" GRC adapter, stainless-steel
MH2S	Myer's hub 2-point, 3/4" GRC adapter, stainless-steel
SM	Surface mount, no machining or hardware provided
SMH	Surface mount, incl. pre-machined mounting points
UM2	Unistrut mount, includes (2) points of mounting, suitable for mounting to single strut.
UM4	Unistrut mount, includes (4) points of mounting, suitable for mounting to (2) struts.
YK	Yoke mount, adjustable trunnion (Not suitable for WET locations)

- Mounting via Aircraft Cable suitable for Static Loads only. If fixtures are subject to movement or mounting substrate is prone to instability, rigid mounting is required. Suitable mounting styles include: MH1, MH2, MH1S, MH2S, SM, SMH, UM2, UM4, AND YOKE (YK).
- For MH mounting options with cord, cord installed in fixture endcap. Alternate cord placement available, contact Factory.
- For MH mounting options, not all fixtures are balanced, contact Factory for swivel-mounting options.
- Some mounting options may require specific channel access.
- Additional cable lengths available, consult Factory

Finish

(leave blank)	Standard natatorium-grade bright dip anodized aluminum and green hanging brackets, shown on specification sheet
M	Silver stainless-steel hanging brackets (no green). Standard bright dip anodized aluminum body
PC	Custom color by powdercoat. Must specify RAL number and components to be finished
BLKG	Glossy black finish on all components
BLKM	Matte black finish on all components
AND	Anodize color finish, available on 2' fixtures only, consult Factory

Custom color anodized aluminum available in 2' configurations, consult Factory.

Controls

OC	Integral on/off occupancy sensor (120-277V)
DO	Integral high/low/off occupancy and daylight harvesting sensor (120-277V)
OCKH	High voltage (347/480V) knockout-mounted on/off occupancy sensor, **not installed**
DOKH	High voltage (347/480V) knockout-mounted high/low/off occupancy and daylight harvesting sensor, **not installed**
Wireless Controls	Multiple wireless control systems available. Contact Factory for options and details

LUX is controls-agnostic and can use most requested control systems

Application (Select all that apply)

GEN	General applications *(Not rated for WET, NSF, or high abuse environments)*
WET	Wet location *(Includes conformal coated LED modules, HO5)*
COR*	Caustic/natatorium environments *(Includes conformal coated LED modules, HO5)*
NSF	EPH rated for food-safe applications
TC	Tennis court *(Polycarbonate lensing recommended)*
MFG	Manufacturing or industrial
WHS	Warehousing or storage
HNG	Hangar
GYM	Gymnasium or sports court *(Polycarbonate lensing required)*
AFH	Arena or fieldhouse *(Polycarbonate lensing recommended)*
ARCH	Architectural *(White lensing recommended)*
ICE	Ice rink *(Polycarbonate lensing recommended)*
GAR	Garage or canopy
FRZ	Freezer or cold storage
HT	High temp, 55°C/131°F or higher *(E-Series recommended)*
BABA	Build America Buy America (BABA) Compliant *(Not all configurations meet BABA, consult Factory)*

*COR application not suitable for all caustic environments, consult Factory

Lensing and Bottom Access required for WET, COR, and EPH/NSF applications

Consult Factory for cost adders for WET, COR and EPH/NSF applications

2' Performance - Wide Distribution

(Data Based on 5000K and 80CRI - Static White ONLY)

No Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX	12,522	78	161
	L-2-18lm-XX-850-2-XXX	19,190	116	166
	L-2-XX-850-2-XXX	24,864	154	162
	L-3-30lm-XX-850-2-XXX	32,750	201	163
	L-3-XX-850-2-XXX	36,768	233	158
	L-4-XX-850-2-XXX	49,272	309	159
	L-5-XX-850-2-XXX	61,393	388	158
	L-6-XX-850-2-XXX	74,216	465	160
	L-7-XX-850-2-XXX	86,766	544	159
	L-8-XX-850-2-XXX	99,654	618	161

CA (Clear Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-CA	12,005	78	154
	L-2-18lm-XX-850-2-XXX-CA	18,397	116	159
	L-2-XX-850-2-XXX-CA	23,837	154	155
	L-3-30lm-XX-850-2-XXX-CA	31,397	201	156
	L-3-XX-850-2-XXX-CA	35,249	233	151
	L-4-XX-850-2-XXX-CA	47,237	309	153
	L-5-XX-850-2-XXX-CA	58,857	388	152
	L-6-XX-850-2-XXX-CA	71,151	465	153
	L-7-XX-850-2-XXX-CA	83,182	544	153
	L-8-XX-850-2-XXX-CA	95,538	618	155

CP (Clear Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-CP	11,080	78	142
	L-2-18lm-XX-850-2-XXX-CP	16,979	116	146
	L-2-XX-850-2-XXX-CP	22,000	154	143
	L-3-30lm-XX-850-2-XXX-CP	28,977	201	144
	L-3-XX-850-2-XXX-CP	32,533	233	140
	L-4-XX-850-2-XXX-CP	43,597	309	141
	L-5-XX-850-2-XXX-CP	54,321	388	140
	L-6-XX-850-2-XXX-CP	65,668	465	141
	L-7-XX-850-2-XXX-CP	76,772	544	141
	L-8-XX-850-2-XXX-CP	88,176	618	143

WA (White Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-WA	11,008	78	141
	L-2-18lm-XX-850-2-XXX-WA	16,869	116	146
	L-2-XX-850-2-XXX-WA	21,858	154	142
	L-3-30lm-XX-850-2-XXX-WA	28,790	201	143
	L-3-XX-850-2-XXX-WA	32,322	233	139
	L-4-XX-850-2-XXX-WA	43,314	309	140
	L-5-XX-850-2-XXX-WA	53,970	388	139
	L-6-XX-850-2-XXX-WA	65,243	465	140
	L-7-XX-850-2-XXX-WA	76,275	544	140
	L-8-XX-850-2-XXX-WA	87,605	618	142

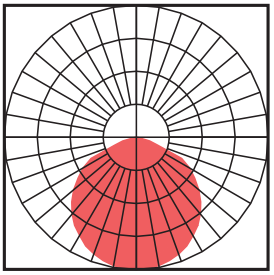
WP (White Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-WP	8,673	78	111
	L-2-18lm-XX-850-2-XXX-WP	13,291	116	115
	L-2-XX-850-2-XXX-WP	17,222	154	112
	L-3-30lm-XX-850-2-XXX-WP	22,684	201	113
	L-3-XX-850-2-XXX-WP	25,467	233	109
	L-4-XX-850-2-XXX-WP	34,128	309	110
	L-5-XX-850-2-XXX-WP	42,523	388	110
	L-6-XX-850-2-XXX-WP	51,405	465	111
	L-7-XX-850-2-XXX-WP	60,097	544	110
	L-8-XX-850-2-XXX-WP	69,024	618	112

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

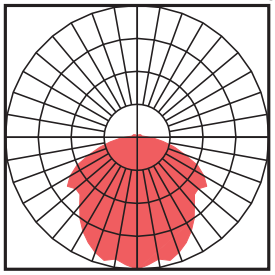
NL (No Lens)

standard 120° distribution achieved when using bare LEDs with no secondary optics
Includes 0% uplight component



Lensed (CA,CP, WA, or WP)

wide/diffused optic achieved using any of our standard lenses
Clear lens includes minimum 3.4% uplight
White lens includes minimum 10% uplight



Lumen Multipliers

Lens	
Standard = CA Lens	
NL	104.3%
CA (nominal)	100.0%
CP	92.3%
WA	91.7%
WP	72.2%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and CA Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
NL	1,855
CA	1,778
CP	1,641
WA	1,630
WP	1,285

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
NL	2,774
CA	2,659
CP	2,454
WA	2,438
WP	1,921

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
NL	3,709
CA	3,556
CP	3,282
WA	3,261
WP	2,569

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
NL	5,547
CA	5,318
CP	4,908
WA	4,876
WP	3,842

4' Performance - Wide Distribution

(Data Based on 5000K and 80CRI - Static White ONLY)

No Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX	25,044	156	161
	L-2-36lm-XX-850-4-XXX	38,379	232	166
	L-2-XX-850-4-XXX	49,728	307	162
	L-3-XX-850-4-XXX	73,535	466	158
	L-4-XX-850-4-XXX	98,544	619	159
	L-5-XX-850-4-XXX	122,786	776	158
	L-6-XX-850-4-XXX	148,433	930	160
	L-7-XX-850-4-XXX	173,532	1,089	159
	L-8-XX-850-4-XXX	199,308	1,236	161

CA (Clear Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-CA	24,010	156	154
	L-2-36lm-XX-850-4-XXX-CA	36,794	232	159
	L-2-XX-850-4-XXX-CA	47,674	307	155
	L-3-XX-850-4-XXX-CA	70,498	466	151
	L-4-XX-850-4-XXX-CA	94,474	619	153
	L-5-XX-850-4-XXX-CA	117,714	776	152
	L-6-XX-850-4-XXX-CA	142,302	930	153
	L-7-XX-850-4-XXX-CA	166,364	1,089	153
	L-8-XX-850-4-XXX-CA	191,076	1,236	155

CP (Clear Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-CP	22,160	156	142
	L-2-36lm-XX-850-4-XXX-CP	33,959	232	146
	L-2-XX-850-4-XXX-CP	44,000	307	143
	L-3-XX-850-4-XXX-CP	65,065	466	140
	L-4-XX-850-4-XXX-CP	87,194	619	141
	L-5-XX-850-4-XXX-CP	108,643	776	140
	L-6-XX-850-4-XXX-CP	131,336	930	141
	L-7-XX-850-4-XXX-CP	153,544	1,089	141
	L-8-XX-850-4-XXX-CP	176,351	1,236	143

WA (White Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-WA	22,016	156	141
	L-2-36lm-XX-850-4-XXX-WA	33,739	232	146
	L-2-XX-850-4-XXX-WA	43,715	307	142
	L-3-XX-850-4-XXX-WA	64,644	466	139
	L-4-XX-850-4-XXX-WA	86,629	619	140
	L-5-XX-850-4-XXX-WA	107,939	776	139
	L-6-XX-850-4-XXX-WA	130,485	930	140
	L-7-XX-850-4-XXX-WA	152,549	1,089	140
	L-8-XX-850-4-XXX-WA	175,209	1,236	142

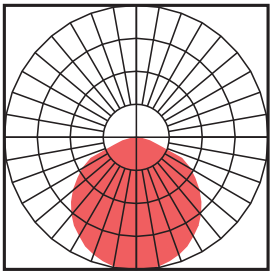
WP (White Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-WP	17,347	156	111
	L-2-36lm-XX-850-4-XXX-WP	26,583	232	115
	L-2-XX-850-4-XXX-WP	34,444	307	112
	L-3-XX-850-4-XXX-WP	50,933	466	109
	L-4-XX-850-4-XXX-WP	68,256	619	110
	L-5-XX-850-4-XXX-WP	85,046	776	110
	L-6-XX-850-4-XXX-WP	102,810	930	111
	L-7-XX-850-4-XXX-WP	120,195	1,089	110
	L-8-XX-850-4-XXX-WP	138,049	1,236	112

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

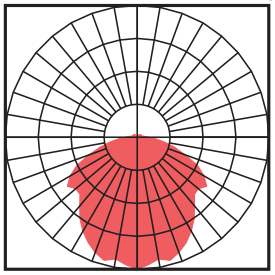
NL (No Lens)

standard 120° distribution achieved when using bare LEDs with no secondary optics
Includes 0% uplight component



Lensed (CA,CP, WA, or WP)

wide/diffused optic achieved using any of our standard lenses
Clear lens includes minimum 3.4% uplight
White lens includes minimum 10% uplight



Lumen Multipliers

Lens	
Standard = CA Lens	
NL	104.3%
CA (nominal)	100.0%
CP	92.3%
WA	91.7%
WP	72.2%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and CA Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
NL	1,855
CA	1,778
CP	1,641
WA	1,630
WP	1,285

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
NL	2,774
CA	2,659
CP	2,454
WA	2,438
WP	1,921

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
NL	3,709
CA	3,556
CP	3,282
WA	3,261
WP	2,569

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
NL	5,547
CA	5,318
CP	4,908
WA	4,876
WP	3,842

4' Performance - Narrow Optic

(Data Based on 5000K and 80CRI - Static White ONLY)

Narrow Optic with No Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N	24,806	156	159
	L-2-36lm-XX-850-4-XXX-N	38,014	232	164
	L-2-XX-850-4-XXX-N	49,612	307	161
	L-3-XX-850-4-XXX-N	74,418	466	160
	L-4-XX-850-4-XXX-N	99,224	619	160
	L-5-XX-850-4-XXX-N	124,031	776	160
	L-6-XX-850-4-XXX-N	148,837	930	160
	L-7-XX-850-4-XXX-N	173,643	1,089	159
	L-8-XX-850-4-XXX-N	198,449	1,236	161

Narrow Optic with CA (Clear Acrylic) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N-CA	22,964	156	147
	L-2-36lm-XX-850-4-XXX-N-CA	35,191	232	152
	L-2-XX-850-4-XXX-N-CA	45,928	307	149
	L-3-XX-850-4-XXX-N-CA	68,893	466	148
	L-4-XX-850-4-XXX-N-CA	91,857	619	148
	L-5-XX-850-4-XXX-N-CA	114,821	776	148
	L-6-XX-850-4-XXX-N-CA	137,785	930	148
	L-7-XX-850-4-XXX-N-CA	160,750	1,089	148
	L-8-XX-850-4-XXX-N-CA	183,714	1,236	149

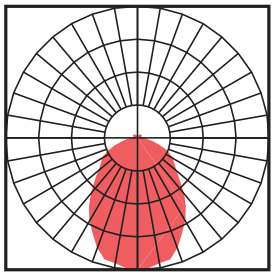
Narrow Optic with CP (Clear Polycarbonate) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N-CP	21,195	156	136
	L-2-36lm-XX-850-4-XXX-N-CP	32,479	232	140
	L-2-XX-850-4-XXX-N-CP	42,389	307	138
	L-3-XX-850-4-XXX-N-CP	63,584	466	137
	L-4-XX-850-4-XXX-N-CP	84,778	619	137
	L-5-XX-850-4-XXX-N-CP	105,973	776	137
	L-6-XX-850-4-XXX-N-CP	127,167	930	137
	L-7-XX-850-4-XXX-N-CP	148,362	1,089	136
	L-8-XX-850-4-XXX-N-CP	169,556	1,236	137

Optical Distribution Variations

NRW + Lens

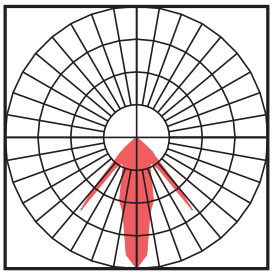
Medium distribution achieved using narrow optic in addition to any standard lens.

- Clear lens includes minimum 2.4% uplight
- White lens includes minimum 6% uplight



NRW Optic Only

Narrow optic achieved using a highly reflective parabolic reflector. Includes 0% uplight component



Lumen Multipliers

Lens	
Standard = N (narrow optic) + No Lens	
N-NL (nominal)	100.0%
N-CA	92.6%
N-CP	85.4%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and No Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N-NL	1,837
N-CA	1,761
N-CP	1,625

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N-NL	2,747
N-CA	2,634
N-CP	2,431

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N-NL	3,674
N-CA	3,522
N-CP	3,251

Field-Installable (Non-Integral) EM Options

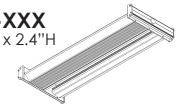
E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N-NL	5,494
N-CA	5,267
N-CP	4,861

2' Length
Wide Distribution ONLY

Standard Configurations

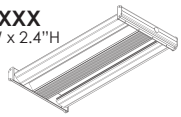
Part #
L-1-SA-XXX-2-XXX
- 24.75"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



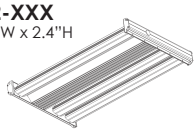
Part #
L-2-SA-XXX-2-XXX
- 24.75"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX
- 24.75"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



Part #
L-4-SA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-2-XXX
- 24.75"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



Part #
L-6-DA-XXX-2-XXX
- 24.75"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX
- 24.75"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX
- 24.75"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX
- 24.75"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-2-XXX
- 24.75"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



Part #
L-4-DA-XXX-2-XXX
- 24.75"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX
- 24.75"L x 36.18"W x 2.4"H
- Weight: 21 LBS

6 Bar
3 Channel

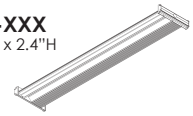


4' Length
All Distributions

Standard Configurations

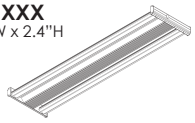
Part #
L-1-SA-XXX-4-XXX
- 47.81"L x 9.18"W x 2.4"H
- Weight: 10 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-4-XXX
- 47.81"L x 12.18"W x 2.4"H
- Weight: 14 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-4-XXX
- 47.81"L x 15.18"W x 2.4"H
- Weight: 18 LBS

3 Bar
1 Channel



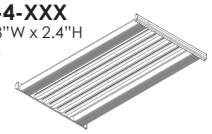
Part #
L-4-SA-XXX-4-XXX
- 47.81"L x 18.18"W x 2.4"H
- Weight: 22 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-4-XXX
- 47.81"L x 27.18"W x 2.4"H
- Weight: 32 LBS

5 Bar
2 Channel



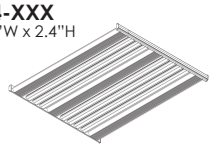
Part #
L-6-DA-XXX-4-XXX
- 47.81"L x 30.18"W x 2.4"H
- Weight: 34 LBS

6 Bar
2 Channel



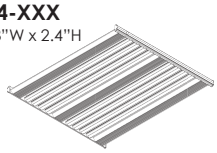
Part #
L-7-TA-XXX-4-XXX
- 47.81"L x 39.18"W x 2.4"H
- Weight: 44 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-4-XXX
- 47.81"L x 42.18"W x 2.4"H
- Weight: 48 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-4-XXX
- 47.81"L x 2.4"W x 9.18"H
- Weight: 10 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-4-XXX
- 47.81"L x 18.18"W x 2.4"H
- Weight: 20 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-4-XXX
- 47.81"L x 21.18"W x 2.4"H
- Weight: 24 LBS

3 Bar
2 Channel



Part #
L-4-DA-XXX-4-XXX
- 47.81"L x 24.18"W x 2.4"H
- Weight: 28 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-4-XXX
- 47.81"L x 36.18"W x 2.4"H
- Weight: 40 LBS

6 Bar
3 Channel



2' Performance - Narrow Optic (HO7) ONLY Offered with 840 and 850 Options

(Data Based on 5000K and 80CRI - Static White ONLY)

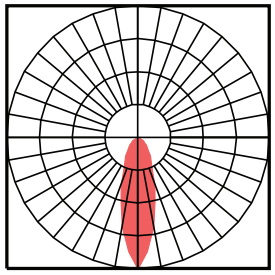
Injection-Molded Narrow Optic				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-N	10,304	68	153
	L-2-18lm-XX-850-2-XXX-N	17,852	116	154
	L-2-XX-850-2-XXX-N	20,609	135	153
	L-3-XX-850-2-XXX-N	30,914	200	155
	L-4-36lm-XX-850-2-XXX-N	35,704	232	154
	L-4-XX-850-2-XXX-N	41,218	270	153
	L-5-XX-850-2-XXX-N	51,522	338	153
	L-6-XX-850-2-XXX-N	61,828	400	155
	L-7-XX-850-2-XXX-N	72,131	473	153
	L-8-XX-850-2-XXX-N	82,436	540	153

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution

NRW Optic

Narrow optic achieved using a molded-acrylic, prismatic optic. Includes approximately 0% uplight.



Lumen Multipliers

CCT	
Standard = 5000K CCT	
5000K (nominal)	100.0%
4000K	100.0%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%

Emergency Battery Performance

(Data Based on 5000K and 80CRI)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N	1,577

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N	2,358

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N	3,153

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N	4,716

2' Performance - Narrow Optic (HO5) ONLY Offered with 835 and 90CRI Options

(Data Based on 3500K and 80CRI - Static White ONLY)

Narrow Optic with No Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N	12,042	78	154
	L-2-18lm-XX-835-2-XXX-N	18,453	116	159
	L-2-XX-835-2-XXX-N	24,084	154	157
	L-3-30lm-XX-835-2-XXX-N	30,798	201	153
	L-3-XX-835-2-XXX-N	36,125	233	155
	L-4-XX-835-2-XXX-N	48,167	309	156
	L-5-XX-835-2-XXX-N	60,209	388	155
	L-6-XX-835-2-XXX-N	72,251	465	155
	L-7-XX-835-2-XXX-N	84,293	544	155
	L-8-XX-835-2-XXX-N	96,334	618	156

Narrow Optic with CA (Clear Acrylic) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N-CA	11,544	78	148
	L-2-18lm-XX-835-2-XXX-N-CA	17,691	116	153
	L-2-XX-835-2-XXX-N-CA	23,089	154	150
	L-3-30lm-XX-835-2-XXX-N-CA	29,526	201	147
	L-3-XX-835-2-XXX-N-CA	34,633	233	149
	L-4-XX-835-2-XXX-N-CA	46,178	309	149
	L-5-XX-835-2-XXX-N-CA	57,722	388	149
	L-6-XX-835-2-XXX-N-CA	69,266	465	149
	L-7-XX-835-2-XXX-N-CA	80,811	544	148
	L-8-XX-835-2-XXX-N-CA	92,355	618	149

Narrow Optic with CP (Clear Polycarbonate) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N-CP	10,655	78	137
	L-2-18lm-XX-835-2-XXX-N-CP	16,328	116	141
	L-2-XX-835-2-XXX-N-CP	21,310	154	139
	L-3-30lm-XX-835-2-XXX-N-CP	27,250	201	136
	L-3-XX-835-2-XXX-N-CP	31,964	233	137
	L-4-XX-835-2-XXX-N-CP	42,619	309	138
	L-5-XX-835-2-XXX-N-CP	53,274	388	137
	L-6-XX-835-2-XXX-N-CP	63,929	465	138
	L-7-XX-835-2-XXX-N-CP	74,583	544	137
	L-8-XX-835-2-XXX-N-CP	85,238	618	138

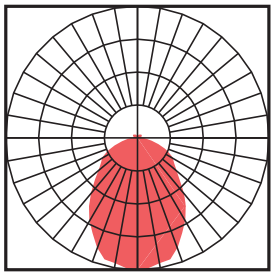
Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

NRW + Lens

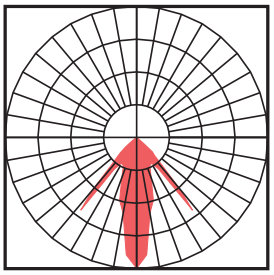
Medium distribution achieved using narrow optic in addition to any standard lens.

- Clear lens includes minimum 2.4% uplight
- White lens includes minimum 6% uplight



NRW Optic Only

Narrow optic achieved using a highly reflective parabolic reflector. Includes 0% uplight component



Lumen Multipliers

Lens	
Standard = N (narrow optic) + No Lens	
N-NL (nominal)	100.0%
N-CA	92.6%
N-CP	85.4%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 3500K, 80CRI and No Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N-NL	1,783
N-CA	1,710
N-CP	1,578

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N-NL	2,667
N-CA	2,557
N-CP	2,360

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N-NL	3,567
N-CA	3,420
N-CP	3,156

Field-Installable (Non-Integral) EM Options

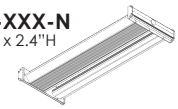
E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N-NL	5,334
N-CA	5,114
N-CP	4,720

2' Length Narrow Optic 840 and 850 Options ONLY

Standard Configurations

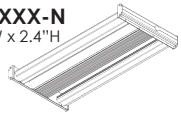
Part #
L-1-SA-XXX-2-XXX-N
- 24.14"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-2-XXX-N
- 24.14"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX-N
- 24.14"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



Part #
L-4-SA-XXX-2-XXX-N
- 24.14"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-2-XXX-N
- 24.14"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



Part #
L-6-DA-XXX-2-XXX-N
- 24.14"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX-N
- 24.14"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX-N
- 24.14"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX-N
- 24.14"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX-N
- 24.14"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-2-XXX-N
- 24.14"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



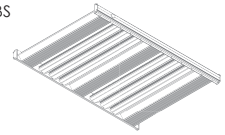
Part #
L-4-DA-XXX-2-XXX-N
- 24.14"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX-N
- 24.14"L x 36.18"W x 2.4"H
- Weight: 21 LBS

6 Bar
3 Channel

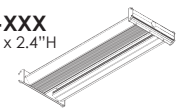


2' Length Narrow Optic 835 and 90CRI Options ONLY

Standard Configurations

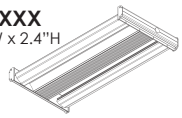
Part #
L-1-SA-XXX-2-XXX
- 24.75"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-2-XXX
- 24.75"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX
- 24.75"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



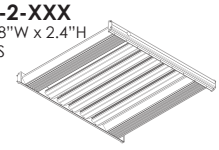
Part #
L-4-SA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



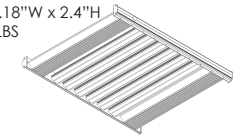
Part #
L-5-DA-XXX-2-XXX
- 24.75"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



Part #
L-6-DA-XXX-2-XXX
- 24.75"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX
- 24.75"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX
- 24.75"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX
- 24.75"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



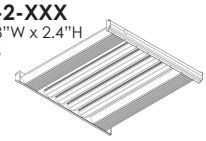
Part #
L-3-DA-XXX-2-XXX
- 24.75"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



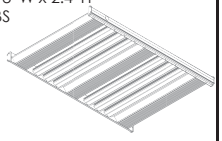
Part #
L-4-DA-XXX-2-XXX
- 24.75"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX
- 24.75"L x 36.18"W x 2.4"H
- Weight: 21 LBS

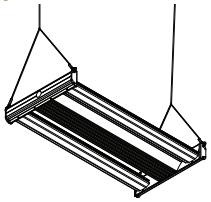
6 Bar
3 Channel



Mounting Options

Cable Mount

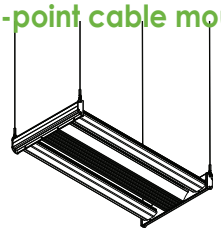
2-point Y-cable mount



Part Numbers:
10Y, 20Y, 30Y

Description:
- "10", "20", "30" represents length in feet
- Galvanized steel cable and hook
- Some configurations may be unbalanced, 4-point hanger recommended for unbalanced fixtures, contact Factory for more information

4-point cable mount

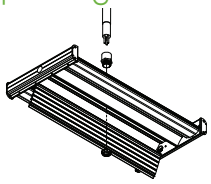


Part Numbers:
4P10, 4P20
4P10S, 4P20S

Description:
- "10", "20", "30" represents length in feet
- "S" in part number denotes natatorium-grade 316 stainless steel, recommended for natatoriums and other caustic environments

Stem Mount

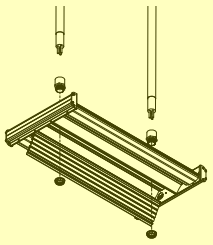
1-point rigid stem mount



Part Numbers:
MH1
MH1S

Description:
- 3/4" IP threaded hub to mount to 3/4" conduit or stem (other hub diameters available, contact factory for options)
- Galvanized steel is standard, for stainless steel use "s" in part number
- Stem/threaded rod not provided
- Not available on all models and options
- Cord installed through fixture end cap when ordered with stem mount option
- Cord NOT installed when power feed is routed through stem

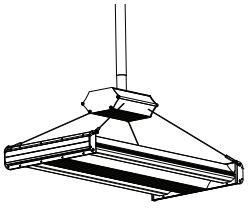
2-point rigid stem mount



Part Numbers:
MH2
MH2S

Description:
- 3/4" IP threaded hub to mount to 3/4" conduit or stem (other hub diameters available, contact factory for options)
- Galvanized steel is standard, for stainless steel use "s" in part number
- Stem/threaded rod not provided
- Not available on all models and options
- Cord installed through fixture end cap when ordered with stem mount option
- Cord NOT installed when power fees is routed through stem

Threaded junction box for single point mount



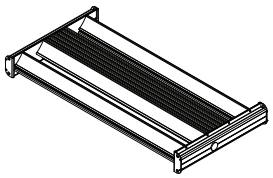
Part Number for 3' Cable Lengths:
SPM3'

Part Number for 5' Cable Lengths:
SPM5'

Description:
- 3/4" IP threaded hub attached to 3" x 6" x 6" junction box with (4) fixed-length cables (3' and 5') for fixture mounting
- Power cord ordered separately

Surface Mount

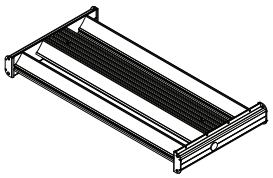
Surface mounting (no additional hardware or mounting holes supplied)



Part Number:
SM

Description:
- Fixture may be anchored flush to any suitable substrate through electronics channel
- No additional hanging hardware provided

Surface mount - 3/8" mounting holes supplied

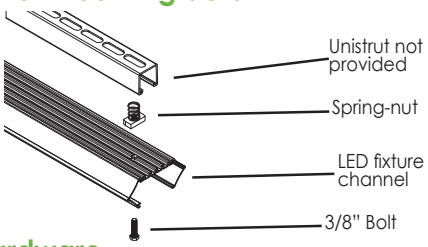


Part Number:
SMH

Description:
- Fixture may be anchored to any suitable substrate through electronics channel
- (2) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

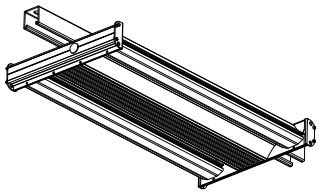
Unistrut Mount

Unistrut mounting detail



2-point Unistrut hardware

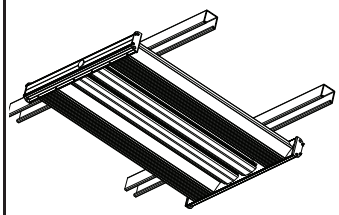
Part Number: **UM2**



Description:
- Unistrut hardware includes (2) sets of 3/8" diameter spring-nuts, bolts, mounting holes provided
- (2) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

4-point Unistrut hardware

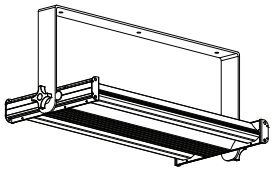
Part Number: **UM4**



Description:
- Unistrut hardware includes (4) sets of 3/8" diameter spring-nuts, bolts, mounting holes provided
- (4) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

Yoke Mount

Yoke Mount

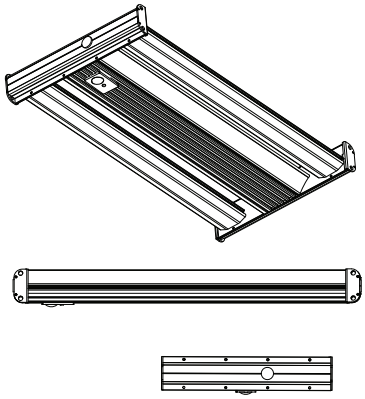


Part Number:
YKx ("x" to change based on fixture)

Description:
- Adjustable or static yoke mounts allows for ceiling or wall mounting, contact Factory
- Power cord ordered separately
- Yoke mount is installed on the fixture before shipping
- Hardware to secure mount to structural surface NOT provided
- Not suitable for WET locations

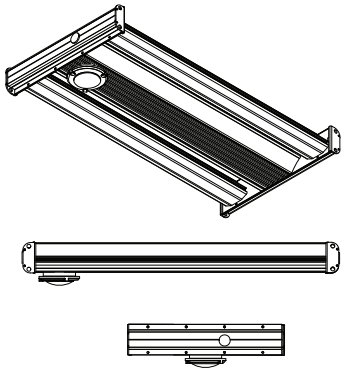
120-277V Sensors

OC



OC	
120V-277V Occupancy Sensor (On/Off)	
Control Type	Occupancy-PIR (line voltage)
Ambient Temperature	0°C to 55°C
Mounting Height	15' to 40'
Coverage Area	Suggested: 1 to 1 spacing to mounting height ratio

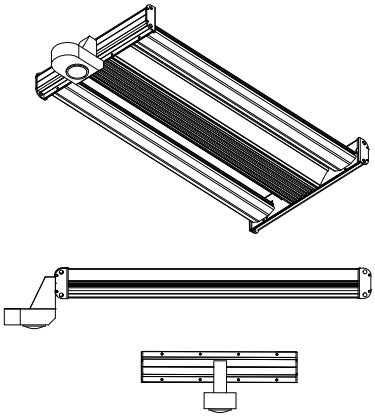
DO



DO	
120V-277V Daylight Harvesting and Occupancy Sensor (On/Off and 0-10V Dimming)	
Control Type	Occupancy-PIR (line voltage & 0-10V) DLH-Photocell (line voltage & 0-10V)
Ambient Temperature	-40°C to 70°C
Mounting Height	8' to 40'
Coverage Area	100' diameter (@ 40' Mounting Height)

347-480V Sensor

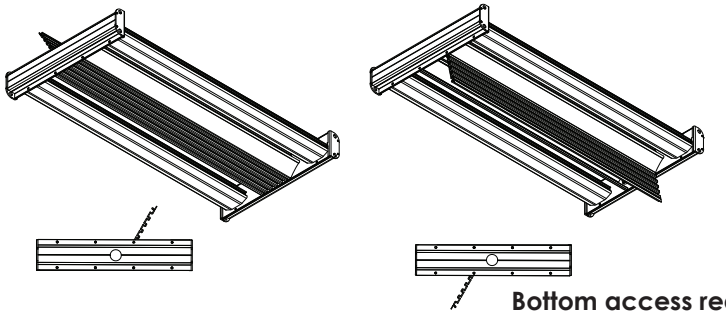
OCKH/DOKH



OCKH	
347V-480V Occupancy Sensor (On/Off)	
Control Type	Occupancy-PIR (line voltage & 0-10V)
Ambient Temperature	-10°C to 60°C
Mounting Height	15' to 45'
Coverage Area	15' to 20' radial coverage (30'-40' diameter) typical

DOKH	
347V-480V Daylight Harvesting and Occupancy Sensor (On/Off and 0-10V Dimming)	
Control Type	Occupancy-PIR (line voltage & 0-10V) DLH-Photocell (line voltage & 0-10V)
Ambient Temperature	-10°C to 60°C
Mounting Height	15' to 45'
Coverage Area	15' to 20' radial coverage (30'-40' diameter) typical

Electronics Channel Access

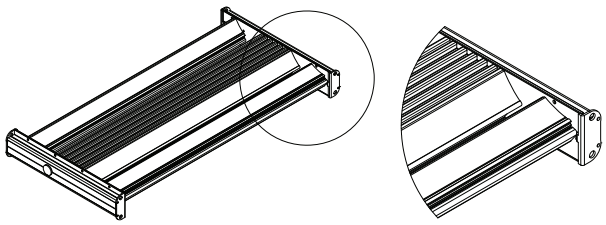


Top Access: Channels open from above the fixture. The driver chamber can be accessed as if it were sitting on a table.
To specify "Top Access", use part number:
"T"

Bottom Access: Channels open from below the fixture. The driver chamber is accessed from above the installer.
To specify "Bottom Access", use part number:
"B"

Bottom access required for wet location

Independently Rotatable LED Bars



Rotatable Bars: Each LED bar can be rotated independently in manufacturing process or in the field. Contact factory for more options.

To specify "Rotatable Bars", add part number:
"R"

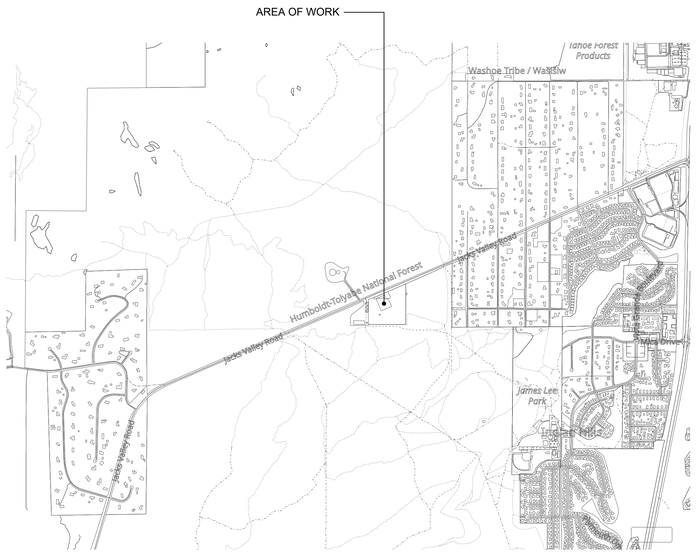
Fixed BARs required for gym and high abuse environments

DCSD JACKS VALLEY ELEMENTARY SCHOOL LIGHTING RETROFIT

701 JACKS VALLEY RD.
CARSON CITY, NV 89705

100% CONSTRUCTION DOCUMENTS
07/15/2025

SITE MAP



OWNER

SCOTT MCCULLOUGH
DOUGLAS COUNTY SCHOOL DISTRICT PROJECT MANAGER
SMCCULLOUGH@DOUGLASNV.US
775-790-5212

SCOPE OF WORK

1. REPLACE ALL EXISTING LIGHTING FIXTURES SHOWN WITH NEW LIGHTING FIXTURES AS SCHEDULED ONE FOR ONE.
2. PROVIDE ALL NEW SUPPORTS, SPLAY WIRES AND ANCHORS APPROPRIATE FOR THE EXISTING CEILING AND SUPPORT TYPES.
3. INTERCEPT AND EXTEND ALL LIGHTING CIRCUITS AND CONTROLS TO NEW LIGTING FIXTURES SHOWN.
4. ALL DAMAGED CEILING TILES SHALL BE REPLACED WITH NEW OF EXACT TYPE AS EXISTING.
5. EXISTING SWITCHES, EMERGENCY LIGHTING ("BUG EYES"), OCCUPANCY SENSORS AND EXTERIOR LIGHTING SHALL REMAIN IN PLACE AND BE PROTECTED THROUGHOUT CONSTRUCTION. NO MODIFICATIONS TO THESE SYSTEMS UNLESS OTHERWISE NOTED.

CONSULTANT

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING
681 Sierra Rose Dr., Ste B | Reno, NV 89511 | 775.826.9010
4601 DTC Blvd., Ste 740 | Denver, CO 80237 | 720.481.3290
8112 Maryland Ave., Ste 400 | Clayton, MO
pkelectrical.com

DRAWING INDEX

SHEET	DESCRIPTION	
G0.1	COVER SHEET	●
E0.1	ELECTRICAL LEGEND	●
E0.2	ELECTRICAL SPECIFICATIONS	●
E0.3	DETAILS	●
E1.1	PARTIAL LIGHTING DEMOLITION PLAN	●
E1.2	PARTIAL LIGHTING DEMOLITION PLAN	●
E2.1	PARTIAL NEW LIGHTING PLAN	●
E2.2	PARTIAL NEW LIGHTING PLAN	●
	TOTAL SHEETS IN ISSUE:	8

APPLICABLE CODES AND REGULATIONS

2018 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
CURRENT NORTHERN NEVADA AMENDMENTS

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING
681 Sierra Rose Drive, Suite B | Reno, NV. 89511 | 775.826.9010
4601 DTC Boulevard, Suite 740 | Denver, CO 80237 | 720.481.3290
pkelectrical.com

JOSEPH E. GAMSBY — STATE OF NEVADA — PROFESSIONAL ENGINEER — ELECTRICAL — No.21011 — 07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL
LIGHTING RETROFIT
701 JACKS VALLEY RD.
CARSON CITY, NV 89705

REVISIONS

SHEET TITLE
COVER SHEET

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

G0.1

PLEASE RECYCLE

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title:
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Elementary School (School/University)	42049	0.81	34060
		Total Allowed Watts =	34060

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Elementary School (School/University 42049 sq ft.)				
LU22A-840MO: Other:	1	117	31	3604
LU24A-840LO: Other:	1	534	24	12976
CLX L48 3000LM HEF: Other:	1	60	18	1110
WL4 40L LP840: Other:	1	21	40	830
L-1-SA-840-4-U10: Other:	1	24	156	3742
EVOBVR 40/20 AR MWD LD CGL: Other:	1	1	32	32
			Total Proposed Watts =	22293

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

LIGHTING FIXTURE SCHEDULE

LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION. THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS.

LIGHTING SYSTEM FOOTCANDLE LEVELS ARE BASED ON THE UTILIZATION OF STANDARD REFLECTANCES OF 80-50-20 (CEILING-WALL-FLOOR) PER I.E.S. (ILLUMINATED ENGINEERING SOCIETY). THE ROOM SURFACES ARE USED AS AN INTEGRAL COMPONENT OF THE LIGHTING SYSTEMS. THE REFLECTANCE OF THE SURFACE PAINT COLOR, MATERIAL, AND OTHER ROOM SURFACES, DIRECTLY AFFECTS THE DELIVERY OF LIGHT TO THE WORK PLANE, A SIGNIFICANT DROP IN OVERALL LIGHTING LEVELS WILL OCCUR IF REFLECTANCES ARE LOWERED. THE ARCHITECT/OWNER SHALL NOTIFY THE ENGINEER IMMEDIATELY IF FINISHES DO NOT FALL INLINE WITH THE REFLECTANCES MENTIONED ABOVE.

SUBSTITUTION: DEFINITIONS

- OR EQUAL = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS WILL BE ALLOWED. ENGINEER'S PRE-BID APPROVAL IS NOT REQUIRED. PROPOSED EQUAL FIXTURES ARE SUBJECT TO REVIEW DURING THE STANDARD SUBMITTAL PROCESS.
- NO EQUAL = PROVIDE SPECIFIED FIXTURE. SUBSTITUTIONS ARE NOT ALLOWED.
- SUBJECT TO REVIEW = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS MAY BE ALLOWED ONLY WITH ENGINEER'S APPROVAL. ALL SUBSTITUTIONS MUST BE SUBMITTED AS REQUIRED BY SPECIFICATIONS AND ACCOMPANIED WITH POINT BY POINT LIGHTING CALCULATIONS. DETERMINATION OF EQUAL IS ENGINEER'S SOLE DISCRETION.

TYPE	SYMBOL	DESCRIPTION AND MANUFACTURER
L1 (31)		2' X 2' ARCHITECTURAL RECESSED LED FIXTURE, STEEL CONSTRUCTION, WHITE POLYESTER POWDER COAT, FLANGED, 4000K, NON-DIMMING. LAMP: LED, 3566 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:PINNACLE ARCHITECTURAL LIGHTING LUCEN LU22A-840MO SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L2 (24)		2' X 4' ARCHITECTURAL RECESSED LED FIXTURE, STEEL CONSTRUCTION, WHITE POLYESTER POWDER COAT, FLANGED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 3155 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:PINNACLE ARCHITECTURAL LIGHTING LUCEN LU24A-840LO SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L3 (18)		4' LINEAR LED FIXTURE, STEEL CONSTRUCTION, MATTE WHITE POLYESTER POWDER COAT, SURFACE-MOUNTED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 3000 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LITHONIA LIGHTING CLX-L48-3000LM-HEF-FDL-MVOLT-40K-80CRI SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L4 (40)		4' LINEAR LED FIXTURE, STEEL CONSTRUCTION, MATEE WHITE POLYESTER POWDER COAT, SURFACE-MOUNTED, 4000K, 1% 0-10V DIMMING. LAMP: LED, 4000 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LITHONIA LIGHTING WL4-40L-GZ1-LP840 SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L5 (156)		4' LINEAR LED HIGH-BAY FIXTURE, ALUMINUM HEAT SINK CHANNEL, ANODIZED ALUMINUM, SUSPENDED, 4000K, 10% 0-10V DIMMING. LAMP: LED, 24,010 LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:LUX DYNAMICS L-1-SA-840-4-U10-3/10-4P10-OC SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
L6 (32)		8" ROUND LED DOWNLIGHT, SURFACE MOUNTED, ALUMINUM HOUSING, IP65, MATTE TRIM, 4000K, MATTE-DIFFUSED WITH MEDIUM WIDE DISTRIBUTION. LAMP: LED, 2,000LUMENS, 80CRI VOLTAGE: 277 MANUFACTURER:GOTHAM EVO EVO8VR-40/-20-AR-LD-MWD-FOL-277 SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL

ELECTRICAL LEGEND

- PANELBOARD: SURFACE MOUNTED
- PANELBOARD: FLUSH MOUNTED
- SWITCHBOARD OR DISTRIBUTION PANEL
- TRANSFORMER
- PULLBOX / VAULT
- MOTOR STARTER
- COMBINATION MOTOR STARTER
- COMBINATION MOTOR STARTER PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- DISCONNECT SWITCH - FUSIBLE (FUSED PER EQUIP. NAMEPLATE)
- DISCONNECT SWITCH - NON-FUSIBLE
- DISCONNECT SWITCH PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- VARIABLE FREQUENCY DRIVE
- VARIABLE FREQUENCY DRIVE PROVIDED BY OTHERS (COORDINATE WITHSTAND RATINGS WITH EQUIP SUPPLIER)
- ENCLOSED CIRCUIT BREAKER
- GROUND ROD
- SHUNT TRIP STATION OR EMERGENCY PUSHBUTTON
- REMOTE METER

- SINGLE POLE SWITCH 48" AFF
- THREE WAY SWITCH 48" AFF
- FOUR WAY SWITCH 48" AFF
- KEY OPERATED SWITCH 48"
- SWITCH WITH LIGHTED HANDLE
- MANUAL MOTOR STARTER
- SWITCH WITH PILOT LIGHT 48" AFF
- TIME WALL SWITCH EQUAL TO HUBBELL DT2000W 48" AFF
- DIMMER OPERATED SWITCH 48" AFF
- OCCUPANCY SENSOR - WALL MOUNTED 48" AFF
- 0-10V DIMMING OCCUPANCY SENSOR - WALL MOUNTED 48" AFF - EQUAL TO SENSOR SWITCH WSX-D
- OCCUPANCY SENSOR - CEILING MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- OCCUPANCY SENSOR - CORNER MOUNTED. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- CONTROL STATION
- CONTACTOR OR RELAY
- PHOTOELECTRIC CELL (ON ROOF FACING NORTH UNO)
- TIMECLOCK

- CONDUIT/RACEWAY IN WALL OR ABOVE CEILING
- CONDUIT/RACEWAY BELOW GRADE OR BELOW FLOOR
- BREAK OR RUN CONTINUES
- OVERHEAD SERVICE
- PRIMARY
- SECONDARY
- COMMUNICATIONS OR SIGNAL
- TELEPHONE
- TELEVISION
- LOW VOLTAGE AND/OR CONTROL WIRING
- EMERGENCY CIRCUIT
- CONDUIT/RACEWAY STUB OUT: MARK AND CAP (SITE)
- CONDUIT/RACEWAY SLEEVE

- SINGLE RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- DUPLEX RECEPTACLE: HALF SWITCHED, +18" AFF
- DUPLEX RECEPTACLE GFI TYPE - 20A, 125V, NEMA 5-20 GFI, +18" AFF
- QUAD RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF
- ISOLATED GROUND TYPE RECEPTACLE (ORANGE TRIANGLE), 20A, 125V, NEMA 5-20IG, +18" AFF
- COMBO DUAL USB CHARGER / DUPLEX RECEPTACLE, 5.1A, (1) TYPE A & (1) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), 20A, 125V, NEMA 5-20R, +18AFF
- QUAD USB CHARGER, 5.1A, (2) TYPE A & (2) TYPE C USB (3.1, 3.0, 2.0 AND 1.1 COMPATIBLE), +18AFF
- SPECIAL PURPOSE RECEPTACLE: SEE DWGS FOR NEMA CONFIGURATION
- DUPLEX RECEPTACLE: FLOOR MOUNTED
- QUAD RECEPTACLE: FLOOR MOUNTED
- DUPLEX RECEPTACLE: CEILING MOUNTED
- QUAD RECEPTACLE: CEILING MOUNTED
- BLANK GFCI PROTECTIVE DEVICE IN READILY ACCESSIBLE LOCATION (LABEL PROTECTED DEVICES)
- DUPLEX "CLOCK" RECEPTACLE: 125V, NEMA 5-20R, +60" AFF
- DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS

- THERMOSTAT (PROVIDED BY MECH. CONTRACTOR UNO)
- JUNCTION BOX (SIZE AS REQUIRED UNO)
- SHEET NOTE DESIGNATION
- FIXTURE DESIGNATION: F1=TYPE (SEE FIXTURE SCH.)
- REVISION DELTA: NUMBER REPRESENTS REVISION
- FEEDER DESIGNATION
- EQUIPMENT CONNECTION

- DATA / VOICE OUTLET: 18" AFF - 1 VOICE, 1 DATA JACK, 2 BLANKS
- DATA / VOICE OUTLET: FLOOR MOUNTED
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS
- TELEPHONE OUTLET: 18" AFF
- DATA OUTLET: 18" AFF
- DEVICE MOUNTED AT NON-STANDARD HEIGHT. IF NO HEIGHT SHOWN VERIFY HEIGHT WITH ARCHITECT
- SPEAKER
- TELEVISION OUTLET: 18" AFF (UNO)
- TELEPHONE TERMINAL BOARD (TTB)
- VOLUME CONTROL
- GROUNDING BAR

*** FIXTURE SCHEDULE HAS PRECEDENCE ***

- LENSED TROFFER
- VOLUMETRIC TROFFER
- FLANGED TROFFER
- SURFACE MOUNT TROFFER
- STRIP FIXTURE
- DOWNLIGHT
- WALL PACK
- POLE MOUNT
- EMERGENCY LIGHTING UNIT
- EXIT SIGN FIXTURE - SHADED AREA DENOTES LIGHTED FACE - ARROWS INDICATE DIRECTION
- SHADING INDICATES EGRESS FIXTURE

- GROUND FAULT INTERRUPTER DEVICE
- METERING DEVICE
- REMOTE METER
- SHUNT TRIP DEVICE
- TRANSFORMER
- CURRENT TRANSFORMER
- GENERATOR
- MOTOR - # INDICATES HP
- INTERRUPTER SWITCH
- GROUND FAULT RELAY W/ CT OR SENSOR
- FUSE
- CIRCUIT BREAKER
- DRAWOUT CIRCUIT BREAKER
- TRANSFER SWITCH (A=AUTOMATIC, M=MANUAL) # FOR POLES 2, 3 OR 4
- SURGE PROTECTION DEVICE

- NORMALLY OPEN (NO) CONTACT
- NORMALLY CLOSED (NC) CONTACT
- COIL - VOLTAGE PER CONTROL DIAGRAMS
- PILOT LIGHT (LED) PUSH-TO-TEST. LETTER INDICATES COLOR (R=RED, G=GREEN, A=AMBER, Y=YELLOW)
- PILOT LIGHT (LED) NON PUSH-TO-TEST
- THERMAL OVERLOAD
- MAGNETIC OVERLOAD
- PUSH BUTTON NORMALLY OPEN (NO)
- PUSH BUTTON NORMALLY CLOSED (NC)
- HAND-OFF-AUTO (HOA) SELECTOR SWITCH
- LIMIT SWITCH NORMALLY OPEN (NO)
- LIMIT SWITCH NORMALLY CLOSED (NC)
- PUSH BUTTON ILLUMINATED (LED)

TICS = NO. OF #12 WIRES (UNO) IF MORE THAN TWO WITHIN RACEWAY. GROUNDING CONDUCTOR (NOT SHOWN) ALWAYS REQUIRED.
- ISOLATED GROUNDING CONDUCTOR
- NEUTRAL CONDUCTOR
- PHASE CONDUCTOR(S)

BRANCH CIRCUIT (WHEN TIC MARKS ARE NOT SHOWN) = (1) PHASE, (1) NEUTRAL AND (1) GROUNDING CONDUCTOR

HOMERUN TO PANELBOARD OR DEVICE

HA-(1,3,5,3N)G HOMERUN CIRCUIT DESIGNATION
- GROUNDING CONDUCTOR
- NEUTRAL CONDUCTOR (N=1, 2N=2 NEUTRALS, 3N=3 NEUTRALS)
- PHASE CONDUCTOR(S)
- PANELBOARD DESIGNATION

HA-(1,3,5)G HOMERUN CIRCUIT DESIGNATION (3 PHASE CIRCUIT SHOWN)
- GROUNDING CONDUCTOR
- PHASE CONDUCTOR(S)
- PANELBOARD DESIGNATION

NOTE: "(E)" IN HOMERUN INDICATES NEW HOMERUN TO EXISTING PANEL

A	AMPS
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMP INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BKR	BREAKER
C	CONDUIT/RACEWAY
CEC	CALIFORNIA ENERGY COMMISSION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT/RACEWAY ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DISTRIBUTION BOARD
DDC	DIRECT DIGITAL CONTROLLER
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
(F)	FUTURE
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT (STEEL)
FPEN	FUSE PER EQUIP. NAMEPLATE
GFI	GROUND FAULT INTERRUPT
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HSKP	HOUSEKEEPING
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
K	kcmil (300K = 300 kcmil)
KVA	KILOVOLT AMPS
KW	KILOWATT
LTG	LIGHTING
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MFG	MANUFACTURER
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MSB	MAIN SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHTLIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NVE	NV ENERGY
P	POLE
PH/Ø	PHASE
PV	PHOTOVOLTAIC
PNL	PANEL
PTC	PV USA TEST CONDITIONS
PWR	POWER
(R)	RELOCATE/RELOCATED
(RR)	REMOVE AND REPLACE
RAC	RIGID ALUMINUM CONDUIT
RFC	RIGID FIBERGLASS CONDUIT
RSC	RIGID STEEL CONDUIT
SE	SERVICE ENTRANCE
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
STC	STANDARD TEST CONDITIONS
SW	SWITCH
TE	TELECOM
TTB	TELEPHONE TERMINATION BOARD
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UNSW	UNSWITCHED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHER PROOF
(X)	EXISTING TO BE REMOVED
XFMR OR XF	TRANSFORMER

- E = EQUIPMENT
- H = ELECTRIC HEAT
- K = KITCHEN EQUIP
- L = LIGHTING
- M = MOTOR
- M1 = LARGEST MOTOR
- R = RECEPTACLES

- 20 = SINGLE POLE CIRCUIT BREAKER
- 20/2 = TWO POLE CIRCUIT BREAKER
- 20/3 = THREE POLE CIRCUIT BREAKER
- 20A = ARC FAULT CIRCUIT BREAKER
- 20C = CONTROLLABLE CIRCUIT BREAKER
- 20G = GFI CIRCUIT BREAKER

NOTE: THIS IS A MASTER SYMBOL LIST. IT MAY BE THAT NOT ALL SYMBOLS SHOWN ARE USED WITHIN THIS SET OF PLANS. HEIGHTS GIVEN ARE TO TOP OF BOX.

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JOSEPH E. GAMSBY — STATE OF NEVADA — PROFESSIONAL ENGINEER — ELECTRICAL — No.21010 — 06/30/26
07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL LIGHTING RETROFIT

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CARSON CITY, NV 89705

REVISIONS

SHEET TITLE
ELECTRICAL LEGEND

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E0.1

PLEASE RECYCLE

SECTION 260000 ELECTRICAL SPECIFICATIONS

ITEM	DESCRIPTION

PART 1 - GENERAL

1.1 SUMMARY
- THE WORK UNDER THIS DIVISION SHALL CONSIST OF ALL LABOR, MATERIALS, EQUIPMENT, SERVICES AND RELATED ACCESSORIES, ETC. NECESSARY AND REQUIRED TO COMPLETE ALL WORK AS SHOWN OR INFERRED ON THE DRAWINGS AND IN THE SPECIFICATIONS (CONTRACT DOCUMENTS).
- PROVIDE FIXED ELECTRICAL EQUIPMENT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- PROVIDE EQUIPMENT AND/OR WIRING NORMALLY FURNISHED OR REQUIRED FOR COMPLETE ELECTRICAL SYSTEMS BUT NOT SPECIFICALLY SPECIFIED ON THE DRAWINGS AND/OR IN SPECIFICATIONS, AS THOUGH SPECIFIED BY BOTH.
- ALL EQUIPMENT AND WIRING SHALL BE NEW, EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE.

1.2 RELATED WORK SPECIFIED ELSEWHERE

COORDINATION: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 26 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS AND ADDENDA.

1.3 ADOPTED CODES
- INTERNATIONAL BUILDING CODE (IBC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC).
- NATIONAL ELECTRICAL CODE (NEC) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
- INTERNATIONAL FIRE CODE (IFC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL.
- NATIONAL FIRE CODES (NFPA STANDARDS) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AS REFERENCED IN THE 2018 INTERNATIONAL FIRE CODE.
- INTERNATIONAL ENERGY CONSERVATION CODE (IECC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL. ASHRAE / IESNA STANDARD 90.1-2004 IS INCORPORATED BY REFERENCE.
- ALL APPLICABLE PROVISIONS OF THE NEVADA REVISED STATUTES (NRS) AND THE NEVADA ADMINISTRATIVE CODE (NAC), INCLUDING THOSE LISTED BELOW.
- THE MOST CURRENT REGULATIONS OF THE STATE FIRE MARSHAL, NEVADA DEPARTMENT OF PUBLIC SAFETY, CARSON CITY, NEVADA (NAC CHAPTER 477, STATE FIRE MARSHAL).
- THE MOST CURRENT EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA) PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE INCLUDING THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)

1.4 DEFINITIONS

PROVIDE	FURNISH, INSTALL, CONNECT AND TEST UNTIL COMPLETE
WIRE	FURNISH ALL NECESSARY WIRING, CONNECT AND TEST UNTIL COMPLETE
INSTALL	FURNISH, SET IN PLACE, WIRE AND TEST UNTIL COMPLETE
WORK	MATERIALS COMPLETELY INSTALLED, CONNECTED, AND TESTED UNTIL COMPLETE
EQUAL	ACCEPTABLE EQUAL AS DETERMINED BY THE ENGINEER

1.5 REQUIREMENTS OF REGULATORY AGENCIES
- OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK. COMPLY WITH ALL ORDINANCES PERTAINING TO WORK DESCRIBED HEREIN. PAY ALL EXPENSES ARISING FROM THE PROCUREMENT OF THESE CERTIFICATES AND INCLUDE IN THE BASE CONTRACT PRICE.
- INSTALL WORK UNDER THIS DIVISION PER DRAWINGS, SPECIFICATIONS, LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, (NFPA-70) INCLUDING LOCAL AMENDMENTS AND INTERPRETATIONS, LOCAL ADOPTED BUILDING CODES, AND ANY SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK WITHIN COMPLETE INSTALLATION. IN EVENT OF CONFLICT, INSTALL WORK PER MOST STRINGENT CODE REQUIREMENTS DETERMINED BY ENGINEER. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.
- ALL MATERIALS, PRODUCTS, DEVICES, FIXTURES, FORMS OR TYPES OF CONSTRUCTION INCLUDED IN THIS PROJECT SHALL MEET OR EXCEED THE PUBLISHED REQUIREMENTS OF NATIONAL ELECTRICAL CODE (NEC), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) AND NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA). ALL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABORATORIES (UL) LABEL OR EQUIVALENT FROM APPROVED INDEPENDENT TESTING LABORATORY.
- ARRANGE, PAY FEES FOR AND COMPLETE WORK TO PASS REQUIRED TESTS BY AGENCIES HAVING AUTHORITY OVER WORK. DELIVER TO ENGINEER COPIES OF THE CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES AND PROVIDE ORIGINAL COPY OF EACH CERTIFICATE TO OWNER.
- WHEN REQUIRED BY LAW OR REGULATIONS, THE GOVERNMENTAL AGENCY HAVING JURISDICTION FOR INSPECTIONS SHALL BE GIVEN REASONABLE NOTICE AND OPPORTUNITY TO INSPECT THE WORK. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE; AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT THEIR OWN EXPENSE.

1.6 DRAWINGS AND SPECIFICATIONS
- DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DURING THE BIDDING PERIOD. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF THEIR FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE ATTENTION OF THE CONSULTANT DURING THE BIDDING PERIOD OR BY REASON OF ANY ERROR ON THE CONTRACTOR'S PART.
- DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. DRAWINGS SHOW GENERAL RUN OF CIRCUITS AND APPROXIMATE LOCATION OF EQUIPMENT. THE CONTRACTOR SHALL REVIEW DRAWINGS OF ALL TRADES TO ASSURE COORDINATION PRIOR TO PLACEMENT OF WORK. RIGHT IS RESERVED TO CHANGE LOCATION OF EQUIPMENT AND DEVICES, AND ROUTING OF CONDUITS WITHIN 10 FEET, WITHOUT EXTRA COST TO OWNER (PRIOR TO ROUGH-IN).
- USE DIMENSIONS IN FIGURES, SHOP DRAWINGS, ETC. AND ACTUAL SITE MEASUREMENTS IN PREFERENCE TO SCALED DIMENSIONS. DO NOT SCALE DRAWINGS FOR EXACT SIZES OR LOCATIONS - USE DIMENSIONED DETAILS OR ACTUAL FIELD CONDITIONS. VERIFY ITEM MOUNTING HEIGHTS AS REQUIRED BY PROJECT CONDITIONS PRIOR TO ROUGH-IN.
- THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS IN MATTERS OF DIMENSIONS. DISCREPANCIES BETWEEN DIFFERENT DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING FOR DETERMINATION.
- LAYOUT EQUIPMENT AS SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE. VERIFY ACCESS REQUIREMENTS FOR EQUIPMENT ACTUALLY FURNISHED,AND ADJUST LAYOUT TO COMPLY WITH NEC 110. RIGHT IS RESERVED TO CHANGE LAYOUT WITHIN 10 FEET WITHOUT ADDITIONAL COST (PRIOR TO ROUGH-IN).
- ALL DEVICES, LIGHT FIXTURES, ETC. LOCATED IN CEILING TILES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS SPECIFICALLY NOTED OR APPROVED TO DO OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE TO FIELD MEASURE AND CONFIRM THE MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, DOORWAYS, AND OTHER ARCHITECTURAL, MECHANICAL OR STRUCTURAL WORK. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.
- EXECUTION OF CONTRACT IS EVIDENCE THAT CONTRACTOR HAS EXAMINED ALL EXISTING CONDITIONS, DRAWINGS AND SPECIFICATIONS RELATED TO WORK, AND IS INFORMED AS TO EXTENT AND CHARACTER OF WORK. LATER CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- ALL WORK CALLED FOR IN THIS SECTION OF THE PLANS AND SPECIFICATIONS SHALL BE PERFORMED UNDER THIS SECTION, REGARDLESS OF WHETHER SUCH WORK MAY ALSO HAVE BEEN CALLED FOR IN OTHER SECTION(S). DISCREPANCIES IN OR CONFLICTS AMONG THE VARIOUS PARTS OF THE CONTRACT DRAWINGS SHALL NOT RELIEVE CONTRACTOR OF THEIR OBLIGATION TO PERFORM.
- NO ATTEMPT HAS BEEN MADE TO ESTABLISH THE REQUIRED SECTIONS OR SPLITS OF EQUIPMENT RELATIVE TO THE SIZE OF ACCESS INTO THE SPACE, BUILDING, ETC. CONTRACTOR SHALL ESTABLISH ALL SAID SPLITS, SECTIONS, ETC. NECESSARY TO INSTALL EQUIPMENT COMPLETE WITHOUT UNDUE DISASSEMBLY OF EQUIPMENT OR DEMOLITION OF BUILDING PARTS AT SITE OF WORK.
- CHARGES FOR EXTRA WORK ARE NOT ALLOWED UNLESS WORK IS AUTHORIZED BY WRITTEN ORDER FROM THE OWNER'S REPRESENTATIVE APPROVING CHARGES FOR WORK.
- CHECK ALL DOOR SWINGS SO LIGHTING CONTROL DEVICES ARE NOT LOCATED BEHIND DOORS. RELOCATE DEVICES AS REQUIRED WITH THE CONSULTANT'S REVIEW.

1.7 COPYRIGHT

THESE PLANS, SPECIFICATIONS, AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF PK ELECTRICAL. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO PK ELECTRICAL. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF PK ELECTRICAL AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF PK ELECTRICAL.

1.8 SUBMITTALS

BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT SIX COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, LIGHTING CONTROLS, SWITCHGEAR, PANELS, CIRCUIT BREAKERS, MOTOR CONTROLLERS, DISCONNECTS WIRING DEVICES, PLATES, RACEWAYS AND FITTINGS, ETC. PROPOSED FOR THIS PROJECT.

1.9 SUBSTITUTIONS

PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER. SUBSTITUTIONS MUST BE SUBMITTED A MINIMUM OF 10 WORKING DAYS PRIOR TO BID FOR CONSIDERATION. PROPOSED SUBSTITUTIONS PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED. BID SUBSTITUTED MATERIAL WILL ONLY BE ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.

1.10 EXAMINATION OF SITE AND EXISTING CONDITIONS

BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.

1.11 EXISTING OUTLETS

EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.

1.12 EXISTING SWITCHGEAR

REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. MATCH AIC RATINGS. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.

1.13 EXISTING PANELBOARDS
- WHERE ADDITIONAL CIRCUITS ARE NEEDED REUSE CIRCUITS AVAILABLE FOR REUSE. INSTALL NEW BREAKERS AS INDICATED ON DRAWINGS. MATCH AIC RATINGS.
- TAG UNUSED CIRCUITS AS SPARE.
- WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING PROJECT AREA ARE NOT IN USE OR OVERLOADED.
- REMOVE EXISTING WIRE NO LONGER IN USE FROM PANEL TO EQUIPMENT.
- PROVIDE NEW UPDATED TYPED DIRECTORIES.

PART 2 - PRODUCTS

2.1 MATERIALS
- ALL MATERIAL SHALL BE NEW, AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC 70, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.
- ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.
- ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.

2.2 CIRCUITING

ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS SHALL BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM-24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE AND CONCRETE SLAB TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. FMC MAY BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURE FROM J-BOX. FIXTURE WHIPS MAY NOT EXCEED 6' IN LENGTH. METAL CLAD CABLE (TYPE MC) WILL BE ACCEPTABLE FOR SINGLE CIRCUIT BRANCH CIRCUITING, FLEXIBLE WHIPS FROM JUNCTION BOXES TO LIGHTING FIXTURES AND WITHIN CASEWORK. TYPE MC CABLE MAY NOT BE USED FOR HOMERUNS. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY. CONNECT PUMP MOTORS WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT.

2.3 WIRING
- WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG. WHERE ALUMINUM IS ALLOWED, WIRE SHALL BE TERMINATED IN AN INSULATED CU/AL RATED COMPRESSION TERMINAL FITTING (MAC-ADAPT OR EQUAL). INSULATION SHALL BE THW, THWN OR THHN.
- UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE WHITE (120V) OR GREY (277V) AND PHASE WIRES SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C) FOR A 120/208 VOLT SYSTEM AND BROWN (PHASE A), ORANGE (PHASE B), AND YELLOW (PHASE C) FOR A 277/480 VOLT SYSTEM.

2.4 WIRING DEVICES

WIRING DEVICES SHALL BE AS FOLLOWS:
- RECEPTACLES - 120V, 20A, NEMA 5-20R, SPECIFICATION GRADE, SIDE AND BACK WIRED WITH CLAMP TYPE TERMINALS, NYLON, WHITE, 2 POLE, 3 WIRE GROUNDING.
- SWITCHES - 120V/277V, 20A, WHITE, HEAVY DUTY, SILENT TYPE SPECIFICATIONS GRADE.
- DEVICE PLATE SHALL BE NYLON, WHITE COLOR WITH MATCHING SCREWS.
- RECEPTACLES IN WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED SUITABLE FOR WET LOCATIONS WHILE IN USE AND UL LISTED EQUAL TO TAY MAC SPECIFICATIONS GRADE.

PART 3 - EXECUTION

3.1 VISIT TO SITE

VISIT SITE, AND SURVEY EXISTING CONDITIONS AFFECTING WORK PRIOR TO BID. INCLUDE NECESSARY MATERIALS AND LABOR TO ACCOMPLISH THE ELECTRICAL WORK, INCLUDING RELOCATION OF EXISTING SERVICES AND UTILITIES ON BUILDING SITE IN BID. NO CONSIDERATION SHALL BE GIVEN TO FUTURE CLAIMS DUE TO EXISTING CONDITIONS. ANY DISCREPANCIES OR INTERFERENCES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

3.2 WORKMANSHIP
- ALL WORK PERFORMED SHALL BE FIRST CLASS WORK IN EVERY ASPECT. THE WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO COMPLY WITH NECA'S "STANDARD OF INSTALLATION."
- IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, FURNISH AND INSTALL ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THAT ALL SYSTEMS ARE COMPLETE AND OPERATIVE.
- ALL WORK UNDER THIS SECTION SHALL BE PERFORMED IN COOPERATION WITH THE WORK PERFORMED UNDER ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR THE PROJECT IN ORDER TO AVOID INTERFERENCE WITH OTHER WORK AND TO SECURE THE PROPER INSTALLATION OF ALL WORK. REFER THE DRAWINGS AND SPECIFICATIONS COVERING THE WORK TO BE PERFORMED UNDER ALL SECTIONS, SO THAT THE RELATION AND EXTENT OF THE WORK OF THIS SECTION WITH RESPECT TO THE WORK OF ALL OTHER SECTIONS IS UNDERSTOOD. GIVE RIGHT OF WAY TO RACEWAYS AND PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.
- CONDUIT SYSTEMS MUST BE COMPLETE PRIOR TO INSTALLATION OF WIRING.

3.3 CHANGE ORDERS
- ADDITIONAL WORK MAY BE REQUIRED ON THE PROJECT WHICH IS OUTSIDE THE SCOPE OF THE CONTRACT. SUCH ADDITIONAL WORK WILL BE DESCRIBED IN SUPPLEMENTAL INSTRUCTIONS AND/OR CLARIFICATIONS, TO BE ESTIMATED AND PRICED BY THE CONTRACTOR, AND ACCEPTED BY THE OWNER, PRIOR TO COMMENCING WORK. PROPOSALS SHALL INCLUDE A LIST OF QUANTITIES OF ALL MATERIAL BEING USED WITH UNIT COSTS BROKEN DOWN INTO MATERIAL AND LABOR COSTS PER UNIT. CONTRACTOR SHALL PROVIDE ACTUAL EQUIPMENT QUOTES WHEN REQUESTED BY ENGINEER.
- MATERIAL COSTS AND LABOR UNITS SHALL NOT EXCEED THE LATEST EDITION OF RS MEANS ELECTRICAL COST DATA.
-

3.4 GUARANTEE
- FURNISH THE OWNER A WRITTEN GUARANTEE, STATING THAT IF THE WORKMANSHIP AND/OR MATERIAL EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN (1) YEAR AFTER THE FINAL ACCEPTANCE BY THE OWNER, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED. SUBMIT WITH OPERATION AND MAINTENANCE MANUALS.
- OBTAIN FROM THE VARIOUS MANUFACTURERS OR VENDORS GUARANTEES OR WARRANTIES FOR THEIR PARTICULAR EQUIPMENT OR COMPONENTS, AND DELIVER THEM TO THE OWNER. ALL GUARANTEES AND WARRANTIES PROVIDED SHALL BE REFERENCED TO THIS PROJECT.
- IN EVENT THAT SYSTEMS ARE PLACED IN OPERATION IN SEVERAL PHASES AT THE OWNER'S REQUEST, GUARANTEE WILL BEGIN ON DATE EACH SYSTEM OR ITEM OF EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER. PROVIDE O&M MANUALS FOR ALL EQUIPMENT WHEN EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER.
- ALL GUARANTEES AND WARRANTIES SHALL INCLUDE LABOR AND MATERIAL AT THE SITE OF INSTALLATION FOR THE DURATION OF THE GUARANTEE PERIOD.

3.5 OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)
- AT ALL OBSERVATIONS OF WORK, OPEN PANEL COVERS, JUNCTION BOX COVERS, PULL BOX COVERS, DEVICE COVERS, AND OTHER EQUIPMENT WITH REMOVABLE PLATES FOR OBSERVATION AS REQUESTED BY AHJ OR ENGINEER. PROVIDE SUFFICIENT PERSONNEL TO EXPEDITE COVER REMOVAL AND REPLACEMENT.
- CONTRACTOR TO DEMONSTRATE OPERATION OF NEW EQUIPMENT AND/OR SYSTEMS TO SATISFACTION OF OWNER/ENGINEER. CONTRACTOR TO HAVE MANUFACTURER AVAILABLE FOR DEMONSTRATION OF EQUIPMENT AND/OR SYSTEMS WHERE REQUESTED BY OWNER/ENGINEER. FURNISH AFFIDAVIT SIGNED BY OWNER'S REPRESENTATIVE INDICATING THAT DEMONSTRATION OF OPERATION HAS BEEN PERFORMED.

3.6 COOPERATION
- CAREFULLY COORDINATE WORK WITH OTHER CONTRACTORS AND SUBCONTRACTORS. REFER CONFLICTS BETWEEN TRADES TO ENGINEER. PROVIDE NECESSARY INFORMATION TO OTHER TRADES FOR SUCH COORDINATION. SUCH INFORMATION SHALL INCLUDE SHOP DRAWINGS, PRODUCT DATA AND ALL OTHER REQUIRED DATA. PROVIDE A SYSTEM ERECTION/COORDINATION DRAWING SHOWING ELECTRICAL, HVAC, PLUMBING AND ARCHITECTURAL FOR INSTALLATION IN CONGESTED AREAS, WHEN REQUESTED.
- WHENEVER SUCH INFORMATION IS NOT PROVIDED IN A TIMELY MANNER OR WHENEVER SUCH INFORMATION IS INCORRECT, THIS CONTRACTOR SHALL BEAR ALL COSTS FOR PROVIDING OR CORRECTING AFFECTED WORK OF RELATED TRADES WITH NO CHANGE TO THE CONTRACT PRICE OR CONSTRUCTION SCHEDULE.
- WORK TO BE INSTALLED AS PROGRESS OF PROJECT WILL ALLOW. SCHEDULE OF WORK DETERMINED BY GENERAL CONTRACTOR, OWNER, AND/OR ARCHITECT/ENGINEER.

3.7 DELIVERY, STORAGE AND HANDLING
- DELIVER EQUIPMENT AND MATERIALS TO JOB SITE IN ORIGINAL, UNOPENED, LABELED CONTAINER. PRODUCTS SHALL BE PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS AND OTHER INFORMATION NEEDED FOR IDENTIFICATION. STORE TO PREVENT DAMAGE AND INJURY. STORE MATERIALS TO PREVENT CORRODING. STORE FINISHED MATERIALS AND EQUIPMENT TO PREVENT STAINING AND DISCOLORING. STORE MATERIALS AFFECTED BY CONDENSATION IN WARM DRY AREAS. PROVIDE HEATERS. CONTRACTOR SHALL VERIFY THE AVAILABILITY OF ON SITE STORAGE SPACE, IF NO ON SITE STORAGE SPACE IS AVAILABLE THEN THE CONTRACTOR SHALL COVER THE COST FOR OFF SITE STORAGE. MATERIALS STORED AT THE PROJECT SITE THAT BECOMES SOILED WITH CONSTRUCTION DIRT, CONCRETE, OR MOISTURE SHALL BE REMOVED FROM THE SITE AND REPLACED WITH NEW. DO NOT INSTALL SOILED MATERIAL.
- INSTALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. CONFLICTS BETWEEN CONTRACT DOCUMENTS AND THESE RECOMMENDATIONS SHALL BE REFERRED TO ENGINEER FOR REMEDY.
- ELECTRICAL OR ELECTRONIC EQUIPMENT THAT HAS BEEN DAMAGED, EXPOSED TO WEATHER OR IS, IN THE OPINION OF THE ENGINEER OR ARCHITECT, OTHERWISE UNSUITABLE BECAUSE OF IMPROPER FABRICATION, STORAGE OR INSTALLATION SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR AT HIS EXPENSE.

3.8 ANCHORS
- PROVIDE ANCHORS FOR ALL EQUIPMENT, RACEWAYS, HANGERS, ETC. TO SAFELY SUPPORT WEIGHT OF ITEM INVOLVED PLUS 100% FOR DEAD LOADS. LIVE LOADS SHALL BE CONSIDERED IN ADDITION TO DEAD LOADS.
- ANCHORS TO CONSIST OF EXPANSION TYPE DEVICES SIMILAR TO "REDHEAD" OR LEAD EXPANSION ANCHORS. PLASTIC ANCHORS ARE NOT ACCEPTABLE.
- USE PRESET ANCHOR STEEL INSERTS IN CONCRETE SLABS. PROVIDE PRESET ANCHOR SIZE AND TYPE FOR ANTICIPATED OR SPECIFIED ROD/BOLT SIZE AND LIVE/DEAD LOAD.

3.9 CLEANING AND PAINTING
- CLEAN EQUIPMENT FURNISHED IN THIS DIVISION AFTER COMPLETION OF WORK. CLEAN WIPE THE INTERIOR OF ALL CONDUIT, PULLBOXES, JUNCTION BOXES, OUTLET BOXES, AND PANELBOARD BACKBOXES SOILED WITH DIRT AND DEBRIS PRIOR TO INSTALLATION OF WIRING.

TOUCH-UP OR RE-PAINT DAMAGED PAINTED FINISHES AS DETERMINED BY THE ENGINEER.

3.10 RECORD DRAWINGS
- CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE-SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM. ALSO INCLUDE THE FOLLOWING INFORMATION:
  - EXACT ROUTING OF ALL CONDUITS LARGER THAN ONE INCH.
  - EXACT LOCATION OF ALL SERVICE GROUNDING/ BONDING CONNECTIONS.
  - CONTRACTORS NAME, ADDRESS, AND TELEPHONE NUMBER.

RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.

3.11 ELECTRICAL SYSTEM TESTING

PRIOR TO PLACING IN SERVICES, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED. PROVIDE GFI TESTING FOR SERVICE SWITCHBOARD. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING FIRM DEEMED BY THE OWNER AS QUALIFIED TO PERFORM INTERNATIONAL ELECTRICAL TESTING ASSOCIATION TESTING. TESTING SERVICES SHALL BE PAID FOR AND COORDINATED BY THE CONTRACTOR. NETA TESTING PROCEDURES AND REQUIREMENTS FOR TESTED VALUES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE NETA ACCEPTANCE TESTING SPECIFICATIONS. ANY DEFICIENCIES OR FAILURES DISCOVERED DURING THE NETA TESTING PROCEDURES SHALL BE PROMPTLY CORRECTED BY THE ENSURE TIMELY COMPLETION OF THE PROJECT AND TO MINIMIZE THE TIME REQUIRED FOR THE INDEPENDENT TESTING FIRM TO COMPLETE THEIR WORK.

TESTING REQUIREMENTS SHALL BE AS FOLLOWS:
- GROUNDING SYSTEM
- GROUND FAULT PROTECTION
- CIRCUIT BREAKERS (OVER 100A)
- LOW VOLTAGE FEEDERS (UP TO 600 VOLTS) SERVING LOADS OF 100 AMPS OR GREATER
- MAIN SWITCHBOARD; DISTRIBUTION BOARDS; BRANCH CIRCUIT PANELS.
- LIGHTING CONTROL SYSTEMS
- FIRE ALARM SYSTEM

3.12 SUSPENDED CEILING SYSTEMS

ALL LAY-IN FIXTURES SHALL BE INDEPENDENTLY SUPPORTED BY TWO #12 SLACK WIRES ATTACHED TO TWO OPPOSITE CORNERS OF THE FIXTURE PER IBC & NEC REQUIREMENTS. THESE WIRES SHALL BE SECURED TO THE STRUCTURAL FRAMING SUCH THAT FAILURE OF THE SUSPENDED CEILING SHALL NOT ALLOW THE FIXTURE TO DROP.

3.13 ONGOING OPERATION

CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF, AND WORKERS. INTERRUPTIONS OF EXISTING POWER, COMMUNICATIONS OR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY GENERAL CONTRACTOR / OWNER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.

3.14 FLEXIBLE CONNECTIONS

PROVIDE FLEXIBLE ELECTRICAL CONDUIT AND CONDUCTORS HAVING A SLACK, 90-DEGREE BEND OR LOOP IN ANY PLANE BETWEEN CONNECTIONS AT ALL VIBRATION ISOLATED EQUIPMENT AND THE FIRST ATTACHMENT TO BUILDING STRUCTURE OR CABINETS, PANELS OR BOXES MOUNTED THEREON.

3.15 DISPOSAL PROCEDURES (FLUORESCENT BULBS, BALLASTS, AND LIGHT FIXTURES)
- THESE MATERIALS DO NOT REQUIRE SPECIAL TRAINING TO REMOVE OR PACKAGE.
- THE CONTRACTOR SHALL CONTRACT WITH WASTE MANAGEMENT LAMPTRACKER OR SIMILAR RECYCLING COMPANY TO RECYCLE THE LAMPS (FLUORESCENT BULBS) AND BALLASTS REMOVED DURING THE PROJECT. THE COSTS TO RECYCLE THESE MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL AND COSTS OF NON-REGULATED MATERIALS (LIGHT FIXTURES) IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO RECYCLE AS MUCH MATERIAL AS POSSIBLE.

3.16 SALVAGE

ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

3.17 SEISMIC PROTECTION
- THIS PROJECT IS SUBJECT TO THE SEISMIC BRACING REQUIREMENT OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION. THE FOLLOWING CRITERIA ARE APPLICABLE TO THIS PROJECT:
  SEISMIC USE GROUP: II; SEISMIC CLASS CATEGORY: D; SEISMIC DESIGN CATEGORY: D.
- IT IS RECOMMENDED THAT THE CONTRACTOR ENLIST THE SERVICES OF A QUALIFIED SEISMIC BRACING VENDOR/ SUPPLIER. PROVIDE BRACING FOR IDENTIFIED EQUIPMENT AND SYSTEM.
- ELECTRICAL EQUIPMENT: ELECTRICAL EQUIPMENT SHALL INCLUDE THE FOLLOWING ITEMS TO THE EXTENT REQUIRED ON THE DRAWINGS OR IN OTHER SECTIONS OF THESE SPECIFICATIONS TO BE SEISMICALLY PROTECTED:
  LIGHT FIXTURES, TRANSFORMERS, SWITCHBOARDS, PANELBOARDS.
- ELECTRICAL SYSTEMS: THE FOLLOWING ELECTRICAL SYSTEMS SHALL BE SEISMICALLY PROTECTED IN ACCORDANCE WITH THIS SPECIFICATION:
  LIGHTING, POWER, SECURITY, COMMUNICATIONS AND FIRE ALARM.
- CONDUITS REQUIRING NO SPECIAL SEISMIC RESTRAINTS: SEISMIC RESTRAINTS MAY BE OMITTED FROM ELECTRICAL CONDUIT LESS THAN 2-1/2 INCHES TRADE SIZE. ALL OTHER INTERIOR CONDUIT SHALL BE SEISMICALLY PROTECTED AS SPECIFIED.

END OF SECTION 260000

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PROFESSIONAL ENGINEER - STATE OF NEVADA
JOSEPH E. GANSER
EXP: 06/30/27
ELECTRICAL
No 21011
07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL
LIGHTING RETROFIT

701 JACKS VALLEY RD.
CARSON CITY, NV 89705

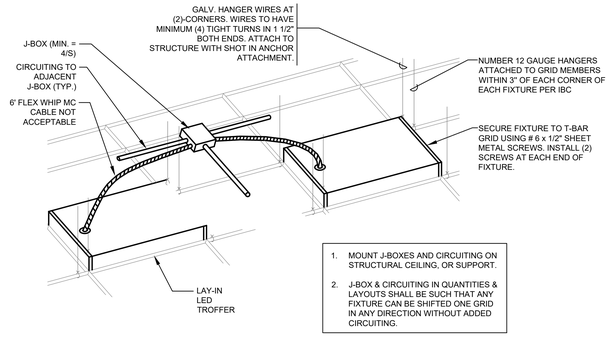
REVISIONS

SHEET TITLE
ELECTRICAL SPECIFICATIONS

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E0.2

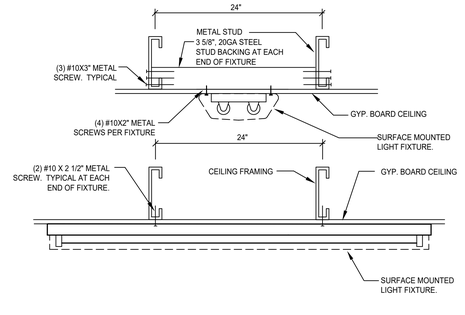
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B / E0.3

FIXTURE MOUNTING DETAIL @ T-BAR CEILING

SCALE: NONE



A / E0.3

SURFACE MOUNTED LIGHT FIXTURE DETAIL

SCALE: NONE

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JOSEPH E. GAMSBY — STATE OF NEVADA — PROFESSIONAL ENGINEER — ELECTRICAL — No.21011 — 06/30/25

07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL LIGHTING RETROFIT

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REVISIONS

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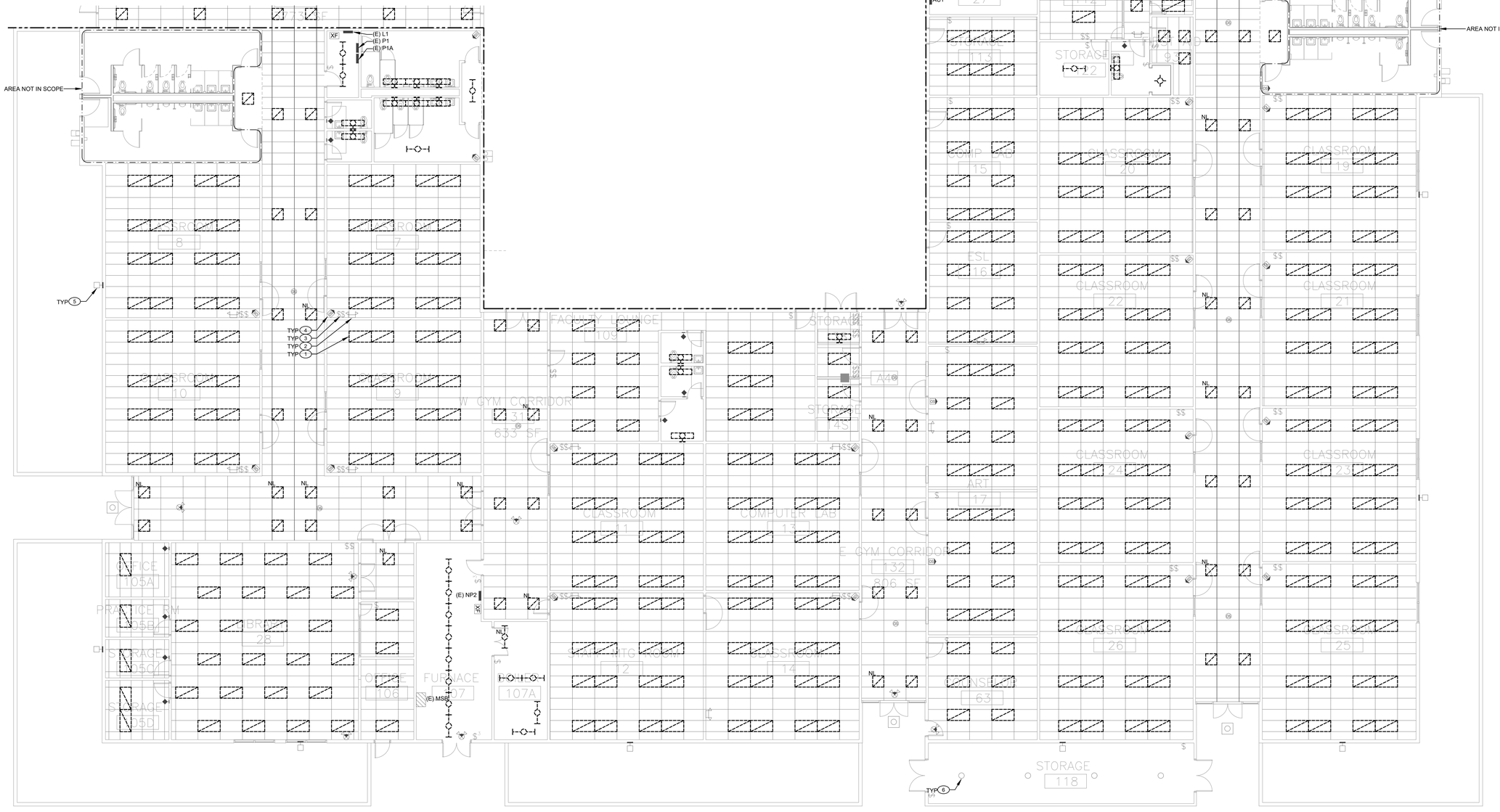
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SHEET NOTES

1	REMOVE EXISTING FIXTURES AS INDICATED BY DASHED LINES.
2	EXISTING EMERGENCY LIGHTING TO REMAIN – PROTECT IN PLACE.
3	EXISTING LIGHTING CONTROLS AND SWITCHES TO REMAIN – PROTECT IN PLACE.
4	EXISTING OCCUPANCY SENSORS TO REMAIN – PROTECT IN PLACE.
5	EXTERIOR LIGHTING TO REMAIN IN PLACE – PROTECT IN PLACE.
6	EXISTING STORAGE SCREW-IN LIGHT BULB BASE TO REMAIN – PROTECT IN PLACE.

GENERAL NOTES

1. THIS DRAWING REPRESENTS THE EXISTING LIGHTING SYSTEMS WITHIN THE EXISTING BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND REWIRING ALL EQUIPMENT AS INDICATED ON THE DRAWINGS.
2. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED AND (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
3. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.
4. EXISTING CIRCUITS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.
5. THE CONTRACTOR MAY SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATIONS IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.
6. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARDED AND ABANDONED MATERIALS LEFT OVER FROM DEMOLITION AND INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUIT, FASTENERS, AND BOXES.
7. CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES AFFECTED BY THE REMOVAL OF FIXTURES, CONDUIT, AND SUPPORT HARDWARE. RESTORE ALL AREAS TO MATCH ADJACENT FINISHES AND CONDITIONS. COORDINATE FINAL SURFACE FINISHES WITH OWNER (DCSD).
8. COORDINATE LIGHTING CONTROL REQUIREMENTS TO MAINTAIN FUNCTIONALITY WITH EXISTING SWITCHING AND DIMMING SYSTEMS.
9. PROVIDE TEMPORARY LIGHTING IF REQUIRED TO MAINTAIN ILLUMINATION IN OCCUPIED AREAS DURING INSTALLATION.
10. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OR UNFORESEEN CONDITIONS ARE ENCOUNTERED DURING THE RETROFIT PROCESS.



A E1.1 PARTIAL LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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NEVADA STATE OF JOSEPH E. GAMSBY No.21019 ELECTRICAL ENGINEER 06/30/26
07/15/2025

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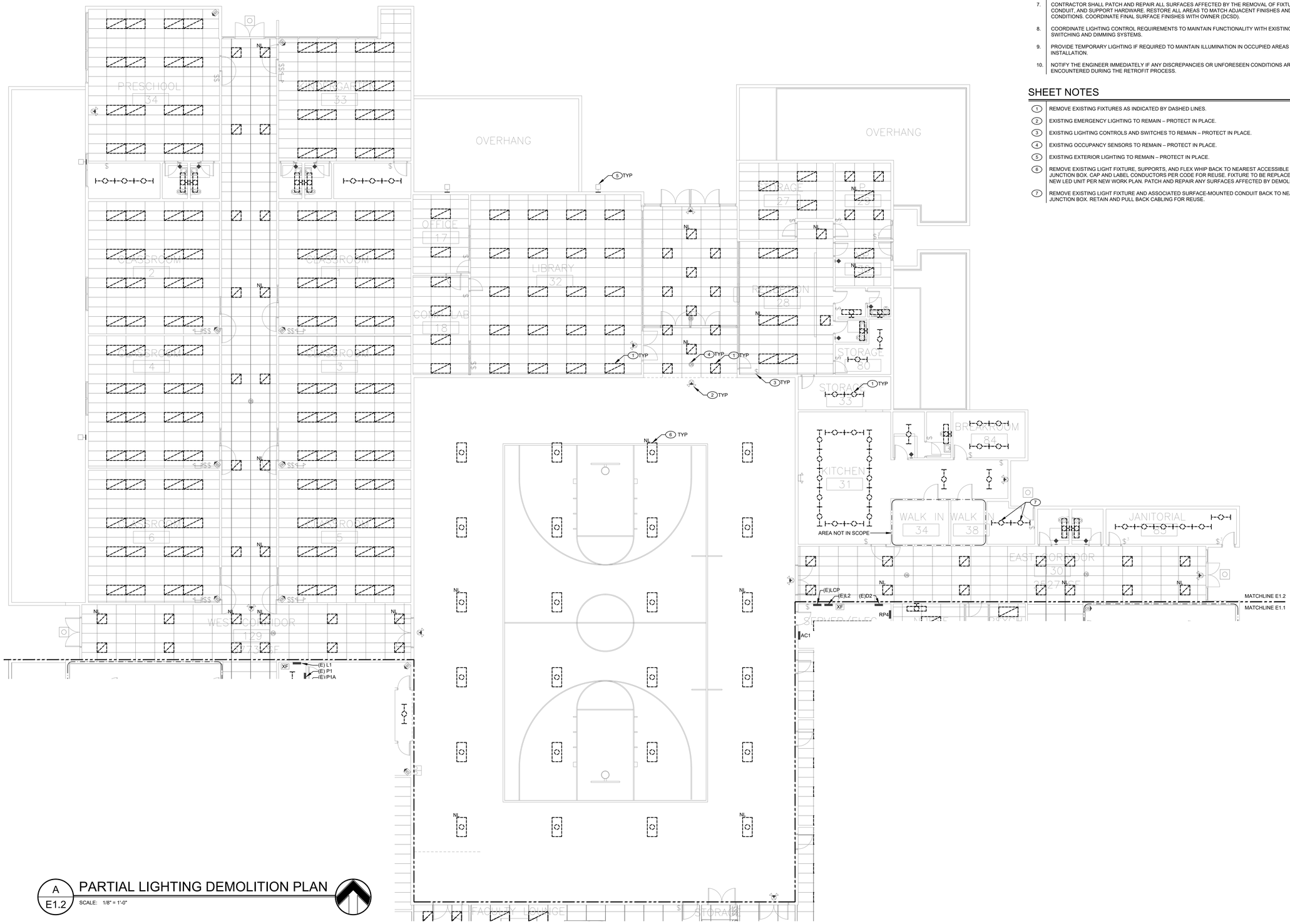
REVISIONS

SHEET TITLE
PARTIAL LIGHTING DEMOLITION PLAN

DRAWN:	TPT
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DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E1.1

PLEASE RECYCLE



A E1.2 PARTIAL LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. THIS DRAWING REPRESENTS THE EXISTING LIGHTING SYSTEMS WITHIN THE EXISTING BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND REWIRING ALL EQUIPMENT AS INDICATED ON THE DRAWINGS.
2. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED AND (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
3. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.
4. EXISTING CIRCUITS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.
5. THE CONTRACTOR MAY SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATIONS IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.
6. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARDED AND ABANDONED MATERIALS LEFT OVER FROM DEMOLITION AND INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUIT, FASTENERS, AND BOXES.
7. CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES AFFECTED BY THE REMOVAL OF FIXTURES, CONDUIT, AND SUPPORT HARDWARE. RESTORE ALL AREAS TO MATCH ADJACENT FINISHES AND CONDITIONS. COORDINATE FINAL SURFACE FINISHES WITH OWNER (DCSD).
8. COORDINATE LIGHTING CONTROL REQUIREMENTS TO MAINTAIN FUNCTIONALITY WITH EXISTING SWITCHING AND DIMMING SYSTEMS.
9. PROVIDE TEMPORARY LIGHTING IF REQUIRED TO MAINTAIN ILLUMINATION IN OCCUPIED AREAS DURING INSTALLATION.
10. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OR UNFORESEEN CONDITIONS ARE ENCOUNTERED DURING THE RETROFIT PROCESS.

SHEET NOTES

1. REMOVE EXISTING FIXTURES AS INDICATED BY DASHED LINES.
2. EXISTING EMERGENCY LIGHTING TO REMAIN – PROTECT IN PLACE.
3. EXISTING LIGHTING CONTROLS AND SWITCHES TO REMAIN – PROTECT IN PLACE.
4. EXISTING OCCUPANCY SENSORS TO REMAIN – PROTECT IN PLACE.
5. EXISTING EXTERIOR LIGHTING TO REMAIN – PROTECT IN PLACE.
6. REMOVE EXISTING LIGHT FIXTURE, SUPPORTS, AND FLEX WHIP BACK TO NEAREST ACCESSIBLE JUNCTION BOX. CAP AND LABEL CONDUCTORS PER CODE FOR REUSE. FIXTURE TO BE REPLACED WITH NEW LED UNIT PER NEW WORK PLAN. PATCH AND REPAIR ANY SURFACES AFFECTED BY DEMOLITION.
7. REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED SURFACE-MOUNTED CONDUIT BACK TO NEAREST JUNCTION BOX. RETAIN AND PULL BACK CABLING FOR REUSE.

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6601 DTC Boulevard, Suite 740 | Denver, CO 80237 | 720.481.3290
pkelectrical.com

JOSEPH E. GAMSBY — STATE OF NEVADA — REGISTERED PROFESSIONAL ENGINEER — ELECTRICAL — No.21017 — 06/30/26
07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL LIGHTING RETROFIT

701 JACKS VALLEY RD.
CARSON CITY, NV 89705

REVISIONS

SHEET TITLE

PARTIAL LIGHTING DEMOLITION PLAN

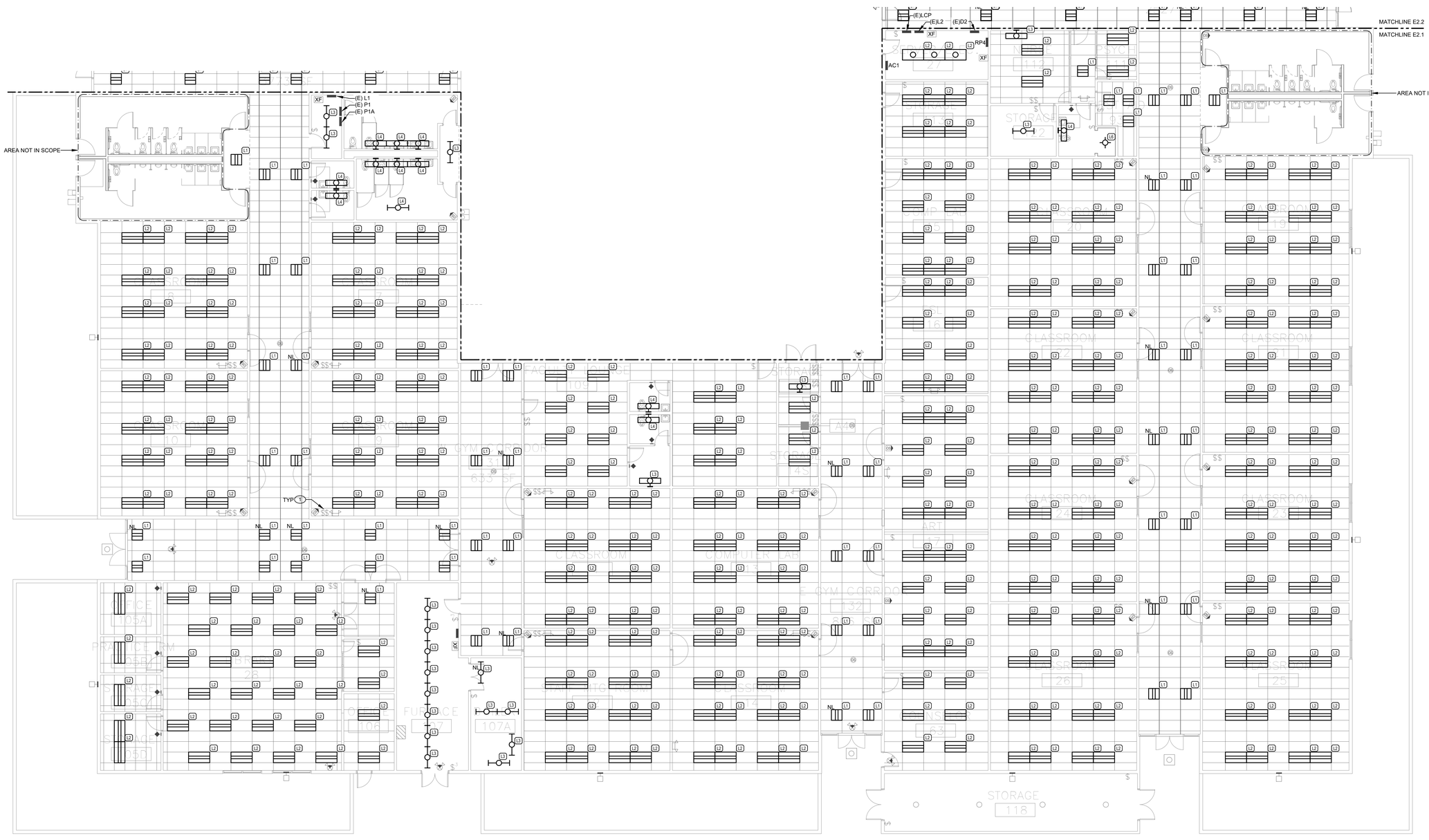
DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E1.2

PLEASE RECYCLE

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING FIXTURE LOCATIONS, CIRCUITRY, AND CEILING CONSTRUCTION PRIOR TO STARTING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. INSTALL NEW FIXTURES ON A 1:1 BASIS AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED.
4. REUTILIZE EXISTING BRANCH CIRCUITS MADE AVAILABLE DURING DEMOLITION FOR NEW FIXTURES. RE-IDENTIFY CIRCUIT CONDUCTORS AS REQUIRED.
5. VERIFY EXISTING WIRING CONDITION PRIOR TO REUSE. REPLACE DAMAGED CONDUCTORS OR DEVICES AS NECESSARY.
6. PROVIDE NEW MOUNTING HARDWARE, SUPPORTS, AND ACCESSORIES FOR NEW FIXTURES AS REQUIRED BY MANUFACTURER AND CODE.
7. PATCH, REPAIR, AND PAINT CEILING AREAS AFFECTED BY FIXTURE REMOVAL OR INSTALLATION TO MATCH ADJACENT FINISHES.



A
E2.1
PARTIAL NEW LIGHTING PLAN
SCALE: 1/8" = 1'-0"

PLEASE RECYCLE

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JOSEPH E. GAISER
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06/30/26
07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL LIGHTING RETROFIT

701 JACKS VALLEY RD.
CARSON CITY, NV 89705

REVISIONS

SHEET TITLE
PARTIAL NEW LIGHTING PLAN

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E2.1

GENERAL NOTES

1. (E) AND/OR SOLID HALFTONE LINES INDICATE EXISTING EQUIPMENT, (R) AND/OR DASHED LINES INDICATE RELOCATED EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING FIXTURE LOCATIONS, CIRCUITRY, AND CEILING CONSTRUCTION PRIOR TO STARTING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. INSTALL NEW FIXTURES ON A 1:1 BASIS AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED.
4. REUTILIZE EXISTING BRANCH CIRCUITS MADE AVAILABLE DURING DEMOLITION FOR NEW FIXTURES. RE-IDENTIFY CIRCUIT CONDUCTORS AS REQUIRED.
5. VERIFY EXISTING WIRING CONDITION PRIOR TO REUSE. REPLACE DAMAGED CONDUCTORS OR DEVICES AS NECESSARY.
6. PROVIDE NEW MOUNTING HARDWARE, SUPPORTS, AND ACCESSORIES FOR NEW FIXTURES AS REQUIRED BY MANUFACTURER AND CODE.
7. PATCH, REPAIR, AND PAINT CEILING AREAS AFFECTED BY FIXTURE REMOVAL OR INSTALLATION TO MATCH ADJACENT FINISHES.



A E2.2 PARTIAL NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

PLEASE RECYCLE

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JOSEPH E. GAMSBY — STATE OF NEVADA — PROFESSIONAL ENGINEER — ELECTRICAL — No.21011 — 06/30/26
07/15/2025

JACKS VALLEY ELEMENTARY SCHOOL
LIGHTING RETROFIT

701 JACKS VALLEY RD.
CARSON CITY, NV 89705

REVISIONS

SHEET TITLE
PARTIAL NEW LIGHTING PLAN

DRAWN:	TPT
CHECKED:	JEG
DATE:	07/15/2025
JOB NUMBER:	25026
PROJECT MGR:	LI

E2.2

Lighting Cut Sheets

DCSD Jacks Valley Elementary School
Lighting Retrofit

100% Construction Documents

July 15, 2024

PK Electrical, Inc.
ENGINEERING | DESIGN | CONSULTING

PINNACLE
ARCHITECTURAL LIGHTING®

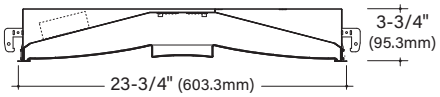
Project Name _____

Date _____ Type _____



LUCEN LU22

2x2 Architectural Recessed



Key Features

- Pre-painted formed 22 gauge cold rolled steel housing
- Highly reflective die-formed white painted reflector
- Wiring access available on both ends and top of housing
- LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL Listed, LO, MO, and HO lumen packages are IC Rated
- Pre-painted fixtures are to be used in dry locations only
- For damp location, must specify Paint After Fabrication (PAF) in the Options section of the luminaire specification
- Maximum fixture weight is 15 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Buy American Act compliant
- Indigo-Clean available, see Indigo-Clean specification sheets for details

Example Part #: LU22-A-830HO-G1-U-OL2-1-0-W

LU22 - [SHIELDING] - [CRI, CCT & OUTPUT] - [MOUNTING] - [VOLTAGE] - [DRIVER] - [CIRCUITING] - [BATTERY & EMERGENCY] - [FINISH] - [FIXTURE OPTIONS] - [CONTROLS]

SHIELDING (__)

A - Satine Lens QS
W - White Rails QS
S - Silver Rails QS
Shielding pg. 2

CRI, CCT & OUTPUT (_____) QS[1]

_27__ - 2700K
_30__ - 3000K
_35__ - 3500K
_40__ - 4000K
CL_____ - Custom Lumens
CW_____ - Custom Watts
Lumen Output pg. 2

MOUNTING (_____)

G1 - 15/16" Grid QS
G9 - 9/16" Grid QS
GS - Screw Slot Grid QS
FL - Flanged
S - Surface Mount
Mounting pg. 3

VOLTAGE (_)

U - Universal *(120 thru 277V)* QS
1 - 120V QS
2 - 277V QS
3 - 347V
Voltage pg. 3

DRIVER (___)

OL2 - Osram *(1%, 0-10v, standard)* QS
OL3 - Osram 347v *(10%, 0-10v)*
EE1 - eldoLED ECOdrive *(1%, 0-10v)*
ES1 - eldoLED ECOdrive *(1%, 0-10v)*
LH1 - Lutron Hi-lume *(1%, EcoSystem)* QS
L51 - Lutron 5-Series *(5%, EcoSystem)*
PL2 - Advance Xitanium *(1%, 0-10v)* QS
PR1 - Advance Xitanium SR
ND - Non-Dimming
Driver pg. 3

CIRCUITING (_)

1 - Single Circuit QS
E - Emergency *(entire fixture)* QS
N - Night Light *(entire fixture)* QS
Circuiting pg. 4

BATTERY & EMERGENCY (___)

0 - None QS
1P - Bodine 10W QS
1I - Iota 10W QS
1IC - Iota 10W, CEC Listed
1A - Acuity Power Sentry 10W
1G - Bodine GTD
Battery and Emergency pg. 4

FINISH (__)

W - White QS
Finish pg. 4

FIXTURE OPTIONS[2] (____)

QS - QuickShip QS
TW - Through-wiring
CP - Chicago Plenum QS
AM - Antimicrobial Paint
FW6 - 6' Flex Whip QS
GLR - Fast Blow Fusing QS
GMF - Slow Blow Fusing
PAF - Paint after fabrication
Fixture Options pg. 4

CONTROLS[3] (___)

DLMFC - Wattstopper DLM *(wired)*
NLIGHT - Acuity nLight *(wired)*
EASYS - Philips EasySense *(wireless)*
SNSLM - Osram Sensilum *(wireless)*
WVLX - Eaton WaveLinx *(wireless)*
VDO - Lutron Vive Sensor *(wireless)*
VRF - Lutron Vive Connected *(wireless)*
Controls pg. 5

*Not all products qualify for DLC listing. For a complete listing of the LUCEN products that qualify for DLC, please go to the DLC website. [1]When specifying CRI, CCT & OUTPUT the first _ is for specifying either **8** - 80CRI or **9** - 90CRI The ending _ _ are for specifying output, example **HO** - High Output. See output charts for more information. For Quickship CRI, CCT & Output see chart on page 4 [2]QS must be used in fixture options section of part number to qualify. [3]Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**). NLTAIR_ options have visible antenna See Controls chart on page 5 for driver options and more information.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Shielding

- Single piece extruded diffuse lens with convex wings and articulated center spine
- Fully luminous housing with optimal glare control
- Highly reflective white reflectors maintain uniform lens brightness

Ordering Code

A	**W**	**S**
Satine Lens	Satine Lens with White Trim	Satine Lens with Silver Trim







Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.
- 80 CRI = R9≥19 and 90 CRI = R9≥61
- Not all products qualify for DLC listing. For a complete listing of the EV3D products that qualify for DLC, please go to the DLC website.

Custom Output - Lumens OR Wattage

CL_ _ _ _ _	Specify CRI, CCT and desired lumens (i.e. CL8351200)	*Specify lumens between standard offering listed below. Lumens are specified per color temp*
CW_ _ _ _ _	Specify CRI, CCT and desired wattage (i.e. CW94015)	*Specify watts between standard offering listed below*

80 CRI

	Color	Output	Watts	Shielding **A** Satine Lens		**W** White Trim		**S** Silver Trim	
				Lumens	*LPW*	*Lumens*	*LPW*	*Lumens*	*LPW*
830LO	3000K	Low	19.6	2132	108.8	1923	98.1	1814	92.6
830MO	3000K	Middle	30.8	3322	107.9	2996	97.3	2827	91.8
830HO	3000K	High	42.1	4287	101.8	3867	91.9	3648	86.7
835LO	3500K	Low	19.6	2191	111.8	1976	100.8	1865	95.1
835MO	3500K	Middle	30.8	3414	110.8	3079	100.0	2905	94.3
835HO	3500K	High	42.1	4406	104.7	3974	94.4	3750	89.1
840LO	4000K	Low	19.6	2286	116.6	2062	105.2	1945	99.3
840MO	4000K	Middle	30.8	3566	115.8	3217	104.4	3035	98.5
840HO	4000K	High	42.1	4627	109.9	4174	99.1	3938	93.5

90 CRI

927LO	2700K	Low	19.6	1777	90.7	1603	81.8	1512	77.2
927MO	2700K	Middle	30.8	2769	89.9	2497	81.1	2356	76.5
927HO	2700K	High	42.1	3573	84.9	3223	76.6	3041	72.2
930LO	3000K	Low	19.6	1964	100.2	1772	90.4	1671	85.3
930MO	3000K	Middle	30.8	3060	99.4	2760	89.6	2604	84.5
930HO	3000K	High	42.1	3949	93.8	3562	84.6	3361	79.8
935LO	3500K	Low	19.6	1970	100.5	1777	90.7	1676	85.5
935MO	3500K	Middle	30.8	3070	99.7	2769	89.9	2613	84.8
935HO	3500K	High	42.1	3961	94.1	3573	84.9	3371	80.1
940LO	4000K	Low	19.6	2040	104.1	1840	93.9	1736	88.6
940MO	4000K	Middle	30.8	3181	103.3	2869	93.2	2707	87.9
940HO	4000K	High	42.1	4128	98.1	3723	88.4	3513	83.4

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

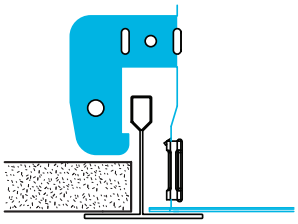
Mounting

- LUCEN is offered with a universal flange for all grid types. See below for fixture placement in relation to the tile for each grid type
- Grid retention clips integral to housing and require mechanical attachment
- Tie off fixture to structure with retention wires
- Refer to installation instructions during installation at the jobsite
- Approved for dry/damp location when PAF is specified
- Maximum fixture weight is 15lbs - Surface Mount Box adds 10 lbs

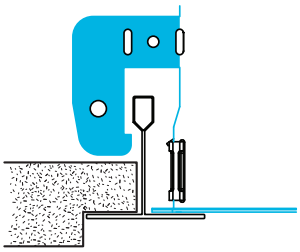
G1

1" Grid Mount

Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.



Standard Tile

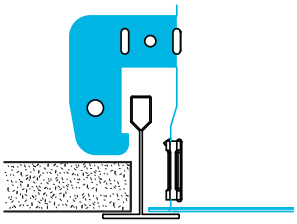


Tegular Tile

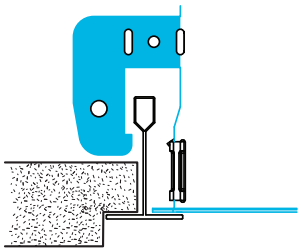
G9

9/16" Grid Mount

Works with 9/16" grid ceiling type. For tegular tile installations, fixture position will not be flush to the bottom of the tile. See tegular tile profile image below.



Standard Tile

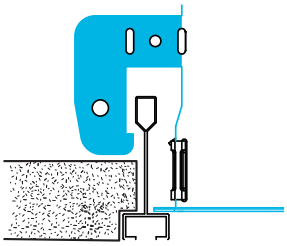


Tegular Tile

GS

Screw Slot Mounting

Works with screw slot and bolt slot grid ceiling types.

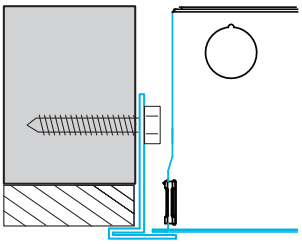


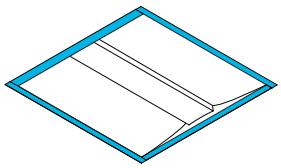
Tegular Tile

FL

Flange Kit

A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.

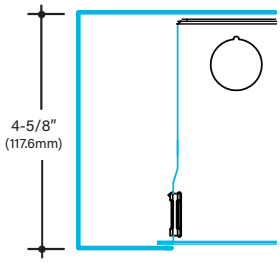


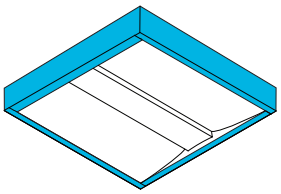


S

Surface Mount

Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs





Voltage

- Some LUCEN configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = OL2
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more Driver options, see Pinnacle Resource Guide
- Some LUCEN configurations will not accommodate all driver options; consult with factory

OL2	Osram Optotronic 1%, 0-10v, nominal 1% dimming range
OL5	Osram Optotronic 1%, 0-10v, AUX
OD1	Osram Optotronic 1%, DEXAL
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE6	eldoLED ECOdrive 1%, for nLight Air Wireless
ES1	eldoLED SOLOdrive 0%, 0-10v Logarithmic
ES6	eldoLED SOLOdrive 0%, *for nLight Air Wireless*
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
L51	Lutron 5-Series 5%, EcoSystem, LDE5
PL2	Advance Xitanium 1%, 0-10v
PR1	Advance Xitanium SR, *requires EASY, VDO, or VRF*
ND	Non-Dimming

Circuiting

- Select fixture circuiting from options below
- Some LUCEN configurations will not accommodate all circuiting options; consult with factory

1	Single Circuit
E	Emergency Circuit only *(uses nIO EZ PH ER with NLIGHT)*
N	Night Light Circuit only

Battery & Emergency

- Select battery or emergency options if required
- Battery duration is 90 minutes
- Test button is integral to fixture
- For more Battery options, see Pinnacle Resource Guide

0	No Battery
1P	Bodine 10w Integral, *CEC Listed*
1I	Iota 10w Integral
1IC	Iota 10w Integral, *CEC Listed*
1G	Bodine GTD
1A	Acuity Power Sentry 10W Integral *(required eldoLED driver)*

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 10 (watts) x 92.3 (LPW) = 923 battery lumen output

Battery & Emergency Ordering Examples

- Single circuit, 10w integral battery Ordering Code: 1-1P
- Emergency circuit only, 10w integral battery Ordering Code: E-1P

Finish

- Powder-coat white painted finish on exposed trim

W	White

Fixture Options

- Additional options to enhance the fixture and finish of the product

QS	10 Day Quick Ship
TW	Through-Wiring
CP	Chicago Plenum
AM	Antimicrobial Paint
FW6	Flex Whip 6'
FW12	Flex Whip 12'
GLR	Internal Fast Blow Fuse
GMF	Internal Slow Blow Fuse
PAF	Paint after fabrication

Quick Ship

Shielding	Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens **W** White Rails **S** Silver Rails	80 CRI, All color temperatures, all lumen packages *See pg 4*	**G1** 1" Grid **G9** 9/16" Grid **GS** Screw Slot	**U** Universal **1** 120v **2** 277v	**OL2** Osram 0-10v, 1% **PL2** Advance Xitanium 0-10v, 1% **LH1** Lutron LDE1 **ND** Non Dimming	**1** Single **E** Emergency **N** Night Light	**1P** Bodine 10w Integral **1I** Iota 10w Integral	**W** White	**CP** Chicago Plenum **FW6** Flex Whip 6' 18-gauge **GLR** Internal Fast-Blow Fuse

Consult Factory for projects that are larger than 200 units.

Controls

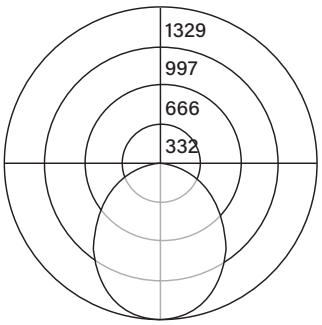
- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready; commissioning by others
- Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**)
- Contact factory for any non-standard configurations for layout, placement, or EM options
- Controls only compatable with Satine Lens.
- Must specify required driver in Driver Section

	Solution	Components	Network/Sensor	Connection	Required Drivers	Limitations
DLMFC	Legrand Wattstopper DLM	LMFC-011	Digital Lighting Management (DLM)	Wired, two RJ45 ports	Any 0-10v	Not available with Battery
NLIGHT	Acuity nLight	nIO EZ PH / nIO EZ PH ER	nLight	Wired, two RJ45 ports	EE2, ES2	Not available with 347 volt
EASYS	Philips EasySense	SNS-200	Daylight/PIR Occupancy	Wireless to switches	PR1	Not available with 347 volt
SNSLM	Osram Sensilum	EN-CLM-PIR-DD-ZB	Encelium, Daylight/PIR Occupancy	Wireless	OD1, OL5	Not available with 347 volt
WLVX	Eaton WaveLinx	SWPD1, MSP3IVMVDC1	WaveLinx WCL, Daylight	Wireless	Any 0-10v	Not available with 347 volt
VDO	Lutron Vive Sensor	DFCSJ-OEM-OCC	Vive, Daylight/PIR Occupancy	Wireless	OD1, PR1	Not available with 347 volt
VRF	Lutron Vive Connected	DFCSJ-OEM-RF	Vive	Wireless	OD1, PR1	Not available with 347 volt

Photometrics

Satine Lens

Test #	ITL88919
Catalog #	LU22A-840MO
Lumens	3566 lm
Watts	30.8 W
Efficacy	116 LPW



Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1329	1329	1329	1329	1329
5	1324	1324	1324	1324	1323
10	1304	1303	1302	1302	1303
15	1271	1269	1266	1263	1264
20	1221	1219	1214	1210	1210
25	1158	1156	1149	1145	1145
30	1084	1080	1074	1072	1073
35	999	994	990	992	996
40	905	902	901	909	916
45	803	803	809	823	832
50	700	702	713	732	743
55	596	600	617	637	648
60	493	500	522	540	550
65	392	403	426	443	453
70	294	309	334	348	357
75	201	219	244	256	266
80	118	136	159	170	178
85	48	63	78	80	84
90	0	0	0	0	0

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3633	3661	3765
55	3325	3442	3615
65	2968	3225	3429
75	2485	3016	3288
85	1762	2863	3084

For all available IES files, please visit our website at pinnacle-ltg.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

Approvals & Certifications

Construction: Formed 20 gauge cold rolled steel housing. Highly reflective die-formed white painted reflector. Wiring access available on top of housing. Captive and hinged center lens swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Co-extruded acrylic lens with ribbed side channels evenly illuminates the side reflector giving the appearance of a fully luminous aperture. Available with standard satine lens or optional clear lens with linear slot or round perf insert.

Mounting: Designed to install into acoustical grid and inaccessible ceilings. Specify G1, G9 or GS for acoustical grid ceiling. Specify FL for inaccessible ceilings. Grid retention clips integral to housing and require mechanical attachment. Tie off fixture to structure with retention wires. Maximum fixture weight is 28 lbs

LED: 25ºC test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 107,300 hours and L90 = 32,000 hours. MacAdam 3-Step Ellipses. Not all products are lighting facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

CRI, CCT & Output: Four lumen packages available. Low (LO), Medium (MO), High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on Color Temperature & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

Voltage: Universal (U), 120 volt (1) and 277 volt (2). Some LUCEN configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Osram 0-10V, 1% = OL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25C ambient operating conditions. Ambient operating range: -20°F/-30°C to 91°F/33°C.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some LUCEN configurations will not accommodate all circuiting options, consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture.

Finish: Powder-coat white painted finish on exposed trim.

Controls: DLM utilizes wired network connections for digital control through switching and dimming. nLight Air rES7 sensor provides wireless control, daylight harvesting and occupancy detection with PIR or PDT using eldoLED LED drivers. nLight Air rIO module provides wireless control using eldoLED LED drivers. EasySense sensor provides daylight harvesting and PIR occupancy detection using the SR LED driver; the Philips app provides advanced configurations. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. WaveLinx Connected Lighting sensor provides wireless control and daylight harvesting using 0-10V LED drivers. Lutron Vive sensor provides wireless control, daylight harvesting and PIR occupancy detection using DEXAL or SR LED drivers. Lutron Vive module provides wireless control using DEXAL or SR LED drivers.

Labels: UL and cUL Listed. LO, MO, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

Fixture Weight: 15 lbs maximum - Surface Mount Box adds 10 lbs.

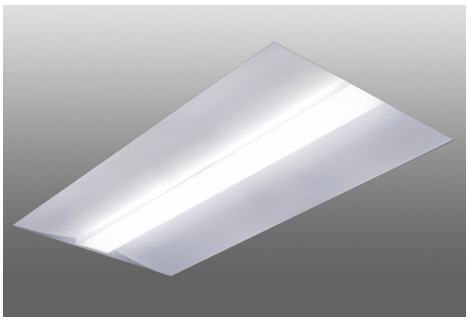
Buy American Act Compliant

Warranty: LUCEN LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

PINNACLE ARCHITECTURAL LIGHTING®

Project Name _____

Date _____ Type _____



LUCEN LU24

2x4 Architectural Recessed



Key Features

- Formed 22 gauge cold rolled steel housing
- Highly reflective die-formed white painted reflector
- Wiring access available on both ends and top of housing
- LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL Listed, LO, MO, aend HO lumen packages are IC Rated
- Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Indigo-Clean available, see Indigo-Clean specification sheets for details

Example Part #: LU24-A-830HO-G1-U-FSD-1-0-W

LU24 - [SHIELDING] - [CRI, CCT & OUTPUT] - [MOUNTING] - [VOLTAGE] - [DRIVER] - [CIRCUITING] - [BATTERY & EMERGENCY] - [FINISH] - [FIXTURE OPTIONS] - [CONTROLS]

SHIELDING (__)

A - Satine Lens QS
W - White Rails QS
S - Silver Rails QS
Shielding pg. 2

SOURCE QS[1] (_ _ _ _ _ _)

_27__ - 2700K
_30__ - 3000K
_35__ - 3500K
_40__ - 4000K
CL_ _ _ _ _ _ - Custom Lumens
CW_ _ _ _ _ _ - Custom Watts
MOD - Mod options available
Lumen Output pg. 2

MOUNTING (_ _ _ _ _ _)

G1 - 15/16" Grid QS
G9 - 9/16" Grid QS
GS - Screw Slot Grid QS
FL - Flanged
S - Surface Mount
Mounting pg. 3

VOLTAGE (_)

U - Universal *(120 thru 277V)* QS
1 - 120V QS
2 - 277V QS
3 - 347V
Voltage pg. 3

DRIVER (_ _ _)

FSD - Factory Select Driver *(1%, 0-10v)* QS
PL2 - Advance Xitanium *(1%, 0-10v)* QS
OL4 - eldoLED Optotronic 347v *(1%, 0-10v)*
EE1 - eldoLED ECOdrive *(1%, 0-10v)*
ES1 - eldoLED SOLOdrive *(0.1%, 0-10v)*
LH1 - Lutron Hi-lume *(1%, EcoSystem)*
PR1 - Advance Xitanium SR
OL2 - eldoLED Optotronic *(1%, 0-10v, standard)* QS
MOD - Mod options available
Driver pg. 4

CIRCUITING (_)

1 - Single Circuit QS
E - Emergency *(entire fixture)* QS
N - Night Light *(entire fixture)* QS
Circuiting pg. 4

BATTERY & EMERGENCY (_ _ _)

0 - None QS
FSB - Factory Select Battery QS
FSG - Factory Select ALCR
1P - Bodine 10W QS
1IC - Iota 10W, CEC Listed QS
GI - Iota ETS DR
GB - Bodine GTD
Battery and Emergency pg. 4

FINISH (_ _)

W - White QS
MOD - Mod options available
Finish pg. 5

FIXTURE OPTIONS[2] (_ _ _ _)

QS - QuickShip QS
TW - Through-wiring
CP - Chicago Plenum
AM - Antimicrobial Paint
FW6 - 6' Flex Whip QS
GLR - Fast Blow Fusing QS
GMF - Slow Blow Fusing
BA - Buy American Act compliant
MOD - Mod options available
Fixture Options pg. 5

CONTROLS[3] (_ _ _)

DLMFC - Wattstopper DLM *(wired)*
DLMFS - Wattstopper LLLC *(wireless)*
EASYS - Philips EasySense *(wireless)*
SNSLM - Encelium Sensilum *(wireless)*
WVLX - Eaton WaveLinx *(wireless)*
VDO - Lutron Vive Sensor *(wireless)*
VRF - Lutron Vive Connected *(wireless)*
ENL - Enlighted, "C" Connected Lighting or "I" IOT
ENL2 - Enlighted 2-Wire, "C" Connected Lighting or "I" IOT
MOD - Mod options available
Controls pg. 6

[1]When specifying SOURCE the first _ is for specifying either 8 - 80CRI, 9 - 90CRI. The ending _ _ are for specifying output, example HO - High Output. See output charts for more information. [2]If specifying QS, QS must be used in fixture options section of part number to qualify. [3]Controls can only be used with Single Circuit (1) or Emergency Circuit (E). See Controls chart on page 5 for driver options and more information

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Shielding

- Single piece extruded diffuse lens with convex wings and articulated center spine
- Fully luminous housing with optimal glare control
- Highly reflective white reflectors maintain uniform lens brightness

Ordering Code

A	**W**	**S**
Satine Lens	Satine Lens with White Trim	Satine Lens with Silver Trim







Source

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.
- 90 CRI = R9≥50

Custom Output- Lumens OR Wattage

CL_ _ _ _ _	Specify CRI, CCT and desired lumens (i.e. CL8351200)	*Specify lumens between standard offering listed below. Lumens are specified per color temp*
CW_ _ _ _ _	Specify CRI, CCT and desired wattage (i.e. CW94015)	*Specify watts between standard offering listed below*

80 CRI

	Color	Output	Watts	Shielding **A** Satine Lens		**W** White Trim		**S** Silver Trim	
				Lumens	*LPW*	*Lumens*	*LPW*	*Lumens*	*LPW*
830LO	3000K	Low	24.3	2937	120.9	2650	109.0	2500	102.9
830MO	3000K	Middle	32.2	3888	120.7	3507	108.9	3309	102.8
830HO	3000K	High	40.8	4788	117.4	4319	105.9	4075	99.9
830VHO	3000K	Very High	63.9	6958	108.9	6276	98.2	5921	92.7
835LO	3500K	Low	24.3	3019	124.2	2723	112.1	2569	105.7
835MO	3500K	Middle	32.2	3996	124.1	3604	111.9	3401	105.6
835HO	3500K	High	40.8	4921	120.6	4439	108.8	4188	102.6
835VHO	3500K	Very High	63.9	7151	111.9	6450	100.9	6086	95.2
840LO	4000K	Low	24.3	3155	129.8	2846	117.1	2685	110.5
840MO	4000K	Middle	32.2	4178	129.8	3769	117.0	3555	110.4
840HO	4000K	High	40.8	5169	126.7	4662	114.3	4399	107.8
840VHO	4000K	Very High	63.9	7482	117.1	6749	105.6	6367	99.6

90 CRI

927LO	2700K	Low	24.3	2448	100.8	2208	90.9	2084	85.7
927MO	2700K	Middle	32.2	3241	100.6	2923	90.8	2758	85.6
927HO	3500K	High	40.8	3991	97.8	3600	88.2	3396	83.2
927VHO	3500K	Very High	63.9	5799	90.8	5231	81.9	4935	77.2
930LO	3000K	Low	24.3	2706	111.4	2441	100.4	2303	94.8
930MO	3000K	Middle	32.2	3581	111.2	3230	100.3	3047	94.6
930HO	3000K	High	40.8	4410	108.1	3978	97.5	3753	92.0
930VHO	3000K	Very High	63.9	6409	100.3	5781	90.5	5454	85.4
935LO	3500K	Low	24.3	2715	111.7	2449	100.8	2310	95.1
935MO	3500K	Middle	32.2	3593	111.6	3241	100.6	3058	95.0
935HO	3500K	High	40.8	4424	108.4	3990	97.8	3765	92.3
935VHO	3500K	Very High	63.9	6429	100.6	5799	90.8	5471	85.6
940LO	4000K	Low	24.3	2815	115.8	2539	104.5	2396	98.6
940MO	4000K	Middle	32.2	3727	115.7	3362	104.4	3172	98.5
940HO	4000K	High	40.8	4611	113.0	4159	101.9	3924	96.2
940VHO	4000K	Very High	63.9	6674	104.4	6020	94.2	5680	88.9

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

Direct Source: MOD Options

- Specify **MOD** in the part number for any of the below options
- All RGB_ Source Options will require specific driver and control
- Consult factory for **MOD** specification details, pricing, and lead-time information

		Required Driver	Required Control
MOD	Color Changing RGB LED	EC1/EC4	DMX
	Color Changing RGB-W LED	EC1/EC4	DMX
	2 Channel Tunable White		
	Dynamic BIOS		

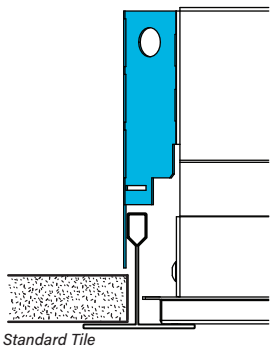
Mounting

- LUCEN is offered with a universal flange for all grid types. See below for fixture placement in relation to the tile for each grid type
- Grid retention clips integral to housing and require mechanical attachment
- Tie off fixture to structure with retention wires
- Refer to installation instructions during installation at the jobsite
- Maximum fixture weight is 25lbs - Surface Mount Box adds 10 lbs

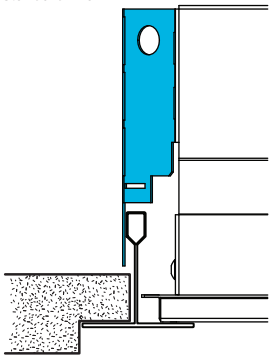
G1

1" Grid Mount

Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.



Standard Tile

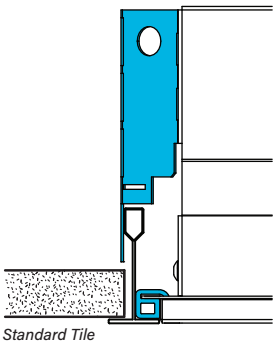


Tegular Tile

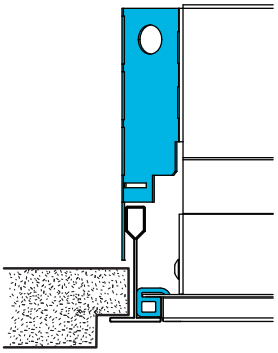
G9

9/16" Grid Mount

Works with 9/16" grid ceiling type. For tegular tile installations, fixture position will not be flush to the bottom of the tile. See tegular tile profile image below.



Standard Tile

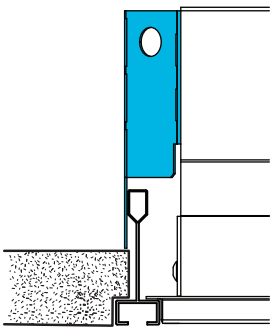


Tegular Tile

GS

Screw Slot Mounting

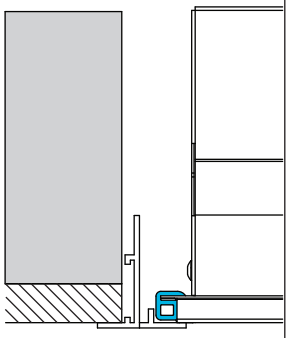
Works with screw slot and bolt slot grid ceiling types.

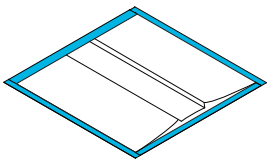


FL

Flange Kit

A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.

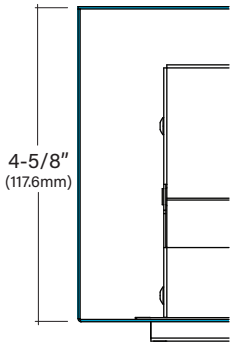


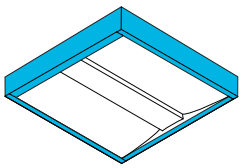


S

Surface Mount

Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs





Voltage

- Some LUCEN configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more Driver options, see Pinnacle Resource Guide
- Some LUCEN configurations will not accommodate all driver options; consult with factory

0-10V Drivers	
FSD	Factory Select Driver 1%, 0-10v
PL2	Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	eldoLED Optotronic, 1%, 0-10v
OL4	eldoLED Optotronic 347v, 1% 0-10v (requires 347v)
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0.1% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
OL5	eldoLED Optotronic 1%, 0-10v, AUX
PL5	Advance Xitanium 1%, 0-10v, AUX
DALI Drivers	
OD1	eldoLED Optotronic 1%, DEXAL
EE3	eldoLED ECOdrive .1%, DALI (logarithmic)
ES3	eldoLED SOLOdrive .1%, DALI (logarithmic)
Lutron Drivers	
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
Alternate Drivers	
PS1	Signify Advance Xitanium Step Dimming 50%/100%
PR1	Philips Advance Xitanium SR, requires EASYS, VDO or VRF
EH1	ELV 120v only, 0-10v universal
OD1	eldoLED Optotronic 1%, DEXAL

Driver: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Power Over Ethernet

Circuiting

- Select fixture circuiting from options below
- Some LUCEN configurations will not accommodate all circuiting options; consult with factory

1	Single Circuit
E	Emergency Circuit only *(uses nIO EZ PH ER with NLIGHT)*
N	Night Light Circuit only

Battery & Emergency

- Select battery or emergency options if required
- Battery duration is 90 minutes
- Test button is integral to fixture
- For more Battery options, see Pinnacle Resource Guide

0	No Battery
FSB	Factory Select Battery (10w option)
FSBST	Factory Select Battery (10w, Self Testing)
1P	Bodine 10w Integral, *CEC Listed*
1IC	Iota 10w Integral, *CEC Listed*
FSG	Factory Select Automatic Load Control Relay (ALCR), UNV
GI	Emergency Transfer Switch (ETS) DR Emergency Control Device, UNV
GB	Bodine GTD, Generator Transfer Device, 120v or 277v

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 10 (watts) x 92.3 (LPW) = 923 battery lumen output

Battery & Emergency Ordering Examples

- Single circuit, 10w integral battery — Ordering Code: 1-1P
- Emergency circuit only, 10w integral battery — Ordering Code: E-1P

Finish

- Powder-coat white painted finish

W	White

Finish: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Wood Grain
	Acoustic
	Metallic Silver
	Textured Black
	Bronze
	Graphite
	Custom Color

Fixture Options

- Additional options to enhance the fixture and finish of the product

QS	Quick Ship
TW	Through-Wiring
CP	Chicago Plenum
AM	Antimicrobial Paint
FW6	Flex Whip 6'
GLR	Internal Fast Blow Fuse
GMF	Internal Slow Blow Fuse
BA	Buy American Act Compliant

Fixture Options: MOD Options

- Specify **MOD** in the part number for any of the below options
- Consult factory for **MOD** specification details, pricing, and lead-time information

MOD	Remote Driver
	End Power Feed

Quick Ship

Shielding	Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens **W** White Rails **S** Silver Rails	80 CRI, All color temperatures, all lumen packages *See pg 4*	**G1** 1" Grid **G9** 9/16" Grid **GS** Screw Slot	**U** Universal **1** 120v **2** 277v	**FSD** Factory Select Driver *(1%, 0-10v)* **PL2** Advance Xitanium 0-10v, 1% **OL2** Osram 0-10v, 1%	**1** Single **E** Emergency **N** Night Light	**FSB** Factory Select Battery **1P** Bodine 10w Integral **1IC** Iota 10w Integral	**W** White	**CP** Chicago Plenum **FW6** Flex Whip 6' 18-gauge **GLR** Internal Fast-Blow Fuse

Consult Factory for projects that are larger than 200 units.

Controls

- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready; commissioning by others
- Controls can only be used with Single Circuit (**1**) or Emergency Circuit (**E**)
- Contact factory for any non-standard configurations for layout, placement, or EM options
- Controls only compatible with Satine Lens.
- Must specify required driver in Driver Section

	Solution	Components	Network/Sensor	Connection	Required Drivers	Limitations
DLMFC	Legrand Wattstopper DLM	LMFC-011	Digital Lighting Management (DLM)	Wired, two RJ45 ports	OL2, OL4	Not available with Battery
DLMFS	Legrand Wattstopper LLLC	LMFS-601-W / LMFI-111	Wireless DLM Fixture Sensor	Wireless	OD1, PR1, 0-10v	0-10v requires interface
EASYS	Philips EasySense	SNS-210	Daylight/PIR Occupancy	Wireless to switches	PR1	Not available with 347 volt
SNSLM	Encelium Sensilum	EN-CLM-PIR-DD-ZB	Encelium, Daylight/PIR Occupancy	Wireless	OD1, OL5	Not available with 347 volt
WLVX	Eaton WaveLinx	SWPD1, MSP3IVMVDC1	WaveLinx WCL, Daylight	Wireless	Any 0-10v	Not available with 347 volt
VDO	Lutron Vive Sensor	DFCSJ-OEM-OCC	Vive, Daylight/PIR Occupancy	Wireless	OD1, PR1	Not available with 347 volt
VRF	Lutron Vive Connected	DFCSJ-OEM-RF	Vive	Wireless	OD1, PR1	Not available with 347 volt
ENLI	Enlighted IOT	SU-5E-IOT, CU-4E	Enlighted, Daylight/PIR Occupancy	Wireless	Any 0-10v	Not available with 347 volt
ENLC	Enlighted Connected Lighting	SU-5E-CL, CU-4E	Enlighted, Daylight/PIR Occupancy	Wireless	Any 0-10v	Not available with 347 volt
ENL2I	Enlighted 2-Wire IOT	KIT-SU-5E-D-IOT	Enlighted, Daylight/PIR Occupancy	Wireless	OD1 OR PR1	Not available with 347 volt
ENL2C	Enlighted 2-Wire Connected Lighting	KIT-SU-5E-D-CL	Enlighted, Daylight/PIR Occupancy	Wireless	OD1 OR PR1	Not available with 347 volt

Controls: MOD Options

- Specify **MOD** in the part number for any of the below options
- **Control** Options may require specific driver. Refer to the chart below
- Consult factory for **MOD** specification details, pricing, and lead-time information

		Required Driver
MOD	Encelium Sensilum	OD1, OL5
	Acuity nLight Air Wireless Connected	EE6, ES6

Approvals & Certifications

Construction: Formed 22 gauge cold rolled steel housing. Highly reflective die-formed reflectors maintain uniform lens brightness. Wiring access on both sides and top of housing. Housing designed to maintain optimal temperature of LED diodes and driver. Captive door frame swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Single piece extruded diffuse lens with convex wings and articulated center spine creating a fully luminous housing with optimal glare control. Available with standard satine lens or optional white or silver lens side rails.

Mounting: Designed to install into acoustical grid and inaccessible ceilings. Specify G1, G9 or GS for acoustical grid ceiling. Specify FL for inaccessible ceilings. Grid retention clips integral to housing and require mechanical attachment. Tie off fixture to structure with retention wires. Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs.

LED: 25ºC test environment. Lumen output/wattage has a margin of +/- 5%. Luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 134,700 hours and L90 = 40,100 hours. MacAdam 3-Step Ellipses. Not all products are lighting facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

Color & Lumen Output: Four lumen packages available. Low (LO), Medium (MO), High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 90 CRI = R9≥50.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some LUCEN configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Advance Xitanium 0-10V, 1% = PL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 95°F/35°C. For more driver options, see Pinnacle Resource Guide. Some LUCEN configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some LUCEN configurations will not accommodate all circuiting options, consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture. For more Battery options, see Pinnacle Resource Guide.

Finish: Powder-coat white painted finish on exposed trim.

Controls: DLM utilizes wired network connections for digital control through switching and dimming. nLight Air rES7 sensor provides wireless control, daylight harvesting and occupancy detection with PIR or PDT using eldoLED LED drivers. nLight Air rIO module provides wireless control using eldoLED LED drivers. EasySense sensor provides daylight harvesting and PIR occupancy detection using the SR LED driver; the Philips app provides advanced configurations. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. ENCELIUM SensiLUM sensor provides wireless control, daylight harvesting and PIR occupancy; driver data is available when using the DEXAL driver. WaveLinx Connected Lighting sensor provides wireless control and daylight harvesting using 0-10V LED drivers. Lutron Vive sensor provides wireless control, daylight harvesting and PIR occupancy detection using DEXAL or SR LED drivers. Lutron Vive module provides wireless control using DEXAL or SR LED drivers.

Labels: UL and cUL 1598 listed. LO, MO, and HO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

Fixture Weight: 25 lbs maximum - Surface Mount Box 10 lbs.

Warranty: LUCEN LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — The CLX is a linear lighting solution that is available in multiple lengths, lumen packages and distributions. Designed for versatility, the CLX can address virtually any indoor lighting need. The CLX is also offered in standard and high efficacy configurations and capable of being continuous row mounted or installed as a stand-alone fixture. Ideal for uplight and downlight in commercial, retail, manufacturing, warehouse, and display applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Channel and cover are formed from code-gauge cold-rolled steel. Housing and lens endcaps are injection molded plastic to provide a more architectural look and feel. The endcaps come standard with a 7/8" knock out for continuous mounting but can be ordered without.

Finish: Paint options include high-gloss, baked white polyester (WH), galvanized (GALV), matte black (MB) and smoke gray (SKGY). Five-stage iron phosphate pre-treatment ensures superior paint adhesion and rust resistance.

OPTICS — Offered with acrylic lens and less lens configurations. Provides a choice of optical distributions including, wide, narrow, and aisle.

Models with wide diffuse lens provide up to 12% uplight. Please check the IES file for specific uplight value.

ELECTRICAL — Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Optional internal pluggable wiring harness for reduced labor cost in row mounting applications. (See PLR_ ordering information on page 9.) Electronic LED driver is multi-volt input and 0-10V dimming standard (see Operational Data on page 6 for actual wattage consumption). This fixture is designed to withstand a maximum line surge of 2.5kV at 0.75kA combination wave for indoor locations, for applications requiring higher level of protection additional surge protection must be provided. Color Variation within 3-step MacAdam ellipse (3SDCM).

L70>100,000 hours at 25˚C.

LEDs provide nominal 80 CRI or 90 CRI at 3000 K, 3500 K,4000 K, or 5000 K.

Lumen output up to 2,500 lumens per foot.

INSTALLATION — Fixture may be ceiling or wall mounted (with or without THCLX hanger or angle mounted with CLXANGBKT), pendant or stem mounted with appropriate mounting options.

WARNING — Removing the lens and opening the fixture during installation exposes the LEDs, putting them at risk for damage.

If you plan to surface mount the fixture, we recommend using the THCLX. This eliminates the need to open the fixture.

If you plan to continuous row mount, we recommend using the PLR wiring harness option. This eliminates the need to open the fixture.

Damage to the LEDs caused during installation will not be covered under the warranty.

LISTINGS — CSA certified to US and Canadian safety standards. For use in damp locations between -4°F (-20°C) and 104°F (40°C). Optional High Ambient (HA) ranging to 122°F(50°C) available on certain lumen packages (See ambient temperature chart for additional information).
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 to confirm which versions are qualified.

GOVERNMENT PROCUREMENT — BAA – Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also 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 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

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 ℃.
Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

Stock Part Number	UPC
CLX L48 3000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525816
CLX L48 3000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525885
CLX L48 5000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525939
CLX L48 5000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525908
CLX L96 6000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525861
CLX L96 6000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525915
CLX L96 10000LM SEF FDL MVOLT GZ10 40K 80CRI WH	00191723525922
CLX L96 10000LM SEF FDL MVOLT GZ10 50K 80CRI WH	00191723525830
CLX L48 3000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525960
CLX L48 3000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525892
CLX L48 5000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525854
CLX L48 5000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525946
CLX L96 6000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525878
CLX L96 6000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525823
CLX L96 10000LM SEF RDL MVOLT GZ10 40K 80CRI WH	00191723525953
CLX L96 10000LM SEF RDL MVOLT GZ10 50K 80CRI WH	00191723525847

LED Linear

CLX

24", 36", 48" and 96" Lengths



Flat Diffuse Lens



Round Diffuse Lens



Wide Diffuse Lens



CLX with Reflector

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning when used with Acuity Brands controls products.
All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specifications for chromatic consistency – including color rendering, color fidelity, and color temperature tolerance around standard CIE chromaticity coordinates.

To learn more about Acuity A+ standards, specifications, and testing visit www.acuitybrands.com/aplus.

design select

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.
*See ordering tree for details

Design Select options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: CLX L48 5000LM SEF WDL MVOLT GZ10 40K 80CRI WH

Series	Length	Nominal lumens	Performance package	Louver	Lens
CLX LED linear	L24 24"	1500LM 1,500 lumens 2000LM 2,000 lumens 2500LM 2,500 lumens 3500LM 3,500 lumens 4500LM 4,500 lumens 5000LM 5,000 lumens	SEF Standard efficiency ‡ HEF Premium efficiency ‡	(Blank) Less louver SBLW Straight blade louver, white ‡ SBLMB Straight blade louver, matte black ‡ SBLGV Straight blade louver, galvanized ‡ SBLSKGY Straight blade louver, smoke gray ‡	L/Lens Less lens FDL Flat diffuse ‡ RDL Round diffuse ‡ WDL Wide diffuse ‡
	L36 36"	2250LM 2,250 lumens 3000LM 3,000 lumens 3750LM 3,750 lumens 5250LM 5,250 lumens 6750LM 6,750 lumens 7500LM 7,500 lumens			
	L48 48"	3000LM 3,000 lumens 4000LM 4,000 lumens 5000LM 5,000 lumens 7000LM 7,000 lumens 9000LM 9,000 lumens 10000LM 10,000 lumens			
	L96 96"	6000LM 6,000 lumens 8000LM 8,000 lumens 10000LM 10,000 lumens 14000LM 14,000 lumens 18000LM 18,000 lumens 20000LM 20,000 lumens			

Distribution	Voltage		Driver ‡	Glare Reflector	Color temperature	Coloring rendering index
(Blank) General ND Narrow ‡ WD Wide ‡ AD2 Aisle, 24° off center ‡	MVOLT 120-277V ‡ 120 120V 208 208V ‡ 240 240V ‡	277 277V 347 347V ‡ 480 480V ‡	GZ1 Generic 0-10V, dims to 1% ‡ GZ10 Generic 0-10V, dims to 10% ‡ EZ1 eldoLED 0-10V, dims to 1% ‡	(blank) No reflectors LUGR Reflectors for additional glare reduction ‡	30K 3000 K 35K 3500 K 40K 4000 K 50K 5000 K	80CRI 80 CRI 90CRI 90 CRI

Options

E10W	Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS ‡
E10WSTAR	Emergency battery pack, Enabled with STAR ‡
BGTD	Generator transfer device, not available with E10W ‡
OCS	5', 18/3 Reloc selectable One Pass cable (fixture will bear dry location label) ‡
HA	High ambient, for use in ambient temperatures up to 50°C ‡
EPNKO	Decorative endplate, no knock out ‡
OUTCTR	Wiring leads pulled through back center of fixture ‡
OUTEND	Wiring leads pulled through end of fixture ‡
Cord Sets: ‡	
CS1W	6' Staight blade plug, 120V ‡
CS3W	NEMA twist-lock plug, 120V ‡
CS7W	Staight blade plug, 277V ‡
CS11W	NEMA twist-lock plug, 277V ‡
CS25W	NEMA twist-lock plug, 347V ‡
CS97W	NEMA twist-lock plug, 480V ‡
CS93W	600V SEOOW white cord, no plug (no voltage required)
CS6WG16ST0WD5D	6' white cord, 16/5, no plug, includes low voltage dimming wires (no voltage required) ‡
PLR___	Plug-in wiring, see page 9 for ordering information
PLR1G	Plug-in wiring, single circuit, Ground
PLR1LVG	Plug-in wiring, single circuit, low-voltage dimming, Ground ‡
RRL___	RELOC®-ready luminaire. See page 14 for ordering information
SPD	Surge protection device, provides up to 6kV protection ‡
BAA	Buy America(n) Act and/or Build America Buy America Qualified
nLight® Wireless:	
NLTAIR2 RES7	nLight AIR Generation 2 enabled PIR integral occupancy sensor with automatic dimming photocell ‡
NLTAIR2 RES7EM	nLight AIR Generation 2 enabled PIR integral occupancy sensor with automatic dimming photocell and UL924 Emergency operation, via power interrupt detection ‡
NLTAIR2 RES7PDT	nLight AIR Generation 2 enabled dual technology integral occupancy sensor with automatic dimming photocell ‡
NLTAIR2 RES7PDTEM	nLight AIR Generation 2 enabled dual technology integral occupancy sensor with automatic dimming photocell and UL924 Emergency operation, via power interrupt detection ‡
NLTAIR2 RIO	No sensor control ‡
NLTAIR2 RIOEM	No sensor, Control Input function only and UL924 Emergency operation, via power interrupt detection ‡
nLight® Wired:	
N100	nLight® without lumen management
N100EMG	nLight® without lumen management For use with generator supply EM power ‡
NES7	nLight® nES 7 PIR integral occupancy sensor ‡
NESPDT7	nLight® nES PDT 7 dual technology integral occupancy control ‡
NES7ADCX	nLight® nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell ‡
NESPDT7ADCX	nLight® nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell ‡
Individual controls: ‡	
MSD7	PIR integral occupancy sensor
MSDPDT7	PDT 7 dual technology integral occupancy control
MSD7ADC	PIR integral occupancy sensor with automatic dimming control photocell
MSDPDT7ADC	PDT integral occupancy sensor with automatic dimming control photocell

Finish

WH	White
GALVW	Galvanized with white lens end caps
GALVB	Galvanized with black lens end caps
MB	Matte black
SKGYW	Smoke gray with white lens end caps
SKGYB	Smoke gray with black lens end caps

See Accessories and footnotes on next page

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Accessories: *Order as separate catalog number.*

Mounting:

ZACVH M100	Adjustable 10' aircraft cable with Y hanger (1 pair)
ZAC120	One adjustable aircraft cable with canopy 120", white
ZACFP120	One adjustable aircraft cable with feed (3 conductor) and canopy, 120", white
ZACFPD120	One adjustable aircraft cable with feed (5 conductor) and canopy 120", white
ZAC240	One adjustable aircraft cable with canopy 240", white
ZACFP240	One adjustable aircraft cable with feed (3 conductor) and canopy, 240", white
ZACFPD240	One adjustable aircraft cable with feed (5 conductor) and canopy 240", white

SQ_	Swivel stem hanger (specify length in 2" increments up to 48") Ships White
THCLX ___	Tong hanger (Must specify color) (one pair) ‡
CLXANGBKT ____	Angle bracket, (Must specify color) (one pair) ‡
HC36 M12	Hanger chain, 36" (1 pair)

Wireguards:

WGCLX24 ___	24" wireguard qty 1, (Must specify color) ‡
WGCLX36 ___	36" wireguard qty 1, (Must specify color) ‡
WGCLX48 ___	48" wireguard qty 1, (Must specify color) ‡
WGCLX48 ___ J2	48" wireguard qty 2, (Must specify color) ‡
WGCLX48 ___ J25	48" wireguard qty 25, (Must specify color) ‡
WGCLX48 ___ J50	48" wireguard qty 50, (Must specify color) ‡

‡ Option Value Ordering Restrictions

Option value	Restriction
347V, 480V	Voltage selected utilizes a step-down transformer. Not available with L24 when ordered with N100. Not available with E10W or BGTD options.
BGTD	Not available with MVOLT, 208V or 240V. Not available with HA. Available with L48 or L96 only. Not available with E10W option. Not available with 208 or 240V. Not available Individual controls, NLight Wired, or NLight Wireless options.
CS1W, CS3W, CS7W, CS11W, CS25W, CS963W, CS97W	Not available with BGTD option. Must specify voltage. Not available with PLR options.
CS6WG16ST0WD5D	Not available with Individual controls, nLight wired networking, nLight wireless networking, nLight wireless zone control options.
Driver	When continuous row mounting, fixtures must all have the same driver selection.
E10W	Not available with OUTCR, Not available with HA. Not available with 347V or 480V. Not available with BGTD option. Requires SPD option. Not available with L24 or L36. Not available with L48 in combination with N100.
E10WSTAR	Not available with OUTCR. Not available with HA. Not available with 347V or 480V. Not available with BGTD option. Requires SPD option. Not available with L24 or L36.
EPNKO	Not available OUTEND.
EZ1	Not available with HA option. Not available with 5000LM, 7500LM.
FDL, RDL, WDL	Only available with general distribution. Not available with CLXRN accessories.
GZ1, GZ10	Not available with Individual controls, nLight wired networking, nLight wireless networking, nLight wireless zone control options.
HA	Not available with L24, L26. Not available with BGTD option. Not available with EZ1. Only available with L48 3000/4000/5000LM and L96 6000/8000/10000LM.
HEF	Not available with L48 3000LM and L96 6000LM
LUGR	Not available with L36 length. Only available with WH finish. Not compatible with THCLX Hanger or wireguard accessories. LUGR option required for some DLC premium qualifications - Please check the DLC Qualified Products List to determine if LUGR option is necessary to meet requirement. If mounting in continuous rows, ensure all models ordered with LUGR option if required on any configuration to ensure rows match in form factor. LUGR reflectors ship in standard fixture carton and are not sold as separate accessory - this option MUST be specified as part of the CLX model number.
MSD7, MSDPDT7, MSD7ADC, MSDPDT7ADC	Not available with any other control option. Requires EZ1. Sensor housing will be the same color as lens end caps.
N100, N100EMG	nLight EMG option requires a connection to existing nLight network. Power is provided from separate N100 enabled fixture.
ND, WD, AD2	Not available with CLXRN accessories. Available L/LENS only.
NES7, NESPDT7, NES7ADCX, NESPDT7ADCX	Not available with any other control option. Requires EZ1. Requires N100 or N100EMG option, N100EMG with NES7 requires RFA. Sensor housing will be the same color as lens end caps.
NLTAIR2 RES7(EM), NLTAIR2 RES7PDT(EM), NLTAIR2 RIO(EM)	Sensor housing will be the same color as lens end caps. For EM, see UL924 Sequence of Operation chart below.
OCS	Must specify voltage.
OUTCR	Not available with L24. Not available with PLR options.
OUTEND	Not available with PLR options.
PLR1LVG	Not available with Individual controls, NLight Wired, or NLight Wireless options. Refer to page 9 for more PLR details.
SBLW, SBLMB, SBLGV, SBLSKGY	When ordered with L24 only available with 1500LM or 2000LM in combination with GZ10 driver. Not for use with THCLX, CLXANGBKT or WGCLX accessories. Not available with RDL lens options.
SEF	Not available with EZ1 when ordered with L24 with 5000LM or L36 with 7500LM.
SPD	Required with E10W, BGTD.
THCLX ___, CLXANGBKT ____	Not available with louver or wireguards. THCLX___ not available with LUGR.
Wireguards	Not for use with LUGR option. For L96 fixtures, use qty 2 48" wireguards.

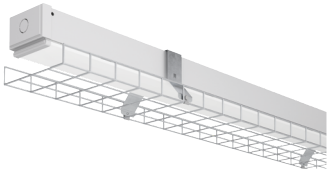
UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

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OPTIONS AND ACCESSORIES



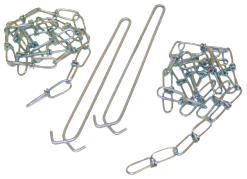
Wireguard
Ships separately from fixture:
96" fixture requires two WGCLX48.
Order as:
WGCLX24___
WGCLX36___
WGCLX48___



LUGR glare reflector
NOT available as accessory - must be specified as part of the fixture nomenclature. See ordering notes on page 3.



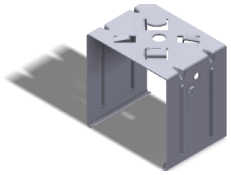
Aircraft Cable with Canopy
Available in 120" or 240"
Order as:
ZAC120
ZAC240



HANGER CHAIN
36" chain with Y hanger. ships as a pair
Order as:
HC36



ZACVH HANGER
10' Aircraft cable with Y hanger.
Order as:
ZACVH



Tong hanger
Ships as a pair
Order As:
THCLX___

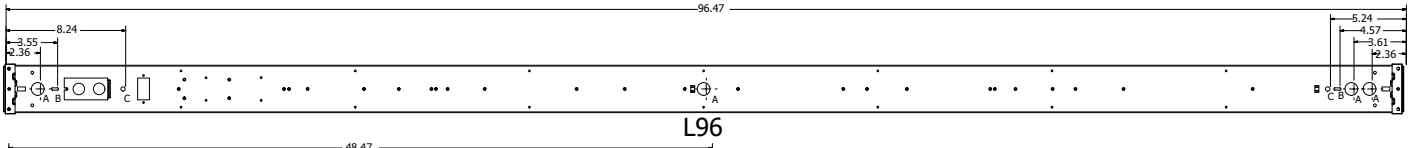
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DIMENSIONS

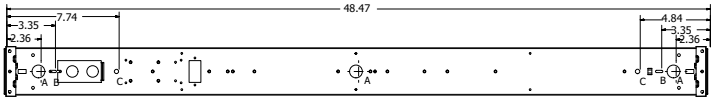
All dimensions are in inches (centimeters) unless otherwise indicated.
Dimensions may vary with options or accessories.

INTEGRATED SENSOR ADDS 2.0 INCHES TO STANDALONE FIXTURE LENGTH
HOUSING END CAP ADDS 0.236 INCHES TO FIXTURE LENGTH PER SIDE. DIMENSIONS BELOW INCLUDE ENDCAPS.

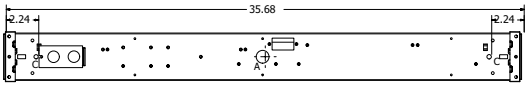
A - 7/8" KNOCK OUT
B - 0.5" by 0.16" SLOT
C - 0.3" DIA HOLE



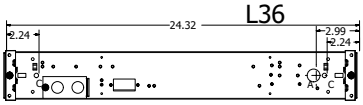
L96



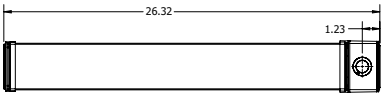
L48



L36



L24

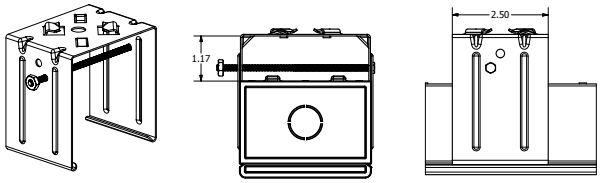


L24 WITH SENSOR

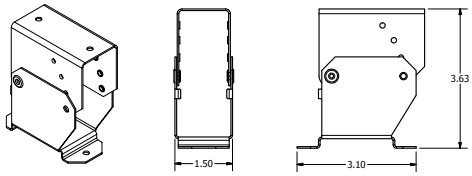
PALLET DIMENSIONS

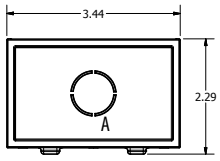
Length	Approx Weight	Fixtures per pallet	Pallet Dims (L X W X H)
L24	4 lb	100	54x46x37
L36	5 lb	80	54x46x37
L48	7.5 lb	64	54x46x37
L96	14 lb	64	98x46x37

THCLX - SHIPS TWO PER ORDER,
UTILIZES A #8 HEX HEAD SCREW AND NUT
FIXTURE SITS 1.3 INCHES FROM STRUCTURE WHEN MOUNTED

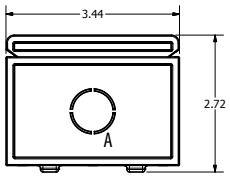


CLXANGBKT - SHIPS TWO PER ORDER
HOLES TO MOUNTING STRUCTURE ARE 0.175" DIA, 2.5" APART
FIXTURE SITS APPROXIMATELY 3.5" FROM STRUCTURE
WHEN MOUNTED HORIZONTAL TO STRUCTURE

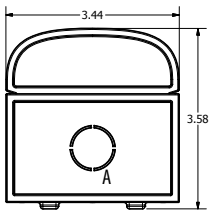




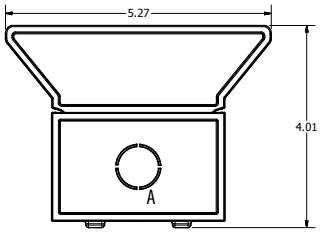
L/LENS



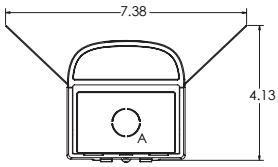
FDL



RDL



WDL



LUGR Reflector Option
- applies to all lens types

PHOTOMETRICS

See www.lithonia.com.

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POWER SENTRY EMERGENCY BATTERY PACKS

		SEF Emergency Lumens	HEF Emergency Lumens
E10W	Factory installable	1400	1500
PS1555LCP	Field installable, remote mount only	2000	2100

Note: For emergency lumen output of specific model, please consult factory. One board will be illuminated during emergency operation.

Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A	10W	90	1200	Title 20, Self Diagnostic
ILB CP10 HE AELR A	10W	90	1200	Title 20; Enabled with Self Testing, Automated Reporting (STAR)
ILBLP CP15 HE SD A	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic

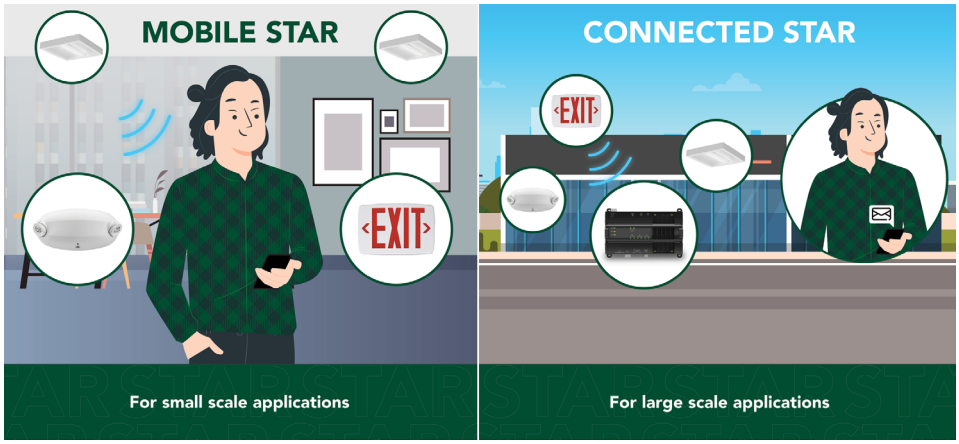
All the above are UL Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.
Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

Enabled with STAR

Emergency Lighting with Self-Testing Automated Reporting (STAR), enables self-testing and automated reporting to aid in life safety code compliance. Build your solution and choose your preferred deployment from Mobile STAR, where test data is logged in each individual unit and broadcast to the CIAIRity™+ app, or Connected STAR, where test data is logged in the STAR Gateway by IOTA® and emailed directly. **Leave the ladders, disruptions and written records behind with emergency lighting solutions with STAR!**

Life Safety Code NFPA 101 testing and reporting requirements for emergency lighting include:

- Testing for 30 seconds every 30 days
- Testing for 90 minutes once a year
- Record keeping and to report to the authority having local jurisdiction



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CLX CHARACTERISTICS

Nominal Lumen Package	Length	Wattage								Length	Width	Depth	Comparable Light Source
		Standard Efficiency				High Efficiency							
		120V	277V	347V	480V	120V	277V	347V	480V	Dimensions are shown in inches			
2500LM	24"	18.4	18.4	24.0	24.0	17.4	17.4	23.1	23.1	24	3.5	3.75	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
5000LM	24"	41.5	41.5	47.4	47.4	38.1	38.1	44.1	44.1	24	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
3750LM	36"	26.5	26.5	32.1	32.1	25.1	25.1	30.7	30.7	36	3.5	3.75	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
7500LM	36"	62.6	62.6	68.6	68.6	54.0	54.0	59.7	59.7	36	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
5000LM	48"	31.8	31.8	37.2	37.2	30.3	30.3	35.8	35.8	48	3.5	3.75	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
10000LM	48"	70.7	70.7	76.2	76.2	65.3	65.3	70.8	70.8	48	3.5	3.75	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
10000LM	96"	63.7	63.7	69.0	69.0	60.6	60.6	66.1	66.1	96	3.5	3.75	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
20000LM	96"	141.3	141.3	146.8	146.8	130.5	130.5	136.1	136.1	96	3.5	3.75	6-lamp 32W T8, 4-lamp 54W T5HO, 200W HID

Note: For wattage by configuration, please reference the CLX Operational Data Document.

Lumen Package	UGR Values of CLX L24 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
1500LM SEF	21.2	23.8	19.4	25.2	17.4	21.1	16.8	14	17.8	16.6	18.1	17.9	24.9	25.1
2000LM SEF	22.3	24.9	20.5	26.3	18.6	22.3	17.9	15.1	18.8	17.6	19.2	18.9	26.1	26.2
2500LM SEF	23.1	25.7	21.3	27.1	19.4	23.1	18.6	15.8	19.6	18.4	19.9	19.7	26.9	27
3500LM SEF	24.1	26.7	22.3	28.1	20.4	24.1	19.7	16.9	20.7	19.5	21	20.8	27.9	28.1
4500LM SEF	25.4	28	23.6	29.4	21.7	25.4	20.7	17.9	21.7	20.5	22	21.8	29.2	29.3
5000LM SEF	25.6	28.2	23.3	29.1	21.4	25.1	21	18.3	21.5	20.3	21.8	21.5	29.4	29.5
1500LM HEF	21.1	23.7	19.3	25.1	21.8	25.5	16.5	13.7	17.6	16.3	17.8	17.6	24.9	25
2000LM HEF	22.2	24.8	20.4	26.2	17.4	21.1	17.6	14.8	18.6	17.4	18.8	18.6	26	26.2
2500LM HEF	23	25.7	21.3	27	18.5	22.2	18.4	15.6	19.4	18.2	19.7	19.4	26.8	27
3500LM HEF	24.1	26.7	22.3	28.1	19.3	23	19.8	17	20.9	19.7	21.1	20.9	27.9	28
4500LM HEF	25.3	27.9	23.5	29.3	20.4	24.1	20.8	18	21.8	20.6	22.1	21.8	29.1	29.3
5000LM HEF	25.5	28.1	23.7	29.5	21.6	25.3	21.1	18.3	22.1	20.9	22.3	22.1	29.3	29.5

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

Lumen Package	UGR Values of CLX L36 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)							
	FDL		RDL		WDL		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
2250LM SEF	21.4	24.1	19.7	25.6	17.7	21.6	25.2	25.4
3000LM SEF	22.3	25	20.6	26.5	18.6	22.5	26.2	26.3
3750LM SEF	23.2	25.9	21.4	27.3	19.5	23.4	27	27.2
5250LM SEF	24.2	26.9	22.5	28.4	20.5	24.4	28	28.2
6750LM SEF	25.1	27.8	23.3	29.2	21.4	25.3	28.9	29
7500LM SEF	25.4	28.1	23.6	29.5	21.7	25.6	29.2	29.4
2250LM HEF	25	27.7	20.5	26.4	18.6	22.5	25.2	25.3
3000LM HEF	25.3	28	21.4	27.3	19.4	23.3	26.1	26.2
3750LM HEF	21.4	24.1	22.4	28.3	20.5	24.4	27	27.1
5250LM HEF	22.3	25	23.2	29.2	21.3	25.2	28	28.1
6750LM HEF	23.1	25.8	23.6	29.5	21.6	25.5	28.8	29
7500LM HEF	24.2	26.8	19.6	25.5	17.7	21.6	29.1	29.3

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values.
To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

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Lumen Package	UGR Values of CLX L48 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
3000LM SEF	21.8	24.5	19.7	25.3	18.6	23.4	19.2	16.5	20.2	19	20.6	20.3	24.8	25.6
4000LM SEF	22.8	25.5	20.7	26.3	19.6	24.4	20.3	17.5	21.2	20	21.6	21.4	25.8	26.6
5000LM SEF	23.6	26.3	21.4	27	20.4	25.2	21	18.2	21.9	20.7	22.3	22.1	26.6	27.3
7000LM SEF	24.8	27.6	22.7	28.3	21.6	26.5	22.3	19.6	23.3	22.1	23.7	23.4	27.8	28.6
9000LM SEF	25.6	28.4	23.5	29.1	22.5	27.3	23.2	20.4	24.1	22.9	24.5	24.3	28.6	29.4
10000LM SEF	26	28.7	23.8	29.5	22.8	27.6	23.6	20.8	24.5	23.3	24.9	24.7	29	29.8
3000LM HEF	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4000LM HEF	22.8	25.6	20.7	26.3	22.8	25.6	20.3	17.5	21.3	20.1	21.7	21.4	29.5	30.3
5000LM HEF	23.6	26.3	21.4	27	23.6	26.3	21	18.2	21.9	20.7	22.3	22.1	30.2	31
7000LM HEF	24.8	27.6	22.7	28.3	24.8	27.6	22.4	19.6	23.4	22.2	23.8	23.5	27.8	28.6
9000LM HEF	25.7	28.4	23.6	29.2	25.7	28.4	23.2	20.4	24.2	23	24.6	24.3	28.7	29.5
10000LM HEF	26	28.7	23.9	29.5	26	28.7	23.6	20.9	24.6	23.4	25	24.7	29	29.8

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

Lumen Package	UGR Values of CLX L96 @ 80CRI and 3500K UGR (70% 50% 20% reflectance using a 4H x 8H room size)													
	FDL		RDL		WDL		FDL LUGR		RDL LUGR		WDL LUGR		L/LENS	
	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise	Crosswise	Endwise
6000LM SEF	21.8	24.6	19.7	25.4	17.9	22.4	19.3	16.5	20.2	19	20.6	20.4	24.8	25.6
8000LM SEF	22.8	25.5	20.7	26.4	18.8	23.4	20.3	17.6	21.2	20.1	21.6	21.4	25.8	26.6
10000LM SEF	23.6	26.3	21.4	27.2	19.6	24.2	21	18.3	21.9	20.8	22.3	22.1	26.5	27.3
14000LM SEF	24.8	27.6	22.7	28.5	20.9	25.5	22.4	19.6	23.3	22.1	23.7	23.5	27.8	28.6
18000LM SEF	25.7	28.4	23.5	29.3	21.7	26.3	23.2	20.5	24.1	23	24.5	24.3	28.6	29.4
20000LM SEF	26	28.7	23.9	29.6	22	26.6	23.6	20.9	24.5	23.4	24.9	24.7	29	29.7
6000LM HEF	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8000LM HEF	22.8	25.6	20.7	26.5	18.9	23.5	20.4	17.6	21.3	20.1	21.7	21.5	25.8	26.6
10000LM HEF	23.6	26.3	21.4	27.2	19.6	24.2	21	18.3	21.9	20.8	22.3	22.1	27	27.8
14000LM HEF	24.9	27.6	22.7	28.5	20.9	25.5	22.4	19.7	23.4	22.2	23.8	23.5	27.8	28.6
18000LM HEF	25.7	28.4	23.6	29.3	21.7	26.3	23.2	20.5	24.2	23	24.6	24.3	28.7	29.5
20000LM HEF	26	28.8	23.9	29.6	22.1	26.6	23.7	20.9	24.6	23.4	25	24.8	29	29.8

UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application

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AMBIENT TEMPERATURE RATINGS

Driver Package		GZ10			EZ1 or EOHN			Any Driver	
Length	**Lumen package**	**Direct Surface**	**THCLX/ Suspended**	**HA Option (Direct or Suspended)**	**Direct Surface**	**THCLX**	**Suspended 18"**	**Xpoint/ BGTD Direct Surface**	**E10W Suspended**
L24	1500LM	40C	40C	N/A	35C	35C	35C	N/A	N/A
	2000LM	40C	40C		35C	35C	35C		
	2500LM	40C	40C		35C	35C	35C		
	3000LM	40C	40C		40C	40C	40C		
	4500LM	40C	40C		35C	35C	40C		
	5000LM	40C	40C		25C	30C	35C		
L36	2250LM	40C	40C		40C	40C	40C		
	3000LM	40C	40C		40C	40C	40C		
	3750LM	40C	40C		40C	40C	40C		
	5250LM	40C	40C		35C	35C	40C		
	6750LM	30C	40C		35C	35C	40C		
	7500LM	30C	40C		25C	30C	35C		
L48	3000LM	40C	40C	50C	40C	40C	40C	35C	25C
	4000LM	40C	40C	50C	40C	40C	40C		
	5000LM	40C	40C	50C	35C	35C	40C		
	7000LM	30C	40C	N/A	35C	35C	40C		
	9000LM	30C	40C		25C	30C	35C		
	10000LM	30C	40C		25C	30C	35C		
L96	6000LM	40C	40C	50C	35C	35C	40C		
	8000LM	30C	40C	50C	35C	35C	40C		
	10000LM	30C	40C	50C	25C	30C	35C		
	14000LM	40C	40C	N/A	35C	35C	40C		
	18000LM	30C	40C		25C	30C	35C		
	20000LM	30C	40C		25C	30C	35C		

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RRL - RELOC®-Ready Luminaire

- RRL connectors can be used with Quick-Flex®, System 820 and OnePass® systems.
- Load side of connector factory installed to luminaire.
- 4-pole mating connector with push-in terminations allows for simple installation.
- Touch-safe design on both halves meets UL/CSA requirement.
- Wiping contact design allows safe disconnect under load.



ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: RRLA

Series		Wiring instructions	
RRL	RELOC®-ready luminaire	A	Hot conductor wired to position #1 (phase A)
		B	Hot conductor wired to position #2 (phase B)
		C	Hot conductor wired to position #3 (phase C) [1]

Compatible RELOC® Cables for Industrial Luminaires (ordered and shipped separately)



OCS



OCU



OD



DC



PT

Notes

1 C, ABE, and C12S options are not used with Quick-Flex QFC, QSFC, QPT, and QD.

PLUG-IN WIRING INFORMATION

Advanced plug-in system with two-circuit capability. Available on industrial and strip products and a variety of architectural products mounted in continuous rows. PLR22 (2-circuit) and crossover harness switches hot circuit serving next fixture in row. Reduces fixture types on job for alternating circuit applications (see example below.)

Easy one-step installation, saves up to 35% on labor costs. Expanded switching flexibility helps save energy.

Rows can be 50% longer with two-circuit systems. Polarized, lock-together nylon connectors prevent miswiring in the field. #12 THHN conductor, rated 600V, 90°C. White neutral wire included. Grounding accomplished by fixture in-row connectors.

CSA certified systems available with up to 2 circuits. G ground required.

Not for use with dedicated emergency circuits.

Note: Specifications subject to change without notice.



Wiring

PLR

Advanced 1 or 2-Circuit Plug-In

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Series	Number of hot wires		Branch circuits (PLR2A / PLR2B Only)				Dimming		Ground	
PLR22	(blank)	Not required for PLR22	(blank)	Not required for PLR22			(blank)	No Dimming	G	Ground (required)
PLR	1	Black	(blank)	Not required for PLR1			(blank)	No Dimming	G	Ground (required)
	2	Black and red	**Circuits to which driver is connected**		**Battery charging circuit (must be unswitched)**		LV	Low-voltage Dimming	G	Ground (required)
			(blank)	Not required for PLR22	(blank)	No battery charging circuit				
			A	Black wire	ELA	Battery pack wired to black wire				
			B	Red wire	ELB	Battery pack wired to red wire				

Typical Applications

Notes:

When specifying PLR1, you will not specify A or B as there is only a single hot wire which would be black in color.

- Multiple-circuit and single-circuit for longer continuous rows
- Multiple-circuit with alternating fixtures on separate circuits and 2-circuit PLR22
- Multiple circuit with night-lights located along row as desired

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LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — For wall or ceiling mounting, vertical or horizontal. The WL combines digital LED lighting and controls technologies with high-performance optical design to offer the most advanced wall-mount luminaire for general ambient lighting applications. High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable.

CONSTRUCTION — Housing is roll formed from code-gauge steel.

Refractor is retained in die cast ends providing secure installation and easy maintenance.

Decorative die-cast end caps provide added durability.

Finish: End caps are post-painted in white polyester powder coat for smooth finish. Post-painted channel available by selecting PAF option.

OPTICS — Impact modified linear faceted refractor. Optically engineered for superior light distribution and maximum efficacy.

Crescent-shape linear faceted refractor system obscures and integrates individual LED images and uniformly washes fixture surface with light.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000). The LEDs have a CRI of 82.

eldoLED driver options deliver choice of dimming range and choice for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Driver disconnect provided where required to comply with US and Canadian codes.

Optional nLight® embedded controls continuously monitor system performance and allow for constant lumen management function.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing energy waste created by the traditional practice of over-lighting.

SENSOR — Integrated sensor (individual control): Sensor Switch MSD7 (Passive Infrared (PIR)) integrated occupancy sensor photocell allows the luminaire to power off when the space is unoccupied. See page 4 for more details on the integrated sensor.

Integrated Sensor (nLight Wired Networking): The sensor is nLight-enabled, meaning it has the ability to communicate over an nLight network. When wired using CAT-5 cabling with other nLight-enabled sensors, power packs, or WallPods, an nLight control zone is created. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software. See page 4 for the nLight sensor options.

Interated Smart Sensor (nLight AIR Wireless Platform): The RES7 sensor is nLight AIR enabled, meaning it has the ability to communicate over the wireless nLight control platform. It is available with an automatic dimming photocell, and either a digital PIR or a dual technology occupancy sensor. It pairs to other luminaires and wall switches through our mobile app, CLAIRITY, which allows for simple sensor adjustment. See page 4 for more details on the Integrated Smart Sensor.

LISTINGS — CSA certified to meet U.S. and Canadian standards. Suitable for damp location.

Patents pending. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

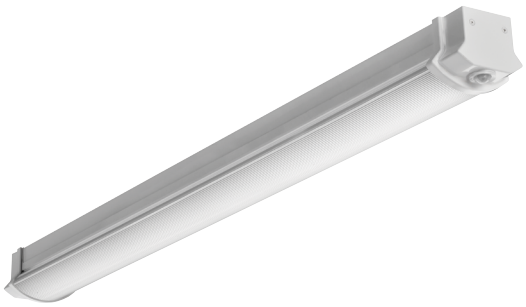
GOVERNMENT PROCUREMENT — BAA – Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also 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 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

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.

W SERIES

Wall bracket & Surface Mount LED



WL4

4'

LED

BAA BABA A+ CAPABLE DLC LISTED nLIGHT eldoLED

Embed nLight® controls today. Prepare for tomorrow.

Now	Tomorrow
User-friendly install	Scalability
Enhanced energy savings	Space configuration
Code compliance	Future-ready

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks when ordered with drivers marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

WL4 Wall Bracket & Surface Mount LED

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: WL4 30L EZ1 LP840

WL4					
Series	**Lumens** [1]	**Voltage**	**Driver**	**Color temperature**	**nLight Interface**
WL4 4' wall-mount LED	20L 2000 lumens 30L 3000 lumens 40L 4000 lumens	(blank) MVOLT 347 347V	EZ1 eldoLED dims to 1%, 0-10V EZB eldoLED dims to dark, 0-10V GZ1 Dims to 1% (0-10V dimming) [2] GZ10 Dims to 10% (0-10V dimming) [2] SLD Step-level dimming [3]	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K	**nLight Wired** (blank) No nLight® interface N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management. For use with generator supply EM power [4] N100 nLight® without lumen management N100EMG nLight® without lumen management. For use with generator supply EM power [4] **nLight Wireless** (blank) No nLight® interface NLTAIR2 nLight® Air Generation 2 enabled [5]

Control [6]	**Standby mode** [9]	**Options**	**Finish** [12]
nLight Wired (blank) No nLight control NES7 nLight® nES 7 PIR integral occupancy sensor [7] NESPDT7 nLight® nES PDT 7 dual technology integral occupancy control [7] NES7ADCX nLight® nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell [7] **nLight Wireless** RES7 nLight AIR control with PIR integral occupancy sensor and automatic dimming photocell RES7PDT nLight AIR control with PDT dual technology integral occupancy sensor and automatic dimming photocell **Individual Control** MSD7 Sensor Switch® MSD 7 PIR Integral Occupancy Control [8]	(blank) Fixture turns off when unoccupied DIM10 Fixture dims to approximately 10% light output when unoccupied DIM50 Fixture dims to approximately 50% light output when unoccupied NOC NOC Occupancy sensor disabled [10]	E7W 7W Emergency battery pack, constant power, Certified in CA Title 20 MAEDBS, User selectable Self-Diagnostic, AC Activate with Integral Test Switch (LINK) [11] E10W Emergency battery pack, 10W Linear Constant Power, Certified in CA Title 20 MAEDBS, CA Title 20 MAEDBS, User selectable Self-Diagnostic, AC Activate with Integral Test Switch (LINK) [11] SC Surface conduit end cap provisions BAA Buy America(n) Act and/or Build America Buy America Qualified BDP Factory Installed Ballast Disconnect Plug [13]	(blank) White PAF Paint After Fabrication White

Notes
1. Approximate lumen output.
2. Not available with any Controls or sensor options.
3. Not available with nLight Interface or Controls.
4. nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture
5. Must order with RES7, RES7PDT, or module. Only availble with EZ1 driver.
6. See sensor options on page 4.
7. Requires N80, N100, N80EMG, or N100EMG.
8. Not available with nLight options or EZB.
9. Not available with nLight Wireless sensor options.
10. Can only be ordered in conjunction with EZ1, NLTAIR2, RES7/RES7PDT. Occupancy sensor disabled at factory but can be re-enabled upon commissioning.
11. Not available with 347V.
12. For additional paint finishes, refer to Architectural Colors.
13. Not available with E10WLCP.

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nLight® Wired Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 RJB / nCM PDT 9 RJB
On/Off & raise/lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM10 RJB / nCM PDT 10 RJB
Graphic touchscreen	nPOD GFX [color]	Wall switch with raise/lower	nWSX PDT LV DX [color]
Photocell controls	**Model number**	**Cat-5 cable (plenum rated)**	**Model number**
Full range dimming	nCM ADCX RJB	10' cable	CAT5 10FT J1
		30' cable	CAT5 30FT J1

nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.

Wall switches	Model number
On/Off single pole	rPODB [color] G2
On/Off two pole	rPODB 2P [color] G2
On/Off & raise/lower single pole	rPODB DX [color] G2
On/Off & raise/lower two pole	rPODB 2P DX [color] G2
On/Off & raise/lower single pole	rPODBZ DX WH G2

ORDERING INFORMATION

rCMS **Example:** RCMS PDT 10 AR G2

Series/Detection	Occupancy Detection	Lens (Required)	Operating Mode	Generation
RCMS nLight AIR occupancy and daylight sensor	(blank) PIR Detection PDT Dual Tech PIR/ Microphonics	10 Large Motion/Extended Range 360˚ 9 Small Motion/Extended Range 360˚ 6 High Bay 360˚ Lens	(blank) None AIR Auxiliary Relay	G2 Generation 2 compatibility

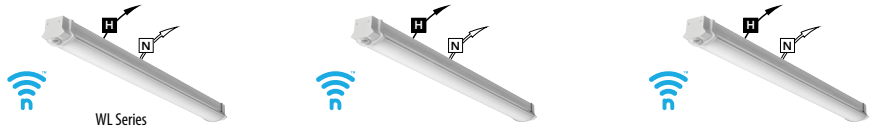


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nLight Platform

nLight embedded fixtures offer:	Customers get:
Manual Dimming	Convenience and visual comfort for occupants
Motion Sensing and/or Daylight Harvesting	Energy savings and code compliance
Fixture or Group Level Control	Ability to configure lighting to the space requirements
Flexibility	Ease of fixture moves, adds and changes
Wireless Wall Switch (nLight AIR Only)	Ease and flexibility of placement
Astronomical and Time of Day Scheduling	Energy savings and building security
Scalable Solution	nLight controls to grow with your business
Future-Ready	nLight platform to set foundation for future upgrades and capabilities

nLight Air Wireless

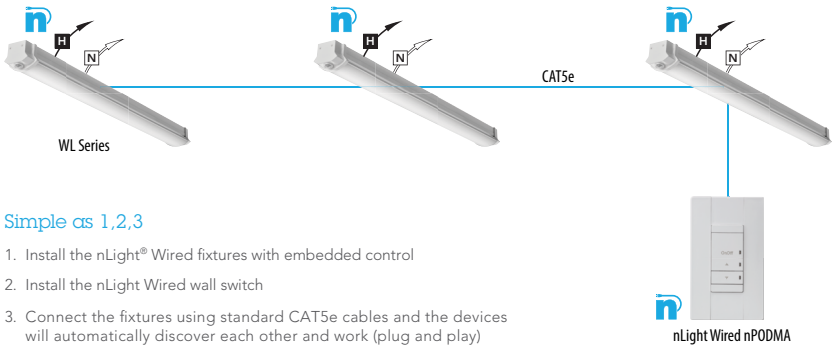


Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome



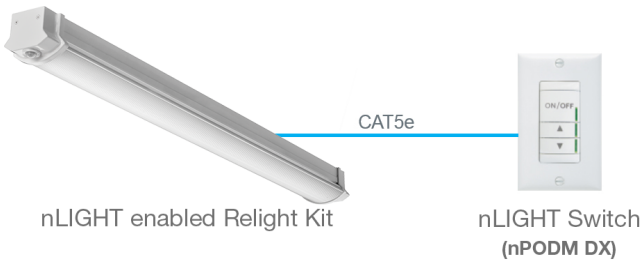
nLight Wired Networking



Simple as 1,2,3

1. Install the nLight® Wired fixtures with embedded control
2. Install the nLight Wired wall switch
3. Connect the fixtures using standard CAT5e cables and the devices will automatically discover each other and work (plug and play)

Basic nLight Zone



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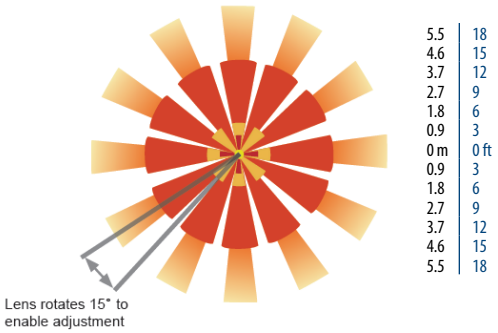
WL4 Wall Bracket & Surface Mount LED

Sensor Options					
Option	Automatic Dimming Photocell	Occupancy Sensing		nLight Wired Networking	nLight AIR Networking
		PIR	PDT		
MSD7		X			
NES7		X		X	
NES7ADCX	X	X		X	
NESPDT7			X	X	
RES7	X	X			X
RES7PDT	X	X	X		X

Sensor Coverage Pattern
Mini 360° Lens

- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor

9 FT Mounting



Integrated Sensor with Individual Control

The MSD7 PIR occupancy sensor is ideal for areas without obstructions and where daylight harvesting may be desired. Suggested applications include, but not limited to, hallways, corridors, storage rooms, and breakrooms or other areas where people are typically moving.

nLight Wired Networking

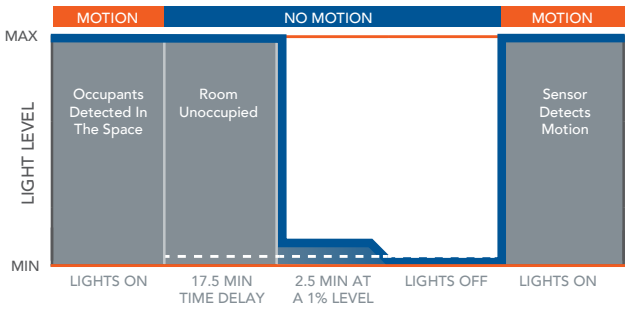
The nES 7 is ideal for small rooms without obstructions or areas with primarily walking motion. Ideal areas include hallways, corridors, storage rooms, and breakrooms. Additionally, the NES7ADCX includes an integrated photocell, which enables daylight harvesting controls.

For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy.

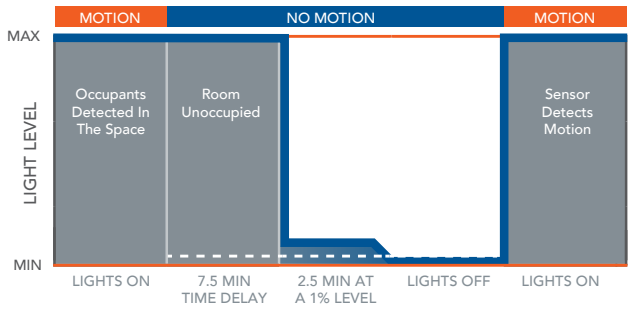
nLight AIR Wireless

nLight AIR is the ideal solution for retrofit or new construction spaces where adding additional wiring can be labor intensive and costly. nLight AIR is available with or without an integral sensor. The integrated RES7 or RES7PDT smart sensors are part of each luminaire in the nLight AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application.

Sequence of Operation



Sequence of Operation



*The presetting on the automatic dimming photocell is 5fc.

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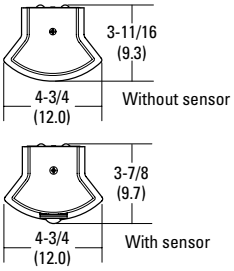
Performance Data			
Lumen package	**Input watts**	**Lumens**	**LPW**
20L LP830	18.7	2050	110
20L LP835	18.7	2152	115
20L LP840	18.7	2255	121
20L LP850	18.7	2410	129
30L LP830	28.2	2952	105
30L LP835	28.2	3095	110
30L LP840	28.2	3251	115
30L LP850	28.2	3239	115
40L LP830	39.5	3927	99
40L LP835	39.5	4124	104
40L LP840	39.5	4325	110
40L LP850	39.5	4571	116

DIMENSIONS

All dimensions are inches (centimeters) unless otherwise noted.

Specifications

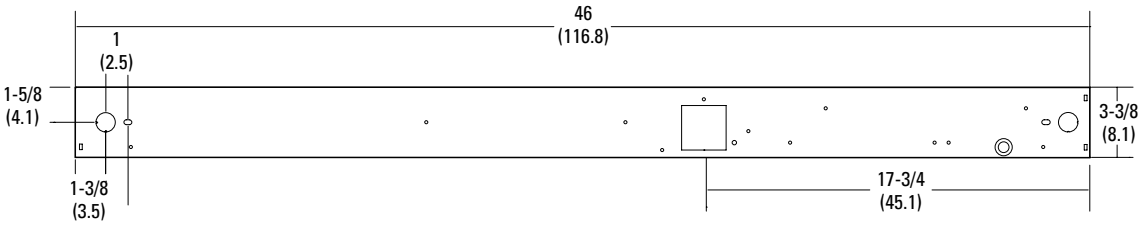
Length: with sensor - 50-15/16 (129.40)
without sensor - 46-13/16 (118.90)
Height: with sensor - 3-7/8 (9.7)
without sensor - 3-11/16 (9.3)
Width: 4-3/4 (12.1)



How to Calculate Estimated Lumens in Emergency Mode
Use the formula below to estimate the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Ouput power of emergency driver. P = 10W for E10WLCP option.
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

MOUNTING DATA

For unit installation; surface ceiling or wall mounting.



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IK10+ Series - High **Lumen** Family - Specification Sheet

The LUX IK10+ series features COMPETITIVE EFFICACY across a BROAD LUMEN RANGE We build the IK10+ from durable 6463 EXTRUDED ALUMINUM making it beautiful while maintaining terrific STABILITY and LONGEVITY



Performance

- Lumen output: **8,700 up to 200,000 lumens, approx.**
- Efficacy: **Up to 166 Lumens per Watt**
- L_{70} (per TM-21): **72,000 Hours**
- L_{70} (calculated): **147,000 Hours**
- Ambient Temp. Rating: **-40°F to 140°F (-40°C to 60°C)**
  Ambient temperature rating varies for auxiliary components
- Surge Protection: **6kV (10kV Option Available)**

Construction

- Extruded 6463 aluminum construction
- Stainless-steel hardware
- Bright dip anodized fixture body
- Isolated driver channels
- Thermally independent heat sink LED bars

Listing and Ratings

- UL 1598 for Dry, Damp, and Wet Locations
- ARRA/BAA Compliant (Made in America)
- BABA Compliant Options Available, Consult Factory
- IP55 Rated
- UL EPH Listed - NSF Rated
- 3G Vibration Rated
- Exceeds IK10 impact rating with polycarbonate lens
- IK10 rating does not apply to acrylic lenses

Warranty

- 10-Year Warranty on fixture body
- 5-Year Warranty on electronics
- For special requests, contact Factory

Applications

- Gymnasiums/Sports Facilities
- Warehouses
- Manufacturing/Industrial
- Arenas/Fieldhouses
- Natatoriums
- Hangars

Installation

- Aircraft cable suspension
- Surface mounting
- Rigid pendant mounting (with or without powerfeed)
- Adjustable yoke mount
- Tandem mounting available
- Custom mounts available, contact Factory

Optics

- Wide 120° beam angle LEDs
- Optional narrow optic for aisle or racking applications
- LED bars are rotatable to allow for custom distributions
- Diffusing lens available in clear and visually comfortable white
- Acrylic and polycarbonate lens materials available
- Lens offers up to 10% uplight

QuickShip®

IK10+ Quick Ship Available
Visit: www.luxdynamics.com

MADE IN THE USA · BUY AMERICAN BAA COMPLIANT · ARRA · c UL us · DLC QPL LISTED · IP55 · Natatorium Grade · WET LOCATION · IK10 · VIBRATION RATING 3G · UL LISTED EPH

IK10+ Series - High **Lumen** Family

LUX dynamics

Example Catalog Number:

L	3	D	A	850	2	U10

	Delivered lumens with 5000K color / Standard Distribution / CA lens	Some options may require additional driver channels in order to function. Consult Factory.	Defines the order of channels and BARs in the fixture frame. Please see configuration chart on specification sheet.	DLC listing for 850 and 840 color temperature. Other color temperatures available. Consult factory.	Typical fixture lengths shown below. Dimensions shown on pages 5 and 6. Fixture length affects lumen output.	Other driver options available. Consult Factory.
Series	**Number of BARS** L series only	**Number of Channels**	**Fixture Configuration**	**CRI / CCT**	**Length**	**Voltage and Dimming**
L High Lumen	**2' length** / **4' length** **1** 12,005lm / 24,010lm **2-18lm** 18,397lm / N/A **2-36lm** N/A / 36,794lm **2** 23,837lm / 47,674lm **3-30lm** 31,397lm / N/A **3** 35,249lm / 70,498lm **4** 47,237lm / 94,474lm **5** 58,857lm / 117,714lm **6** 71,151lm / 142,302lm **7** 83,182lm / 166,364lm **8** 95,538lm / 191,076lm	**S** Single **D** Double **T** Triple **Q** Quad	**A** **B** **C** **...** **A** defines standard configuration.	865 80CRI 6500K 857 80CRI 5700K **850** 80CRI 5000K **840** 80CRI 4000K **835** 80CRI 3500K 830 80CRI 3000K 827 80CRI 2700K 950 90CRI 5000K 940 90CRI 4000K 935 90CRI 3500K 927 90CRI 2700K **TW*** Tunable White **RGBW*** RBG with XXX GREYED options not stocked and may need additional lead time *Options significantly decrease lumen output, contact Factory for more information	**2** 2' (24.75") Standard (24.14") Narrow **4** 4' (47.81") Standard (46.34") Narrow	**U10** 120-277V 0-10V dimming 10% min. **U1** 120-277V 0-10V dimming 1% min. **H10** 347/480V 0-10V dimming 10% min. **H1** 347/480V 0-10V dimming 1% min. **DALI** 120-277V DALI control **DMX*** 120-277V DMX control **DP10** 277-480V 0-10V dimming 10% min. **Dimming curves and other operating characteristics may vary between models** *Option significantly decreases lumen output, contact Factory for more information

Some CRI, CCT and other output variations may affect DLC listing; contact LUX for further information.

Options and Accessories

Distribution

(leave blank) General Distribution
N Narrow optics

Narrow optic options vary
See page 6 and 8 for all narrow optic options

Lensing

(leave blank) No Lensing, bare LEDs
CA Clear acrylic diffuse lens
WA White acrylic diffuse lens
CP Clear polycarbonate diffuse lens
WP White polycarbonate diffuse lens

"2" or "4" denotes fixture length
Recommended (leave blank) with N distribution option
Recommended WA or WP options for visual comfort
DLC listing for CA, CP, and (leave blank) options

Lumen/Wattage Output

CFO Custom fixture output (specify custom lumen output or wattage lower than standard)

Direction of Light

(leave blank) BARs aimed down
I BARs aimed up
C Custom aiming

Consult with Factory for option "C"

BAR Locking

(leave blank) BARs fixed
R BARs rotatable (Not suitable for WET locations)

Recommended FIXED (BLANK) in high-abuse environments

Channel Access

T Lid opens from above fixture
B Lid opens from below fixture

Some options, including controls and mounting types, may require specific access, consult Factory for further information

Cord

(leave blank)	No cord provided	
3/10	3-wire, 10'cord	Standard white
4/10	4-wire, 10'cord	Standard white
5/10	5-wire, 10'cord	Standard white
6/10	6-wire, 10'cord	Standard white

Other cord lengths and multi-circuit wiring available
Cord routed through fixture endcap unless otherwise specified
1st digit: Number of wires, including ground, available from 3 through 6
2nd digit: Overall length, including strips, available from 10' through 30'

Emergency

E10 10-watt integral emergency battery (CA Title-20 compliant)
E15 15-watt integral emergency battery (CA Title-20 compliant)
E20 20-watt integral emergency battery (CA Title-20 compliant) not available on all configurations, consult Factory
E20R 20-watt non-integral emergency battery (CA Title-20 compliant) **must be field-installed**
E30R 30-watt non-integral emergency battery (CA Title-20 compliant) **must be field-installed**

Remote Mounting

(leave blank) Standard integral driver(s)
RMS Remote mount driver(s) - surface mount
RMC Remote mount driver(s) - cable mount
RNK Remote mount driver(s) - no enclosure kit provided

Restrictions may apply for certain applications, consult Factory

Options and Accessories Continued

Mounting

(leave blank)	No mounting hardware provided
10Y	Y-hanger AC cable up to 11' length, snap hook
4P10	4-point AC cable up to 10' length, hook
4P10S	Stainless steel 4-point AC cable up to 10' length, hook
SPM	Adapter to suspend luminaire below existing stem
MH1	Myer's hub 1-point, 3/4" GRC adapter, Galv. Steel
MH2	Myer's hub 2-point, 3/4" GRC adapter, Galv. Steel
MH1S	Myer's hub 1-point, 3/4" GRC adapter, stainless-steel
MH2S	Myer's hub 2-point, 3/4" GRC adapter, stainless-steel
SM	Surface mount, no machining or hardware provided
SMH	Surface mount, incl. pre-machined mounting points
UM2	Unistrut mount, includes (2) points of mounting, suitable for mounting to single strut.
UM4	Unistrut mount, includes (4) points of mounting, suitable for mounting to (2) struts.
YK	Yoke mount, adjustable trunnion (Not suitable for WET locations)

- Mounting via Aircraft Cable suitable for Static Loads only. If fixtures are subject to movement or mounting substrate is prone to instability, rigid mounting is required. Suitable mounting styles include: MH1, MH2, MH1S, MH2S, SM, SMH, UM2, UM4, AND YOKE (YK).
- For MH mounting options with cord, cord installed in fixture endcap. Alternate cord placement available, contact Factory.
- For MH mounting options, not all fixtures are balanced, contact Factory for swivel-mounting options.
- Some mounting options may require specific channel access.
- Additional cable lengths available, consult Factory

Finish

(leave blank)	Standard natatorium-grade bright dip anodized aluminum and green hanging brackets, shown on specification sheet
M	Silver stainless-steel hanging brackets (no green). Standard bright dip anodized aluminum body
PC	Custom color by powdercoat. Must specify RAL number and components to be finished
BLKG	Glossy black finish on all components
BLKM	Matte black finish on all components
AND	Anodize color finish, available on 2' fixtures only, consult Factory

Custom color anodized aluminum available in 2' configurations, consult Factory.

Controls

OC	Integral on/off occupancy sensor (120-277V)
DO	Integral high/low/off occupancy and daylight harvesting sensor (120-277V)
OCKH	High voltage (347/480V) knockout-mounted on/off occupancy sensor, **not installed**
DOKH	High voltage (347/480V) knockout-mounted high/low/off occupancy and daylight harvesting sensor, **not installed**
Wireless Controls	Multiple wireless control systems available. Contact Factory for options and details

LUX is controls-agnostic and can use most requested control systems

Application (Select all that apply)

GEN	General applications *(Not rated for WET, NSF, or high abuse environments)*
WET	Wet location *(Includes conformal coated LED modules, HO5)*
COR*	Caustic/natatorium environments *(Includes conformal coated LED modules, HO5)*
NSF	EPH rated for food-safe applications
TC	Tennis court *(Polycarbonate lensing recommended)*
MFG	Manufacturing or industrial
WHS	Warehousing or storage
HNG	Hangar
GYM	Gymnasium or sports court *(Polycarbonate lensing required)*
AFH	Arena or fieldhouse *(Polycarbonate lensing recommended)*
ARCH	Architectural *(White lensing recommended)*
ICE	Ice rink *(Polycarbonate lensing recommended)*
GAR	Garage or canopy
FRZ	Freezer or cold storage
HT	High temp, 55°C/131°F or higher *(E-Series recommended)*
BABA	Build America Buy America (BABA) Compliant *(Not all configurations meet BABA, consult Factory)*

*COR application not suitable for all caustic environments, consult Factory

Lensing and Bottom Access required for WET, COR, and EPH/NSF applications

Consult Factory for cost adders for WET, COR and EPH/NSF applications

2' Performance - Wide Distribution

(Data Based on 5000K and 80CRI - Static White ONLY)

No Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX	12,522	78	161
	L-2-18lm-XX-850-2-XXX	19,190	116	166
	L-2-XX-850-2-XXX	24,864	154	162
	L-3-30lm-XX-850-2-XXX	32,750	201	163
	L-3-XX-850-2-XXX	36,768	233	158
	L-4-XX-850-2-XXX	49,272	309	159
	L-5-XX-850-2-XXX	61,393	388	158
	L-6-XX-850-2-XXX	74,216	465	160
	L-7-XX-850-2-XXX	86,766	544	159
	L-8-XX-850-2-XXX	99,654	618	161

CA (Clear Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-CA	12,005	78	154
	L-2-18lm-XX-850-2-XXX-CA	18,397	116	159
	L-2-XX-850-2-XXX-CA	23,837	154	155
	L-3-30lm-XX-850-2-XXX-CA	31,397	201	156
	L-3-XX-850-2-XXX-CA	35,249	233	151
	L-4-XX-850-2-XXX-CA	47,237	309	153
	L-5-XX-850-2-XXX-CA	58,857	388	152
	L-6-XX-850-2-XXX-CA	71,151	465	153
	L-7-XX-850-2-XXX-CA	83,182	544	153
	L-8-XX-850-2-XXX-CA	95,538	618	155

CP (Clear Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-CP	11,080	78	142
	L-2-18lm-XX-850-2-XXX-CP	16,979	116	146
	L-2-XX-850-2-XXX-CP	22,000	154	143
	L-3-30lm-XX-850-2-XXX-CP	28,977	201	144
	L-3-XX-850-2-XXX-CP	32,533	233	140
	L-4-XX-850-2-XXX-CP	43,597	309	141
	L-5-XX-850-2-XXX-CP	54,321	388	140
	L-6-XX-850-2-XXX-CP	65,668	465	141
	L-7-XX-850-2-XXX-CP	76,772	544	141
	L-8-XX-850-2-XXX-CP	88,176	618	143

WA (White Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-WA	11,008	78	141
	L-2-18lm-XX-850-2-XXX-WA	16,869	116	146
	L-2-XX-850-2-XXX-WA	21,858	154	142
	L-3-30lm-XX-850-2-XXX-WA	28,790	201	143
	L-3-XX-850-2-XXX-WA	32,322	233	139
	L-4-XX-850-2-XXX-WA	43,314	309	140
	L-5-XX-850-2-XXX-WA	53,970	388	139
	L-6-XX-850-2-XXX-WA	65,243	465	140
	L-7-XX-850-2-XXX-WA	76,275	544	140
	L-8-XX-850-2-XXX-WA	87,605	618	142

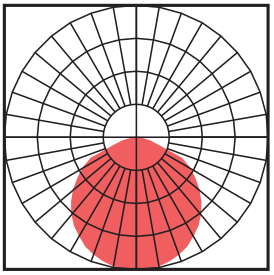
WP (White Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-WP	8,673	78	111
	L-2-18lm-XX-850-2-XXX-WP	13,291	116	115
	L-2-XX-850-2-XXX-WP	17,222	154	112
	L-3-30lm-XX-850-2-XXX-WP	22,684	201	113
	L-3-XX-850-2-XXX-WP	25,467	233	109
	L-4-XX-850-2-XXX-WP	34,128	309	110
	L-5-XX-850-2-XXX-WP	42,523	388	110
	L-6-XX-850-2-XXX-WP	51,405	465	111
	L-7-XX-850-2-XXX-WP	60,097	544	110
	L-8-XX-850-2-XXX-WP	69,024	618	112

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

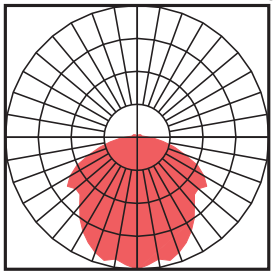
NL (No Lens)

standard 120° distribution achieved when using bare LEDs with no secondary optics
Includes 0% uplight component



Lensed (CA,CP, WA, or WP)

wide/diffused optic achieved using any of our standard lenses
Clear lens includes minimum 3.4% uplight
White lens includes minimum 10% uplight



Lumen Multipliers

Lens	
Standard = CA Lens	
NL	104.3%
CA (nominal)	100.0%
CP	92.3%
WA	91.7%
WP	72.2%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and CA Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
NL	1,855
CA	1,778
CP	1,641
WA	1,630
WP	1,285

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
NL	2,774
CA	2,659
CP	2,454
WA	2,438
WP	1,921

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
NL	3,709
CA	3,556
CP	3,282
WA	3,261
WP	2,569

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
NL	5,547
CA	5,318
CP	4,908
WA	4,876
WP	3,842

4' Performance - Wide Distribution

(Data Based on 5000K and 80CRI - Static White ONLY)

No Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX	25,044	156	161
	L-2-36lm-XX-850-4-XXX	38,379	232	166
	L-2-XX-850-4-XXX	49,728	307	162
	L-3-XX-850-4-XXX	73,535	466	158
	L-4-XX-850-4-XXX	98,544	619	159
	L-5-XX-850-4-XXX	122,786	776	158
	L-6-XX-850-4-XXX	148,433	930	160
	L-7-XX-850-4-XXX	173,532	1,089	159
	L-8-XX-850-4-XXX	199,308	1,236	161

CA (Clear Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-CA	24,010	156	154
	L-2-36lm-XX-850-4-XXX-CA	36,794	232	159
	L-2-XX-850-4-XXX-CA	47,674	307	155
	L-3-XX-850-4-XXX-CA	70,498	466	151
	L-4-XX-850-4-XXX-CA	94,474	619	153
	L-5-XX-850-4-XXX-CA	117,714	776	152
	L-6-XX-850-4-XXX-CA	142,302	930	153
	L-7-XX-850-4-XXX-CA	166,364	1,089	153
	L-8-XX-850-4-XXX-CA	191,076	1,236	155

CP (Clear Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-CP	22,160	156	142
	L-2-36lm-XX-850-4-XXX-CP	33,959	232	146
	L-2-XX-850-4-XXX-CP	44,000	307	143
	L-3-XX-850-4-XXX-CP	65,065	466	140
	L-4-XX-850-4-XXX-CP	87,194	619	141
	L-5-XX-850-4-XXX-CP	108,643	776	140
	L-6-XX-850-4-XXX-CP	131,336	930	141
	L-7-XX-850-4-XXX-CP	153,544	1,089	141
	L-8-XX-850-4-XXX-CP	176,351	1,236	143

WA (White Acrylic) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-WA	22,016	156	141
	L-2-36lm-XX-850-4-XXX-WA	33,739	232	146
	L-2-XX-850-4-XXX-WA	43,715	307	142
	L-3-XX-850-4-XXX-WA	64,644	466	139
	L-4-XX-850-4-XXX-WA	86,629	619	140
	L-5-XX-850-4-XXX-WA	107,939	776	139
	L-6-XX-850-4-XXX-WA	130,485	930	140
	L-7-XX-850-4-XXX-WA	152,549	1,089	140
	L-8-XX-850-4-XXX-WA	175,209	1,236	142

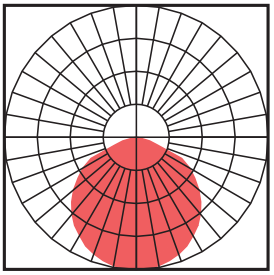
WP (White Polycarbonate) Lens				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-WP	17,347	156	111
	L-2-36lm-XX-850-4-XXX-WP	26,583	232	115
	L-2-XX-850-4-XXX-WP	34,444	307	112
	L-3-XX-850-4-XXX-WP	50,933	466	109
	L-4-XX-850-4-XXX-WP	68,256	619	110
	L-5-XX-850-4-XXX-WP	85,046	776	110
	L-6-XX-850-4-XXX-WP	102,810	930	111
	L-7-XX-850-4-XXX-WP	120,195	1,089	110
	L-8-XX-850-4-XXX-WP	138,049	1,236	112

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

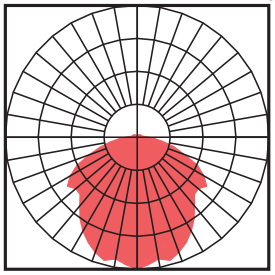
NL (No Lens)

standard 120° distribution achieved when using bare LEDs with no secondary optics
Includes 0% uplight component



Lensed (CA,CP, WA, or WP)

wide/diffused optic achieved using any of our standard lenses
Clear lens includes minimum 3.4% uplight
White lens includes minimum 10% uplight



Lumen Multipliers

Lens	
Standard = CA Lens	
NL	104.3%
CA (nominal)	100.0%
CP	92.3%
WA	91.7%
WP	72.2%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and CA Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
NL	1,855
CA	1,778
CP	1,641
WA	1,630
WP	1,285

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
NL	2,774
CA	2,659
CP	2,454
WA	2,438
WP	1,921

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
NL	3,709
CA	3,556
CP	3,282
WA	3,261
WP	2,569

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
NL	5,547
CA	5,318
CP	4,908
WA	4,876
WP	3,842

4' Performance - Narrow Optic

(Data Based on 5000K and 80CRI - Static White ONLY)

Narrow Optic with No Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N	24,806	156	159
	L-2-36lm-XX-850-4-XXX-N	38,014	232	164
	L-2-XX-850-4-XXX-N	49,612	307	161
	L-3-XX-850-4-XXX-N	74,418	466	160
	L-4-XX-850-4-XXX-N	99,224	619	160
	L-5-XX-850-4-XXX-N	124,031	776	160
	L-6-XX-850-4-XXX-N	148,837	930	160
	L-7-XX-850-4-XXX-N	173,643	1,089	159
	L-8-XX-850-4-XXX-N	198,449	1,236	161

Narrow Optic with CA (Clear Acrylic) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N-CA	22,964	156	147
	L-2-36lm-XX-850-4-XXX-N-CA	35,191	232	152
	L-2-XX-850-4-XXX-N-CA	45,928	307	149
	L-3-XX-850-4-XXX-N-CA	68,893	466	148
	L-4-XX-850-4-XXX-N-CA	91,857	619	148
	L-5-XX-850-4-XXX-N-CA	114,821	776	148
	L-6-XX-850-4-XXX-N-CA	137,785	930	148
	L-7-XX-850-4-XXX-N-CA	160,750	1,089	148
	L-8-XX-850-4-XXX-N-CA	183,714	1,236	149

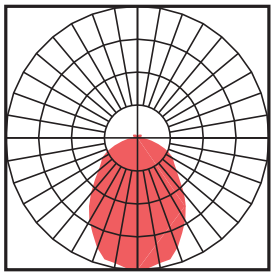
Narrow Optic with CP (Clear Polycarbonate) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-4-XXX-N-CP	21,195	156	136
	L-2-36lm-XX-850-4-XXX-N-CP	32,479	232	140
	L-2-XX-850-4-XXX-N-CP	42,389	307	138
	L-3-XX-850-4-XXX-N-CP	63,584	466	137
	L-4-XX-850-4-XXX-N-CP	84,778	619	137
	L-5-XX-850-4-XXX-N-CP	105,973	776	137
	L-6-XX-850-4-XXX-N-CP	127,167	930	137
	L-7-XX-850-4-XXX-N-CP	148,362	1,089	136
	L-8-XX-850-4-XXX-N-CP	169,556	1,236	137

Optical Distribution Variations

NRW + Lens

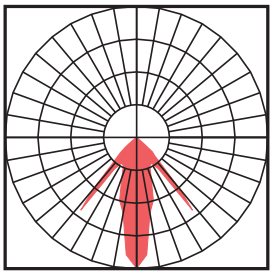
Medium distribution achieved using narrow optic in addition to any standard lens.

- Clear lens includes minimum 2.4% uplight
- White lens includes minimum 6% uplight



NRW Optic Only

Narrow optic achieved using a highly reflective parabolic reflector. Includes 0% uplight component



Lumen Multipliers

Lens	
Standard = N (narrow optic) + No Lens	
N-NL (nominal)	100.0%
N-CA	92.6%
N-CP	85.4%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 5000K, 80CRI and No Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N-NL	1,837
N-CA	1,761
N-CP	1,625

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N-NL	2,747
N-CA	2,634
N-CP	2,431

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N-NL	3,674
N-CA	3,522
N-CP	3,251

Field-Installable (Non-Integral) EM Options

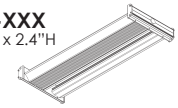
E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N-NL	5,494
N-CA	5,267
N-CP	4,861

2' Length
Wide Distribution ONLY

Standard Configurations

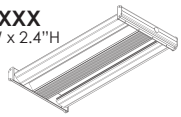
Part #
L-1-SA-XXX-2-XXX
- 24.75"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



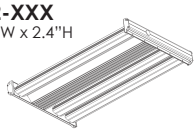
Part #
L-2-SA-XXX-2-XXX
- 24.75"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX
- 24.75"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



Part #
L-4-SA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-2-XXX
- 24.75"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



Part #
L-6-DA-XXX-2-XXX
- 24.75"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX
- 24.75"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX
- 24.75"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX
- 24.75"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-2-XXX
- 24.75"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



Part #
L-4-DA-XXX-2-XXX
- 24.75"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX
- 24.75"L x 36.18"W x 2.4"H
- Weight: 21 LBS

6 Bar
3 Channel

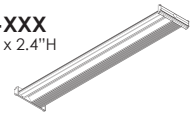


4' Length
All Distributions

Standard Configurations

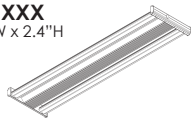
Part #
L-1-SA-XXX-4-XXX
- 47.81"L x 9.18"W x 2.4"H
- Weight: 10 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-4-XXX
- 47.81"L x 12.18"W x 2.4"H
- Weight: 14 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-4-XXX
- 47.81"L x 15.18"W x 2.4"H
- Weight: 18 LBS

3 Bar
1 Channel



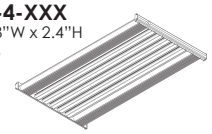
Part #
L-4-SA-XXX-4-XXX
- 47.81"L x 18.18"W x 2.4"H
- Weight: 22 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-4-XXX
- 47.81"L x 27.18"W x 2.4"H
- Weight: 32 LBS

5 Bar
2 Channel



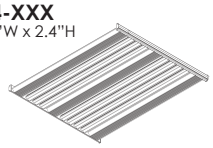
Part #
L-6-DA-XXX-4-XXX
- 47.81"L x 30.18"W x 2.4"H
- Weight: 34 LBS

6 Bar
2 Channel



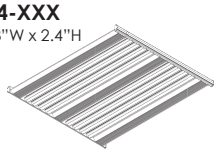
Part #
L-7-TA-XXX-4-XXX
- 47.81"L x 39.18"W x 2.4"H
- Weight: 44 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-4-XXX
- 47.81"L x 42.18"W x 2.4"H
- Weight: 48 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-4-XXX
- 47.81"L x 2.4"W x 9.18"H
- Weight: 10 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-4-XXX
- 47.81"L x 18.18"W x 2.4"H
- Weight: 20 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-4-XXX
- 47.81"L x 21.18"W x 2.4"H
- Weight: 24 LBS

3 Bar
2 Channel



Part #
L-4-DA-XXX-4-XXX
- 47.81"L x 24.18"W x 2.4"H
- Weight: 28 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-4-XXX
- 47.81"L x 36.18"W x 2.4"H
- Weight: 40 LBS

6 Bar
3 Channel



2' Performance - Narrow Optic (HO7) ONLY Offered with 840 and 850 Options

(Data Based on 5000K and 80CRI - Static White ONLY)

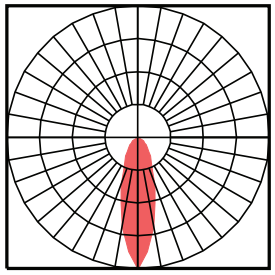
Injection-Molded Narrow Optic				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 5000K, 80 CRI, High Lumen	L-1-XX-850-2-XXX-N	10,304	68	153
	L-2-18lm-XX-850-2-XXX-N	17,852	116	154
	L-2-XX-850-2-XXX-N	20,609	135	153
	L-3-XX-850-2-XXX-N	30,914	200	155
	L-4-36lm-XX-850-2-XXX-N	35,704	232	154
	L-4-XX-850-2-XXX-N	41,218	270	153
	L-5-XX-850-2-XXX-N	51,522	338	153
	L-6-XX-850-2-XXX-N	61,828	400	155
	L-7-XX-850-2-XXX-N	72,131	473	153
	L-8-XX-850-2-XXX-N	82,436	540	153

Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution

NRW Optic

Narrow optic achieved using a molded-acrylic, prismatic optic. Includes approximately 0% uplight.



Lumen Multipliers

CCT	
Standard = 5000K CCT	
5000K (nominal)	100.0%
4000K	100.0%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%

Emergency Battery Performance

(Data Based on 5000K and 80CRI)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N	1,577

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N	2,358

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N	3,153

Field-Installable (Non-Integral) EM Options

E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N	4,716

2' Performance - Narrow Optic (HO5) ONLY Offered with 835 and 90CRI Options

(Data Based on 3500K and 80CRI - Static White ONLY)

Narrow Optic with No Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N	12,042	78	154
	L-2-18lm-XX-835-2-XXX-N	18,453	116	159
	L-2-XX-835-2-XXX-N	24,084	154	157
	L-3-30lm-XX-835-2-XXX-N	30,798	201	153
	L-3-XX-835-2-XXX-N	36,125	233	155
	L-4-XX-835-2-XXX-N	48,167	309	156
	L-5-XX-835-2-XXX-N	60,209	388	155
	L-6-XX-835-2-XXX-N	72,251	465	155
	L-7-XX-835-2-XXX-N	84,293	544	155
	L-8-XX-835-2-XXX-N	96,334	618	156

Narrow Optic with CA (Clear Acrylic) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N-CA	11,544	78	148
	L-2-18lm-XX-835-2-XXX-N-CA	17,691	116	153
	L-2-XX-835-2-XXX-N-CA	23,089	154	150
	L-3-30lm-XX-835-2-XXX-N-CA	29,526	201	147
	L-3-XX-835-2-XXX-N-CA	34,633	233	149
	L-4-XX-835-2-XXX-N-CA	46,178	309	149
	L-5-XX-835-2-XXX-N-CA	57,722	388	149
	L-6-XX-835-2-XXX-N-CA	69,266	465	149
	L-7-XX-835-2-XXX-N-CA	80,811	544	148
	L-8-XX-835-2-XXX-N-CA	92,355	618	149

Narrow Optic with CP (Clear Polycarbonate) Lens - HO5				
	Model	Delivered Lumens	Wattage	Efficacy
Delivered Lumens @ 3500K, 80 CRI, High Lumen	L-1-XX-835-2-XXX-N-CP	10,655	78	137
	L-2-18lm-XX-835-2-XXX-N-CP	16,328	116	141
	L-2-XX-835-2-XXX-N-CP	21,310	154	139
	L-3-30lm-XX-835-2-XXX-N-CP	27,250	201	136
	L-3-XX-835-2-XXX-N-CP	31,964	233	137
	L-4-XX-835-2-XXX-N-CP	42,619	309	138
	L-5-XX-835-2-XXX-N-CP	53,274	388	137
	L-6-XX-835-2-XXX-N-CP	63,929	465	138
	L-7-XX-835-2-XXX-N-CP	74,583	544	137
	L-8-XX-835-2-XXX-N-CP	85,238	618	138

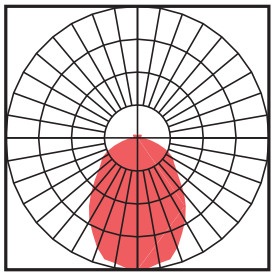
Custom lumen/wattage output available with CFO option specified. Consult Factory.

Optical Distribution Variations

NRW + Lens

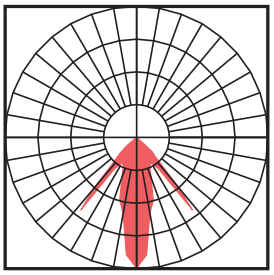
Medium distribution achieved using narrow optic in addition to any standard lens.

- Clear lens includes minimum 2.4% uplight
- White lens includes minimum 6% uplight



NRW Optic Only

Narrow optic achieved using a highly reflective parabolic reflector. Includes 0% uplight component



Lumen Multipliers

Lens	
Standard = N (narrow optic) + No Lens	
N-NL (nominal)	100.0%
N-CA	92.6%
N-CP	85.4%

CCT	
Standard = 5000K CCT	
6500K	97.1%
5700K	98.4%
5000K (nominal)	100.0%
4000K	100.0%
3500K	97.1%
3000K	93.2%
2700K	90.6%

CRI	
Standard = 80 CRI	
80 CRI (nominal)	100.0%
90 CRI	
6500K (90 CRI)	83.4%
5700K (90 CRI)	83.7%
5000K (90 CRI)	83.7%
4000K (90 CRI)	83.7%
3500K (90 CRI)	82.2%
3000K (CRI 90)	79.8%
2700K (CRI 90)	75.9%

Emergency Battery Performance

(Data Based on 3500K, 80CRI and No Lens)

Integral EM Options

E10 (10 Watt EM)	
Lens Option	Delivered Lumens
N-NL	1,783
N-CA	1,710
N-CP	1,578

E15 (15 Watt EM)	
Lens Option	Delivered Lumens
N-NL	2,667
N-CA	2,557
N-CP	2,360

E20 (20 Watt EM)	
Lens Option	Delivered Lumens
N-NL	3,567
N-CA	3,420
N-CP	3,156

Field-Installable (Non-Integral) EM Options

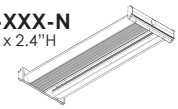
E30 (30 Watt EM)	
Lens Option	Delivered Lumens
N-NL	5,334
N-CA	5,114
N-CP	4,720

2' Length Narrow Optic 840 and 850 Options ONLY

Standard Configurations

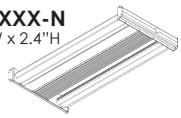
Part #
L-1-SA-XXX-2-XXX-N
- 24.14"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-2-XXX-N
- 24.14"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX-N
- 24.14"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



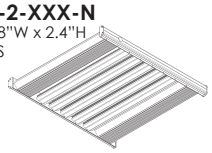
Part #
L-4-SA-XXX-2-XXX-N
- 24.14"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



Part #
L-5-DA-XXX-2-XXX-N
- 24.14"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



Part #
L-6-DA-XXX-2-XXX-N
- 24.14"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX-N
- 24.14"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX-N
- 24.14"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX-N
- 24.14"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX-N
- 24.14"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



Part #
L-3-DA-XXX-2-XXX-N
- 24.14"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



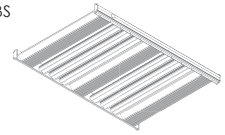
Part #
L-4-DA-XXX-2-XXX-N
- 24.14"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX-N
- 24.14"L x 36.18"W x 2.4"H
- Weight: 21 LBS

6 Bar
3 Channel

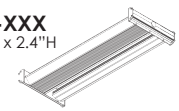


2' Length Narrow Optic 835 and 90CRI Options ONLY

Standard Configurations

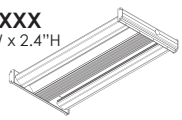
Part #
L-1-SA-XXX-2-XXX
- 24.75"L x 9.18"W x 2.4"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-SA-XXX-2-XXX
- 24.75"L x 12.18"W x 2.4"H
- Weight: 7 LBS

2 Bar
1 Channel



Part #
L-3-SA-XXX-2-XXX
- 24.75"L x 15.18"W x 2.4"H
- Weight: 9 LBS

3 Bar
1 Channel



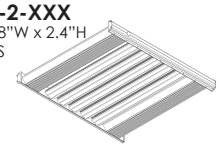
Part #
L-4-SA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 11 LBS

4 Bar
1 Channel



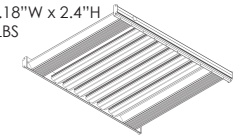
Part #
L-5-DA-XXX-2-XXX
- 24.75"L x 27.18"W x 2.4"H
- Weight: 16 LBS

5 Bar
2 Channel



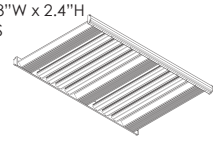
Part #
L-6-DA-XXX-2-XXX
- 24.75"L x 30.18"W x 2.4"H
- Weight: 18 LBS

6 Bar
2 Channel



Part #
L-7-TA-XXX-2-XXX
- 24.75"L x 39.18"W x 2.4"H
- Weight: 23 LBS

7 Bar
3 Channel



Part #
L-8-TA-XXX-2-XXX
- 24.75"L x 42.18"W x 2.4"H
- Weight: 25 LBS

8 Bar
3 Channel



Other Common Configurations

Part #
L-1-SB-XXX-2-XXX
- 24.75"L x 2.4"W x 9.18"H
- Weight: 5 LBS

1 Bar
1 Channel



Part #
L-2-DA-XXX-2-XXX
- 24.75"L x 18.18"W x 2.4"H
- Weight: 10 LBS

2 Bar
2 Channel



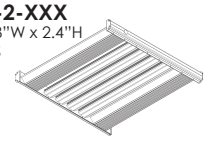
Part #
L-3-DA-XXX-2-XXX
- 24.75"L x 21.18"W x 2.4"H
- Weight: 12 LBS

3 Bar
2 Channel



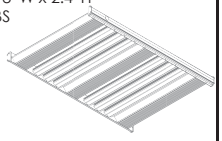
Part #
L-4-DA-XXX-2-XXX
- 24.75"L x 24.18"W x 2.4"H
- Weight: 14 LBS

4 Bar
2 Channel



Part #
L-6-TA-XXX-2-XXX
- 24.75"L x 36.18"W x 2.4"H
- Weight: 21 LBS

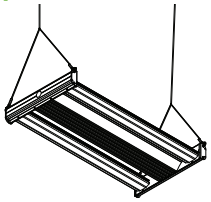
6 Bar
3 Channel



Mounting Options

Cable Mount

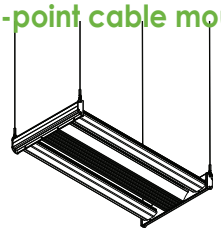
2-point Y-cable mount



Part Numbers:
10Y, 20Y, 30Y

Description:
- "10", "20", "30" represents length in feet
- Galvanized steel cable and hook
- Some configurations may be unbalanced, 4-point hanger recommended for unbalanced fixtures, contact Factory for more information

4-point cable mount

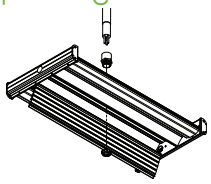


Part Numbers:
4P10, 4P20
4P10S, 4P20S

Description:
- "10", "20", "30" represents length in feet
- "S" in part number denotes natatorium-grade 316 stainless steel, recommended for natatoriums and other caustic environments

Stem Mount

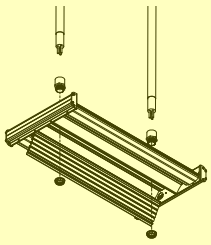
1-point rigid stem mount



Part Numbers:
MH1
MH1S

Description:
- 3/4" IP threaded hub to mount to 3/4" conduit or stem (other hub diameters available, contact factory for options)
- Galvanized steel is standard, for stainless steel use "s" in part number
- Stem/threaded rod not provided
- Not available on all models and options
- Cord installed through fixture end cap when ordered with stem mount option
- Cord NOT installed when power feed is routed through stem

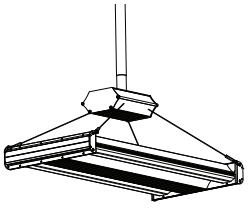
2-point rigid stem mount



Part Numbers:
MH2
MH2S

Description:
- 3/4" IP threaded hub to mount to 3/4" conduit or stem (other hub diameters available, contact factory for options)
- Galvanized steel is standard, for stainless steel use "s" in part number
- Stem/threaded rod not provided
- Not available on all models and options
- Cord installed through fixture end cap when ordered with stem mount option
- Cord NOT installed when power fees is routed through stem

Threaded junction box for single point mount



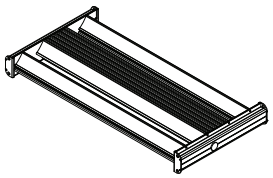
Part Number for 3' Cable Lengths:
SPM3'

Part Number for 5' Cable Lengths:
SPM5'

Description:
- 3/4" IP threaded hub attached to 3" x 6" x 6" junction box with (4) fixed-length cables (3' and 5') for fixture mounting
- Power cord ordered separately

Surface Mount

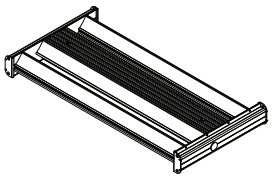
Surface mounting (no additional hardware or mounting holes supplied)



Part Number:
SM

Description:
- Fixture may be anchored flush to any suitable substrate through electronics channel
- No additional hanging hardware provided

Surface mount - 3/8" mounting holes supplied

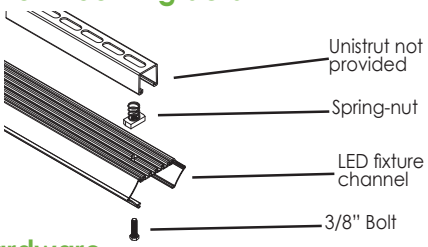


Part Number:
SMH

Description:
- Fixture may be anchored to any suitable substrate through electronics channel
- (2) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

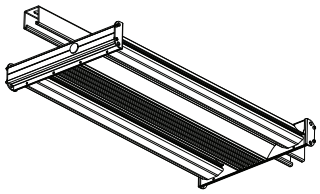
Unistrut Mount

Unistrut mounting detail



2-point Unistrut hardware

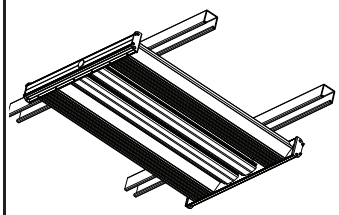
Part Number: **UM2**



Description:
- Unistrut hardware includes (2) sets of 3/8" diameter spring-nuts, bolts, mounting holes provided
- (2) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

4-point Unistrut hardware

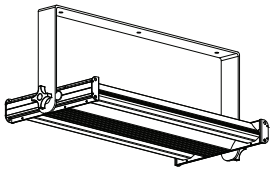
Part Number: **UM4**



Description:
- Unistrut hardware includes (4) sets of 3/8" diameter spring-nuts, bolts, mounting holes provided
- (4) 3/8" mounting holes provided per electronics channel, centered 2" from the end of the aluminum extrusion

Yoke Mount

Yoke Mount

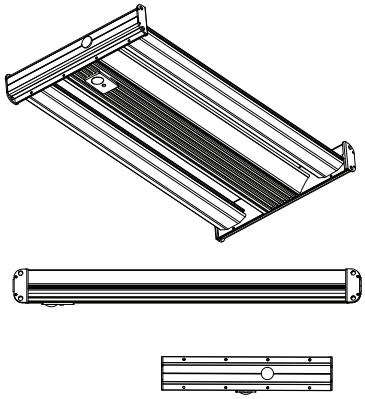


Part Number:
YKx ("x" to change based on fixture)

Description:
- Adjustable or static yoke mounts allows for ceiling or wall mounting, contact Factory
- Power cord ordered separately
- Yoke mount is installed on the fixture before shipping
- Hardware to secure mount to structural surface NOT provided
- Not suitable for WET locations

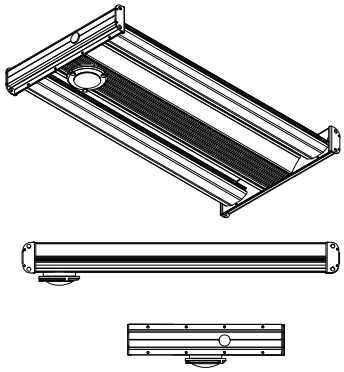
120-277V Sensors

OC



OC	
120V-277V Occupancy Sensor (On/Off)	
Control Type	Occupancy-PIR (line voltage)
Ambient Temperature	0°C to 55°C
Mounting Height	15' to 40'
Coverage Area	Suggested: 1 to 1 spacing to mounting height ratio

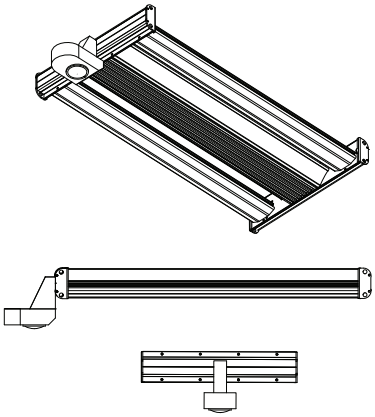
DO



DO	
120V-277V Daylight Harvesting and Occupancy Sensor (On/Off and 0-10V Dimming)	
Control Type	Occupancy-PIR (line voltage & 0-10V) DLH-Photocell (line voltage & 0-10V)
Ambient Temperature	-40°C to 70°C
Mounting Height	8' to 40'
Coverage Area	100' diameter (@ 40' Mounting Height)

347-480V Sensor

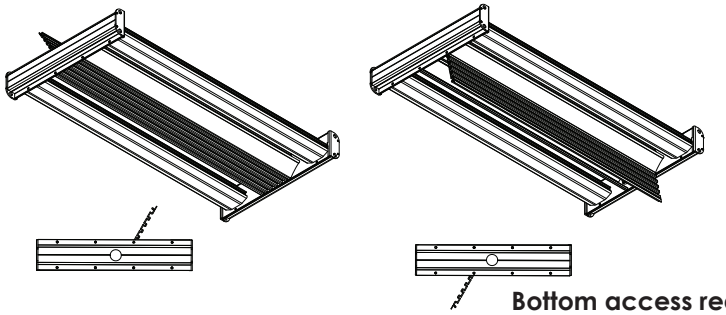
OCKH/DOKH



OCKH	
347V-480V Occupancy Sensor (On/Off)	
Control Type	Occupancy-PIR (line voltage & 0-10V)
Ambient Temperature	-10°C to 60°C
Mounting Height	15' to 45'
Coverage Area	15' to 20' radial coverage (30'-40' diameter) typical

DOKH	
347V-480V Daylight Harvesting and Occupancy Sensor (On/Off and 0-10V Dimming)	
Control Type	Occupancy-PIR (line voltage & 0-10V) DLH-Photocell (line voltage & 0-10V)
Ambient Temperature	-10°C to 60°C
Mounting Height	15' to 45'
Coverage Area	15' to 20' radial coverage (30'-40' diameter) typical

Electronics Channel Access

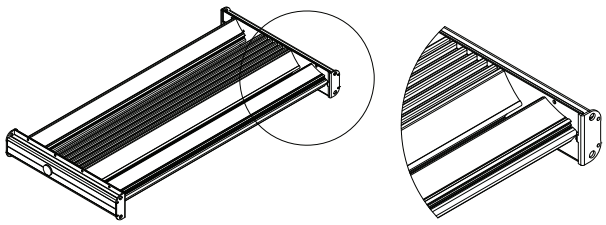


Top Access: Channels open from above the fixture. The driver chamber can be accessed as if it were sitting on a table.
To specify "Top Access", use part number:
"T"

Bottom Access: Channels open from below the fixture. The driver chamber is accessed from above the installer.
To specify "Bottom Access", use part number:
"B"

Bottom access required for wet location

Independently Rotatable LED Bars



Rotatable Bars: Each LED bar can be rotated independently in manufacturing process or in the field. Contact factory for more options.

To specify "Rotatable Bars", add part number:
"R"

Fixed BARs required for gym and high abuse environments

gotham® | EVO®

Multiple Layers of Light

Luminaire Type:

Catalog Number:

BAA BABA

General Illumination Vandal Resistant Downlight 8"

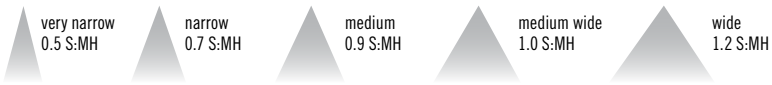


OVERVIEW

Feature Set

- Bounding Ray™ optical design
- Unitized optics mechanically attach the light engine to the lower reflector for complete optical alignment.
- 45° cutoff to source and source image
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- 2.5 SDCM; 85 CRI typical, 90+ CRI optional
- Fixtures are wet location, covered ceiling
- Available with 10% dimming, 1% dimming, or dim to dark
- Batwing distribution with feathered edges provides even illumination on horizontal and vertical surfaces

Distribution



Superior Perfomance

Nominal Lumens	2000	2500	3000
Delivered Lumens	2,287	2,964	3,398
Wattage	31.6	41.1	47.1
Efficacy	72.5	72	72.2

COMPLIMENTARY PRODUCTS

Coordinated Apertures | Multiple Layers of Light



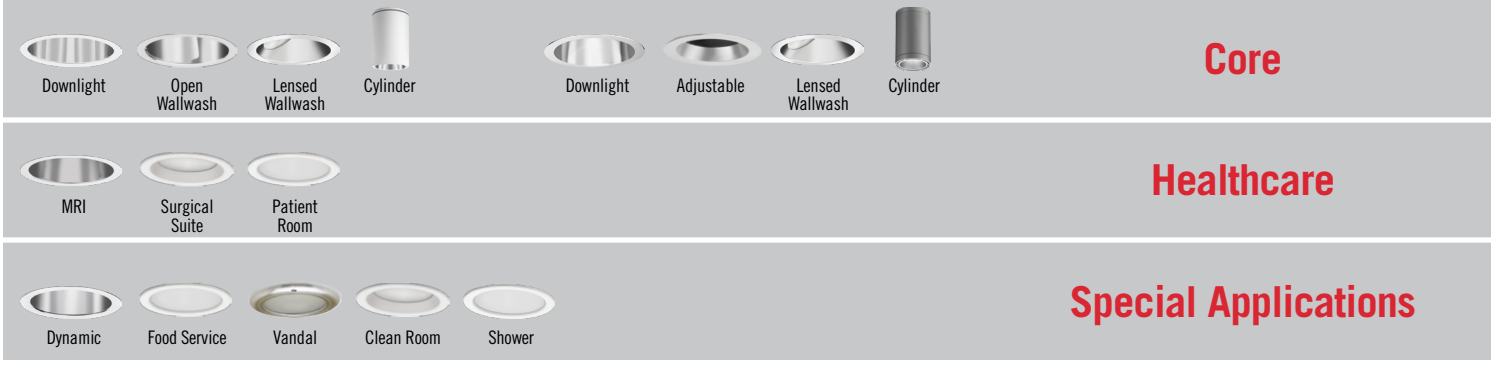
General Illumination Layer | EVO



High Center Beam Layer | Incito



EVO + Incito — Multiple Layers of Light



GOTHAM ARCHITECTURAL DOWNLIGHTING | 1400 Lester Road Conyers, GA 30012 | P 800-705-SERV (7378) | gothamlighting.com

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ORDERING INFORMATION

Luminaire Type:

Catalog Number:

EXAMPLE: EV08VR 35/30 AR MWD 277 EZ1 DNA

Series	Color Temperature	Nominal Lumen Values	Reflector & Flange Color	Finish	Distribution
EV08VR	**27/** 2700 K **30/** 3000 K **35/** 3500 K **40/** 4000 K **50/** 5000 K	**20** 2000 lumens **25** 2500 lumens **30** 3000 lumens	**AR** Clear **PR** Pewter **WTR** Wheat **GR** Gold **WR**[1] White **BR**[1] Black **WRAMF**[1] White Anti-microbial	**LSS** Semi-specular **LD** Matte-diffuse **LS** Specular	**VND** Very Narrow (0.5 s/mh) **ND** Narrow (0.7 s/mh) **MD** Medium (0.9 s/mh) **MWD** Medium wide (1.0 s/mh) **WD** Wide (1.2 s/mh)

Lens type	Voltage	Driver[5]	Control Interface
CGL 1/8" clear glass lens **FOL** 1/8" tempered flush opal glass lens **CVX** 3/16" clear convex glass lens **PCL**[2] 3/16" clear polycarbonate lenses **PPC**[2] 1/8" prismatic polycarbonate lenses	**120** **277** **347**[3,4]	**GZ10** 0-10V driver dims to 10% **GZ1** 0-10V driver dims to 1% **EZ10** eldoLED 0-10V ECOdrive. Linear dimming to 10% min. **EZ1** eldoLED 0-10V ECOdrive. Linear dimming to 1% min. **EZB** eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. **EDAB**[6] eldoLED SOLOdrive DALI. Logarithmic dimming to <1%. **EDXB**[6] eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. **ECOD**[6] Lutron Ecosystem digital Hi-Lume 1% soft-on, fade to black. Maximum 2500 lumens	**NLT**[7] nLight® dimming pack **NLTER**[3,7,8] nLight® dimming pack emergency circuit **NLTAIR2**[11] nLight® AIR enabled **NLTAIRER2**[3,8,12] nLight® AIR enabled emergency **EXA1** XPoint Wireless, eldoLED 0-10V ECOdrive. Linear dimming to 1%. Refer to XPoint tech sheet. **EXAB** XPoint Wireless, eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. Refer to XPoint tech sheet. 120V or 277V.

Options				Architectural Colors	
SF	Single fuse. Specify 120V or 277V.	**N80**[9]	nLight® Lumen Compensation	Architectural Colors - Powder Paint[13]	
ELR	Emergency battery pack, 10W, with remote test switch	**BGTD**	Bodine generator transfer device. Specify 120V or 277V.	**DWHG**	Textured White (standard)
ELRSD	Emergency battery pack, 10W, with self-diagnostics, remote test switch	**90CRI**	High CRI (90+)	**DDB**	Dark Bronze
E10WCPR	Emergency battery pack, 10W Constant Power, CA Title 20 compliant with remote test switch	**CP**[10]	Chicago Plenum. Specify 120V or 277V.	**DBL**	Black
		PCU[12]	3/16" Clear Polycarbonate Lens Underlay (roomside)	**DWH**	Gloss White
		RRL__	RELOC®-ready Luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Available only with RRLA, RRLB, RRLAE, and RRLC12S. Refer to RRL spec sheet on www.acuitybrands.com for RELOC product specifications. Above ceiling access required.	**DMB**	Medium Bronze
				DNA	Natural Aluminum

ACCESSORIES — order as separate catalog numbers (shipped separately)

ISD BC	0-10V wallbox dimmer. Refer to ISD-BC.

ORDERING NOTES

1. Not available with finishes.
2. Provided standard with clear polycarbonate underlay (2 lenses total).
3. Not available with emergency batterypack options.
4. Supplied with factory installed step down transformer.
5. Refer to TECH-240 for compatible dimmers.
6. Not available with nLight® and XPoint options.
7. Specify voltage.
8. Specify voltage. ER for use with generator supply power. Will require an emergency hot feed and normal hot feed.
9. Fixture begins at 80% light level. Must be specified with NL or NLTER. Only available with EZ10 and EZ1 drivers.
10. ELR not available.
11. Not available DALI or DMX drivers. Not available with CP or N80 options. Not recommended for metal ceiling installations.
12. Not available with CVX, PCL or PPC lens.
13. Additional architectural colors available; see www.lithonia.com/archcolors.

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SPECIFICATIONS

Optical Assembly
Fully serviceable and upgradeable lensed LED light engine suitable for field maintenance or service from below the ceiling.

Optical design is a Bounding Ray™ design with 45° cutoff to source and source image. Top-down flash characteristic for superior glare control.

Unitized optics shall have mechanical attachment of the light engine to the lower reflector for complete optical alignment.

Marine-grade die-cast aluminum bezel, low copper alloy (<1% copper)

Stainless steel Torx® T20 tamper-resistant screws

One-piece closed-cell silicone gaskets

Electrical
The luminaire shall operate from a 50 or 60 Hz ±3 Hz AC line over a voltage ranging from 120 VAC to 277 VAC. The fluctuations of line voltage shall have no visible effect on the luminous output.

The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.

Sound Rated A+. Driver shall be >80% efficient at full load across all input voltages.

Input wires shall be 18AWG, 300V minimum, solid copper.

Controls
Luminaire shall be equipped with interface for nLight wired or wireless network with integral power supply as per specification.

Dimming
The luminaire shall be capable of continuous dimming without perceivable stroboscopic flicker as measured by flicker index (ANSI/IES RP-16-10) over a range of 100 – 10%, 100 – 1.0% or 100 – 0.1% of rated lumen output with a smooth shut off function to step to 0%.

eldoLED LED drivers shall conform to IEEE P1789 standards. Alternatively, manufacturers must demonstrate conformance with product literature and testing which demonstrates this performance. Systems that do not meet IEEE P1789 will not be considered.

Driver is inaudible in 24dB environment, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment.

Construction
Luminaire housing shall be constructed of 16-gauge galvanized steel and have preinstalled telescopic mounting bars with maximum 32" and minimum 15" extension and 4" vertical adjustment.

Luminaires shall be suitable for installation in ceilings up to 1½" thick.

Tool-less adjustments shall be possible after installation.

The assembly and manufacturing process for the luminaire shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration.

25°C ambient temperature standard (1/2" clearance on all sides from non-combustible materials in non-IC applications, unless marked spacing noted otherwise). For use in insulated ceilings, a 3" clearance on all sides from insulation is required (unless marked spacing noted otherwise).

Listings
Fixtures are CSA certified to meet US and Canadian standards: All fixtures manufactured in strict accordance with the appropriate and current requirements of the “Standards for Safety” to UL, wet location covered ceiling.

IP55 rating (below the mounting surface) standard; IP65 rating with use of silicone at installation. Refer to TECH-200 for ingress protection ratings.

Photometrics
LEDs tested to LM-80 standards. Measured by IESNA Standard LM-79-08 in an accredited lab. Lumen output shall not decrease by more than 30% over the minimum operational life of 60,000 hours.

Color appearance from luminaire to luminaire of the same type and in all configurations, shall be consistent both initially and at 60,000 hours and operate within a tolerance of <2.5 MacAdam ellipse as defined by a point at the intersection of the CCT line and the black body locus line in CIE chromaticity space.

Government Procurement
BAA - Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations
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 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

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.

A+ Capable Luminaire
This item is an A+ capable luminaire, which has been designed and tested to provided consistent color appearance and out-of-the-box control capability with simple commissioning when used with Acuity Brands controls products.

All configurations of this luminaire are calibrated and tested meet the Acuity Brands' specification for chromatic consistency - including color rendering, color fidelity and color temperature tolerance around standard CIE chromaticity coordinates.

To learn more about A+, visit www.acuitybrands.com/aplus.

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EVO - eldoLED Driver Default Dimming Curve			
Nomenclature	Min Dimming	Driver Dim Curve	Control Dim Curve
EZ10	10%	Linear	Linear/Logarithmic
EZ1	1%	Linear	Linear/Logarithmic
EXA1	1%	Linear	Linear/Logarithmic
EZB	<1%	Logarithmic	Linear
EDAB	<1%	Logarithmic	Linear
EXAB	<1%	Logarithmic	Linear
EDXB	<1%	Square	Linear

Distributions		
Nomenclature	Beam Angle	Field Angle
VND	30	64
ND	44	69
MD	54	82
MWD	67	89
WD	71	92

Lumen Output Multiplier		
CRI	CCT	Multplier
80	2700K	0.96
	3000K	1.00
	3500K	1.00
	4000K	1.01
	5000K	1.07
90	2700K	0.80
	3000K	0.83
	3500K	0.85
	4000K	0.87
	5000K	0.91

Reflector Finish Multiplier	
Reflector Finish	Multiplier
LS - Specular	1
LSS - Semi Specular	0.956
WR - White	0.87
LD - Matte Diffuse	0.85
BR - Black	0.73

Driver		Control Provided (note: 347V/UVOLT versions provided with 347 option selected)			
Nomenclature	Description	NLT	NLTER	NLTAIR2	NLTAIRER2
GZ10	0-10V driver dims to 10%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V ER G2
GZ1	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V ER G2
EZ10	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2
EZ1	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2
EZB	eldoLED 0-10V SOLOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2

How to Estimate Delivered Lumens in Emergency Mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

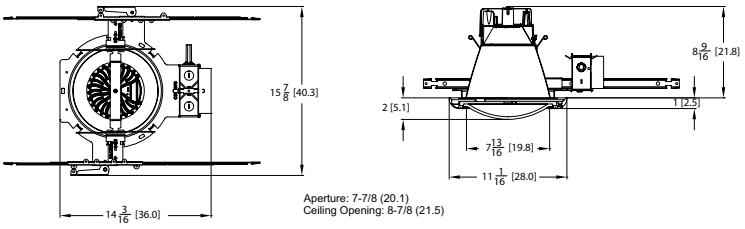
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DIMENSIONAL DATA

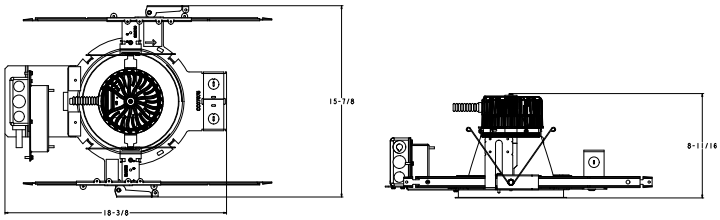
*Dimensions in inches [centimeters]

Aperture: 7 7/8" [20.1] Ceiling Opening: 8 7/8" [21.5]

Standard



Dimensions for CP



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NLIGHT AIR

nLight® AIR is the ideal solution for retrofit or new construction spaces where adding communication wiring is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each EVO Luminaire ordered with the NLTAIR option. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

nLight® AIR Control Accessories
Order as separate catalog number. Visit nLight AIR.

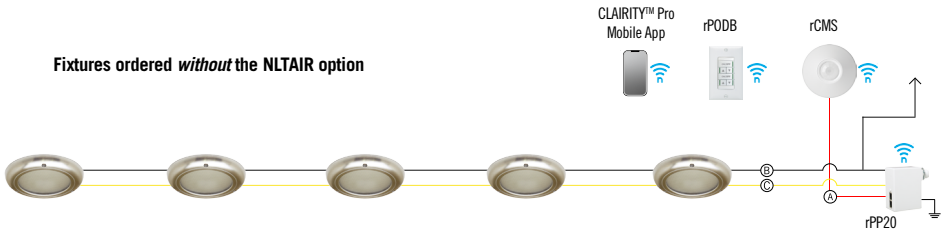
Wall Switches	Model Number
On/Off single pole	rPODB (color) G2
On/Off two pole	rPODB 2P (color) G2
On/Off & raise/lower single pole	rPODB DX (color) G2
On/Off & raise/lower two pole	rPODB 2P DX (color) G2

nLight® AIR Control Accessories *(cont.)*

Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	rCMS 9 / rCMS PDT 9
Large motion 360°, ceiling	rCMS 10 / rCMS PDT 10

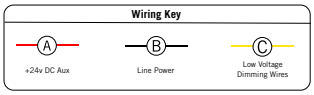
Possibilites for nLight® AIR

Fixtures ordered *without* the NLTAIR option



Fixtures ordered *with* the NLTAIR option





NLIGHT

nLight® The nLight® solution is a digital networked lighting control system that provides both energy savings and increased user configurability by cost effectively integrating time-based, daylight-based, sensor-based and manual lighting control schemes.

nLight® Wired Control Accessories
Order as separate catalog number. Visit nLight.

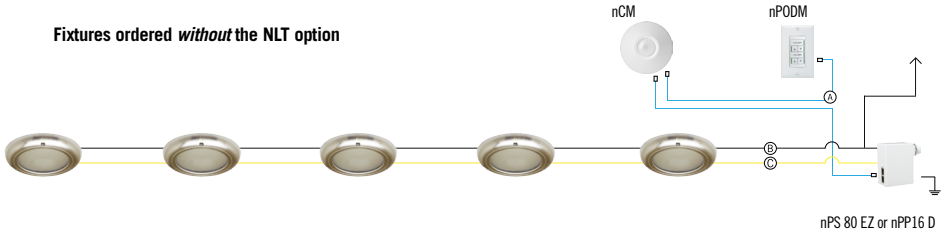
Wall Switches	Model Number
On/Off single pole	nPODM (color)
On/Off two pole	nPODM 2P (color)
On/Off & raise/lower single pole	nPOD DX (color)
On/Off & raise/lower two pole	nPODM 2P DX (color)
Graphic touchscreen	nPOD GFX (color)
Photocell Controls	
Dimming	nCM ADCX

nLight® Wired Control Accessories *(cont.)*

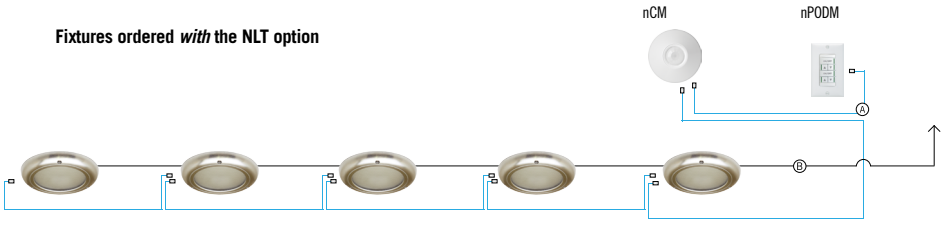
Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	nCM 9 / nCM PDT 9
Large motion 360°, ceiling	nCM 10 / nCM PDT 10
Wide View	nWV 16 / nWV PDT 16
Wall switch with raise/lower	nWSX LV DX / nWSX PDT LV DX
Cat-5 Cables (plenum rated)	
10', CAT5	CAT5 10FT J1
15', CAT5	CAT5 15FT J1

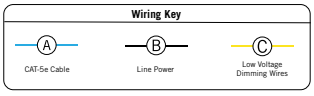
Possibilites for nLight® wired

Fixtures ordered *without* the NLT option



Fixtures ordered *with* the NLT option





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