

FOR REFERENCE ONLY
NOT FOR BIDDING
CONTRACTORS MUST PURCHASE
PLANS FROM AND REGISTER WITH THE
ENGINEER TO BE ELIGIBLE TO BID

CONTRACT DOCUMENTS

BID FORM AND SPECIFICATIONS

**9618 Old Highway 43 Creola, AL 36525
New Lighting at Creola Municipal Park**

PROJECT NO. CCP-018-22

MOBILE COUNTY COMMISSION

Merceria L. Ludgood, Commissioner
Connie Hudson, Commissioner
Randall Dueitt, Commissioner

Bid Date: June 14, 2023

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ITEM I

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the County Commission, in the Mobile Government Plaza, Alabama, Eighth Floor South Tower, Mobile, AL, until **Wednesday June 14, 2023 at 10:00 a.m.**, and then publicly opened for furnishing all labor and materials, and performing all work required by Mobile County and described as follows:

Project Name: New Lighting at Creola Municipal Park

Project Number: CCP-018-22

Project Summary: Construction and Installation of LED lighting, light poles, and electrical components for Creola Municipal Park soccer fields.

One Hundred Twenty (120) calendar days are allowed for the construction of the project.

All bids must be on blank forms provided in the Specifications and submitted in its entirety. A cashier's check drawn on an Alabama bank or a Bidder's Bond, payable to Mobile County, Alabama, for an amount not less than five percent (5%) of the amount bid, but no more than ten thousand (\$10,000) dollars, shall be filed with the proposal, the Bidder's Bond being prepared on the form specified and signed by a bonding company authorized to do business in the State of Alabama.

A Performance Bond in the form and terms approved by the County in an amount not less than the contract price will be required at the signing of the contract. A labor and materials bond in form and terms approved by the County in an amount not less than the contract price, insuring payment for all labor and materials, shall also be required at the signing of the contract. In addition, the Contractor must furnish to the County at the time of the signing of the contract a certificate of insurance coverage as provided in the specifications. The right is reserved to reject any and/or all bids and to waive informalities and to furnish any item of material or work to change the amount of said Contract.

Liquidated damages for non-completion of the work within the time limit agreed upon will be assessed in accordance with the terms of the Contract.

Specifications are on file and may be seen at the office of the Facilities Design and Construction, 7th Floor West, South Tower, Government Plaza, 205 Government Street, Mobile Alabama, and at the offices of **Driven Engineering Inc., 8005 Morris Hill Road, Semmes, AL 36575**.

Specifications may be obtained at the office of **Driven Engineering Inc.** by depositing one hundred dollars for each set. This deposit shall be refunded in full to each prime Contractor Bidder upon return of the documents in reusable condition within ten (10) days after Bid Opening for up to two (2) sets. The cost of and return of additional sets of Specifications shall be in accordance with Section 39-2-3 in the code of Alabama 1975. No specifications will be issued to contractors later than twenty-four (24) hours prior to the time indicated above for receiving bids.

All prospective bidders shall have a representative present at a **Mandatory** Pre-bid Conference that will be held on **Tuesday, June 6, 2023 at 10:00 a.m.**, on-site at 9618 Old Highway 43 Creola, Alabama 36525, in the parking lot. All contractors not having a representative at this meeting will be disqualified from bidding on this project.

No bids will be considered unless the bidder, whether resident or non-resident of Alabama, is properly licensed and qualified to submit a proposal for this construction in accordance with all applicable laws of the State of Alabama. This shall include evidence of holding a current license from the State Licensing Board for General Contractors, Montgomery, Alabama, as required by Chapter 8 of Title 34, of the Code of Alabama, 1975. In addition, non-residents of the State, if a corporation, shall show evidence of having qualified with the Secretary of State to do business in the State of Alabama.

Prior to the award of a competitively bid contract to a contractor having one or more employees in the state of Alabama, Alabama law requires that the contractor provide the county proof of enrolment in E-Verify (see www.uscis.gov/everify).

If applicable to a contract resulting from this bid invitation, the successful bidder must comply with the Mobile County Contractor Felony Investigation, available in the Engineering Department, or online at <https://www.mobilecountyal.gov/uploads/investigationpolicy1107.pdf>.

No bid shall be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the County Commission of Mobile County.

Contractors and suppliers wishing to do business with Mobile County may now review Bids and Requests for Proposals (RFPs) at and Mobile County Bid Alerts.

<https://www.mobilecountyal.gov/bids/>

COUNTY COMMISSION OF
MOBILE COUNTY, ALABAMA

BY: CONNIE HUDSON, PRESIDENT

FOLLOWING DATES:

Lagniappe

FOLLOWING DATES: May 17, 2023, May 24, 2023, May 31, 2023

Montgomery Advertiser

FOLLOWING DATE: May 17, 2023

Alabama Messenger

FOLLOWING DATE: May 17, 2023

Huntsville Speakin out news

FOLLOWING DATE: May 17, 2023

ITEM II

INVITATION AND INSTRUCTIONS TO BIDDERS

1.00 BID INVITATION

Notice is hereby given that Mobile County will receive bids on the project described herein. Qualified bidders are invited to bid on this contract.

1.01 PROJECT NAME: New Lighting at Creola Municipal Park

PROJECT NUMBER: CCP-018-22

PROJECT LOCATION: 9618 Old Highway 43, Creola, Alabama 36525

1.02 PROJECT SUMMARY:

Construction and Installation of LED lighting, light poles, and electrical components for Creola Municipal Park soccer fields as detailed in the attached scope of work (ITEM VII).

1.03 BID DEADLINE

Bids will be received until **10:00 a.m., Wednesday, June 14, 2023** at the Mobile County Administrative Office 8th Floor, Government Plaza, 205 Government Street, Mobile, Alabama, and publicly opened shortly thereafter.

1.04 AVAILABILITY OF DOCUMENTS

Bid Documents may be obtained at the offices of **Driven Engineering Inc., 8005 Morris Hill Road, Semmes, AL 36575**, by depositing **one hundred** dollars with the **Engineer** for each set. This deposit shall be refunded in full to each prime Contractor Bidder upon return of the documents in reusable condition within ten (10) days after Bid Opening. The cost of and return of additional sets of Specifications shall be in accord with Act 97-225, Public Works Contracts. No specifications will be issued to contractors later than twenty-four (24) hours prior to the time indicated above for receiving bids.

1.05 INQUIRIES

Questions regarding this project should be directed to the **Engineer** at **Nathan.williams@drivenengineering.com** no later than three (3) business days prior to the bid opening.

1.06 SITE EXAMINATION

A **mandatory** Pre-bid conference will be held, **10:00 a.m. Tuesday, June 6, 2023** at the job site at 9618 Old Highway 43, Creola, Alabama 36525, in the parking lot. All contractors not having a representative at this meeting will be disqualified from bidding on this project.

The Mobile County Commission, will not furnish any labor, material, or supplies unless specifically stated in the Contract Documents.

Contractor must be properly licensed to perform the work as outlined in the Scope of Work.

Where required by State Law, State Contractor's license is required.

Except for contracts funded in whole or in part by funds received from a federal agency, preference shall be given to resident contractors on the same basis as the nonresident bidder's state awards contract to Alabama contractors bidding under similar circumstances. Therefore, non-resident bidders shall submit with their bid a written opinion of an attorney at law licensed to practice law in the non-resident bidder's state of domicile as to preferences granted by that state to entities doing business in that state when letting public contracts.

1.07 BID SECURITY

Bids shall be accompanied by a Bid Security equal to five percent (5%) of the total bid price, including the allowance if any, but in no event not more than ten thousand (\$10,000.00) dollars. Bid Security shall be in the form of a Bid Bond or a cashier's check payable to the Mobile County Commission. No Bid Security is required on bids less than ten thousand (\$10,000.00) dollars.

1.08 PERFORMANCE ASSURANCE AND INSURANCE

The bidder to whom award is made shall provide a Performance Bond equal to 100% of the total Contract Amount (including the allowance) and a Labor and Material Bond equal to one hundred percent (100%) of the total contract amount (including the allowance). The accepted Bidder shall also provide insurance as required in section 1.20.

1.09 DURATION OF OFFER

Bids may be withdrawn in written or telegraphic request received from bidder prior to the time fixed for opening. No bid shall be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the Mobile County

Commission.

1.10 EQUAL OPPORTUNITY

The County of Mobile is an Equal Opportunity Employer and requires that all contractors comply with the Equal Employment Opportunity laws and the provisions of the Contract Documents in this regard. The County also encourages and supports the utilization of Minority Business Enterprises on this and all public bids.

1.11 BID SUBMISSION AND PREPARATION

Sealed Bids, signed, executed, and dated, will be received by the Mobile County Commission as noted in section 1.03 above.

Submit one copy of the executed offer on the Bid Form provided, signed, and with the required Bid Security. The bid shall be enclosed in a sealed opaque envelope approximately 9x12 inches or larger, clearly identified on the outside as a **SEALED BID** with **PROJECT NAME, PROJECT NUMBER, OWNER'S NAME, AND ADDRESS, BIDDER'S NAME AND ADDRESS, BIDDER'S LICENSE NUMBER.**

Forms furnished, or copies thereof, shall be used, and strict compliance with the requirements of the invitation, these instructions, and the instructions printed on the forms is necessary. Special care should be exercised in the preparation of bids. Bidders must make their own estimates of the facilities and difficulties attending the performance of the proposed contract, including local conditions, the uncertainty of weather, and all other contingencies. All designations and prices shall be fully and clearly set forth. The proper space in the bid and guaranty forms shall be suitably filled in.

Fill in all blanks on the bid form with non-erasable ink or type. Erasers or other changes must be explained or noted over the signature of the bidder.

The Bid Form may have a Contingency Allowance listed. The Contingency Allowance covers unforeseen conditions and shall not be used by the Contractor without the written authorization of the Owner. Add this amount to the Base Bid to derive the Total Bid. At the conclusion of the project any unused portion of the Contingency Allowance, and any other unused funds, shall revert to the owner.

Each bid must give the full business address of the bidder and must be signed by him with his usual signature. Bids by partnerships must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership, or by an authorized representative, followed by the signature and

designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the State of Incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person shall also be typed or printed below the signature. A bid by a person who affixes to this signature the word "president," "secretary," "agent," or other designation without disclosing his principal, may be held to be the bid of the individual signing. When requested by the Mobile County Commission, satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

Each project will be bid separately unless otherwise expressly requested in the contract document. Combination bids, that is bids on separate projects lumped together as a single bid or on all or none basis, will not be accepted unless the contract document expressly requests or permits same.

Alternate bids will not be considered unless requested.

1.12 BID INELIGIBILITY

The Contract will be awarded to the lowest responsible bidder complying with conditions of the invitation for bids, provided his bid is reasonable and it is in the interest of the Owner to accept it.

The Owner, however, reserves the right to reject any and all bids and to waive any informality/irregularity in bids received whenever such rejection or waiver is in the interest of the Owner. It also reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid of a bidder who is not, in the judgment of the Owner, in a position to perform the Contract.

The bidder to whom the award is made will be notified at the earliest possible date. Bids received after the deadline will be returned to the bidder unopened.

1.13 CONTRACT TIME

The Contractor agrees to perform the work within the time stated in the Bid Form. The bidder in submitting an offer accepts the conditions of the contract period stated for performing the work.

1.14 CONSTRUCTION DOCUMENT IDENTIFICATION

The Construction Documents are the Project Manual, Drawings, Addenda, and all other related documents bearing the Project Title and Number.

Bidders shall use complete sets of Construction Documents in preparing their Bids.

The County will not assume responsibility for errors or misinterpretations resulting from the use of incomplete sets of Construction Documents.

1.15 ADDENDA

All Addenda are part of the Contract Documents and will be issued to all plan holders on record. Prospective bidders are to include all resultant costs in the Bid submittal. It is the responsibility of the bidder to verify that all addenda have been received.

1.16 BID ACCEPTANCE

Bid with the lowest Total Bid amount from a responsive and responsible bidder may be accepted if within the Contract Budget. In the event that alternates are listed on the Bid Form, the lowest combination of Total Bid and Alternate Bids accepted by the owner shall be the accepted bid. Alternates shall be awarded in the order in which they are listed on the Bid Form.

1.17 BIDDERS INTERESTED IN MORE THAN ONE BID

If more than one bid is offered by any one party, by or in a name of his clerk, partner, corporation in which he has a substantial interest, or in which he is an officer, or other person, all such bids may be rejected. A party who has quoted prices on materials to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the materials or work. The Mobile County Commission reserves the right to determine in its discretion whether the provisions of this clause have been violated by any bidder.

1.18 ERRORS IN BIDS

Bidders or their authorized agents are expected to examine the maps, drawings, specifications and all other instructions pertaining to the work, which will be open to their inspection. Failure to do so will be at the bidder's own risk. In case of error, in the extension of prices, the unit price will govern.

1.19 CONTRACT AND BOND

Prior to the award of a competitively bid contract to a contractor having one or more employees in the State of Alabama, Alabama law requires that the contractor provide the County proof of enrollment in E-Verify (see www.uscis.gov/everify).

If applicable to a contract resulting from this bid invitation, the successful bidder must comply with the Mobile County Contractor Felony Investigation, available in the Engineering Department, or online at <https://www.mobilecountyal.gov/uploads/investigationpolicy1107.pdf>.

The bidder to whom award is made must, when requested, enter into written contract on the standard form as set out herein, with satisfactory security in the amount required, within the period specified, or, if no period be specified, within fifteen (15) days after the required forms are presented to him for signature.

1.20 INSURANCE REQUIREMENTS

Contractor, at its sole expense, shall obtain and maintain in full force the following insurance to protect the Contractor and the Mobile County Commission (MCC) at limits and coverages specified herein. These limits and coverages specified are the minimum to be maintained and are not intended to represent the correct insurance needed to fully and adequately protect the Contractor. If requested by MCC, Contractor will provide copies of policies within ten (10) days of request.

All insurance will be provided by insurers licensed to conduct business in the State of Alabama and shall have a minimum A.M. Best rating of A- VII and must be acceptable to MCC. Self-insured plans and/or group funds not having an A.M. Best rating must be submitted to MCC for prior approval.

NO WORK IS TO BE PERFORMED UNTIL PROOF OF COMPLIANCE WITH THE INSURANCE REQUIREMENTS HAS BEEN RECEIVED BY MCC.

(a) Worker’s Compensation and Employers Liability

Part One:	Statutory Benefits as required by the State of Alabama	
Part Two:	Employers Liability	\$1,000,000 Each Accident
		\$1,000,000 Each Employee
		\$1,000,000 Policy Limit

Policy shall contain a Waiver of Subrogation Endorsement in favor of MCC.

i. U.S. Longshoreman & Harbor workers Act (USL&H)-

Required if contract involves work near a navigable Waterway that may be subject to the USL&H law.

ii. Maritime Endorsement (Jones Act)-

Endorsement required if contract involves the use of a Vessel.
Or include coverage for “Master or Members or Crew” under “Protection and Indemnity” coverage (P&I).

Bodily injury by accident	\$1,000,000
(Each Accident)	
Bodily injury by disease	\$1,000,000

(Aggregate)

(b) Commercial General Liability

Coverage on an Occurrence form with a combined single limit (Bodily Injury and Property Damage combined) as follows:

Each Occurrence	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Products/completed Operation Aggregate	\$2,000,000
General Aggregate	\$2,000,000

- Aggregate Limit applies per Project
- Coverage to include
 - Premises and operations
 - Personal Injury and Advertising Injury
 - Products/Completed Operations
 - Independent Contractors
 - Contractual Liability
 - Explosion, Collapse and Underground hazards
- The Commercial General Liability policy, shall name MCC as Additional Insured for claims arising out of the Contractors and/or any Subcontractors work. The ISO Forms CG 20 07 04 and CG 20 37007 04 or a comparable form that is no more restrictive shall be required. The additional Insured form MUST include the current Operations and Products/Completed Operations of each contractor. The naming of the additional insured does not obligate the additional insured to pay any premiums due.
- Aggregate limits to be on a “per project” basis.

(c) Automobile Liability

Covering all Owned, Non-Owned, and Hired vehicles with a Combined single limit (bodily injury and property damage combined) of \$1,000,000 each accident. The policy shall name MCC as an Additional Insured

(d) Protection and Indemnity Insurance – If the contract involves work aboard an Owned, Non-Owned or Hired Vessel, Liability coverage in the amount of \$1,000,000 per occurrence shall be maintained.

(e) Environmental Insurance – If the contract includes any work involving environmental issues (i.e., identification, remediation, disposal). MOBILE COUNTY COMMISSION to be named as Additional Insured.

Each Occurrence	\$1,000,000
Aggregate	\$1,000,000

(f) Property Insurance (Properties over \$100,000)

Builders Risk – The contractor shall procure and maintain builder’s risk, or installation floater, covering the full replacement cost of the job. Any deductibles shall be paid by the contractor.

Coverage shall be written on the “special” (all risk) coverage form including theft. The form shall include, but not be limited to, the perils of fire, (with extended coverage) theft, vandalism, malicious mischief, collapse, windstorm and testing. Flood insurance required if work is located in a Flood Zone.

The coverage shall be written in the name of the contractor and MOBILE COUNTY COMMISSION and subcontractors involved in the project. Any loss payable shall be to the interest of the contractor and MOBILE COUNTY COMMISSION as their interest may appear.

The coverage shall be maintained until final payment has been made or the contractor no longer has an insurable interest in the property, whichever is later. Coverage shall not be impaired by the partial occupancy by the owner and the coverage shall be so endorsed.

Waiver of Subrogation

Policies specified in (a), (b), (f), and all other property policies of each contractor/subcontractor shall contain a Waiver of Subrogation Endorsement in favor of MOBILE COUNTY COMMISSION.

Certificate of Insurance

A Certificate of Insurance evidencing the above minimum requirements must be provided to and accepted by MCC **PRIOR** to commencement of any work on the contract. Each policy shall be endorsed to provide thirty (30) days prior written notice of cancellation to the MCC.

1.21 COLLUSION

If there is any reason for believing that collusion exists among the Bidders any or all bids may be rejected, and those participating in such collusion may be barred from submitting bids on the same or other work with the County.

1.22 SUBLETTING OR ASSIGNING OF CONTRACT

Limitations: The Contractor shall not sublet, assign, transfer, convey, sell, or otherwise dispose of any portion of the contract, his right, title, or interest therein, or his power to execute such contract, to any person, firm, or corporation without written consent of the County, and such written consent shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract. Unless otherwise stipulated in the proposal or special provisions, the Contractor shall perform with his own organization, and with the assistance of workmen under his immediate superintendence and reported on his payroll, all contract work of a value not less than fifty percent (50%) of the total contract amount, except that any items designated in the contract as "Specialty Items" so performed by subcontract may be deducted from the total contract amount before computing the amount of work required to be performed by the Contractor with his own organization.

Subcontractor's Status: A Subcontractor shall be recognized only in the capacity of an employee or agent of the Contractor and the Contractor will be responsible to the County for all of the subcontractor's work, including failures or omissions; and his removal may be required by the Project Manager, as in the case of an employee.

1.23 PROSECUTION OF WORK

The Contractor shall commence work within ten (10) days of issuance of the Notice to Proceed (NTP) by the Project Manager or as otherwise directed in writing.

The Contractor shall prosecute the work continuously and diligently in the order and manner set out in his schedule as approved by the Project Manager. He shall provide sufficient satisfactory materials, labor, and equipment to insure that the work will be completed in a satisfactory manner within the time specified in the contract. A company representative capable of making decisions on the contractor's behalf shall be on-site at all times during construction activities and shall have in his possession a set of project construction specifications and plans.

Should the Contractor fail to maintain a satisfactory rate of progress, the Project Manager may require that additional forces and/or equipment be placed on the work to bring the project up to schedule and maintain it at that level.

Should the Contractor fail to furnish sufficient satisfactory equipment and/or labor for maintaining the quality and progress of the work at a satisfactory level, the Project Manager may withhold all estimates that may become due until satisfactory quality and progress are maintained; or the contract may be annulled.

1.24

LIQUIDATED DAMAGES

Liquidated damages for non-completion of the work within the time limit agreed upon will be assessed in the amount of actual damages to the Owner but in no event not more than two hundred fifty (\$ 250.00) dollars per day.

ITEM III
BID FORM

Date: _____

PROJECT NUMBER: CCP-018-22

PROJECT NAME: New Lighting at Creola Municipal Park

PROJECT LOCATION: 9618 Old Highway 43, Creola, Alabama 36525

Base bid will include all labor, materials, equipment, shipping, overhead, profit, bonds, insurance, and all other costs necessary to provide the complete services outlined within this contract and scope of work.

The owner agrees to provide the following materials: NONE

Base Bid \$ _____

Allowance \$ \$35,000.00

Total Bid \$ _____

Acknowledgement of addenda (1, 2, 3, etc...) _____

The contractor agrees to complete all the work within **One Hundred Twenty (120)** calendar days from date given in the *Notice to Proceed (NTP)* unless other arrangements are approved by the Project Manager.

Company _____

Company Representative _____
(Print)

Company Representative _____
(Signature)

Address _____

Phone No.: () _____ FAX No.:() _____

Email _____

Alabama License No. _____

ITEM IV

PERFORMANCE BOND

KNOW ALL MEN: That we _____

(Insert here the name & address of legal title of the Contractor)

_____ hereinafter called the Principal, and

(Insert here the name and address of legal title of one or more sureties)

_____ and

_____ and

_____ hereinafter called the Surety or Sureties, are held and firmly bound unto Mobile County, a political subdivision of and Body Corporate in the State of Alabama, hereinafter called the Owner in the sum of _____ Dollars

(\$_____) for the payment whereof the Principal and the Surety or Sureties bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly, by these presents.

WHEREAS, the Principal has, by means of a written agreement, dated _____, _____ entered into a contract with the Owner for: **CCP-018-22, New lightning at Creola Municipal Park**, which agreement is by reference made a part hereof,

NOW, THEREFORE, The conditions of this obligation is such that if the Principal shall faithfully perform the Contract on his part, and satisfy all claims and demands, incurred for the same, and shall fully indemnify and save harmless the Owner from all cost and damage which he may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good for any such default thence this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, HOWEVER, that no suit, action, or proceedings, by reason of any default whatever be brought on his Bond after twelve months from the day on which the final payment under the Contract falls due.

PROVIDED, further, that the said surety or sureties, for value received hereby stipulate and agree that no change, extension of time, or addition to the terms of the Contract or to the work to be performed thereunder of the Specifications thereof shall in any way effect their obligations on this bond, and they do hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work, or to the Specifications.

Signed and Sealed this ____ day of _____, _____.

(Individual principals sign here)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

In the presence of:

_____ (SEAL)
(Corporate Principal Sign Here)

ATTEST:

BY:

Here) (Surety Sign

WITNESS:

_____ BY _____

COUNTERSIGNED:

LABOR AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
_____ as Principal, and
_____ as Surety, are held and firmly
bound unto said Mobile County, a political subdivision of and body corporate in the State of Alabama,
hereinafter called the Obligee, in the penal sum of _____
_____ Dollars (\$ _____)
lawful money of the United States, for the payment of which sum and truly to be made, we bind
ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly
by these presents.

WHEREAS, said principal has entered into a certain Contract with said Obligee, dated
_____, _____, (Hereinafter called the Contract) fo **CCP-018-22,**
New Lighting at Creola Municipal Park, which Contract and the Specifications for said work shall
be deemed a part hereof as fully as if set out herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT if the said Principal
and all subcontractors to whom any portion of the work in said contract is sublet and all assignees
of said Principal and of such subcontractors shall promptly make payments to all persons supplying
him or them with labor, materials, or supplies for or in the prosecution of the work provided for in
such Contract, or any amendment or extension of or addition to said Contract, and for the payment
of reasonable attorney's fees incurred by the successful claimant or plaintiffs in suits or claims
against the contractor arising out of or in connection with the said contract, then the above obligation
shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following conditions and limitations.

(a) Any person, firm or corporation that has furnished labor, materials, or supplies for or in the
prosecution of the work provided for in said Contract shall have a direct right to action against the
Principal and Surety on this bond, which right of action shall be asserted in a proceeding, instituted
in the County in which the work provided for in said Contract is to be performed or in any County in
which said Principal or Surety does business. Such right of action shall be asserted in a proceeding
instituted in the name of the claimant or claimants for his or their use and benefit against the Principal
and Surety or either of them (but not later than one year after the final settlement of said Contract
falls due) in which action such claim or claims shall be adjusted and judgment rendered thereon.

(b) The Principal and Surety hereby designate and appoint _____
_____ or his successor or
representative as the agent of each of them to receive and accept services of process or other
pleading issued, or filed in any proceeding instituted on this bond and hereby consent that such

service shall be the same as personal service on the Principal and/or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under Workmen's Compensation or Employer's Liability Statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action, or proceeding thereon that is instituted later than one (1) year after the final settlement of said contract.

(e) This Bond is given pursuant to the terms of an Act of the Legislature of the State of Alabama approved February 8, 1935, entitled: "An Act to further provide for Bonds and Contractors on State and other public works and suits thereon".

SIGNED, SEALED, AND DELIVERED this ____ day of _____, ____.

(Individual Principals sign here)

_____(SEAL)

BY: _____(SEAL)

In the Presence Of:

here

Corporate Principal sign

ATTEST:

BY: _____
Surety Sign Here

WITNESS:

BY: _____

ITEM V

CERTIFICATE OF CONTRACTOR'S & SUBCONTRACTOR'S INSURANCE

FORM FOR CERTIFICATE OF CONTRACTORS AND SUBCONTRACTORS INSURANCE TO
MOBILE COUNTY COMMISSION, ALABAMA

Date _____

This is to certify that the policies designated below have been issued by the
_____ and are in force on the date
borne by this certificate.

1. Location and designation of project:

2. Name and address of insured for whom this certificate is issued:

3. Type of insurance:

Limits of Liability

(a) Workmen's Compensation:

_____	_____	_____	_____	_____	_____
number)	(exp. date)	(coverage)	(aggregate)	(one person)	(policy
		accident)			(one

(b) Contractor's Public Liability:

1. Bodily Injury:

_____	_____	_____
(each person)	(each occurrence)	(total coverage)

2. Property Damage:

_____	_____
(each accident)	(aggregate)

(c) Automobile (Motor Vehicle):

1. Bodily Injury:

_____	_____	_____
(Each Person)	(Each Occurrence)	(Total Coverage)

2. Property Damage:

(Each Accident)

(Aggregate)

(d) Owner's Protective Liability:

(Each Occurrence)
(Bodily Injury)

(Each Occurrence)
(Property Damage)

Such insurance as is afforded by the above policies covers the operations undertaken by the insured with respect to the construction of the project above designated. The insurance afforded by the above-designated policies, specimen copies of which have been filed with the Mobile County Commission and to each of which is attached for following endorsement.

The insurer agrees with the insured as follows:

1. That it will furnish to said Mobile County Commission a certificate of insurance in triplicate on a form approved for such purpose by said Commission, setting forth the pertinent information regarding the policy to which this endorsement is attached, for each project of said Commission to which the policy applies.
2. That it will attach to each said certificate of insurance executed copies of any endorsement other than this endorsement which are attached to said policy at the time said policy is issued, provided only that said endorsements affect the coverage of said policy in respect of operations involved in the construction of the projects of said County Commission to which the policy applies.
3. That it will mail to the Mobile County Commission three executed copies of each endorsement subsequently issued to become a part of said policy provided only that endorsement affects the coverages of said policy in respect of operations involved in the construction of the project of said County Commission which the policy applies, and provided further that such endorsement shall not be effective unless such notice is given to the County at the same time that notice thereof is given to the insured.
4. That it will mail to the Mobile County Commission, at least thirty days before the effective date thereof notice of cancellation of said policy, provided no cancellation shall be effective unless such notice is given to the County.

Insurer

BY: _____
Authorized Representative

ITEM VI

CONTRACT

This **CONTRACT** is made this ____ day of _____, _____, by and between the **MOBILE COUNTY COMMISSION** (hereinafter "**OWNER**") and _____ (hereinafter "**CONTRACTOR**"), on the project:

CCP-018-22, New Lighting at Creola Municipal Park.

The **OWNER** and the **CONTRACTOR** agree as set forth below:

1. The contract consists of all of the items contained within this bid package.
2. The **CONTRACTOR** shall perform all the **WORK** described herein.
3. The **WORK** to be performed under this **CONTRACT** shall be commenced upon execution of this **CONTRACT** within ten (10) days of the date specified in a *Notice to Proceed* (NTP) to be issued to the Contractor by the Owner, or its authorized representative. The work shall be completed, subject to authorized adjustments, within One Hundred Twenty (120) calendar days from and after the commencement date stipulated in said *Notice to Proceed*.
4. The **OWNER** shall pay the **CONTRACTOR** in current funds for the performance of the **WORK**, the **CONTRACT SUM** of <AMOUNT IN WORDS> <(\$##)> dollars. The **CONTRACTOR** shall submit to the **OWNER**, on or before the 5th day of each month, an estimated total for work performed in the previous month. The **OWNER** will hold back five percent (5%) of each monthly estimate until fifty percent (50%) completion of the work. Immediately after the completion of the contract, the contractor shall give notice of the completion by an advertisement, published once a week for a period of four (4) successive weeks in a newspaper of general circulation that is published within the city or county in which the work has been performed. Proof of the publication of the notice shall be made by the **CONTRACTOR** to the **OWNER** by affidavit of the publisher and a printed copy of the notice published. Final payments shall be made after the completion of the notices of completion and within thirty-five (35) days of acceptance by the **OWNER** of the work, the amount due, and close-out documents, or interest shall be due the **CONTRACTOR**. Interest shall not be due on payments made after the 35 day period because of administrative or processing delays at the close of the fiscal year. Partial payments shall be made within thirty-five (35) days of the acceptance by the **OWNER** of the work and the amount due, or interest shall be due the **CONTRACTOR**.
5. The **CONTRACTOR** shall not commence work under this **CONTRACT** until it has purchased **INSURANCE** for protection from any and all claims that may arise out of or result from

the **CONTRACTOR'S** operations under the **CONTRACT**. The **CONTRACTOR** shall maintain the required insurance in the minimum amounts as described in Item II.

6. To the fullest extent permitted by law, the **CONTRACTOR** shall indemnify and hold harmless the **OWNER**, and its agents and employees from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees arising out of or resulting from the performance of the **WORK**.

7. Prior to the commencement of the work the **CONTRACTOR** shall thoroughly and completely inspect the premises, and agree to perform the **WORK** for the **CONTRACT SUM**.

8. The **CONTRACTOR** warrants to the **OWNER** that all materials furnished under this **CONTRACT** will be new, and that all work will be of a good quality, free from faults and defects, and in conformance with the **CONTRACT DOCUMENTS**. All **WORK** not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the **OWNER**, the **CONTRACTOR** shall furnish satisfactory evidence as to the kind and quality of materials.

9. The **CONTRACTOR** shall promptly correct all **WORK rejected** by the **OWNER** as defective or failing to conform to the **CONTRACT DOCUMENTS**. The **CONTRACTOR** shall bear all costs of correcting such rejected **WORK**, regardless of whether the **WORK** is fabricated, installed, or completed.

10. The **CONTRACTOR** shall remove from the site all portions of the **WORK** which are defective or non-conforming and which have not been corrected unless removal is waived by the **OWNER**.

11. If the **CONTRACTOR** fails to correct defective or nonconforming **WORK** within a reasonable time fixed by written notice from the **OWNER**, the **OWNER** may correct and the **CONTRACTOR** shall bear the cost of making good all work of the **OWNER** or separate contractors. **WRITTEN NOTICE** shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving the notice.

12. If the **OWNER** prefers to accept the defective or nonconforming **WORK**, the **OWNER** may do so instead of requiring its removal and correction, in which case a reduction in the

CONTRACT SUM shall be effected whether or not final payment has been made. The reduction shall be equitable and appropriate.

13. If the **CONTRACTOR** fails to correct defective **WORK** as set forth above or persistently fails to carry out the **WORK** in accordance with the **CONTRACT DOCUMENTS**, or fails to supply enough properly trained workers or proper materials or disregards laws, ordinances, rules or regulations, the **OWNER**, by a written order signed by its authorized agent, may order the **CONTRACTOR** to stop the **WORK**. If the **CONTRACTOR** fails within the seven (7) days after receipt of written notice to commence corrective action, the **OWNER** may, after seven (7) days follow the receipt of an additional written notice, and without prejudice to any other remedy of the **OWNER**, terminate employment of the **CONTRACTOR** and take possession of the site and of all materials thereon, and may finish the work by whatever methods the **OWNER** finds expedient.

14. If, within one (1) year after acceptance of the **WORK** by the **OWNER**, or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the **CONTRACT DOCUMENT**, any of the **WORK** is found to be defective or not in conformity with the **CONTRACT DOCUMENTS**, the **CONTRACTOR** shall correct it promptly after receipt of a written notice from the **OWNER** to do so unless the **OWNER** has previously given the **CONTRACTOR** a written acceptance of such condition. This obligation shall survive both final payment for the **WORK** and termination of the **CONTRACT**. The **OWNER** shall give such notice promptly after discovery of the condition.

15. If the **CONTRACTOR** is delayed at any time in the progress of the **WORK** by any act or neglect of the **OWNER**, any of its employees, labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any causes beyond the **CONTRACTOR'S** control, the **CONTRACT** time shall be extended to such reasonable time as the **OWNER** may determine.

16. The **CONTRACTOR** shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the **WORK**. The **CONTRACTOR** shall perform the **WORK** in a manner that allows the **OWNER** to the maximum extent possible to continue its daily operations on the premises.

17. The **CONTRACTOR** shall at all times keep the premises free from accumulation of waste materials or rubbish caused by the **CONTRACTOR'S** operations. At the completion of the **WORK**,

the **CONTRACTOR** shall remove all the **CONTRACTOR'S** waste materials and rubbish from and about the **PROJECT** as well as all the **CONTRACTOR'S** tools, construction equipment, machinery, and surplus materials. If the **CONTRACTOR** fails to clean up at the completion of the **WORK**, the **OWNER** may do so and the cost thereof shall be charged to the **CONTRACTOR**.

18. The **CONTRACTOR** shall be responsible for liquidated damages due to non-completion of the work within the time limit agreed upon. Liquidated damages will be assessed in the amount of actual damages to the **OWNER**, but in no event shall be more than \$ 250.00 per day.

19. The duties and obligations imposed by the **CONTRACT DOCUMENTS** and the **RIGHTS AND REMEDIES** available there under shall be in addition to, and not a limitation of, any duties, obligations, rights, and remedies otherwise imposed or available by law.

20. 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 or agents, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

21. Upon completion of the work the **CONTRACTOR** shall provide to the **OWNER**, in addition to the proof of advertisement in Item 4 above, 1) a one year warranty from the **CONTRACTOR** on workmanship and materials used, 2) manufacturer's warranty on materials and equipment, 3) Operations and Maintenance manuals on equipment and equipment specifications, as applicable, 4) "as-built" drawings, as applicable, 5) a Consent of Surety from the bonding company, and 6) a written waiver and release of liens documentation from the **CONTRACTOR**.

22. The **OWNER** and **CONTRACTOR**, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assign and legal representatives of such other party with respect to all covenants, agreements and obligations contained in the **CONTRACT DOCUMENTS**. Neither party to the **CONTRACT** shall assign the **CONTRACT** or sublet it as a whole without the written consent of the other.

23. In the event of a conflict between the front end documents and the plans and/or scope of work, the front end documents will prevail.

24. By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for

employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting from the violation.

Source of Sufficient Funds

- County Funds
- Grant Funds
- Other Funds _____

Availability of Funds

- Above funds are held by Mobile County at contract execution
- Above funds will become available following contract execution

ATTEST:

MOBILE COUNTY COMMISSION

Glenn L. Hodge
County Administrator

BY: **CONNIE HUDSON**
ITS: President

ATTEST:

(Name of Contractor)

BY: _____
(Contractor's Representative)

ITS: _____
(Representative's Title)

GENERAL CONTRACTOR'S LICENSE NUMBER:

STATE OF ALABAMA}
COUNTY OF MOBILE}

I, the undersigned authority in and for said State and County, hereby certify that, as respectively, of, whose name is signed to the foregoing conveyance and who are known to me, acknowledged before me on this day, that, being informed of the contents of the conveyance they executed the same voluntarily on the day the same bears date.

Given under my hand and Notaries Seal on this ____ day of _____, ____.

NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

STATE OF ALABAMA}
COUNTY OF MOBILE}

I, the undersigned authority in and for said State and County, hereby certify that CONNIE HUDSON, as President of the MOBILE COUNTY COMMISSION and GLENN L. HODGE, as County Administrator of MOBILE COUNTY, whose names are signed to the foregoing conveyance and who are known to me, acknowledged before me on this day, that, being informed of the contents of the conveyance they executed the same voluntarily on the date the same bears date.

Given under my hand and Notaries Seal on this ____ day of _____, _____.

NOTARY PUBLIC
MY COMMISSION EXPIRES:_____

ITEM VII

SCOPE OF WORK

**New Lighting at Creola Municipal Park
9618 Old Highway 43, Creola, Alabama 36525
CCP-018-22**

The Contractor to provide all necessary supervision, labor, tools, materials, and safety equipment to perform the following tasks: Furnishing of all labor, material, equipment, supplies, and services necessary to construct and install the complete electrical systems as shown on the drawings and specified herein. Work shall include but is not necessarily limited to the following items: Grounding; Lighting; Interior Distribution/Branch Circuits; Equipment Connections.

The **CONTRACTOR** shall:

- possess the proper license to perform all aspects of the work required to complete the project.
- acquire and pay for any and all applicable licenses, review fees, permit fees and inspection/testing fees, etc., associated with this contract unless noted otherwise within the contract documents.
- provide all necessary services and materials, unless stated otherwise within the contract documents.
- comply with all laws, codes, and regulations, including safety, fire, health, environmental, and insurance.
- perform all work in a neat and professional manner.
- submit to the project manager a written change proposal, including add-on or deduct costs if any, for any modification requests to the plans, specifications, or other contract requirements. If changes are deemed necessary by the project manager, he will return an approved copy of the proposal prior to any change implementation.
- be responsible for all damages to properties outside the Scope of Work caused by the contractor during the execution of this contract. This includes, but is not limited to, damage too small to be covered by the contractor's insurance.
- clean up the job site daily and remove all waste and non-salvageable material in accordance with applicable laws, codes, and regulations.
- deliver all salvageable material to the Mobile County Building Maintenance Complex at 554 South Royal Street, Mobile, AL.

Item VIII

SECTION 16100

ELECTRICAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A The General and/or Special Conditions Sections are a part of this specification, and the Contractor shall consult them in detail for instructions pertaining to this work.
- B Section 16 is sub-divided for convenience only.

1.2 SCOPE

- A Furnishing of all labor, material, equipment, supplies, and services necessary to construct and install the complete electrical systems as shown on the drawings and specified herein.
- B Work shall include but is not necessarily limited to the following items:
 - 1. Grounding
 - 2. Lighting
 - 3. Interior Distribution/Branch Circuits
 - 4. Equipment Connections

1.3 JOB CONDITIONS

- A Site Inspections:
 - 1. Before submitting proposals, each bidder should visit the site and fully familiarize himself with all job conditions and shall be fully informed as to the extent of his work.
 - 2. No consideration will be given after the bid opening date for alleged misunderstanding as to the requirements of work involved in connecting to the utilities, as to requirements of materials to be furnished, or as to the extent of demolition required.
- B Existing Conditions: All utilities, existing systems, and conditions shown on the plans as existing are approximate, and the Contractor shall verify before any work is started.
- C Maintaining Service: Any existing service (or operating system) which must be interrupted for any length of time shall be supplied with a temporary service as necessary for continuation of the normal operation of this facility.
- D Accidental Interruptions:
 - 1. All excavation and/or remodeling work required shall be performed with care so as not to interrupt other existing services (water, gas, electrical, sewer, sprinklers, etc.).
 - 2. If accidental utility interruption resulting from work performed by the Contractor occurs, service shall be immediately restored to its original condition without

delay, by and at the expense of the Contractor, using skilled workmen of the trade required.

1.4 TEMPORARY POWER

- A Furnish and maintain temporary wiring system for light and power for use during construction by all trades.
 - 1. Use solidly grounded system.
 - 2. Limit over-current protection to 20 amperes on No. 12 conductors.
 - 3. Pay for all charges incurred while furnishing power for construction.

1.5 CODES, PERMITS AND INSPECTIONS

- A The installation shall comply with all local, state, and federal laws and ordinances applicable to electrical installation and with the regulations of the latest edition of the National Electrical Code (N.E.C.) acceptable to the local authorities where such regulations do not conflict with local, state, and federal laws and ordinances.
- B The Contractor shall obtain and pay for all permits and inspection fees, and after completion of the work, shall furnish the Architect a certificate of final inspection and approval from the applicable local inspection authorities.

1.6 DRAWINGS AND SPECIFICATIONS

- A The drawings and these specifications are complimentary each to the other.
 - 1. What is called for by one shall be as binding as if called for by both.
- B Where the drawings and/or specifications differ as to quantity or quality, the greater quantity or higher quality shall be provided.
- C Omissions from the drawings and specifications of details of work which are evidently necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such work.
- D In any case of discrepancy in the figures or catalog numbers, the matter shall be submitted to the Architect, who shall promptly make a determination in writing.
- E Any adjustment by the Contractor shall be at the Contractor's own risk and expense.
- F Electrical drawings are diagrammatic only. Do not scale these drawings.
- G All equipment shall be installed in accordance with the manufacturer's recommendations and any conflicting data shall be verified before bidding.

1.7 STANDARDS OF MATERIALS AND WORKMANSHIP

- A Materials: All materials shall be new and shall be listed and approved by the

Underwriters' Laboratories, Inc., in every case where a standard has been established for a particular type of material in question.

- B All electrical material and equipment provided by the Contractor shall be new and free of defects. All work performed under this Section of the Specifications shall be carried out by skilled workers regularly engaged in the performance of such duties. The entire electrical installation shall be not less than that required by the latest edition of the National Electrical Code, the Occupational Safety and Health Act, and all electrical codes locally enforced in the Project area.
- C Equipment and materials of the same type or classification and used for the same purpose shall be products of the same manufacturer.

1.8 SUBSTITUTIONS:

- A Reference to a particular product by manufacturer, trade name, or catalog number establishes the quality standards of material and equipment required for this installation and is not intended to exclude products equal in quality and similar design.
- B The Architect reserves the sole right to decide the equality of materials proposed for use in lieu of these specified.
- C It shall be the Contractor's responsibility to furnish the information and data sufficient to establish the quality and utility of the items in question, including furnishing samples if required.

1.9 SHOP DRAWINGS:

- A The Contractor shall submit a list of items proposed for use.
 - 1. He shall also submit catalog data and shop drawings on proposed systems and their components, panelboards, safety switches, starters and contactors, transformers, lighting fixtures, and wiring devices.
- B Where substitutions alter the design or space requirements, the Contractor shall defray all items of cost for the revised design and construction including costs to all allied trades involved.
- C Data shall be submitted within ten (10) calendar days after the contract is awarded.
 - 1. Provide six (6) copies of shop drawings unless a greater number of copies is required by the General Conditions.
 - 2. Each submittal data section shall be covered with an index sheet listing Contractor, Sub-Contractor, Project Name, and an index to the enclosed submittals.
- D Each major section of submittals such as power equipment, lighting fixtures, fire alarm, etc., shall be secured in a booklet or stapled with a covering index which lists the following information:

1. General contractor with phone number and project manager
2. Subcontractor with phone number and project manager.
3. Supplier of equipment with phone number and person responsible for this project
4. Index of each item covered in submittal and model number as proposed in the attached.
5. Any deviation from contract documents shall be specifically noted on submittal cover index and boldly on specific submittal sheet.

1.10 OPERATING AND MAINTENANCE MANUALS:

- A At completion of the work, furnish three (3) copies of written operation instructions which shall include manufacturer's descriptive bulletins, operating and maintenance manuals and parts lists of all equipment installed.
- B Also included in such instructions, the specified size and capacity ratings of all equipment installed.
- C Each set of instructions shall be assembled into a suitable loose leaf type binder and presented to the Architect for delivery to the Owner.

1.11 RECORD DRAWINGS

- A Record Drawings:
1. Maintain one extra set of black-line, white print drawings for use as Record drawings. These prints shall be marked "Record Drawings" and maintained at the Project site.
 2. The Contractor shall record on the prints using a colored pencil all deviations from the Contract Drawings, at the time that such deviations are made.
 3. A complete file of accepted field sketches, diagrams, and other changes as may become necessary during the progress of the work shall also be maintained and attached to the set of marked-up prints.
 4. As the work is completed, relevant information shall be transferred to a reproducible set, and copies made to be given to the Architect.
- B Comply with the following for all work specified in Division Sixteen.
1. As-built information shall be shown to scale, using standard symbols listed in the legend.
 2. As a minimum, show the following:
 - a. Location of stub-outs, dimensioned from permanent building lines.
 - b. Location and depth of under-slab and in-slab raceways.
 - c. All routing of raceways.
 - d. Corrected panelboard and equipment schedules.
 - e. Corrected circuit numbers as they appear on panelboard directories.
 - f. Corrected motor horsepower and full load amperages
 - g. Number, size, type of insulation, and number of wires in each conduit or multiconductor cable whether in conduit or exposed.

- h. Location of junction boxes and splices.
- i. Location of access panels

1.12 INTERFACE WITH OTHER CONTRACTS

- A It shall be the responsibility of the Contractor to cooperate with all other crafts working on this project.
- B All cutting, trenching, backfill, and structural removals to permit entry of the electrical system components shall be done by this Contractor.
- C All patching and finishing shall be done by the General Contractor.

1.13 EQUIPMENT FURNISHED UNDER OTHER SECTIONS

- A This Contractor shall furnish and install complete electrical roughing-in and connection to all equipment furnished under other sections as indicated on drawings.
- B All such equipment shall be set in place as work of other sections.

1.14 EQUIPMENT CONNECTIONS

- A In general, provide electrical power and control systems connections to all equipment shown on drawings.
 - 1. Included are wiring raceways, disconnects, starters, and other devices shown.
 - 2. Excluded are devices furnished integrally with the manufacturer's package and work specified in other sections of these specifications.
- B Packaged air conditioning units are all with starters and contactors.
 - 1. Provide disconnecting means and connect.
 - 2. Low voltage control of these devices is specified for installation in Division 15.

1.15 GROUNDING

- A Provide grounding and bonding systems in strict accordance with the latest published edition of N.E.C., except where more stringent requirements are specified herein.
- B Inter-connection of neutral and ground is not permitted except at service entrance equipment.
- C Install grounding conductors to permit shortest and most direct path to ground.
- D Concealed joints shall be made by Cadweld method.
- E Where grounding conductors are in raceway, bond conductor and raceway at both ends.
- F Grounding and bonding fittings used shall be UL listed and be compatible with metals

used in the system.

1. Sheet metal type straps are not acceptable.

G Unless otherwise shown on drawings, each driven electrode shall consist of one 3/4 inch diameter 10 ft. long copperweld steel rod.

1. Rod made of wrought iron may be used in lieu of copperweld at option of contractor.

H A green insulated ground conductor shall be run in all branch circuit and feeder conduits with phase and/or neutral conductors.

I Ground conductor shall be sized as noted on drawings or per NEC where not specified on drawings.

1. Minimum size #12 AWG copper.

2. Conduit box to device strap or yoke screw connection is not sufficient.

3. Provide an insulated grounding jumper for receptacle circuits.

1.16 GUARANTEE AND SERVICE

A Upon completion of all tests and acceptance, the Contractor shall furnish the Owner of a written guarantee covering the electrical work done for a period of one (1) year from date of acceptance.

1. The guarantee includes equipment capacity and performance ratings specified without excessive noise levels.

B. Upon notice from the Architect or the Owner, the Contractor shall, during the guarantee period, rectify and replace any defective material or workmanship and repair any damage caused thereby without additional cost.

PART 2 - PRODUCTS

2.1 GENERAL

A. All equipment and materials shall have ratings established by a recognized independent agency or laboratory.

B. The Contractor shall apply the items used on the project within the ratings and subject to any stipulations or exceptions established by the independent agency or laboratory.

C. Use of equipment or materials in applications beyond that certified by the agency or beyond that recommended by the manufacturer shall be cause for removal and replacement of such misapplied items.

2.2 PANELBOARDS

- A. Circuit breaker panelboards shall be with sequence phased bus bars and molded case circuit breakers.
- B. Circuit breakers shall be quick-make, quick-break, trip indicating, each pole containing thermal and magnetic trip units.
- C. Provide two and three pole circuit breakers with common trip, without relying on handle ties. Tandem type breakers and bailed tied handles of single unit breakers shall not be acceptable for this work.
- D. Submit shop drawings showing cabinet dimensions, circuit breaker electrical ratings, and bussing arrangements. All bussing shall be copper.
- E. Panelboards shall be of type specified on drawings or equivalent as manufactured by Siemens, GE, Challenger, or Square D.
 - 1. Note that dimensions may be critical, do not exceed dimensions of the specified manufacturer without prior approval.

2.3 NAMEPLATES

- A. Each new panel shall have an external micarta engraved nameplate.
- B. Disconnect switches, starters or similar devices shall have a micarta engraved nameplate mechanically affixed (no glue) indicating the load served and the location, such as "A/C 2" or "A/C 3 above ceiling".
- C. Letters shall be 1/4" black on a white background. Panels shall be designated in this manner.

"Panel G"
120/240 Volts
3 Phase, 4 Wire"

2.4 DIRECTORIES

- A. For panelboards, install typewritten directories, list each branch circuit, identifying space and equipment it controls.
- B. Label panels, disconnect switches, pushbuttons, motor starters, and time clocks with identification shown on plans using engraved nameplates,
- C. Identify main electrical service disconnecting means using engraved nameplate.

2.5 DISCONNECT SWITCHES

- A. Furnish heavy duty disconnect switches.

- B. Switches shall be a product of the same manufacturer as panelboards, using a quick-make, quick-break mechanism.
- C. Enclosure shall be NEMA Type conforming to area in which it is installed.

2.6 FUSES

- A. Furnish fuses for fusible equipment.
 - 1. Supply one (1) set of 3-spare fuses for each size used.
 - 2. Provide spare fuse cabinet.
- B. Motor circuit fuses shall be Fusestrons rated between 125 and 150 percent of name plate rating or as specified by the equipment manufacturer.

2.7 RACEWAY AND FITTINGS

- A. Conduit Systems: Acceptable types of conduits:
 - 1. Hot dipped galvanized rigid steel (GRS)
 - 2. Electrical Metallic Tubing (EMT)
 - 3. Polyvinyl Chloride - Schedule 40 (PVC 40)
 - 4. Polyvinyl Chloride - Schedule 80 (PVC 80)
 - 5. Flexible Metallic Conduit (½" min. trade size) (FLEX)
 - 6. Liquid Tight Flexible Metallic Conduit (½" min. trade size) (LQFLEX)
- B. Conduits installed in earth fill, in concrete, or in solid masonry structures shall be PVC 40.
- C. Conduits installed in moist and/or damp locations shall be PVC 40 or GRS.
- D. Conduits subject to mechanical injury shall be GRS.
- E. Conduits for connection to motors or vibrating equipment shall be LQFLEX not less than 18" long and not over 60" long.
- F. Conduits run concealed in the hollow space of non-masonry wall or above suspended ceilings shall be EMT.
- G. Exposed conduits shall be run at right angles to or parallel with building lines and exposed structure.
- H. In all cases, conduit runs shall be grouped together where possible and shall be supported from the building structure, not for any suspended ceiling support system.
- I. Install conduits passing through building sidewalls or through beams below grade with expansion/deflection fittings.

- 1. Install expansion fittings where conduit crosses an expansion joint.
- J. Where conduit penetrates damp-proofing membranes, cut the membrane carefully around the conduit and seal the joint with pressure sensitive tape.
- K. Support raceways securely with pipe straps, wall brackets, conduit hangers or ceiling trapeze.
 - 1. Fastenings shall be by wood screws or screw type nails to wood, by toggle bolts to concrete block, expansion bolts on concrete or brick, and beam clamp types on steel or bar joists.
 - 2. Raceways shall not be fastened to suspended ceiling supports but must have independent support from the structure.
 - 3. Supporting devices shall be of materials having corrosion protection at least equal to the raceway.
 - 4. A support shall be provided as close as practical to, and not exceeding 18" from an unsupported box or from change of direction.
 - 5. In horizontal runs, this support may be omitted if the box is independently supported, and the box connection is not made with chase nipple or threadless box connector.
 - 6. In vertical runs, load produced by weight of the raceway and conductors shall not be carried by the raceway terminal but must be carried entirely by conduit supports.
 - 7. Install conduit supports in strict accordance with the following table, except as required by support for boxes and changes in direction:

L. Raceway Support Spacing:

MAXIMUM TRADE SIZE (INCHES)	LOCATION OF RUNS	SUPPORT SPACING
½, ¾	Exposed, Horizontal	7 feet
1 and larger	Exposed, Horizontal	10 feet
All sizes	Concealed, Horizontal	10 feet
½, ¾	Exposed, Vertical	7 feet
1, 1¼	Exposed, Vertical	8 feet
1 ½ and larger	Exposed, Vertical	10 feet
All sizes	Concealed, Vertical	10 feet

- M. For conduit runs that are not sized on drawings, the maximum conduit fill shall be computed using the requirements for Type THW conductors although the actual wiring is with Type THWN or other type of conductors having smaller cross-sections.
 - 1. This requirement is made to provide spare conduit capacity.
- N. Install all required sleeves for conduits passing through concrete slabs.
 - 1. Fireproof space between conduit and sleeve after installation using of mineral wool.

2.8 CONDUCTORS

- A. All conductors shall be installed in conduit.
- B. Conductors for building wiring shall have THHN/THWN, 600 volt insulation and shall be soft-drawn copper of standard American Wire Gauge (AWG) size.
 - 1. No aluminum conductors will be allowed.
- C. The minimum size shall be No. 12. All wire No. 8 and larger shall be stranded.
- D. All branch circuits No. 10 and smaller shall be wired with color-coded wire with the same color used for a system throughout the building.
- E. Power feeders and branch circuits larger than No. 10 shall either be fully color coded or shall have black insulation and be similarly color coded with tape or paint in all junction boxes and panels.
 - 1. Where tape or paint is used to identify conductors, apply at all terminations, junction boxes, pull boxes and wireways.
 - 2. Apply tape, butt lapped, or paint for a minimum distance of 2" and, where applied to ends of conductors, start at cut end of the conductor insulation.
 - 3. Tape shall not cover manufacturers conductors shall be color coded or labeled as necessary for clear identification.
 - 4. Color coding of all conductors shall be as follows:

120/208/240 Volt Three Phase (Wye) System

Phase A:	Black
Phase B:	Red
Phase C:	Blue
Neutral:	White
Ground:	Dark Green

277/480 Volt Three Phase (Wye) System

Phase A:	Brown
Phase B:	Orange
Phase C:	Yellow
Neutral:	Gray
Ground:	Dark Green

2.9 JUNCTION AND PULL BOXES

- A. Junction and pull boxes shall meet requirements of National Electrical Code.
- B. Standard manufactured boxes shall be listed by Underwriters' Laboratories, Inc.

1. Where custom designed and fabricated boxes are needed, they shall meet the construction standards of Underwriters' Laboratories, Inc. and the N.E.C.
- C. Junction and pull boxes shall be installed where required by the National Electrical Code and where necessary to facilitate pulling of wire or cable.
1. Considerations are sizes of wire and cable, number of bends in raceway, and conductor support requirements in vertical raceways.
 2. Maximum distance between terminations at junction or pull boxes, cabinets, or other points of termination shall not exceed 250 feet for straight horizontal runs.
 3. This length shall be decreased 50 feet for each 90° bend.

2.10 OUTLETS

- A. Outlet boxes shall be one piece or projection welded, galvanized stamped steel for gang sizes required.
1. Where several devices are located on drawings in the same general location, use multi-gang boxes.
 2. Sectional boxes are not acceptable.
- B. Boxes shall be sized in accordance with the National Electrical Code.
- C. Boxes required for communications systems, mechanical control devices, etc., shall be installed under this section of the specifications.
- D. Verify outlet box locations and sizes required for systems other than electrical power from shop and manufacturer's drawings, and install outlets as per those requirements.
- E. Boxes for wall and ceiling outlets shall finish flush and straight.
1. Wall outlets in exposed concrete block, masonry, and tile walls shall be installed with extra deep square corner boxes or with standard boxes and square cornered tile wall covers so that conduit offsets are not required.
 2. Openings in concrete blocks or masonry walls shall be saw cut with an opening tolerance of 1/8" on all sides, the opening shall have bottom of box at nearest masonry joint to dimension indicated.
 3. For other wall finishes, boxes shall be installed with plaster or device type covers as required.
 4. No outlets shall be installed back-to-back.
 5. Where outlets occur in stud walls back-to-back on opposite sides, they shall be isolated by a stud between them.

2.11 WIRING DEVICES

- A. Colors: Wiring device and plate colors shall be selected by Architect for individual rooms from one of the following colors (unless another color is noted): Brown, ivory,

gray, white.

- B. Receptacles:
 - 1. Duplex receptacles shall be specification grade, 20 amps, 125 volts with grounding terminal (NEMA 5-20R configuration).
 - 2. All receptacles shall be such depth as to permit mounting in outlet boxes 1½" or greater in depth without the use of spacers.
 - 3. All receptacles shall accept standard duplex wall plates.
 - 4. All receptacles shall be noise suppressed and shall be UL listed.

- B. Switches: Standard flush tumbler switches shall be specification grade, 20 amps, 120/277 volts A-C only, single pole, three-way or four-way as shown, single throw with screw terminals arranged for side wiring.

- C. Device Plates: Shall be specification grade, high impact thermoplastic type.
 - 1. Color to match device.

- D. Ground Fault Receptacles: Ground fault circuit interrupting duplex receptacles shall be specification grade, 20 amps, 125 volts with grounding terminal.
 - 1. Units shall have line and load terminals such that connection to load terminals will provide ground fault protection for other receptacles.

2.19 LIGHTING FIXTURES

- A. Provide wired, cleaned, and with lamps specified, all fixtures designated on drawings.

- B. Contractor shall verify the ceiling construction for correct trim and support arrangement of lighting fixtures.

- C. Corrosion resistant plaster frames are required in plaster ceilings.

- D. Shop drawing submittals shall consist of properly identified copies of manufacturer's catalog pages showing all features and accessories specified.

- E. Secure mounting and support of all lighting fixtures shall be accomplished under this section of the specifications.
 - 1. LED fixture supports shall be provided at least 4 feet on center.
 - 2. All concealed fixture mounting accessories shall be securely tied to structure or suspended ceiling carrying channels independently of ceiling tile materials or secondary tees.
 - 3. Where necessary, additional ceiling hanger wires shall be provided for fixture support.

- F. Flexible connections to fixture shall not exceed 5 feet in length.

1. Fixtures shall be solidly grounded to the raceway system.
- G. In areas where the reflected ceiling plan is shown, all work shall be in conformance with this plan.
1. If the ceiling grid is installed other than shown on the electrical plan, it shall be the responsibility of the installer of the lighting fixtures to call this fact immediately to the attention of the Architect and Contractor.
 2. Work shall not proceed until the Architect's decision in the matter is obtained.
- H. LED ballasts shall be automatic reset thermal-protected, CBM-ETL Series, Class P, sound rated, high power factor, energy-saving type.
1. Where local ordinances require the fusing of LED lamp ballasts, provide factory installed and sized buss in-line fuses (Type GLR with HLR fuse holder).
 2. Use of low power factor ballasts is permissible only when specifically scheduled on drawings.
 3. Sound rating for F40 lamp ballasts shall be A. UL
- I. Lamps: All lamps shall be the product of one manufacturer and shall be as manufactured by General Electric, or Sylvania.

2.12 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protections: Take necessary precautions to protect all material, equipment, apparatus, and work from damage.
4. Failure to do so to the satisfaction of the Architect will be sufficient cause for the rejection of the material, equipment, or work in question.
 5. The contractor is responsible for the safety and good condition of the materials installed until final acceptance by the Owner.
- B. Cleaning: Conduit openings shall be capped or plugged during installation.
- C. Fixtures and equipment shall be tightly covered and protected against dirt, moisture, chemical, and mechanical injury.
1. At the completion of the work, the fixtures, material, and equipment shall be thoroughly cleaned and delivered in condition satisfactory to the Architect.

2.13 FIRE RATING

- A. Installation under this division shall be so made that the fire-protective rating of fire walls and fire-resistant or fire-stopped walls, partitions, ceilings, and floors will be substantially equivalent to its original rating.
- B. Contractors attention is called to review architectural plans and specifications for approved methods of fire rating materials approved and installation methods.

PART 3 - EXECUTION

3.1 PAINTING

- A. The contractor shall touch-up or refinish all items of electrical equipment furnished with a factory finish coat of paint and which may have been damaged regardless of cause.

3.2 TESTING AND BALANCING

- A. Balance all single-phase loads connected to all panelboards to ensure an approximate equal division on these loads on main power supply serving building.
 - 1. All tests shall be made in accordance with the latest standards of the IEEE and the NEC.

- B. The installation shall be tested for performance, grounds, and insulation resistance.

"Megger" type instruments shall be used.

Contractor shall perform circuit continuity and operational tests on all equipment furnished or connected by Contractor.

The tests shall be made prior to final inspection.

The Contractor shall provide all testing equipment and all costs shall be borne by him.

Written reports shall be made of all tests.

These reports shall be turned over to the Architect at the time of final inspection.

All faults shall be corrected immediately.

3.3 CLEANING UP

- A. The Contractor shall remove all oil, grease, or other stains resulting from his work performed in the building or the exterior thereof.

END OF SECTION 16100