

CAPITAL DEVELOPMENT BOARD



PROJECT MANUAL

CDB # 810-066-016

UPGRADE EXTERIOR LIGHTING

MCHENRY COUNTY COLLEGE

8900 US HWY 14

CRYSTAL LAKE (MCHENRY COUNTY), ILLINOIS

CONTRACT: ELECTRICAL

State of Illinois

CAPITAL DEVELOPMENT BOARD

USING AGENCY: ILLINOIS COMMUNITY COLLEGE BOARD

CDB BUILDING INVENTORY NUMBERS:

Building A: JC27A

Building D: JC27D

Building B: JC27B

Building E: JC27E

Building C: JC27C

Building F: JC27F

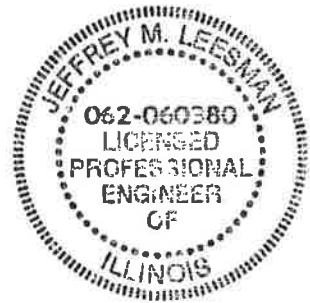
BY: KJWW ENGINEERING

1100 WARRENVILLE ROAD, SUITE 400W

NAPERVILLE, ILLINOIS, 60563

DPR DESIGN FIRM REGISTRATION NO. 12338

KJWW PROJECT NO. 12.0616.00



DATE: March 22, 2013

License Expiration Date:

11/30/13

Signature:

Date Signed:

03/21/13

PROJECT MANUAL
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State of Illinois
CAPITAL DEVELOPMENT BOARD

KJWW Engineering Consultants, 1100 Warrenville Road, Suite 400W, Naperville, Illinois, 60563
Tel: 630-527-2320

PROJECT MANUAL FOR

CDB-810-066-016

McHenry County College/Upgrade Exterior Lighting, Crystal Lake, McHenry County, Illinois

DATE: March 22, 2013

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BIDDING & CONTRACT REQUIREMENTS
00 01 15 - Drawings, Schedules and Details

All Drawings Dated: March 22, 2013

1. G1.00-Cover Sheet
2. G1.01-Sheet Index and ASHRAE 90.1 Compliance Forms
3. G1.02-Area of Work
4. E0.00-Electrical Cover Sheet
5. ED1.01-Site Plan – Lot A – Electrical Demolition
6. ED1.02-Site Plan – Lot C – Electrical Demolition
7. E1.01-Site Plan – Lot A – Lighting
8. E1.02-Site Plan – Lot C – Lighting
9. E2.01-Floor Plan – Building A – Exterior Lighting Replacement – Alternate Bid #1
10. E2.02-Floor Plan – Building A&B – Exterior Lighting Replacement – Alternate Bid #1
11. E2.03-Floor Plan – Building C&D – Exterior Lighting Replacement – Alternate Bid #1
12. E2.04-Floor Plan – Building E – Exterior Lighting Replacement – Alternate Bid #1
13. E2.05-Enlarged Electrical Rooms & Wiring Details
14. E3.00-Electrical Details
15. E4.00-Partial One Line Diagram

END 00 01 15.

BIDDING & CONTRACT REQUIREMENTS
00 11 13 – Advertisement for Bids

The State of Illinois, Capital Development Board (CDB) will receive sealed bids for:

CDB PROJECT #: 810-066-016
TITLE: McHenry County College/Upgrade Exterior Lighting
LOCATION: Crystal Lake, Illinois
USING AGENCY: McHenry County College
COUNTY: McHenry County

PROJECT DESCRIPTION: This project is to upgrade parking lot and building mounted lighting. This will include the replacement of existing site lighting poles, wiring, conduit and controls and building mounted exterior lighting.

<u>TRADE</u>	<u>COST RANGE</u>	<u>BID DATE/TIME</u>
ELECTRICAL	under \$400,000	April 11, 2013/11:00 a.m.

BID LOCATION:
ILLINOIS CAPITAL DEVELOPMEN BOARD
100 WEST RANDOLPH STREET
SUITE 14-600, 14TH FLOOR
JAMES R. THOMPSON CENTER
CHICAGO, ILLINOIS 60601

Minority & Female Business Subcontractor/Supplier Participation is Applicable

Obtain Plans From: BHFx Digital Imaging, 30W250 Butterfield Road, #304, Warrenville, Illinois, 60555, Tel: (630) 393-0777

Refundable Plan Deposit: \$100.00

Pre-bid meeting will be held at McHenry County College, Room A217 on April 5, 2013 at 10:00 am.

INFORMATION TO BIDDERS:

1. Bidders must be prequalified with CDB; allow 45 days for application processing. For an application and a copy of CDB's Standard Documents for Construction (applicable to this project), visit CDB's Website www.cdb.state.il.us or phone 217/782-6152 (TDD 217/524-4449).
2. All contractors and subcontractors are required to pay prevailing wages as determined by the Illinois Department of Labor.
3. Progress payments will normally be issued by the Illinois Comptroller within 30 business days after CDB receives and approves an Invoice-Voucher.
4. Contact the A/E for the location of plan rooms where documents are on file.
- 5. Bidders are advised to review Article 01 11 01, Supplement to SDC, for any revisions to the Standard Documents for Construction.**
- 6. The Disclosure Form(s) and Standard Certifications must be included with bid at time of submittal. Failure to do so will result in rejection of bid. You are also required to submit disclosure forms and standard certifications for subcontractors whose contracts will be valued over \$50,000 within 20 days of execution of your contract with CDB or execution of the contract between you and your subcontractor, whichever is later.**
- 7. MBE/FBE firms must be certified or registered with CMS as either an MBE or FBE prior to bidding.**

CAPITAL DEVELOPMENT BOARD

Jim Underwood
Executive Director

Darnell Barnes
Project Manager
Tel: (312) 814-3195, Email:
Darnell.Barnes@Illinois.gov

BIDDING & CONTRACT REQUIREMENTS
Document 00 41 00 - Bid Form

RETURN WITH BID

NAME OF FIRM

FOR ELECTRICAL WORK

BID FOR: CDB PROJECT NUMBER: 810-066-016

PROJECT TITLE: McHenry County College/Upgrade Exterior Lighting, Crystal Lake, Illinois, McHenry College

BID TO: State of Illinois, Capital Development Board

THE BIDDER ACKNOWLEDGES THE FOLLOWING ADDENDA: (Failure to acknowledge may cause bid rejection.)

NO.____, DATED ____ NO.____, DATED ____ NO____, DATED____

NO.____, DATED ____ NO.____, DATED ____ NO____, DATED____

EACH BID SHALL INCLUDE:

- A. THE BID FORMS, INCLUDING THE PC-2 FORM AND THE MBE/FBE FORM (00 41 05).
- B. BID SECURITY
- C. PRODUCT SUBSTITUTION FORM (at Bidder's option)
- D. DISCLOSURE(S), STANDARD CERTIFICATIONS, & BD. OF ELECTIONS CERTIFICATE

BASE BID: THE BIDDER AGREES TO PERFORM ALL WORK FOR THE ABOVE TRADE, EXCLUSIVE OF ALTERNATE BIDS, FOR THE SUM OF:

_____ DOLLARS (\$_____)

ALTERNATE BID NO.1: ADD TO THE BASE BID THE SUM OF:

_____ DOLLARS (\$_____)

ALTERNATE BID NO.2: ADD TO THE BASE BID THE SUM OF:

_____ DOLLARS (\$_____)

This project includes multiple buildings. CDB intends to award the entire scope of work to one bidder. In accordance with 30 ILCS 500/30-30, the bidder shall provide pricing for each building:

- | | | |
|----|---------------------|--------------|
| 1. | CDB Building No. | <u>JC27A</u> |
| | Alternate Bid No. 1 | _____ |
| 2. | CDB Building No. | <u>JC27B</u> |
| | Alternate Bid No. 1 | _____ |
| 3. | CDB Building No. | <u>JC27C</u> |
| | Alternate Bid No. 1 | _____ |
| 4. | CDB Building No. | JC27D |
| | Alternate Bid No. 1 | _____ |

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5. CDB Building No. JC27E
Alternate Bid No. 1 _____

Note: Any qualifying or conditional statements included on the bid form or attached to the bid form may result in rejection of the bid unless rescinded by the bidder.

PRODUCT SUBSTITUTION FORM ATTACHED:

State Required Ethical Standards Governing Contract Procurement: Certifications and Disclosures

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. The bidder indicates that each certification is made and understood, and that each disclosure requirement has been understood and completed.

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for the chief procurement officer to void the contract, or subcontract, and may result in the suspension or debarment of the bidder or subcontractor.

THE BIDDER AGREES TO:

1. Hold this bid open for 60 calendar days after bid opening date or as required in the project manual.
2. Enter into and execute a contract with CDB if awarded on the basis of this bid.
3. Comply with the Contract Documents with respect to all bonds, insurance, work requirements and schedule.
4. Conform to the goals established for the utilization of minority and female workers and subcontractors/suppliers as included in the Contract Documents.
5. Pay CDB a Construction Administration Fee, as specified in Project Manual Section 01 11 00, which is included in the Base Bid price.
6. Comply with the provisions in Article 00 72 60, Alternative Dispute Resolution, of the SDC.
7. Complete the work in accordance with the contract time as specified in Project Manual Section 01 11 00.

THE BIDDER MAKES THE FOLLOWING REPRESENTATIONS AND CERTIFICATIONS:

- A. A surety company has agreed to issue Bonds required by the Bid Documents for this work if this bid is accepted by CDB.
- B. The Bidder is not barred from contracting with any unit of state or local government as a result of violating the bid rigging or bid rotating provisions contained in 720 ILCS 5/33E-3 and 720 ILCS 5/33E-4.
- C. The Bidder is not barred from contracting with the State of Illinois as a result of a bribery conviction per 30 ILCS 505/10.2.
- D. The Bidder is not delinquent in the payment of any debt to the state per 30 ILCS 210/5. Bidder has listed all known subcontractors and suppliers on the bid form in the space provided on the bid form.

BIDDING & CONTRACT REQUIREMENTS
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- E. The Bidder certifies that it is aware of the requirements of Public Act 95-635, 820 ILCS 130/5.5, and that, if awarded a contract, it is or will be in full compliance with the law prior to beginning work, including the requirement to file with CDB a written substance abuse plan which meets or exceeds the requirements of the Act.
- F. The Bidder certifies that it is aware of the requirements of Public Act 97-0590 which was effective August 26, 2011. This Public Act requires a fee of \$15 to cover expenses related to the administration of the Minority Contractor Opportunity Initiative. Any Vendor awarded a contract of \$1,000 or more from this solicitation is required to pay a fee of \$15. The Comptroller shall deduct the fee from the first check issued to the Vendor under the contract and deposit the fee in the Comptroller's Administrative Fund.
- G. Apprenticeship and Training Certification
In accordance with the provisions of Section 30-22 (6) of the Illinois Procurement Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract.
- The bidder shall include with this bid package the official Certificate of Registration or a verification letter from the US Department of Labor (USDOL) certified group program sponsor for the USDOL certified apprenticeship and training program of which the bidder is a member for each of the types of work or crafts that will be performed with the bidder's forces and for each of the types of work or crafts that will be performed by the subcontractor(s) (if the subcontractor is participating in an approved program at the time of bid).
- The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all subcontracts.
- H. The Bidder will maintain an Illinois office as the primary place of employment for persons employed in the construction authorized by the contract in accordance with 30 ILCS 500/30-22(8). In accordance with the Statute, the bidder must sign an affidavit certifying compliance with the requirement.

RETURN WITH BID
AFFIDAVIT

STATE OF _____

COUNTY OF _____

CDB Project No. _____

CDB Contract No. _____

Before me this day personally appeared _____, who, being duly sworn, deposes and says:
(Print Name)

Bidder will maintain an Illinois office as the primary place of employment for persons employed in the construction authorized by the contract in accordance with 30 ILCS 500/30-22(8). I am duly authorized to make this affidavit.

Signature

Printed Name

Bidder Name

Address

Illinois Office Location:

_____, Illinois

I, _____, a Notary Public of the County and State aforesaid, hereby certify that _____ personally known to me to be the affiant in the foregoing affidavit, personally appeared before me this day and having been by me duly sworn deposes and says that the facts set forth in the above affidavit are true and correct.

Witness my hand and official seal this the _____ day of _____, _____.

(SEAL)

Notary Public

My Commission expires:

____ / ____ / _____.

BIDDING & CONTRACT REQUIREMENTS
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I. STANDARD BUSINESS TERMS AND CONDITIONS

1 AVAILABILITY OF APPROPRIATION (30 ILCS 500/20-60): This contract is contingent upon and subject to the availability of funds. The State, at its sole option, may terminate or suspend this contract, in whole or in part, without penalty or further payment being required, if (1) the Illinois General Assembly or the federal funding source fails to make an appropriation sufficient to pay such obligation, or if funds needed are insufficient for any reason, (2) the Governor decreases the Department's funding by reserving some or all of the Department's appropriation(s) pursuant to power delegated to the Governor by the Illinois General Assembly; or (3) the Department determines, in its sole discretion or as directed by the Office of the Governor, that a reduction is necessary or advisable based upon actual or projected budgetary considerations. Contractor will be notified in writing of the failure of appropriation or of a reduction or decrease.

2 AUDIT/RETENTION OF RECORDS (30 ILCS 500/20-65): Vendor and its subcontractors shall maintain books and records relating to the performance of the contract or subcontract and necessary to support amounts charged to the State under the contract or subcontract. Books and records, including information stored in databases or other computer systems, shall be maintained by the Vendor for a period of three years from the later of the date of final payment under the contract or completion of the contract, and by the subcontractor for a period of three years from the later of final payment under the term or completion of the subcontract. If federal funds are used to pay contract costs, the Vendor and its subcontractors must retain its records for five years. Books and records required to be maintained under this section shall be available for review or audit by representatives of: the procuring Agency, the Auditor General, the Executive Inspector General, the Chief Procurement Officer, State of Illinois internal auditors or other governmental entities with monitoring authority, upon reasonable notice and during normal business hours. Vendor and its subcontractors shall cooperate fully with any such audit and with any investigation conducted by any of these entities. Failure to maintain books and records required by this section shall establish a presumption in favor of the State for the recovery of any funds paid by the State under the contract for which adequate books and records are not available to support the purported disbursement. The Vendor or subcontractors shall not impose a charge for audit or examination of the Vendor's books and records.

3 TIME IS OF THE ESSENCE: Time is of the essence with respect to Vendor's performance of this contract. Vendor shall continue to perform its obligations while any dispute concerning the contract is being resolved unless otherwise directed by the State.

4 NO WAIVER OF RIGHTS: Except as specifically waived in writing, failure by a Party to exercise or enforce a right does not waive that Party's right to exercise or enforce that or other rights in the future.

5 FORCE MAJEURE: Failure by either Party to perform its duties and obligations will be excused by unforeseeable circumstances beyond its reasonable control and not due to its negligence including acts of nature, acts of terrorism, riots, labor disputes, fire, flood, explosion, and governmental prohibition. The non-declaring Party may cancel the contract without penalty if performance does not resume within 30 days of the declaration.

6 CONFIDENTIAL INFORMATION: Each Party, including its agents and subcontractors, to this contract may have or gain access to confidential data or information owned or maintained by the other Party in the course of carrying out its responsibilities under this contract. Vendor shall presume all information received from the State or to which it gains access pursuant to this contract is confidential. Vendor information, unless clearly marked as confidential and exempt from disclosure under the Illinois Freedom of Information Act, shall be considered public. No confidential data collected, maintained, or used in the course of performance of the contract shall be disseminated except as authorized by law and with the written consent of the disclosing Party, either during the period of the contract or thereafter. The receiving Party must return any and all data collected, maintained, created or used in the course of the performance of the contract, in whatever form it is maintained, promptly at the end of the contract, or earlier at the request of the disclosing Party, or notify the disclosing Party in writing of its destruction. The foregoing obligations shall not apply to confidential data or information lawfully in the receiving Party's possession prior to its acquisition from the disclosing Party; received in good faith from a third-party not subject to any confidentiality obligation to the disclosing Party; now is or later becomes publicly known through no breach of confidentiality obligation by the receiving Party; or is independently developed by the receiving Party without the use or benefit of the disclosing Party's confidential information.

7 USE AND OWNERSHIP: All work performed or supplies created by Vendor under this contract, whether written documents or data, goods or deliverables of any kind, shall be deemed work-for-hire under copyright law and all intellectual property and other laws, and the State of Illinois is granted sole and exclusive ownership to all such work, unless otherwise agreed in writing. Vendor hereby assigns to the State all right, title, and interest in and to such work including any related intellectual property rights, and/or waives any and all claims that Vendor may have to such work including any so-called "moral rights" in connection with the work. Vendor acknowledges the State may use the work product for any purpose. Confidential data or information contained in such work shall be subject to confidentiality provisions of this contract.

8 INDEPENDENT CONTRACTOR: Vendor shall act as an independent contractor and not an agent or employee of, or joint venturer with the State. All payments by the State shall be made on that basis.

9 SOLICITATION AND EMPLOYMENT: Vendor shall not employ any person employed by the State during the term of this contract to perform any work under this contract. Vendor shall give notice immediately to the Agency's director if Vendor solicits or intends to solicit State employees to perform any work under this contract.

10 COMPLIANCE WITH THE LAW: The Vendor, its employees, agents, and subcontractors shall comply with all applicable federal, state, and local laws, rules, ordinances, regulations, orders, federal circulars and all license and permit requirements in the performance of this contract. Vendor shall be in compliance with applicable tax requirements and shall be current in payment of such taxes. Vendor shall obtain at its own expense, all licenses and permissions necessary for the performance of this contract.

11 BACKGROUND CHECK: Whenever the State deems it reasonably necessary for security reasons, the State may conduct, at its expense, criminal and driver history background checks of Vendor's and subcontractors officers, employees or agents. Vendor or subcontractor shall reassign immediately any such individual who, in the opinion of the State, does not pass the background checks.

12 APPLICABLE LAW: This contract shall be construed in accordance with and is subject to the laws and rules of the State of Illinois. The

BIDDING & CONTRACT REQUIREMENTS
Document 00 41 00 - Bid Form

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Department of Human Rights' Equal Opportunity requirements (44 Ill. Adm. Code 750) are incorporated by reference. Any claim against the State arising out of this contract must be filed exclusively with the Illinois Court of Claims (705 ILCS 505/1). The State shall not enter into binding arbitration to resolve any contract dispute. The State of Illinois does not waive sovereign immunity by entering into this contract. The official text of cited statutes is incorporated by reference (An unofficial version can be viewed at <http://www.ilga.gov/legislation/ilcs/ilcs.asp>). In compliance with the Illinois and federal Constitutions, the Illinois Human Rights Act, the U. S. Civil Rights Act, and Section 504 of the federal Rehabilitation Act and other applicable laws and rules the State does not unlawfully discriminate in employment, contracts, or any other activity.

13 ANTI-TRUST ASSIGNMENT: If Vendor does not pursue any claim or cause of action it has arising under federal or state antitrust laws relating to the subject matter of the contract, then upon request of the Illinois Attorney General, Vendor shall assign to the State rights, title and interest in and to the claim or cause of action.

14 CONTRACTUAL AUTHORITY: The Agency that signs for the State of Illinois shall be the only State entity responsible for performance and payment under the contract. When the Chief Procurement Officer or authorized designee signs in addition to an Agency, they do so as approving officer and shall have no liability to Vendor. When the Chief Procurement officer or authorized designee signs a master contract on behalf of State agencies, only the Agency that places an order with the Vendor shall have any liability to Vendor for that order.

15 NOTICES: Notices and other communications provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by courier (UPS, Federal Express or other similar and reliable carrier), by e-mail, or by fax showing the date and time of successful receipt. Notices shall be sent to the individuals who signed the contract using the contact information following the signatures. Each such notice shall be deemed to have been provided at the time it is actually received. By giving notice, either Party may change the contact information.

16 MODIFICATIONS AND SURVIVAL: Amendments, modifications and waivers must be in writing and signed by authorized representatives of the Parties. Any provision of this contract officially declared void, unenforceable, or against public policy, shall be ignored and the remaining provisions shall be interpreted, as far as possible, to give effect to the Parties' intent. All provisions that by their nature would be expected to survive, shall survive termination. In the event of a conflict between the State's and the Vendor's terms, conditions and attachments, the State's terms, conditions and attachments shall prevail.

17 PERFORMANCE RECORD / SUSPENSION: Upon request of the State, Vendor shall meet to discuss performance or provide contract performance updates to help ensure proper performance of the contract. The State may consider Vendor's performance under this contract and compliance with law and rule to determine whether to continue the contract, suspend Vendor from doing future business with the State for a specified period of time, or to determine whether Vendor can be considered responsible on specific future contract opportunities.

18 FREEDOM OF INFORMATION ACT: This contract and all related public records maintained by, provided to or required to be provided to the State are subject to the Illinois Freedom of Information Act notwithstanding any provision to the contrary that may be found in this contract.

STANDARD CERTIFICATIONS

Vendor acknowledges and agrees that compliance with this section and each subsection for the term of the contract and any renewals is a material requirement and condition of this contract. By executing this contract Vendor certifies compliance with this section and each subsection and is under a continuing obligation to remain in compliance and report any non-compliance.

This section, and each subsection, applies to subcontractors used on this contract. Vendor shall include these Standard Certifications in any subcontract used in the performance of the contract using the Standard Subcontractor Certification form provided by the State.

If this contract extends over multiple fiscal years including the initial term and all renewals, Vendor and its subcontractors shall confirm compliance with this section in the manner and format determined by the State by the date specified by the State and in no event later than July 1 of each year that this contract remains in effect.

If the Parties determine that any certification in this section is not applicable to this contract it may be stricken without affecting the remaining subsections.

1. As part of each certification, Vendor acknowledges and agrees that should Vendor or its subcontractors provide false information, or fail to be or remain in compliance with the Standard Certification requirements, one or more of the following sanctions will apply:
 - the contract may be void by operation of law,
 - the State may void the contract, and
 - the Vendor and its subcontractors may be subject to one or more of the following: suspension, debarment, denial of payment, civil fine, or criminal penalty.

Identifying a sanction or failing to identify a sanction in relation to any of the specific certifications does not waive imposition of other sanctions or preclude application of sanctions not specifically identified.

2. Vendor certifies it and its employees will comply with applicable provisions of the U.S. Civil Rights Act, Section 504 of the Federal Rehabilitation Act, the Americans with Disabilities Act (42 U.S.C. § 12101 et seq.) and applicable rules in performance under this contract.

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3. Vendor certifies it is not in default on an educational loan (5 ILCS 385/3). This applies to individuals, sole proprietorships, partnerships and individuals as members of LLCs.
4. Vendor (if an individual, sole proprietor, partner or an individual as member of a LLC) certifies it has not received an (i) an early retirement incentive prior to 1993 under Section 14-108.3 or 16-133.3 of the Illinois Pension Code, 40 ILCS 5/14-108.3 and 40 ILCS 5/16-133.3, or (ii) an early retirement incentive on or after 2002 under Section 14-108.3 or 16-133.3 of the Illinois Pension Code, 40 ILCS 5/14-108.3 and 40 ILCS 5/16-133, (30 ILCS 105/15a).
5. Vendor certifies it is a properly formed and existing legal entity (30 ILCS 500/1.15.80, 20-43); and as applicable has obtained an assumed name certificate from the appropriate authority, or has registered to conduct business in Illinois and is in good standing with the Illinois Secretary of State.
6. To the extent there was a incumbent Vendor providing the services covered by this contract and the employees of that Vendor that provide those services are covered by a collective bargaining agreement, Vendor certifies (i) that it will offer to assume the collective bargaining obligations of the prior employer, including any existing collective bargaining agreement with the bargaining representative of any existing collective bargaining unit or units performing substantially similar work to the services covered by the contract subject to its bid or offer; and (ii) that it shall offer employment to all employees currently employed in any existing bargaining unit performing substantially similar work that will be performed under this contract (30 ILCS 500/25-80). This does not apply to heating, air conditioning, plumbing and electrical service contracts.
7. Vendor certifies it has not been convicted of bribing or attempting to bribe an officer or employee of the State of Illinois or any other State, nor has Vendor made an admission of guilt of such conduct that is a matter of record (30 ILCS 500/50-5).
8. If Vendor has been convicted of a felony, Vendor certifies at least five years have passed after the date of completion of the sentence for such felony, unless no person held responsible by a prosecutor's office for the facts upon which the conviction was based continues to have any involvement with the business (30 ILCS 500/50-10).
9. If Vendor, or any officer, director, partner, or other managerial agent of Vendor, has been convicted of a felony under the Sarbanes-Oxley Act of 2002, or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953, Vendor certifies at least five years have passed since the date of the conviction. Vendor further certifies that it is not barred from being awarded a contract and acknowledges that the State shall declare the contract void if this certification is false (30 ILCS 500/50-10.5).
10. Vendor certifies it is not barred from having a contract with the State based on violating the prohibition on providing assistance to the state in identifying a need for a contract (except as part of a public request for information process) or by reviewing, drafting or preparing solicitation or similar documents for the State (30 ILCS 500/50-10.5e).
11. Vendor certifies that it and its affiliates are not delinquent in the payment of any debt to the State (or if delinquent has entered into a deferred payment plan to pay the debt), and Vendor and its affiliates acknowledge the State may declare the contract void if this certification is false (30 ILCS 500/50-11) or if Vendor or an affiliate later becomes delinquent and has not entered into a deferred payment plan to pay off the debt (30 ILCS 500/50-60).
12. Vendor certifies that it and all affiliates shall collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with provisions of the Illinois Use Tax Act (30 ILCS 500/50-12) and acknowledges that failure to comply can result in the contract being declared void.
13. Vendor certifies that it has not been found by a court or the Pollution Control Board to have committed a willful or knowing violation of the Environmental Protection Act within the last five years, and is therefore not barred from being awarded a contract (30 ILCS 500/50-14).
14. Vendor certifies it has not paid any money or valuable thing to induce any person to refrain from bidding on a State contract, nor has Vendor accepted any money or other valuable thing, or acted upon the promise of same, for not bidding on a State contract (30 ILCS 500/50-25).
15. Vendor certifies it is not in violation of the "Revolving Door" section of the Illinois Procurement Code (30 ILCS 500/50-30).
16. Vendor certifies that it has not retained a person or entity to attempt to influence the outcome of a procurement decision for compensation contingent in whole or in part upon the decision or procurement (30 ILCS 500/50-38).
17. Vendor certifies it will report to the Illinois Attorney General and the Chief Procurement Officer any suspected collusion or other anti-competitive practice among any bidders, offerors, contractors, proposers or employees of the State (30 ILCS 500/50-40, 50-45, 50-50).
18. In accordance with the Steel Products Procurement Act, Vendor certifies steel products used or supplied in the performance of a contract for public works shall be manufactured or produced in the United States, unless the executive head of the procuring agency grants an exception (30 ILCS 565).
19. a) If Vendor employs 25 or more employees and this contract is worth more than \$5000, Vendor certifies it will provide a drug free workplace pursuant to the Drug Free Workplace Act.

BIDDING & CONTRACT REQUIREMENTS
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b) If Vendor is an individual and this contract is worth more than \$5000, Vendor shall not engage in the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance during the performance of the contract (30 ILCS 580).

20. Vendor certifies that neither Vendor nor any substantially owned affiliate is participating or shall participate in an international boycott in violation of the U.S. Export Administration Act of 1979 or the applicable regulations of the U.S. Department of Commerce. This applies to contracts that exceed \$10,000 (30 ILCS 582).
21. Vendor certifies it has not been convicted of the offense of bid rigging or bid rotating or any similar offense of any state or of the United States (720 ILCS 5/33 E-3, E-4).
22. Vendor certifies it complies with the Illinois Department of Human Rights Act and rules applicable to public contracts, including equal employment opportunity, refraining from unlawful discrimination, and having written sexual harassment policies (775 ILCS 5/2-105).
23. Vendor certifies it does not pay dues to or reimburse or subsidize payments by its employees for any dues or fees to any "discriminatory club" (775 ILCS 25/2).
24. Vendor certifies it complies with the State Prohibition of Goods from Forced Labor Act, and certifies that no foreign-made equipment, materials, or supplies furnished to the State under the contract have been or will be produced in whole or in part by forced labor, or indentured labor under penal sanction (30 ILCS 583).
25. Vendor certifies that no foreign-made equipment, materials, or supplies furnished to the State under the contract have been produced in whole or in part by the labor or any child under the age of 12 (30 ILCS 584).
26. Vendor certifies that it is not in violation of Section 50-14.5 of the Illinois Procurement Code (30 ILCS 500/50-14.5) that states: "Owners of residential buildings who have committed a willful or knowing violation of the Lead Poisoning Prevention Act (410 ILCS 45) are prohibited from doing business with the State until the violation is mitigated".
27. Vendor warrants and certifies that it and, to the best of its knowledge, its subcontractors have and will comply with Executive Order No. 1 (2007). The Order generally prohibits Vendors and subcontractors from hiring the then-serving Governor's family members to lobby procurement activities of the State, or any other unit of government in Illinois including local governments if that procurement may result in a contract valued at over \$25,000. This prohibition also applies to hiring for that same purpose any former State employee who had procurement authority at any time during the one-year period preceding the procurement lobbying activity.
28. Vendor certifies that information technology, including electronic information, software, systems and equipment, developed or provided under this contract will comply with the applicable requirements of the Illinois Information Technology Accessibility Act Standards as published at www.dhs.state.il.us/jitaa. (30 ILCS 587)
29. Vendor certifies that it has read, understands, and is in compliance with the registration requirements of the Elections Code (10 ILCS 5/9-35) and the restrictions on making political contributions and related requirements of the Illinois Procurement Code (30 ILCS 500/20-160 and 50-37). Vendor will not make a political contribution that will violate these requirements. These requirements are effective for the duration of the term of office of the incumbent Governor or for a period of 2 years after the end of the contract term, whichever is longer.

In accordance with section 20-160 of the Illinois Procurement Code, Vendor certifies as applicable:

Vendor is not required to register as a business entity with the State Board of Elections.

or

Vendor has registered **and has attached a copy** of the official certificate of registration as issued by the State Board of Elections. As a registered business entity, Vendor acknowledges a continuing duty to update the registration as required by the Act.

By submission of a bid, the contractor business entity acknowledges and agrees that it has read and understands Sections 20-160 and 50-37 of the Illinois Procurement Code, and that it makes the following certification:

The undersigned business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. A copy of the certificate of registration shall be submitted with the bid. The bidder is cautioned that the Board will not award a contract without submission of the certificate of registration.

These requirements and compliance with the above referenced statutory sections are a material part of the contract, and any breach thereof shall be cause to void the contract under Section 50-60 of the Illinois Procurement Code.

BIDDING & CONTRACT REQUIREMENTS

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RETURN WITH BID

VENDOR (show Company name and DBA)

Signature _____

Printed Name _____

Title _____ Date _____

Address _____

RETURN WITH BID

J. Disclosures and Conflicts of Interest

- A.** The disclosures hereinafter made by the bidder and its' subcontractors, as applicable, are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The bidder further certifies that the Department has received the disclosure forms for each bid.

The chief procurement officer may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Procurement Code. Furthermore, the chief procurement officer may void the contract and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$25,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Procurement Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form. The current annual salary of the Governor is \$177,412.00.

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by a separate form. The forms must be included with each bid.

STATE OF ILLINOIS
FINANCIAL DISCLOSURES AND CONFLICTS OF INTEREST (May 24, 2012)

Financial Disclosures and Conflicts of Interest forms (“forms”) must be accurately completed and submitted by the vendor, any parent entity(ies) and any subcontractors. There are **nine** steps to this form and each must be completed as instructed in the step heading, unless otherwise provided. A bid, offer, or proposal that does not include this form may be considered not responsive. The State/Public University will consider this form when evaluating the bid, offer, or proposal or awarding the contract.

The requirement of disclosure of financial interests and conflicts of interest is a continuing obligation. If circumstances change and the previously submitted form is no longer accurate, disclosing entities must provide an updated form.

Separate forms are required for the vendor, any parent entity(ies) and any subcontractors.

Subcontractor forms must be provided to CDB within 20 days after execution of the State/Public University contract or after execution of the subcontract, whichever is later, for all subcontracts with an annual value of more than \$50,000.

This disclosure is submitted for:

Vendor Vendor’s Parent (100% ownership) Subcontractor >\$50,000 Subcontractor’s Parent Entity > \$50,000

Project Name and Project Number	
Vendor Name	
DBA	
Parent (100% ownership)	
Subcontractor	
Instrument of Ownership or Beneficial Interest	<p>PLEASE CIRCLE ONE: Sole Proprietorship Corporate Stock (C-Corporation, Professional Corporation, Service Corporation) Limited Liability Company Membership Agreement (Series LLC, Low-Profit Limited Liability Partnership) Partnership Agreement (General Partnership, Limited Partnership, Limited Liability Partnership, Limited Liability Limited Partnership) Not-For-Profit Corporation Other Trust Agreement (Beneficiary)</p> <p><input type="checkbox"/> If you selected Other, please describe:</p>

RETURN WITH BID

STEP 1

SUPPORTING DOCUMENTATION SUBMITTAL

(All vendors complete regardless of annual contract value)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

You must select one of the five options below and select the documentation you are submitting. You must provide the documentation the applicable section requires with this form.

Option 1 - Publicly Traded Entities

1.A. I will complete Step 2, Option A for each qualifying individual or entity holding any ownership or distributive income share in excess of 5% or an amount greater than 60% (\$106,447.20) of the annual salary of the Governor.

OR

1.B. I have attached a copy of the Federal 10-K.

Option 2 - Privately Held U.S. Entities with more than 200 Shareholders

2.A. I will complete Step 2, Option A for each qualifying individual or entity holding any ownership or distributive income share in excess of 5% or an amount greater than 60% (\$106,447.20) of the annual salary of the Governor.

OR

2.B. I will list in Step 2, Option A each qualifying individual or entity holding any ownership share in excess of 5% and have attached information Federal 10-K reporting companies are required to report under 17 CFR 229.401.

Option 3 - Privately Held U.S. Entities with 200 or fewer Shareholders, Members, or Owners, and Not Including Sole Proprietorships

3.A. I will complete Step 2, Option A for each qualifying individual or entity holding any ownership or distributive income share in excess of 5% or an amount greater than 60% (\$106,447.20) of the annual salary of the Governor.

Option 4 – Not-for-Profit Entities

I will complete Step 2, Option B.

Option 5 - Sole Proprietorships

I will skip to Step 3.

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STEP 2

DISCLOSURE OF FINANCIAL INTEREST OR BOARD OF DIRECTORS

(All vendors, except sole proprietorships, must complete regardless of annual contract value)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

Complete **either** Option A (for all entities other than not-for-profits) or Option B (for not-for-profits).

OPTION A – Ownership Share and Distributive Income

Ownership Share – If you selected Option 1.A., 2.A., 2.B., or 3.A. in Step 1, provide the name and address of each individual and their percentage of ownership if said percentage exceeds 5%, or the dollar value of their ownership if said dollar value exceeds \$106,447.20.

Check here if including an attachment with requested information in a format substantially similar to the format below.

Name	Address	Percentage of Ownership	\$ Value of Ownership

Distributive Income – If you selected Option 1.A., 2.A., or 3.A. in Step 1, provide the name and address of each individual and their percentage of the disclosing vendor’s total distributive income if said percentage exceeds 5% of the total distributive income of the disclosing entity, or the dollar value of their distributive income if said dollar value exceeds \$106,447.20.

Check here if including an attachment with requested information in a format substantially similar to the format below.

Name	Address	% of Distributive Income	\$ Value of Distributive Income

BIDDING & CONTRACT REQUIREMENTS
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Please certify that the following statements are true.

I have disclosed all individuals or entities that hold an ownership interest of greater than 5% or greater than \$106,447.20.

Yes No

I have disclosed all individuals or entities that were entitled to receive distributable income in an amount greater than \$106,447.20 or greater than 5% of the total distributable income of the disclosing entity.

Yes No

OPTION B – Disclosure of Board of Directors (Not-for Profits)

List members of your board of directors. Please include an attachment if necessary.

Name	Address

STEP 3

LOBBYIST OR AGENT

(Complete only if contract has an annual value over \$50,000)

(Subcontractors with subcontract annual value of more than 50,000 must complete)

Yes No. Is your company represented by or do you employ a lobbyist or other agent required to register under the Lobbyist Registration Act (lobbyist must be registered pursuant to the Act with the Secretary of State) or other agent who is not identified through Step 2, Option A above and who has communicated, is communicating, or may communicate with any State/Public University officer or employee concerning the bid or offer? If yes, please identify each lobbyist and agent, including the name and address below and complete Step 6 for each individual.

Name	Address	Relationship to Disclosing Entity

Describe all costs/fees/compensation/reimbursements related to the assistance provided by each representative lobbyist or other agent to obtain a State/Public University contract:

BIDDING & CONTRACT REQUIREMENTS

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STEP 4

PROHIBITED CONFLICTS OF INTEREST

(All vendors must complete regardless of annual contract value)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

Step 4 must be completed for each individual or entity disclosed in Step 2, Option A above. Please provide the name of the individual or entity for which responses are provided:

1. Do you hold or are you the spouse or minor child who holds an elective office in the State of Illinois or hold a seat in the General Assembly? Yes No
2. Have you, your spouse, or minor child been appointed to or employed in any offices or agencies of State government and receive compensation for such employment in excess of 60% (\$106,447.20) of the salary of the Governor? Yes No
3. Are you or are you the spouse or minor child of an officer or employee of the Capital Development Board or the Illinois Toll Highway Authority? Yes No
4. Have you, your spouse, or an immediate family member who lives in your residence currently or who lived in your residence within the last 12 months been appointed as a member of a board, commission, authority, or task force authorized or created by State law or by executive order of the Governor? Yes No
5. If you answered yes to any question in 1-4 above, please answer the following: Do you, your spouse, or minor child receive from the vendor more than 7.5% of the vendor's total distributable income or an amount of distributable income in excess of the salary of the Governor (\$177,412.00)? Yes No
6. If you answered yes to any question in 1-4 above, please answer the following: Is there a combined interest of self with spouse or minor child more than 15% (\$354,824.00) in the aggregate of the vendor's distributable income or an amount of distributable income in excess of two times the salary of the Governor? Yes No

STEP 5

CONFLICTS OF INTEREST RELATING TO PERSONAL RELATIONSHIPS

(Complete only if contract has an annual value over \$50,000)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

Step 5 must be completed for each individual or entity disclosed in Step 2, Option A above.

BIDDING & CONTRACT REQUIREMENTS

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Please provide the name of the individual or entity for which responses are provided:

1. Do you currently have, or in the previous 3 years have you had State employment, including contractual employment of services? Yes No
2. Has your spouse, father, mother, son, or daughter, had State employment, including contractual employment for services, in the previous 2 years? Yes No
3. Do you hold currently or have you held in the previous 3 years elective office of the State of Illinois, the government of the United States, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois? Yes No
4. Do you have a relationship to anyone (spouse, father, mother, son, or daughter) holding elective office currently or in the previous 2 years? Yes No
5. Do you hold or have you held in the previous 3 years any appointive government office of the State of Illinois, the United States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of expenses incurred in the discharge of that? Yes No
6. Do you have a relationship to anyone (spouse, father, mother, son, or daughter) holding appointive office currently or in the previous 2 years? Yes No
7. Do you currently have or in the previous 3 years had employment as or by any registered lobbyist of the State government? Yes No
8. Do you currently have or in the previous 2 years had a relationship to anyone (spouse, father, mother, son, or daughter) that is or was a registered lobbyist? Yes No
9. Do you currently have or in the previous 3 years had compensated employment by any registered election or re-election committee registered with the Secretary of State or any county clerk in the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections? Yes No
10. Do you currently have or in the previous 2 years had a relationship to anyone (spouse, father, mother, son, or daughter) who is or was a compensated employee of any registered election or reelection committee registered with the Secretary of State or any county clerk in the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections? Yes No

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STEP 6

EXPLANATION OF AFFIRMATIVE RESPONSES

(All vendors must complete regardless of annual contract value)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

If you answered "Yes" in Step 4 or Step 5, please provide on an additional page a detailed explanation that includes, but is not limited to the name, salary, State agency or university, and position title of each individual.

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STEP 7

**POTENTIAL CONFLICTS OF INTEREST
RELATING TO DEBARMENT & LEGAL PROCEEDINGS**

(Complete only if contract has an annual value over \$50,000)
(Subcontractors with subcontract annual value of more than \$50,000 must complete)

This step must be completed for each individual or entity disclosed through Step 2 and Step 3.

1. Within the previous ten years, have you had debarment from contracting with any governmental entity? Yes No
2. Within the previous ten years, have you had any professional licensure discipline? Yes No
3. Within the previous ten years, have you had any bankruptcies? Yes No
4. Within the previous ten years, have you had any adverse civil judgments and administrative findings? Yes No
5. Within the previous ten years, have you had any criminal felony convictions? Yes No

If you answered "Yes", please provide a detailed explanation that includes, but is not limited to the name, salary, State agency or university, and position title of each individual.

STEP 8

DISCLOSURE OF CURRENT AND PENDING CONTRACTS

(Complete only if contract has an annual value over \$50,000)
(Subcontractors with subcontract annual value of more than \$50,000 must complete)

If you selected Option 1, 2, 3, or 5 in Step 1, do you have any contracts, pending contracts, bids, proposals, or other ongoing procurement relationships with units of State of Illinois government? Yes No.

If "Yes", please specify below. Attach an additional page in the same format as provided below, if desired.

Agency/University	Project Title	Status	Value	Contract Reference/P.O./Illinois Procurement Bulletin #

RETURN WITH BID

Please explain the procurement relationship:

STEP 9

SIGN THE DISCLOSURE

(All vendors must complete regardless of annual contract value)

(Subcontractors with subcontract annual value of more than \$50,000 must complete)

This disclosure is signed and made under penalty of perjury for all for-profit entities by an authorized officer or employee on behalf of the bidder or offeror pursuant to Sections 50-13 and 50-35 of the Illinois Procurement Code. This disclosure information is submitted on behalf of:

Name of Disclosing Entity:

Signature: _____

Date:

Printed Name:

Title:

Phone Number:

Email Address:

**BIDDING & CONTRACT REQUIREMENTS
Document 00 41 00 - Bid Form**

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K. Subcontractor Requirements

A. Delinquent Debt and listing of all Subcontractors per SDC Section 00 21 50.2C

In accordance with State policy, Contractors must list all known subcontractors and suppliers who will be employed on this project. Attach additional sheets if necessary.

B. Requirements for Subcontractors over \$50,000

Pursuant to requirements under Public Act 96-0920, the contract shall state whether the services of a subcontractor will or may be used. Furthermore, the contract shall include names and addresses of all known subcontractors with subcontracts with an annual value of more than \$25,000 and the expected amount of money each will receive under the contract (30 ILCS 500/20-130(a)).

Please check the applicable option:

The services of a subcontractor will or may be used: YES _____ NO _____

If YES, then list known subcontractors with value expected over \$25,000:
(use additional sheets if necessary)

	Name of Subcontractor	ADDRESS	Subcontract Over \$50,000 (Yes/No)	Total Expected Value for Subcontractors over \$50,000	CDB ID NO.	TIN (FEIN or SSN)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

CONTRACTOR: (show Company name and DBA): _____

Signature _____

Printed Name: _____ FEIN #: _____

Title: _____ Date _____

Address _____

Telephone: _____ Fax: _____ Email: _____

For Corporations only: Attest By: _____ (Corporate Secretary)

**L. Disclosure of Business Operations with Government of Iran
30 ILCS 500/50-36**

Each bid, offer, or proposal submitted for a State contract, other than a small purchase defined in Section 20-20 [of the Illinois Procurement Code], shall include a disclosure of whether or not the bidder, offeror, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran and :

(1) more than 10% of the company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral – extraction products or services to the Government of Iran or a project or consortium created exclusively by that Government; and the company has failed to take substantial action; or

(2) the company has, on or after August 5, 1996, made an investment of \$20 million or more, or any combination of investments of at least \$10 million each that in the aggregate equals or exceeds \$20 million in any 12- month period that directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

A bid, offer, or proposal that does not include this disclosure shall not be considered responsive. We may consider this disclosure when evaluating the bid, offer, or proposal or awarding the contract.

You must check one of the following items and if item 2 is checked you must also make the necessary disclosure.

1. ___ There are no business operations that must be disclosed to comply with the above cited law.

2. ___ The following business operations are disclosed to comply with the above cited law:

Name of Company

Signature

BIDDER'S EMPLOYEE UTILIZATION FORM

No minority or female workforce hiring goals have been established for this contract. The bidder's workforce projection shall include all subcontract work under the contract.

Failure to complete the PC-2 form may result in bid rejection.

CDB's acceptance of the Bidder's PC-2 projection is a condition of contract award. CDB will notify the bidder if the projection is unacceptable. The bidder shall be given the opportunity to negotiate an acceptable projection with the CDB. Failure to reach an acceptable workforce projection may result in rejection of the contract award.

GOALS

The following workforce hiring goals are in effect for each trade. These goals represent a minimum of **total** workforce hours.

Minority / Female Utilization

Percent

Sheetmetal	25%
Equipment operators	20%
Mechanics	12%
Ironworkers/Boilermakers	20%
Carpenters	25%
Acoustical Tilers	20%
Ceramic Tile Setters	12%
Brick Masons/Tuckpointers	15%
Cement Masons	15%
Lathers (Metal/Wood)	15%
Tapers	15%
Plasters	15%
Painters	20%
Glaziers	15%
Roofers	25%
Metal Deck Roofers	15%
Pipefitters	25%
Plumbers	25%
Insulators	12%
Temperature Control	12%
Laborers	33%
Electricians	25%
Fencing, Guard Rails	15%
Landscaping	20%
Truck Drivers	20%
Air Test & Balancing	0%
Sandblast/Waterproofing/Caulkers	0%
Asbestos Workers	30%
Terrazzo	12%
Carpet	15%

INSTRUCTIONS

for

Project: **810-066-016** Phase:

Trade: **Electrical**

Under "Total Employees", project the total number of employees to be used in the performance of the contract work by your firm and your subcontractors. Include within the projections, separate numbers for Journeyman and Apprentices by the letters "J" and "A". (See next page)

 Contact Person

 Firm Name

 Address

 Address

 Telephone Number

 Fax Number

 Email Address

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BIDDING & CONTRACT REQUIREMENTS

Document 00 41 04-Bid Form-DHR Form PC-2

CDB Project Number

CDB Contract No.	
Contractor I.D.	

FOR CDB OFFICE USE ONLY

Contract/Trade Bid FEP Tech Monitored/Non-Monitored
Electrical **Jennifer Kimbrough** **Monitored**

TRADE CATEGORIES	Trade Codes	African American				Hispanic				Native American				Asian				Caucasian				
		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		
		J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	
Sheet Metal	3																					
Equipment Operators	4																					
Elevator Mechanics	5																					
Ironworker/BoilerMakers	6																					
Carpenters	7																					
Acoustical Tilers	8																					
Ceramic Tilesetters	9																					
Brick Mason/Tuckpointers	10																					
Cement Masons	11																					
Lather - Metal/Wood	12																					
Tapers	13																					
Plasterers	14																					
Painters	15																					
Glaziers	16																					
Roofers	17																					
Metal Deck Roofers	18																					
Pipefitter/Sprinkler Fitters	19																					
Plumbers	20																					
Insulators	21																					
Temperature Control	22																					
Laborers	23																					
Electricians	24																					
Fencing/Guard Rails	25																					
Landscaping	26																					
Well Drilling	27																					
Truck Drivers	28																					
Air Test & Balancing	29																					
SndBlst/Wtrprfng.Caulkers	30																					
Asbestos Workers	31																					
Terrazzo	32																					
Carpet	33																					
TOTALS																						

NOTE: Bidder's failure to complete DHR Form PC-2 may result in rejection of the bid. Bidder shall set forth a total projection of the total workforce to be allocated for this contract. Approval of the workforce hiring projection is a post-award requirement.

RETURN WITH BID

CDB PROJECT NO.

DIVISION 0 - BIDDING & CONTRACT REQUIREMENTS

Document 00 41 05 - Minority/Female Business Enterprise Program Requirements

CONTRACT REQUIREMENTS FOR MINORITY/FEMALE BUSINESS PARTICIPATION

GOALS: The MBE/FBE goal for this Electrical contract 6% (4% MBE and 2% FBE) of the amount of the contract awarded by CDB. The contract award is defined as the Base Bid plus any or all alternates.

INSTRUCTIONS: When Goals are established, the Bidder shall include below the names of certified minority/female owned business enterprises which will perform at least the percentage of the work specified in the Goals statement (see above) and the proposed dollar value of subcontract (percentage values are not acceptable). Firms cannot be identified after the bid opening. Failure to identify firms will result in rejection of bid. If the Bidder needs assistance in identifying subcontractors or suppliers, contact CDB's FEP Unit prior to submitting the bid and assistance will be provided in accordance with the MBE/FBE requirements in the Standard Documents for Construction. Efforts to comply with these requirements will be considered in evaluating whether the bid is responsive. If the percentage of the work (Base Bid plus all Alternates) is less than the specified goals, bidder is required to submit within 7 (seven) calendar days after the bid opening written evidence of its good faith efforts to achieve the goals.

BIDDER'S MBE/FBE SUBCONTRACTOR/SUPPLIER FIRMS, INCLUDING ADDRESS AND TELEPHONE NUMBER, TO BE UTILIZED IN REGARD TO THIS CONTRACT (Include base bid below and each alternate on next page(s)): Note: A firm can only be designated as an MBE or FBE, but not both. Firms must be certified or registered with CMS as an MBE/FBE prior to bid opening.

(Attach additional sheet if necessary)

BASE BID:

	Name of MBE/FBE Firm Address City State Zip	Proposed \$ Value of Subcontract	Telephone Number	MBE/FBE Denotation And Certifying Agency
1.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
2.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
3.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
4.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
5.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
6.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
7.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
8.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS

RETURN WITH BID

ALTERNATE BID No. _____

	Name of MBE/FBE Firm Address City State Zip	Proposed \$ Value of Subcontract	Telephone Number	MBE/FBE Denotation And Certifying Agency
1.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
2.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
3.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS

ALTERNATE BID No. _____

	Name of MBE/FBE Firm Address City State Zip	Proposed \$ Value of Subcontract	Telephone Number	MBE/FBE Denotation And Certifying Agency
1.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
2.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
3.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS

ALTERNATE BID No. _____

	Name of MBE/FBE Firm Address City State Zip	Proposed \$ Value of Subcontract	Telephone Number	MBE/FBE Denotation And Certifying Agency
1.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
2.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS
3.				<input type="checkbox"/> MBE <input type="checkbox"/> FBE <input type="checkbox"/> Certified by CMS

RETURN WITH BID

Check box if written evidence of good faith efforts to achieve the goals will be submitted to support a change/waiver of goals request. Written evidence must be submitted within 7 (seven) calendar days after the bid opening. (Not required when participation goals have been met or are not applicable)

The Bidder represents to CDB that, to the best of its knowledge and belief:

1. Each of the subcontractors and suppliers listed qualifies under the provisions and definitions of the Minority/Female Business Enterprise Program Act as either a minority/female owned business.
2. The subcontract(s) which will be executed by the Bidder for the first level subcontractors and suppliers if the bidder is awarded this contract by CDB will meet or exceed the specified MBE/FBE goals, and will comply with all provisions of the Minority/Female Business Enterprise Program Act.

Bidder agrees to the contractual requirements specified in CDB’s Standard Documents for Construction in regard to the Minority/Female Business Enterprise Program Act.

Signature, Title

Date

SIGNATURE IS REQUIRED

RETURN WITH BID

State of Illinois
CAPITAL DEVELOPMENT BOARD

BIDDING & CONTRACT REQUIREMENTS
Document 00 41 06 – Bid Bond

as Principal, and _____
a corporation of the State of _____
as Surety, are held and firmly bound unto the State of Illinois, acting by and through the Capital Development Board, as Obligee, in the amount of ten percent (10%) of the amount of the base bid for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, to this agreement.

Principal has submitted to Obligee a bid to enter into a written contract, for

CDB Project Number: _____ Division of Work: _____
in accordance with bidding documents for the project, which contract is by reference made a part hereof and is hereinafter referred to as "the Contract".

THE CONDITION OF THIS OBLIGATION is that if Principal, upon acceptance by Obligee of its bid within the period of time specified for acceptance, shall comply with all post award requirements as required by the terms of the bid within the time specified after date of the Notice of Award, or in the event of the failure to comply with all post award requirements, if Principal shall pay Obligee (1) for all costs of procuring the work which exceeds the amount of its bid, or (2) shall pay Obligee the amount of this bond as liquidated damages in the event Principal is a sole bidder and after an attempt to secure other bids by readvertising none can be obtained, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Surety hereby agrees that its obligation shall not be impaired by any extensions of time for Obligee's acceptance or compliance with post award requirements. Surety hereby waives notice of such extensions.

Signed and sealed this _____ day of _____, 20__.

CONTRACTOR
BY _____ BY _____
SIGNATURE OFFICER OF THE SURETY
Title _____ Title _____
ATTEST:

CORPORATE SECRETARY (Corporations only)

JURAT (Notary's Statement Authenticating Signature)
STATE OF _____
COUNTY OF _____

I, _____, a Notary Public in and for said county, do hereby certify that
(Insert Name of Attorney-In-Fact for SURETY)
who is personally known to me to be the same person whose name is subscribed to the foregoing instrument on behalf of SURETY, appeared before me this day in person and acknowledged respectively, that he/she signed, sealed, and delivered said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ DAY OF _____ A.D. 20__

My commission expires _____

Notary Signature _____

RETURN WITH BID

BIDDING & CONTRACT REQUIREMENTS
Document 00 41 07 Product Substitution Form

The Bidder should include this form with the Bid Forms if a material substitution is offered at that time. See Article 00 43 25 of the Standard Documents for Construction.

The Base Bid and Alternate Bids include only those products specified in the bidding documents. Following is a list of substitute products which bidder proposes to furnish on this project, with the difference in price being deducted from the Base Bid or Alternate Bids.

NOTE: CDB WILL NOT ACCEPT SUBSTITUTIONS FOR SPECIFIED MEMBRANE ROOF SYSTEM(S).

Bidder understands that acceptance of any proposed substitution is at CDB's option. Approval or rejection of any substitutions listed below will be indicated prior to executing the Contract.

MANUFACTURER'S NAME AND PRODUCT

DEDUCT

<u>MANUFACTURER'S NAME AND PRODUCT</u>	<u>DEDUCT</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

EVALUATION. Contract award will be made in accord with the Standard Documents for Construction. Only the lowest responsible bidder's Proposed Product Substitution Form will be evaluated.

BIDDER'S NAME: _____

TRADE: _____

BIDDING & CONTRACT REQUIREMENTS
00 43 43 - Prevailing Wage Act

1. **PREVAILING WAGE ACT**

1.1 Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 et seq., these specifications list on the following pages, the Illinois Department of Labor prevailing rate of wages for the county where the contract is being performed and for each craft or type of worker needed to execute the contract.

Mchenry County Prevailing Wage for March 2013

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====	=====
ASBESTOS ABT-GEN		ALL		36.200	36.700	1.5	1.5	2.0	12.78	9.020	0.000	0.500
ASBESTOS ABT-MEC		BLD		34.160	36.660	1.5	1.5	2.0	10.82	10.66	0.000	0.720
BOILERMAKER		BLD		43.450	47.360	2.0	2.0	2.0	6.970	14.66	0.000	0.350
BRICK MASON		BLD		40.680	44.750	1.5	1.5	2.0	9.550	12.00	0.000	0.970
CARPENTER		ALL		41.520	43.520	1.5	1.5	2.0	13.19	11.76	0.000	0.530
CEMENT MASON		ALL		41.550	43.550	2.0	1.5	2.0	9.500	13.76	0.000	0.500
CERAMIC TILE FNSHER		BLD		34.440	0.000	2.0	1.5	2.0	9.700	6.930	0.000	0.610
COMMUNICATION TECH		BLD		35.770	37.870	1.5	1.5	2.0	12.07	9.370	0.000	0.450
ELECTRIC PWR EQMT OP		ALL		35.400	48.110	1.5	1.5	2.0	5.000	10.97	0.000	0.270
ELECTRIC PWR GRNDMAN		ALL		27.380	48.110	1.5	1.5	2.0	5.000	8.490	0.000	0.210
ELECTRIC PWR LINEMAN		ALL		42.390	48.110	1.5	1.5	2.0	5.000	13.14	0.000	0.320
ELECTRIC PWR TRK DRV		ALL		28.350	48.110	1.5	1.5	2.0	5.000	8.790	0.000	0.220
ELECTRICIAN		ALL		43.080	47.380	1.5	1.5	2.0	12.06	11.41	0.000	0.540
ELEVATOR CONSTRUCTOR		BLD		49.080	55.215	2.0	2.0	2.0	11.88	12.71	3.930	0.600
FENCE ERECTOR	E	ALL		33.740	35.740	1.5	1.5	2.0	12.61	10.18	0.000	0.250
FENCE ERECTOR	S	ALL		44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
GLAZIER		BLD		39.500	41.000	1.5	2.0	2.0	11.99	14.30	0.000	0.840
HT/FROST INSULATOR		BLD		45.550	48.050	1.5	1.5	2.0	10.82	11.86	0.000	0.720
IRON WORKER	E	ALL		40.750	42.750	2.0	2.0	2.0	13.20	19.09	0.000	0.350
IRON WORKER	S	ALL		44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400
IRON WORKER	W	ALL		35.090	36.840	2.0	2.0	2.0	8.250	20.59	0.000	0.700
LABORER		ALL		36.200	36.950	1.5	1.5	2.0	12.52	9.280	0.000	0.500
LATHER		ALL		41.520	43.520	1.5	1.5	2.0	13.19	11.76	0.000	0.530
MACHINIST		BLD		43.550	46.050	1.5	1.5	2.0	6.130	8.950	1.850	0.000
MARBLE FINISHERS		ALL		29.700	0.000	1.5	1.5	2.0	9.550	11.75	0.000	0.620
MARBLE MASON		BLD		39.880	43.870	1.5	1.5	2.0	9.550	11.75	0.000	0.730
MATERIAL TESTER I		ALL		26.200	0.000	1.5	1.5	2.0	12.52	9.280	0.000	0.500
MATERIALS TESTER II		ALL		31.200	0.000	1.5	1.5	2.0	12.52	9.280	0.000	0.500
MILLWRIGHT		ALL		41.520	43.520	1.5	1.5	2.0	13.19	11.76	0.000	0.530
OPERATING ENGINEER		BLD	1	45.100	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	2	43.800	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	3	41.250	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	4	39.500	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	5	48.850	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	6	46.100	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		BLD	7	48.100	49.100	2.0	2.0	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		HWY	1	43.300	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250
OPERATING ENGINEER		HWY	2	42.750	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250

OPERATING ENGINEER	HWY	3	40.700	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250	
OPERATING ENGINEER	HWY	4	39.300	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250	
OPERATING ENGINEER	HWY	5	38.100	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250	
OPERATING ENGINEER	HWY	6	46.300	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250	
OPERATING ENGINEER	HWY	7	44.300	47.300	1.5	1.5	2.0	15.70	10.55	1.900	1.250	
ORNAMNTL IRON WORKER	E	ALL	40.800	43.300	2.0	2.0	2.0	12.86	15.61	0.000	0.500	
ORNAMNTL IRON WORKER	S	ALL	44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400	
PAINTER		ALL	40.880	42.880	1.5	1.5	1.5	9.650	8.200	0.000	1.250	
PAINTER SIGNS		BLD	33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000	
PILEDRIVER		ALL	41.520	43.520	1.5	1.5	2.0	13.19	11.76	0.000	0.530	
PIPEFITTER		BLD	45.050	48.050	1.5	1.5	2.0	8.460	14.85	0.000	1.780	
PLASTERER		BLD	40.250	42.670	1.5	1.5	2.0	10.85	10.94	0.000	0.550	
PLUMBER		BLD	44.500	47.500	1.5	1.5	2.0	11.05	12.40	0.000	1.700	
ROOFER		BLD	38.350	41.350	1.5	1.5	2.0	8.280	8.770	0.000	0.430	
SHEETMETAL WORKER		BLD	42.160	44.160	1.5	1.5	2.0	9.890	11.61	0.000	0.780	
SIGN HANGER		BLD	26.070	27.570	1.5	1.5	2.0	3.800	3.550	0.000	0.000	
SPRINKLER FITTER		BLD	49.200	51.200	1.5	1.5	2.0	10.25	8.200	0.000	0.450	
STEEL ERECTOR	E	ALL	40.750	42.750	2.0	2.0	2.0	13.20	19.09	0.000	0.350	
STEEL ERECTOR	S	ALL	44.950	47.200	2.0	2.0	2.0	8.890	17.69	0.000	0.400	
STONE MASON		BLD	40.680	44.750	1.5	1.5	2.0	9.550	12.00	0.000	0.970	
TERRAZZO FINISHER		BLD	35.510	0.000	1.5	1.5	2.0	9.700	9.320	0.000	0.400	
TERRAZZO MASON		BLD	39.370	42.370	1.5	1.5	2.0	9.700	10.66	0.000	0.550	
TILE MASON		BLD	41.430	45.430	2.0	1.5	2.0	9.700	8.640	0.000	0.710	
TRAFFIC SAFETY WRKR		HWY	28.250	29.850	1.5	1.5	2.0	4.896	4.175	0.000	0.000	
TRUCK DRIVER		ALL	1	35.850	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TRUCK DRIVER		ALL	2	36.000	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TRUCK DRIVER		ALL	3	36.200	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TRUCK DRIVER		ALL	4	36.400	36.400	1.5	1.5	2.0	7.200	6.000	0.000	0.150
TUCKPOINTER		BLD	40.950	41.950	1.5	1.5	2.0	8.180	10.82	0.000	0.940	

Legend :

RG (Region)

TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)

C (Class)

Base (Base Wage Rate)

FRMAN (Foreman Rate)

M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.

OSA (Overtime (OT) is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

MCHENRY COUNTY

FENCE ERECTOR (EAST) - That part of the county East and Northeast of a line following Route 31 North to Route 14, northwest to Route 47 north to the Wisconsin State Line.

IRONWORKERS (EAST) - That part of the county East of Rts. 47 and 14.

IRONWORKERS (SOUTH) - That part of the county South of Route 14 and East of Route 47.

IRONWORKERS (WEST) - That part of the county West of Route 47.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether

for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video), telephone, security systems, fire alarm systems that are a component of a multiplex system and share a common cable, and data inside wire, interconnect, terminal equipment, central offices, PABX and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic

materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators; Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches; Bobcats (up to and including ¾ cu yd.) .

Class 4. Bobcats and/or other Skid Steer Loaders (other than bobcats up to and including ¾ cu yd.); Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall .

Class 7. Mechanics.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell Machine with Air Compressor; Dredges; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Off-Road Hauling Units (including articulating)/2 ton capacity or more; Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro- Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders.

Class 7. Gradall and machines of like nature.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more;

Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

2. PROJECT LABOR AGREEMENT

- 2.1 Because of the size, duration, and important public purpose to be served by the Project, it is in the public interest to have the Project completed in the most timely, efficient, and orderly manner possible and without labor disputes or disruptions of any kind which might interfere with or delay the Project. Accordingly, the Contractor is required to enter into a Project Labor Agreement with the trade unions which have traditionally performed and have trade and geographic jurisdiction over such work. The Project Labor Agreement will be provided by CDB and executed by each Contractor and Trade Union within 20 days following the Authorization to Proceed (ATP) with a copy provided to CDB. The agreement shall provide for, at a minimum, the following:
- a. Contracting or subcontracting work to only those firms, persons, companies or entities that have, or agree to be bound by and operate under, for the life of the Project, current collective bargaining agreements with applicable trade unions.
 - b. No lockout, strikes, picketing or other work stoppage of any nature.
 - c. Trade unions agree to use their best efforts to prevent any acts described in paragraph 2, or those of a similar nature of effect, or, in the event such an act takes place, to cause an immediate cessation thereof.
 - d. The right to discharge or discipline and employee who violates the provisions of the agreement.
 - e. Coverage for the life of the Project.
 - f. Incorporation of the agreement into subcontracts.
 - g. Procedures for resolving disputes related to the agreement.
- 2.2 Submission of the executed Project Labor Agreement shall be a post- ATP requirement.

**CAPITAL DEVELOPMENT BOARD
STANDARD PROJECT LABOR AGREEMENT**

This Agreement is entered into this _____ day of _____, 2013, by and between the Capital Development Board and the **AFL-CIO Project Labor Agreement Committee (PLA Committee)** for and on behalf of its affiliated members, hereinafter referred to individually and collectively, as the "Union". This Agreement shall apply to work performed by the Employer and its Contractors and Subcontractors on Construction know as the **CDB Project No. 810-066-016 Illinois Community College Board, Upgrade Exterior Lighting, McHenry County College, McHenry, Illinois.**

ARTICLE 1 - INTENT AND PURPOSES

1.1 It is mutually understood that the following terms and conditions relating to employment of workmen covered by this Agreement have been written in order to promote efficiency of construction operations and provide for peaceful settlement of labor disputes without strikes or lockouts, thereby promoting the public interest in assuring the timely and economical completion of the work. It is also the intent of the parties to set out standard working conditions for the efficient prosecution of said construction work, herein to establish and maintain harmonious relations between all parties of the Agreement, to secure optimum productivity and to eliminate strikes, lockouts, or delays in the prosecution of the work.

- (a) Therefore, the following provisions will be binding upon _____ and all its sub-contractors (hereinafter jointly referred to as "Contractor"), who shall be required to sign the "Participation Agreement", attached hereto as "Schedule A", and the Unions during the term of this Agreement and any renewal thereafter. The Unions hereby consent to apply the terms and conditions of this Project Agreement to said sub-contractors upon their signing the "Participation Agreement". It is understood that each sub-contractor will be considered and accepted by the Unions as a separate employer for the purposes of collective bargaining. It is further agreed that the employees working under this Agreement shall constitute a bargaining unit separate and distinct from all others. This Agreement may be modified by mutual consent in writing by the parties signatory hereto.

1.2 The Contractor agrees to be bound by the terms of the Collective Bargaining Agreements and amendments thereto of the affiliates of the PLA Committee and the applicable employers association, if any. Such agreements are incorporated herein by reference. In order to comply with the requirements of the various fringe benefit funds to which the Contractor is to contribute, the Contractor shall sign such participation agreements as are necessary. Upon written notice from any fringe benefit fund C.D.B. will withhold payment of delinquencies occurring on this project from the involved Prime Contractors.

1.3 It is mutually understood that where the provisions of this Agreement are at variance with any other agreement between the Contractor and the Union, the language of this Agreement shall prevail.

1.4 The Contractor and the Union agree that should the Collective Bargaining Agreement (CBA) of any PLA Committee affiliates signatory to this Agreement expire prior to the completion of this project, the expired contracts' terms will be maintained until a new CBA is ratified. The wages, and fringe benefits included in any new CBA will be effective on the effective date of the newly negotiated C.B.A. unless wage and fringe benefit retroactivity is agreed upon by the bargaining parties.

ARTICLE II - RECOGNITION

2.1 The Contractor recognizes the PLA Committee and the signatory affiliates as the sole and exclusive bargaining representatives for its craft employees employed on the jobsite. PLA Committee affiliates signatory to this Agreement will have recognition on the project for their craft.

ARTICLE III - ADMINISTRATION OF AGREEMENT

3.1 In order to assure that all parties have a clear understanding of the Agreement, to promote harmony and address potential problems, a pre-job conference will be held with the Contractor, PLA Committee Representatives and all signatory parties prior to the start of any work on the project.

3.2 Representatives of the Contractor and the Unions shall meet as required but not less than once a month to review the operation of this Agreement. The representatives at this meeting shall be empowered to resolve any dispute over the intent and application of the Agreement.

3.3 The Contractor shall make available in writing to the Unions and Council no less than one week prior to these meetings a job status report, planned activities for the next 30 day period, actual numbers of craft employees on the project and estimated numbers of employees by craft required for the next 30 day period. The purpose of this report is to allow time to address any potential jurisdictional problems and to ensure that no party signatory to the Agreement is hindering the continuous progress of the project through a lack of planning or shortage of manpower.

ARTICLE IV - HOURS OF WORK OVERTIME SHIFTS & HOLIDAYS

4.1 The standard work day shall be an established consecutive eight (8) hour period between the hours of 7:00 a.m. and 5:00 p.m. with one-half hour designated as unpaid period for lunch. The standard work week shall be five (5) consecutive days of work commencing on Monday. Starting time which is to be established at the pre-job conference will be applicable to all craft employees on the project. Should job conditions dictate a change in the established starting time and/or a staggered lunch period on certain work of the project or with individual crafts, the Contractor, Business Managers of the crafts involved and the PLA Committee shall mutually agree to such changes. If work schedule change cannot be mutually agreed to between these parties, the hours fixed in the Agreement shall prevail.

4.2 All time before and after the established work day of eight (8) hours, Monday through Friday and all time on Saturday shall be paid in accordance with each crafts current collective bargaining agreement. All time on Sundays and Holidays shall be paid for at the rate of double time.

- (a) Fringe benefit payments for all overtime work shall be paid in accordance with each craft's Current collective Bargaining Agreement.

4.3 Shift work, if used, shall be as provided in the collective bargaining agreement of each affected craft.

4.4 Recognized Holidays shall be as follows: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veterans Day (to be celebrated the day after Thanksgiving), Thanksgiving Day and Christmas Day. No work will be performed on Labor Day under any consideration, except in an extreme emergency and then only after consent is given by the Business Manager.

Christmas Day. No work will be performed on Labor Day under any consideration, except in an extreme emergency and then only after consent is given by the Business Manager.

ARTICLE V - ABSENTEEISM

5.1 The Contractor and the Union agree that the chronic and/or unexcused absenteeism is undesirable and must be controlled. Employees that develop a record of such absenteeism shall be identified by the Contractor to the appropriate referral facility and the Contractor shall support such action with the work record of the involved employee. Any employee terminated for such absenteeism shall not be eligible for rehire on the project for a period of no less than ninety (90) days.

ARTICLE VI - MANAGEMENT RIGHTS

6.1 The Contractor retains and shall exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this Agreement and the Unions collective bargaining agreement.

ARTICLE VII - GENERAL WORKING CONDITIONS

7.1 Employment begins and ends at the project site, to be determined at the Pre-Job Conference.

7.2 Employees shall be at their place of work at the starting time and shall remain at their place of work until quitting time. The parties reaffirm their policy of a fair days work for a fair days pay.

7.3 The Contractor may utilize brassing, or other systems to check employees in and out. Should such procedures be required, the techniques and rules regarding such procedures shall be established by mutual consent of the parties at the pre-job conference.

7.4 There shall be no limit on production by workmen nor restrictions on the full use of tools or equipment. Craftsmen using tools shall perform any work of their trade and shall work under the direction of the craft foreman. There shall be no restrictions on efficient use of manpower other than as may be required by safety regulations.

7.5 Crew Foreman shall be utilized as per the existing collective bargaining agreements. The Contractor agrees to allow crew foremen ample time to direct and supervise their crew. The Union agrees there will be no restrictions placed on crew foreman's ability to handle tools and materials.

7.6 The Contractor may utilize the most efficient methods or techniques of construction, tools or other labor saving devices to accomplish the work. Practices not a part of the terms and conditions of this Agreement will not be recognized.

7.7 Should overtime work be required, the Contractor will have the right to assign specific employees and/or crews to perform such overtime work as is necessary to accomplish the work.

7.8 The Contractor may establish such reasonable project rules as the Contractor deems appropriate. These rules will be reviewed and established at the pre-job conference and posted at the project site by the Contractor.

7.9 It is recognized that specialized or unusual equipment may be installed on the project and in such cases, the Union recognizes the right of the Contractor to involve the equipment supplier or vendor's personnel in supervising the setting of the equipment, making modifications and final alignment which may be necessary prior to and during the start-up procedure, in order to protect factory warranties.

7.10 In order to promote a harmonious relationship between the equipment or vendor's personnel and the Building Trades craftsmen, a meeting shall be held between the Contractor and the Unions prior to any involvement on the project by these personnel. The Contractor will inform the Unions of the nature of involvement by these personnel and the numbers of personnel to be involved, allowing ample time for the Union representatives to inform their stewards prior to the start of any work.

ARTICLE VIII - SAFETY

8.1 The employees covered by the terms of this Agreement shall at all times while in the employ of the Contractor be bound by the safety rules and regulations as established by the Contractor in accordance with the Construction Safety Act and OSHA.

- (a) These rules and regulations will be published and posted at conspicuous places throughout the project.

8.2 In accordance with the requirements of OSHA, it shall be the exclusive responsibility of each Contractor on a jobsite to which this Agreement applies, to assure safe working conditions for its employees and compliance by them with any safety rules contained herein or established by the Contractor. Nothing in this Agreement will make the PLA Committee or any of its affiliates liable to any employees or to other persons in the event that injury or accident occurs.

ARTICLE IX - SUBCONTRACTING

9.1 The Contractor agrees that neither he nor any of his subcontractors will subcontract any work to be done on the project except to a person, firm or corporation party signatory to this Agreement.

9.2 Any Contractor or Sub-contractor working on the project covered by this Agreement shall as a condition to working on said project, become signatory to and perform all work under the terms of this Agreement. The furnishing of materials, supplies or equipment and the delivery thereof shall be in no case considered subcontracting.

ARTICLE X - UNION REPRESENTATION

10.1 Authorized representatives of the PLA Committee and its signatory affiliates shall have access to the project provided they do not interfere with the work of the employees and further provided that such representatives fully comply with the visitor and security rules established for the project.

10.2 Each PLA Committee affiliate which is a party to this Agreement, shall have the right to designate a working journeyman as a steward. Such designated steward shall be a qualified worker performing the work of that craft and shall not exercise any supervisory functions. Each steward shall be concerned with the employees of the steward's employer and not with the employees of any other employer.

10.3 The working steward will be paid at the applicable wage rate for the job classification in which he is employed.

10.4 The working steward shall not be discriminated against because of his activities in performing his duties as steward, and except as otherwise provided in local agreements, shall be the last employee in his craft to be laid off in any reduction in force. Stewards will be subject to discharge to the same extent that other employees are only after notification to the Union Representative. The Contractor will permit stewards sufficient time to perform the duties inherent to a steward's responsibilities. Stewards will be offered available overtime work if qualified.

ARTICLE XI - GRIEVANCE AND ARBITRATION PROCEDURES

11.1 It is specifically agreed that in the event any disputes arises out of the interpretation or application of this Agreement, excluding jurisdictional disputes which are covered by an expedited procedure in Article XII below, the same shall be settled by means of the procedure set out herein upon mutual agreement of the parties. Otherwise, the procedure set forth in the local collective bargaining agreement shall be used, but in no case shall both procedures be utilized to resolve such disputes. No such grievance shall be recognized unless called to the attention of the Contractor by the Union or to the Union by the Contractor within five (5) working days after the alleged violation was committed or discovered by the grieving party.

11.2 Grievances shall be settled according to the following procedure:

- (a) Step 1. The dispute shall be referred to the Steward of the craft union involved and a representative of the Contractor at the construction project.
- (b) Step 2. In the event that the steward and the Contractor's representative at the construction site cannot reach agreement within two (2) working days after a meeting is arranged and held, the matter shall be referred to the Union Business Manager, a representative of the PLA Committee and the Project Superintendent and/or Project Manager.
- (c) Step 3. In the event the dispute is not resolved within five (5) working days after completion of Step 2, these two shall request a panel of arbitrators from the U.S. Mediation and Conciliation Service for selection of an impartial arbitrator who shall hear the grievance and make a decision within ten (10) working days which shall be final and binding on all parties. The parties shall each pay the expense of their own representative. The decision of the arbitrator shall be binding upon all parties. The expense of the impartial arbitrator shall be borne equally by the Contractor and the involved craft Union.

ARTICLE XII - JURISDICTIONAL DISPUTES

This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.

12.1 All decisions of the Illinois Jurisdictional Dispute Resolution Process are final and binding upon all parties.

12.2 Administrative functions under the Illinois Jurisdictional Dispute Resolution Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative.

12.3 The primary concern of the Illinois Jurisdictional Dispute Resolution Process shall be the adjustment of jurisdictional disputes in the construction industry by independent Arbitrators selected by the Illinois State Federation of Labor. A sufficient number of Arbitrators shall be selected from geographical areas of the state of Illinois and shall be randomly assigned to a particular dispute subject only to the Arbitrator's ability to conduct a hearing and render a decision in a timely manner as required under this Process. Decisions shall be only for the specific job under consideration and shall become effective immediately upon issuance and complied with by all parties.

12.4 In rendering a decision, the Arbitrator shall determine:

- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
- (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute in the local area, the Arbitrator shall then consider whether there is a previous decision of record governing the case, including decisions of construction industry arbitration panels within the geographical jurisdiction of the local area Building Trades Council located within the State of Illinois;
- (c) If the Arbitrator finds that a previous decision of record governs the case, the Arbitrator shall apply the decision of record in rendering his/her decision except under the following circumstances: After notice to the other parties to the dispute prior to the hearing that intends to challenge the decision of record, if a trade challenging the decision of record is able to demonstrate that the recognized and established prevailing practice in the locality of the work has been contrary to the applicable decision of record, and that historically in that locality the work in dispute has not been performed by the other craft or crafts, the Arbitrator may rely on such prevailing practice rather than the decision of record. If the craft relying on the decision of record demonstrates that it has performed the work in dispute in the locality of the job, then the Arbitrator shall apply the decision of record in rendering his/her decision. If the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages, or the use of vertical agreements, the Arbitrator shall rely on the decision of record rather than the prevailing practice in the locality;
- (d) If no decision of record is applicable, the Arbitrator shall then consider the established trade practice in the industry and prevailing practice in the locality, and any party to the dispute may rely on prior decisions of record, decisions of construction industry arbitration panels within the state of Illinois.
- (e) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well-being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

12.5 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute. Agreements of Record are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.

12.6 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor ("Federation") from any liability arising from its action or inaction and covenant not to sue the Federation.

12.7 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, contractors or subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:

- (a) Representatives of the affected trades and the employer shall meet on the job site within forty-eight (48) hours after receiving notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)
- (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within forty-eight (48) hours subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
- (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Board pursuant to the provisions of the Jurisdictional Dispute Resolution process, which may be amended from time to time, for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or its designated representative, pursuant to Article II of this agreement. The Administrator shall, within seventy-two (72) hours provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown to the Administrator, an additional seventy-two (72) hour extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. All time period contained in this Article specifically exclude Saturdays, Sundays and Holidays.

12.8 The Arbitrator chosen shall be randomly selected based on geographical location of the jurisdictional dispute and upon his/her availability to conduct a Hearing within 48 hours of said notice. The Arbitrator may issue a "bench" decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within 48 hours subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memorda, decisions, etc. shall be provided to all disputing parties, the local Building & Construction Trades Council, and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a "short form" decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion.

In the event a jurisdictional dispute is not referred to the Illinois Jurisdictional Dispute Resolution Process by either (or any) of the labor organizations claiming the work, the employer may, upon its own initiative, or at the request of the Illinois Capital Development Board, petition the Administrator to assign an Arbitrator to hear the case. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union's General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

12.9 All interested parties shall be entitled to make presentations to the Arbitrator. Any interested party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Upon approval of the Arbitrator, other parties not directly involved in the dispute may be invited to be present during the presentation and discussion. Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

12.10 The Order of Presentation in all Hearings before an Arbitrator shall be:

- I. Identification and Stipulation of the Parties
- II. Union(s) claiming the disputed work presents its case
- III. Unions assigned the disputed work presents its case
- IV. Employer assigning the disputed work presents its case
- V. Evidence from other interested parties (i.e., general contractor, project manager, owner, etc.)

- VI. Rebuttal by unions(s) claiming the disputed work
- VII. Additional submissions permitted and requested by Arbitrator
- VIII. Closing arguments by the parties

12.11 To further the interests of the Illinois Jurisdictional Dispute Resolution Process, it is agreed that any party hereto or any employer may at any time file a Verified Complaint in writing with the Administrator alleging a violation of a decision or award previously made by an Arbitrator. The Administrator shall thereupon set a subsequent Hearing, before the same Arbitrator who presided at the initial Hearing or the next available Arbitrator in the event the original Arbitrator cannot timely hear the Verified Complaint. Said Hearing shall be held within three (3) days of receipt of the Verified Complaint with respect to the alleged violation. The Administrator shall notify all interested parties of the time and place of the Hearing; provided, however, that the party filing the Verified Complaint must have served a copy of said document and all supporting documents to all interested parties and the Administrator.

All parties shall be given an opportunity to testify and present documentary evidence relating to the subject matter of the Hearing. Within forty-eight (48) hours after the conclusion of the Verified Complaint, the Arbitrator shall render a written decision in the matter and shall state whether or not there has been a violation of the Arbitrator's prior decision or award. Copies of the decision shall be served by regular mail, personal service of facsimile.

Should the Arbitrator determine that there has been a violation of its prior decision or award, it shall order immediate compliance by the offending party(s). The Arbitrator may take one or more of the following courses of action in order to enforce compliance with its decision:

- (a) Assess liquidated damages not to exceed \$5,000.00 for each violation by the members of, or employees represented by, the parties hereto, and may assess liquidated damages not to exceed \$10,000.00 for each violation by either party hereto or any of its officers or representatives. If a fine is rendered by the Arbitrator, it should be commensurate with the seriousness of the violation having a relationship to lost hours for the labor organizations and lost efficiency for the employer. Each of the parties hereto hereby agrees for itself and its members to pay to the other party said liquidated damages within thirty (30) days from any sum, or sums, so assessed because of violations of a decision or award by itself, its officers or representatives, or its member(s). Should either party bound to this Process, or any of its members fail to pay the amount so assessed within the thirty (30) day time period herein provided, the party or member so failing to pay shall be deprived of all the benefits of this Process until such time as the matter is adjusted to the satisfaction of the Administrator; provided, however, the foregoing shall not prohibit the offending party from defending jurisdictional dispute claim in a subsequent, non-related matter.
- (b) In the event the Arbitrator determines that there is a violation of this Section, the Arbitrator may order an immediate cessation of all work by the non-compliant employers and employees performing work on the project. Enforcement of any decision of an Arbitrator or finding of non-compliance, including remedies contemplated under this Section, shall be pursuant to the terms and conditions of Section 12.12.

The filing of a Verified Complaint is not a necessary requirement in order for a party to seek judicial enforcement of the Arbitrator's prior decision or award.

12.12 The Illinois Jurisdictional Dispute Resolution Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision. The prevailing party in any enforcement proceedings shall be entitled to recover its costs and attorneys fees from the non-prevailing party. In the event the Illinois Jurisdictional Dispute Resolution Process or its Administrator is made a party to, or is otherwise required to participate in any such enforcement proceedings for whatsoever reason, the non-prevailing party shall bear all costs, attorneys' fees, and any other expenses incurred by the Process or the Administrator in those proceedings.

12.13 In the event there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

12.14 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and the Illinois Capital Development Board, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.

ARTICLE XIII - WORK STOPPAGES AND LOCKOUTS

13.1 During the term of this Agreement there shall be no strikes, picketing, work stoppages, slow downs or other disruptive activity for any reason by the PLA Committee, its affiliates or by any employee and there shall be no lockout by the Contractor. Failure of any Union or employee to cross any picket line established at the project site is a violation of this Article.

13.2 The PLA Committee and its affiliates shall not sanction, aid or abet, encourage or continue any work stoppage, picketing or other disruptive activity and will not make any attempt of any kind to dissuade others from making deliveries to or performing services for or otherwise doing business with the Contractor at the project site. Should any of these prohibited activities occur the Union will take the necessary action to end such prohibited activities.

13.3 No employee shall engage in any activities which violate this Article. Any employee who participates in or encourages any activities which interfere with the normal operation of the project shall be subject to disciplinary action, including discharge, and if justifiably discharged for the above reasons, shall not be eligible for rehire on the same project for a period of not less than ninety (90) days.

13.4 Neither the PLA Committee or its affiliates, shall be liable for acts of employees for which it has not responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for unauthorized acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its right in any instance shall not be deemed a waiver of its right in any other instance.

13.5 In lieu of any action at law or equity, any party shall institute the following procedure when a breach of this Article is alleged, after all involved parties have been notified of the fact.

- (a) The party invoking this procedure shall notify an individual to be mutually agreed upon, whom the parties agree shall be the permanent arbitrator under this procedure. In the event the permanent arbitrator is unavailable at any time, he shall appoint his alternate. Notice to the arbitrator shall be by the most expeditious means available, with notice by telegram or any effective written means to the party alleged to be in violation and all involved parties.
- (b) Upon receipt of said notice the arbitrator named above shall set and hold a hearing within twenty-four (24) hours if it is contended the violation still exists but not before twenty-four (24) hours after the telegraph notice to all parties involved as required above.
- (c) The Arbitrator shall notify the parties by telegram or any other effective written means, of the place and time he has chosen for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Arbitrator.
- (d) The sole issue at the hearing shall be whether or not a violation of this Article has in fact occurred. The Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without an Opinion. If any party desires an Opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.
- (e) Such Award may be enforced by any court of competent jurisdiction upon the filing of the Agreement and all other relevant documents referred to herein above in the following manner. Telegraphic notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's Award as issued under Section 13.5 of this Article, all parties waive the right to a hearing and agree that such proceedings may be exparte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- (f) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- (g) The fees and expenses of the Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

ARTICLE XIV - GENERAL SAVINGS CLAUSE

14.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.

ARTICLE XV - TERM OF AGREEMENT

15.1 This Agreement shall be in full force as of and from the date of the Notice of Award to the Substantial Completion of all applicable contractors.

SCHEDULE A

PARTICIPATION AGREEMENT

The undersigned, a subcontractor to _____ agrees to be bound to the attached Project Agreement negotiated between _____ and the PLA Committee.


Subcontractor

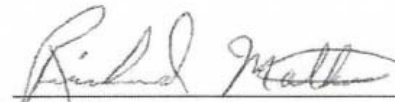
By


Date


FOR THE CONTRACTORS:

<hr/> GENERAL	Date	<hr/> VENTILATING	Date
<hr/> PLUMBING	Date	<hr/> ELECTRICAL	Date
<hr/> HEATING	Date	<hr/> FIRE PROTECTION	Date



John Thompson, Vice President
Bricklayers



Richard Mathis, President
Roofers

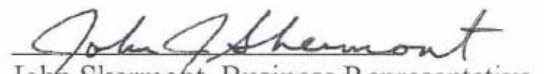

Donald Moss, Pres-Business Mgr
Cement Masons

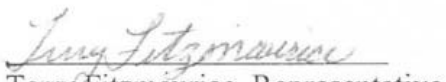

Curtis Cade, Int'l Representative
Plumbers & Pipe Fitters

Ed Christensen, Director *
Elevator Constructors

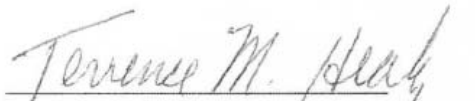

Robert Paddock, Representative
IUOE State Council

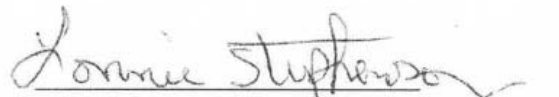

Eric Dean, Int'l Representative
Iron Workers

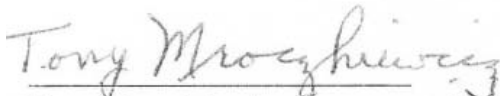

John Skermont, Business Representative
Boilermakers

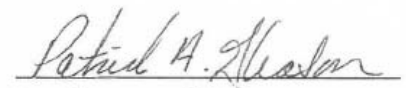

Terry Fitzmaurice, Representative
IUPAT

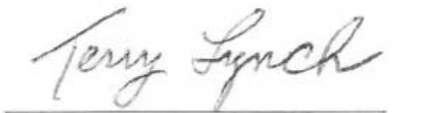

George Slater, President
Sheet Metal State Council


Terrence Healy, Int'l Representative
LIUNA


Lonnie Stephenson, Int'l Representative
IBEW


Tony Mroczkiewica, Representative
Midwestern District UBC


Pat Gleason, Chairman
IL Conference of Teamsters &
Construction Division


Terry Lynch, Int'l Representative
Asbestos Workers

* only if Elevator Constructors master agreement language is attached to PLA

END 00 43 43.

CDB-00 43 43
CDB-810-066-016

DIVISION 1 - GENERAL REQUIREMENTS
01 11 00 – Project Summary

1. **STANDARD DOCUMENTS FOR CONSTRUCTION:** CDB's 2009 edition of the Standard Documents for Construction (SDC) and the Supplement to Standard Documents for Construction (Section 01 11 01) shall apply to this project.

2. **GENERAL PROJECT INFORMATION:**
 - A. **DESCRIPTION:** This project is to upgrade parking lot lighting and building mounted lighting. This will include the replacement of existing site lighting poles, wiring, conduit, controls and building mounted exterior lighting.
 - B. **EXISTING CONDITIONS:** Existing site lighting is in poor condition and past it's useful life and is in need of replacement.

3. **SUBSTANCE ABUSE PREVENTION ON PUBLIC WORKS PROJECTS ACT**
 - A. Effective January 1, 2008, contractors and subcontractors on CDB projects must submit a substance abuse plan to CDB as part of the post award process to the extent they are not party to a collective bargaining agreement which addresses substance abuse.
 - B. The plan must, at a minimum, meet the requirements set forth in Public Act 95-635. The text of this act is available on CDB's website.
 - C. Add to SDC section 00 51 40 Post Award Requirements: "I. A completed Substance Abuse Prevention Certification form (available in the Reference Library on CDB's website) and Contractor's substance abuse plan, if applicable. "

4. **APPRENTICESHIP TRAINING REQUIREMENT**
 - A. Effective June 1, 2004, all bidders and all their subcontractors must be participants in apprenticeship and training programs that are both approved by and registered with the U.S. Departments of Labor's Bureau of Apprenticeship and Training. The program(s) must be in the same trade(s) in which the firm performs work.
 - B. A statement to the above effect has been added to the Representations and Certifications section of the Bid Form (00 41 00). Bidders must be a member of an approved apprenticeship program prior to beginning work on the project.
 - C. CDB, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and each of its subcontractors. Unless otherwise directed in writing by CDB, applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor.
 - D. In order to fulfill this requirement, it shall not be necessary that an applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract.

- E. For information on how to participate in or set up a program, contractors may call David Wyatt at the U.S. Department of Labor (312/596-5508) or check the USDOL website: www.doleta.gov/atels_bat/.

5. **DELINQUENT DEBT**

- A. The State of Illinois has instituted a policy to ensure that no vendor, or potential state vendor, receives a state contract if that vendor owes a delinquent debt to any state agency.
- B. "Delinquent debt" is any cumulative amount of money totaling \$1,000 owed to state agencies that are at least 90 days past due. This includes taxes or payments of any kind.
- C. This policy not only covers individuals, businesses or entities that seek to enter into a state contract, but any subcontractor employed by that individual, business or entity at the time a state contract is sought.
- D. The policy also can be retroactive following a contract award. If a contract is awarded to a vendor, and during the term of the contract the vendor or a subcontractor incurs a delinquent debt with the state, CDB will notify the vendor. At its discretion, the agency *can* give the vendor or subcontractor 30 days to pay the delinquent debt. If the debt is not paid during this grace period, the contract or subcontract will be cancelled.
- E. Bidders are required to list all subcontractors that the vendor knows will be employed as part of a state contract, along with all applicable Federal Employee Identification Numbers or Social Security Numbers on the bid form.
- F. Before awarding a contract, CDB will check the bidder and listed subcontractors and suppliers against the delinquent debt list in the Comptroller's Office to determine if the bidder is eligible for a contract award. If a delinquent debt is found during the check with the Comptroller's Office, the contract award will be denied.

6. **CONTRACT TIME:** Refer to Articles 00 72 10 and 01 32 00 of the Standard Documents for Construction.

SPECIAL NOTICE - DEADLINE FOR COMPLETION. Contractor shall commence work immediately upon receipt of the Authorization to Proceed and shall complete all work through Substantial Completion in accord with the contract no later than January 7, 2014. The contractor will be permitted to commence work in parking lots A and C on May 20, 2013 or not until authorization to proceed, whichever is later, and shall be completed by August 20, 2013. The contractor shall complete all work in accord with the contract (Final Acceptance) within (60) sixty consecutive calendar days from the date of Substantial Completion.

7. **CONTRACT.** Construct project under single contract. All work shown on the bidding documents is the responsibility of the contractor, regardless of the trade or specialty involved.

- A. Electrical

8. **PRE-BID CONFERENCE.** The pre-bid meeting will be held at McHenry County College, Room A217 on April 5, 2013 at 10:00 am. Bidders are strongly urged to attend this meeting. See SDC 00 21 10 and 00 25 00.
9. **CONSTRUCTION ADMINISTRATION FEE:** A construction administration fee is applicable to the following contracts in accordance with Article 00 21 40 of the Standard Documents for Construction:
- | | |
|---------------|-------------|
| 1. Electrical | \$14,000.00 |
|---------------|-------------|
10. **BID SECURITY:** Bid security must be submitted with each bid equal to 10% of the base bid and must be in the form of a CDB bid bond, certified check, cashier's check or bank draft. Refer to Article 00 43 13 of the Standard Documents for Construction.
11. **BIDDER'S EMPLOYEE UTILIZATION FORM, DHR PC-2**
- A. **Requirement.** All bidders shall complete Table A of the DHR Form PC-2. The bidder shall complete the appropriate DHR Form PC-2 per Para. 00 43 48.1 of the SDC and as identified by trade category. Failure to complete may result in rejection of the bid per Para. 00 43 48.1 of the SDC.
- B. **Projections.** Workforce projections, as identified by completing Table A, shall be those for the specific project being bid. Workforce projections shall include the bidder's subcontractor'(s') workforce. The bidder, if awarded a contract, shall be responsible for ensuring the subcontractor(s) meet minority/female workforce goals.
- C. **No Goal Contracts.** For those trade categories designated as "no goals", the bidder shall complete the DHR Form PC-2 as indicated in Paragraph A above. CDB encourages the bidder to utilize minority/female tradespersons on "no goals" designated contracts.
12. **BUSINESS ENTERPRISE FOR MINORITIES, FEMALES AND PERSONS WITH DISABILITIES ACT:**
- A. This project has goals for participation by minority and female owned businesses as first and second tier (level) subcontractors or suppliers in accord with the Business Enterprise for Minorities, Females, and Persons with Disabilities Act. Only MBE/FBE firms certified or registered with the Illinois Department of Central Management Services are acceptable. NOTE: MBE/FBE goals are in addition to those specified for workforce projections (DHR Form PC-2 Form).
- MBE/FBE GOALS FOR THIS PROJECT. Each bidder shall name, on the Bid Form provided (00 41 05), the MBE/FBE owned subcontractors and suppliers it intends to use to meet the specified goals:
- | | |
|------------------------|------------------------|
| 1. Electrical Contract | 6% (4% MBE and 2% FBE) |
|------------------------|------------------------|

If the goals are not met, the bidder shall submit it within 7(seven) calendar days after the bid opening documentation of its good faith efforts to achieve the goals (See Article 00 43 39.8 of the SDC). Failure to submit such documentation, or to use good faith efforts, shall result in rejection of the bid.

13. **BUILDERS RISK INSURANCE, DESIGNATED PURCHASER.** Contractor shall purchase and maintain builder's risk insurance in accord with Article 00 73 19 of the Standard Documents for Construction.
14. **BUY ILLINOIS PROGRAM.** The Buy Illinois Program encourages contractors to incorporate products manufactured, fabricated or assembled in the State of Illinois. It is a voluntary program; there is no incentive provision affecting the award of the contract nor is there a required percent of the contract that must be Illinois products
 - A. Illinois products will be indicated in the project manual with (IL) preceding the item in the specification paragraph. Typically, only specifications that are prescriptive, those listing three or more manufacturers, will be in the program. Contractors should consider these products when procuring the materials and equipment for the project. If the contractor is aware of an Illinois product not listed, the contractor is encouraged to advise the A/E prior to bidding or offer a product substitution with the bid. CDB will verify that the product meets the definition of an Illinois product and add it to CDB's Buy Illinois product directory.
 - B. Contractors should provide the total value of Illinois products on the Contractor's Schedule of Values (CSV) in the space provided. The individual items included in the total should be identified by putting (IL) in front of their descriptions on the CSV.
 - C. Where material is specified by standards and/codes and not by a list of acceptable manufacturers, contractors are still encouraged to purchase Illinois products. However, the contractor should not include these materials in the computation of the total dollars for Illinois products on the CSV.
15. **USE OF ILLINOIS LABOR** Two State statutes require the preference of Illinois residents in the labor force on State-funded projects under certain circumstances. Contractors must take these statutes into account in preparing their bids.
 1. Under the FY2010 Budget Implementation (Capital) Act (Public Act 96-0037) at least 50% of the total labor hours on State construction projects must be performed by actual residents of the State of Illinois (persons with a permanent home or principle establishment in the State of Illinois). This requirement applies only to projects funded in FY10 and later and *does/*does not apply to this project.
 2. Public Act 96-929 (effective June 16, 2010) mandates that during a period of excessive unemployment at least 90% of the total labor hours on State construction projects must be performed by persons who have resided in Illinois for at least thirty (30) days and intend to become or remain Illinois residents,. (30 ILCS 570/3). 'A period of excessive unemployment' means any month immediately following 2 consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded 5% as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures. (30 ILCS 570/1)

- A. Contractors are required to incorporate the above provisions into all subcontracts for subcontractors who will have workers at the project site.
 - B. To verify that this requirement is being met, contractors must submit Certified Payroll forms for themselves and their subcontractors each month for the duration of the contract/subcontract.
 - 1. The Certified Payroll form(s) must include the name and address of each worker on the project site during the time period covered by the form.
 - 2. For subcontractors, the contractor will include the beginning and ending dates of the subcontract on the Certified Payroll form.
 - 3. If Certified Payroll forms are not submitted timely, payment may be reduced or withheld until Certified Payroll submittals are brought up to date.
16. ***DURATION OF BIDS.*** The bidders shall hold their bids open for (60) calendar days after the bid opening in lieu of the sixty (60) calendar days required by Para. 00 51 10.3 of the Standard Documents for Construction.
18. **VALUE MANAGEMENT.** The value management program is applicable to this project.

DIVISION 1 - GENERAL REQUIREMENTS
**01 11 01 – Supplement to SDC and SDC-
CM**

The Standard Documents for Construction and Standard Documents for Construction for Projects with a Construction Manager are hereby changed. The following articles replace those in the 2006 and 2009 editions. All other articles remain applicable.

00 21 50 WORK WITH OWN STAFF

.1 Subcontractors and Suppliers

A. Subcontract/Supplier Disclosure. The Contractor shall submit with his/her bid the names and CDB issued identification (ID) numbers (prequalification ID number or registration ID number), if known, of all first tier subcontractors and suppliers with a subcontract value greater than \$50,000 to be utilized by the Contractor in the performance of this contract and any lower tier subcontractor/supplier with a subcontract value greater than \$50,000. Financial and Conflict of Interest disclosures and standard certifications for each subcontractor over \$50,000 must be submitted to CDB by the contractor within 20 days of the execution of a contract with CDB or 20 days of the execution of the subcontract, whichever is later. The Contractor shall promptly notify the State in writing of any additional or substitute subcontractors meeting the above criteria hired during the term of this contract (names, addresses, expected contract amount and CDB ID nos.). Upon request by the CPO, the Contractor shall provide CDB a copy of each subcontract and the subcontractor's completed and signed CDB Certifications and Disclosure Form(s) within twenty (20) days of execution of this contract or of the subcontract, whichever is later.

00 43 39 MINORITY AND FEMALE BUSINESS ENTERPRISE PARTICIPATION

- .1 Certification.** CDB will only accept Minority and Female Business Enterprise (MBE/FBE) firms certified by the Illinois Department of Central Management Services (CMS) as a MBE or FBE; or a MBE/FBE that has been certified by an agency recognized by CMS and is registered with CMS as MBE/FBE. In each case, the MBE/FBE's certification/registration with CMS shall be in good standing prior to the bid opening.
- .2 Designated Projects.** CDB may designate projects with "MBE/FBE Participation Goals." See the bid form and Section 01 11 00 of the project manual for applicable goals for first and second tier (level) subcontractors and supplier MBE/FBE participation.
- .3 Bid Form.** Each bidder shall name, on the bid form provided, the minority and female owned businesses it intends to use to meet the specified goals. If the specified goals are not met, the bidder shall submit with its bid a request for change/waiver of MBE/FBE goals or, within 7 (seven) calendar days of the bid opening, submit documentation of its good faith efforts to achieve the goals.
- .4 MBE/FBE Bidder.** If the bidder is a minority or female owned business, indicate by stating "Bidder is an MBE/FBE firm" on the applicable page of the bid form. CDB encourages MBE/FBE prime bidders to use MBE/FBE subcontractors/suppliers.
- .5 Joint Venture.** If the bidder is a joint venture, the percentage of ownership held by the MBE/FBE joint venturer may be used to meet the MBE/FBE goal for the contract.

- .6 Subcontracts.** Subcontracting of work to a lower tier non-MBE/FBE firm which would reduce the proceeds received by the subcontracting MBE/FBE firm below the specified goal is prohibited. CDB may, in such cases, reject the bid or terminate the contract. Refer to Paragraph 00 51 20.2.A.10).
- .7 Request for Assistance.** If the bidder needs assistance in locating subcontractors or suppliers to meet the goals, bidder shall contact CDB's Fair Employment Practices Division prior to the submittal of the bid.
- .8 Submittal of good faith documentation or change waiver request. Include with the package:**
- A. All information indicating why the specified goal cannot be met.
 - B. A list of all MBE/FBE firms contacted and the dates they were contacted, including documentation from those firms.
 - C. Copies of all bid solicitation letters to MBE/FBE firms. Letters shall contain, as a minimum:
 - 1) Project Title and Location
 - 2) Classification of Work Items for Which Quotations are Requested
 - 3) Date, Time, and Place Quotations are Due
 - 4) Returnable Acknowledgment of the Solicitation
 - D. Evidence, such as a log, of telephone contact including time and date of call, telephone number, and name of the person called.
 - E. All other evidence of good faith efforts made by the bidder to secure eligible MBE/FBE firms to meet the specified goal. Evidence may include documentation that states the following:
 - 1) A reasonable number of MBE/FBE firms were contacted.
 - 2) The work selected by the bidder for allocation to MBE/FBE firms was selected in order to increase the likelihood of achieving the specified goal.
 - 3) The bidder negotiated, in good faith, with the potential MBE/FBE firms by not imposing any conditions which are not similarly imposed on all other subcontractors and suppliers, or by denying benefits ordinarily conferred on subcontractors or suppliers for the type of work for which bids were solicited.
 - 4) The services of the referral agencies were used by the bidder in efforts to achieve the specified goal.
 - 5) The bidder attended CDB pre-bid meeting for the project.
 - F. Other relevant information in support of the change/waiver request.
- .9 Replacement of MBE/FBE Subcontractor or Supplier.** If it can be demonstrated that the MBE/FBE subcontractor or supplier cannot perform the work, or if a MBE/FBE loses its CMS certification/registration after the bid opening, then the Contractor shall make a good faith effort to replace, in-kind, the MBE/FBE. The contractor shall identify the replacement MBE/FBE or provide evidence of good faith effort to find a replacement on the Contractor's letterhead and submit with documented evidence of cause to CDB's Office of Fair Employment Practice. CDB will review submittal and may, at its sole discretion, authorize the replacement or approve the good faith effort.
- .10 Calculation of MBE/FBE Participation as a Material Supplier or Subcontractor**
- A. MBE/FBE as a material supplier: A 100 percent goal credit is allowed for the cost of materials or purchases from a MBE/FBE regular dealer.
 - B. MBE/FBE as a subcontractor: A 100 percent goal credit is allowed for the work of the

subcontract performed by the MBE/FBE's own forces (performing, managing and supervising the work), including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the MBE/FBE subcontractor from the prime Contractor or its affiliates. Work that a MBE/FBE subcontractor in turn subcontracts to a non-MBE/FBE does not count toward the MBE/FBE goal.

00 45 00 CERTIFICATIONS OF COMPLIANCE WITH APPLICABLE LAWS

- .1 Recertification.** If the contract extends over multiple years, vendor (A/E or Contractor) and its subcontractors will sign and submit to CDB Contracts the required Compliance Form (available in the Reference Library on CDB's website: www.cdb.state.il.us) by April 1 of each subsequent year after the contract is signed. Failure to do so may result in voiding the contract by operation of law or rendering the contract voidable at the option of the State without additional compensation. Violations of certain provisions may also be deemed a civil or criminal offense.

00 51 20 ACCEPTANCE AND REJECTION OF BIDS

- .1 CDB's Rights.** When, in its opinion, it is in the best interest of the state, CDB reserves the right to:

- A. Accept any bid
- B. Reject any or all bids
- C. Waive technical deficiencies and irregularities
- D. Allow bidder to remedy technical deficiencies or irregularities within a stated time
- E. Rescind any notice of award if CDB determines the notice of award was issued in error
- F. Rescind any notice of award when it is in the best interest of the state
- G. Rebid any contract

.2 Bid Rejection.

- A. Bids will be rejected for the following material deficiencies:

- 1) Failure to be prequalified with CDB no later than the close of business the day before the bid opening (Article 00 21 05) or being determined non-responsible after bid opening.
- 2) Submission of a bid late (Paragraph 00 51 10.1).
- 3) Failure to submit bid and/or bid modifications to appropriate bid opening office.
- 4) Submission of a bid in a manner that reveals the bid price prior to the bid opening (example: by fax). (Paragraph 00 42 10.4).
- 5) Use of a bid envelope, which is received by CDB unsealed, or marked in a manner that does not reasonably identify the project and/or contract for which it is intended (Paragraph 00 42 10.3).
- 6) Omission of a base bid price, alternate bid price or unit price (Paragraph 00 42 10.1).
- 7) Submission of a bid price that cannot be determined.
- 8) Deletion of original signatures to the extent that an intent to be bound by the bid is not apparent.
- 9) When CDB does not accept the unit price(s), when those prices are an integral part of the base bid, all bids for that contract will be rejected.

- 10) Failure to attend a mandatory pre-bid meeting.
 - 11) Bids not in substantial conformance with the bidding documents and whose non-conformance is determined to be material and unresponsive.
 - 12) Failure to submit a completed CDB form 00 41 05 (Minority/Female Business Participation).
 - 13) Failure to use good faith efforts to achieve minority/female business participation goals.
 - 14) Failure to submit Bidder Disclosure(s) form and Certifications with bid.
- B. The following technical deficiencies may be remedied by the bidder within seven calendar days. Failure to remedy the bid within seven calendar days shall result in rejection of the bid. These technical deficiencies are:
- 1) Failure to use a revised bid form when bid forms have been changed by addenda.
 - 2) Failure to acknowledge an addendum, however adjustment of the bid amount will not be allowed.
 - 3) Failure to provide USDOL Apprenticeship and Training Certification for bidder and all known subcontractors.
 - 4) Failure to submit bidder's Certificate of Registration in an approved apprenticeship and training program.
 - 5) Failure to supply subcontractor and/or supplier names and Taxpayer Identification Numbers as required.
 - 6) Submission of a bid bond not on CDB's form (Paragraphs 00 43 13.1 and 00 43 13.2).
 - 7) Submission of a bid security in a form other than a bid bond, certified check, cashier's check or bank draft (Paragraph 00 43 13.1).
 - 8) Omission of the signature of the officer of the surety or any other required signatures except the signature in Paragraph 00 51 20.2.A.8), submission of those signatures in pencil or submission of a non-original signature.
 - 9) Replacement of a bid security from an unacceptable surety with one from a surety acceptable to CDB (Paragraph 00 43 13.4).
 - 10) Failure to furnish and/or complete the DHR PC-2 form.
 - 11) When applicable, failure to submit documentation of good faith efforts to meet MBE/FBE goals.
 - 12) Failure to submit a signed affidavit stating that the bidder will maintain an Illinois office as the primary place of employment for persons employed in the construction authorized by the contract.
 - 13) Failure to submit Certificate of Registration with State Board of Elections in accord with 30 ILCS 500/20-160.

14) Failure to submit Disclosure of Business Operations with Government of Iran form in accord with 30 ILCS 500/50-36.

C. CDB at its sole discretion and without conferring any rights on any bidder may waive bid technical deficiencies or irregularities that are not in conformance with the bidding documents but whose non-conformance is non-material or minor.

D. Submittal of conditions or qualifying statements contrary to CDB's contract terms is not acceptable and, unless rescinded, the bid shall be rejected.

00 51 28 MBE/FBE BUSINESS CERTIFICATION, POST REQUIREMENTS

.1 Post-Award submittal. See Article 005140. The contract awardee shall submit CDB's MBE/FBE Subcontractor Supplier Certification form, Document 00665 (available in the Reference Library on CDB's website), for each of the MBE/FBE subcontractor(s) and/or supplier(s) being utilized to meet the designated participation goals as specified on the bid form and in Section 01 11 00 of the project manual. The form must be signed by the MBE/FBE subcontractor or supplier and shall be submitted to CDB's FEP section.

Completion of the 00665 form is not required if the Contractor is an MBE or FBE firm. MBE/FBE prime contractors are encouraged to utilize MBE/FBE subcontractors/suppliers. If goals are split (separate MBE and FBE goals), then an MBE or FBE firm must supply 00665 forms for the subcontractor firm(s) utilized to meet the FBE or MBE goal, respectively.

.2 Listed Firms. The 00665 certification form shall be completed and submitted for each MBE/FBE firm listed on the bid form.

.3 Compliance. The MBE/FBE participation goal dollar value is based upon the total contract sum (including awarded alternates). The participation goal percentage amount(s) shall meet or exceed the goal(s) as specified on the bid form (and in Section 01 11 00 of the project manual), or in an approved change/waiver request (refer to Article 00 43 39 herein).

.4 Voluntary. Contractors are encouraged to utilize MBE/FBE subcontractors/suppliers for those projects that are not designated for MBE/FBE participation and complete the 00665 certification form for each MBE/FBE firm. MBE/FBE subcontractors/suppliers may be added at any time during the project.

.5 Subcontracts/Supplier agreements. Copies of subcontracts or supplier agreements (to correspond with each 00665 form) are required to be submitted within ten (10) days of the Notice of Award.

00 51 40 POST AWARD REQUIREMENTS

.1 Contractor's Duty to Comply. The Contractor may not proceed with the work until the following post award requirements are met. These requirements are part of the contract and failure to comply with these requirements shall constitute a breach of the contract. CDB shall issue Authorization to Proceed upon successful completion of these post award requirements.

.2 Submittals. Within ten (10) calendar days from the date of the notice of award letter, the Contractor shall furnish, on CDB forms, the following:

- A. Contract executed by the Contractor;
- B. Performance Bond;
- C. Labor and Material Payment Bond;

- D. Certificates of Insurance;
- E. Builder's Risk Insurance Policy (if applicable);
- F. MBE/FBE Subcontractor Supplier Certifications, Form 00665 and MBE/FBE Subcontractor/Supplier agreements (if applicable).
- G. Completed substance Abuse Prevention Certification form and Contractor's substance abuse plan (if applicable),
- H. DHR PC-2 accepted by FEP Technician.

- .3 Cancellation of Award.** All post award requirements are mandatory. Noncompliance shall be cause for CDB to cancel the notice of award and make a claim against the bid security.
- .4 Post Award Extensions.** CDB may extend the time limitations for good cause. No extension shall operate as a waiver of post award requirements, nor shall it extend the contract completion date.
- .5 Delays.** Any delays to the commencement of the work due to the Contractor's failure to meet the post award requirements shall be the responsibility of the Contractor and its surety. Contractor and its surety shall be responsible for the costs of any such delays.

00 51 45 MBE/FBE BUSINESS POST-AWARD SUBCONTRACTS/SUPPLIER AGREEMENTS

- .1 General.** Contract awardee shall submit MBE/FBE subcontracts, or supplier agreements within ten (10) days of the Notice of Award.

Submittal is not required if the Contractor is an MBE or FBE firm. If the MBE/FBE prime contractor utilizes MBE/FBE subcontractors, it shall submit copies of subcontracts or agreements for same.

00 73 17 BONDS, GENERAL

.1 Discretion to Adjust Criteria

1) Sureties that do not have an A.M. Best rating may apply for acceptance to provide bonds up to 50% of their statutory allowed limit or \$500,000, whichever is less, if they meet the following criteria and obtain the Director's approval based on the information requested below.

Criteria

- 1. The company must be an Illinois Domiciled company.**
- 2. The company must be licensed to write surety in the State of Illinois.**
- 3. The company has been writing contract surety in Illinois for a minimum of two years.**
- 4. The company is currently and has been a member of the Surety and Fidelity Association of American (SFAA) for the two most recent years.**
- 5. The company must have a Risk-Based Capital ration of 250% or greater.**
- 6. The company must be able to demonstrate the underwriting expertise for contract surety.**

01 29 73.1 SCHEDULE OF VALUES

- A. Provide CDB prequalification/registration ID numbers on the CSV form for subcontractors/suppliers described in 00 21 50.2C.

- B. Identify work performed by MBE/FBE subcontractors and suppliers on the CSV form.
- C. Revise and resubmit CSV for approval if any substitution or replacement of subcontractors or suppliers occurs.
- D. Revise and resubmit CSV for approval if any change in the contract amount of subcontractors or suppliers other than a change resulting from a change order occurs.

01 29 76 PROGRESS PAYMENT PROCEDURES

.1 Payments to Subcontractors and Suppliers.

- A. Subcontractors (as described in 00 21 50.2C.) who have not obtained a CDB ID number and/or have not submitted the required Disclosures and Certifications may have their payment amounts withheld by CDB in addition to any other remedy provided by this contract or by law.

DIVISION 1 - GENERAL REQUIREMENTS
01 23 00 - Alternate Bids

1. GENERAL

1.1 REQUIREMENTS INCLUDE:

- A. Designated Contractor: Provide Alternate Bid prices in Bid Form for specified alternate work.
- B. Each Contractor coordinate all related and required work necessary to perform work specified in alternate bids, when accepted and awarded.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Standard Documents for Construction, Article 00 43 23
- B. Bid Forms Document, 00 41 00

2. DESCRIPTION OF ALTERNATE BIDS

2.1 Electrical Contract

- A. Alternate Bid No. 1: Replace existing building mounted light fixtures. Refer to drawings for additional information

1. Pertinent work specified elsewhere

- a. 260500 – Basic Electrical Requirements.
- b. 260505 – Electrical Demolition for Remodeling.
- c. 265100 – Lighting

2.2 Electrical Contract

- A. Alternate Bid No. 2: Provide empty conduit and hand holes for future camera wiring. Refer to drawings for additional information.

1) Pertinent work specified elsewhere

- a. 260500 – Basic Electrical Requirements
- b. 260533 – Conduit and Boxes

END 01 23 00

DIVISION 1 - GENERAL REQUIREMENTS
01 32 00 - Construction Schedule

1. General

1.1 REQUIREMENTS INCLUDE:

- A. The contractor shall prepare and maintain a detailed project schedule as described below.
- B. The project schedule shall be the contractor's working schedule; used to execute the work and record and report actual progress. It shall show how the contractor plans to complete the work within the contract time and meet any contractually specified intermediate milestone dates.

1.2 RELATED REQUIREMENTS

- A. Specified Elsewhere:
 - 1. SDC 01 29 00 - Payment
 - 2. 00 72 20 - Assignment
 - 3. 01 11 00 - Project Summary
 - 4. 01 31 20 - Project Meetings
 - 5. 01 33 23 - Shop Drawings, Product Data and Samples
 - 6. 01 29 73 - Schedule of Values

1.3 FORM OF SCHEDULE

- A. The project schedule shall be in the form of an activity network diagram and include:
 - (1) Activity description and duration.
 - (2) Earliest start and finish calendar days for each activity.
 - (3) Latest start and finish calendar dates.
 - (4) Actual start and finish calendar dates.
 - (5) Total float in work days.
- B. The schedule shall provide sufficient detail and clarity so that the contractor can plan and control the work and CDB and the A/E can readily monitor and follow the progress of all portions of the work. The critical activities must be clearly shown. The degree of detail must be satisfactory to the A/E and CDB.

1.4 CONTENTS OF SCHEDULE

- A. The schedule must be inclusive of all installation tasks of the work.
- B. Submittal and approval of shop drawings and material samples as well as delivery dates of major equipment shall be included in the project schedule.
- C. Activity duration shall be in whole working days.
- D. There should be at least one activity for each specification section.

1.5 UPDATING

- A. The project schedule shall be updated monthly.
- B. Actual activity completion dates shall be reported and recorded on the schedule.
- C. Progress on uncompleted activities shall be reported.
- D. Projected completion dates and activities shall be reviewed and revised if necessary.

1.6 REPORTS AND SUBMITTALS

- A. Within 30 days of the Authorization to Proceed, the contractor shall submit the project schedule to the A/E and CDB.
- B. Five (5) days prior to the pay/progress meeting, the contractor shall submit the current updated schedule to the A/E and CDB.
- C. The schedule shall be presented on 11" by 17" sheets. Each sheet shall be clearly titled. Intermediate milestones shall be clearly indicated.
- D. A management narrative report indicating the progress of the work, any revisions since last reporting period, any lost time required to be made up and the contractors' plan to maintain the schedule and meet the milestone dates and contract completion will accompany the updated schedule. The report will identify any potential delays and problem areas and their impact on project completion.

1.7 REVIEWS

- A. The A/E and CDB shall review and may comment on the schedule at the pay/progress meeting. They may also attend the update meetings. The contractor(s) shall revise the schedule as directed by the A/E for compliance with the requirements herein.
- B. Payment and reduction of retainage may be denied by CDB for failure to submit a proper schedule and maintaining work progress according to the project schedule.
- C. Neither the A/E's nor CDB's review and/or comments shall indicate approval/disapproval of the schedule. Since the schedule is dependent on the contractors' proprietary information and commitments, the A/E and CDB can not and will not warrant the schedule to be correct and sufficient to meet the required contract dates.

END 01 32 00.

DIVISION 1 - GENERAL REQUIREMENTS
01 33 23 - Shop Drawings, Product Data & Samples

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor to make submittals to Architect/Engineer. Contractor shall maintain a master list of submittals.

1.2 Contractor:

A. Review submittals within 5 business days.

1. Verify field dimensions.
2. Verify compliance with Contract requirements.

B. Certify review.

C. Transmit reviewed submittals to Architect/Engineer.

1.3 DEFINITIONS

A. Shop drawings: Shop drawings are original drawings prepared by Contractor, subcontractor, sub-subcontractor, supplier or distributor, which illustrate some portion of the work, showing fabrication, layout, setting or erection details.

1. Prepared by qualified detailer.
2. Identify details by reference to sheet and detail numbers shown on contract drawings.
3. Maximum sheet size: (11" x 17".)
4. Reproductions for submittals: Reproducible transparency, full size reproducible transparencies which do not require any special equipment for reproduction and copying are to specified.
5. Submit 7 copies.

B. Product data:

1. Manufacturer's standard schematic drawings, edited to fit this project.
2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
 - a. Clearly mark each copy to identify pertinent materials, products or models.
 - b. Show dimensions and clearances.
 - c. Show wiring diagrams and controls.

1.4 SCHEDULE SUBMITTAL

A. Submit schedule of all exhibits to Architect/Engineer within seven (7) business days after preconstruction meeting.

1. Prepare schedule in bar chart format. Include:
 - a. Exhibit identification.
 - b. Specification section and page number.
 - c. Date of submittal to Architect/Engineer.
 - d. Latest date for final approval.
 - e. Fabrication time.
 - f. Date of installation.
2. Architect/Engineer will review and comment on exhibit schedule and will advise the contractor as to which submittals require longer review durations.

Submit number of copies of shop drawings, product data and samples which contractor requires for distribution plus 1 copy which will be retained by Architect/Engineer.

B. Accompany submittals with transmittal letter, in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. The number of shop drawings, product data and samples submitted.
5. Notification of deviations from Contract.
6. Other pertinent data.

C. Submittals shall include:

1. Date and revision dates.
2. Project title and number.
3. Names of:
 - a. Architect/Engineer.
 - b. Supplier.
 - c. Manufacturer.
 - d. Separate detailer when pertinent.
4. Identification of product or material.
5. Relation to adjacent structure or material.
6. Field dimensions, clearly identified as such.
7. Specification section and page number.
8. Specified standards, such as ASTM number or ANSI.
9. A blank space, (3"x4"), for Architect/Engineer's stamp.
10. Identification of previously approved deviation(s) from contract documents.
11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract.
12. Space for Contractor's approval stamp.

1.5 RESUBMISSION REQUIREMENTS

- A. Resubmit all shop drawings, product data, and samples as requested by the contractor and/or A/E.

1.6 RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission to the next level of authority.
- B. Verify:
 - 1. Field dimensions.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
- C. Coordinate each submittal with requirements of:
 - 1. The work.
 - 2. The contract documents.
- D. Contractor's responsibility for errors, omissions or deviation from contract documents in submittals is not relieved by Architect/Engineer's review of submittals.
- E. Prior to submission, notify Architect/Engineer and CDB in writing of all proposed deviations in submittals from contract requirements. Substitution of materials or equipment may only be approved by change order.
- F. Do not begin any work which requires submittals without Architect/Engineer's approval.
- G. After Architect/Engineer's review, make response required by A/E's stamp and distribute copies. Indicate by transmittal that copy of approved data has been delivered to installer.

1.7 ARCHITECT/ENGINEER'S DUTIES

- A. Review submittals within 14 calendar days.
 - 1. Review for:
 - a. Design concept of project.
 - b. Compliance with contract documents.
 - 2. Review all requests for proposed deviations. Obtain CDB's concurrence and respond to Contractor's request.
 - 3. Affix stamp, date and initials or signature certifying to review of submittal, and with instructions for contractor response.
 - 4. Return submittals to sender for response or distribution.

B. Schedule 01 33 23:

1. Submittals list:

**Referenced
Specification**

<u>Section</u>	<u>Submittal Item</u>
26 24 16	Panelboards
26 28 21	Contactors
26 51 00	Lighting
Drawings	Timeclocks, Hand Holes, Submersible Splice Kit

END 01 33 23

DIVISION 1 - GENERAL REQUIREMENTS
01 35 16 - Remodeling Project Procedures

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor:

1. Coordinate work of employees.
2. Schedule elements of remodeling and renovation work to expedite completion.
3. Schedule noisy or hazardous work to avoid problems with Using Agency's operations.
4. In addition to demolition, cut, move or remove existing construction to provide access or to allow remodeling and new work to proceed. Include:
 - a. Repair or remove hazardous or unsanitary conditions.
 - b. Remove abandoned piping, conduit and wiring.
 - c. Remove unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals and deteriorated concrete.
 - d. Clean surfaces. Remove surface finishes to install new work and finishes.
5. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a neat transition to adjacent new construction.
6. Note or record existing project conditions before beginning work to minimize later disputes.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 01 32 00 - Construction Schedules.
2. 01 51 00 - Temporary Utilities.
3. 01 54 00 - Construction Aids
4. 01 73 29 - Cutting & Patching
5. 01 74 13 - Construction Cleaning
6. 01 74 23 - Final Cleaning.

1.3 SEQUENCE AND SCHEDULES

A. Submit separate detailed subschedule for alterations work, coordinated with Construction Schedule. Show:

1. Each stage of work; occupancy dates of areas.
2. Date of Substantial Completion for each area of alteration work.
3. Crafts employed in each stage.

1.4 ALTERATIONS, CUTTING AND PROTECTION

- A. Cut finish surfaces such as masonry, tile, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division.
- B. Protect existing and new work from weather and temperature extremes.
 - 1. Maintain existing interior work above (*60) degrees F.
 - 2. Provide weather protection, waterproofing, heat and humidity control to prevent damage to remaining existing work and to new work.
- C. Items of construction, furnishings and articles having a historic or private value discovered during progress of the work shall remain in the Using Agency's possession and ownership.
 - 1. Promptly notify Architect/Engineer.
 - 2. Protect items from damage from weather and work.
 - 3. Architect/Engineer will promptly transmit CDB's decision for disposition of discovery.
 - 4. Store items to be retained by owner in a safe, dry place on site. Dispose of items which CDB releases.

1.5 MATERIALS FOR PATCHING, EXTENDING AND MATCHING

- A. Ensure that work is complete:
 - 1. Provide same materials or types of construction as that in existing structure, to patch, extend or match existing work.

2. EXECUTION

2.1 REMOVE EXISTING CONSTRUCTION

- A. Remove and dispose of existing electrical equipment and conduit as defined on drawings.

2.2 PERFORMANCE. Patch and extend existing work using skilled craftsmen capable of matching existing quality of workmanship. For patched or extended work, provide quality equal to that specified for new work.

2.3 ADJUSTMENTS

- A. Where partitions are removed, patch floors, walls and ceilings with finish materials to match existing as closely as possible.
 - 1. Where removal of partitions results in adjacent spaces becoming one, rework floors and ceilings to provide smooth planes without breaks, steps or bulkheads.
 - 2. Where extreme change of plane of (*two inches) or more occurs, request instructions from Architect/Engineer.

B. Trim and refinish existing doors to clear new floors.

2.4 DAMAGED SURFACES

- A. Patch and replace all portions of existing finished surfaces found to be damaged, lifted, discolored or showing other imperfections, with matching material.
1. Provide adequate support prior to patching the finish.
 2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
 3. When existing surface cannot be matched, refinish entire surface to nearest intersections.

2.5 TRANSITION FROM EXISTING TO NEW WORK

- A. When new work abuts or finishes flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance as closely as possible.
1. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

2.6 CLEANING

- A. Perform construction cleaning as specified in 01 74 13.
1. Clean User occupied areas daily.
 2. Clean all spillage, overspray or heavy dust collections in User occupied areas immediately.
- B. At completion of work of each craft, clean area and make surfaces ready for work of successive crafts.
- C. At completion of alterations work in each area, provide final cleaning in accord with 01 74 23 and return space to a condition suitable for use of User.

END 01 35 16

DIVISION 1 - GENERAL REQUIREMENTS
01 41 00 - Regulatory Requirements

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor comply with all laws, rules and regulations governing the work.

1. When Contractor observes that contract documents are at variance with specified codes, notify Architect/Engineer in writing immediately. Architect/Engineer will process changes in accord with General Conditions.
2. When Contractor performs any work knowing or having reason to know that the work is contrary to such laws, rules and regulations and fails to so notify the Architect/Engineer, Contractor shall pay all costs arising therefrom. However, it will not be the Contractor's primary responsibility to make certain that the contract documents are in accord with such laws, rules and regulations.

1.2 DEFINITIONS & ABBREVIATIONS

A. Definitions:

1. Dates: Reference Codes, Regulations and Standards are the issue current at date of bidding documents unless otherwise specified.
2. Codes: Codes are rules, regulations or statutory requirements of government agencies.
3. Standards: Standards are requirements set by authorities, custom or general consent and established as accepted criteria.

B. Abbreviations:

- | | |
|----------|---|
| 1. AGCI | Associated General Contractors in Illinois. |
| 2. ANSI | American National Standards Institute. |
| 3. ASTM | American Society for Testing and Materials. |
| 4. BOCA | Building Officials & Code Administrators |
| 5. CDB | Capital Development Board. |
| 6. FED | Federal Agencies. |
| 7. FM | Factory Mutual Engineering Corp. |
| 8. IBHE | Illinois Board of Higher Education. |
| 9. ICBO | Int'l Conference of Building Officials |
| 10. ICCB | Illinois Community College Board. |
| 11. IDHS | Illinois Department of Human Services. |
| 12. IDOL | Illinois Department of Labor. |
| 13. IEPA | Illinois Environmental Protection Agency. |
| 14. ISBE | Illinois State Board of Education. |
| 15. ISPE | Illinois Society of Professional Engineers. |
| 16. NFPA | National Fire Protection Association. |
| 17. UBC | Uniform Building Code |
| 18. UL | Underwriters Laboratories, Inc. |

1.3 QUALITY ASSURANCE

- A. Architect/Engineer has designed the project with full knowledge of code requirements and has copies of all specified codes available for Contractor's inspection.
- B. Contractor:
 - 1. Ensure that copies of specified codes and standards are readily available to Contractor's personnel. Copies are available at Contractor's expense from source or publisher.
 - 2. Ensure that Contractor's personnel are familiar with workmanship and installation requirements of specified codes and standards.

1.4 REGULATORY REQUIREMENTS

- A. Source and requirements: (*NOTE: Include only those appropriate to project. Include date of issuance for each item. Date should be most current at time of bid, unless local governing authority or Using Agency requires otherwise.)
 - 1. CDB:
 - a. Illinois Accessibility Code
 - b. Illinois Energy Conservation Code
 - 2. FED:
 - a. ADA 2010
 - 3. State of Illinois:
 - a. Illinois Purchasing Act, as amended (30 ILCS 505/1 et. seq.)
 - 4. IEPA
 - a. Air Pollution Standards.
 - b. Noise Pollution Standards.
 - c. Water Pollution Standards.
 - d. Public Water Supplies.
 - e. Solid Waste Standards.
 - f. Illinois Recommended Standards for Sewage Work.
 - g. Hazardous Waste Crane and Hoisting Equipment Operators Licensing Act, 225 ILCS 220/1 et. seq.
 - h. Hazardous Waste Laborers Licensing Act, 225 ILCS 221/1 et. seq.
Toxic Substance Control Act.
 - 5. NFPA: National Fire Codes
 - a. 70-2011, National Electrical Code

END 01 41 00

DIVISION 1 - GENERAL REQUIREMENTS
01 51 00 - Temporary Utilities

1. GENERAL

1.1 REQUIREMENTS INCLUDE. Designated contractor provide and maintain specified temporary utilities during construction period.

A. Electrical Contractor Provide:

1. Toilets.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere: (*)

1. 01 11 00 - Project Summary. (*A/E Note: Include reference in Division 15 Mechanical and 16 Electrical, to direct attention to temporary utilities requirements.)

1.3 DEFINITIONS

A. Toilets:

1. Provide temporary toilet facilities for use of all workmen and authorized parties throughout construction period.
2. Provide a minimum number of enclosed combination toilet and urinal units for construction personnel:
 - a. One for every 20 employees, or fraction thereof.

2.

3. PRODUCTS

3.1 MATERIALS. May be new or used, but shall be adequate for purposes used, shall not create unsafe or unsanitary conditions, nor violate applicable codes.

4. EXECUTION

4.1 INSTALLATION

A. Toilets:

1. Service regularly.

4.2 REMOVAL

A. Upon CDB's prior written authorization, completely remove temporary materials and equipment.

B. Repair all damage caused by temporary utilities' installation. Restore to (*specified) (*original) conditions.

END 01 51 00.

DIVISION 1 - GENERAL REQUIREMENTS
01 51 50 - Use of Existing Facilities

1. GENERAL

1.1 The project will be constructed at an occupied facility. These requirements supplement the Standard Documents for Construction and other sections of the Project Manual.

1.2 The Using Agency will be on site during the construction. Contractor shall provide temporary barricades and signage to clearly mark areas that are off limits to the public.

1.3 REQUIREMENTS INCLUDE: Contractor provide:

- A. Scheduling
- B. Security and site regulations
- C. Construction aids
- D. Temporary enclosures and barriers
- E. Access roads & parking areas
- F. Construction Cleaning
- G. Field Offices
- H. Storage
- I. Close-out

1.4 RELATED REQUIREMENTS

- A. Specified elsewhere:

2. EXECUTION

2.1 SCHEDULING

A. Schedule the work to allow the User Agency to continue use of all buildings and areas on site. Submit separate detailed sub schedule showing:

- 1. Each stage of work; occupancy dates of areas.
- 2. Date of Substantial Completion for each area of work.

B. Schedule early completion of designated area(s) for Using Agency's usage prior to substantial completion of entire project.

C. Coordinate with User if there are any requirements for keeping parking lots open or completing 1 before starting another, etc.

2.2 SECURITY AND SITE REGULATIONS

A. Confer with the Using Agency's representative and obtain full knowledge of all site rules and regulations affecting work.

B. Provide control of all persons and vehicles entering and leaving project site. General Contractor to notify the Campus Police of all construction related activities taking place and the personnel involved.

- C. Do not take photographs of any kind except with prior written authorization from CDB and Using Agency.
- D. McHenry County College is a tobacco free campus.

2.3 TEMPORARY ENCLOSURES AND BARRIERS

- A. Provide temporary enclosures to separate work areas from existing building and from areas occupied by Using Agency.
- B. Provide and maintain suitable barriers to prevent unauthorized entry, and to protect the work.

2.4 TEMPORARY UTILITIES

- A. Using Agency will authorize use of existing facilities or services:
 - 1. Electrical power service (exterior receptacles).
- B. Make written arrangements with Using Agency's representative.
- C. Prevent interference with Using Agency's normal use of system.
- D. Modify, supplement and extend systems to meet temporary utility requirements for project, subject to approval of Architect/Engineer and Using Agency. Modifications shall be at contractor's expense.
- E. Using Agency will pay all costs of consumables (except toll calls) used for construction purposes for utilities it furnishes.
- F. Contractor requiring facilities or services beyond those available from the User shall provide and pay for extension or modification of services to perform the work, and for restoration of services at completion of work.

2.5 ACCESS ROADS & PARKING AREAS

- A. Existing on-site streets and driveways may be used for construction traffic. Maintain existing condition.
- B. Existing parking facilities may be used for parking of construction personnel's private vehicles and of contractor's lightweight (not exceeding a B plate) vehicles.
- C. Maintain roads, walks and parking areas in a sound, clean condition. Restore to original condition upon work completion prior to Final Acceptance.
- D. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Using Agency's operations or construction operations.

2.6 TRAFFIC REGULATION:

- A. Contractor provide traffic control and directional signs, mounted on barricades or standard posts
 - 1. At each change of direction of a roadway and at parking areas.
 - 2. Provide qualified and suitably equipped flaggers when construction operations encroach on traffic lanes, as required for traffic regulation

2.7 CONSTRUCTION CLEANING

- A. Contractor provide cleaning and disposal of waste materials, debris and rubbish during construction.
- B. Contractor shall supervise and coordinate cleaning operations of all Assigned Contractors.
- C. Contractor shall provide covered containers for deposit of waste materials, debris and rubbish and recyclables.
- D. Clean User occupied areas daily.

2.8 FIELD OFFICES

- A. Make arrangements with User Agency Representative for use of Conference Room for project meetings.

2.1 STORAGE Make arrangements with Using Agency's Representative for any on-site storage of materials and equipment to be installed in project. Using agency will permit one storage trailer to be on site. Protection and security for stored materials and equipment is solely contractor's responsibility.

2.2 CLOSEOUT

- A. Upon completion of need to use existing user-provided facilities, or when directed by Architect/Engineer, restore each to original or specified condition.
- B. At completion of work in each area, provide final cleaning and return space to a condition suitable for use of User.

END 01 51 50

DIVISION 1 - GENERAL REQUIREMENTS
01 56 00 - Barriers

1. GENERAL

1.1 Work Includes:

A. Base Bid:

1. Electrical Contractor provide fencing
 - a. Open mesh fence.
2. Maintain fences and barriers during entire construction period. Relocate as construction progresses.

END 01 56 00

DIVISION 1 - GENERAL REQUIREMENTS
01 66 00 - Storage & Protection

.1 GENERAL

A. REQUIREMENTS INCLUDE

1. Contractor make arrangements with Using Agency's Representative for storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment, on and off site is solely contractor's responsibility.

.2 PRODUCTS

A. PROTECTIVE MATERIALS

1. For duration of storage period, provide materials which will provide proper protection against the elements or other harmful environmental conditions.

.3 EXECUTION

A. LOCATION.

1. Where shown on drawings, or where authorized by Using Agency.

END 01 66 00

DIVISION 1 - GENERAL REQUIREMENTS
01 73 29 - Cutting & Patching

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor:

1. Execute cutting (including excavating), filling or patching of work to:
 - a. Install specified work.
 - b. Remove samples of installed work specified for testing.
 - c. Remove and replace defective work.
2. In addition, upon written instructions of Architect/Engineer or CDB:
 - a. Uncover work to provide for observation of covered work.
 - b. Remove samples of installed materials for testing.
 - c. Remove work to provide for alteration of existing work.

1.2 SUBMITTALS

- A. Prior to cutting which affects structural members or work of another contractor, submit written notice to Architect/Engineer requesting consent to proceed with cutting, including:
 1. Project identification.
 2. Description of affected work.
 3. Necessity for cutting.
 4. Effect on other work, on structural integrity of project.
 5. Description of proposed work. Designate:
 - a. Scope of cutting and patching.
 - b. Contractor and Crafts to execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing.
 6. Alternatives to cutting and patching.
 7. Designation of party responsible for cost of cutting and patching.
- B. Prior to cutting and patching done on instruction of Architect/ Engineer, submit cost estimate.
- C. When conditions of work, or schedule, indicate change of materials or methods, submit recommendation to Architect/Engineer, including:
 1. Condition indicating change.
 2. Recommendation for alternative materials or methods.
 3. Submittals specified for substitutions.
- D. Submit written notice to Architect/Engineer, designating time work will be uncovered, to provide for observation.

1.3 PAYMENT FOR COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of Architect/Engineer: Party responsible for ill-timed, rejected or non-conforming work.
- B. Work done on instructions of Architect/Engineer (by change order), other than defective or non-conforming work: CDB.

2. PRODUCTS

- 2.1 MATERIALS. For replacement of work removed: Comply with specifications for type of work to be performed.

3. EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of work, including elements subject to movement or damage during:
 - 1. Cutting and patching.
 - 2. Excavating and backfilling.
- B. After uncovering work, inspect conditions affecting installation of new products.

3.2 PREPARATION

- A. Prior to cutting:
 - 1. Provide shoring, bracing and support to maintain structural integrity of project.
 - 2. Provide protection for other portions of the project.
 - 3. Provide protection from elements.

3.3 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.
- B. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.
- C. Restore work which has been cut or removed; install new products to provide completed work in accord with contract documents.

D. Refinish entire surfaces to provide an even finish.

1. Continuous surfaces: To nearest intersection(s).
2. Assembly: Entire refinishing.

END 01 73 29

DIVISION 1 - GENERAL REQUIREMENTS
01 74 13 - Construction Cleaning

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Electrical Contractor: Supervise and coordinate cleaning operations of all assigned Contractors.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 01 35 16 - Remodeling Project Procedures: cleaning Using Agency occupied spaces.
2. Individual Specification Sections: specific cleaning for product or work.

2. EXECUTION

2.1 CLEANING

A. Areas of work shall be clean and free of debris at all times.

2.2 DISPOSAL

All recyclables shall be properly recycled and documented.

END 01 74 13.

DIVISION 1 - GENERAL REQUIREMENTS
01 74 23 - Final Cleaning

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor: Provide final cleaning:

1. At completion of work, or at such other times remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all sight exposed surfaces; leave work clean and ready for occupancy.

B. Contractor:

1. Supervise and coordinate the cleaning operations of all employees.
2. At project completion, leave project clean, ready for occupancy.

2. EXECUTION

2.1 FINAL CLEANING

- A. Employ experienced workmen and/or professional cleaners for final cleaning.
- B. Remove grease, dust, dirt, stains, labels, fingerprints, protection and other foreign materials from sight-exposed interior and exterior finished surfaces; polish surfaces so designated to specified finish.
 1. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces to ensure performance.
- C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- D. Contractor soft broom clean all exposed concrete surfaces clean; other paved areas with soft or stiff broom as directed. Rake clean other surfaces on grounds.
- E. Contractor sweep and mop clean all flooring.
- F. Contractor vacuum clean all carpet.
- G. Contractor shall maintain finally cleaned areas until project, or designated portion thereof, is accepted by CDB.

END 01 74 23.

DIVISION 1 - GENERAL REQUIREMENTS
01 78 23 - Operating & Maintenance Data

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Each Contractor provide Operating and Maintenance Data in accordance with Article 01 78 23 of the Standard Documents for Construction and the Project Manual.

2. REQUIRED SUBMITTALS

2.1 Contractor

- A. Operations and maintenance instructions shall include:

- 1. Product data
- 2. Operating characteristics, limiting condition
- 3. As-installed control diagrams
- 4. Parts nomenclature and numbers
- 5. Operating procedures, start-up procedures
- 6. Manufacturer's instructions for maintenance, and service and care
- 7. Service manual
- 8. Shop drawings
- 9. Spare parts
- 10. Warranties & bonds
- 11. Troubleshooting procedures
- 12. Safety requirements, operating cautions
- 13. Overall system diagrams for use by operations and maintenance personnel

- 2.2 Contractor provide Operating and Maintenance Data per the following Specification Sections:

- A. 260500 Par 3.5.

END 01 78 23.

DIVISION 1 - GENERAL REQUIREMENTS
01 78 36 - Extended Warranties & Bonds

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Each Contractor shall warrant their work in accordance with the Standard Documents for Construction. In addition, the following extended Warranties and Bonds shall be provided as specified.

2. EXTENDED WARRANTIES AND BONDS

2.1 Electrical Contractor

- A. Section 265100 Par 1.7, Induction Lamps, two-years.
- B. Section 265100 Par 1.7, LED Light engines and drivers, five-years.

END 01 78 36.

DIVISION 1 - GENERAL REQUIREMENTS
01 78 39 - Project Record Documents

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor:

1. At project site, maintain one record copy of:
 - a. Contract drawings, including separate volume(s) of details.
 - b. Project Manual.
 - c. Interpretations and supplemental instructions.
 - d. Addenda.
 - e. Reviewed, approved shop drawings and product data.
 - f. Other modifications to contract.
 - g. Field test records.
 - h. All schedules.
 - i. Correspondence file.
2. Store documents apart from documents used for field construction.
3. Provide files and racks for document storage.
4. File documents in format in accord with Project Manual Table of Contents.
5. Maintain documents in clean, dry, legible condition.
6. Do not use record documents for field construction purposes.
7. Make documents available at all times for inspection by Architect/Engineer and CDB.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 01 33 23 - Shop Drawings, Product Data & Samples.
2. 01 78 23 - Operating & Maintenance Data.
3. 01 78 36 - Warranties & Bonds.

1.3 RECORDING

- A. Label each document "PROJECT RECORD DOCUMENTS" in 2" high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until specified information has been recorded.
- D. Contract drawings: Legibly mark to record actual construction:
 1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.

3. Field changes of dimension and detail.
4. Changes made by change order.
5. Details not on original contract drawings.

E. Specifications and addenda: Legibly mark up each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by change order or field order.
3. Other matters not originally specified.

F. Shop drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.

G. A/E will periodically review documents to confirm they are up-to-date. Contractor payment may be withheld or reduced if record documents are not current.

1.4 SUBMITTAL

A. At completion of project, deliver record documents to A/E.

B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each record document.
5. Certification that each document submitted is complete and accurate.
6. Signature of contractor, or his authorized representative.

END 01 78 39.

DIVISION 26 - ELETRICAL
26 05 00 – Basic Electrical Requirements

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. Electrical Contractor Provides:

- a. Work requirements applicable to all Division 26. Also refer to Division 1 - General Requirements.
- b. Extension of electrical power system to and including light fixtures, poles, pole bases, equipment, devices, etc.
- c. Extension of existing grounding system.

B. Alternate Bid #1:

1. Electrical Contractor Provides:

- a. Replace existing building mounted lighting fixtures. Refer to drawings for additional information.

C. Alternate Bid #2:

1. Electrical Contractor Provides:

- a. Empty conduit system and handholes for future cameras. Refer to drawings for additional information.

1.2 WORK SEQUENCE

- A. All work that will produce excessive noise or interference with normal building operations, as determined by the Using Agency, shall be scheduled with the Using Agency. It may be necessary to schedule such work during unoccupied hours. The Using Agency reserves the right to determine when restricted construction hours are required.

1.3 QUALITY ASSURANCE

A. Contractor's Responsibility Prior to Submitting Pricing/Bid Data:

1. The Contractor is responsible for constructing complete and operating systems. The Contractor acknowledges and understands that the Contract Documents are a two-dimensional representation of a three-dimensional object, subject to human interpretation. This representation may include imperfect data, interpreted codes, utility guides, three-dimensional conflicts, and required field coordination items. Such deficiencies can be corrected when identified prior to ordering material and starting installation. The Contractor agrees to carefully study and compare the individual Contract Documents and report at once in writing to the

Architect/Engineer any deficiencies the Contractor may discover. The Contractor further agrees to require each subcontractor to likewise study the documents and report at once any deficiencies discovered.

2. The Contractor shall resolve all reported deficiencies with the Architect/Engineer prior to awarding any subcontracts, ordering material, or starting any work with the Contractor's own employees. Any work performed prior to receipt of instructions from the Architect/Engineer will be done at the Contractor's risk.

B. Qualifications:

1. Only products of reputable manufacturers as determined by the Engineer are acceptable.
2. All Contractors and subcontractors shall employ only workmen who are skilled in their trades. At all times, the number of apprentices at the job site shall be less than or equal to the number of journeymen at the job site.

C. Compliance with Codes, Laws, Ordinances:

1. Conform to all requirements of the 2011 National Electrical Code and Capital Development Board regulations over this installation.
2. If there is a discrepancy between the codes and regulations and these specifications, the Engineer shall determine the method or equipment used.
3. If the Contractor notes, at the time of bidding, any parts of the drawings or specifications that do not comply with the codes or regulations, he shall inform the Architect/Engineer in writing, requesting a clarification. If there is insufficient time for this procedure, he shall submit with his proposal a separate price to make the system comply with the codes and regulations.
4. All changes to the system made after the letting of the contract to comply with codes or the requirements of the Inspector, shall be made by the Contractor without cost to the Using Agency.
5. If there is a discrepancy between manufacturer's recommendations and these specifications, the manufacturer's recommendations shall govern.

D. Examination of Drawings:

1. The drawings for the electrical work are completely diagrammatic, intended to convey the scope of the work and to indicate the general arrangements and locations of equipment, outlets, etc., and the approximate sizes of equipment.
2. Contractor shall determine the exact locations of equipment and rough-ins, and the exact routing of raceways so as to best fit the layout of the job.
3. Scaling of the drawings will not be sufficient or accurate for determining these locations.

4. Where job conditions require reasonable changes in arrangements and locations, such changes shall be made by the Contractor at no additional cost to the Using Agency.
5. Because of the scale of the drawings, certain basic items, such as junction boxes, pull boxes, conduit fittings, etc., may not be shown, but where required by other sections of the specifications or required for proper installation of the work, such items shall be furnished and installed.
6. If an item is either shown on the drawings or called for in the specifications, it shall be included in this contract.
7. The Contractor shall determine quantities and quality of material and equipment required from the documents. Where discrepancies arise between drawings, schedules and/or specifications, the greater and better quality number shall govern.
8. Where used in electrical documents the word “furnish” shall mean supply for use, the word “install” shall mean connect up complete and ready for operation, and the word “provide” shall mean to supply for use and connect up complete and ready for operation.
9. Any item listed as furnished shall also be installed unless otherwise noted.
10. Any item listed as installed shall also be furnished unless otherwise noted.

E. Electronic Media/Files:

1. Construction drawings for this project have been prepared utilizing AutoCAD MEP.
2. Contractors and Subcontractors may request electronic media files of the contract drawings and/or copies of the specifications. Specifications will be provided in PDF format.
3. Upon request for electronic media, the Contractor shall complete and return a signed “Electronic File Transmittal” form provided by KJWW.
4. If the information requested includes floor plans prepared by others, the Contractor will be responsible for obtaining approval from the appropriate Design Professional for use of that part of the document.
5. The electronic contract documents can be used for preparation of shop drawings and as-built drawings only. The information may not be used in whole or in part for any other project.
6. The drawings prepared by KJWW for bidding purposes may not be used directly for ductwork layout drawings or coordination drawings.
7. The use of these CAD documents by the Contractor does not relieve them from their responsibility for coordination of work with other trades and verification of space available for the installation.

8. The information is provided to expedite the project and assist the Contractor with no guarantee by KJWW as to the accuracy or correctness of the information provided. KJWW accepts no responsibility or liability for the Contractor's use of these documents.

F. Field Measurements:

1. Verify all pertinent dimensions at the job site before ordering any conduit, conductors, wireways, fittings, etc.

1.4 SUBMITTALS

- A. Refer to Section 01 33 23 for submittal requirements.

1.5 WARRANTY

- A. Refer to Division 1 of these specifications.

1.6 INSURANCE

- A. This Contractor shall maintain insurance coverage as set forth in Division 1 of these specifications.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All items of material having a similar function (e.g., panelboards and contactors) shall be of the same manufacturer unless specifically stated otherwise on drawings or elsewhere in specifications.

PART 3 - EXECUTION

3.1 JOBSITE SAFETY

- A. Neither the professional activities of the Engineer, nor the presence of the Engineer or his or her employees and subconsultants at a construction site, shall relieve the Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory agencies. The Engineer and his or her personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions. The Contractor is solely responsible for jobsite safety. The Engineer and the Engineer's consultants shall be indemnified and shall be made additional insureds under the Contractor's general liability insurance policy.

3.2 EXCAVATION, FILL, BACKFILL, COMPACTION

A. General:

1. Prior to the commencement of any excavation or digging, the Contractor shall verify all underground utilities with the regional utility locator. Provide prior notice to the locator before excavations. Contact information for most regional utility locaters can be found by calling 811.
2. The Contractor shall do all excavating, filling, backfilling, compacting, and restoration in connection with his work.

B. Excavation:

1. Make all excavations to accurate, solid, undisturbed earth, and to proper dimensions.
2. If excavations are carried in error below indicated levels, concrete of same strength as specified for the foundations or thoroughly compacted gravel fill, as determined by the Architect/Engineer shall be placed in such excess excavations under the foundation. Place thoroughly compacted, clean, stable fill in excess excavations under slabs on grade, at the Contractor's expense.
3. Trim bottom and sides of excavations to grades required for foundations.
4. Protect excavations against frost and freezing.
5. Take care in excavating not to damage surrounding structures, equipment or buried pipe. Do not undermine footing or foundation.
6. Perform all trenching in a manner to prevent cave-ins and risk to workmen.
7. Where original surface is pavement or concrete, the surface shall be saw cut to provide clean edges and assist in the surface restoration.
8. If satisfactory bearing soil is not found at the indicated levels, immediately notify the Architect/Engineer or their representative, and do no further work until the Architect/Engineer or their representative gives further instructions.
9. Excavation shall be performed in all ground conditions, including rock, if encountered. Bidders shall visit the premises and determine the soil conditions by actual observations, borings, or other means. The cost of all such inspections, borings, etc., shall be borne by the bidder.
10. If a trench is excavated in rock, a compacted bed with a depth of 3" (minimum) of gravel shall be used to support the conduit unless masonry cradles or encasements are used.
11. Mechanical excavation of the trench to line and grade of the conduit or to the bottom level of masonry cradles or encasements is permitted, unless otherwise indicated on the electrical drawings.

12. Mechanical excavation of the trench to line and grade where direct burial cables are to be installed is permitted provided the excavation is made to a depth to permit installation of the cable on a fine sand bed at least 3 inches deep.
- C. Dewatering:
1. Furnish, install, operate and remove all dewatering pumps and pipes needed to keep trenches and pits free of water.
- D. Underground Obstructions:
1. Known underground piping, conduit, feeders, foundations, and other obstructions in the vicinity of construction are shown on the drawings. Review all Bid Documents for all trades on the project to determine obstructions indicated. Take great care in making installations near underground obstructions.
 2. If objects not shown on the drawings are encountered, remove, relocate, or perform extra work as directed by the Architect/Engineer.
- E. Fill and Backfilling:
1. No rubbish or waste material is permitted for fill or backfill.
 2. Furnish all necessary sand for backfilling.
 3. Dispose of the excess excavated earth as directed.
 4. Backfill materials shall be suitable for required compaction, clean and free of perishable materials, frozen earth, debris, earth with a high void content, and stones greater than 4 inches in diameter. Water is not permitted to rise in unbackfilled trenches.
 5. Backfill all trenches and excavations immediately after installing of conduit, or removing forms, unless other protection is directed.
 6. For conduits that are not concrete encased, lay all conduits on a compacted bed of ground at least 3" deep. Backfill around conduits with ground, in 6" layers and compact each layer.
 7. Backfill with ground up to grade for all conduits under slabs or paved areas. All other conduits shall have ground backfill to 6" above the top of the conduit.
 8. Place all backfill above the ground in uniform layers not exceeding 6" deep. Place then carefully and uniformly tamp each layer to eliminate lateral or vertical displacement.
 9. After backfilling of trenches, no superficial loads shall be placed on the exposed surface of the backfill until a period of 48 hours has elapsed.
- F. Surface Restoration:
1. Where trenches are cut through graded, planted or landscaped areas, the areas shall be restored to the original condition. Replace all planting and landscaping

features removed or damaged to its original condition. At least 6" of topsoil shall be applied where disturbed areas are to be seeded or sodded. All lawn areas shall be sodded unless seeding is called out in the drawings or specifications.

2. Concrete or asphalt type pavement, seal coat, rock, gravel or earth surfaces removed or damaged shall be replaced with comparable materials and restored to original condition. Broken edges shall be saw cut and repaired as directed by Architect/Engineer.

3.3 ENGINEER OBSERVATION OF WORK

- A. The contractor shall provide three (3) calendar days notice to the Engineer prior to:
 1. Placing fill over underground utilities.
- B. The Engineer will review the installation and provide a written report noting deficiencies requiring correction. The contractor's schedule shall account for these reviews and show them as line items in the approved schedule.

3.4 PROJECT CLOSEOUT

- A. The following paragraphs supplement the requirements of Division 1.
- B. Final Jobsite Observation:
 1. In order to prevent the Final Jobsite Observation from occurring too early, the Contractor shall review the completion status of the project and certify that the job is ready for the final jobsite observation.
 2. It is understood that if the Engineer finds the job not ready for the final observation and additional trips and observations are required to bring the project to completion, the cost of the additional time and expenses incurred by the Engineers will be deducted from the Contractor's final payment.
- C. The following must be submitted before Architect/Engineer recommends final payment:
 1. Operation and maintenance manuals with copies of approved shop drawings.
 2. Record documents including marked-up drawings and specifications.
 3. A report documenting the instructions given to the Using Agency's representatives complete with the number of hours spent in the instruction. The report shall bear the signature of an authorized agent of this Contractor and shall be signed by the Using Agency's representatives.
 4. Provide spare parts, maintenance, and extra materials in quantities specified in individual specification sections. Deliver to project site and place in location as directed and submit receipt to Architect/Engineer.

3.5 OPERATION AND MAINTENANCE INSTRUCTIONS

- A. Submit three (3) properly indexed and bound copies, in “D” ring style notebooks, of the Operations and Maintenance Instructions to the Architect/Engineer. Make all corrections or additions required.
- B. Operation and Maintenance Instructions shall include:
 - 1. Notebooks shall be heavy duty locking three ring binders and incorporate clear vinyl sheet sleeves on the front cover and spine for slip-in labeling. “Peel and stick” labels are **not** acceptable. Sheet lifters shall be supplied at the front of each notebook. Provide “Wilson-Jones” or equal, color black. Size notebooks a minimum of 1/2" thicker than material for future inserts. Label the spine and front cover of each notebook. If more than one notebook is required, label in consecutive order. For example; 1 of 2, 2 of 2. No other forms of binding will be acceptable.
 - 2. Prepare binder covers (front and spine) with printed title “Operation and Maintenance Instructions”, title of project, and subject matter of binder when multiple binders are required.
 - 3. Title page with project title, Architect, Engineer, Contractor, and Subcontractor with addresses, telephone numbers, and contacts.
 - 4. Table of Contents describing all index tabs.
 - 5. Listing of all Subcontractors and major equipment suppliers with addresses, telephone numbers, and contacts.
 - 6. Index tabs dividing information by specification section, major equipment, or systems. All tab titles shall be clearly printed under reinforced plastic tabs. Label all equipment to match the identification in the construction documents.
 - 7. Copies of warranties.
 - 8. Copies of all final approved shop drawings and submittals. Copy of power system study and overcurrent protective device settings.
 - 9. Copies of all factory inspection and/or equipment start-up reports.
- C. Operation and maintenance data shall consist of written instructions for the care, maintenance, and operation of the equipment and systems. Instruction books, cards, manuals furnished with the equipment shall be included.

3.6 INSTRUCTING THE USING AGENCY'S REPRESENTATIVE

- A. Adequately instruct the Using Agency's designated representatives in the maintenance, care, and operation of the complete systems installed under this contract.
- B. Provide verbal and written instructions to the Using Agency's representatives by **FACTORY PERSONNEL** in the care, maintenance, and operation of the equipment and systems.

- C. The Using Agency has the option to make a video recording of all instructions. Coordinate schedule of instructions to facilitate this recording.
- D. The instructions shall include:
 - 1. Maintenance of equipment.
 - 2. Start-up procedures for all major equipment.
- E. Notify the Architect/Engineer of the time and place for the verbal instructions to the Using Agency's representative so his representative can be present if desired.
- F. Minimum hours of instruction time for each item and/or system shall be as indicated in each individual specification section.
- G. Operating Instructions:
 - 1. Contractor is responsible for all instructions to the Using Agency's representatives for the electrical and specialized systems.
 - 2. If the Contractor does not have staff that can adequately provide the required instructions, he shall include in his bid an adequate amount to reimburse the Using Agency for the Engineer to perform these services.

3.7 RECORD DOCUMENTS

- A. The following paragraphs supplement the requirements of Division 1.
- B. Maintain at the job site a separate and complete set of electrical drawings and specifications with all changes made to the systems clearly and permanently marked in complete detail.
- C. Mark drawings and specifications to indicate approved substitutions; Change Orders, and actual equipment and materials used. All Change Orders, RFI responses, Clarifications and other supplemental instructions shall be marked on the documents. Record documents that merely reference the existence of the above items are not acceptable. Should this Contractor fail to complete Record Documents as required by this contract, this Contractor shall reimburse Architect/Engineer for all costs to develop record documents that comply with this requirement. Reimbursement shall be made at the Architect/Engineer's hourly rates in effect at the time of work.
- D. Record changes daily and keep the marked drawings available for the Architect/Engineer's examination at any normal work time.
- E. Upon completing the job, and before final payment is made, give the marked-up drawings to the Architect/Engineer.

3.8 PAINTING

- A. Paint all equipment that is marred or damaged prior to the Using Agency's acceptance. Paint and color shall match original equipment paint and shall be obtained from the equipment supplier if available. All equipment shall have a finished coat of paint applied unless specifically allowed to be provided with a prime coat only.

3.9 ADJUST AND CLEAN

- A. Thoroughly clean all equipment and systems prior to the Using Agency's final acceptance of the project.
- B. Clean all foreign paint, grease, oil, dirt, labels, stickers, etc. from all equipment.
- C. Remove all rubbish, debris, etc., accumulated during construction from the premises.

3.10 SPECIAL REQUIREMENTS

- A. Install all equipment to maximize access to parts needing service or maintenance. Review the final location, placement, and orientation of equipment with the Using Agency's representative prior to setting equipment.
- B. Installation of equipment or devices without regard to coordination of access requirements and confirmation with the Using Agency's representative will result in removal and reinstallation of the equipment at the Contractor's expense.

3.11 SYSTEM COMMISSIONING

- A. The electrical systems shall be complete and operating. System start-up, testing, balancing, and satisfactory system performance is the responsibility of the Contractor. This includes all calibration and adjustment of electrical controls, balancing of loads, troubleshooting and verification of software, and final adjustments that may be needed.
- B. All operating conditions and control sequences shall be tested during the start-up period. Testing all interlocks, safety shut-downs, controls, and alarms.
 - 1. The Contractor, subcontractors, and equipment suppliers shall have skilled technicians to ensure that all systems perform properly. If the Architect/Engineer is requested to visit the job site for trouble shooting, assisting in start-up, obtaining satisfactory equipment operation, resolving installation and/or workmanship problems, equipment substitution issues or unsatisfactory system performance, including call backs during the warranty period, through no fault of the design; the Contractor shall reimburse the Using Agency on a time and materials basis for services rendered at the Architect/Engineer's standard hourly rates in effect when the services are requested. The Contractor shall pay the Using Agency for services required that are product, installation or workmanship related. Payment is due within 30 days after services are rendered.

3.12 FIELD QUALITY CONTROL

- A. General:
 - 1. Conduct all tests required during and after construction.
 - 2. Supply necessary instruments, meters, etc., for the tests. Supply competent technicians with training in the proper testing techniques.
 - 3. All cables and wires shall be tested for shorts and grounds following installation and connection to devices. Replace shorted or grounded wires and cables.

4. Any wiring device, electrical apparatus or lighting fixture, if grounded or shorted on any integral "live" part, shall have all defective parts or materials replaced.
 5. Test cable insulation of service and panel feeder conductors for proper insulation values. Tests shall include the cable, all splices, and all terminations. Each conductor shall be tested and shall test free of short circuits and grounds and have an insulation value not less than the National Electrical Code Standards. Take readings between conductors, and between conductors and ground.
 6. If the results obtained in the tests are not satisfactory make adjustments, replacements, and changes as needed. Then repeat the tests, and make additional tests, as the Architect/Engineer or authority having jurisdiction deems necessary.
- B. Other Equipment:
1. Give other equipment furnished and installed by the Contractor all standard tests normally made to assure that the equipment is electrically sound, all connections properly made, phase rotation correct, fuses and thermal elements suitable for protection against overloads, voltage complies with equipment nameplate rating, and full load amperes are within equipment rating.
- C. If any test results are not satisfactory, make adjustments, replacements and changes as needed and repeat the tests and make additional tests as the Architect/Engineer or authority having jurisdiction deem necessary.

END OF SECTION

DIVISION 26 05 05 ELECTRICAL
26 05 05 - Electrical Demolition For Remodeling

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Electrical Contractor Provides:
 - a. Electrical demolition
- B. Alternate Bid #1:
 - 1. Electrical Contractor Provides:
 - a. Electrical demolition

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work shall be as specified in individual Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
- B. Verify that abandoned wiring and equipment serve only abandoned equipment or facilities. Extend conduit and wire to facilities and equipment that will remain in operation following demolition. Extension of conduit and wire to equipment shall be compatible with the surrounding area. Extended conduit and conductors to match existing size and material.
- C. Coordinate scope of work with all other Contractors and the Using Agency at the project site. Schedule removal of equipment and electrical service to avoid conflicts.
- D. Bid submittal shall mean the Contractor has visited the project site and has verified existing conditions and scope of work.

3.2 PREPARATION

- A. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use

personnel experienced in such operations. Assume all equipment and systems must remain operational unless specifically noted otherwise on drawings.

- B. Existing Ring Road Lighting System: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from the Using Agency at least 48 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Demolish and extend existing electrical work under provisions of Division 1 of Specifications and this Section.
- B. Remove, relocate, and extend existing installations to accommodate new construction.
- C. Remove abandoned wiring and raceway to source of supply.
- D. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- E. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories. Ballasts in light fixtures installed prior to 1980 shall be incinerated in EPA approved incinerator or disposed of in EPA certified containers and deposited in an EPA landfill certified for PCB disposal or recycled by permitted ballast recycler. Punctured or leaking ballasts must be disposed of according to Federal Regulations under the Toxic Substance Control Act. Provide Using Agency and Engineer with a Certificate of Destruction to verify proper disposal.
- F. Repair adjacent construction and finishes damaged during demolition and extension work. Patch openings to match existing surrounding finishes.
- G. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
- H. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified. Extended conduit and conductors to match existing size and material.
- I. HID and fluorescent lamps, determined by the Toxicity Characteristic Leachate procedure (TCLP), to be hazardous waste shall be disposed of in a permitted hazardous waste disposal facility or by a permitted lamp recycler. . Provide Using Agency and Engineer with a Certificate of Destruction to verify proper disposal.
- J. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- K. This Contractor is responsible for all costs incurred in repair, relocations, or replacement of any cables, conduits, or other services if damaged without proper investigation.
- L. Emergency phone batteries shall be recycled by permitted battery recycler. Provide using Agency and Engineer with a certificate to verify proper disposal.

- M. Metal Poles and heads shall be recycled by permitted metal recycler. Provide using Agency and Engineer with a certification to verify proper disposal.
- N. Concrete pole base shall be recycled by permitted concrete recycler. Provide using Agency and Engineer with a certification to verify proper disposal.
- O. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.
- P. ELECTRICAL ITEMS (E.G., LIGHTING FIXTURES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE USING AGENCY. CONTRACTOR SHALL PLACE ITEMS RETAINED BY THE USING AGENCY IN A LOCATION COORDINATED WITH THE USING AGENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE USING AGENCY DOES NOT WANT.

3.4 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment that remain or are to be reused.

3.5 INSTALLATION

- A. Install relocated materials and equipment under the provisions of Division 1 of Specifications.

END OF SECTION

DIVISION 26 ELECTRICAL
26 05 13 - Wire and Cable

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Electrical Contractor Provides:
 - a. Building wire

1.2 REFERENCES

- A. NEMA WC 70 - Power Cables Rated 2,000V or Less for the Distribution of Electrical Energy
- B. UL 44 – Thermoset-Insulated Wires and Cables
- C. UL 83 – Thermoplastic-Insulated Wires and Cables
- D. UL 1581 – Standard for Electrical Wires, Cables, and Flexible Cords

PART 2 - PRODUCTS

2.1 BUILDING WIRE

- A. Feeders and Branch Circuits Larger Than 6 AWG: Copper, stranded conductor, 600 volt insulation, THHN/THWN.
- B. Feeders and Branch Circuits Larger than 6 AWG in Underground Conduit: Copper, stranded conductor, 600 volt insulation, THWN.
- C. Feeders and Branch Circuits 6 AWG and Smaller: Copper conductor, 600 volt insulation, THHN/THWN. 6 and 8 AWG, stranded conductor; smaller than 8 AWG, solid or stranded conductor, unless otherwise noted on the drawings.

PART 3 - EXECUTION

3.1 WIRE INSTALLATION SCHEDULE

- A. Building wire in raceway.

3.2 CONTRACTOR CHANGES

- A. The basis of design is copper conductors installed in raceway based on ambient temperature of 30°C, NEC Table 310.16.

- B. The Contractor shall be responsible for derating and sizing conductors and conduits to equal or exceed the ampacity of the basis of design circuits, if he/she chooses to use methods or materials other than the basis of design.
- C. Record drawing shall include the calculations and sketches.

3.3 GENERAL WIRING METHODS

- A. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 14 AWG for control wiring.
- B. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 75 feet, and for 20 ampere, 277 volt branch circuit home runs longer than 200 feet.
- C. Use no wire smaller than 8 AWG for outdoor lighting circuits.
- D. The ampacity of multiple conductors in one conduit shall be derated per National Electrical Code, Article 310. In no case shall more than 4 conductors be installed in one conduit to such loads as motors larger than 1/4 HP, panelboards, motor control centers, etc.
- E. Where installing parallel feeders, place an equal number of conductors for each phase of a circuit in same raceway or cable.
- F. Splice only in junction or outlet boxes.
- G. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- H. Make conductor lengths for parallel circuits equal.
- I. All conductors shall be continuous in conduit from last outlet to their termination.
- J. Terminate all spare conductors on terminal blocks, and label the spare conductors.

3.4 WIRING INSTALLATION IN RACEWAYS

- A. Pull all conductors into a raceway at the same time. Use UL listed wire pulling lubricant for pulling 4 AWG and larger wires.
- B. Install wire in raceway after interior of building has been physically protected from the weather and all mechanical work likely to injure conductors has been completed.
- C. Pulling shall be continuous without unnecessary stops and starts with wire or cable only partially thru raceway.
- D. Where reels of cable or wire are used, they shall be set up on jacks close to the point where the wire or cable enters the conduit or duct so that the cable or wire may be unreel and run into the conduit or duct with a minimum of change in the direction of the bend.
- E. Cables or wires shall not be laid out on the ground before pulling.
- F. Cables or wires shall not be dragged over earth or paving.

- G. Care shall be taken so as not to subject the cable or wire to high mechanical stresses that would cause damage to the wire and cable.
- H. Conductors shall not be pulled through conduits until plastering or masonry work is completed and conduits are free from moisture. Care shall be taken so that long pulls of wire or pulls around several bends are not made where the wire may be permanently stretched and the insulation damaged.
- I. Only nylon rope shall be permitted to pull cables into conduit and ducts.
- J. At least six (6) inch loops or ends shall be left at each outlet for installation connection of luminaires or other devices.
- K. All wires in outlet boxes not connected to fixtures or other devices shall be rolled up, spliced if continuity of circuit is required, and insulated.
- L. Completely and thoroughly swab raceway system before installing conductors.

3.5 WIRING CONNECTIONS AND TERMINATIONS

- A. Splice and tap only in accessible junction boxes.
- B. Use solderless, tin-plated copper, compression terminals (lugs) applied with circumferential crimp for copper conductor terminations, 8 AWG and larger.
- C. Use solderless, tin-plated, compression terminals (lugs) applied with indenter crimp for copper conductor terminations, 10 AWG and smaller.
- D. Use solderless pressure connectors with insulating covers for copper wire splices and taps, 8 AWG and smaller. For 10 AWG and smaller, use insulated spring wire connectors with plastic caps.
- E. Use copper, compression connectors applied with circumferential crimp for copper wire splices and taps, 6 AWG and larger. Tape uninsulated conductors and connectors with electrical tape to 150 percent of the insulation value of conductor.
- F. Thoroughly clean wires before installing lugs and connectors.
- G. Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.
- H. Phase Sequence: All apparatus shall be connected to operate in the phase sequence A-B-C representing the time sequence in which the phase conductors so identified reach positive maximum voltage.
- I. As a general rule, applicable to switches, circuit breakers, starters, panelboards, switchgear and the like, the connections to phase conductors are intended thus:
 - 1. Facing the front and operating side of the equipment, the phase identification shall be:
 - a. Left to Right - A-B-C
 - b. Top to Bottom - A-B-C

- J. Connection revisions as required to achieve correct rotation of motors shall be made at the load terminals of the starters or disconnect switches.

3.6 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Division 1.
- B. Building Wire and Power Cable Testing: Test shall be made by means of an insulation testing device such as a “Megger” using not less than 500 volts D.C. test potential.
- C. Inspect wire and cable for physical damage and proper connection.
- D. Torque test conductor connections and terminations to manufacturer's recommended values.
- E. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. Electrical Contractor Provides:

- a. Rigid metallic conduit and fittings
- b. Electrical metallic tubing and fittings
- c. Flexible metallic conduit and fittings
- d. Liquidtight flexible metallic conduit and fittings
- e. Rigid non-metallic conduit and fittings
- f. High density polyethylene conduit and fittings
- g. Pull and junction boxes

B. Alternate Bid #2:

1. Electrical Contractor Provides:

- a. Rigid metallic conduit and fittings
- b. Electrical metallic tubing and fittings
- c. Rigid non metallic conduit and fittings
- d. High density polyethylene conduit and fittings
- e. Pull and junction boxes

1.2 REFERENCES

A. American National Standards Institute (ANSI):

1. ANSI C80.1 - Rigid Steel Conduit, Zinc-Coated
2. ANSI C80.3 - Electrical Metallic Tubing, Zinc-Coated and Fittings
3. ANSI C80.4 - Fittings for Rigid Metal Conduit and Electrical Metallic Tubing
4. ANSI/NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers and Box Supports
5. ANSI/NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

B. NECA "Standards of Installation"

C. National Electrical Manufacturers Association (NEMA):

1. ANSI/NEMA FB 1 – Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing and Cable
2. RN 1 – Polyvinyl chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit
3. TC 2 – Electrical Polyvinyl Chloride (PVC) Conduit
4. TC 9 – Fittings for PVC Plastic Utilities Duct for Underground Installation

- D. National Fire Protection Association (NFPA):
1. ANSI/NFPA 70 – National Electrical Code
- E. Underwriters Laboratories (UL): Applicable Listings
1. UL 1 – Flexible Metal Conduit
 2. UL 6 – Rigid Metal Conduit
 3. UL 360 – Liquid Tight Flexible Steel Conduit
 4. UL514-B – Conduit Tubing and Cable Fittings
 5. UL651-A – Type EB and a PVC Conduit and HDPE Conduit
 6. UL651-B – Continuous Length HDPE Conduit
 7. UL746A – Standard for Polymeric Materials – Short Term Property Evaluations
 8. UL797 – Electrical Metal Tubing
 9. UL1242 – Intermediate Metal Conduit
- F. American Standard of Testing and Materials (ASTM):
1. ASTM D 570 - Standard Test Method for Water Absorption of Plastics
 2. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics
 3. ASTM D 648 - Standard Test Method for Deflection Temperature of Plastics under Flexural Load in the Edge Wise Position
 4. ASTM D 2412 - Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
 5. ASTM D 2447 - Standard Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter
 6. ASTM D 3350 - Standard Specification for Polyethylene Plastic Pipe and Fittings Material
- G. Definitions:
1. Fittings: Conduit connection or coupling.
 2. Body: Enlarged fittings with opening allowing access to the conductors for pulling purposes only.
 3. Mechanical Spaces: Enclosed areas, usually kept separated from the general public, where the primary use is to house service equipment and to route services. These spaces generally have exposed structures, bare concrete and non-architecturally emphasized finishes.
 4. Finished Spaces: Enclosed areas where the primary use is to house personnel and the general public. These spaces generally have architecturally emphasized finishes, ceilings and/or floors.
 5. Concealed: Not visible by the general public. Often indicates a location either above the ceiling, in the walls, in or beneath the floor slab, in column coverings, or in the ceiling construction.
 6. Above Grade: Not directly in contact with the earth. For example, an interior wall located at an elevation below the finished grade shall be considered above grade but a wall retaining earth shall be considered below grade.

7. Slab: Horizontal pour of concrete used for the purpose of a floor or sub-floor.

PART 2 - PRODUCTS

2.1 RIGID METALLIC CONDUIT (RMC) AND FITTINGS

- A. Acceptable Manufacturers:
 1. Acceptable Manufacturers: Allied, LTV, Steelduct, Wheatland Tube Co, O-Z Gedney, or approved equal.
 2. Acceptable Manufacturers of RMC Conduit Fittings: Appleton Electric, O-Z/Gedney Co., Electroline, Raco, Bridgeport, Midwest, Regal, Thomas & Betts, Crouse-Hinds, Killark, or approved equal.
- B. Minimum Size Galvanized Steel: 3/4 inch (19mm), unless otherwise noted.
- C. Fittings and Conduit Bodies:
 1. End Bell Fittings: Malleable iron, hot dip galvanized, threaded flare type with provisions for mounting to form.
 2. Expansion Joints: Malleable iron and hot dip galvanized providing a minimum of 4 inches of movement. Fitting shall be watertight with an insulating bushing and a bonding jumper.
 3. Expansion Joint for Concrete Encased Conduit: Neoprene sleeve with bronze end coupling, stainless steel bands and tinned copper braid bonding jumper. Fittings shall be watertight and concrete-tight.
 4. Conduit End Bushings: Malleable iron type with molded-on high impact phenolic thermosetting insulation. Where required elsewhere in the contract documents, bushing shall be complete with ground conductor saddle and clamp. **High impact phenolic threaded type bushings are not acceptable.**
 5. All other fittings and conduit bodies shall be of malleable iron construction and hot dip galvanized.
- D. PVC Externally Coated Conduit: NEMA RN 1; rigid steel conduit with external 20 mil PVC coating and internal galvanized surface. All fittings and conduit bodies shall be complete with coating. Acceptable Manufacturers: Robroy, Permacote, or approved equal.

2.2 ELECTRICAL METALLIC TUBING (EMT) AND FITTINGS

- A. Minimum Size Electrical Metallic Tubing: 3/4 inch, unless otherwise noted.
- B. Acceptable Manufacturers of EMT Conduit: Allied, LTV, Steelduct, Wheatland Tube Co, or approved equal.

- C. Fittings and Conduit Bodies:
 - 1. 2" Diameter or Smaller: Compression type of steel designed for their specific application.
 - 2. Larger than 2": Compression type of steel designed for their specific application.
 - 3. Acceptable Manufacturers of EMT Conduit Fittings: Appleton Electric, O-Z/Gedney Co., Electroline, Raco, Bridgeport, Midwest, Regal, Thomas & Betts, or approved equal.

2.3 FLEXIBLE METALLIC CONDUIT (FMC) AND FITTINGS

- A. Minimum Size Galvanized Steel: 3/4 inch, unless otherwise noted. Lighting branch circuit wiring to an individual luminaire may be a manufactured, UL listed 3/8" flexible metal conduit with #12 AWG THHN conductors and an insulated ground wire.
- B. Acceptable Manufacturers: American Flex, Alflex, Electri-Flex Co, or approved equal.
- C. Construction: Flexible steel, approved for conduit ground, zinc coated, threadless type formed from a continuous length of spirally wound, interlocked zinc coated strip steel. Provide a separate equipment grounding conductor when used for equipment where flexibility is required.
- D. Fittings and Conduit Bodies:
 - 1. Threadless hinged clamp type, galvanized zinc coated cadmium plated malleable cast iron.
 - 2. Fittings and conduit bodies shall include plastic or cast metal inserts supplied by the manufacturer to protect conductors from sharp edges.
 - 3. Acceptable Manufacturers: O-Z/Gedney Co., Thomas & Betts, Appleton Electric, Electroline, Bridgeport, Midwest, Regal, or approved equal.

2.4 LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC) AND FITTINGS

- A. Acceptable Manufacturers: Anaconda Type UA, Electri-Flex Type LA, Alflex, Carlon (Lamson & Sessions), or approved equal.
- B. Construction: Flexible steel, approved for conduit ground, zinc coated, threadless type formed from a continuous length of spirally wound, interlocked zinc coated strip steel and an extruded PVC cover.
- C. Fittings and Conduit Bodies:
 - 1. Watertight, compression type, galvanized zinc coated cadmium plated malleable cast iron, UL listed.
 - 2. Fittings and conduit bodies shall include plastic or cast metal inserts supplied by the manufacturer to protect conductors from sharp edges.

3. Acceptable Manufacturers: Appleton Electric, O-Z/Gedney Co., Electroline, Bridgeport, Thomas & Betts, Midwest, Regal, Carlon (Lamson & Sessions), or approved equal.

2.5 RIGID NON-METALLIC CONDUIT (RNC) AND FITTINGS

- A. Minimum Size Rigid Smooth-Wall Nonmetallic Conduit: 3/4 inch, unless otherwise noted.
- B. Acceptable Manufacturers: Carlon (Lamson & Sessions) Type 40, Cantex, J.M. Mfg., or approved equal.
- C. Construction: Schedule 40 and Schedule 80 rigid polyvinyl chloride (PVC), UL labeled for 90°C.
- D. Fittings and Conduit Bodies: NEMA TC 3; sleeve type suitable for and manufactured especially for use with the conduit by the conduit manufacturer.
- E. Plastic cement for joining conduit and fittings shall be provided as recommended by the manufacturer.

2.6 HIGH DENSITY POLYETHYLENE

- A. Minimum Size: 2 inch, unless noted otherwise.
- B. Acceptable Manufacturers: Carlon, Chevron Phillips Chemical Company, or approved equal.
- C. Materials used for the manufacture of polyethylene pipe and fittings shall be extra high molecular weight, high-density polyethylene resin. The material shall be listed by PPI (Plastic Pipe Institute) and shall meet the following resin properties:

ASTM Test	Description	Values HDPE
D-1505	Density g/CM ³	< .941
D-1238	Melt Index, g/10 min Condition E	> .55 grams/10 min.
D-638	Tensile Strength at yield (psi)	3000 min.
D-1693	Environmental Stress Crack Resistance Condition B, F 20	96 hrs.
D-790	Flexural Modulus, MPa (psi)	< 80,000
D-746	Brittleness Temperature	-75°C Max

- D. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same raw material, including both the base resin and coextruded resin. The pipe shall be homogeneous throughout and free of visible cracks, holes, voids, foreign inclusions, or other defects that may affect the wall integrity.
- E. Fitting and Conduit Bodies:
 1. Directional Bore and Plow Type Installation: Electrofusion or Universal Aluminum threaded couplings. Tensile strength of coupled pipe must be greater than 2,000 lbs.

2. For all other type of installation: Coupler must provide a water tight connection. The tensile strength of coupled pipe must be greater than 1,000 lbs.
3. E-loc type couplings are not acceptable in any situations.
4. Acceptable Manufacturers: ARCON, Carlon, or approved equal.

2.7 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: ANSI/NEMA OS 1; galvanized steel.
- B. Sheet metal boxes larger than 12 inches in any dimension that contain terminations or components: Continuous hinged enclosure with 1/4 turn latch and white back panel for mounting terminal blocks and electrical components.
- C. Cast Metal Boxes for Outdoor and Wet Location Installations: NEMA 250; Type 4 and Type 6, flat-flanged, surface-mounted junction box, UL listed as raintight. Galvanized cast iron box and cover with ground flange, neoprene gasket, and stainless steel cover screws.
- D. Handholes for Underground Installations: Precast composite polymer concrete stackable body with conduit entry holes at center bottom of each side; composite polymer concrete cover with logo and skid resistant surface and stainless steel bolts. ANSI/SCTE 77 compliant for intended applications. Die-molded with pre-cut 6 x 6 inch cable entrance at center bottom of each side.
- E. Flanged type boxes shall be used where installed flush in wall.

PART 3 - EXECUTION

3.1 CONDUIT SIZING

- A. Size conduit as shown on the drawings and specifications. Where not indicated in the contract documents, conduit size shall be according to N.E.C. (Latest Edition). Conduit and conductor sizing shall be coordinated to limit conductor fill to less than 40%, maintain conductor ampere capacity as required by the National Electrical Code (to include enlarged conductors due to temperature and quantity derating values) and to prevent excessive voltage drop and pulling tension due to long conduit/conductor lengths.
- B. Minimum Conduit Size (Unless Noted Otherwise):
 1. Above Grade: 3/4 inch.
 2. Below Grade: 1 1/4 inch.
- C. Conduit sizes shall change only at the entrance or exit to a junction box, unless specifically noted on the drawings.

3.2 CONDUIT ARRANGEMENT

- A. In general, conduit shall be installed concealed in walls, in finished spaces and where possible or practical, or as noted otherwise. In unfinished spaces, mechanical and utility

areas, conduit may run either concealed or exposed as conditions dictate and as practical unless noted otherwise on drawings. Installation shall maintain headroom in exposed vicinities of pedestrian or vehicular traffic.

- B. Conduit runs shall be routed as shown on large scale drawings. Conduit routing on drawings scaled 1/4"=1'-0" or less shall be considered diagrammatic, unless noted otherwise. The correct routing, when shown diagrammatically shall be chosen by the Contractor based on information in the contract documents, in accordance with manufacturer's written instructions, applicable codes, the NECA's "Standard of Installation", in accordance with recognized industry standards, and coordinated with other contractors.
- C. Contractor shall adapt his work to the job conditions and make such changes as required and permitted by the Architect/Engineer, such as moving to clear beams and joists, adjusting at columns, avoiding interference with windows, etc., to permit the proper installation of other mechanical and/or electrical equipment.
- D. Contractor shall cooperate with all Contractors on the project. He shall obtain details of other Contractor's work in order to ensure fit and avoid conflict. Any expense due to the failure of This Contractor to do so shall be paid for in full by him. The other trades involved as directed by the Architect/Engineer shall perform the repair of work damaged as a result of neglect or error by This Contractor. The resultant costs shall be borne by This Contractor.

3.3 CONDUIT SUPPORT

- A. Conduit runs installed above a suspended ceiling shall be properly supported. In no case shall conduit rest on the suspended ceiling construction, nor utilize ceiling support system for conduit support.
- B. Conduit shall not be supported from ductwork, water, sprinkler piping, or other non-structural members, unless approved by the Architect/Engineer. All supports shall be from structural slabs, walls, structural members, and bar joists, and coordinated with all other applicable contractors, unless noted otherwise.
- C. Conduit shall be held in place by the correct size of galvanized one-hole conduit clamps, two-hole conduit straps, patented support devices, clamp back conduit hangers, or by other means if called for on the drawings.
- D. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.
- E. Spring-steel conduit clips specifically designed for supporting single conduits or tubing may be used in lieu of malleable-iron hangers for 1-1/2" and smaller raceways serving lighting and receptacle branch circuits above accessible ceilings and for securing raceways to slotted channel and angle supports.
- F. Group conduits in parallel runs where practical and use conduit racks or trapeze hangers constructed of steel channel, suspended with threaded solid rods or wall mounted from metal channels with conduit straps or clamps. Provide space in each rack or trapeze for 25% additional conduits.

- G. Do not exceed 25 lbs. per hanger and a minimum spacing of 2'-0" on center when attaching to metal roof decking (excludes concrete on metal deck). This 25 lbs. load and 2'-0" spacing include adjacent electrical and mechanical items hanging from deck. If the hanger restrictions cannot be achieved, supplemental framing off steel framing will need to be added.
- H. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.
- I. Supports for metallic conduit shall be no greater than 10 feet. A smaller interval may be used if necessitated by building construction, but in no event shall support spans exceed the National Electrical Code requirements. Conduit shall be securely fastened within 3 feet of each outlet box, junction box, device box, cabinet, or fitting.
- J. Supports of flexible conduit shall be within 12 inches of each outlet box, junction box, device box, cabinet, or fitting and at intervals not to exceed 4.5 feet.
- K. Supports for non-metallic conduit shall be at sufficiently close intervals to eliminate any sag in the conduit. The manufacturer's recommendations shall be followed, but in no event shall support spans exceed the National Electrical Code requirements.
- L. Finish:
 - 1. Prime coat exposed steel hangers and supports. Hangers and supports in crawl spaces, pipe shafts, and above suspended ceiling spaces are not considered exposed.
 - 2. Trim all ends of exposed field fabricated steel hangers, slotted channel and threaded rod to within 1" of support or fastener to eliminate potential injury to personnel unless shown otherwise on the drawings. Smooth ends and install elastomeric insulation with two coats of latex paint if exposed steel is within 6'-6" of finish floor and presents potential injury to personnel.

3.4 CONDUIT INSTALLATION

- A. Conduit Connections:
 - 1. Shorter than standard conduit lengths shall be cut square using industry standards. The ends of all conduits cut shall be reamed or otherwise finished to remove all rough edges.
 - 2. Metallic conduit connections in slab on grade installation shall be sealed and one coat of rust inhibitor primer applied after the connection is made.
 - 3. Where conduits with tapered threads cannot be coupled with standard couplings, then approved split or Erickson couplings shall be used. Running threads will not be permitted.
 - 4. Install expansion/deflection joints where conduit crosses structure expansion/seismic joints.
- B. Conduit terminations for all low voltage wiring shall have nylon bushings installed on each end of every conduit run.

C. Conduit Bends:

1. Use a hydraulic one-shot conduit bender or factory elbows for bends in conduit 2" in size or larger. All steel conduit bending shall be done cold; no heating of steel conduit shall be permitted.
2. All bends of rigid non-metallic conduit (RNC) shall be made with the manufacturer's approved bending equipment. The use of spot heating devices will not be permitted (i.e. blow torches).
3. A run of conduit shall not contain more than the equivalent of four (4) quarter bends (360°), including those bends located immediately at the outlet or body.
4. Rigid non-metallic conduit (RNC) runs longer than 100 feet or runs which have more than two 90° equivalent bends (regardless of length) shall use rigid metal or RTRC factory elbows for bends.
5. Use conduit bodies to make sharp changes in direction (i.e. around beams).

D. Conduit Placement:

1. Conduit shall be mechanically continuous from source of current to all outlets. Conduit shall be electrically continuous from source of current to all outlets, unless a properly sized grounding conductor is routed within the conduit. All metallic conduits shall be bonded per the National Electrical Code.
2. Route exposed conduit and conduit above suspended ceilings (accessible or not) parallel/perpendicular to the building structural lines, and as close to building structure as possible. Wherever possible, route horizontal conduit runs above water and steam piping.
3. Route conduit through roof openings provided for piping and ductwork where possible. If not provided or routing through provided openings is not possible, route through roof jack with pitch pocket. Coordinate roof penetrations with other trades.
4. Conduits, raceway, and boxes shall not be installed in concealed locations in metal deck roofing or less than 1.5" below bottom of roof decking.
5. Avoid moisture traps where possible. Where unavoidable, provide a junction box with drain fitting at conduit low point.
6. All conduits through walls shall be grouted or sealed into openings. Where conduit penetrates firewalls and floors, seal with a UL listed sealant. Seal penetrations with intumescent caulk, putty, or sheet installed per manufacturer's recommendations. All materials used to seal penetrations of firewalls and floors shall be tested and certified as a system per ASTM E814 Standard for fire tests or through-penetration fire stops as manufactured by 3M or approved equal.
7. **CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN MASONRY OR EXTERIOR WALLS UNDER THIS DIVISION. A QUALIFIED MASON AT THE EXPENSE OF THIS**

CONTRACTOR SHALL REPAIR ALL OPENINGS TO MATCH EXISTING CONDITIONS.

8. Seal interior of conduit at exterior entries, etc., and where the temperature differential can potentially be greater than 20°F, to prevent moisture penetration. Seal shall be placed where conduit enters warm space. Conduit seal fitting shall be a drain/seal, with sealing compound, equal to O-Z/Gedney type EYD.
9. Rigid non-metallic conduit (RNC) shall be installed when material surface temperatures and ambient temperature are greater than 40°F.
10. Where rigid non-metallic conduit (RNC) conduit is used below grade, in a slab, below a slab, etc., a transition to rigid galvanized steel or PVC-coated steel conduit shall be installed before conduit exits earth. The metallic conduit shall extend a minimum of 6" into the surface concealing the non-metallic conduit.
11. Contractor shall provide suitable mechanical protection around all conduits stubbed out from floors, walls or ceilings during construction to prevent bending or damaging of stubs due to carelessness with construction equipment.
12. Contractor shall provide a polypropylene pull cord with 2000 lbs. tensile strength in each empty conduit (indoor and outdoor), except in sleeves and nipples.

3.5 CONDUIT TERMINATIONS

- A. Where conduit bonding is indicated or required in the contract documents, the bushings shall be a grounding type sized for the conduit and ground bonding conductor as manufactured by O-Z/Gedney, Appleton, Thomas & Betts, Burndy, Regal, or approved equal.
- B. Conduits with termination fittings shall be threaded for one (1) lock nut on the outside and one (1) lock nut and bushing on the inside of each box.
- C. Where conduits terminate in boxes with knockouts, they shall be secured to the boxes with lock nuts and provided with approved screw type tinned iron bushings or fittings with plastic inserts.
- D. Where conduits terminate in boxes, fittings, or bodies with threaded openings, they shall be tightly screwed against the shoulder portion of the threaded openings.
- E. Conduit terminations to all motors shall be made with flexible metallic conduit (FMC), unless noted otherwise. Final connections to roof exhaust fans, or other exterior motors and motors in damp or wet locations shall be made with liquidtight flexible metallic conduit (LFMC). Motors in hazardous areas, as defined in the National Electrical Code, shall be connected using flexible conduit rated for the environment.
- F. Rigid non-metallic conduit (RNC) conduit shall be terminated using fittings and bodies produced by the manufacturer of the conduit, unless noted otherwise. Prepare conduit as per manufacturer's recommendations before joining. All joints shall be solvent welded by applying full even coat of plastic cement to the entire areas that will be joined. Turn the conduit at least a quarter to one half turn in the fitting and let the joint cure for 1-hour minimum or as per the manufacturer's recommendations.

- G. All conduit ends shall be sealed with plastic immediately after installation to prevent the entrance of any foreign matter during construction. The seals shall be removed and the conduits blown clear of any and all foreign matter prior to any wires or pull cords being installed.

3.6 UNDERGROUND CONDUIT INSTALLATION

A. Conduit Connections:

- 1. Conduit joints in a multiple conduit run shall be staggered at least one foot apart.

B. Conduit Bends (Lateral):

- 1. Conduits shall have long sweep radius elbows instead of standard elbows wherever special bends are indicated and noted on the drawings, or as required by the manufacturer of the equipment or system being served.

C. Conduit Elbows (vertical):

- 1. Minimum metal or RTRC elbow radiuses shall be 30 inches for primary conduits (>600V) and 18 inches for secondary conduits (<600V). Increase radius, as required, based on pulling tension calculation requirements.

D. Conduit Placement:

- 1. Conduit runs shall be pitched a minimum of 4" per 100 feet to drain toward the terminations. Duct runs shall be installed deeper than the minimum wherever required to avoid any conflicts with existing or new piping, tunnels, etc.
- 2. For parallel runs, use suitable separators and chairs installed not greater than 4' on centers. Band conduit together with suitable banding devices. Securely anchor conduit to prevent movement during concrete placement or backfilling.
- 3. Where concrete is required, the materials for concreting shall be thoroughly mixed to a minimum $f'c = 2500$ and immediately placed in the trench around the conduits. No concrete that has been allowed to partially set shall be used.
- 4. Before the Contractor pulls any cables into the conduit he shall have a mandrel 1/4" smaller than the conduit inside diameter pulled through each conduit and if any concrete or obstructions are found, the Contractor shall remove them and clear the conduit. Spare conduit shall also be cleared of all obstructions.
- 5. Conduit terminations in manholes, masonry pull boxes, or masonry walls shall be with malleable iron end bell fittings.
- 6. All spare conduits not terminated in a covered enclosure shall have its terminations plugged as described above.
- 7. All non-metallic conduit installed underground outside of a slab shall be rigid.

E. Horizontal Directional Drilling:

1. Entire drill path shall be accurately surveyed, with entry and exit stakes placed and coordinated with other contractors. If using a magnetic guidance system, entire drill path shall be surveyed for any surface geo-magnetic variations or anomalies.
2. Any utility located within 20 feet of the bore path shall have the exact location physically verified by hand digging or vacuum excavation. Restore inspection holes to original condition after verification.

F. Raceway Seal:

1. Where a raceway enters a building or structure, it shall be sealed with a sealing bushing or duct seal to prevent the entry of liquids or gases. Seal must be compatible with conductors and raceway system. Spare or unused raceway shall also be sealed.

3.7 CONDUIT INSTALLATION SCHEDULE

A. In the event the location of conduit installation represents conflicting installation requirements as specified in the following schedule, a clarification shall be obtained from the Architect/Engineer. If This Contractor is unable to obtain a clarification as outlined above, concealed rigid galvanized steel conduit installed per these specifications and the National Electrical Code shall be required.

B. The following schedule shall be adhered to unless they constitute a violation of applicable codes or are noted otherwise on the drawings. The installation of RMC conduit will be permitted in place of any and all conduit specified in this schedule.

1. Exposed:

- a. Switchboards, panel feeders, etc.: EMT.
- b. Branch Circuits (lighting, receptacles, controls, etc.): EMT.

2. Finished Spaces/Concealed: EMT.

3. Wet or Damp Locations: RMC conduit, boxes and fittings, installed and equipped so as to prevent water from entering the conduit system.

4. In or Under Slabs on Grade or Site Conduits:

- a. Within 5' from the Exterior Perimeter of a Building Foundation: RNC conduit with a minimum of 3" thickness between the surface of the concrete and the nearest conduit. Concrete to be doweled into the foundation.
- b. 5' or Greater from the Exterior Perimeter of a Building Foundation: RNC.
- c. Under Roads, Drives, and Vehicle Traveled Ways: Directional boring: HDPE in RMC or PVC in 3" concrete envelope.

5. Interior Locations:
 - a. Exposed: EMT conduit.
 - b. Concealed: EMT.

3.8 BOX INSTALLATION SCHEDULE

- A. Galvanized steel boxes may be used in:
 1. Concealed interior locations above ceilings and in hollow studded partitions.
 2. Exposed interior locations in mechanical rooms and in rooms without ceilings; higher than 8' above the highest platform level.
 3. Direct contact with concrete except slab on grade.
- B. Cast boxes shall be used in:
 1. Exterior locations.
 2. Exposed interior locations within 8' of the highest platform level.
 3. Direct contact with earth.
 4. Direct contact with concrete in slab on grade.
 5. Wet locations.

3.9 COORDINATION OF BOX LOCATIONS

- A. Provide electrical boxes as shown on the drawings, and as required for splices, taps, wire pulling, equipment connections, and code compliance.
- B. Electrical box locations shown on the Contract Drawings are approximate, unless dimensioned.
- C. Locate and install boxes to allow access. Avoid interferences with ductwork, piping, structure, equipment, etc. Where installation is inaccessible, provide access doors. Coordinate locations and sizes of required access doors with the Architect and General Contractor.
- D. Locate and install to maintain headroom and to present a neat appearance.

3.10 PULL AND JUNCTION BOX INSTALLATION

- A. Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.
- B. Support pull and junction boxes independent of conduit.

3.11 EXPOSED BOX INSTALLATION

- A. Boxes shall be secured to the building structure with proper size screws, bolts, hanger rods, or structural steel elements.
- B. On brick, block and concrete walls or ceilings, exposed boxes shall be supported with no less than two (2) Ackerman-Johnson, Paine, Phillips, or approved equal screw anchors or expansion shields and round head machine screws. Cast boxes shall not be drilled.

- C. On steel structures, exposed boxes shall be supported to the steel member by drilling and tapping the member and fastening the boxes by means of round head machine screws.
- D. Boxes may be supported on steel members by APPROVED beam clamps if conduit is supported by beam clamps.
- E. Boxes shall be fastened to wood structures by means of a minimum of two (2) wood screws adequately large and long to properly support. (Quantity depends on size of box.)
- F. Wood, plastic, or fiber plugs shall not be used for fastenings.
- G. Explosive devices shall not be used unless specifically allowed.

END OF SECTION

DIVISION 26 ELECTRICAL
26 05 53 - ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Electrical Contractor Provides:
 - a. Nameplates and tape labels
 - b. Conductor color coding
 - c. Electrical gear labeling
 - d. Power distribution equipment labeling
 - e. Pole identification

1.2 REFERENCES

- A. ANSI C2 – National Electrical Safety Code
- B. NFPA 70 – National Electrical Code
- C. ANSI A13.1 – Standard for Pipe Identification
- D. ANSI Z535.4 – Standard for Product Safety Signs and Labels

PART 2 - PRODUCTS

2.1 ELECTRICAL IDENTIFICATION PRODUCTS

- A. Colored Adhesive Marking Tape for banding Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch to 2 inches in width.
- B. Pretensioned Flexible Wraparound Colored Plastic Sleeves for Cable Identification: flexible acrylic bands sized to suit the cable diameter and arranged to stay in place by pre-tensioned gripping action when coiled around the cable.
- C. Underground Plastic Markers: Bright colored continuously printed plastic ribbon tape of not less than 6 inches wide by 4 mil thick, printed legend indicating type of underground line, manufactured for direct burial service. Tape shall contain a continuous metallic wire to allow location with a metal detector.
- D. Aluminum, Wraparound Marker Bands: 1" in width, .014 inch thick aluminum bands with stamped or embossed legend, and fitted with slots or ears for permanently securing around wire or cable jacket or around groups of conductors.
- E. Brass or aluminum Tags: 2" by 2" by .05-inch metal tags with stamped legend, punched for fastener.

- F. Indoor/Outdoor Number and Letters: Outdoor grade vinyl label, minimum of 3/4" high x 9/16" wide, with acrylic adhesive designed for permanent application in severe indoor and outdoor environments.

2.2 NAMEPLATES AND SIGNS

- A. Engraved, Plastic-Laminated Labels, Signs and Instruction Plates: Engraving stock melamine plastic laminate, 1/16-inch minimum thick for signs up to 20 square inches, or 8 inches in length; 1/8 inch thick for larger sizes. Labels shall be punched for mechanical fasteners. Engraving legend shall be as follows:
 - 1. Black letters on white face for normal power.
 - 2. White letters on red face for emergency power.
- B. Baked-Enamel Signs for interior Use: Preprinted aluminum signs, punched, or drilled for fasteners, with colors, legend, and size required for application. Mounting 1/4" grommets in corners.
- C. Exterior, Metal-Backed, Butyrate Signs: Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with .0396 inch galvanized-steel backing; and with colors, legend, and size required for application. Mounting 1/4" grommets in corners.
- D. Safety Signs: Comply with 29 CFR, Chapter XVII, Part 1910.145.
- E. Fasteners for Plastic-Laminated Signs; Self-tapping stainless steel screws or number 10/32 stainless steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as required by code.
- B. Install identification devices in accordance with manufacturer's written instruction and requirements of NEC.
- C. Sequence of Work: Where identification is to be applied to surfaces that require finish, install identification after completion of finish work. All mounting surfaces shall be cleaned and degreased prior to identification installation.
- D. Identify Junction, Pull and Connection Boxes: Labeling shall be 3/8-inch Kroy tape or permanent magic marker (color coded), neatly hand printed.
- E. Circuit Identification: Tag or label conductors as follows:
 - 1. Multiple Power or Lighting Circuits in Same Enclosure: Where multiple branch circuits are terminated or spliced in a box or enclosure, label each conductor with source and circuit number.

2. Multiple Control Wiring and Communication/Signal Circuits in Same Enclosure: For control and communications/signal wiring, use wire/cable marking tape at terminations in wiring boxes, troughs, and control cabinets. Use consistent letter/number conductor designations throughout on wire/cable marking tape.
 3. Match identification markings with designations used in panelboards shop drawings, Contract Documents, and similar previously established identification schemes for the facility's electrical installations.
- F. Apply warning, caution and instruction signs as follows:
1. Install warning, caution or instruction signs where required by NEC, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems and of the items to which they connect. Install engraved plastic-laminated instruction signs with approved legend where instructions or explanations are needed for system or equipment operation. Install metal-backed butyrate signs for outdoor items.
 2. Emergency Operating Signs: Install, where required by NEC, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems and of the items to which they connect, engraved laminate signs with white legend on red background with minimum 3/8-inch high lettering for emergency instructions on power transfer, load shedding, or other emergency operations.
- G. Apply circuit/control/item designation labels of engraved plastic laminate for pushbuttons, pilot lights, alarm/signal components, and similar items, except where labeling is specified elsewhere.
- H. Install labels parallel to equipment lines at locations as required and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
- I. Install ARC FLASH WARNING signs on all switchboards, panelboards, industrial control panels, and motor control centers. Sign at a minimum shall contain:



- J. Underground Electrical Lines: For exterior underground power, control, signal, and communication lines, install continuous underground plastic line marker located directly above line at 6 to 8 inches below grade. Where width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches overall, use a single marker.

3.2 BOX LABELING

- A. All junction, pull, and connection boxes shall be identified as follows:
 - 1. For power and lighting circuits, indicate system voltage and identity of contained circuits (“120V, 1LA1-3,5,7”).
 - 2. For other wiring, indicate system type and description of wiring (“FIRE ALARM NAC #1”).
- B. Box covers shall be painted to correspond with system type as follows:
 - 1. Optional Emergency Branch: Yellow

3.3 CONDUCTOR COLOR CODING

- A. Color coding shall be applied at all panels, switches, junction boxes, pull boxes, vaults, manholes etc., where the wires and cables are visible and terminations are made. The same color coding shall be used throughout the entire electrical system, therefore maintaining proper phasing throughout the entire project.
- B. All wires and cables, 6 AWG or larger, used in motor circuits, main feeders, sub-main feeders and branch circuits, shall be coded by the application of plastic tape. The tape shall be 3-M, Plymouth or Permacel, in colors specified below. The tape shall be applied at each conductor termination with two 1-inch tape bands at 6-inch centers. Contractor option to use colored cabling in lieu of the tape at each end for conductor 6 AWG to 500 KCM.
- C. Wire and cables smaller than 6 AWG shall be color coded by the manufacturer.
- D. Colored cable ties shall be applied in groups of three ties of specified color to each conductor at each terminal or splice point starting 3 inches from the termination and spaced at 3- inches centers. Tighten to a snug fit, and cut off excess length.
- E. Where more than one nominal voltage system exists in a building or facility, each ungrounded conductor of a multi-wire branch circuit, where accessible, shall be identified by phase and system.
- F. Conductors shall be color coded as follows:
 - 1. 480Y/277 Volt, 4-Wire:
 - a. A-Phase – Brown
 - b. B-Phase – Orange
 - c. C-Phase – Yellow
 - d. Neutral – Gray
 - e. Ground Bond – Green

3.4 POWER DISTRIBUTION EQUIPMENT IDENTIFICATION

- A. Provide identification on the front of all power distribution equipment, such as panelboards, switchboards, etc. The identification material shall be engraved plastic-laminated labels. Text shall be a minimum of 1/4” high, Swiss 721 Bold.

- B. Labeling shall include:
1. Equipment type and contract documents designation of equipment.
 2. Voltage of the equipment.
 3. Name of the upstream equipment and location of the upstream equipment if it is not located within sight.

<p>DISTRIBUTION PANEL <u>DP-H1</u> 480Y/277V FED FROM SWITCHBOARD "SB-1" (LOCATED IN MAIN ELECTRIC ROOM)</p>
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- C. Distribution panelboards and switchboards shall have each overcurrent protection device identified with name and location of the load being served ("AHU-1 LOCATED IN PENTHOUSE 1").
- D. Branch panelboards shall be provided with typed panel schedules upon completion of the project. Existing panelboards shall have their existing panel schedules typed, with all circuit changes, additions or deletions also typed on the panel schedules. A copy of all panel schedules for the project shall be turned over as part of the O&M Manuals. Refer to 26 05 00 for other requirements.

3.5 POLE IDENTIFICATION

- A. Lighting poles, bollards and overhead distribution poles shall be individually identified with a unique number, for maintenance purposes. Apply the outdoor grade vinyl label number above the hand hole cover or 24" above grade. Bollards may be identified with a number applied inside the luminaire that is visible from the exterior. Coordinate numbering scheme with Using Agency.

END OF SECTION

DIVISION 26 ELECTRICAL
26 24 16 - Panelboards

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Electrical Contractor Provides:
 - a. Lighting and appliance branch circuit panelboards

1.2 REFERENCES

- A. NEMA AB 1 - Molded Case Circuit Breakers
- B. NEMA FU 1 – Low voltage cartridge fuses
- C. NEMA KS 1 - Enclosed Switches
- D. NEMA PB 1 - Panelboards
- E. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less
- F. NEMA PB 1.2 - Application Guide for Ground-fault Protective Devices for Equipment
- G. UL 248 – Low-Voltage Fuses
- H. UL 67 - Panelboards

1.3 SUBMITTALS

- A. Submit shop drawings for equipment and component devices under provisions of Section 26 05 00.
- B. Include outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.

1.4 SPARE PARTS

- A. Keys: Furnish four (4) each to the Using Agency.

PART 2 - PRODUCTS

2.1 ELECTRICAL SYMBOL LIST

- A. Item #: 480/277 V Panelboard:
 - 1. Panelboard, surface mount, 480/277 volt, 3 phase, 4 wire, S/N ground bus, copper bus, bolt on breakers, NEMA 1 enclosure.

2.2 RATINGS

- A. Definitions:
 - 1. Series rated equipment shall be defined as equipment that can achieve a required UL AIC rating with an upstream device such as a main breaker or a combination of devices to meet or exceed a required UL AIC rating. All series rated equipment shall have a permanently attached nameplate indicating that device rating must be maintained. See Section 26 05 53 for additional requirements.
 - 2. Fully rated equipment shall be defined as equipment where all devices in that equipment shall carry a minimum of the AIC rating that is specified.
- B. The panelboards for this project shall be fully rated unless otherwise specifically noted in the Drawings or Specifications.

2.3 BRANCH CIRCUIT PANELBOARDS

- A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB 1; circuit breaker type.
- B. Enclosure: NEMA PB 1; Type 1.
- C. Provide cabinet front with door-in-door construction, concealed hinge, and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.
- D. Provide panelboards with copper bus, ratings as scheduled on the drawings. Provide copper ground bus in all panelboards.
- E. All multiple-section panelboards shall have the same dimensional back box and cabinet front size.
- F. Minimum Integrated Short Circuit Rating: As shown on the drawings.
- G. Molded Case Circuit Breakers: Bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled on the drawings. Do not use tandem circuit breakers.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install panelboards plumb as indicated on the drawings in conformance with NEMA PB 1.1.
- B. Height: 6 feet to handle of highest device.
- C. Provide filler plates for unused spaces in panelboards.
- D. Provide typed circuit directory for each branch circuit panelboard. Label each circuit with the type of load and the name and number of the area served. Revise directory to reflect circuit changes required to balance phase loads.

3.2 FIELD QUALITY CONTROL

- A. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers.

END OF SECTION

DIVISION 26 ELECTRICAL
26 28 21 - Contactors

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Electrical Contractor Provides:
 - a. Lighting contactors
 - b. Enclosures

1.2 REFERENCES

- A. ANSI/NEMA ICS 6 - Enclosures for Industrial Controls and Systems
- B. NEMA ICS 2 - Industrial Control Devices, Controllers, and Assemblies
- C. UL 508 - Industrial Control Equipment

1.3 SUBMITTALS

- A. Submit shop drawings under provisions of Section 26 05 00.
- B. Include outline drawings with dimensions, and equipment ratings for voltage, capacity, and poles.
- C. Submit manufacturer's instructions under provisions of Section 26 05 00.

PART 2 - PRODUCTS

2.1 LIGHTING CONTACTORS

- A. Contactors: NEMA ICS 2 and UL 508; electrically held, 2-wire control.
- B. Coil Operating Voltage: 120 volts, 60 Hertz.
- C. Contacts: As indicated on the drawings.
- D. Enclosure: ANSI/NEMA ICS 6; Type 1.
- E. Provide solderless pressure wire terminals.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

- B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points. Separate power-limited and nonpower-limited conductors according to conductor manufacturer's written instructions.
- C. Size conductors according to lighting control device manufacturer's written instructions, unless otherwise indicated.
- D. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction boxes: and equipment enclosures.
- E. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. Electrical Contractor Provides:
 - a. Exterior luminaires and accessories
 - b. Lamps
 - c. Ballasts
 - d. Poles

B. Alternate Bid #1:

1. Electrical Contractor Provides:
 - a. Exterior building mounted luminaires and accessories
 - b. Lamps
 - c. Ballasts

1.2 REFERENCES

- A. ANSI C78.377-2008 – Specifications for the Chromaticity of Solid State Lighting Products
- B. ANSI C82.77-2002 – Standard for Harmonic Emission Limits and Related Power Quality Requirements for Lighting Equipment
- C. IEEE C2 - National Electrical Safety Code

1.3 SUBMITTALS

- A. Submit product data under provisions of Section 26 05 00.
- B. Submit product data sheets for luminaires, lamps, ballasts, drivers and poles. Include complete product model number with all options as specified.
- C. Submit lens product data, dimensions and weights if not included in product data sheet submittal.
- D. Include outline drawings, support points, weights, and accessory information for each luminaire type.
- E. LED luminaire submittals shall include photometric report per IESNA LM-79-08 for the latest generation system being furnished, including independent testing laboratory name, report number, date, luminaire model number, input wattage, luminaire, and light source specifications. Manufacturer origin of LED chipset and driver shall be submitted.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site. Store and protect under provisions of Section 26 05 00.
- B. Protect luminaire finishes, lenses, and trims from damage during storage and installation. Do not remove protective films until construction cleanup within each area is complete.
- C. Handle site lighting poles carefully to prevent breakage and damage to finish.

1.5 MOCKUP

- A. Provide and install luminaires with power and control connections for Fixture Type F1 and F2. Approved luminaires in mockup may be reused as part of complete work if in original condition.

1.6 WARRANTY

- A. Induction lamps shall carry a two-year warranty from date of Substantial Completion.
- B. Light emitting diode (LED) light engines and drivers shall have a five-year warranty from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EXTERIOR LUMINAIRES AND ACCESSORIES - GENERAL

- A. Listed for wet or damp location as scheduled. Fountain and pool luminaires shall be listed for submersible location to meet depth specified.
- B. Provide low temperature ballasts or LED drivers, with reliable starting to -20°F.

2.2 LIGHT EMITTING DIODE (LED) LUMINAIRE SYSTEMS

- A. Light emitting diodes used in interior applications shall have a minimum color rendering index (CRI) of 80. Light emitting diodes used in exterior applications shall have a minimum color rendering index (CRI) of 70. Color temperature of the luminaires shall be as noted on the luminaire schedule.
- B. LED chip arrays specified as color changing shall have chip colors as noted on the luminaire schedule.
- C. LED chips shall be wired so that failure of one chip does not prohibit operation of the remainder of the chip array.
- D. LED Driver:
 - 1. Solid state driver with integral heat sink. Driver shall have overheat, short-circuit and overload protection, power factor 0.90 or above and maximum total harmonic distortion of 20%. Surge suppression device for all exterior luminaires.
 - 2. Drivers shall have dimming capabilities as outlined in the luminaire schedule for each luminaire type.

3. Driver shall have a minimum of 50,000 hours rated life.

2.3 ACCEPTABLE MANUFACTURERS – LAMPS

MANUFACTURER	FLUORESCENT	INDUCTION
Philips Lighting Company	X	X
Osram Sylvania	X	X
Venture Lighting International Inc.		
GE Lighting	X	
USHIO America, Inc.	X	

2.4 ELECTRODELESS FLUORESCENT (INDUCTION) SYSTEMS

- A. System shall comply with FCC class B, CFR 47-18.
- B. Lamp, power coupler, and induction generator shall be designed and packaged as a complete lamp system from the same manufacturer.
- C. Generator output frequency for lamp operation shall be minimum 250kHz.
- D. System design life of 100,000 hours with 70% lumen maintenance at 60,000 hours.
- E. Minimum CRI of 80, correlated color temperature as scheduled.
- F. Minimum starting temperature of -10°F.

2.5 ACCEPTABLE MANUFACTURERS - POLES

- A. Manufacturer of Luminaire.
- B. Valmont Poles.
- C. U. S. Pole Company.
- D. KW Industries

2.6 LIGHTING POLES

- A. Metal Poles: Square straight aluminum lighting pole with embedded anchor transformer base.
- B. Wind Load: 100 MPH velocity, with 1.3 gust factor with luminaires and brackets mounted.
- C. Hand Hole: 2 x 4 inches with removable weatherproof cover installed at manufacturer's standard location. Provide matching gasketed cover plate.
- D. Anchor Bolts: As recommended by pole manufacturer. Provide template, flat washers, lock washers, and hex nuts for each pole. Grout between anchor plate and concrete base with non-shrink grout after pole is plumbed.

- E. Vibration Damper: Canister or snake type second mode vibration damper internal to the pole as recommended by pole manufacturer. Provide additional pole top damper for first mode vibration on single-head poles where recommended by manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Securely fasten luminaires to the ceiling framing member by mechanical means such as bolts, screws, rivets or listed clips identified for use with the type of ceiling framing members.
- B. Install lamps in lamp holders of luminaires.
- C. Adjust aimable luminaires to obtain lighting levels on objects and areas as directed to obtain desired lighting levels.
- D. Luminaire Pole Bases: Sized and constructed as indicated on the drawings. Project anchor bolts 2 inches minimum above base. Install poles plumb with double nuts for adjustment. Grout around pole anchor base.
- E. Use belt slings or non-chafing ropes to raise and set pre-finished luminaire poles.

3.2 RELAMPING

- A. Replace failed lamps at completion of work. Replacement of incandescent and other lamp burnouts after the warranty period starts shall be the responsibility of the final user.

3.3 ADJUSTING AND CLEANING

- A. Align luminaires and clean lenses and diffusers at completion of work. Clean paint splatters, dirt, and debris from installed luminaires.
- B. Touch up luminaire and pole finish at completion of work.

3.4 LUMINAIRE SCHEDULE

- A. As shown on the drawings.

END OF SECTION