

SOLICITATION, OFFER AND AWARD

(Construction, Alteration, or Repair)

IMPORTANT – The "offer" section on Page 2 must be fully completed by offeror.

1. CONTRACT NO. 696-FD-17-17-C040	2. SOLICITATION NO. 696-FD-16-B025	3. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	4. DATE ISSUED 6/23/16	5. PROJECT NUMBER 010385	6. TRACKING NO. 01015008
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7. ISSUED BY TEXAS DEPARTMENT OF CRIMINAL JUSTICE CONTRACTS AND PROCUREMENT INFORMATION TECHNOLOGY, CONSTRUCTION AND UTILITIES BRANCH TWO FINANCIAL PLAZA, SUITE 525 HUNTSVILLE, TX 77340	8. ADDRESS OFFER TO (SEE SECTION L, PARAGRAPH 11)
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9. FOR INFORMATION CALL: →	A. NAME Teresa Rhodes, CTPM, CTCM	B. TELEPHONE NO. (NO COLLECT CALLS) PHONE NO.: 936-437-7055 FAX NO. 325-223-0310
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Document Type: 9 Statutory Cite: 2166.003 (b)	ESTIMATED BUDGET: 198,000.00
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SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE STATE REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying no., date):

Replace Service Entrance Switchgear - Backgate – Ellis Unit located in Huntsville, Texas

As designed by:
Texas Department of Criminal Justice Facilities Engineering
Two Financial Plaza, Suite 400
Huntsville, Texas 77340

Please provide the following information:

DUNS # 10-690-0975 TAX ID # 80-0004612 CHARTER # 80003280411. The Contractor shall begin performance within 10 calendar days and complete it within 112 calendar days as specified in the Notice to Proceed. This performance period is mandatory, negotiable. (* SEE SECTION F)

12A. THE CONTRACTOR MUST FURNISH, AT ITS OWN EXPENSE ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES", indicate within how many calendar days after award in Item 12B.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 14
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

- A. Sealed offers in original and two (2) copies to perform the work required are due at the place specified in Item 8 by 200 P.M. local time August 2, 2016. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.
- B. An offer guarantee is, is not required.
- C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.
- D. Offers providing less than 100 calendar days for acceptance after the date offers are due will not be considered and will be rejected.

OFFER (Must be fully completed by offeror)

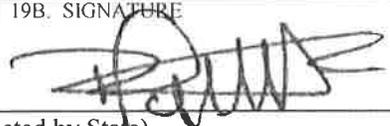
14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code) Emerald Standard Services, Inc. 520 Preston Ave. Pasadena, TX 77503	15A. Telephone No. (Include Area Code) (713) 473-1000 15B. Fax No.: (713) 473-1006	16. EMAIL ADDRESS roger@emerald-standard.com
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AMOUNTS → SEE BID SCHEDULE

17. The offeror agrees to furnish any required performance and payment bonds.

18. ACKNOWLEDGMENT OF ADDENDA / AMENDMENT
(The offeror acknowledges receipt to the solicitation – give number and date of each)

ADDENDA/ AMENDMENT NO.	01												
DATE	07/20/16												

19A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) Rogelio R. Pombrol, Jr., President	19B. SIGNATURE 	19C. OFFER DATE 02-AUG-2016
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AWARD (To be completed by State)

20. ITEMS ACCEPTED:

01 – Replace Service Entrance Switchgear – Backgate – Ellis Unit \$219,500.00

21. AMOUNT \$219,500.00	22. AMOUNT IN WRITING TWO HUNDRED NINETEEN THOUSAND FIVE HUNDRED DOLLARS AND ZERO CENTS
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23. ADMINISTERED BY Texas Department of Criminal Justice Contracts and Procurement, Information Technology, Construction and Utilities Branch Two Financial Plaza, Suite 525 Huntsville, TX 77340	24. PAYMENT WILL BE MADE BY Texas Department of Criminal Justice Accounts Payable P.O. Box 4018 Huntsville, TX 77342-4018
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STATE WILL COMPLETE ITEM 25 OR 26 AS APPLICABLE

<input type="checkbox"/> 25. NEGOTIATED AGREEMENT Contractor is required to sign this document and return ____ copies to issuing office. Contractor agrees to furnish and deliver all items or perform all requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input checked="" type="checkbox"/> 26. AWARD: Your offer on this solicitation to the items listed above is accepted subject to Section D. Conditions Precedent to Award. The contract documents consist of (a). all documents included in TDCJ Solicitation Number <u>696-FD-16-B025</u> and Solicitation Addenda; (b). all documents included in your Offer; and (c) this Solicitation, Offer and Award Document.
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27A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	28A. NAME AND TITLE Jerry McGinty Chief Financial Officer
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27B. SIGNATURE	27C. DATE	28B. TEXAS DEPARTMENT OF CRIMINAL JUSTICE By 	28C. AWARD DATE 9/15/16
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TABLE OF CONTENTS

	Page
Section A, Solicitation, Offer and Award	1
Table of Contents	3
Section B, The Schedule (Bid Schedule).....	4
Section C, Specification and Drawings	5
Section D, Conditions Precedent to Award	6
Section E, Inspection and Acceptance	7
Section F, Deliveries or Performance	9
Section G, Contract Administration Data	10
Section H, Special Conditions.....	11
Section I, General Conditions	17
Section J, List of Documents, Exhibits and Attachments	80
Section K, Representations, Certifications and Other Statements of Bidders	81
Section L, Instructions, Conditions and Notices to Offerors	88
Section M, Evaluation Factors for Award	94

SECTION B

THE SCHEDULE
BID SCHEDULE

ITEM NO.	DESCRIPTION	QUANTITY	PRICE
01	Base Bid		
	Replace Service Entrance Switchgear - Backgate - Ellis Unit located in Huntsville, Texas as shown in the construction plans as prepared by the TDCJ Facilities Engineering.		
			Lump Sum \$ <u>219,500.00</u>

The Base Bid is separated as follows:

(1) Materials incorporated into the realty (Cannot be less than the price Contractor paid for materials)	\$ <u>137,100.00</u>
(2) Labor	\$ <u>43,400.00</u>
(3) Overhead and Profit (includes the cost of the Payment and Performance Bonds)	\$ <u>39,000.00</u>
TOTAL	\$ <u>219,500.00</u>

RECYCLED MATERIALS

The Texas Department of Criminal Justice is required to (1) eliminate procedures and specifications that discriminate against products made of recycled materials and (2) encourage the use of products made of recycled materials. If product(s) being bid on this solicitation (a) contains recycled material whether post-consumer or pre-consumer; or (b) is a product that has been remanufactured, rebuilt, or otherwise restored to a like new condition, bidder shall, as part of the bid response, indicate on the appropriate line item if product has recycled content.

SECTION C

SPECIFICATION AND DRAWINGS

(SEE SECTION J, ATTACHMENT NO. 11 AND 12)

SECTION D**CONDITIONS PRECEDENT TO AWARD**

The following are conditions precedent to the Award being an enforceable contract. In the event these conditions are not met, this Award shall be null and void and of no force or effect, unless Owner agrees in writing to the contrary.

The conditions precedent to the Award are:

1. Compliance with Section I. General Conditions, Article III., Contract Documents and Bonds, paragraph 3.5 Performance and Payment Bonds;
2. Compliance with Section I. General Conditions, Article V., Contract Responsibilities, paragraph 5.7 Insurance; and
3. Compliance with Section K. Representations, Certifications and Other Statements of Bidders, paragraph 1, Historically Underutilized Business (HUB) Representation and Section I, General Conditions, Article II., Laws Governing Construction, paragraph 2.5 Historically Underutilized Business (HUB).
4. Compliance with Section K. Representations, Certifications and Other Statements of Bidders, paragraph 11, Disclosure of Interested Parties.

SECTION E

INSPECTION AND ACCEPTANCE

1. Inspection and acceptance shall be as stated in the Contract Documents. The Owner hereby reserves the right to perform inspections of the Work and any and all inspections performed by the Owner or by others for the Owner shall be for the sole benefit of the Owner. Quality control is and shall remain one hundred percent (100%) the responsibility of the Contractor.
2. **INSPECTION OF CONSTRUCTION**
 - (a) *Definition*: "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.
 - (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed under the Contract conforms to Contract requirements. The Contractor shall maintain complete inspection records and make them available to the Owner. All Work shall be conducted under the general direction of the Owner and is subject to Owner inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the Contract.
 - (c) Owner inspections and tests are for the sole benefit of the Owner and do not:
 - (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
 - (2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
 - (3) Constitute or imply acceptance; or
 - (4) Affect the continuing rights of the Owner after acceptance of the completed Work under paragraph (i) of this section.
 - (d) The presence or absence of an Owner's inspector does not relieve the Contractor from any Contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Owner's written authorization.
 - (e) The Contractor shall promptly furnish, at no increase in Contract Sum, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Owner. The Owner may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. The Owner shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the Contract.
 - (f) The Contractor shall, without charge, replace or correct work found by the Owner not to conform to Contract requirements, unless in the public interest the Owner consents to accept the Work with an appropriate adjustment in Contract Sum. The Contractor shall promptly segregate and remove rejected material from the premises.
 - (g) If the Contractor does not promptly replace or correct rejected Work, the Owner may:

- (1) By contract or otherwise, replace or correct the Work and charge the cost to the Contractor, or
 - (2) Terminate for default the Contractor's right to proceed.
- (h) If, before acceptance of the entire Work, the Owner decides to examine already completed Work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the Work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the Work is found to meet Contract requirements, the Owner shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the Work was thereby delayed, an extension of Contract Time.
- (i) Unless otherwise specified in the Contract, the Owner shall accept, as promptly as practicable after completion and inspection, all Work required by the Contract or that portion of the Work the Owner determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Owner's rights under any warranty or guarantee.

SECTION F

DELIVERIES OR PERFORMANCE

1.1 CONTRACT TIME

The performance period for this Contract shall be one hundred twelve (112) calendar days and shall begin on the date designated in the Notice to Proceed. All Work shall be completed within the amount of calendar days designated in the Notice to Proceed, unless otherwise modified by written agreement of the contracting parties.

2.1 LIQUIDATED DAMAGES - FAILURE TO COMPLETE WITHIN CONTRACT TIME

- (a) If the Contractor fails to complete the Work within the time specified in the Contract, or any extension, the Contractor shall pay to the Owner as liquidated damages, the sum of Three Hundred Eighty-Five Dollars (\$385.00) for each available calendar day of delay.
- (b) If the Owner terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned by the Owner in completing the Work.
- (c) If the Owner does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the Work is completed or accepted.
- (d) In the event that the Contractor fails to complete the Work within the time specified in the Contract and/or the Owner is assessing liquidated damages, the Contractor is bound to faithfully perform all contractual requirements until such time as the Work is satisfactorily completed or accepted by the Owner.

SECTION G

CONTRACT ADMINISTRATION DATA

1. POINT OF CONTACT

- (a) The Contract Administrator shall be the primary point of contact and is responsible for the administration of all matters concerning the Historically Underutilized Business (HUB) program, bonds, insurance, disputes, claims, and all Change Orders estimated at \$25,000.00 or more.
- (b) The Project Administrator shall be the primary point of contact for all on site construction activities. All documents, correspondence, request for changes, Change Orders/Field Orders less than \$25,000.00, requests for meetings, pre-final and final inspections and any and all other activities pertinent to the performance and daily administration of the Contract shall be coordinated with the Project Administrator unless otherwise excepted in the Contract Documents.

2. PAYMENTS

It is recommended that the Contractor receive payments via electronic funds transfer (EFT), also known as Direct Deposit. Regardless as to whether Direct Deposit is chosen, the Contractor shall submit a completed Vendor Maintenance Direct Deposit and Substitute W-9 Form (See Section J, Attachment No. 13) to the following address:

TDCJ Accounts Payable
P.O. Box 4018
Huntsville, Texas 77342-4018

If the Contractor has previously submitted a completed Vendor Maintenance Direct Deposit and Substitute W-9 Form to the TDCJ for another separate contract, another form is not required to be submitted. In the event the Contractor elects to decline Direct Deposit on the Vendor Maintenance Direct Deposit and Substitute W-9 Form, the payment will be mailed to the address provided in Section K, Article 14, Remittance Address.

SECTION H**SPECIAL CONDITIONS**

This solicitation is being advertised under Texas Government Code, Section 2155.067. The issuing office believes that the requested items are proprietary to one manufacturer and/or to the specifications. Only responses conforming exactly to these specifications will be considered in determining an award. The issuing office strongly encourages responses from all qualified vendors who may be able to provide the specified items.

The following Special Conditions supplements, modifies, changes, deletes from or adds to the General Conditions as specified herein. Where any Article of the General Conditions is modified or any paragraph or clause thereof is modified or deleted by these Special Conditions, the unaltered provisions of that Article, Paragraph, Sub-Paragraph or Clause of the General Conditions shall remain in effect.

1. CONTRACT DRAWINGS AND SPECIFICATIONS

The Contractor will be furnished four (4) complete sets of the Contract Drawings and Specifications (Project Manual) at no cost to the Contractor.

2. BACKGROUND CHECKS FOR CONTRACT CONSTRUCTION WORKERS**A. General Provisions**

Contract construction workers, by Contract, are individuals employed by a private construction contractor or Subcontractor and whose access to Agency premises or privately operated correctional facilities have been approved by the Warden for the sole purpose of performing construction-related Work authorized by the TDCJ Facilities Division. Contract construction workers shall be subject to stringent security measures and be closely supervised upon access to Agency premises. Contract construction workers shall not be issued badges or ID cards, nor allowed to come and go at will. Contract construction workers shall be searched, and the tools and equipment furnished by the contract construction workers shall be carefully inventoried and secured at all times.

B. Minor traffic violations are not considered criminal charges; however, an outstanding warrant resulting from a minor traffic violation shall cause a contract employee to be ineligible for conducting work on a unit or facility.

C. Criminal History Eligibility Criteria

Notwithstanding a misdemeanor conviction and a felony conviction, an individual may be considered on a case-by-case basis for approval to be a contract construction worker provided the individual meets the following eligibility criteria:

1. The individual shall have completed any sentence for criminal offense, including community supervision, and have not been incarcerated in a correctional facility for the previous two-year period.

2. The individual shall not have been convicted of any of the offenses listed below (to include soliciting, attempting, conspiring, or aiding others to engage, solicit, attempt or conspire to commit any of the listed offenses), or have been incarcerated in or sentenced to an adult correctional facility for any felony offense during which violence was used in the commission of the offense.
3. Homicide - (capital murder; murder; manslaughter; or any other homicide offense);
4. Kidnapping - (aggravated kidnapping; kidnapping; unlawful restraint or any other kidnapping offense);
5. Sexual Offense - (rape; sexual assault; sexual abuse; aggravated rape; aggravated sexual abuse; or any other sexual assault offense including indecency with a child);
6. Robbery - (robbery; aggravated robbery; or any other robbery offense);
7. Assault - (assault; aggravated assault; injury to a child; injury to an elderly person; or any other assault offense); or
8. Offense Involving Use or Exhibition of a Deadly Weapon (includes during the commission of the offense or during immediate flight therefrom and where an affirmative finding on use of a deadly weapon was made by the trial court or jury).

D. Criminal History Background Check

The Facilities Division's designated staff shall be responsible for:

1. Obtaining a current list of all contract construction workers scheduled to access Agency premises; and
2. Ensuring that a criminal history background check is performed prior to the individual performing services for the Agency and on an annual basis. (Proper and complete documentation is crucial to timely completion of background checks.) The Owner makes no commitment as to the length of time to complete a background check. Contractor agrees that delays in the background check process are not events or occurrences for which time extensions may be granted, unless caused by Owner's negligence or willful misconduct. Therefore, Contractor should submit, as soon as practicable, complete and correct background questionnaires for individuals identified to work on a unit/facility.

E. A contract construction worker with a prior conviction/incarceration must meet the following criteria:

1. A contract construction worker must not have any pending charges for any criminal offense or have an outstanding warrant.
2. Former TDCJ employees who have separated employment under certain conditions may not be allowed on the unit/facility.
3. Immediate family members (parent, brother, sister, spouse, child, grandparent, aunt, uncle, nephew, niece) of an offender may not be allowed on the unit/facility.

4. Contract construction workers shall not be allowed to work on a unit/facility to which they have been assigned as a former TDCJ offender.
5. The Warden, at the Warden's sole discretion, may deny access to a unit/facility if the Warden believes the contract construction worker may jeopardize the safe and orderly operation of the unit/facility, pose a danger to offenders or employees, or place an undue logistical burden on staff.

3. SPECIAL SECURITY MEASURES

- A. The Contractor shall provide the Facilities Division Project Administrator a list of all Contract Construction Workers who will be working on the unit. The Contractor shall daily update/revise the list as Contract Construction Workers are added or terminated and provide the Facilities Division Project Administrator with the current list in effect. The list shall be in alphabetical order by employee's last name and shall include employee's driver's license number, social security number and company name. In addition, as new contract construction workers are added to the workforce, the Contractor shall provide the Facilities Division Project Administrator with a completed Non-Employee Background Questionnaire (included herein as Attachment No. 9) in advance of said employees being admitted to the worksite, for the background check to be conducted. Each Contract Construction Worker shall read and sign a copy of the Standards of Conduct for Civilian Construction Contractor's Employees (included herein as Attachment No. 1) acknowledging and agreeing to abide by these standards.
- B. All Contract Construction Workers shall have read TDCJ's PD-22, "General Rules of Conduct and Disciplinary Action Guidelines for Employees", and PD-29, "Sexual Misconduct with Offenders", which are located on the Texas Department of Criminal Justice website at <http://www.tdcj.state.tx.us/vacancy/hr-policy/index.htm>, prior to commencing Work. Failure to adhere to these rules will result in contract employee's expulsion from the unit.
- C. The Contractor shall provide a legible photocopy of one of the acceptable primary identification documents as stipulated by the Texas Department of Public Safety, which includes driver's license, State ID card, Federal ID card or a passport in conjunction with a photocopy of their Social Security Card for all Contract Construction Workers who will be working on the unit.
- D. All Contract Construction Workers will report to the job site at the scheduled shift time and proceed into the facility as a group. At the end of the workday they will all leave in a similar group. Only work crew supervisors will be allowed to leave the unit's fenced compound under escort to procure additional tools or specialized tools. All Contract Construction Workers may eat their lunch in the work area or exit the unit in a group for lunch. Contract Construction Workers may not eat in the unit's cafeteria.
- E. The Contractor will coordinate with the Unit Warden or designee the collection point for Contract Construction Workers to enter the fenced compound and measures to be taken to receive required security escort of Contract Construction Workers to construction site if through the unit compound.
- F. Tools, generators, ladders, acetylene cutters, vehicular equipment or heavy equipment shall not be stored in the unit fenced compound.

- G. Contractor shall implement measures to disable vehicular or heavy equipment (e.g., vehicles, graders, cherry pickers, etc.) when they are left unattended.
- H. Contractor and Contract Construction Workers shall ensure a clear area be maintained a minimum of eight (8) feet from all fences. This area shall be clear of all debris, weeds and other construction material. All work sites will be cleared of construction debris at the end of each day. All debris is to be immediately removed to a secure area or to a designated area for disposal.
- I. All vehicles will be searched upon entering and/or exiting the unit's fenced compound.
- J. The Texas Department of Criminal Justice reserves the right to adopt any special rules as may be necessary to preserve the security of the institution should they become necessary. Coordination between the Unit Warden and Contractor shall be made as those situations arise.
- K. All Contract Construction Workers appointed by Contractor who visit any TDCJ unit will be required to comply with that unit's security regulations.

4. EQUIPMENT/SYSTEM DEMONSTRATIONS

The equipment/system demonstrations along with the services to provide instruction in the operation and/or maintenance of equipment and systems to the Owner, as called for in the Technical Specifications, shall be scheduled and performed (at a time as directed by the Owner) not later than the first thirty (30) Day period after beneficial occupancy.

5. RELATIONSHIP OF PARTIES

Contractor is acting as an independent contractor and is wholly responsible for the day-to-day operations of its programs and employees; no joint venture, partnership, or agency exists nor shall be implied by the terms of this Contract. No employee of Contractor shall become an employee of the TDCJ by virtue of this Contract.

6. CONFIDENTIALITY

Any confidential information provided to or developed by the Contractor in the performance of the Contract shall be kept confidential unless otherwise provided by law and shall not be made available to any individual or organization by the Contractor or the Department without prior approval of the other party.

7. WAIVER

No waiver by either party of any default of the other under this Contract shall operate as a waiver of any future or other default, whether of a like or different character or nature.

8. SEVERABILITY

If any part of this Contract is contrary to any federal, state, or local law, it is not applicable and such invalidity shall not affect the other provisions or applications of this agreement which can be given effect without the invalid provision or application and to that end the provisions of this Contract are declared to be severable.

9. CONTRACT MODIFICATION

No other agreements, oral or written, shall constitute a part of this Contract unless such be made in writing, executed by the parties hereto or their successors, and expressly made a part thereof, and approved in writing by the Owner.

10. BID DEPOSIT (5% of Total Bid)

The Contractor further agrees that the Bid Deposit accompanying this Bid, payable to the Texas Department of Criminal Justice, and its amount is the measure of damages which the Owner will sustain by the failure of the undersigned to execute and deliver the Contract, Performance Bond and Payment Bond, insurance certificates and that if the undersigned defaults in executing the Agreement and/or in furnishing the aforementioned documents within fourteen (14) consecutive calendar days from Contract award, then the Bid Deposit shall become subject to forfeiture to the Owner. Bid Deposit is not required for bids totaling less than \$25,000.00. Acceptable forms of bid deposits are limited to: irrevocable letter of credit issued by a financial institution subject to the laws of Texas; a surety or blanket bond from a company chartered or authorized to do business in Texas and United States Treasury listed; a United States Treasury Bond; or certificate of deposit.

11. STANDARD WORK WEEK

The standard work week shall be Monday through Friday, eight (8) hours per day. Any deviation from the standard work week schedule; including but not limited to weekends, official state holidays, extended hours, night work or four ten-hour days; must be approved by the Owner.

Utilizing the standard work week, the Contractor shall schedule the Work to be completed within the Contract Time, which is measured in calendar days rather than scheduled work days.

Approved work schedules other than the standard work week may be revoked for circumstances beyond the Owner's control or if the Contractor fails to maintain adequate staff, equipment or supervision for proper execution of the Work.

The actual work hours will be established at the pre-construction conference.

12. NOTICE TO PROCEED

It is the Owner's intent to issue a Notice to Proceed (NTP) at the Pre-Construction Conference.

13. CONTRACT SCHEDULE

The Contractor shall comply with the following Special Conditions in conjunction with Section I, Article VIII of the General Conditions.

13.1 Contractor's Scheduler

The Project Scheduler shall be responsible for preparing, updating, and maintaining the Project Schedule, and for submitting the reports to the Owner required by the Contract Documents. The Project Scheduler shall be responsible for identifying and obtaining all necessary information from Subcontractors, vendors, suppliers and the Owner. The Project Scheduler shall be fully authorized to act on behalf of the Contractor with respect to performing all Project Schedule requirements.

The Project Scheduler shall have as a minimum the following qualifications:

- (1) Two years of experience in preparing, updating and maintaining Critical Path Method (CPM) construction schedules of fifty activities or more using Primavera. (List such projects and describe the scheduling responsibilities of the proposed Project Scheduler on each).
- (2) One year of experience using Primavera software in construction scheduling (List such projects and describe the scheduling responsibilities of the proposed Project Scheduler on each as well as provide contact information for Primavera experience verification).

After award of the Contract and prior to the Pre-Construction Conference, the Contractor shall submit for the Owner's approval a resume evidencing the qualifications listed above to the Project Administrator.

13.2 Activities shall be identified by buildings and activity durations shall be in units of whole workdays. Less than two percent (2%) of all non-procurement activities' original durations shall be greater than thirty (30) Days.

13.3 Within fourteen (14) Days after the start of the Contract Time, the Contractor shall submit the CPM Schedule.

13.4 The Project Schedule shall be updated on a monthly basis throughout the duration of the Work and until Contract completion.

13.5 Average calendar days lost monthly due to Anticipated Adverse Weather Days:

Jan	Feb	Mar	April	May	Jun	July	Aug	Sept	Oct	Nov	Dec
9	9	8	7	7	7	7	7	7	5	7	8

SECTION I

GENERAL CONDITIONS

TABLE OF CONTENTS

ARTICLE I. GENERAL PROVISIONS..... 20

- 1.1 CONTRACT DEFINITIONS
- 1.2 EXECUTION AND CORRELATION
- 1.3 INTERPRETATION
- 1.4 FIXED ASSET ACCOUNTING
- 1.5 DELIVERY
- 1.6 PHOTOGRAPHS
- 1.7 PRE-CONSTRUCTION CONFERENCE
- 1.8 PROJECT REVIEW MEETINGS

ARTICLE II. LAWS GOVERNING CONSTRUCTION..... 25

- 2.1 COMPLIANCE WITH LAWS
- 2.2 WAGE RATES
- 2.3 STATE SALES AND USE TAXES
- 2.4 ANTITRUST CLAIMS
- 2.5 HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
- 2.6 CLEAN WATER ACT AND THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
- 2.7 VENUE

ARTICLE III. CONTRACT DOCUMENTS AND BONDS..... 28

- 3.1 COPIES FURNISHED - DRAWINGS AND SPECIFICATIONS
- 3.2 OWNERSHIP OF DRAWINGS AND SPECIFICATIONS
- 3.3 DRAWINGS AND SPECIFICATIONS AT THE SITE
- 3.4 "RECORD SET" OF CONTRACT DOCUMENTS
- 3.5 PERFORMANCE AND PAYMENT BONDS
- 3.6 INTERRELATION OF DOCUMENTS
- 3.7 SALES TAX EXEMPTION CERTIFICATE

ARTICLE IV. CONTRACT ADMINISTRATION 30

- 4.1 GENERAL ADMINISTRATION
- 4.2 ARCHITECT/ENGINEER'S ADMINISTRATION
- 4.3 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK
- 4.4 ACCESS TO AND INSPECTION OF THE WORK
- 4.5 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS
- 4.6 CONTRACT TERMINATION
- 4.7 WRITTEN NOTICE
- 4.8 DISPUTED MATTERS

ARTICLE V. CONTRACT RESPONSIBILITIES 35

- 5.1 OWNER'S RESPONSIBILITIES
- 5.2 OWNER-CONTRACTOR OBLIGATIONS

- 5.3 CONTRACTOR'S RESPONSIBILITIES
- 5.4 CONTRACTOR'S PROJECT MANAGER
- 5.5 ACTS AND OMISSIONS
- 5.6 CONDITIONS AT SITE OR BUILDING
- 5.7 INSURANCE
- 5.8 SAFETY PRECAUTIONS AND PROGRAMS
- 5.9 MATERIALS AND WORKMANSHIP
- 5.10 TESTS
- 5.11 REMOVAL OF DEFECTIVE WORK
- 5.12 ROYALTIES AND PATENTS
- 5.13 EQUAL MATERIALS
- 5.14 SHOP DRAWINGS AND SAMPLES
- 5.15 CLEANING
- ARTICLE VI. CONTRACT CHANGES 48
 - 6.1 CHANGE ORDERS
 - 6.2 RESERVED
 - 6.3 REQUESTS FOR EQUITABLE ADJUSTMENT
 - 6.4 REQUESTS FOR TIME EXTENSIONS
 - 6.5 MINOR CHANGES
 - 6.6 ADMINISTRATIVE PROCEDURES FOR CHANGE ORDER
- ARTICLE VII. CONTRACT PAYMENTS 51
 - 7.1 CONTRACT SUM BREAKDOWN
 - 7.2 PROGRESS PAYMENTS
 - 7.3 LIEN FOR UNPAID LABOR AND MATERIALS
 - 7.4 PAYMENT OF DEBT OWED TO THE STATE OF TEXAS
 - 7.5 RIGHT TO OFFSET
- ARTICLE VIII. TIME AND SCHEDULING 55
 - 8.1 TIME LIMITS
 - 8.2 CONTRACT TIME
 - 8.3 PROGRESS AND COMPLETION
 - 8.4 DELAYS AND EXTENSION OF TIME
 - 8.5 FAILURE TO COMPLETE WORK ON TIME
- ARTICLE IX. BENEFICIAL OCCUPANCY 68
 - 9.1 BENEFICIAL OCCUPANCY
 - 9.2 CERTIFICATION
 - 9.3 ADDITIONAL INSPECTION COSTS
- ARTICLE X. CONTRACT FINAL ACCEPTANCE AND PAYMENT 69
 - 10.1 NOTIFICATION
 - 10.2 PRE-FINAL INSPECTION
 - 10.3 FINAL INSPECTION AND ACCEPTANCE
 - 10.4 ADDITIONAL INSPECTION COSTS
 - 10.5 FINAL PAYMENT DOCUMENTATION
 - 10.6 FINAL PAYMENT
- ARTICLE XI. CONTRACT WARRANTY AND GUARANTEE 71
 - 11.1 WARRANTY OF CONSTRUCTION

ARTICLE XII. PRESERVATION OF SITE ASSETS	73
ARTICLE XIII. OPERATION AND STORAGE AREAS.....	73
ARTICLE XIV. MISCELLANEOUS PROVISIONS.....	74
14.1 GOVERNING LAW	
14.2 RIGHTS AND REMEDIES	
14.3 ENTIRE AGREEMENT	
14.4 SEVERABILITY	
14.5 INDEPENDENT CONTRACTOR	
14.6 INDEMNIFICATION OF THE DEPARTMENT	
14.7 NON-AVAILABILITY/LOSS OF FUNDING	
14.8 NOTICE	
14.9 FINANCIAL OPERATIONS	
14.10 UTILIZATION OF PRODUCTS AND MATERIALS PRODUCED IN TEXAS	
14.11 ASSIGNMENT	
14.12 AUTHORITY TO AUDIT	
14.13 CONFIDENTIALITY AND OPEN RECORDS	
14.14 NO LIABILITY UPON TERMINATION	
14.15 LIMITATION ON AUTHORITY; NO OTHER OBLIGATIONS	
14.16 INTELLECTUAL PROPERTY INDEMNIFICATION	
14.17 RIGHTS TO DATA, DOCUMENTS AND COMPUTER SOFTWARE (STATE OWNERSHIP)	
14.18 ELECTRONIC AND INFORMATION RESOURCES ACCESSIBILITY STANDARDS, AS REQUIRED BY 1 TAC, CHAPTER 213	
14.19 E-VERIFY	

SECTION I

GENERAL CONDITIONS

ARTICLE I. GENERAL PROVISIONS

1.1 CONTRACT DEFINITIONS: Whenever the following terms are used in these General Conditions or in the other Contract Documents, the intent and meaning shall be interpreted as follows:

1.1.1 ADVERSE WEATHER DAY: A day on which the Contractor's current contract schedule indicates Work is to be performed, and which inclement weather and related affected site conditions prevent the Contractor from performing Work on critical activities for 50 percent or more of the Contractor's scheduled workday. Days qualifying as Adverse Weather Days are days in which the adverse weather conditions altered the physical site conditions rendering consequential disruption to the day's scheduled progress. Excessively high or low temperatures alone will not be considered adverse weather days.

1.1.2 ARCHITECT/ENGINEER (A/E) and/or DESIGN PROFESSIONAL (DP): A person registered as an architect pursuant to Tex. Occ. Code Ann., Chapter 1051, as a landscape architect pursuant to Tex. Occ. Code Ann., Chapter 1052, a person licensed as a professional engineer pursuant Tex. Occ. Code Ann., Chapter 1001 and/or a firm employed to provide professional architectural or engineering services and to exercise overall responsibility for the design of a Project or a significant portion thereof, and to perform the contract administration responsibilities set forth in the Contract.

1.1.3 BENEFICIAL OCCUPANCY: The date of Beneficial Occupancy of the Work, or designated portion thereof, is the date jointly certified by the A/E and Owner when construction is so sufficiently complete, in accordance with the Contract Documents, that the Owner may, at the Owner's option, utilize the Work, or a designated portion thereof, for the use for which it is intended.

1.1.4 BUSINESS HOURS: Normal business hours are Monday through Friday from 8:00 a.m. until 5:00 p.m. Central Time.

1.1.5 CHANGE ORDER: A Change Order is a written order to the Contractor signed by the Owner issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his/her agreement therewith, including the adjustment in the Contract Sum and/or the Contract Time.

1.1.6 CONTRACT CONSTRUCTION WORKER: Is an individual employed by a private construction contractor or subcontractor and whose access to Agency premises or a privately operated correctional facility has been approved by the Warden for the sole purpose of performing construction-related Work authorized by the TDCJ Facilities Division or the facility's owner. This definition does not include a purchase order/procurement card vendor.

1.1.7 CONTRACT: The Contract Documents form the **CONTRACT**, which represents the entire and integrated agreement between the Owner and the Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the A/E and Contractor, or (2) between the Owner and a Subcontractor or (3) between any persons or entities other than the Owner and Contractor. The A/E shall, however, be entitled to

performance and enforcement of obligations under the Contract intended to facilitate performance of the A/E duties.

1.1.8 CONTRACT DOCUMENTS: The Contract Documents consist of the Solicitation, Offer and Award document inclusive of its Sections A through M and the Attachments and Exhibits thereto, Payment and Performance Bonds, Specifications, Drawings, Addenda issued prior to contract award, other documents listed in the Contract, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties or (2) a Change Order or (3) a Unilateral Change Order, or (4) a written order for a minor change in the Work (not involving an adjustment in the Contract Sum or an extension of the Contract Time) issued by the Owner or the A/E.

1.1.9 CONTRACTOR: The individual, corporation, company, partnership, firm or other organization that has contracted to perform the Work under the Contract with the Owner.

1.1.10 CONTRACT SUM: The Contract Sum is the total compensation payable to the Contractor for performing the Work as originally contracted for or as subsequently adjusted by Change Order.

1.1.11 CONTRACT TIME: The Contract Time is the total number of calendar days within which the Contractor shall commence and complete the Work to be performed, as originally contracted for or as subsequently adjusted by Change Order. The Contract Time will begin on the day designated in the Notice to Proceed.

1.1.12 DAY: Wherever the word "Day" is used in the Contract Documents, it shall be interpreted to mean a calendar day, which is not the same as a scheduled work day.

1.1.13 DRAWINGS: The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.14 ENVIRONMENTALLY SENSITIVE PRODUCT: A product that protects or enhances the environment or that damages the environment less than traditionally available products.

1.1.15 FIELD ORDER: An authorization given to the Contractor to proceed with a limited change in the Work. The Field Order guarantees that the Contractor will be compensated for the Work. However, the Contractor cannot request this compensation until the Field Order is included in a completed Change Order. Field Orders are not to exceed \$25,000.00.

1.1.16 FURNISH: "Furnish", unless specifically limited in context, means; furnishing items specified to project site, to include unpacking and assembly. Owner furnished items shall be unloaded, unpacked and properly stored by the Contractor upon delivery. Assembly, if required, shall be by the Contractor.

1.1.17 INSTALL: "Install" means incorporating into the Work including all necessary labor, materials, equipment and connections to perform Work indicated.

1.1.18 OWNER: The Owner is the State of Texas acting through the Texas Department of Criminal Justice.

1.1.19 POST-CONSUMER MATERIALS: Finished products, packages or materials generated by a business entity or consumer that have served their intended end uses, and that have been recovered or otherwise diverted from the waste stream for the purpose of recycling.

- 1.1.20 PRE-CONSUMER MATERIALS:** Materials or by-products that have not reached a business entity or consumer for an intended end use including industrial scrap material and overstock, or obsolete inventories from distributors, wholesalers and other companies. The term does not include materials and by-products generated from, and commonly reused within, an original manufacturing process or separate operation within the same or a parent company.
- 1.1.21 PRELIMINARY PAY WORKSHEET:** The Preliminary Pay Worksheet is a review document that reflects work performed and the established schedule of values. The Preliminary Pay Worksheet is submitted by the Contractor to the Owner prior to a request for progress payment.
- 1.1.22 PROJECT:** The term "Project" shall comprise the total construction of which the Work performed under the contract documents may be the whole or a part and which may include construction by the Owner or by separate contractors.
- 1.1.23 PROJECT MANUAL:** The Project Manual is the volume(s) usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.
- 1.1.24 PROVIDE:** "Provide" means furnish and install.
- 1.1.25 RECYCLED MATERIAL CONTENT:** The portion of a product made with Recycled Materials consisting of Pre-Consumer Materials (waste), Post-Consumer Materials (waste), or both.
- 1.1.26 RECYCLED MATERIALS:** Materials, goods or products that contain recyclable materials, industrial waste, or hazardous waste that may be used in place of raw or virgin materials in manufacturing a new product.
- 1.1.27 RECYCLED PRODUCT:** A product that meets the requirements for recycled material content as prescribed by the rules established by the Texas Commission on Environmental Quality in consultation with the Comptroller of Public Accounts (CPA). The product must be clearly identified as recycled by packaging, markings, literature, etc.
- 1.1.28 SAMPLES:** Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to assist in the establishment of standards by which the Work will be judged.
- 1.1.29 SHOP DRAWINGS:** Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the Work.
- 1.1.30 SPECIAL CONDITIONS:** Special Conditions shall relate to a particular Project but shall not weaken the character or intent of the General Conditions. Special Conditions will supplement specific paragraphs of the General Conditions as specified in the Special Conditions.
- 1.1.31 SPECIFICATIONS:** The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- 1.1.32 SUBCONTRACTOR:** A person or organization who contracts under, or for the performance of part or the entire Contract between the Owner and the Contractor. The subcontract may be direct with the Contractor or with another subcontractor.

1.1.33 WORK: The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, plant and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.2 EXECUTION AND CORRELATION

1.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

1.2.2 The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the required results.

1.2.3 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.4 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.3 INTERPRETATION

1.3.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.3.2 In the interest of conciseness, sentences, statements, and clauses used exclude any form of verb "shall" normally expressed in verb phrase with verbs such as "furnish", "install", "provide", "perform", "construct", "erect", "comply", "apply", "submit", etc. Any such sentences, statements, and clauses are to be interpreted to include applicable form of phrase "the Contractor shall" and requirements described therein interpreted as mandatory elements of Contract.

1.3.3 In interest of conciseness, references to specification sections and details may be preceded by the word "see". Any such references are to be interpreted to include applicable form of phrase, "and comply with".

1.4 FIXED ASSET ACCOUNTING: Prior to final acceptance the Project Administrator will prepare a list of items included in the Work which are to be capitalized. This list will be generally limited to items having a value in excess of \$5,000.00 and not being an integral part of the structure. The list will include but will not be limited to items such as emergency generator, food service equipment, laundry equipment, electronic equipment, etc. The Project Administrator will present the list of items to the Contractor who shall provide the value of each item on the list to the Project Administrator prior to final payment. The list will include the equipment with its cost, manufacturer, model number and serial number. Equipment and systems shall be listed by building wherein they are installed. In addition, the total value of each individual building must be specified.

1.5 DELIVERY: Name and address of Owner will not be used for deliveries. Owner will not accept delivery of products and materials and Owner will not be responsible for material losses, delays or other damages, including all impacts resulting from the use of the Owner's name and address for deliveries. Contractor shall make arrangements to have someone present for acceptance and unloading of all deliveries. Arrange deliveries in accordance with construction schedules and in ample time to facilitate inspection prior to installation and to not cause delay to the project.

1.6 PHOTOGRAPHS: Photographs shall be taken only with written permission of the Owner. (Progress photographs will not be required unless called for elsewhere.)

1.7 PRE-CONSTRUCTION CONFERENCE: After award of the contract a Pre-Construction Conference will be held to discuss mobilization and specific pre-construction activities. The Pre-Construction Conference will be conducted by the Owner. The A/E, the Owner and its representatives and the Contractor will participate. The prime objectives of the Pre-Construction Conference are to:

1. Introduce the Contractor to persons responsible for the monitoring and administration of the Work.
2. Develop a list of representatives of the Owner, the A/E and the Contractor who will be directly involved with the Project. This list shall include names, telephone numbers, functions and responsibilities. Key personnel's telephone numbers for after Business Hours shall be listed.
3. Establish interfaces between Contractor, Owner and A/E personnel.
4. Contractor shall furnish (in writing) the percent for social security, workman's compensation and like taxes, to be applied to the labor portion of the Change in Work/Cost Analysis for Work to be done by the Contractor.
5. Contractor shall furnish (in writing) the percent for social security, workman's compensation and like taxes, to be applied to the labor portion of the Change in Work/Cost Analysis for all of its Subcontractors.
6. Review the requirements for mobilization including:
 - a. Location of temporary offices,
 - b. Lay-down area,
 - c. Security requirements,
 - d. Safety requirements, and
 - e. Reporting requirements.

1.8 PROJECT REVIEW MEETINGS: Project Review Meetings shall be held on a regularly scheduled basis. These meetings will provide a management level review of the Contractor's operations, assessment of progress and schedule, discussion and resolution of problems, and coordination of the activities of all parties concerned. The minutes of these meetings will provide a record related to the accomplishment

of the Work. The Project Review Meetings are formal meetings and are held in addition to, and at a higher level than, weekly job meetings.

1.8.1 The Owner will chair these meetings. The Owner, the A/E's representative, the Owner's inspectors, and the Contractor's Project Manager/Superintendent or other representative as designated by the Contractor and approved by the Owner shall attend these meetings. Notice of the meeting will be sent to all parties by the Owner. Anyone required but not able to attend must send an authorized representative with full authority to participate in problem solving and decision making unless prior arrangements to be excused are made with the Owner.

1.8.2 The Project Review Meetings will be held monthly unless more frequent meetings are necessitated under certain circumstances. The Owner will determine the frequency of meetings, but they will, under no circumstances, be held less than monthly.

1.8.3 The Owner will prepare and distribute the minutes. These minutes will be published no later than one week after the conclusion of the meeting. In addition to the documentation of the meeting, the minutes will include the date, time and place of the meeting and the names of all attendees and their respective affiliations.

ARTICLE II. LAWS GOVERNING CONSTRUCTION

2.1 COMPLIANCE WITH LAWS: In the execution of the Contract, the Contractor must comply with all applicable State and Federal laws, including but not limited to laws concerned with labor and equal employment opportunity, safety and minimum wages, and patent, copyright and trademark rights. The Contractor shall make himself/herself familiar with and at all times shall observe and comply with all Federal, State and Local laws, ordinances and regulations which in any manner affect the conduct of the Work, and shall indemnify and save harmless the State and its official representatives against any claim arising from violation of any such law, ordinance or regulation by its self or by its Subcontractors or its employees.

2.1.1 The Contractor shall cooperate with applicable city or other government officials at all times where their jurisdiction prevails. The Contractor shall make application and payments for any permits and permanent utilities, which are required for the execution of the Work.

2.1.2 In the event of an apparent conflict between requirements of two or more codes or standards, the more restrictive requirement shall govern. Specific requests for interpretation shall be directed to the Owner.

2.2 WAGE RATES: The Contractor shall not pay less than the wage scale of the various classes of labor as shown on the "Prevailing Wage Schedule" provided by the Owner. The specified wage rates are minimum rates only. The Owner is not bound to pay any claims for additional compensation made by any Contractor because the Contractor pays wages in excess of the applicable minimum rate contained in the Contract. The "Prevailing Wage Schedule" is not a representation that qualified labor adequate to perform the Work is available locally at the prevailing wage rates.

2.2.1 Notification to Workers: The Contractor shall notify each worker, in writing, of the following as they commence Work on the Contract: the worker's job classification, the established minimum wage rate requirement for that classification, as well as the worker's actual wage. The notice must be delivered to and signed in acknowledgement of receipt by the employee and must list both the wages and fringe benefits to be paid or furnished for each classification in which the worker is assigned duties. When requested by the Owner, the Contractor shall furnish evidence of compliance with the Texas Prevailing Wage Law.

2.2.1.1 Submit a copy of each worker wage-rate notification to the Owner with the application for progress payment for the period during which the worker was engaged in activities on behalf of the project.

2.2.1.2 The Prevailing Wage Schedule is determined by the Owner in compliance with Tex. Gov't Code, Chapter 2258. Should the Contractor at any time become aware that a particular skill or trade not reflected on the Owner's Prevailing Wage Schedule will be or is being employed in the Work, whether by the Contractor or by a subcontractor, the Contractor shall promptly inform the Owner of the proposed wage to be paid for the skill along with a justification for same. The Contractor is responsible for determining the most appropriate wage for a particular skill in relation to similar skills or trades identified on the Prevailing Wage Schedule. In no case shall any worker be paid less than the wage indicated for Laborers.

2.2.1.3 Assessment for Violation: The Contractor and any Subcontractor will pay to the State an assessment of sixty dollars (\$60) for each worker employed for each calendar day, or portion thereof, that the worker is paid less than the wage rates stipulated in the Prevailing Wage Schedule.

2.2.1.4 COMPLAINTS OF VIOLATIONS

2.2.1.4.1 Owner's Determination of Good Cause. Upon receipt of information concerning a violation of Tex. Gov't Code, Chapter 2258, the Owner will, within 31 Days, make an initial determination as to whether good cause exists that a violation occurred. The Owner will send documentation of the initial determination to the Contractor against whom the violation was alleged, and to the worker involved. Upon making a good cause finding, the Owner will retain the full amounts claimed by the claimant or claimants as the difference between wages paid and wages due under the Prevailing Wage Schedule and any supplements thereto, together with the applicable penalties, such amounts being subtracted from successive progress payments pending a final decision on the violation.

2.2.1.4.2 If the Contractor and claimant worker reach an agreement concerning the claim, the contractor shall promptly notify the Owner in a written document countersigned by the worker.

2.2.1.4.3 Arbitration Required: If the violation is not resolved within 14 days following initial determination by the Owner, the Contractor and the claimant worker must participate in binding arbitration in accordance with the Texas General Arbitration Act, Tex. Civ. Prac. & Rev. Code, Chapter 171. For a period not to exceed 10 Days, after which, if no agreement reached, a district court may be petitioned by any of the parties to the arbitration to appoint an arbitrator whose decision will be binding on all parties.

2.2.1.4.4 Arbitration Award: If an arbitrator assesses an award against the Contractor, the Contractor shall promptly furnish a copy of said award to the Owner. The Owner may use any amounts retained under Article 2.2.1.4.1 to pay the worker the amount as designated in the arbitration award. If the retained funds are insufficient to pay the worker in accordance with the arbitration award, the worker has a right of action against the Contractor, and/or the surety to receive the amount owed, plus attorneys' fees and court costs. The Owner has no duty to release any funds to either the claimant or the Contractor until it has received the notices of agreement or the arbitration award.

2.2.1.4.5 No Extension of Time: If the Owner's determination proves valid that good cause existed to believe a violation had occurred, the Contractor is not entitled to an extension of time for any delay arising directly or indirectly from the arbitration procedures set forth herein.

2.3 STATE SALES AND USE TAXES: The Owner qualifies for exemption from State and Local Sales and Use Taxes pursuant to the provisions of the Texas Tax Code (Title 2, Chapter 151, Subsection

151.311). Tangible personal property incorporated into the Owner's realty is exempt pursuant to Subsection 151.311 of the Texas Tax Code and the terms of a separated contract. The Contractor shall comply with applicable provisions of Chapter 34, Rules 3.291 and 3.357 of the Texas Administrative Code, or other procedures as may be prescribed by the Comptroller of Public Accounts.

2.4 ANTITRUST CLAIMS: The Contractor shall assign to the Owner any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 U.S.C. Secs. 1 et seq.

2.5 HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

2.5.1 The Contractor shall be required to make a good faith effort to award necessary subcontracts to HUBs in accordance with Texas Government Code, Section 2161.181-182, 2161.252(b), and Texas Administrative Code (TAC), Title 34, Part 1, Chapter 20, Subchapter B, Rule 20.11. Pursuant to the Comptroller of Public Accounts HUB Rules, TAC, Title 34 Part 1, Chapter 20, Subchapter B, Rules 20.13 and 20.14, the Contractor shall submit a HUB Subcontracting Plan (HSP) as part of the bid submission, as well as make a good faith effort to implement the HSP. The Contractor shall seek written approval from the Department prior to making any modifications to its HSP.

2.5.2 A detailed description of the HSP and required forms are included as Exhibit J.1.

2.5.3 The Contractor shall provide notice to all Subcontractors of their selection as a Subcontractor to this Contract. The notice must specify, at a minimum, this agency's name, the name of the Contract Administrator, this Contract's assigned contract number, the subcontracting opportunity the Subcontractor will perform, the approximate dollar value of the subcontract and the expected percentage of this Contract's total value that the subcontract represents. A copy of the notice shall be provided to the Contract Administrator no later than ten (10) working days after this Contract is awarded.

2.5.4 The Contractor shall submit to the Contract Administrator on a monthly basis (by the 5th Day of the following month) the Prime Contractor Progress Assessment Report, which is included in Exhibit J.1.

2.6 CLEAN WATER ACT AND THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

2.6.1 The Contractor shall comply with all federal and state laws pertaining to construction storm water activities including, but not limited to, the Clean Water Act (CWA), the National Pollution Discharge Elimination System (NPDES), Texas Water Code Section 26.04, and Texas Administrative Code, Title 30, Chapters 205, 305.44, and 305.128.

The Contractor shall complete and file Notice of Intent (NOI) and pay application fees with the Texas Commission on Environmental Quality (TCEQ). The Contractor shall be responsible for preparing and maintaining a Storm Water Pollution Prevention Plan (SWP3), and shall be recognized as the primary operator. The SWP3 shall be approved by the Owner before implementation. It shall be maintained by the Contractor on the job site and kept current at all times.

2.7 VENUE: In any legal action arising under this Contract, the laws of the State of Texas shall apply and venue will be in Travis County, Texas.

ARTICLE III. CONTRACT DOCUMENTS AND BONDS

3.1 COPIES FURNISHED - DRAWINGS AND SPECIFICATIONS: The Contractor will be furnished free of charge the number of complete sets of the Contract Drawings and Specifications as provided in the Special Conditions. Additional complete sets of Drawings and Specifications, if requested, will be furnished at reproduction cost to the one requesting such additional sets.

3.2 OWNERSHIP OF DRAWINGS AND SPECIFICATIONS: All Drawings, Specifications and copies thereof furnished by the A/E are and shall remain the property of the Owner. They are not to be used on any other project. One contract set for each party to the Contract may be retained. All other sets are to be returned to the Owner through the A/E following completion of the Work if requested by the Owner.

3.3 DRAWINGS AND SPECIFICATIONS AT THE SITE: The Contractor shall keep on the site of Work a copy (in good order) of the Contract Documents, approved shop drawings and Modifications to the Contract Documents. The Contractor shall at all times give the Owner or its representatives and agents access thereto.

3.4 "RECORD SET" OF CONTRACT DOCUMENTS: The Contractor shall maintain a record set of Contract Documents, hereinafter called "Record Set", which reflects the conditions and representations of the Work performed whether it be directed by addendum, Change Order or otherwise. This information shall be recorded on shop drawings located at the construction site. The "Record Set" shall be readily available for review by the A/E and/or Owner and no Work shall be permanently concealed until all required information related to that Work has been recorded. The Contractor shall update the "Record Set" a minimum of once monthly. The "Record Set" will be reviewed as a part of the monthly Project Review Meeting in conjunction with the review of the Contractor's payment request. Payment may be withheld, to such extent necessary to protect the Owner from loss, unless the "Record Set" reflects current and accurate conditions. Upon completion of the Work, and prior to application for final payment, the Contractor shall furnish the "Record Set" to the A/E. The "Record Set" is required to provide an accurate and legible record of actual construction, including:

1. Measured horizontal and vertical locations of utilities and appurtenances referenced to permanent surface improvements.
2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
3. Field changes of dimension and detail.
4. Changes made by modifications.
5. Details not on original contract drawings.
6. References to related shop drawings and modifications.

The A/E after review and approval will transmit the "Record Set" to the Owner for final disposition.

3.5 PERFORMANCE AND PAYMENT BONDS: Performance and Payment Bonds are not required on contracts of \$25,000.00 or less unless otherwise stipulated. The Contractor shall provide, at its own expense, within fourteen (14) Days after award execution, in accordance with the provisions of Government Code, Title 10, Section 2253.021, the following bonds to the Owner: (1) Performance Bond for

the sole protection of the State of Texas, which shall be in the amount of the Contract and conditioned on the faithful performance of the work in accordance with the Contract; and (2) Payment Bond for the sole protection of those supplying labor, materials, and/or equipment, which shall be in the amount of the Contract. Subcontractors are not required by the Owner to execute performance or payment bonds.

3.5.1 Each bond shall be executed by a corporate surety or corporate sureties duly authorized and admitted to do business in this State and licensed by this State to issue surety bonds, acceptable to the Owner, and on forms approved by the Attorney General of Texas. (Surplus lines insurance carriers, including sureties, are not qualified to issue payment and performance bonds required by Government Code, Title 10, Section 2253.021.) If any surety upon any bond furnished in connection with the Contract becomes insolvent, or otherwise not authorized to do business in this State, the Contractor shall promptly furnish equivalent security to protect the interests of the State of Texas and of persons supplying labor, materials and/or equipment in the prosecution of the Work contemplated by the Contract.

3.5.2 Each bond shall be accompanied by a valid Power-of-Attorney (issued by the Surety company and attached, signed and sealed, with the corporate seal, embossed to the bond) authorizing the agent who signs the bond to commit the company to the terms of the bond, and stating (on the face of the Power-of-Attorney) the limit, if any, in the total amount for which he/she is empowered to issue a single bond.

3.5.3 Bonds shall remain in effect and full force as required by the Contract Documents and applicable law.

3.5.4 The providing of Performance and Payment Bonds by Contractor, at the Contractor's expense must be accomplished within fourteen (14) Days following the Notice of Award, before a Notice to Proceed will be issued by the Owner. Failure to fulfill this requirement may result in forfeiture of the Contractor's bid security and termination of the Contract in accordance to paragraph 4.6.2.

3.5.5 In the event that the Contract price increases due to Change Orders, the Contractor shall be required, at the Contractor's expense, to provide both Performance and Payment bonds in an additional amount to 100 percent of the increase.

3.6 INTERRELATION OF DOCUMENTS: The interrelation of the Specifications, the Drawings and the Schedules is as follows: The Specifications determine the nature and setting of the several materials; the Drawings or Schedules establish the quantities, dimensions, details and locations. Anything mentioned in the Specifications and not shown on the Drawings or Schedules, or shown on the Drawings or Schedules and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

3.6.1 Should the Drawings disagree one with another, or with the Specifications or should the Specifications disagree one with another, the better quality or greater quantity of Work or materials shall be included for bidding purposes and shall be performed or furnished. Figures given on large scale drawings govern small scale drawings.

3.6.2 The Scope of the Work, placed in the front part of each section of the Specifications, is intended to designate the scope and locations of all items of the Work included therein, either generally or specifically. It is not intended to limit the Scope of Work should plans, Schedules or notes indicate an increased scope. Inadvertent omission of an item from its proper section of the Specifications and its inclusion in another section shall not relieve the Contractor of responsibilities for the item specified.

3.6.3 In case of discrepancy in the figures, in the Drawings, in the Schedules, or in the Specifications, the matter shall be promptly submitted in writing to the A/E who will promptly make a determination in

writing after review with the Owner. Any action taken by the Contractor without such a determination shall be at its own risk and expense.

3.6.4 Details labeled "Typical Details" or "Typical" on the Plans shall apply to all situations occurring on the Project that are the same or similar to those specifically detailed. Such details shall apply whether or not they are keyed in at each location. Questions regarding applicability of Typical Details shall be referred to the A/E.

3.7 SALES TAX EXEMPTION CERTIFICATE: TDCJ Accounts Payable Representative will provide Contractor with an "Exemption Certificate" for tangible personal property included in or to be included in the Work.

ARTICLE IV. CONTRACT ADMINISTRATION

4.1 GENERAL ADMINISTRATION: Unless otherwise provided for in the Contract Documents, the Owner will provide general administration of the Contract. The Owner assumes no responsibility for any understanding given or representation made orally by its agents prior to the execution of this Contract, unless such understanding(s) are expressly stated in the Contract. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor. Any failure by the Contractor to become acquainted with available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the Work or mutually agreed changes thereto.

4.1.1 The Owner reserves the right on appropriate occasions to issue instructions through other designated representatives.

4.1.2 All communications concerning the construction of the Work shall be furnished to the Owner, the A/E, and the Contractor by the party concerned. The administration of the Contract in regard to matters related to taxes, laws, and wage rates, Contract Documents, separate contracts, changes in the Work, payments, claims, acceptance, warranty and guarantee, federally funded projects, insurance, bonds and like matters is described in appropriate articles of these conditions or the Special Conditions appended hereto.

4.1.3 All instructions affecting Contract Sum, Contract Time or Contract interpretation shall be confirmed expeditiously in writing with copies furnished to the Owner, the A/E and the Contractor by the party issuing the instruction. No instruction affecting the A/E's design liability shall be issued without its prior written consent.

4.1.4 All oral communications affecting Contract Time, Contract Sum and Contract interpretation will be confirmed in writing. No oral communication, by itself, can authorize a change in the Work, the Contract Sum, the Contract Time, or waive compliance with the plans and specifications.

4.2 ARCHITECT/ENGINEER'S ADMINISTRATION: The A/E shall be a representative of the Owner during construction until final payment to the Contractor is due. The A/E will advise and consult with the Owner. The A/E has the authority to act on behalf of the Owner to the extent provided in the Contract Documents, unless otherwise modified by written instrument, which will be shown to the Contractor.

4.2.1 The A/E shall attend and participate in the Pre-Construction Conference, which will be held at a date, time and place established by the Owner and A/E.

4.2.2 In accordance with the contract between the A/E and Owner, the A/E shall visit the construction site at intervals appropriate to the stage of construction to reasonably determine that the Work is proceeding

in accordance with the Contract Documents. The A/E shall provide a continuity of observations covering all phases of the Work but it shall not be exhaustive or continuous.

4.2.3 The A/E shall attend and participate in Project Review Meetings which will be held monthly on a regularly scheduled basis during construction, unless more frequent meetings are necessitated under certain circumstances, at the time and place (probably project site) established by the Owner. As a part of the Project Review Meeting the A/E will review the Contractor's payment request.

4.2.4 The A/E shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors or any other persons performing any of the Work, or for the failure of any of them to carry out the Work in accordance with the Contract Documents.

4.2.5 The A/E shall assist the Owner in determining the amounts owing to the Contractor based on observations at the site and on evaluations of the Contractor's Application for Payment and shall assist the Owner in reviewing and approving Certificates of Payment. However, the A/E's assistance does not include the preparation of Certificates of Payment.

4.2.6 The A/E shall render design interpretations necessary for the proper execution or progress of the Work with reasonable promptness on request of either the Owner or the Contractor and shall render written interpretations within a reasonable time, on all claims, disputes and other matters in question relating to the design interpretation of the Contract Documents. Interpretations of the A/E shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in written or graphic form. The A/E's interpretations shall be final if consistent with the intent of the Contract Documents.

4.2.7 The A/E will make recommendations to the Owner regarding rejection of Work, which does not conform to the Contract Documents. Whenever, in the A/E's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents, the A/E will make recommendations to the Owner concerning special inspections and testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work be then fabricated, installed or completed.

4.2.8 The A/E shall assist the Owner in preparing Change Orders for the Owner's approval and execution in accordance with the Contract Documents, and shall have authority to order minor changes in the Work which do not involve an adjustment in the Contract Sum or an extension of the Contract Time and which are not inconsistent with the intent of the Contract Documents. The A/E's assistance is to be in the form of providing appropriate drawings and specifications and additional background information to the Owner.

4.2.9 The A/E shall assist the Owner in performing the following: inspections to determine the Date of Beneficial Occupancy or Pre-Final Inspection and the date of Final Completion; receiving and forwarding to the Owner for the Owner's review written warranties and related documents required by the Contract Documents and assembled by the Contractor.

4.2.10 The A/E shall be responsible for review and approval of all Contractor prepared and submitted documents prior to transmitting the final copies to the Owner. These documents will include instruction, maintenance and operational manuals, parts catalogs, wiring diagrams, directory of installing contractors, written warranties, bonds, receipts, affidavits, Record Set drawings and like publications or items required by the Contract Documents.

4.3 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK: The Contractor shall not employ any Subcontractor to whom the A/E or the Owner may have a reasonable

objection. The Contractor will not be required to employ any Subcontractor against whom he/she has a reasonable objection.

4.3.1 A change in any approved Subcontractor or the addition of any new Subcontractor can be made only with the written consent of the Owner. Changes will require the Contractor to submit a revised HUB Subcontracting Plan (Exhibit 1) to the Contract Administrator.

4.3.2 Any part of the Work performed for the Contractor by a Subcontractor shall be pursuant to a written contract. The Contractor agrees to incorporate by reference the Contract Documents into every written subcontract and to bind every Subcontractor and every Subcontractor agrees to be bound by the terms of the Contract Documents as far as applicable to his/her Work. The Contractor shall furthermore fully inform its Subcontractors prior to executing an agreement with them that they will be required to perform their Work in conformance with related documents and to submit cost estimates and Change Order proposals in complete and full analytical detail when so required or requested. The Contractor shall indemnify the Owner for any Subcontractor's claim, which may result from the failure of the Contractor to incorporate the provisions of this Contract into the Agreement with any of its Subcontractors or entities.

4.4 ACCESS TO AND INSPECTION OF THE WORK: The Contractor shall provide sufficient, safe and proper facilities at all reasonable times for observation and/or inspection of the Work by the authorized representatives of the Owner. The A/E and the Owner will make periodic visits to the site to familiarize themselves with the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents.

4.4.1 The Contractor shall not cover up any Work with finishing materials or other building components prior to an inspection of the Work by the A/E or the Owner for approval of the installation. Should corrections of the Work be required for approval, cover up shall be delayed until another inspection can be made and approval is indicated. Verbal approval to proceed with subsequent operations shall be confirmed to the Contractor in writing by the inspecting party.

4.4.2 Inspections provided by personnel not located on-site; At least forty-eight (48) hours prior to the anticipated cover up inspection, the Contractor shall notify the Owner. Should the Owner fail to make the necessary inspection within an additional twenty-four (24) hour period, the Contractor may proceed with cover up Work, unless the Owner makes an arrangement with the Contractor for additional time in which to complete desired inspections.

4.4.2.1 Inspections provided by personnel located on-site; at least twenty-four (24) hours prior to the anticipated cover up inspection, the Contractor shall notify the Owner. Should the Owner fail to make the necessary inspection within an additional twenty-four (24) hour period, the Contractor may proceed with cover up Work, unless the Owner makes an arrangement with the Contractor for additional time in which to complete desired inspections.

4.4.2.2 For on-site inspection by other Authorities having Jurisdiction: The Contractor shall notify other Authorities having Jurisdiction, as required by said Authority, prior to the anticipated cover up inspection.

4.5 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS: The Owner reserves the right to perform construction or operations related to the Project with the Owner's own material and labor forces and to award other contracts in connection with other portions of the Project under these or similar conditions of the Contract.

4.5.1 When separate contracts are awarded for different portions of the Project, "the Contractor" in the Contract Documents in each case shall be the Contractor who signs each separate contract. This Contractor shall properly connect and coordinate its Work with the Work of other contractors. If any part of this Contractor's Work depends for proper execution or proper results on the Work of any other separate contractor or the Owner, this Contractor shall inspect and promptly report in writing to the Owner any discrepancies or defects he/she may find in such other Work that render it unsuitable for such proper execution and results. Failure of this Contractor to so inspect and report shall constitute an acceptance of the Owner's or other contractor's Work as fit and proper to receive its Work, except as to defects which may develop in the Owner's or other separate contractor's Work after the execution of this Contractor's Work.

4.5.2 Should this Contractor cause damage to the Work or property of the Owner and/or any separate contractor on the Project, this Contractor shall, upon due notice, endeavor to settle with the Owner and/or such other separate contractor by agreement. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify this Contractor who shall defend such proceedings and pay all costs in connection therewith, and if any judgment against the Owner arises therefrom, this Contractor shall pay or satisfy it.

4.5.2.1 The Contractor shall notify the Owner in writing of damages within twenty-four (24) hours after occurrence.

4.5.3 This Contractor shall afford the Owner and/or other separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their Work and shall properly connect and coordinate its Work with theirs.

4.5.4 The Owner reserves the right to make essential installations, which are pertinent to the immediate use of the Work or Project with the concurrence of the Contractor. Within this right the Owner may let other contracts or may do such work with its own materials and labor forces. The Owner, in reserving this right, warrants that they will cooperate with the Contractor's forces and goals. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other separate contractor or company or by Owner employees. The Contractor shall cooperate to the end that the Owner may realize complete functioning of the Work or Project within the Contract Time.

4.6 CONTRACT TERMINATION:

4.6.1 Termination by Contractor. If the Work is stopped for a period of ninety (90) Days under an order of any court or other public authority having jurisdiction, or as a result of an act of government such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, then the Contractor may, upon ten (10) additional Days written notice to the Owner and the A/E, terminate the Contract and recover from the Owner payment for all Work executed and for any loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and overhead associated with such Work or losses and reasonable expenses resulting from such termination. If the cause of the Work stoppage is removed prior to the end of the ten (10) Day notice period, the Contractor may not terminate the Contract.

4.6.2 Termination by Owner. If the Contractor persistently or repeatedly refuses or fails to supply enough properly skilled workmen or proper materials or fails to make prompt payment when due to Subcontractors, laborers, or material men for materials and labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, or fails to so prosecute the Work or any portion thereof

as to ensure its completion, within the Contract Time, or any extension thereof, specified in this Contract, then the Owner may, without prejudice to any right or remedy and after giving the Contractor and its Surety, if any, ten (10) Days written notice, terminate the Contract. In such event the procedure outlined in the performance bond, if any, for completion of the Work will be followed and the Owner may take possession of the site and utilize in completing the Work such materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and necessary therefore. Should the surety fail to respond within fifteen (15) Days following such notice and fail to pursue completion of the Work with diligence acceptable to the Owner, the Owner may arrange for completion of the Work and deduct the cost thereof from the unpaid Contract Sum remaining, including the cost of additional services made necessary by such default or neglect, in which event no further payment shall then be made by the Owner until all costs of completing the Work shall have been paid. If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the A/E's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor or its surety shall pay the difference to the Owner. This obligation for payment shall survive the termination of the Contract. Whether or not the Contract is terminated, the Contractor and its Surety shall be liable for any damage to the Owner resulting from the Contractor's refusal or failure to complete the Work within the specified time.

4.6.2.1 If the Owner so terminates the Contract, the resulting damage will consist of the liquidated damages specified in the Contract until such reasonable time as may be required for final completion of the Work together with any increased costs occasioned by the Owner in completing the Work. Further, if the Owner does not terminate the Contract, the resulting damage will consist of such liquidated damages until the Work is completed or accepted.

4.6.2.2 After notice of termination of the Contract under the provisions of this clause, if it is determined for any reason that the Contractor was not in default or the delay was excusable, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly; failure to agree to any such adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this Contract entitled "Disputes".

4.6.2.3 Should a court of competent jurisdiction determine that termination of the Contract was wrongful, then such termination shall be deemed a termination for convenience in accordance with paragraph 4.6.3 and Contractor's remedy will be solely in accordance with paragraph 4.6.3.

4.6.2.4 The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

4.6.3 Termination for Convenience of Owner: Prior to, or during the performance of the Work, the Owner reserves the right to terminate the Contract for unforeseen causes not limited to court orders, loss of funding, acts of the government to discontinue the Work, etc., that may occur. Upon such an occurrence, the following procedures will be adhered to:

4.6.3.1 The Owner will immediately notify the A/E and the Contractor in writing, specifying the effective termination date of the Contract.

4.6.3.2 After receipt of the Notice of Termination, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due at that point in the Contract.

- a. Stop all Work.

- b. Place no further subcontracts or orders for materials or services.
- c. Terminate all subcontracts.
- d. Cancel all material and equipment orders as applicable.
- e. Take action that is necessary to protect and preserve all property related to this Contract which is in the possession of the Contractor.

4.6.3.3 Within 180 days of the date of the Notice of Termination, the Contractor shall submit a final termination settlement proposal to the Owner based upon costs up to the date of termination, reasonable profit on Work done only, and reasonable demobilization costs. If the Contractor fails to submit the proposal within the time allowed, the Owner may determine the amount due to the Contractor because of the termination and shall pay the determined amount to the Contractor.

4.6.3.4 If the Contractor and the Owner fail to agree on the settlement amount, the matter will be handled as a dispute through administrative procedures as established in paragraph 5.2.1.

4.7 **WRITTEN NOTICE:** shall be considered to have been duly given if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail to the last business address known to one who gives the notice.

4.8 **DISPUTED MATTERS:** Disputed matters shall be handled through administrative procedures as established in paragraph 5.2.1.

ARTICLE V. CONTRACT RESPONSIBILITIES

5.1 **OWNER'S RESPONSIBILITIES:** The Owner shall furnish available information regarding the site which is considered by Owner to be relevant, accurate, and necessary for Contractor's performance under the Contract.

5.1.1 All formal communications shall be through the Owner.

5.1.2 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein.

5.2 **OWNER-CONTRACTOR OBLIGATIONS:** The Owner and the Contractor each bind themselves, partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Owner, nor shall the Contractor assign any monies due or to become due to him/her hereunder, without the previous written consent of the Owner.

5.2.1 **DISPUTES:** Any dispute arising under this Contract that is not disposed of by mutual agreement between Owner and Contractor shall be resolved according to "Procedures for Resolving Contract Claims and Disputes," Rule §155.31, Texas Administrative Code, Title 37, Part VI, Chapter 155, Subchapter C.

5.2.1.1 If authorized to adjudicate a breach of contract claim against the Owner under Chapter 114, Civil Practice and Remedies Code, Contractor, prior to filing suit, shall comply with the dispute resolution process in subsections 155.31(h) – (q) of Rule §155.31 "Procedures for Resolving Contract Claims and Disputes." However, references therein to Chapter 2260 or the State Office of Administrative Hearings

shall be inapplicable if contractor files suit under Chapter 114, Civil Practice and Remedies Code, after completion of the dispute resolution process.

5.2.1.2 At all times during the course of the dispute resolution process, the Contractor shall continue with the Work as directed, in a diligent manner and without delay, shall conform to the Owner's directive, decision or order, and shall be governed by all applicable provisions of the Contract Documents. Records of the Work shall be kept in sufficient detail to enable payment in accordance with applicable provisions in the Contract Documents, if this should become necessary.

5.2.1.3 This provision shall not be construed to prohibit contractor from seeking any other legal or equitable remedy to which it is entitled.

5.3 CONTRACTOR'S RESPONSIBILITIES: The Contractor shall supervise and direct the Work using its best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, safety, sequences and procedures, and for coordinating all portions of the Work under the Contract. The Contractor shall have read and be thoroughly familiar with the Contract Documents.

5.3.1 The Contractor shall provide, without extra charge, all incidental items required as a part of the Work, even though not particularly specified or indicated provided that the same are reasonably inferable for a complete working system from the Contract Documents and readily apparent therefrom, and if he/she has good reason for objecting to the use of a material, appliance, or method of construction as shown or specified, shall register their objections to the A/E, in writing, sending a copy to the Owner. Otherwise, the Contractor shall proceed with the Work under the stipulation that a satisfactory job is required.

5.3.2 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Owner or A/E in their administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

5.3.3 The Contractor is solely responsible for successful completion of the Project in accordance with the Plans and Specifications. The Contractor expressly acknowledges that the Owner has no duty to discover Work that fails to conform to the Plans and Specifications and/or to point out such non-conforming Work to the Contractor. The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

5.3.4 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

5.3.5 CONTRACTOR INSPECTION OF WORK:

5.3.5.1 The Contractor shall provide and maintain the necessary equipment, material and supplies required to accomplish the testing and inspection hereunder.

5.3.5.2 The Contractor's Quality Control inspection system shall provide for procedures which will ensure the latest Drawings, Shop Drawings, Specifications and instructions required by the Contract and changes thereto are used in performing the Work.

5.3.5.3 The Owner reserves the right to observe at the source, the materials, supplies or services not manufactured or performed within the Contractor's facility. Such observation shall not constitute acceptance, nor shall it replace in any way the Contractor's responsibility for inspection or requirement to furnish an acceptable end item.

5.3.5.3.1 Prior to the start of Work under each separate Specification section, or prior to the start of Work where a change in a construction operation is contemplated by the Contractor, a coordination meeting will be held between the Contractor's Superintendent, the Contractor's Quality Control Manager, the A/E, and the appropriate representative of the Owner. Supervisory and Quality Control representatives of all applicable Subcontractors will also attend. The purpose of the meeting is to ensure that there are no misunderstandings regarding the quality as well as the technical requirements of the Contract. The Contractor's and applicable subcontractor's Quality Control representatives shall be on-site at all times during the Work and shall have the authority to affect the resolution of Quality problems including stopping the Work. The TDCJ Project Administrator shall be notified a minimum of 72 hours prior to any prework coordination meeting. As a minimum the following items shall be reviewed at the meeting:

- a. Contract requirements;
- b. Shop drawings and submittals;
- c. Contractor's Quality Control Program requirements;
- d. Adequacy of previous operations;
- e. Availability of required materials and equipment;
- f. Contractor's Quality Control inspections and tests;
- g. TDCJ Quality Assurance inspections and tests;
- h. Familiarity and proficiency of the Contractor's and each Subcontractor's workforce to perform the operation to required workmanship standards;
- i. Safety and environmental precautions to be observed; and
- j. Any other preparatory steps which the particular operation may be dependent upon.

5.3.5.3.2 Upon completion of a representative sample of a given feature of the Work and prior to the start of a new or changed operation, an appropriate Owner's representative(s) and the A/E will meet with the Contractor's Superintendent and Quality Control Manager and applicable Subcontractor's superintendent and their Quality Control representatives. The responsibility for scheduling and providing these samples in a timely manner so that the Work is not delayed or hindered lies solely with the Contractor. The following items will be checked at this meeting as a minimum:

- a. Workmanship to establish quality standards;
- b. Conformance to Contract Drawings and Specifications and the approved shop drawings or submittals;
- c. Adequacy of materials;
- d. Adequacy and results of inspection and testing methods; and
- e. Adequacy of safety and environmental precautions.

Once approved, the representative sample will become the physical baseline by which ongoing Work is evaluated for quality and acceptability. To the maximum practical extent, approved representative samples of Work elements shall remain visible until all Work in the appropriate category is complete.

5.3.5.3.3 The Contractor shall monitor the Work on a daily basis to assure the continuing conformance of the Work to the workmanship standards established during the pre-work coordination meeting and initial inspections. Follow-up inspections will be recorded on the Contractor's daily Quality Control report.

5.3.5.4 The Contractor shall maintain adequate, current, factual records in an appropriate format of all inspections and tests performed to include as a minimum the type and number of inspections and tests, results of inspections and tests and proposed remedial or corrective actions necessary for any defective or rejected Work which does not meet Contract requirements. These records should include a statement that all supplies or materials and workmanship incorporated in the Work are in full compliance with the terms and requirements of the Contract Documents.

5.3.5.5 Before construction operations commence, the Owner and Contractor shall discuss the Quality Control inspection system requirements described in this Article and the interrelationship of Contractor, Owner and A/E systems and procedures. The Contractor shall designate an individual employed by the Contractor as Quality Control Manager in accordance with Technical Specification Section 01440.

5.3.5.6 The Owner shall notify the Contractor of any noncompliance with the foregoing provisions. Proposed corrective action will be submitted to the Owner by the Contractor within twenty-four (24) hours of notice of noncompliance for approval by the Owner and A/E. Upon approval, the Contractor shall take immediate corrective action. If the Contractor fails or refuses to take prompt action, the Owner may issue an order stopping all or part of the Work until the Contractor takes appropriate action. No portion of the time lost due to any such stop order shall be made the subject of a claim for extension of time or for excess costs or damages, including all impacts, by the Contractor.

5.3.5.7 Separate payment will not be made for providing and maintaining an effective Quality Control Program and all costs associated therein shall be included in the applicable unit prices or lump-sum prices contained in the bidding schedule.

5.3.6 Removal of Employees: The Owner may, in writing, require the Contractor to remove from the Work any employee the Owner finds careless, incompetent or otherwise objectionable. The Contractor will promptly remove from the Work said employee.

5.3.7 The foregoing are in addition to other duties and responsibilities of the Contractor enumerated herein.

5.3.8 The Owner reserves the right to provide supplemental Quality Assurance inspection. However, the primary responsibility for Quality Control remains with the Contractor.

5.4 **CONTRACTOR'S PROJECT MANAGER:** The Contractor shall employ, as a minimum, a competent Project Manager and a competent Superintendent. The Superintendent shall be in attendance at the Project site during the progress of the Work. The Project Manager and Superintendent shall be satisfactory to the Owner and shall not be changed except with the written approval of the Owner unless said individuals leave the employment of the Contractor. These individuals shall represent the Contractor and shall have full authority to act on the Contractor's behalf. All communications given to either individual shall be as binding as if given to the Contractor.

5.5 ACTS AND OMISSIONS: The Contractor shall be responsible for acts and omissions of its employees and Subcontractors, their agents and employees and other persons performing portions of the Work.

5.6 CONDITIONS AT SITE OR BUILDING

5.6.1 The Contractor is responsible for having visited the site and having ascertained pertinent local conditions such as location, accessibility, and general character of the site or the building, the character and extent of existing Work within and adjacent to the site, and any other Work being performed thereon at the time of the submission of his/her bid. Any failure to do so will not relieve the Contractor from responsibility for successfully performing the Work without additional expense to the Owner.

5.6.1.1 The Owner makes no representations as to the accuracy or completeness of the site information furnished to the Contractor by Owner and does not expressly or by implication warrant same and is not responsible for any interpretations or conclusions reached by the Contractor with respect thereto. It is Contractor's sole responsibility to verify to its own satisfaction all site information, including but not restricted to topographical data, borings, subsurface information, above and underground utilities and easements.

5.6.1.2 The Contractor shall take field measurements, and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the A/E at once, in writing, sending a copy to the Owner.

5.6.1.3 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with materials or equipment.

5.6.2 If, in the performance of the Contract, subsurface, latent or concealed conditions at the site are found to be materially different from the information included in the bid documents, or if unknown conditions of an unusual nature are disclosed differing materially from the conditions usually inherent in Work of the character shown and specified, the A/E shall be notified in writing of such conditions before they are disturbed.

5.7 INSURANCE

5.7.1 The Contractor shall not commence Work under this Contract until he/she has obtained all the insurance required hereunder and certificates of such insurance have been filed with and accepted by the Owner. Insurance coverage shall provide for a 30-Day notice prior to cancellation or material change to the policy coverage and or limits. Acceptance of the insurance certificates by the Owner shall not relieve or decrease the liability of the Contractor.

5.7.2 Unless otherwise provided in the Special Conditions the Contractor shall provide and maintain, until the Work included in the Contract is completed and accepted by the Owner, the minimum insurance coverages that follow, provided that the limits of liability may be met in part by the use of umbrella or excess policies. The insurance policies required herein shall not contain the word "endeavor to" or similar wording which would fail to provide a binding obligation to provide such notice to the Owner of the cancellation of a policy or a material change to an insurance policy.

5.7.2.1.1 MINIMUM INSURANCE COVERAGES

<u>Type of Coverage</u>	<u>Minimum Limits of Liability</u>
1. Workers' Compensation Insurance Coverage	Statutory: Texas Administrative Code,

A. Definitions:

Certificate of coverage ("certificate")- A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Texas Department of Insurance, Workers' Compensation Division, or a coverage agreement (DWC Form-81, DWC Form-82, DWC Form-83, or DWC Form-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Subcontractor - Persons providing services on the project ("subcontractor" in Texas Labor Code, Section 406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

- (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
- (2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Insurance, Division of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

- (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
- (2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
- (3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (4) obtain from each other person with whom it contracts, and provide to the contractor:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
- (6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured,

with the division. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

- | | | |
|--------------------------------------------------|---------------------------|----------------------------------------------|
| 2. Employers' Liability | | |
| a. | Bodily Injury by Accident | \$500,000 ea. Accident |
| b. | Bodily Injury by Disease | \$500,000 ea. Employee |
| c. | Bodily Injury by Disease | \$500,000 Policy Limit |
| 3. Commercial General Liability | | |
| (Combined Bodily Injury & Property Damage) | | \$1,000,000 Aggregate |
| | | \$1,000,000 Products/Completed Operations |
| | | \$1,000,000 Personal & Advertising Liability |
| | | \$1,000,000 ea. Occurrence |
| | | \$50,000 Fire Damage |
| | | \$5,000 Medical Expense |
| 4. Comprehensive Auto Liability | | \$1,000,000 Combined Single Limit |
| 5. Builder's Risk/Installation Floater Insurance | | |

The Contractor shall obtain at its own expense on an All Risk of physical loss basis, Builder's Risk Insurance coverage including workmanship, acceptable to the Owner, in the amount of insurance equal at all times to 100% of the insurable value of materials delivered and labor performed. **Policy must include flood coverage if Work is to be executed in a flood zone as defined by the Federal Emergency Management Agency (FEMA) and Windstorm Coverage for locations designated as a First Tier Coastal County.** Any and all exclusions must be approved by the Owner. The policy so issued in the name of the Contractor shall also name its Subcontractors and the Owner as Loss Payee, as their respective interests may appear. The policy shall have an endorsement as follows:

"This insurance shall be specific as to coverage and not considered as contributing insurance with any permanent insurance maintained on the present premises."

6. Reserved

7. Umbrella Coverage:

The Contractor may provide the following minimum Coverage Limits, as recommended by the advice and counsel of the Contractor's insurance provider:

- a. When Contract Amount equals less than \$5,000,000.
Excess or Umbrella Policy of \$1,000,000.
- b. When Contract Amount exceeds \$5,000,000.
Excess or Umbrella Policy of \$5,000,000.

5.7.3 All policies shall contain special endorsements to include:

1. The Owner as additional insured (except Workers' Compensation and Employers' Liability);
2. Notice of Cancellation to Owner (minimum of 30 days); and
3. Waive subrogation against the TDCJ.

If the Contractor already has in force insurance policies that provide the required coverage, there is no need to purchase duplicate coverage for this Project. Provide riders to such existing policies to cover this Project.

5.7.4 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the A/E, and their agents and employees from and against all claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph.

5.7.4.1 In any and all claims against the Owner and/or the A/E or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 5.7.4 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

5.7.4.2 The obligations of the Contractor under this Paragraph shall not extend to the liability of the A/E, and/or the Owner, their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the A/E, and/or the Owner their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

5.7.4.3 The parties agree that the terms, covenants and provisions of paragraph 5.7.4 shall survive the termination of this Contract.

5.8 SAFETY PRECAUTIONS AND PROGRAMS

5.8.1 It shall be the duty and responsibility of the Contractor and all of its Subcontractors to be familiar and comply with all requirements of Public Law 91-596, 29 U.S.C. Secs. 651 et seq., the Occupational Safety and Health Act of 1970, (OSHA) and all amendments thereto, and to enforce and comply with all of the provisions of this Act. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. At the Pre-Construction Conference the Contractor shall submit its safety program to the Owner for acceptance. Acceptance by the Owner shall not relieve the Contractor from errors or omissions in the program or from any and all safety obligations required by all applicable statutory requirements.

5.8.1.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

1. Employees on the Work and other persons who may be affected thereby;

2. The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or anyone directly or indirectly employed by any of them; and
3. Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

5.8.1.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

5.8.1.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

5.8.1.4 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner.

5.8.1.5 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

5.8.2 TRENCH EXCAVATIONS: On projects in which trench excavations will exceed a depth of five feet, the Contractor and all of its Subcontractors shall comply with all requirements of 29 C.F.R. Standards 1926.650, 1926.651 and 1926.652, Occupational Safety and Health Administration (OSHA). Contractor shall include for each selected trench excavation safety system to be utilized a separate pay item classification as a part of the Contract Sum breakdown required by paragraph 7.1. Such pay item classification shall be based on the linear feet of trench excavated. Further, Contractor shall also include in the Contract Sum breakdown a separate pay item for such shoring based on the square feet of shoring used. Before commencing any trench excavation that will exceed a depth of five feet, the Contractor will provide the Owner with detailed Plans and Specifications regarding the safety systems to be utilized. Said plans and specifications shall include a certification from a Registered Professional Engineer indicating full compliance with the OSHA provisions printed above.

5.8.3 In an emergency affecting the safety of persons or property, the Contractor shall act, at its discretion, to prevent threatened damage, injury or loss.

5.9 MATERIALS AND WORKMANSHIP

(a) All equipment, material, and articles incorporated into the work covered by this Contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this Contract. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Owner, is equal to that named in the specifications, unless otherwise specifically provided in the Contract.

(b) The Contractor shall obtain the Owner's approval of the machinery and mechanical and other equipment to be incorporated into the Work. When requesting approval, the Contractor shall furnish to the Owner the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this Contract or by the Owner, the Contractor shall also obtain the Owner's approval of the materials or items the Contractor contemplates incorporating into the Work. When requesting approval, the Contractor shall provide full information concerning the materials or items. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this Contract shall be performed in a skillful and workmanlike manner. The Owner may require, in writing, that the Contractor remove from the Work any employee the Owner deems incompetent, careless, or otherwise objectionable.

5.10 TESTS: If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to be inspected, tested or approved, the Contractor shall give the Owner and the A/E timely notice of its readiness and of the date arranged so the Owner and A/E may observe such inspection, testing or approval. In addition, the Owner or the A/E may require special inspection, testing or approval of material or Work for compliance with the requirements of the Contract Documents. Upon direction of the Owner and the A/E, the Contractor shall promptly arrange for such special testing, inspection or approval procedure. The Contractor is responsible for employing the services of an acceptable testing laboratory and for performing all testing required. All costs associated with this testing shall be borne by the Contractor. Methods of testing shall be in accordance with the Contract Documents. The Owner reserves the right to perform Quality Assurance testing. The Owner shall pay for all Quality Assurance testing. The Contractor shall be responsible for the cost of the material being tested. If testing by either the Contractor's testing laboratory or the Owner's Quality Assurance testing laboratory determines material or workmanship is not in conformance with the Contract Documents, the Contractor shall be responsible for all costs associated with replacement of non-conforming Work or material. The Contractor shall further be responsible for the cost of any re-testing performed by the Owner's Quality Assurance Testing laboratory as a result of non-conforming Work. When directed by the Owner, verification of material compliance with the specifications shall be made by one of the following:

1. Manufacturer's certificate of compliance.
2. Mill certificate.
3. Testing laboratory certification.
4. Report of actual laboratory test from the Contractor's laboratory. Samples tested shall be selected as required by the Contract Documents or Industry Standard, whichever is more stringent and the method of testing shall comply with the Contract Documents.

5.11 REMOVAL OF DEFECTIVE WORK: If any materials furnished under this Contract are condemned by the Owner and/or A/E, the Contractor shall, after having received notice from the Owner or A/E to that effect, proceed to remove from the grounds or buildings all condemned materials, whether worked or un-worked, and take down all portions of the Work which the Owner and/or A/E shall by like written notice condemn as unsound or improper or as in any way failing to conform to the Contract Documents, and shall make good all Work damaged or destroyed thereby.

5.11.1 The Contractor shall without charge, replace all material or correct any workmanship found by the Owner and/or A/E not to conform to the Contract requirements, unless in the public interest the Owner consents to accept such material or workmanship with an appropriate adjustment in the Contract Sum.

5.11.2 If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Owner may (1) by Contract or otherwise replace such material or correct such workmanship and charge the cost thereof to the Contractor, and/or (2) terminate the Contractor's employment in accordance with Article IV, and/or (3) or other action as referenced elsewhere in this Contract.

5.12 ROYALTIES AND PATENTS: The Contractor shall pay all royalties and license fees, and defend all suits or claims for infringement of any patent right and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such royalties and license fees and loss when a particular design or process, or the product of a particular manufacturer or manufacturers is specified; provided, however, if the Contractor has reason to believe the design, process or product specified constitutes an infringement of a patent, they shall be responsible for such royalties, license fees and loss unless he/she promptly gives such information to the Owner and the A/E.

5.12.1 The Contractor is responsible for ensuring that any substitution proposed at any time can be utilized as proposed without infringing on any patent, copyright, trademark or other form of intellectual property, and by submitting a request for substitution warrants to the A/E and the Owner that the proposed substitution can be implemented without such infringement. In reviewing substitution requests, the A/E and the Owner will make no determination as to the existence or potential infringement of such rights by the proposed substitution, and approval of substitution requests do not relieve the Contractor from its responsibilities under this section and paragraph. 2.1.

5.13 EQUAL MATERIALS: The Contractor shall be responsible for any additional costs or delays resulting from having furnished materials, equipment or fixtures other than those specified, and shall reimburse the Owner for any increased design costs resulting from such substitutions.

5.14 SHOP DRAWINGS AND SAMPLES: Shop Drawings and Samples shall be submitted as required by the Specifications.

5.14.1 The Contractor shall submit, with reasonable promptness and in orderly sequence, all Shop Drawings and Samples required by the Contract Documents, or subsequently by the A/E as covered by Contract Modifications. The Contractor shall review them for compliance with Contract Documents and shall certify that he/she has done so by stamp, or otherwise, affixed to each copy thereof. Submittal data presented without such certification will be returned without review or other comment, and any delay resulting therefrom will be the Contractor's responsibility.

5.14.1.1 The Contractor shall bear the cost of reproduction of Shop Drawings as may be required. Usually eight (8) copies are required, but the number will be established at the Pre-Construction Conference; a sepiamay be required in lieu of one or more copies.

5.14.1.2 The Contractor shall, within 20 days after receipt of the Notice to Proceed submit to the Owner through the A/E a schedule of all items that shall be furnished for review and approval by the Owner and/or the A/E. The schedule shall also list all items that are to be reviewed and approved by the Contractor.

5.14.1.3 Such schedules shall include, among other things, Shop Drawings, manufacturer's literature, certificates of compliance, materials samples, materials colors, guarantees, etc.

5.14.1.4 The schedules shall indicate the type of item, Contract requirements reference, the Contractor's scheduled dates for submitting the above and like items and the projected need dates for approval answers from the Owner or the A/E and the projected or actual dates for procurement. The schedule shall show a minimum of thirty (30) Days after receipt for review and approval by the Owner and A/E, and if re-submittal is required, an additional fourteen (14) Days will be allowed for approval after receipt. The Contractor will revise and/or up-date this schedule as appropriate.

5.14.1.5 The submittal schedule shall be coordinated with the Owner-approved, Contractor-prepared and submitted progress schedule for all the Work. The Contractor shall revise and/or update the schedule as appropriate or as directed by the Owner to ensure consistency with the progress schedule as it may be revised and/or updated. Such revised submittal schedules shall be promptly provided to the Owner. Usually eight (8) copies are required, but the number will be established at the Pre-Construction Conference.

5.14.1.6 Furnishing of the schedule or revision thereto shall not be interpreted as relieving the Contractor of its obligation to comply with all the Specifications' requirements for the items on the schedule.

5.14.2 Shop Drawings and Samples shall be properly identified, as specified or as the Owner and/or the A/E may require. At the time of submission, the Contractor shall inform the Owner and the A/E in writing of any deviation in the Shop Drawings or Samples from the requirements of the Contract Documents.

5.14.3 By submitting Shop Drawings and Samples, the Contractor thereby represents that all field measurements, field construction criteria, materials, catalog numbers and similar data were verified, and that he/she has checked and coordinated each Shop Drawing and Sample with the requirements of the Work and of the Contract Documents and he/she shall so certify as required by paragraph 5.14.1.

5.14.4 The A/E or the Owner, if required by Special Conditions, will review and approve the Shop Drawings and Samples with reasonable promptness, but only for conformance with the design concept of the Project and with the information given in the Contract Documents. The approval of a separate item shall not indicate approval of an assembly in which the item functions. The approval of the Shop Drawings or Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Owner and the A/E in writing of such deviation at the time of submission and the Owner or the A/E has not objected to the specific deviation. The approval shall not relieve the Contractor from responsibility for errors or omissions in the Shop Drawings or Samples.

5.14.4.1 The A/E will review and approve all submittals, color schedules, and specified mockups constituting Samples of finishes, such as architectural concrete and block sample panels.

5.14.5 The Contractor shall make any corrections required and shall resubmit the required number of corrected copies of the Shop Drawings or new Samples of materials until approved. The Contractor shall direct specific attention in writing to any new revisions other than the corrections required on previous submissions.

5.14.6 No Work requiring a Shop Drawing or Sample submission shall be commenced until the submission has been approved. All such Work shall be in accordance with approved Shop Drawings and Samples.

5.14.7 Shop Drawings shall be complete and detailed. If approved by the A/E, each copy of the Drawings will be identified as having received such approval by being so stamped and dated. If approval "with exception" or "as noted" by the A/E is so identified, stamped and dated, the Contractor shall comply with the notations so shown. If such qualified approval is so shown or if the drawings are not approved by

the A/E or if resubmission is so directed, the Contractor shall make any corrections required or indicated by the A/E at the Contractor's expense.

5.14.8 When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the A/E shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

5.15 **CLEANING:** The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the Work, the Contractor shall remove from the Work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Owner. Upon completing the Work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Owner.

ARTICLE VI. CONTRACT CHANGES

6.1 **CHANGE ORDERS:** The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, and the Contract Sum and/or Contract Time will be adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents. If, in the Owner's sole opinion, such changes cause an increase or decrease in the Contractor's costs of, or time required for, performance of the Contract, an equitable adjustment may be made and confirmed in writing in a Change Order, in accordance with section 6.6 below.

6.1.1 Such orders, designated or indicated to be change orders, include but are not limited to changes:

- 1) In the Contract Documents;
- 2) In the methods or manner of performance of the Work;
- 3) In the Owner-furnished facilities, equipment, materials, services, or sites;
- 4) Directing acceleration in the Work to accomplish its completion prior to the original Contract completion date.

6.1.2 Any other written order which shall include direction, instruction, interpretation, or determination from the Owner shall be treated as a potential Change Order under this clause, provided that the Contractor gives the Owner written notice, prior to performing Work, stating the date, circumstances, and source of the order and that the Contractor regards the order as a Change Order.

6.1.3 It is recognized by the parties hereto, and agreed by them, that the Specifications and Drawings may or may not be free from errors, omissions or imperfections, or require changes or additions in order for the Work to be completed to the satisfaction of the Owner, and that, accordingly, it is the express intention of the parties, notwithstanding any other provisions in this Contract, that any errors, omissions or imperfections in such Specifications and Drawings, or any changes in or additions to same, or to the Work ordered by Owner, and any resulting delays in the Work or increases in Contractor's costs and expenses, shall not constitute or give rise to any claim, demand or cause of actions of any nature whatsoever in favor of Contractor, whether for breach of Contract, quantum meruit, or otherwise; provided, however, that Owner shall be liable to Contractor for the sum stated to be due Contractor in any Change Order approved and signed by both parties, it being agreed hereby that such sum, together with any extension of time contained in said Change Order, shall constitute full compensation to Contractor for all costs, expenses and damages to Contractor, whether

direct, consequential or otherwise in any wise incident to, arising out of, or resulting directly or indirectly from the Work performed by Contractor under such Change Order.

6.1.4 RESERVED

6.1.5 RESERVED

6.1.6 The Contractor agrees that the Owner or any of its duly authorized representatives shall have access to all Contractor records related to the Project to verify charges to the Contract. Further, the Contractor agrees to include these provisions in all subcontracts related to these projects. The Owner shall give the Contractor reasonable advance notice of intended audits.

6.1.6.1 Records may be reviewed during normal Business Hours and shall include accounting records, employee time sheets, estimating work papers, Change Order files, correspondence, canceled checks, related overhead records as applicable, and any and all supporting documents necessary to substantiate charges related to the Contract.

6.1.6.2 For the purpose of such examination, the Owner shall have access to said records of the Contractor or any related parties to the Contract from the effective date of this Contract, for the duration of the Work, and until two years after the date of final payment by the Owner to the Contractor. The period of access and examination described herein which relate to appeals under paragraph 5.2.1 of this Contract, litigation, or the settlement of claims arising out of the performance of this Contract shall continue until final disposition of such claims, appeals or litigation.

6.2 RESERVED

6.3 REQUESTS FOR EQUITABLE ADJUSTMENT:

6.3.1 Requests for equitable adjustment in Contract Sum shall be submitted in accordance with section 6.6.1.1.1 not later than 20 Days after the occurrence giving rise to such request to the Owner and with copy to the A/E. The request shall be in writing and shall be supported in detail sufficient to provide for evaluation and prompt resolution. If Contractor does not submit a request for equitable adjustment within 20 days, it is mutually agreed that the Contractor waives the right to subsequently request an equitable adjustment for an occurrence which may give rise to such request.

6.3.2 No request shall be allowed for an equitable adjustment under this or any other provision of the Contract if asserted after final payment under this Contract.

6.4 REQUESTS FOR TIME EXTENSION: The Contractor shall comply with Article VIII when requesting time extensions.

6.5 MINOR CHANGES: The A/E, with concurrence of the Owner, will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time. Such changes shall be affected by written order, which the Contractor shall carry out promptly.

6.6 ADMINISTRATIVE PROCEDURES FOR CHANGE ORDER:

6.6.1 Lump Sum Proposal

6.6.1.1 In responding to a request for the Contractor to propose a price for a change in the Work, the Contractor shall furnish a lump sum proposal supported by a complete breakdown as described hereafter, indicating the estimated or actual cost to the Contractor for performance of the changed Work, including the applicable percentage of overhead and profit described hereafter. Any request for an extension of time must be justified and presented in adequate detail to permit evaluation. (See Article VIII, General Conditions).

6.6.1.1.1 The Proposal for the adjustment of the Contractor's Work shall show cost of any extra Work and shall consist of the following items:

- a. Costs for materials and supplies. Costs shall be itemized to include unit cost, quantity and total cost. Costs reflected in the itemization shall reflect actual cost to the trade for material and supplies used.
- b. Wages paid for skilled, semi-skilled, unskilled labor or equipment operators performing the additional Work. Wages shall be itemized to include trade(s), hourly rate, hours and total cost. Such labor may include working foremen; all other supervisors shall be excluded and shall be considered as a part of field supervision.
- c. Costs for additional construction equipment solely for the use on the Change Order Work. Equipment costs shall be itemized to include type(s), the number(s) of each, hourly usage rate, hours of usage and total cost. Onsite equipment shall be employed in Change Order Work at no extra charge, unless the Change Order Work also contains a time extension. Equipment usage rates will be paid based on prevailing local or regional rates.
- d. Transportation costs for delivery and handling of materials, supplies and equipment. Such costs shall be itemized in sufficient detail as to allow identification of items transported.
- e. Total costs for field supervision (including superintendent), tools, use of other equipment on the job as necessary for economical performance of the Change Order Work, general office and field services and expenses, interference with other Work, adjustments to progress schedules and all other overhead including bond and insurance (except Workers' Compensation) and profit shall not exceed 15%.
- f. To the total cost proposed for the Change Order Work which is the sum of a, b, c, d and e above will be added, if applicable, the net cost of the following: Workers' Compensation Insurance, Social Security, Retirement/Pension and/or other costs of a similar nature imposed upon the Contractor by the state or Federal owner, or both, which are incidental to such Change Order Work and which the Contractor would be required to pay.
- g. Contractor mark-up. The Contractor will be allowed to add a maximum of 5% to cover all overhead expenses and profit, including supervision, small tools, insurance and bond when Work is performed by Subcontractors. It is expressly understood and agreed that when the Contractor performs the Work with its own forces, and where there is no Subcontractor involved, the Contractor will be allowed the 15% mark-up described in paragraph 6.6.1.1.1e and the 5% mark-up is then not applicable.

6.6.2 PROCESSING:

6.6.2.1 All approved changes in the Contract Sum or Contract Time will be issued by the Owner to the Contractor for Contractor's concurrence as a Field Order or Change Order. The Field Order is the Contractor's

assurance of payment and authorization to proceed with the change. The Contractor shall not make application for payment of Work approved by a Field Order until the Field Order has been incorporated into the contract by a Change Order.

6.6.3 Unilateral Change Order: In the event that the Owner requires certain Work to be accomplished and the Contractor fails in the discharge of any or all of its responsibilities described herein, the Owner may issue a Unilateral Change Order which is a Change Order issued by or at the direction of the Owner without the full and timely agreement of the Contractor.

6.6.3.1 A Unilateral Change Order may be issued before, during or after the changed Work is physically accomplished under the following conditions:

- a. Contractor fails to submit price and/or time extension proposal for the changed Work within the time requested by the Owner;
- b. Negotiation fails to achieve an agreed price and/or time extension or there remains a disagreement concerning any part of the changed Work; or
- c. Contractor fails or refuses to execute a Change Order provided that he/she has had opportunity to state his/her objections, and, if stated, they are not mutually resolved.

6.6.3.2 The terms of a Unilateral Change Order including the change in Contract Sum and/or Contract Time shall be determined by the Owner assisted by the A/E and shall, in the Owner's judgment, be fair and reasonable.

6.6.3.3 When a Unilateral Change Order has been issued, it will have the full force and effect of a Contract Modification. It will be included in schedules, payment estimates, reports and all official records of the Contract. The issuance of a Unilateral Change Order will not prejudice any of the Contractor's rights to dispute matters under other provisions of the Contract.

ARTICLE VII. CONTRACT PAYMENTS

7.1 CONTRACT SUM BREAKDOWN: The Contractor shall submit to the Owner for approval a breakdown of the Contract Sum, itemizing material and labor for the various classifications of the Work. The breakdown will be used for evaluation of progress payments.

7.1.1 The breakdown shall be submitted to the Owner not less than twenty (20) Days prior to the first request for payment, and this shall be a condition precedent to the processing of the first payment. This breakdown shall follow the sections of the Specifications and each item thereunder shall include its pro rata part of overhead and profit so that the sum of the items will equal the Contract Sum. The breakdown will correspond to the items of Work in the progress schedule, including the Work of Subcontractors. Each item shall be assigned labor or materials values, or both, the sub-total thereof equaling the value of the Work in place when completed.

7.1.2 No progress payments will be made prior to receipt and approval of the Contract Sum breakdown and project schedule, which shall be in such detail as required by the Owner.

7.2 PROGRESS PAYMENTS: Once each calendar month, the Owner will make a progress payment to the Contractor on the basis of a certified estimate, approved by the A/E, of the Work performed during the preceding calendar month under this Contract, including an affidavit that all payrolls, bills for labor, materials, equipment, or other indebtedness connected with such Work have been paid or will be paid within ten (10) Days after receipt of the progress payment, or within the period of time required by Government

Code, Title 10, Section 2251.022; but to ensure the proper performance of this Contract, the Owner shall retain not less than five percent (5%) of the amount of each estimate until final completion and acceptance of all Work covered by this Contract. Should the Owner issue a Certificate of Beneficial Occupancy in accordance with Article IX, upon application by the Contractor approved by the A/E, and without terminating the Contract, the Owner may make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than the retainage stipulated in the Contract Documents, and if bonds have been furnished as provided in Article III, such payment shall be made under the terms and conditions governing final payment, and shall not constitute a waiver of claims. Final payment shall be made after completion of the Work by the Contractor in accordance with the Contract Documents.

7.2.1 PRELIMINARY PAY WORKSHEET TO THE APPLICATION AND CERTIFICATE FOR PAYMENT: Every month that a progress payment is to be requested, the Contractor shall submit to the Owner a complete, clean copy of a preliminary pay work sheet or preliminary Application and Certificate for Payment, to include the following:

7.2.1.1 The Contractor's estimate of the amount of Work performed, labor furnished and materials incorporated into the Work, using the established Schedule of Values.

7.2.1.2 An updated Work Progress Schedule.

7.2.1.3 Such additional documentation as the Owner may require as set forth in the Special Conditions or elsewhere in the Contract Documents.

7.2.2 CONTRACTOR'S APPLICATION FOR PROGRESS PAYMENT: As soon as practicable, but in no event later than seven Days after receipt of the Preliminary Pay Worksheet, the A/E and Owner will review with the Contractor the Preliminary Pay Worksheet and observe the condition of the Work. Based on this review, the Owner and the A/E may require modifications to the Preliminary Pay Worksheet prior to the submittal of an application for progress payment, and will promptly notify the Contractor of revisions necessary for approval. At the Progress Meeting or as soon as practicable, the Contractor shall submit its invoice to the Owner on the appropriate and completed form, reflecting the required modifications to the Schedule of Values required by the A/E and/or Owner. Contractor shall attach all additional documentation required by the Owner and/or A/E, as well as an affidavit of payment affirming that all payrolls, bills for labor, materials, equipment, subcontracted work and other indebtedness connected with the Contractor's invoice are paid or will be paid within the time specified in Texas Government Code, Chapter 2251. No invoice is complete unless it fully reflects all required modifications, with all required documentation attached, including the Contractor's affidavit.

7.2.3 CERTIFICATION BY ARCHITECT/ENGINEER: Upon receipt of the Contractor's invoice, the Owner will review the application for progress payment for completeness and forward to the A/E. The A/E will certify that the application is complete and payable, or that it is incomplete, stating reasons why. If the invoice is incomplete, the Contractor shall make the required corrections and resubmit the invoice to the Owner for processing.

7.2.4 No progress payments will be made prior to receipt and approval of all project schedules and subsequent updates which shall meet the requirements as specified in 8.3.3.

7.2.5 In preparing progress payments, all material installed, labor performed, and stored material as provided by Article 7.2.5.1 may be included in the progress upon which payment is based.

7.2.5.1 All stored materials which are included in the progress payment shall at no time exceed five (5) percent of the Contract Sum and shall:

1. Have been approved to be incorporated into the Work by the A/E.
2. Have been approved for storage by the Owner, provided that if the Owner requests same, shall be furnished with bills of lading, material invoices, shipping receipts, delivery receipts, etc. for any or all material in question.
3. Contractor shall provide proof of title to the stored material in the form of invoices.
 - A. For material stored on-site which is scheduled for installation within 60 Days of arrival on the job-site and is properly stored and protected. Approved payment will be for invoiced amount less retainage.
 - B. For material stored off-site which is scheduled for installation within 60 Days and stored at an Owner approved storage site and a 30-Day written notice of such storage has been provided before request for payment. Approved payment will be for the invoiced amount less retainage.
 1. Storage will be in an insured and bonded warehouse.
 2. Documentation shall include evidence of such bonding and insurance coverage acceptable to the Owner and a receipt for stored material to the Owner from the warehouse company.
 3. Such material shall be segregated in storage and shall be available for inspection by representatives of the Owner.
 4. The Contractor shall pay for any Owner incurred expense in verifying such storage.

7.2.5.2 Any exception to the provisions of Article 7.2.5.1 will be considered on a case by case basis in response to a written request by the Contractor. Any exceptions granted shall be for the sole benefit of the Owner and/or the Project.

7.2.6 The Owner may withhold or, on account of subsequently discovered evidence, nullify that part of any certificate to such extent as may be necessary to protect the Owner from loss on account of:

1. Defective Work not remedied.
2. Damage to Work or property of the Owner and/or of another contractor.
3. Failure to maintain scheduled progress.
4. Receipt of written notice by the Owner of unpaid bills, as stipulated in Texas Property Code, Section 53.232, if the Contractor has not provided a payment bond and if the Contract Sum does not exceed \$25,000.00. Any funds so withheld shall be released to the Contractor if he/she furnishes a bond for release of lien as provided in Texas Property Code, Section 53.236. When the above grounds are removed, payment will be made for amounts withheld because of them.

5. Stored material not properly protected in accordance with the manufacturer's recommendations and the technical specifications, whichever is most stringent.
6. Failure to properly maintain and update the Record Set of Contract Documents.
7. Failure to comply with the wage rates provisions contained in the Contract.
8. Costs of re-testing, inspection or approval of materials or workmanship not in conformance with Contract requirements as stipulated in Article V, Paragraph 5.10.
9. Increased design costs and other associated costs resulting from Contractor substitutions.
10. Persistent failure to carry out the Work in accordance with the Contract Documents.
11. Reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or damages for the anticipated delay.
12. Failure to furnish to the Owner all instructional manuals, maintenance manuals, parts catalogs, wiring diagrams, operational manuals, spare parts, specified written warranties and like publications and parts for all installed equipment, systems and like items.
13. Re-inspection as defined in the Contract Documents.

7.2.7 All material and Work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and Work upon which payments have been made or the restoration of any damaged Work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the Contract.

7.2.8 Payments to the Contractor shall not be construed to release the Contractor or its surety from any obligation under this Contract.

7.2.9 The Owner will pay the Contract Sum as provided in the Contract Documents.

7.2.9.1 Update of the initial breakdown, as defined in paragraph 8.3, of the Contract Sum shall thereafter be reflected in the periodic update of the Contractor's Progress Schedule described under Article VIII. In connection with any progress payment, if the Owner requests same, they shall be furnished manifest proof of any Contractor's or Subcontractor's value; and such account shall be in a form as requested.

7.2.9.2 Pay estimate certificates must be signed by a corporate official or a specifically authorized representative of the Contractor. If the latter, a copy of the written delegation of authority to sign must be filed with the Owner.

7.2.9.3 Terms of payment shall be in accordance with Government Code, Title 10, Chapter 2251.

7.3 LIEN FOR UNPAID LABOR AND MATERIALS:

7.3.1 When the value of the Contract between the Owner and the Contractor is not in excess of \$25,000.00, claimants are referred to Texas Property Code, Section 53.231, for requirements that are prerequisite to the filing of a valid lien on funds unpaid to the Contractor at the time of filing the claim.

7.3.2 When the Contract between the Owner and the Contractor is in excess of \$25,000.00, claims must be sent directly to the Contractor and its surety in accordance with Government Code, Title 10, Chapter 2253. The Owner will furnish, in accordance with such Article, a copy of the Payment Bond as provided therein to claimants upon their request. All claimants are cautioned that no lien exists on the funds unpaid to the Contractor on such Contract, and that reliance on notices sent to the Owner may result in loss of their rights against the Contractor and/or Surety. The Owner is not responsible in any manner to a claimant for collection of unpaid bills, and accepts no such responsibility because of any representation by an agent or employee.

7.4 PAYMENT OF DEBT OWED TO THE STATE OF TEXAS

As required by §2252.903, Government Code, Contractor agrees that any payments due under a contract resulting from this IFB shall be directly applied towards eliminating any debt or delinquency including, but not limited to, delinquent taxes, delinquent student loan payments, and delinquent child support, until the debt is paid in full. Contractor shall comply with rules adopted by the TDCJ under §403.055, 403.551, 2252.903, Government Code and other applicable laws and regulations regarding satisfaction of debts or delinquencies to the State of Texas.

7.5 RIGHT TO OFFSET

In the event the Owner determines that Contractor owes money to the Owner under any contract or purchase order, the Owner, upon providing the Contractor with written notice of its intent to offset, shall have the right to withhold monies due to the Contractor with respect to this Contract or purchase order or with respect to any contract or purchase order with the Owner and apply such monies to the money due to the Owner.

ARTICLE VIII. TIME AND SCHEDULING

8.1 TIME LIMITS: All time limits stated in the Contract Documents are of the essence of this Contract.

8.2 CONTRACT TIME: The Contract Time as outlined in Section F.1, is the number of calendar days in which the Contractor shall commence and complete the Work. The Contract Time shall be deemed to commence upon the date designated in the Notice to Proceed issued by the Owner. The Work must be complete by the end of the Contract Time. The Schedule is to encompass all activities between the start and completion of Contract Time.

8.3 PROGRESS AND COMPLETION: It is understood and acknowledged by the parties that the Work cannot be efficiently completed without the use of a competent Schedule, updated frequently and utilized by the Contractor for the planning, management, and coordination of the Work. It is further acknowledged that the needs of the Owner to coordinate the provision of materials and services called for by the Contract Documents require that the Owner be made aware of any events or circumstances that affect the Schedule or sequences of Work required to construct the project. **Therefore, the requirements of this Contract as to scheduling and reporting, as well as time limits for completion of the Work, are of the essence.**

8.3.1 The Contractor is solely responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques, and procedures to be employed in scheduling and completing the project in a timely manner. All Schedules required under the Contract Documents shall represent the Contractor's best judgment of how it will execute the Work in compliance with the Contract Documents.

By submitting any Schedule, report or update required by the Contract Documents, the Contractor represents to the Owner that the information set out therein is accurate, that the plan of Work set out is achievable, and that the Contractor intends to proceed according to the Schedule.

Acceptance of any such Schedule, report or update by the Owner serves only to acknowledge that the Contractor has fulfilled the contractual requirement to submit the same; in so doing, the Owner assumes no responsibility for any loss or damage to the Contractor and the Contractor remains solely responsible for the choice of sequences, durations, logic, and procedures reflected therein.

The purpose of the Project Schedule shall be to:

- (1) Permit the Contractor to plan and coordinate its activities, and those of its Subcontractors, suppliers, and vendors, as well as action required by the Contract Documents of the Owner and A/E, so as to complete the Work in accordance with all applicable time limitations set forth in the Contract Documents;
- (2) Provide timely and accurate information to the Owner on the progress of the Work and the Contractor's planned methods of implementation to achieve Completion, and to timely apprise the Owner of any events or circumstances that have delayed or threaten to delay the Work;
- (3) Serve as a reliable model of the Work that will permit the accurate determination of the impact of any delaying event or circumstances upon the time of completion, and to permit the Contractor to identify and implement effective strategies to avoid or minimize delays;
- (4) Permit the Contractor to identify and implement effective strategies of recovering lost time, where necessary.

The Critical Path Method (CPM) in calendar and work days, shall be used for the planning, scheduling, execution and reporting of the Work to be performed under the Contract.

The Project Schedule shall include a Project Schedule, a Schedule of Values, and computer-produced Schedule and Cost Reports as stipulated herein.

The Contractor shall provide the computer processing of the computer-produced reports and network diagram required by this article. The Contractor shall also provide, at no additional cost to the Owner, an electronic copy of the project network and of the computer-produced reports for the Preliminary Logic Network, Detailed Logic Network, Project Schedule Updates and Time Impact Analysis. The Contractor shall use "Primavera P6 Project Management" as its scheduling software.

The Contractor shall meet with the Owner within seven (7) calendar days after the start of the Contract Time to assure mutual understanding of the requirements of this article.

8.3.1 Contractor's Representative: Under this Contract the Contractor shall designate in writing an authorized representative in the Contractor's organization who shall be responsible for coordinating with the

Owner during the preparation and maintenance of the Project Schedule. Qualifications of the Project Scheduler are outlined in Section H, paragraph 13.1.

Approval of the Schedule submissions shall be contingent upon acceptance of the Contractor's choice of authorized scheduling representative.

The Contractor's representative shall have complete authority to act on behalf of the Contractor in fulfilling the Project Schedule requirements and such authority shall not be interrupted throughout the duration of the Contract unless approved in writing by the Owner.

8.3.2 SCHEDULE DEVELOPMENT BY CONTRACTOR: Within a time period established in Section H, paragraph 13.3, after the start of the Contract Time, the Contractor shall submit one (1) electronic copy of its proposed CPM Schedule (hereinafter referred to as the Network) along with a supporting narrative to the Owner. The Contractor's Network shall consist of, but not be limited to, the following:

8.3.2.1 Proposed Procurement Activities.

- (1) These procurement activities shall include mobilization, Shop Drawing submittals, Sample submittals, and fabrication and delivery of key and long-lead procurement items, including Owner furnished equipment and materials. The activities shall also indicate intended submittal dates and realistic delivery dates for fabrication and delivery activities.
- (2) The Contractor shall also prepare a log which shall list all Shop Drawing and Sample submittals. This log shall be computerized on an Excel spreadsheet compatible with versions 6.0 or greater, and will include, at a minimum, the following information for each item:
 - (a) Item Number
 - (b) Spec Number
 - (c) Item Description
 - (d) Related Activity Number and Description
 - (e) Planned Date of Initial Submittal
 - (f) Actual Date(s) of Initial (and Subsequent) Submittals
 - (g) Planned Date of the A/E's Initial Response
 - (h) Actual Date(s) of the A/E's Initial (and Subsequent) Responses
 - (i) Status of the A/E's Initial (and Subsequent) Responses(s) - i.e. Approved, Rejected, Approved as Noted, etc.
 - (j) Comments

This log shall be updated monthly and included in the Contractor's monthly Schedule Update Report required under paragraph 8.3.5. If the Owner requires, the Contractor will also submit, at no additional charge to the Owner, the information contained herein as an electronic copy.

8.3.2.2 Proposed Commissioning / Inspection Activities

8.3.2.3 Proposed Cost and Resource Loading to show the direct man-days and labor/material cost estimated to perform the Work including Work by Subcontractors for each activity.

8.3.2.4 Proposed Construction Activities including erection or installation, testing of equipment or materials and operation and/or certification of equipment or materials.

(1) Activities shall be identified by building/area and activity durations shall be in units of whole Work days. Proposed durations assigned to each activity shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity. Activity durations are established in Section H, paragraph 13.2.

(2) The Network as developed shall show the sequence and interdependence of activities required for complete performance of the Work. The Contractor shall be responsible for assuring all Work sequences are logical and the Network shows a coordinated plan of the Work. This includes proposed sequence for equipment/system demonstrations.

The following shall be included with the Primavera database and depicted on the Network for each activity by building with the ability to compile if requested by the Owner.

(3) Activity identity number utilizing a numeric designation concept.

(4) Concise description of the Work represented by the activity defined and related to a specific pay item.

(5) A coding structure of building/area to allow for organization of work activities.

Failure by the Contractor to include any element of Work required for performance of the Contract shall not excuse the Contractor.

The Proposed Procurement and Construction Activities described in the above Subparagraph shall include the information required under paragraph 8.3.5.

The Contractor shall consult with the Owner for delivery of Owner furnished equipment or materials, and its principal Subcontractors and Suppliers relating to the preparation of its construction plan and Construction Schedule. Principal Subcontractors shall receive copies of those portions of the Contractor's Construction Schedule which relate to their Work and shall be continually advised of any updates or revisions to the Construction Schedule as the Work progresses. When the Contractor submits its Construction Schedule to the Owner or makes any proposed updates or revisions to such Schedule, it will be assumed by the Owner that the Contractor has consulted with and has the concurrence of its principal Subcontractors and Suppliers. The Contractor shall be solely responsible for ensuring that all Subcontractors and Suppliers comply with the requirements of the Construction Schedule for their portions of the Work.

SCHEDULE OF VALUES: At the time of completion of the Project Schedule, the Contractor shall submit to the Owner for review and approval a Schedule of Values, allocating a dollar value for the activities on the Network. The dollar value for the activity shall be the cost of the Work of the activity including labor, materials, and pro rata contribution of General Conditions requirements, overhead and profit. The sum of all activity costs shall equal the total Contract Sum.

Cost Reports: Initial and subsequent Cost Reports will include the following information for each activity, sorted first by building designation then by trade activity:

- a. Activity number and description;
- b. Percentage of value of Work in place against total value;
- c. Cost of each activity separated into Labor and Materials;

- d. Value of Work in place since last report;
- e. Value of Work in place to date; and
- f. Value of uncompleted Work.

As part of the updating process, the Contractor's computer will calculate, based upon progress data provided by the Contractor and agreed to by the Owner, the value of Work done for each activity less the amount previously paid for past percentages completed. Summation of all values of each activity less the appropriate percent of retainage shall be the amount payable to the Contractor as provided by paragraph 7.2.

The Contractor shall ensure that the critical path runs through onsite activities and that off-site activities do not control the critical path of the Network.

8.3.3 JOINT REVIEW, REVISION AND ACCEPTANCE: Within fourteen (14) Days of receipt of the Contractor's proposed Network, the Owner shall evaluate the Network for compliance with this article and other Contract requirements, and notify the Contractor of its findings.

If the Owner does not request a revision or justification, the Owner and the Contractor may meet within seven (7) Days of receipt of the Contractor's proposed Network for joint review of the proposed Network.

If the Owner does request a revision or justification, the Contractor shall, within seven (7) Days of receipt of the Owner's request, provide a satisfactory revision or adequate justification for those activities, logic and durations to the satisfaction of the Owner.

The Owner and the Contractor may meet within seven (7) Days of receipt of the Contractor's response for joint review of the correction or adjustment of the Contractor's proposed Network. In the joint review any areas which still do not comply with the Contract requirements, shall be subject to revision by the Contractor. In the event the Contractor fails to define any element of Work, activity or logic and the Owner review does not detect this omission or error, such omission or error, when discovered by the Contractor or Owner, shall be corrected by the Contractor at the next monthly Schedule Update (discussed hereinafter) and shall not affect any Milestone.

Within seven (7) Days after the joint review between the Contractor and Owner, the Contractor shall revise the Network in accordance with the agreements reached during the joint review and submit four (4) each computer-produced Schedule and Cost Reports and electronic copy as identified in paragraph 8.3.5.

If the Contractor's Schedule still does not comply with the Contract requirements, the Owner may, within seven (7) Days, request a meeting to remedy all remaining objections to the Project Schedule or discuss proper action as prescribed in Article VII of the Contract Documents.

Upon establishment of an agreed-upon Project Schedule, the Owner and the Contractor shall, at the Owner's discretion, sign and date on the face of the Project Schedule documents their respective approval. Subsequent to the Owner's acceptance of the Project Schedule, the Contractor shall proceed with the Work in accordance with the Project Schedule and shall not deviate therefrom unless revised in accordance with Paragraphs 8.3.7 or 8.3.8.

Acceptance by the Owner of the Contractor's Project Schedule will be a condition precedent to making any progress payments.

The Owner's review of the Contractor's Project Schedule is for conformance to the requirements of this provision only.

The activity cost for the Schedule of Values shall be coded with a cost code corresponding to the trade, Subcontractor or Supplier performing the Work so that subtotals for each division of the Work can be prepared.

The Schedule of Values shall, in the best judgment of the Contractor, represent a fair, reasonable and equitable dollar (cost) allocation for each activity on the Network.

The Contractor will provide, within seven (7) Days after acceptance of the Schedule of Values, a computer listing of all cost-loaded activities for the Owner's review.

8.3.4 PROJECT SCHEDULE UPDATE: The Project Schedule shall be updated as specified in Section H, paragraph 13.4 throughout the duration of the Work and until Contract Completion. The Contractor shall meet with the Owner each month at a Schedule Update meeting to review actual progress made through the date of the Schedule Update, including dates activities actually started and/or were completed, the percentage of Work completed and remaining duration on each activity started and/or completed. The data date of each Schedule Update shall be the first Day immediately following the last day of the progress payment period.

The following information shall be submitted by the Contractor on or before the last Day of the progress payment period, but not earlier than seven (7) Days before.

(1) One (1) original and three (3) reproduced marked-up copies of the previous month's Schedule Update computer-produced reports indicating the progress on Schedule activities and indicating actual activity start and/or complete dates, and revised (current) remaining durations.

(2) The Contractor shall indicate in writing those activities the Contractor plans to Work on during the following update month and current or anticipated conditions which have delayed or may delay the Work in order to discuss remedial action. The Contractor shall also explain, for Work which reflects less than satisfactory progress, whether any downstream Work will (or will not) be affected in a like manner and the Contractor's method of corrections.

(3) Any additional written information necessary to support the above.

In case of disagreements at the Schedule Update meeting concerning actual progress to date, the Owner's determination shall govern.

8.3.4.1 A Schedule Update meeting shall occur on or before the seventh (7th) Day following the submittal of the Schedule Update information. After this meeting the Contractor shall revise the Project Schedule to reflect progress as of the date of the Schedule Update and any revisions to the Project Schedule Update and any revisions to the Project Schedule (which shall be highlighted on the updated Network) and perform a computer-produced calculation to determine the status of the Project Schedule.

Each Project Schedule Update shall be forwarded to the Owner within seventy-two hours after the Schedule Update meeting and shall, at the Owner's request, include the following:

- (1) A description of all activities completed during the preceding update period.
- (2) A description of the progress made on activities listed as started but not completed.
- (3) A description of any accepted revisions to the Schedule logic or initial activity durations, or activity costs.
- (4) A narrative describing areas of the Work behind Schedule, reasons for delay and the Contractor's proposed method of recovery as required in accordance with paragraph 8.3.6.
- (5) Prints of the updated Network indicating the progress made up to the date of the Schedule Update and indicating any revisions to the Network.
- (6) One printed copy of the following computer-produced reports, and one (1) electronic copy of the reports:
 - (a) All activities sorted by building and early start.
 - (b) 60-day early start sorted by activity number showing predecessor and successor relationships.
 - (c) All activities sorted by building showing the actual mandays for completed and in-progress Work items.
 - (d) Accumulative curve showing scheduled and actual manpower for the total Project by month.
- (7) The activity number, float, 60-day early start, and earned mandays computer-produced Schedule Reports listed above shall include for each activity depicted on the Network, the following information:
 - (a) Activity Number
 - (b) Activity Description
 - (c) Original Duration
 - (d) Remaining Duration
 - (e) Activity Responsibility Code
 - (f) Activity Early Start and Early Finish Dates
 - (g) Activity Late Start and Late Finish Dates
 - (h) Actual Start and Actual Finish Dates
 - (i) Total Float
- (8) An updated submittal log as defined in paragraph 8.3.3.
- (9) An electronic copy of the progressed Schedule Network "P6 for Windows".

The updating of the Project Schedule is essential for determining the estimate upon which progress payment will be made. If the Contractor fails or refuses to provide information required to accomplish a complete Project Schedule Update or revision as specified hereinafter the Contractor shall not be entitled to progress payments until the information necessary for a complete Schedule Update is furnished to the satisfaction of the Owner.

8.3.5 RECOVERY SCHEDULE:

8.3.5.1 Should the updated Construction Schedule show at any time during the Contractor's performance, in the sole opinion of the Owner, that the Project will be completed beyond the scheduled project completion date, or should Contractor be required to undertake actions under paragraph 8.4.4 of the General Conditions hereof, the Owner may request the Contractor to prepare a Recovery Schedule at no additional cost to the Owner (unless the Owner is solely responsible for the event or occurrence which has caused the Schedule slippage) explaining and displaying how Contractor intends to reschedule its Work in order to regain compliance with the Construction Schedule.

8.3.5.2 If the Contractor believes that all of the time can be recovered during the subsequent pay period, the Contractor will be permitted to prepare a Recovery Schedule as set forth below. However, if the Contractor believes that it will take more than thirty (30) Days to recover all of the lost time, he/she shall prepare and submit a request for revision to the Construction Schedule and comply with all requirements of paragraph 8.3.8.

8.3.5.2.1 The Contractor shall prepare and submit to the Owner a Recovery Schedule, incorporating best available information from Subcontractors and others which will permit return to Construction Schedule at the earliest possible time. The Contractor shall prepare a Recovery Schedule to the same level of detail as the Construction Schedule. This Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.

8.3.5.2.2 Within two (2) Days after submission of Recovery Schedule to the Owner, the Contractor shall participate in a conference with the Owner to review and evaluate the Recovery Schedule. Within two (2) Days of conference, the Contractor shall submit the revisions necessitated by the review for the Owner's review and acceptance. The Contractor shall use the accepted Recovery Schedule as its plan for returning to the Construction Schedule.

8.3.5.2.3 The Contractor shall confer daily with the Owner to assess the effectiveness of the Recovery Schedule. As a result of this conference, the Owner will direct the Contractor as follows:

- a. If the Owner determines the Contractor is still behind Schedule, the Owner will direct the Contractor to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the Owner as provided elsewhere in the Contract Documents.
- b. If the Owner determines the Contractor has successfully complied with provisions of the Recovery Schedule, the Owner will direct the Contractor to return to the use of the accepted Construction Schedule.

8.3.6 PROJECT SCHEDULE REVISIONS: Updating the Project Schedule to reflect actual progress made up to the date of a Schedule Update shall not be considered revisions to the Project Schedule.

If, as a result of the monthly Project Schedule Update, it appears the Project Schedule no longer represents the actual prosecution and progress of the Work, the Owner will request, and the Contractor shall submit, a revision to the Project Schedule.

The Contractor may also request revisions to the Project Schedule in the event the Contractor's planning for the Work is revised. If the Contractor desires to make changes in the Project Schedule to reflect revisions in

its method of operating and scheduling of the Work, the Contractor shall notify the Owner in writing, stating the reason for the proposed revision in accordance with the requirements of Paragraph 8.3.8.

If revision to the Project Schedule is contemplated, the Contractor or Owner shall so advise the other in writing at least seven (7) Days prior to the next Schedule Update meeting, describing the revision and setting forth the reasons thereof.

Should the Contractor desire to or otherwise be required under the Contract Documents to make modifications or changes in its method of operation, its sequence of Work or the durations of the activities in its Network, he/she shall do so in accordance with the requirements of the Contract Documents. Revisions to the accepted Network must be accepted in writing by the Owner.

The Contractor shall submit requests for revisions to the Network to the Owner, together with written rationale for revisions and description of logic for rescheduling Work and maintaining the Specific Dates listed in the Contract Documents. Proposed revisions acceptable to the Owner will be incorporated into next update of Network.

In submitting any proposed Schedule Revisions to the Owner, the Contractor shall, at the Owner's request, submit therewith the following certification:

"The undersigned Contractor certifies that the proposed Schedule revision to the Network which is comprised of the graphic network of activities displayed on the sheets dated ____ and on the computerized mathematical reports dated ____ is Contractor's Schedule revision to the Network as required by the Contract Documents; and that said Schedule revision is a true and accurate representation of its plan to complete the Work, including all Change Orders that are in the Contractor's possession as of the foregoing date, and fully complies with the requirements of the Contract Documents. The Contractor further certifies that it will prosecute the Work in accordance with this Schedule revision, subject to any change therein which is implemented in accordance with the Contract Documents; and the Contractor further certifies that they have fully complied with all of the requirements of the Contract Documents relating to coordination of said Network."

Owner-directed revisions to the Project Schedule will not be incorporated into the Project Schedule without written notice to the Contractor, who shall respond in writing within seven (7) Days, either agreeing with the Owner's proposed revision, or setting forth justification why it should not be accomplished. If the Contractor's justification for not accomplishing the revision is reasonable, such revision will not be incorporated into the Project Schedule. The Contractor's failure to respond in writing within seven (7) Days will be deemed to be an acceptance of the Owner-directed revisions, and such revisions will be incorporated into the Project Schedule by the Contractor. Requests for revisions of activity data or other schedule-related information (e.g.: manpower, unit productivity rate, etc.) shall be made in accordance with the requirements of this Paragraph.

8.3.7 TIME IMPACT ANALYSIS FOR CHANGE ORDER, DELAYS AND CONTRACTOR REQUEST: When changes are initiated, delays are experienced, or the Contractor, in accordance with paragraph 8.3.7 desires to revise the Project Schedule, the Contractor shall submit to the Owner a written Time Impact Analysis illustrating the influence of each change, delay, or Contractor request on any critical activity. Each Time Impact Analysis shall include a Fragmentary Network (Network Analysis) demonstrating how the Contractor proposes to incorporate the change, delay or Contractor request into the Project Schedule. The Time Impact Analysis shall demonstrate the time impact to each and every affected activity in the Project Schedule utilizing the most recent Project Schedule Update as the basis for the Analysis. The date of the most recent Project Schedule Update shall be a date prior to the date the change is given to the Contractor, the date of delay occurred or the date the Contractor submits a request for a change. The event times used in the Time Impact Analysis shall be those included in the most recent Project Schedule Update or as adjusted by mutual

agreement. The Time Impact Analysis shall include an electronic copy which shall contain the details of the change including, but not to be limited to, added, changed or deleted data for activities, logic restraints, resources or costs. If the Project Schedule is revised subsequent to submittal of a Time Impact Analysis but prior to its acceptance, the Contractor shall promptly indicate in writing to the Owner of the need for any modification to its Time Impact Analysis.

Activity delays shall not automatically mean that an extension of any milestone is warranted or due the Contractor. A change or delay may not affect existing critical activities or cause non-critical activities to become critical. A change or delay may result in only absorbing a part of the available total float that may exist within an activity chain of the Network, thereby not causing any effect on any milestone.

Float or slack time associated with one chain of activities is defined as the amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the Network. Float or slack time shown on the Network is available for use by the Owner and the Contractor, whichever first needs the use or benefit of the float. No time extension will be given for an event or circumstance that only consumes available positive float.

The copy of each Time Impact Analysis shall be submitted within seven (7) Days after the commencement of a delay or the notice of direction for a change is given to the Contractor.

In cases where the Contractor does not submit a Time Impact Analysis within seven (7) Days, it is mutually agreed that the particular change, delay or Contractor request does not require an extension of time to a milestone and the Contractor hereby waives its right to subsequently request a time extension.

Acceptance or rejection of each Time Impact Analysis by the Owner shall be made within seven (7) calendar days after receipt unless subsequent meetings and negotiations are necessary. The Time Impact Analysis shall be incorporated into the Project Schedule after approval of the request for an extension of time as per paragraph 8.4.2.

8.3.8 RESPONSIBILITY FOR COMPLETION: The Contractor shall furnish sufficient forces, offices, facilities and equipment, and if approved by Owner, shall Work such hours including night shift and overtime operations as necessary to ensure the prosecution of the Work in accordance with the current monthly Project Schedule. If, in the opinion of the Owner, the Contractor falls behind in meeting the Project Schedule, the Contractor shall take such steps as may be necessary to improve its progress provided that all additional steps are subject to owner approval. Failure of the Contractor to comply with the requirements of this Paragraph shall be a basis for determination by the Owner that the Contractor is not prosecuting the Work with such diligence as will ensure completion within the milestones and scheduled completion date. Upon such determination, the Owner may terminate the Contractor's right to proceed with the Work or any separable part thereof, in accordance with the provisions of paragraph 4.6, or may take such other actions as may be deemed appropriate.

If the Contractor, after completing the Recovery and Revision processes as outlined in paragraphs 8.3.6 and 8.3.7, still cannot show a Schedule Completion which reflects the Contract Completion, a meeting between the Owner and Contractor must be held to discuss late completion of the Work. If in this meeting it is decided that the project cannot be finished by the Contract Completion date then the Owner may require the Contractor to prepare a Schedule which reflects a completion which can be met. Along with this Schedule, the Contractor should include a narrative which explains the reasons it cannot achieve the Contract Completion date and the steps it plans to implement to minimize the delay. This Schedule must adhere to the Schedule requirements outlined in the Contract and will be reviewed as the Contractor's Work Schedule in accordance with paragraph 8.3.4.

Acceptance of a Schedule with a late completion date does not constitute an extension of time by the Owner, or waive the Owner's right to a timely finish or damages for failure to complete timely. Failure of the Owner to direct acceleration does not relieve the Contractor from the duty to complete timely.

8.3.9 PERFORMANCE MONITORING: The Owner may elect throughout or at any time during the Project to record on a daily basis the number of workers and construction equipment working on each Schedule activity in each area of Project and give a copy of this log to the Contractor who shall be responsible for advising the Owner, without additional cost to the Owner, of any error in this Work history, in writing, within seven (7) Days of receipt of same. This information will be used by the Owner in its evaluation of the adequacy of the Contractor's performance and on-site manpower staffing, as well as in the evaluation of any Contractor or Subcontractor claims.

The Contractor shall prepare a report on a daily basis (a "Daily Construction Report") so as to record the following information as a minimum:

- (1) Weather data including sky conditions, temperature, wind and precipitation;
- (2) Work currently being performed and with the following information:
 - a. Manpower - listed by Contractor and craft,
 - b. Quantities installed, and
 - c. Problem areas discovered and/or resolved;
- (3) Descriptions of the specific Work started, in progress, or completed;
- (4) Other comments which the Contractor deems appropriate for recording. Each morning (or following day if an official state holiday) the Contractor shall submit the previous day's Daily Construction Reports to the Owner; and
- (5) Stoppages and delays.

The Contractor shall prepare a Bar Chart representing current Work activity. This bar chart will be reviewed with the Owner at the start of each week. The Bar chart will depict two (2) weeks of Work progress beginning with the week of the review and shall be created from the last approved updated Schedule.

8.4 DELAYS AND EXTENSION OF TIME:

8.4.1 Requests for Time Extensions: Requests for extensions of time must be made in writing no later than twenty (20) Days after the occurrence of the delay or at the time of the next Project Schedule Update, whichever shall occur first. All time extension requests shall be based on the latest approved Schedule. The request must include a narrative describing how the occurrence affected the critical path. Additional documentation is to be made available at request of the Owner. Requests for extensions of time shall be stated in numbers of whole calendar days and shall be in accordance with paragraph 8.3.8. If Contractor does not submit a complete and correct request for extension of time within 20 days of the occurrence of the delay or at the time of the next Project Schedule Update if sooner, it is mutually agreed that the Contractor waives the right to subsequently request an extension of time based on such occurrence of delay.

8.4.2 The Contractor may be granted an extension of time because of changes ordered in the Contract or because of any unforeseeable occurrence deemed by the Owner as being beyond the Contractor's control, which constitutes a justifiable delay. The Owner may extend the time subject to the following provisions.

8.4.2.1 EXCUSABLE DELAYS

- (1) Changes ordered by Owner
- (2) Owner's express order to stop or suspend Work in whole or in part if for Owner's convenience
- (3) Adverse weather in accordance with Section H, paragraph 13.5
- (4) Failure of the Owner or A/E to timely take some action required by the Owner, or to provide information timely
- (5) Documented delays in transportation or unavailability of material, equipment or supply, if material, equipment, or supply is not reasonably available elsewhere.
- (6) Strikes and Lockouts
- (7) Design defects in accordance with paragraph 6.1.3
- (8) Late delivery of OFCI items
- (9) Any other unforeseeable and unavoidable causes which in the sole discretion of the Owner are determined to be beyond the Contractor's control

8.4.2.2 PROOF OF ENTITLEMENT

Contractor must show by Time Impact Analysis, using the most recent accepted Schedule Update before the delay occurred, that the delay was experienced in critical path activities and that it affected the Contract Completion Date.

Contractor must provide backup data (daily reports) documenting actual delay. Contractor must also show that a reasonable revision of the Schedule could not avoid the delay.

Contractor must show that they took reasonable steps to avoid or mitigate the delay.

8.4.2.3 RELIEF FOR DELAY

The Contractor is entitled to recover direct and general conditions costs of extended performance time only for the following types of excusable delay:

- (1) Failure of the Owner or A/E to take required actions timely (e.g., failure to provide OFCI items), or provision of defective items and failure to provide timely information
- (2) Changes ordered by Owner
- (3) Design defects in accordance with paragraph 6.1.3
- (4) Owner's express order to stop or suspend Work in whole or in part if for Owner's convenience.

The Owner shall ascertain the facts and the extent of the delay and extend the time for completing the Work when, in its judgment, the findings justify such an extension of Contract Time. The findings of the Owner are final and conclusive on both parties and subject to appeal only as provided in paragraph 5.2.1.

8.4.2.4 FORCE MAJEURE

Owner may grant relief from performance of the contract if the Contractor is prevented from performance by an act of war, order of legal authority, act of God, or other unavoidable cause not attributable to the fault or negligence of the Contractor. The burden of proof for the need of such relief shall rest upon the Contractor. To obtain release based on force majeure, the Contractor shall file a written request with Owner.

8.4.3 TIME EXTENSIONS FOR ADVERSE WEATHER

1. This provision specifies the procedure for determination of time extensions for adverse weather. Time extensions for adverse weather shall be submitted and reviewed monthly. In order for a time extension to be awarded for adverse weather, the following conditions must be satisfied:

- a. The adverse weather experienced at the project site during the Contract Time must be found to exceed the adverse weather days anticipated for the project location during any given month. The days affected by adverse weather delays must be shown to be scheduled work days or that notice was given prior to the delay that work was going to proceed on that day.
- b. The adverse weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without fault or negligence of the Contractor.

2. The Schedule of monthly anticipated adverse weather delays is shown in Section H, paragraph 13.5 for the project location and will constitute the baseline for monthly weather time evaluations. The Contractor's progress Schedule must reflect dependent activities.

3. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the Contract, the Contractor will record on the Daily Construction Report the occurrence of adverse weather and resultant impact to normally scheduled Work activities. The Project Administrator (Owner) will sign its concurrence or non-concurrence on the Daily Construction Report. Actual adverse weather delay days must prevent Work on critical activities for 50 percent or more of the Contractor's scheduled Workday.

The number of actual adverse weather delay days shall include days impacted by actual adverse weather and be calculated chronologically from the first to the last day of each month, and be recorded as full days. This will give the Contractor full consideration for equivalent fair weather work days. Then a modification can be issued in accordance with paragraph 8.4 of the General Conditions.

8.4.4 If the Work is behind Schedule and the rate of placement of Work is inadequate to regain scheduled progress so as to insure timely completion of the entire Work (Contract Completion Date) or a separable portion thereof, the Contractor, when so informed by the Owner, shall immediately take action to increase the rate of Work placement in a manner approved by Owner.

A Recovery Schedule shall be provided in accordance with paragraph 8.3.6.

8.4.4.1 The Contractor shall, within five (5) working days after being so informed, notify the Owner of the specific measures taken and planned to increase the rate of progress together with an estimate as to when scheduled progress will be regained. Should the plan of action be deemed inadequate by the Owner, the Contractor will take additional steps or make adjustments as necessary to its plan of action until it meets with Owner's approval. The increased rate of Work placement will continue until scheduled progress is recovered. If the cause of delay is not identified in paragraph 8.4.1.1 as an Excusable delay then the Contractor shall not

be entitled to additional compensation for the effort it applies to the Work under the terms of paragraphs 8.3.6 and 8.3.7.

8.4.4.2 Failure by the Contractor to comply with the requirements of the Owner under this provision shall be grounds for determination that the Contractor is guilty of a substantial violation of provisions of the Contract Documents. Upon such determination the Owner may terminate the Contract as provided in paragraph 4.6.

8.4.4.3 The Contractor shall receive no compensation for delays or hindrances to the Work, including any extended overhead, other provisions of the Contract notwithstanding, except when direct and unavoidable extra cost results from the failure of the Owner to provide materials, if any, specified to be furnished by the Owner, or from the failure of the Owner, or A/E to provide instructions necessary for prosecution of the Work; provided, however, that the Owner will not be responsible for such additional compensation unless the Contractor gives timely written notice that they are being delayed or are about to be delayed by the failure to provide the materials or information; and provided further, that no claim shall be allowed for costs incurred prior to receipt of such notice.

8.4.4.4 Any directive or order to accelerate the Work will be in writing. Any directive or order terminating accelerated Work will be in writing.

8.4.5 No extension of time shall release the Contractor or the Surety furnishing its performance or payment bond from all obligations thereunder, which shall remain in full force until the discharge of the Contract.

8.5 FAILURE TO COMPLETE WORK ON TIME: The time set forth in the Contract for the completion of Work is an essential element of the Contract. Contractor's failure to complete the Work within such time will cause damage to the Owner. Where appropriate, the value of such damages may be stated in Section F.

8.5.1 For each and every Day that the Work, or any portion of the Work, shall remain incomplete after the expiration of the Contract Time set in the Contract, or as extended by the Owner, the amount shown in Section F as liquidated damages will be deducted from the moneys due or to become due to the Contractor, not as a penalty, but as added expense including administrative and inspection costs. Liquidated damages shall cease to accrue at Final Completion.

8.5.2 The rights and remedies of the Owner provided in this Article are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE IX. BENEFICIAL OCCUPANCY

9.1 BENEFICIAL OCCUPANCY: If and only if the Owner should wish to use or occupy the Work, or portion thereof, prior to final completion the Owner shall request in writing that the Contractor determine if the Work, or portion thereof, so identified by the Owner is sufficiently complete to allow the Owner to occupy. Should the Contractor determine that the Work, or a designated portion thereof, acceptable to the Owner, is sufficiently complete, the Contractor shall prepare for submission to the A/E a comprehensive list of items remaining to be completed or corrected. Upon receipt of the Contractor's list and prior to the agreed date of Beneficial Occupancy, a joint inspection tour by the Contractor, Owner, and A/E, or their duly appointed representatives, shall be made. The A/E will furnish to the Contractor a list of items of Work to be completed and deficiencies to be corrected and the Contractor shall complete such remaining Work within the remaining Contract time or within the time frame stated on the Certificate of Beneficial Occupancy. Failure

to achieve Final Completion within the Contract Time or time frame stated on the Certificate of Beneficial Occupancy will cause damage to the Owner and may subject the Contractor to Liquidated Damages as stated in Section F, Article 2 of the Contract.

9.2 CERTIFICATION: When the A/E and the Owner, on the basis of an inspection determines that the Work or a designated portion thereof is sufficiently complete, they will then prepare a Certificate of Beneficial Occupancy which shall establish the Date of Beneficial Occupancy; shall state the responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and operation of permanent equipment; and shall fix the time within which the Contractor shall complete the items listed therein. The Certificate of Beneficial Occupancy shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to each of them in such Certificate. The Owner will furnish to the Contractor a letter indicating acceptance of the Work or designated portion thereof, subject to completion or correction of the listed items.

9.2.1 Following the joint inspection tour and the agreed date of Beneficial Occupancy, the Owner may occupy the building or facility or any part thereof for whatever purposes the Owner deems necessary. The Owner will assume responsibility, under the provisions of this Article, for the area they so occupies, except that the Contractor shall retain responsibility for the remaining items of Work until such are satisfactorily completed and accepted by the Owner.

9.2.2 At the time of joint inspection tour for Beneficial Occupancy, the Contractor shall furnish to the Owner all instructional manuals, maintenance manuals, parts catalogs, wiring diagrams, operational manuals, spare parts, specified written warranties and like publications for all installed equipment, systems and like items along with a complete accounting of all fixed assets which are incorporated into the Work, or portion thereof as required in paragraph 1.4. If the Contractor does not furnish these requirements and the Owner must obtain this information and data, the costs for this procurement will be deducted from payments due the Contractor.

9.3 ADDITIONAL INSPECTION COSTS: Contractor shall be charged with any cost for re-inspection resulting from substantial differences between the Contractor's list of items to be completed or corrected and the list of items resulting from the A/E inspection.

ARTICLE X. CONTRACT FINAL ACCEPTANCE AND PAYMENT

10.1 NOTIFICATION: When the Work is completed, the Contractor shall notify the A/E and the Owner in writing that the Work will be ready for Pre-Final Inspection on a definite date. A seventy-two (72) hour advance notice shall be given to the Owner. The Contractor must have performed an inspection of the Work, developed a punch list, and have corrected all items on that punch list prior to requesting a pre-final inspection. The Contractor's completed punch list must be submitted to the Owner at the time of the Pre-final Inspection request.

10.2 PRE-FINAL INSPECTION: A Pre-Final Inspection will be required for any Work for which there has been no Certificate of Beneficial Occupancy issued in accordance with Article IX. A joint inspection tour by the Contractor, Owner, and the A/E or their duly appointed representatives shall be made at the time the Contractor so advises the Owner and the A/E that the Work is ready for the Pre-Final Inspection. Following such inspection, the A/E and/or the Owner shall furnish to the Contractor a list of items of Work to be completed and deficiencies to be corrected and the Contractor shall complete such remaining Work within the remaining Contract Time.

10.2.1 At the time of Pre-Final Inspection the Contractor shall furnish to the Owner all instructional manuals, maintenance manuals, parts catalogs, wiring diagrams, operational manuals, spare parts, specified written warranties and like publications for all installed equipment, systems and like items along with a complete accounting of all fixed assets which are incorporated into the Work. If the Contractor does not furnish these requirements and the Owner must obtain this information and data, the costs for this procurement will be deducted from payments due the Contractor.

10.3 FINAL INSPECTION AND ACCEPTANCE: When the items identified in the A/E's Pre-Final Inspection or Beneficial Occupancy list are completed or corrected, the Contractor shall notify the A/E in writing that the Work will be ready for final inspection on a definite date. A seventy-two (72) hour advance notice shall be given to the Owner. Upon verification by the A/E that the Work is ready for final inspection and acceptance, the Owner will within ten (10) Days make a final inspection, then once the Work is found acceptable under the Contract Documents and the Contract is fully performed, make final payment to the Contractor.

10.3.1 To avoid delay in final payment, the Contractor shall have all necessary bonds, guarantees not previously furnished, receipts, affidavits, etc. prepared and signed in advance with a letter of transmittal listing each item to be furnished to the Owner at the time of final inspection.

10.3.2 Upon acceptance of the Work, the A/E and Owner shall execute a Final Completion Certificate in accordance with the Contract and deliver such document to the Contractor by mail or other means within ten (10) Days. The Contractor's requirement for Builder's Risk Insurance coverage of the Work may be terminated on the date of the executed final acceptance document. In the case where heating and ventilating, air conditioning or other systems must be tested seasonally, the Owner may accept the Work less such testing, and final acceptance of such systems will be accomplished after completion of successful tests. Upon final acceptance, the Owner may occupy or use the Work.

10.4 ADDITIONAL INSPECTION COSTS: Contractor shall be charged with any cost for re-inspection resulting from substantial differences between the Contractor's list of items to be completed or corrected and the list of items resulting from the A/E inspection.

10.5 FINAL PAYMENT DOCUMENTATION: Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the A/E for transmittal to the Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or its property might in any way be responsible, have been paid or will be paid or otherwise satisfied within thirty days after receipt of final payment from the Owner, or within the period of time required by Government Code, Title 10, Chapter 2251; (2) all guarantees and/or bonds as required on specific branches of the Work, and as further described in Article XI; (3) consent of Surety, if any, to final payment; and (4), if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of claims arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against any such claim.

10.6 FINAL PAYMENT: The making of final payment shall constitute a waiver of all claims by the Owner except those arising from: (1) faulty or defective Work appearing after Final Inspection and acceptance; (2) failure of the Work to comply with the requirements of the Contract Documents; or (3) terms of any special warranties required by the Contract Documents. Acceptance of final payment shall constitute a waiver of all claims by the Contractor except those specifically enumerated at the time of final payment and filed in accordance with Article VI.

10.6.1 Upon execution of the Final Completion certificate by the A/E and Owner, the Contractor shall submit a request for final payment signed by a Contractor principal. Such request shall be marked "FINAL PAYMENT". This request shall be reviewed, approved and certified by the A/E and shall be forwarded to the Owner. The Owner will then process final payment.

10.6.1.1 When the value of the Contract between the Owner and the Contractor is not in excess of \$25,000.00, final payment to the Contractor will be withheld for a period of sixty (60) days following the last date upon which contracted Work is performed, or on which contracted material is delivered to the job-site, in order that unpaid claimants, who have furnished labor and/or materials for the Project to the Contractor, may be provided the time permitted by Texas Property Code, Section 53, to file claims against funds still due the Contractor.

ARTICLE XI. CONTRACT WARRANTY AND GUARANTEE

11.1 WARRANTY OF CONSTRUCTION

- (a) In addition to any other warranties in this Contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that Work performed under this Contract conforms to the Contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any Subcontractor or supplier at any tier.
- (b) The warranty shall be for the period of one (1) year or for the period stated in the specifications, whichever is greater, beginning on the date of the final acceptance of Work. If the Owner takes possession of any part of the Work before final acceptance, this warranty shall be for a period of one (1) year or as stated in the specifications, whichever is greater, beginning on the date the Owner takes possession.
- (c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner-owned controlled real or personal property, when that damage is the result of ;
 - 1. The Contractor's failure to conform to Contract requirements or
 - 2. Any defect of equipment, material, workmanship, or design furnished.
- (d) The Contractor shall restore any Work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.
- (e) The Owner shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.
- (f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

- (g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall;
1. Obtain all warranties that would be given in normal commercial practice;
 2. Require all warranties to be executed, in writing, for the benefit of the Owner; and
 3. Enforce all warranties for the benefit of the Owner.
- (h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Owner may bring suit at its expense to enforce a Subcontractor's, manufacturer's, or supplier's warranty.
- (i) Unless a defect is caused by the negligence of the Contractor or Subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Owner nor for the repair of any damage that results from any defect in Owner-furnished material or design.
- (j) This warranty shall not limit the Owner's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

11.1.1 WARRANTY DATA: The Contractor shall provide all warranties as required by the Contract Documents. Warranties shall contain the following minimum information:

Contractor's name, address and telephone number.
 Manufacturer's name, address and telephone number.
 Model number and serial number for each item.
 Installed location of each item.

11.1.2 DIRECTORY OF INSTALLING CONTRACTORS: The Contractor shall provide the name, address, telephone number, and Work scope for each Subcontractor participating in the project.

11.1.3 OPERATIONS AND MAINTENANCE MANUALS: The Contractor is responsible for obtaining the A/E's review and approval of all operation and maintenance manuals prior to transmitting the final copies to the Owner. The Contractor shall provide a minimum of three complete sets (per site) of the operation and maintenance manuals required by the Owner. Operation and maintenance manuals shall be provided for all items as required in the Contract Documents, including all commissioning data, mechanical, electrical, plumbing, and electronic equipment furnished by the Contractor. Each operation and maintenance manual shall be bound in a three-ring side binder with a durable plastic cover. Each manual shall contain the following information:

1. Title and table of contents.
2. Name, address, and telephone number of Contractor, each installing Subcontractor and each supplier.
3. List of equipment and respective parts list for each.
4. Operating instructions.

5. Maintenance instructions.

ARTICLE XII. PRESERVATION OF SITE ASSETS

12.1 The Contractor shall take all necessary measures to protect existing trees and vegetation, structures and facilities, utilities and other improvements at or near the site of Work.

12.1.1 The Contractor shall preserve and protect all existing trees and vegetation such as shrubs and grass on or adjacent to site of Work which are not to be removed and which do not unreasonably interfere with the construction Work. Care will be taken in removing trees authorized for removal to avoid damage to other trees or vegetation to remain in place. All damage to existing trees and vegetation to remain in place caused by careless construction or removal operations shall be repaired by the Contractor at his/her expense and cost, as directed by the Owner.

12.2 The Contractor shall protect from damage all existing structures and facilities, utilities and other improvements at or near the site of Work, the location of which is evident or made known to the contractor, and will repair or restore any damage to such improvements resulting from failure to comply with the requirements of the Contract or to exercise reasonable care in the performance of the Work.

12.3 If the Contractor fails or refuses to exercise proper care for preservation and protection of site assets described hereunder or fails or refuses to repair all such resulting damage promptly, the Owner may have the necessary Work performed and charge the cost thereof to the Contractor.

ARTICLE XIII. OPERATION AND STORAGE AREAS

13.1 The Contractor will operate and maintain the operations areas and associated storage areas at the site of the Work in accordance with the following:

13.1.1 All Contractor operations, including storage of materials, and employee parking upon the site of Work shall be confined to areas designated by the Owner.

13.1.2 The Contractor may erect temporary buildings and make ready outside storage areas at its own expense, which shall remain its property. The Contractor shall remove such buildings, materials and associated utilities service lines upon completion of the Work, unless the Contractor requests, and the Owner provides written consent, that he/she may abandon such buildings and utilities in place.

13.1.3 The Contractor will use only established roadways or construct and use such temporary roadways as may be authorized by the Owner. Load limits of vehicles shall not exceed that prescribed by appropriate regulations or law. The Contractor will provide protection to road surfaces, curbs, sidewalks and drainage structures to prevent damage and all damage thereto shall be repaired by and at the expense of the Contractor.

13.2 The Owner may restrict the Contractor's entry to the site to assigned entrances and routes.

13.3 The Contractor shall at all time keep the construction areas, including storage areas, used by them free from the accumulation of water, waste materials, or rubbish during performance of the Work. During the period of construction, and not less frequently than once a week, the Contractor shall remove from the site any and all waste materials, rubbish and trash, and shall dispose of such waste materials, rubbish and trash off the property of the Owner. Prior to the Contractor's requested date for final inspection, the Contractor shall remove any and all remaining equipment from the site and shall leave the premises in a clean, neat and workmanlike condition satisfactory to the Owner.

ARTICLE XIV. MISCELLANEOUS PROVISIONS**14.1 GOVERNING LAW**

14.1.1 The Contract shall be governed by the laws of the State of Texas and any action, whether at law or in equity shall be brought exclusively in the State Courts of Texas.

14.2 RIGHTS AND REMEDIES

14.2.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

14.2.2 Failure to timely enforce, or the waiver of, any provision of these Contract Documents or any breach of nonperformance by the Owner or Contractor shall not be deemed a waiver by either of the parties of the right in the future to demand strict compliance and performance of any provision of these Contract Documents. No waiver or waivers of any breach or default (or any breaches or defaults) by any party hereto or of performance shall be deemed a waiver thereof in the future, nor shall any such waiver or waivers be deemed or construed to be waiver of subsequent breaches or defaults of any kind, character, or description, under any circumstances. Only duly authorized officers or employees of the Owner or Contractor are authorized to waive or modify any provision of these Contract Documents. All waivers or modifications of these Contract Documents shall be in writing.

14.3 ENTIRE AGREEMENT: This Contract shall be binding upon and inure to the benefit of the parties and their respective successors and assigns. The provisions of these Contract Documents constitute the entire agreement, understanding and representations, express or implied, between the Owner and the Contractor. Nothing in these Contract Documents, expressed or implied, is intended or shall be construed to confer upon any person other than the Owner and the Contractor, any right, remedy, or claim, legal or equitable.

14.4 SEVERABILITY: If any clause, provision, or section of this Contract be held illegal, invalid, or unenforceable by any court, the illegality, invalidity, or unenforceability of each clause, provision, or section shall not affect any of the remaining clauses, provisions, or sections hereof, and this Contract shall be construed and enforced as if such illegal, invalid, or unenforceable clause, provision, or section had not been contained herein. In case any agreement or obligation contained in the Contract is held to be in violation of law, then such agreement or obligation shall be deemed to be the agreement or obligation of the Owner and the Contractor, as the case may be, to the full extent permitted by law.

14.5 INDEPENDENT CONTRACTOR

The Contractor understands that it is an independent contractor, wholly responsible for the day to day operations of its programs and employees; that no joint venture, partnership or agency exists nor shall be implied by the terms of the contract if the contract is awarded to Contractor; and that no employee of Contractor will become an employee of the Owner by virtue of this contract.

14.6 INDEMNIFICATION OF THE OWNER

The Contractor shall indemnify and save the Owner, the Texas Board of Criminal Justice, the State of Texas and its officers, agents and employees (hereinafter the State) harmless from and against:

- A. Any and all claims arising from the conduct, management or performance of the contract by Contractor, its agents, subcontractors or employees, including, without limitation, any and all claims arising from:
 - 1. Any breach or default on the part of the Contractor in the performance of any covenant or agreement on its part to be performed, pursuant to the terms of this contract;
 - 2. Any act or negligence of the Contractor or any of its agents, subcontractors, servants, employees or licensees;
 - 3. Any accident, injury or damage whatsoever caused to any person, firm or corporation.
- B. All costs, reasonable attorney's fees, expenses and liabilities incurred in or about any such claim, action or proceeding brought thereon.

Nothing herein is intended to deprive the State or Contractor of the benefits of any law limiting exposure to liability and/or setting a ceiling on damages, or any laws establishing defenses for them. By entering into this Contract, the State does not waive its right of sovereign immunity, nor does the Contractor waive any immunity that may extend to it by operation of law. The aforementioned indemnification shall not be affected by a claim that negligence of the State or its respective agents, contractors, employees or licensees contributed in part to the loss or damage indemnified against.

- C. The parties agree that the terms, covenants and provisions of Section I, Article 14.6 shall survive the termination of this Contract.

14.7 NON-AVAILABILITY/LOSS OF FUNDING

The Contractor understands that this contract may be terminated by TDCJ in the event TDCJ is not granted funding to pay for the services described in the contract documents or in the event that funding is lost due to either a reduction in the budget or a reallocation of budgeted funds and that funding of TDCJ is limited to funding actually authorized by the legislature of the State of Texas.

14.8 NOTICE

Required notices will be provided to the Texas Department of Criminal Justice, Contracts and Procurement, Information Technology, Construction and Utilities Branch, Two Financial Plaza, Suite 525, Huntsville, Texas 77340; Attn: Teresa Rhodes, CTPM, CTCM Contract Administrator and to Contractor at:

Emerald Standard Services, Inc.

520 Preston Ave., Pasadena, TX 77503

Attn: Roger Pombrol

14.9 FINANCIAL OPERATIONS

14.9.1 Contractor shall establish and provide financial services and operations which comply with generally accepted accounting principles in order to ensure that the funds of the Owner are safeguarded and that the financial records accurately reflect the transactions relevant to the implementation of this Contract.

14.9.1.1 Contractor shall develop, implement and maintain a financial management system including accurate, correct and complete payroll, accounting and financial reporting records, cost source documentation, effective internal and budgetary controls, determination of reasonable, allowable and allocable cost elements, and timely and appropriate audits and resolution of any questionable or improper findings.

14.10 UTILIZATION OF PRODUCTS AND MATERIALS PRODUCED IN TEXAS

Contractor shall comply with Texas Government Code, Section 2155.4441 relating to service contract use of products produced in the State of Texas. In performing services under this Contract, the Contractor shall purchase products and materials produced in the State of Texas when they are available at a price and time comparable to products and materials produced outside of Texas.

14.11 ASSIGNMENT

The Contractor may not assign any interest in this Contract without the prior written consent of the Owner which consent the Owner may withhold at its sole discretion.

If the Owner so elects in its sole discretion, this Contract will terminate upon the occurrence of any of the following:

- A. More than 50% of the assets of Contractor are sold;
- B. Contractor is merged into, acquired by, or consolidated with another corporation or business entity; or is otherwise the subject of reorganization; or
- C. Any shareholder or Owner of Contractor who owns at least 10% beneficial Ownership of contractor fails to continue to own at least 10%.

In the event that any sale, transfer, or assignment, **as referenced in paragraph A and B above**, is consented to by the Owner the transferee or its legal representative shall agree in writing with the Owner to assume, perform and be bound by the covenants, obligations and agreements contained herein.

14.12 AUTHORITY TO AUDIT

14.12.1 Contractor understands that acceptance of funds under this Contract acts as acceptance of the authority of the State Auditor's Office, or any successor agency, to conduct an audit or investigation in connection with those funds. Contractor further agrees to cooperate fully with the State Auditor's Office or its successor in the conduct of the audit or investigation, including providing all records requested. Contractor will ensure that this clause concerning the authority to audit funds received indirectly by subcontractors through Contractor and the requirement to cooperate is included in any subcontract it awards. Contractor will reimburse the State of Texas for all costs associated with enforcing this provision.

14.12.2 Contractor must retain all work and other supporting documents pertaining to this Contract, for purposes of inspecting, monitoring, auditing, or evaluating by TDCJ and any authorized agency of the State of Texas, including an investigation or audit by the State Auditor for period of four (4) years after the date of submission of the final invoice or until a resolution of all billing questions, whichever is later. Contractor shall maintain and retain supporting fiscal and any other documents relevant to showing that any payments under this Contract funds were expended in accordance with the laws and regulations of the State of Texas, including but not limited to, requirements of the Comptroller of the State of Texas and the State Auditor.

14.13 CONFIDENTIALITY AND OPEN RECORDS

14.13.1 Notwithstanding any provisions of this Contract to the contrary, Contractor understands that the TDCJ will comply with the Texas Public Information Act, Government Code, Chapter 552 as interpreted by judicial opinions and opinions of the Attorney General of the State of Texas. TDCJ agrees to notify Contractor in writing within a reasonable time from receipt of a request for information related to Contractor's work under this contract. Contractor will cooperate with TDCJ in the production of documents responsive to the request. The TDCJ will make a determination whether to submit a Public Information Act request to the Attorney General. Contractor will notify the TDCJ's General Counsel within twenty-four (24) hours of receipt of any third party requests for information that was provided by the State of Texas for use in performing the Contract. This Contract and all data and other information generated or otherwise obtained in its performance may be subject to the Texas Public Information Act. Contractor agrees to maintain the confidentiality of information received from the State of Texas during the performance of this Contract, including information which discloses confidential personal information particularly, but not limited to, social security numbers.

14.13.2 In accordance with Section 2252.907, Government Code, the Contractor acknowledges that this contract and information created or maintained in connection with this contract is public information and subject to disclosure as provided by Chapter 552, Government Code (Texas Public Information Act). The Public Information Act may require the Contractor to make information related to this contract available to the public pursuant to a request for public information. The Contractor agrees, upon request, to make information related to this contract that is not otherwise excepted from release by the Public Information Act available to the public in hard copy, unless the requestor of the information consents to receive the information in another mutually agreeable format. The Contractor acknowledges that the agency shall not provide legal counsel related to the Contractor's compliance with the Public Information Act.

14.14 NO LIABILITY UPON TERMINATION

If this Contract is terminated for any reason, the TDCJ and the State of Texas shall not be liable to Contractor for any damages, claims, losses, or any other amounts arising from or related to any such termination. However, Contractor may be entitled to the remedies provided in Government Code, Chapter 2260.

14.15 LIMITATION ON AUTHORITY; NO OTHER OBLIGATIONS

Contractor shall have no authority to act for or on behalf of the TDCJ or the State of Texas except as expressly provided for in this Contract; no other authority, power or use is granted or implied. Contractor may not incur any debts, obligations, expenses, or liabilities of any kind on behalf of the State of Texas or the TDCJ.

14.16 INTELLECTUAL PROPERTY INDEMNIFICATION

The Contractor will indemnify, defend, and hold harmless the State of Texas and the TDCJ against any action or claim brought against the State of Texas and/or the TDCJ that is based on a claim that software infringes any patent rights, copyright rights or incorporated misappropriated trade secrets. Contractor will pay any damages attributable to such claim that are awarded against the State of Texas and/or the TDCJ in a judgment or settlement.

If the TDCJ's use of the software becomes subject to a claim, or is likely to become subject to a claim, in the sole opinion of the TDCJ, Contractor shall, at its sole expense (1) procure for the TDCJ the right to continue using such software under the terms of this Contract; or (2) replace or modify the software so that it is non-infringing.

14.17 RIGHTS TO DATA, DOCUMENTS AND COMPUTER SOFTWARE (STATE OWNERSHIP)

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings or materials prepared by Contractor in the performance of its obligations under this Contract shall be the exclusive property of the State of Texas and all such materials shall be delivered to the TDCJ by the Contractor upon completion, termination, or cancellation of this Contract. Contractor may, at its own expense, keep copies of all its writings for its personal files. Contractor shall not use, willingly allow, or cause to have such materials used for any purpose other than the performance of Contractor's obligations under this Contract without the prior written consent of the TDCJ; provided, however, that Contractor shall be allowed to use non-confidential materials for writing samples in pursuit of the work. The ownership rights described herein shall include, but not be limited to, the right to copy, publish, display, transfer, prepare derivative works, or otherwise use the works.

14.18 ELECTRONIC AND INFORMATION RESOURCES ACCESSIBILITY STANDARDS, AS REQUIRED BY 1 TAC, CHAPTER 213

Effective September 1, 2006 state agencies and institutions of higher education shall procure products which comply with the State of Texas Accessibility requirements for Electronic and Information Resources specified in 1 TAC Chapter 213 when such products are available in the commercial marketplace or when such products are developed in response to a procurement solicitation.

Contractor shall provide the TDCJ with the URL to its Voluntary Product Accessibility Template (VPAT) for reviewing compliance with the State of Texas Accessibility requirements (based on the federal standards established under Section 508 of the Rehabilitation Act), or indicate that the product/service accessibility information is available from the General Services Administration "Buy Accessible Wizard" (<http://www.buyaccessible.gov>). Contractors not listed with the "Buy Accessible Wizard" or supplying a URL to their VPAT must provide the TDCJ with a report that addresses the same accessibility criteria in substantively the same format. Additional information regarding the "Buy Accessible Wizard" or obtaining a copy of the VPAT is located at <http://www.section508.gov/>.

14.19 E-VERIFY SYSTEM

By entering into this Contract, the Contractor certifies and ensures that it utilizes and will continue to utilize, for the term of this Contract, the U.S. Department of Homeland Security's E-Verify system to determine the eligibility of:

1. All persons employed to perform duties within Texas, during the term of the Contract; and
2. All persons (including subcontractors) assigned by the Respondent to perform work pursuant to the Contract, within the United States of America.

The Contractor shall provide, upon request of the TDCJ, an electronic or hardcopy screenshot of the confirmation or tentative non-confirmation screen containing the E-Verify case verification number for attachment to the Form I-9 for the three most recent hires that match the criteria above, by the Contractor, and Contractor's subcontractors, as proof that this provision is being followed.

If this certification is falsely made, the Contract may be immediately terminated, at the discretion of the state and at no fault to the state, with no prior notification. The Contractor shall also be responsible for the costs of any re-solicitation that the state must undertake to replace the terminated Contract.

SECTION J

LIST OF DOCUMENTS, EXHIBITS AND
OTHER ATTACHMENTSATTACHMENTS

No.	Description	Pages
1	Standards of Conduct for Civilian Construction Contractors Employees	3
2	Payment Bond	1
3	Performance Bond	1
4	Prevailing Wage Schedule (Outside Five Foot Perimeter of Building)	3
5	Prevailing Wage Schedule (Buildings to Five Feet Beyond Building Line)	4
6	Substitution Request (Bidding Phase)	
7	Substitution Request (After execution of Contract)	2
8	Contractor Qualifications (TDCJ Master Contract File)	
9	Non-Employee Background Questionnaire	3
10	State Documents and Forms	36
11	Specifications	
12	Drawings	
13	Vendor Maintenance Direct Deposit and Substitute W-9 Form	2
14	Release of Claims	1

EXHIBITS:

1	HUB Subcontracting Plan (HSP)	6
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SECTION K

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF BIDDERS

1. HISTORICALLY UNDERUTILIZED BUSINESS (HUB) REPRESENTATION

The Bidder certifies that, if awarded the Contract, it will have "Historically Underutilized Business", participate in the Work to the extent of at least one hundred percent (100%) of the total dollar amount of the Contract as awarded. Such participation in the Work means that amounts equal to or greater than the stated percentage of the total Contract amount will be paid to such Historically Underutilized Business for work done under subcontract, for the supply of materials to be incorporated in the Work, and (if the Bidder itself is a Historically Underutilized Business) for work accomplished by the Bidder with its own forces. Double counting shall be avoided.

1.1 REPRESENTATION

The Bidder represents and certifies as part of its offer that it [X] is, or [] is not a HUB certified by the Texas Procurement and Support Services.

2. CHILD SUPPORT REPRESENTATION

Under Section 231.006 of the Texas Family Code a child support obligator who is more than 30 days delinquent in paying child support and a business entity in which the obligator is a sole proprietor, partner, shareholder or Owner with an Ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials or services.

Governmental entities and any corporation, including a non-profit corporation, that does not have a majority shareholder who is a natural person capable of being a child support obligator are not subject to Section 231.006.

Check ONE: Bidder IS NOT subject to Section 231.006 _____ (business entity DOES NOT have a sole proprietor, majority stockholder or substantial Owner who is a natural person capable of being a child support obligator).

Bidder IS subject to Section 231.006 _____ X _____ (business entity DOES have a sole proprietor, majority stockholder or substantial Owner who is a natural person capable of being a child support obligator).

If subject to Section 231.006, the bid must include names and social security numbers of each person with at least 25% Ownership of the business entity submitting Bid.

(Print Name)

_____-_____-_____
SSN

(Print Name)

_____-_____-_____
SSN

(Print Name)

_____-_____-_____
SSN

Pursuant to Section 231.006 Family Code, the bidder certifies that the individual or business entity named in the Bid is not ineligible to receive the specified payments and acknowledges that any resultant contract may be terminated and payment may be withheld if this certification is inaccurate.

3. FRANCHISE TAX REPRESENTATION

The Bidder represents and certifies as part of its offer that it is not currently delinquent in the payment of any franchise tax owed the State of Texas.

4. PREFERENCE CLAIM

In accordance with 34 TAC Rule 20.38, the Bidder shall check below if claiming a preference. If the appropriate line is not marked, a preference will not be granted unless other documents included in the bid show a right to the preference.

- Goods produced or offered by a Texas bidder that is owned by a Texas resident service-disabled veteran
- Goods produced in Texas or offered by a Texas bidder that is not owned by a Texas resident service-disabled veteran
- Agriculture products produced or grown in TX
- Agriculture products and services offered by TX bidders
- Services offered by a Texas bidder that is owned by a Texas resident service-disabled veteran
- Services offered by a Texas bidder that is not owned by a Texas resident service-disabled veteran
- Texas Vegetation Native to the Region
- USA produced supplies, materials, equipment or agricultural products
- Products of persons with mental or physical disabilities
- Products made of recycled, remanufactured, or environmentally sensitive materials including recycled steel
- Energy efficient products
- Rubberized asphalt paving material
- Recycled motor oil and lubricants
- Products produced at facilities located on formerly contaminated property
- Products and services from economically depressed or blighted areas
- Vendors that meet or exceed air quality standards
- Recycled or Reused Computer Equipment of Other Manufacturers
- Foods of Higher Nutritional Value (for consumption in a public cafeteria only)

5. NO COLLUSION

Bidder represents and certifies its employees, agents and representatives have not and shall not discuss or disclose the terms of their bid and its submission or response thereto with any third party other than persons or entities which Bidder engaged to assist it with respect to such response or submission.

Neither the Bidder nor the firm, corporation, partnership or institution represented by the Bidder or anyone acting for such firm, corporation or institution has violated the antitrust laws of the State or the Federal Antitrust Laws,

nor communicated directly or indirectly the bid submitted to any competitor or any other person engaged in such line of business.

6. NO GRATUITIES

The Bidder represents and certifies that it has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or A/E employed by the Agency in connection with the submitted bid.

7. NO COMPENSATION

Bidder represents and certifies that its employees, agents and representatives have not received compensation for participation in the preparation of the specifications for this solicitation.

8. HUMAN IMMUNO-DEFICIENCY VIRUS SERVICES ACT COMPLIANCE

8.1 Bidder certifies compliance with the HIV Services Act, [Health & Safety Code, Title 2, Subtitle D, Chapter 85] requirements for maintenance of confidentiality regarding HIV and its related conditions, including Acquired Immuno-Deficiency Syndrome (AIDS).

8.2 Bidder further certifies that workplace guidelines are developed and implemented. Bidder may elect to use workplace guidelines developed and implemented by the TDCJ.

8.3 In the absence of confidentiality guidelines, Bidder is not eligible to receive state funds.

9. COMMUNICABLE DISEASE PREVENTION & CONTROL ACT COMPLIANCE

Bidder certifies compliance with the applicable provisions of the Communicable Disease Prevention and Control Act, Health & Safety Code, Title 2, Subtitle D, Chapter 81.

10. CONFLICT OF INTEREST

10.1 Any individual who interacts with public purchasers in any capacity is required to adhere to the guidelines established in the Texas Government Code, Section 572.051. The Section outlines the ethical standards required of public purchasers, employees, and vendors who interact with public purchasers in the conduct of State business.

10.2 Specifically, a TDCJ employee may not have an interest in, or in any manner be connected with a contract or bid for a purchase of goods or services by an agency of the State; or in any manner, including by rebate or gift, accept or receive from a person to whom a contract may be awarded, directly or indirectly, anything of value or a promise, obligation, or contract for future reward or compensation. Entities who are interested in seeking business opportunities with the State must be mindful of these restrictions when interacting with public purchasers of the TDCJ or purchasers of other state agencies.

10.3 No Texas Department of Criminal Justice staff or Board Member shall have any conflict of interest or potential conflict of interest with the Bidder or any of its agents, including a financial interest, in this contract either currently or within the past two (2) years.

10.4 The Bidder covenants that Bidder has no existing interest and will not acquire any interest, direct or indirect, which could conflict in any manner or degree with the performance of services required under this

Contract and that no person having any such interest shall be employed by Bidder. No Bidder, Owner or agent shall have any conflict of interest or potential conflict of interest, including a financial interest with Texas Department of Criminal Justice staff, Texas Board of Criminal Justice member, Architect/Engineer (A/E), subcontractor, vendor or supplier affected by this Contract either currently or within the past two (2) years.

10.5 Any such conflict or potential conflict of interest shall be disclosed to the Owner by the party having such conflict before the execution of this Contract or within (10) Days of discovering the conflict. Owner representatives not affected by the conflict or potential conflict shall determine the severity of the conflict, if any, and recommend the appropriate remedial action to resolve the conflict without adversely affecting the interest of the Texas Department of Criminal Justice and its project schedule. Such remedial action could include cancellation of this Contract for the conflicting party.

10.6 Pursuant to Section 2155.004 (a) Texas Government Code, the Bidder has not received compensation for participation in the preparation of the specifications for this IFB. Under Section 2155.004 (b) Texas Government Code, the Bidder certifies that the individual or business entity named in this bid or Contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.

11. DISCLOSURE OF INTERESTED PARTIES

In accordance with Texas Government Code 2252.908, a governmental entity or state agency may not enter into a contract valued at \$1 million dollars or greater with a business entity unless the business entity, in accordance with Texas Administrative Code, Title 1, Part 2, Chapter 46, Rules 46.1, 46.3 and 46.5, submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency.

The disclosure of interested parties must be submitted on a form, and in a manner, prescribed by the Texas Ethics Commission. The Disclosure of Interested Parties Form (Form 1295) and instructions may be found at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm.

12. EQUAL OPPORTUNITY

Bidder certifies compliance with all terms, provisions, and requirements of Titles VI and VII, Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, and any other Federal, state, local or other anti-discriminatory act, law, statute or regulation, along with all amendments and revisions of the acts, laws, statutes or regulations, in the performance of this contract, and will not discriminate against any child or youth, client, employee, or applicant for employment because of race, creed or religion, age, sex, color, national or ethnic origin, handicap, or any other illegal discriminatory basis or criteria.

13. UNFAIR BUSINESS PRACTICES

Bidder certifies that it has not been found guilty in a judicial or state administrative agency proceeding of unfair business practices within the year preceding the effective date of this contract. Bidder further certifies that no officer of Bidder has served, within the past year, as an officer of another company which has been found guilty in a judicial or state administrative agency proceeding of unfair business practices. If the above certifications are false, any resulting contract will be void.

14. CONTRACTING WITH EXECUTIVE HEAD OF STATE AGENCY

Bidder represents and certifies that they are in compliance with Texas Government Code, Section 669.003 relating to contracting with executive head of a state agency.

If Section 669.003 applies, Bidder shall complete the following information in order for the bid to be evaluated:

Name of Former Executive: _____

Name of State Agency: _____

Date of Separation from State Agency: _____

Position with Bidder: _____

Date of Employment with Bidder: _____

15. LIMITATION ON EMPLOYMENT OF FORMER STATE OFFICERS

The Contractor certifies that they are in compliance with Section 572.069 of the Government code relating to employment of a former state officer or employee. A former state officer or employee of the TDCJ who during the period of state service or employment participated on behalf of the TDCJ on a procurement or contract negotiation involving a business entity may not accept employment from that business entity before the second anniversary of the date the officer's or employee's service or employment with the TDCJ ceased.

16. REMITTANCE ADDRESS

If the remittance address is different from the mailing address, Bidder shall enter the remittance address below. Failure to provide this information may impact payment.

Emerald Standard Services, Inc.

520 Preston Ave.

Pasadena, TX 77503

17. SUSPENSION, DEBARMENT, AND TERRORISM

Bidder certifies that the bidding entity and its principals are eligible to participate in this transaction and have not been subjected to suspension, debarment, or similar ineligibility determined by any federal, state or local government entity and that bidder is in compliance with the State of Texas statues and rules relating to procurement and that bidder is in compliance with the Federal Government's Terrorism Watch List as described in Executive Order 13224. Entities ineligible for federal procurement are listed at <https://www.sam.gov>.

18. FRAUD, WASTE OR ABUSE

In accordance with Texas Government Code, Chapter 321, the State Auditor's Office (SAO) is authorized to investigate specific acts or allegations of impropriety, malfeasance or nonfeasance in the obligation,

expenditure, receipt or use of state funds. If there is a reasonable cause to believe that fraud, waste or abuse has occurred at this agency, it can be reported to the SAO by calling 1-800-892-8348 or at the SAO's website at www.sao.state.tx.us. It can also be reported to the TDCJ Office of the Inspector General at 1-866-372-8329, the TDCJ Internal Audit Division at 1-512-406-5935, or Crime Stoppers at 1-800-832-8477.

19. VIOLATION OF FEDERAL LAW RELATING TO RECONSTRUCTION EFFORTS AS A RESULT OF HURRICANES RITA, KATRINA OR ANY OTHER DISASTER AFTER SEPTEMBER 24, 2005

Pursuant to Section 2261.053, Texas Government Code a state agency may not accept a bid or award a contract that includes proposed financial participation by a person who, during the five-year period preceding the date of the bid or award, has been convicted of violating a federal law or assessed a penalty in a federal civil or administrative enforcement action in connection with a contract awarded by the federal government for relief, recovery, or reconstruction efforts as a result of Hurricane Rita, Katrina, or any other disaster occurring after September 24, 2005. Under Section 2261.053, Texas Government Code, the Contractor certifies that the individual or business entity named in this bid or contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.

20. NO LITIGATION

Bidder certifies that there is not now pending, or to its knowledge threatened, any action, suit or proceeding to which Bidder, or any of its employees, are a party, before or by any court or governmental agency or body, which may result in any material adverse change in Bidder's ability to perform its obligations under this Contract, or any such action, suit or proceeding related to environmental or civil rights matters; Bidder further certifies that no labor disturbance by the employees of Bidder exists or is imminent which may be expected to materially and adversely affect Bidder's ability to perform its obligations under this Contract. Prior to Owner making an award of this Contract, Owner may require Bidders being considered for the award to recertify the representations set forth above. Owner, in its sole discretion, may disqualify any Bidder that in the opinion of Owner is a party, or who has any employees that are a party, to any action, suit or proceeding that may result in any material adverse change in Bidder's ability to perform its obligations under this Contract. During the term of this Contract, to include extensions hereof, Bidder shall notify Owner in writing within five days of Bidder having received knowledge of any actions, suits or proceedings filed against Bidder, or any of its employees, or to which Bidder, or any of its employees, are a party, before or by any court or governmental agency or body, which (1) may result in any material adverse change in Bidder's ability to perform its obligations under this Contract; or, (2) filed in any federal court, state court, or federal or state administrative hearing within the state of Texas regardless as to any anticipated material adverse change in Bidder's ability to perform its obligations under this Contract; or, (3) is brought by or on behalf of a state of Texas offender regardless as to any anticipated material adverse change in Bidder's ability to perform its obligations under this Contract.

21. IMMIGRATION

Bidder represents and warrants that it will comply with the requirements of the Immigration Reform and Control Act of 1986, Immigration Act of 1990, and the Illegal Immigration Reform and Immigration Responsibility Act of 1996, regarding employment verification and retention of verification forms for any individual who will perform any labor or services under this contract.

22. ADVERTISING OF AWARD

The Contractor agrees not to refer to awards in commercial advertising in such a manner as to state or imply that the product or service provided is endorsed or preferred by the Owner or is considered by the Owner to be superior to other products or services.

23. CONDITIONS PRECEDENT TO AWARD

Bidder hereby certifies, represents, and warrants that all conditions precedent set forth in Section D hereof shall be met within the periods of time specified in the Award.

BIDDER:

Name Emerald Standard Services, Inc.
By Rogelio R. Pombrol, Jr.
Signature 
Title President
Date 02/AUG/2016

SECTION L

INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

1. AMENDING AND MODIFYING BIDS/PUBLIC DISCLOSURE OF BIDS

- 1.1** No bid may be changed, amended or modified (by telegram or otherwise) after it has been submitted. A bid may be withdrawn, however, and be resubmitted at any time prior to the time set for bid opening.
- 1.2** Information, documentation, and other material in connection with this solicitation or any resulting contract may be subject to public disclosure pursuant to Chapter 552 of the Texas Government Code (the "Public Information Act"). Any part of the solicitation response that is of a propriety nature must be clearly and prominently marked as such by respondent. No public disclosures or news releases pertaining to this Contract shall be made without prior written approval of Owner.

2. REJECTION OF BIDS

- A. Any bid that fails to conform to the essential requirements of the Invitation for Bids shall be rejected.
- B. Any bid that does not conform to the applicable specifications shall be rejected unless the invitation authorized the submission of alternate bids and the supplies offered as alternates meet the requirements specified in the invitation.
- C. Any bid that fails to conform to the delivery schedule or permissible alternates stated in the invitation shall be rejected.
- D. A bid shall be rejected when the Bidder imposes conditions that would modify requirements of the invitation or limit the Bidder's liability to the Owner, since to allow the Bidder to impose such conditions would be prejudicial to other bidders. For example, bids shall be rejected in which the Bidder –
1. Protects against future changes in conditions, such as increased costs, if total possible costs to the Owner cannot be determined;
 2. Fails to state a price and indicates that price shall be "price in effect at time of delivery";
 3. States a price but qualifies it as being subject to "price in effect at time of delivery";
 4. When not authorized by the invitation, conditions or qualifies a bid by stipulating that it is to be considered only if, before date of award, the Bidder receives (or does not receive) award under a separate solicitation;
 5. Requires that the Owner is to determine that the Bidder's product meets applicable Owner specifications; or
 6. Limits rights of the Owner under any Contract provision.

- E. A low Bidder may be requested to delete objectionable conditions from a bid provided the conditions do not go to the substance, as distinguished from the form, of the bid, or work an injustice on other Bidders. A condition goes to the substance of a bid where it affects price, quantity, quality, or delivery of the items offered.
- F. Any bid may be rejected if the Owner determines in writing that it is unreasonable as to price. Unreasonableness of price includes not only the total price of the bid, but the prices for individual line items as well.
- G. Any bid may be rejected if the prices for any line items or sub-line items are materially unbalanced.
- H. Bids received from any person or concern that is suspended, debarred, proposed for debarment, or declared ineligible as of the bid opening date shall be rejected unless a compelling reason determination is made.
- I. Low bids received from concerns determined to be not responsible.
- J. When a bid deposit is required and a Bidder fails to furnish the deposit in accordance with the requirements to the invitation for bids, the bid shall be rejected.
- K. The originals of all rejected bids, and any written findings with respect to such rejections, shall be preserved with the papers relating to the acquisition. After submitting a bid, if all of a Bidder's assets or that part related to the bid are transferred during the period between the bid opening and the award, the transferee may not be able to take over the bid. Accordingly, the Owner shall reject the bid unless the transfer is affected by merger, operation of law or other means not barred.
- L. Bids that do not include a completed HUB Subcontracting Plan shall be rejected.

3. NOTICE TO BIDDERS OF REJECTION OF ALL BIDS.

When it is determined necessary to reject all bids, the Owner shall notify each Bidder that all bids have been rejected and shall state the reason for such action.

4. MINOR INFORMALITIES OR IRREGULARITIES IN BIDS.

A minor informality or irregularity is one that is merely a matter of form and not of substance. It also pertains to some immaterial defect in a bid or variation of a bid from the exact requirements of the invitation that can be corrected or waived without being prejudicial to other Bidders. The defect or variation is immaterial when the effect on price, quantity, quality of delivery is negligible when contrasted with the total cost or scope of the supplies or services being acquired. The Owner either shall give the Bidder an opportunity to cure any irregularity in a bid or waive the deficiency, whichever is to the advantage of the Owner. Examples of minor informalities or irregularities include failure of a bidder to:

- A. Return the number of copies of signed bids required by the invitation;
- B. Furnish required information concerning the number of its employees;
- C. Sign its bid, but only if:

1. The unsigned bid is accompanied by other material indication the Bidder's intention to be bound by the unsigned bid (such as the submission of a bid guarantee or a letter signed by the Bidder, with the bid, referring to and clearly identifying the bid itself); or
 2. The firm submitting a bid has formally adopted or authorized, before the date set for opening of bids, the execution of documents by typewritten, printed, or stamped signature and submits evidence of such authorization and the bid carries such a signature.
- D. Acknowledge receipt of an addendum / amendment to an invitation for bids, but only if-
1. The bid received clearly indicates that the Bidder received the addendum / amendment, such as where the addenda / amendment added another item to the invitation and the Bidder submitted a bid on the item; or
 2. The addendum / amendment involves only a matter of form or has no effect on either of the following: price, quantity, quality or delivery of the item bid upon.
- E. Furnish affidavits concerning parent company and affiliates, if required.
- F. Execute the representations and certifications at Section K of the Solicitation and submit with the bid.

5. NON-RESIDENT BIDDERS

The attention of all Bidders is called to Texas Government Code, Title 10, Section 2252.001, 2252.002, 2252.003 and 2252.004. A Nonresident Bidder is defined as follows: "Nonresident Bidder" means a Bidder whose principal place of business is not in this State, but excludes a contractor whose ultimate parent company or majority Owner has its principal place of business in this State.

6. DISCREPANCIES AND AMBIGUITIES

- A. If Bidder of proposed work is in doubt as to true meaning of any part of the Bid Documents or believes that discrepancies exist, Bidder shall submit written request for interpretation to the Contract Administrator. Such request must reach the Contract Administrator at least ten Days prior to time set for receipt of bids.
- B. Bidder submitting request for interpretation is responsible for its prompt, timely and actual delivery.
- C. Interpretations or explanations will not be made orally.
- D. All interpretations or supplemental instructions will be provided in Addenda.
- E. Copy of such Addendum will be issued to each entity holding Bid Documents.
- F. Failure to receive such addenda / amendment does not relieve bidder from any obligation under his/her bid as submitted, Bidder is responsible to ensure receipt and acknowledgment of all addenda / amendments issued and may be cause for rejection of its bid.

7. SUBSTITUTIONS

- A. Bidder requesting substitutions shall **submit written request to the Contract Administrator no later than 5:00 PM, fourteen (14) Days prior to the time set for receipt of bids.**
- B. Approvals of substitutions will be made by Addendum then distributed to each entity holding Bid Documents.

8. BID ACCEPTANCE

It is understood that the Owner reserves the right to accept or reject any and all bids and to waive all irregularities. It is further agreed that this Bid and Bid Bond shall be valid and not be withdrawn for a period of **one hundred (100) Days** from the date of opening thereof.

9. QUALIFICATIONS

Determination of Contractor responsibility will be based on the following criteria:

- (a) Have adequate financial resources to perform the contract, or the ability to obtain them;
- (b) Be able to comply with the required or proposed delivery or performance schedule, taking into consideration all existing commercial and governmental business commitments;
- (c) Have a satisfactory performance record. Have a satisfactory record of integrity and business ethics;
- (d) Have the necessary organization, experience, accounting controls, and technical skills, or the ability to obtain them (including, as appropriate, such elements as production control procedures, property control systems, quality assurance measures, and safety programs applicable to materials to be produced or services to be performed by the prospective contractor and subcontractors);
- (e) Have the necessary production, construction, and technical equipment and facilities, or the ability to obtain them; and
- (f) Be otherwise qualified and eligible to receive an award under applicable laws and regulations.

To this effect, bidders shall be required to submit documentation to support the above (such as Balance/Income Statements, a list of current projects, personnel list, list of equipment and facilities, and so forth). (See Attachment No. 8)

10. DOCUMENT AVAILABILITY

- A. Bid Documents can be purchased from the Contract Administrator as stated in the Notice to Bidders.

- B. Number of sets obtainable: Any number may be purchased with adequate advance notice to issuing party. Only complete sets will be sold.
- C. Ownership of documents: All documents are the property of the Texas Department of Criminal Justice.

11. SUBMISSION OF BIDS

Bids should be submitted on this form. Bids must be time stamped at the office designated in the solicitation on or before the hour and date specified for the bid opening. Any bid received at the designated location after the exact time specified will not be considered unless TDCJ determines that it was properly addressed and in the possession of TDCJ prior to the specified time but was late due to mishandling by the agency.

- A. Submit only one original and two copies of the Bid (use forms furnished in documents).
- B. All bids shall be in a sealed envelope and marked "**SEALED BID: Texas Department of Criminal Justice, Replace Service Entrance Switchgear - Backgate- Ellis Unit. Do Not Open Until 2:00 p.m., August 2, 2016**".
- C. Sealed bids may be mailed or hand delivered to the Texas Department of Criminal Justice at the following address:

TDCJ – Information Technology, Construction and Utilities Branch
 Two Financial Plaza, Suite 525
 Huntsville, Texas 77340
 Attn: Teresa Rhodes, CTPM, CTCM - Contract Administrator

(BIDS MUST BE RECEIVED BY 2:00 P.M. ON August 2, 2016 AT THE DESIGNATED ADDRESS TO BE CONSIDERED RESPONSIVE)

- D. All bids must be in original form with original signatures.
- E. Faxed or e-mailed bids are not acceptable.
- F. Faxed or e-mailed modifications to bids are not acceptable.

12. PREPARATION OF BID

As a reminder please ensure that you have:

- A. Furnished your Dunn and Bradstreet Number (DUNS#), Tax Identification Number (TAX ID #) and Charter Number (Charter #) in the spaces provided on page 1 of the Solicitation, Offer, and Award form.
- B. Completed blocks 10, 14, 15, 16, 18, 19A, 19B, and 19C on pages one (1) and two (2) of the Solicitation, Offer, and Award form.
- C. Completed the blanks in Section B.
- D. Read and completed the blanks and signature block in Section K.

- E. Completed the blanks in paragraph 14.8 of Section I.
- F. Completed all required Attachments, including "Contractor's Qualification Form" (use Attachment 8 furnished in documents).
- G. Bidders are required to submit a HUB Subcontracting Plan in accordance with Exhibit 1. ***Failure to submit the HUB Subcontracting Plan with appropriate forms will subject the bid to rejection from further consideration.***
- H. Have provided the required 5% bid deposit.
- I. Have acknowledged receipt of any Addenda/Amendment that may have been issued by completing Block 18 on Solicitation, Offer and Award Form or by enclosing copy of the Addenda/Amendment.
- J. Have enclosed all of the above documents with your bid, to include any other information that may have been requested.

13. PRE-AWARD DATA

- A. Within five (5) working days after official notification, the successful Bidder shall furnish the following documents:
 - (1) Written letter from Bidder's legal counsel as to Bidder's Resident or Nonresident status along with a copy of any statute in the state of a Nonresident Bidder which confers on a Resident Bidder any credit or assesses any Nonresident Bidder a penalty.
 - (2) Cost breakdown information for combination bids, if applicable.

14. BIDDER QUALIFICATIONS

Bidder must provide evidence that demonstrates the Bidder is qualified to satisfactorily perform the specified Work and must have worked in this trade for at least five (5) years. The Bidder shall submit written evidence to include a minimum of three (3) projects completed within the last ten (10) years of similar work, size and complexity to include the contracting party's name, telephone number, location, type of facility, construction cost and the date of completion.

SECTION M

EVALUATION FACTORS FOR AWARDS

1. Bidders must comply with material aspects of this Invitation for Bids to be considered responsive. Bidders must meet the qualifications and experience requirements to be considered for award.
 - 1.1 The Owner will evaluate bids in response to this solicitation without discussions with Bidder and in accordance with Texas Government Code, §2155.074. Contractor's prior performance may be used as a factor in the award.
 - 1.2 In accordance with Texas Administrative Code, Title 34, Chapter 20, Rule §20.31 (b), the Owner may negotiate if the Owner receives only one acceptable bid, or no acceptable bids, provided that the negotiations do not result in a material change to the advertised specifications.
2. In the event of tie bids, the preferences listed in Section K, Article 4 will be used to break the tie.
3. The Owner reserves the right, at its sole discretion, to make a single Contract award or multiple Contract awards from this solicitation. The Owner reserves the right to make no awards in the event of inconsistent pricing and/or the absence of available competition.
4. Alternate bids, if allowed for herein, will be evaluated based on the best interests of the Owner.

ATTACHMENTS

ATTACHMENT NO. 1

TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

**STANDARDS OF CONDUCT FOR CIVILIAN
CONSTRUCTION CONTRACTORS EMPLOYEES**

I. SECURITY MEASURES

A. GENERAL SECURITY MEASURES

No person working for or otherwise connected with the Contractor (his agents, subcontractors or their employees) shall be allowed to bring onto the owner's (state) property firearms, alcoholic beverages, drugs, or any other controlled substances with the exception of prescription medication. No such person shall cross any fences, except those fences designated to allow egress and ingress to the construction site. All vehicles shall be kept locked with windows up while on the owner's property. Contractors' employees shall avoid all contact with inmates, no employee shall converse with or otherwise communicate with any inmate. In addition to the usual civil and/or criminal penalties for violations of the above regulations, the owner reserves the right to refuse further entry to the job site to any individual who has violated the above restrictions. Further, the Owner reserves the right to immediately remove from the jobsite any individual who has violated the above restrictions.

II. EXPECTATIONS OF CONTRACTORS AND SUBS

A. ALL CONTRACTORS, SUBS, AND THEIR EMPLOYEES WILL:

1. Read and sign the Texas Department of Criminal Justice, Facilities Division, Standards of Conduct for Civilian Contractor Employees.
2. Refrain from bringing firearms, ammunition, controlled substances (with the exception of prescription drugs) or any other contraband items on the property of the Texas Department of Criminal Justice (I.D.). This includes in the personal vehicles of the on-site workers.
3. Vehicles will remain locked at all times when operator is absent.
4. There shall be no contact with any inmates in the TDCJ facilities except those which may be assigned to assist on an individual institutional project.
5. Approved visitors of inmates will not be allowed to work on any project that involves the unit where the visited inmate resides.
6. Vehicles are subject to search at anytime while on State Prison property.

B. GENERAL SECURITY FOR TOOL CONTROL:

1. All tools in tool boxes are to be inventoried with the total number of tools in each box plainly marked on the outside of the box.
2. Copies of tool inventories are to be filed with the entrance gate officer, the Owner's Designated Representative and the contractor's project superintendent. Any changes to an individual's tool box inventory should be immediately noted on all inventory sheets.
3. Tools should be cross-checked against the number on the tool box upon entry and exit from the facility.
4. Class "A" tools should receive special handling. When tools are not in use, they shall be kept and locked under key in a secure area and if possible rendered inoperable. Class "A" tools include, but are not limited to, tools most likely to be used in an escape attempt or do bodily harm. These generally include hacksaw blades, files, pipe wrenches, ladders, acetylene cutting tips, pipe and bolt cutters, etc.
5. At no time are Class "A" tools to be left unattended and when in use, the on-site TDCJ security officer will be notified.
6. Generators, ladders and acetylene cutters all must be secured at the end of each workday.
7. Emery wheels will be locked and rendered inoperable when not in use unless stored outside of the secure perimeter.
8. When a Class "A" tool is lost, the Assistant Warden for security or Warden shall be immediately notified.
 - a. Any inmates who may have had access to the area will be held until a thorough search is made.
 - b. A written report will be made covering the details of the loss.
9. All hazardous and poisonous chemicals, not in use, are to be stored in a locked tool trailer or other secure area. An inventory shall be maintained and direct supervision provided when the items are used at the work site. Upon completion of the project, the Contractor will be responsible for the removal of all hazardous materials and all hazardous waste generated under his control.

I have received a copy of the "STANDARDS OF CONDUCT FOR CIVILIAN CONSTRUCTION CONTRACTORS EMPLOYEES" issued by the Texas Department of Criminal Justice.

I have read, understand and will comply with this policy.

SIGNATURE

SOCIAL SECURITY #

DRIVERS LICENSE #

STATE

COMPANY

DATE

NAME

ADDRESS

CITY STATE ZIP

WITNESS

COMPANY

DATE

TEXAS STATUTORY PAYMENT BOND
CHAPTER 2253 THE GOVERNMENT CODE AS AMENDED
(PUBLIC WORKS)

STATE OF TEXAS
COUNTY OF _____:

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ as Principal, and
_____ as Surety are hereby held and firmly
bound unto the State of Texas in the penal sum of
_____ Dollars (\$_____) for the
payment whereof, the said Principal and Surety Bond themselves, their heirs, executors, administrators and
successors, jointly and severally, firmly by these Presents.

The conditions of this obligation are such that whereas the Principal entered into a certain Contract, hereto
attached, and made a part hereof with the State of Texas, acting by and through the Texas Department of
Criminal Justice, dated _____ for the _____.

NOW, THEREFORE, the conditions of this obligation are such that, if the Principal shall promptly make
payments to all claimants as defined in Chapter 2253 The Government Code, as amended and recodified,
supplying labor and materials in the prosecution of the work provided for in said Contract, then this obligation
shall be null and void, otherwise it shall remain in full force and effect.

This bond is made and entered into solely for the protection of all claimants supplying labor and material in
the prosecution of the work provided for in said Contract, and all such claimants shall have a direct right of
action under the Bond as provided in Chapter 2253 The Government Code, as amended and recodified.

In WITNESS WHEREOF, the above bound parties have executed this instrument under their several seals
this _____ day of _____, 200____, the name and corporate seal of each party being hereto
affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing
body.

SEAL:

ATTEST:

SURETY'S AGENT:

COMPANY NAME

PRINCIPAL ADDRESS

BY: CITY, STATE, ZIP CODE

SURETY TELEPHONE:

BY:

TEXAS STATUTORY PERFORMANCE BOND
CHAPTER 2253 GOVERNMENT CODE AS AMENDED
(PUBLIC WORKS)

STATE OF TEXAS:
COUNTY OF _____:

LET IT BE KNOWN BY THIS INSTRUMENT:

That we, _____, as Principal
and we, _____, a Corporation
duly authorized to do business in this State, as Surety(s), are this date held and firmly bound unto the State of
Texas in the amount of _____ Dollars (\$ _____)
for the payment of which indemnity the said Principal and Surety, by this declaration, do firmly bind
themselves, their heirs, executors, administrators, successors and assigns, jointly and individually.

Since a Contract, which by reference is made a part hereof, exists between the Principal and the State of
Texas, acting by and through the Texas Department of Criminal Justice, and dated _____ for the
conditions of this obligation are, therefore, such that it shall remain in full force and effect unless and until the
Principal shall faithfully perform the Contract in accordance with the Contract Documents.

In the event of Principal's failure, as defined by the Contract Documents, to faithfully perform the Contract,
Surety(s) will within fifteen (15) days of determination of default, assume full responsibility for completion of
said Contract and become entitled to payment of the balance of the Contract amount, or the Surety shall
make other arrangements satisfactory with the Texas Department of Criminal Justice for the completion of the
defaulted work but in no event shall the Surety's liability exceed the penalty of this bond.

The liabilities, rights, limitations and remedies concerning this Bond shall be determined in accordance with
the provisions of Chapter 2253 The Government Code, as amended and recodified, pursuant to which this
Bond is executed.

IN WITNESS TO THIS DECLARATION, the said Principal and Surety(s) have signed and sealed this
instrument this _____ day of _____, 200_____.

PRINCIPAL

SURETY

By _____

By _____

Bond Identification No. _____

Address of Attorney-in-fact

(Use of this form for the purposes indicated has been approved by the Attorney General of Texas)

**PREVAILING WAGE SCHEDULE
(Outside Five Foot Perimeter of Building)**

General Decision Number: TX160123 01/08/2016 TX123

Superseded General Decision Number: TX20150123

State: Texas

Construction Type: Heavy

Counties: Anderson, Falls, Freestone, Grimes, Houston, Jasper, Lee, Leon, Limestone, Madison, Milam, Newton, Polk, Sabine, San Augustine, Shelby, Trinity, Tyler, Walker and Washington Counties in Texas.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 01/08/2016

SUTX2009-122 04/21/2009

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	\$ 13.00	0.00
LABORER: Common or General	\$ 8.75	0.00
LABORER: Pipelayer	\$ 11.25	0.00
OPERATOR: Backhoe/Trackhoe	\$ 15.89	0.00
OPERATOR: Bulldozer	\$ 14.25	0.00
OPERATOR: Front End Loader	\$ 11.52	0.00
TRUCK DRIVER	\$ 11.75	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The

classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional

Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed. With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

ATTACHMENT NO. 5

**PREVAILING WAGE SCHEDULE
(Buildings to five feet beyond building line)**

General Decision Number: TX160220 04/01/2016 TX220

Superseded General Decision Number: TX20150220

State: Texas

Construction Type: Building

County: Walker County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	03/18/2016
2	04/01/2016

* ASBE0022-003 12/01/2015	Rates	Fringes
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ASBESTOS WORKER/HEAT & FROST INSULATOR	\$ 22.78	11.90
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BOIL0074-005 01/01/2013	Rates	Fringes
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Boilermaker	\$ 22.71	20.63
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CARP0551-006 04/01/2015	Rates	Fringes
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CARPENTER (Form Work Only)	\$ 22.50	8.33
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IRON0084-008 06/01/2015	Rates	Fringes
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IRONWORKER, STRUCTURAL AND REINFORCING	\$ 23.02	6.35
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LABO0154-017 05/01/2008		
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	Rates	Fringes
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Laborers: (Mason Tender – Cement/Concrete)	\$ 14.53	3.49
-----------------------------------------------	----------	------

PLUM0068-006 10/01/2015 Plumber	Rates \$ 29.64	Fringes 9.49
SUTX2009-075 04/20/2009 BRICKLAYER	Rates \$ 18.00	Fringes 0.00
CARPENTER, Includes Acoustical Ceiling Installation, Batt Insulation, and Metal Stud Installation (Excludes Drywall Hanging, and Form Work)	\$ 15.13	2.63
CEMENT MASON/CONCRETE FINISHER	\$ 12.09	0.00
DRYWALL HANGER	\$ 13.89	1.00
ELECTRICIAN	\$ 18.06	4.87
LABORER: Common or General	\$ 9.24	0.00
LABORER: Landscape & Irrigation	\$ 8.50	0.22
LABORER: Mason Tender – Brick	\$ 12.02	0.00
LABORER: Mortar Mixer	\$ 12.00	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	\$ 14.67	0.47
OPERATOR: Bulldozer	\$ 13.00	0.35
OPERATOR: Crane	\$ 21.33	0.00
OPERATOR: Forklift	\$ 14.58	0.00
OPERATOR: Loader (Front End)	\$ 10.54	0.00
PAINTER: Brush, Roller and Spray	\$ 11.75	0.00
ROOFER	\$ 13.64	1.80
SHEET METAL WORKER	\$ 17.00	0.00
TILE SETTER	\$ 15.00	0.00
TRUCK DRIVER	\$ 10.68	0.34

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue. 3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

ATTACHMENT NO. 6
SUBSTITUTION REQUEST
(Bidding Phase)

Not Applicable After Award of Contract

ATTACHMENT NO. 7

SUBSTITUTION REQUEST - AFTER EXECUTION OF CONTRACT

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

PROJECT: _____ PROJECT NO.: _____

TO: (A/E) FROM: (BIDDER)

HEREBY REQUESTS ACCEPTANCE OF THE FOLLOWING PRODUCT OR SYSTEMS AS A SUBSTITUTION IN ACCORD WITH PROVISIONS OF DIVISION ONE OF SPECIFICATIONS:

1. SPECIFIED PRODUCT OR SYSTEM:

Substitution request for (Generic Description): _____

Specification Section No. _____ Article(s) _____ Para.(s) _____

2. SUPPORTING DATA:

- Product data for proposed substitution is attached (description of product, reference standards, performance and test data).
- Sample is attached
- Sample will be sent if requested

3. QUALITY COMPARISON:

	SPECIFIED PRODUCT	SUBSTITUTION
Name, brand:	_____	_____
Catalog No.:	_____	_____
Manufacturer:	_____	_____
Vendor:	_____	_____
Significant variations	_____	_____

Maintenance Service Available: yes no

4. PREVIOUS INSTALLATIONS:

Identification of similar projects on which proposed substitution was used: (Attach list)

Project: _____	A/E: _____
Address: _____	Owner: _____
_____	Date Installed: _____

5. REASON FOR NON-AVAILABILITY OF SPECIFIED ITEM:

Attach affidavit, certification or other data as proof of non-availability.

- Strikes
- Lockouts
- Bankruptcy
- Discontinuance of production
- Proven shortage
- Similar occurrences (explain below)

6. EFFECT OF SUBSTITUTION:

Proposed substitution affects other parts of Work: No Yes (If yes, explain)

Substitution changes Contract Time: No Yes Add/Deduct _____ day

Substitution requires dimensional revision or redesign of structure or M & E Work:

No Yes (If yes, attach complete data.)

Saving or credit to Owner, if any, for accepting substitution: \$ _____

7. CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:

I/we have investigated the proposed substitution. I/we:

- believe that is equal or superior in all respects to specified product, except as stated above;
- will provide the same warranty as specified for specified product;
- have included complete cost data and implications of the substitution;
- will pay redesign and special inspection costs caused by the use of this product;
- will pay additional costs to other contractors caused by the substitution;
- will coordinate the incorporation of the proposed substitution in the Work;
- will modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning
- waive future claims for added cost to Contract cause by the substitution.
- warrant and represent to the Owner and the A/E that the proposed substitution does not infringe on any patents or other rights held by others, or that a license has been or will be obtained timely from the holders of such rights for the use of the substitute as proposed; and acknowledge that by accepting this substitution neither the A/E nor the Owner makes any warranty or representation to the Contractor or any Subcontractor regarding the existence or potential for such infringement.

Contractor: _____ Date: _____

By: _____

Answer all questions and complete all blanks - use "NA" if not applicable.

A/E'S REVIEW AND ACTION:

- Resubmit substitution request:
 - Provide more information in following categories: _____

- Sign Contractor's Statement of Conformance.
- Submit proof of non-availability.
- Substitution is accepted.
- Substitution is accepted, with the following comments: _____

- Substitution not accepted.

A/E's Signature

Date

ATTACHMENT NO. 8
CONTRACTOR QUALIFICATIONS

Attachment 8 will be in TDCJ Contract File after award of Contract

ATTACHMENT 9

Texas Department of Criminal Justice
Non-Employee Background Questionnaire

This information is needed for TDCJ to conduct a criminal history check to determine whether access to TDCJ units and departments should be approved. All questions shall be answered in full.

NOTE TO APPLICANT: With few exceptions, you are entitled upon request: (1) to be informed about the information the TDCJ collects about you; and (2) under Texas Government Code §§ 552.021 and 552.023, to receive and review the collected information. Under Texas Government Code § 559.004, you are also entitled to request, in accordance with the TDCJ procedures, that incorrect information the TDCJ has collected about you be corrected.

- 1. Name: Last First Middle Social Security No.:
3. Mailing Address: Street City State Zip
4. Date of Birth: (MM/DD/YYYY) 5. Place of Birth: City State
6. Driver License No.: State: 7. Phone No.: ()
8. Other names used (maiden, alias, nicknames):
9. Sex: Male Female 10. E-mail Address:
11. Ethnic Origin: White Black Hispanic Asian/Pac. Islander Am. Ind/Alaskan Other
12a. Have you previously been employed by TDCJ or worked in a TDCJ facility on a contract basis? Yes No
12b. Have you engaged in sexual abuse in a prison, jail, lockup, community confinement facility, juvenile facility, or other institution? Yes No
12c. Have you been convicted of engaging or attempting to engage in sexual activity in the community facilitated by force, overt or implied threats of force, or coercion, or if the victim did not consent or was unable to consent or refuse? Yes No
12d. Have you been civilly or administratively adjudicated to have engaged in sexual activity in the community facilitated by force, overt or implied threats of force, or coercion, or if the victim did not consent or was unable to consent or refuse? Yes No
13. Are you related to any employee or contract employee of TDCJ? Yes No Unknown
14a. Are you or any immediate member of your family related to any TDCJ offender? Yes No Unknown
14b. Are you now or have you ever been involved in a spousal relationship with a TDCJ offender? Yes No
14c. Do you have a current business partnership or gang association with a current TDCJ offender? Yes No
14d. Are you on a current TDCJ offender's visitation list? Yes No
14e. Have you corresponded in the last year with a current TDCJ offender? Yes No

NOTE: If you answered yes to Question 14a, b, c, d, or e above, you are required to complete and submit a PERS 282A, Additional Offender Information. The PERS 282A form is available from the TDCJ website at www.tdcj.texas.gov.

- If you have a personal relationship with an offender, who is not a relative, be sure to read the "Offender Relationships" paragraph on Page 3 of this questionnaire.

(Continued on Page 2)

IMPORTANT

Read the definition of conviction in Question 17. When answering questions 15 through 17, **do not include:** 1) any violation of law committed before your 17th birthday, if the final decision was made in juvenile court or under a youth offender law; 2) any conviction whose record was expunged under federal or state law; 3) minor traffic violations. **DWI, DUI, Open Container, and Driving While License Suspended** are not minor traffic violations and shall be listed.

15. Do you have any criminal charges currently pending? Yes No
 If yes, please explain: _____
16. Are you on parole or probation, deferred adjudication, or under a pre-trial diversion agreement? Yes No
 If yes, please explain: _____
17. Have you ever been convicted of a crime (misdemeanor or felony)? Yes No If yes, list each one below.
 Attach an additional page if necessary. **Include those that may not appear on your record at this time.**
Important: For purposes of contract employment with TDCJ, convictions include sentenced to confinement, paid fine, time served, placed on probation (includes **deferred adjudication**), and court ordered restitution. See Falsification Policy on Page 3 of this questionnaire.

Date	Felony or Misdemeanor	Offense	Offense Class	City & State	Punishment

DOCUMENT REQUIREMENTS: You are required to provide with this questionnaire a **disposition** for each criminal charge you reported in Question 15, 16, and 17 above. A disposition is a statement of the charge, date, and the results of the case. If the charge was dismissed, the disposition shall state the reason for dismissal. Dispositions can normally be obtained from the **clerk of the court** having jurisdiction over the case.

18. Are you now or have you ever been a member of a street gang? Yes No
 Are you now or have you ever been a member of or affiliated with an organization promoting racial, ethnic, or gender superiority or separation, independence from governmental laws and regulations, or overthrow of the United States Government?
 Yes No
 If you answered yes to either of these questions, provide the following information:
- a. Name of the organization and dates of membership: _____
- b. Position or positions you held in the organization: _____
- c. Arrests and/or convictions resulting from your activities as a member: _____
19. Do you have any tattoos or markings on your body signifying membership or affiliation with a street gang or associated with organizations promoting racial, ethnic, or gender superiority or separation, independence from governmental laws and regulations, or overthrow of the United States Government? Yes No
 If yes, provide a description and location of those tattoos or markings: _____

(Continued on Page 3)

FALSIFICATION POLICY

It is important that contract employee applicants provide accurate information in this questionnaire. **Failure to list any criminal conviction or other important information, such as prior employment with TDCJ or offender relationships, is considered falsification of the questionnaire and results in disqualification for contract employment access to TDCJ facilities for one year.**

As a criminal justice TDCJ, it is very important that we know if an applicant has a criminal record. In most cases, a criminal record does not disqualify you for access to TDCJ facilities. However, falsification of the questionnaire always disqualifies you, regardless of how well qualified you are otherwise.

What convictions shall be listed? All convictions handled in adult court shall be listed, no matter when or where they occurred. In Texas, if you are 17 years old or older, the case is always handled in adult court. If you are under 17, it still may be handled in adult court. As an exception, you are not required to list convictions for minor traffic violations. Examples of minor traffic violations are speeding, running stop signs, and no seat belts. Examples of crimes which are not minor traffic violations and shall be listed are DWI, DUI, Hit and Run, Assault with a Motor Vehicle, Reckless Driving, Open Container, and Driving While License is Suspended. Convictions that have been **expunged** under state or federal law do not have to be listed. Expunged means a judge signed an order directing all agencies with a record of the arrest and conviction destroy those records (this is not the same as a deferred adjudication, explained below).

What is a conviction? For TDCJ purposes, a conviction is a judgement or a verdict, a plea of guilty or nolo contendere, and/or a judicial finding of guilt substantiated by the evidence, which results in the payment of fines, forfeiture of collateral or bond, restitution, **deferred adjudication**, probation, community supervision, confinement, suspended sentence, or any other penalty imposed by a court of law or agreed upon by the accused. This includes instances where a pardon or a reprieve has been granted for any reason other than proof of innocence. **If you have a case handled by deferred adjudication, it shall be listed in your application, regardless of whether you think it is still on record.** On the other hand, a pre-trial diversion agreement is not considered a conviction for the purpose of employment with TDCJ and does not need to be included on your application.

Military Convictions. Convictions by court martial for criminal offenses shall also be listed.

Failure to Appear. If you were convicted of a routine traffic violation or other offense and did not pay the ticket on time or failed to appear to court, you may have been charged with and convicted of Failure to Appear. Failure to Appear is a separate crime and shall be listed.

Questions. If you have any questions concerning what shall be listed in this questionnaire, it is recommended you contact the Human Resources Division in Huntsville at (936) 437-3126 **before** you submit this questionnaire.

OFFENDER RELATIONSHIPS: TDCJ employees and contract employees with access to TDCJ facilities are prohibited from maintaining or developing a personal relationship with an offender who is not related to the employee. Prohibited relationships include those involving cohabitation, sexual misconduct, or actions that jeopardize or have the potential to jeopardize the security of the TDCJ. This means employees and contract employees may not have personal contact or relationships with offenders currently incarcerated or on parole outside of their official duties if this contact or relationship would jeopardize or has the potential to jeopardize the security of the TDCJ. Prohibited contact includes living together, writing letters or notes, telephone contact, visitation, and depositing funds into an offender's Inmate Trust Fund (ITF) account. If an employee or contract employee was once married to an offender or had a child together with an offender, employee contact with the offender may be limited to that which is ordered by the Court. As a condition of contract employment with TDCJ, contract employees with prohibited relationships shall sever those relationships. Sever means to cease any and all cohabitation, intimate encounters, verbal or written communications, visitation, or other prohibited contact. Continuation of a prohibited relationship after contract employment with TDCJ may result in denial of access to TDCJ facilities, if the TDCJ determines the relationship jeopardizes or has the potential to jeopardize the security of the TDCJ.

ADDITIONAL INFORMATION: All applicants, who may have contact with offenders, are ineligible for employment if they have committed any activity described in questions 12b, 12c, 12d.

CERTIFICATION: I certify that I have read and understand the above explanation of the TDCJ Policy on Falsification and Offender Relationships. I further certify that my answers on this questionnaire are true, complete and correct to the best of my knowledge and I have not evaded or omitted any part thereof to reflect an untruth. I understand falsification constitutes grounds for refusing or terminating access to TDCJ units and departments.

DUTY TO DISCLOSE: I hereby acknowledge that I have a duty to disclose any sexual misconduct during the term of my employment. I further acknowledge that I have a duty to disclose any misconduct on my part while working for previous employers.

Signature: _____

Date: _____

ATTACHMENT NO. 10

STATE DOCUMENTS AND FORMS (Contract Conditions and Division 1 Govern This Section)

A. The following State Documents and forms (or equivalent forms generated by automated contract management software) will be used by the Contractor during the construction of the project, and are included in this attachment: To be equivalent, an automated form must contain all items of data shown on the original form, and be similar enough in format to be used interchangeably with the original. **Any equivalent automated forms must be approved by the Owner prior to beginning work.**

10.A.1	Payment Voucher
10.A.2	Request for Information
10.A.3	Change Proposal Request
10.A.4	Pending Change Request Cost Analysis
10.A.5	Pending Change Request Cost Analysis Summary Sheet
10.A.6	Change Order
10.A.7	Consent of Surety to Final Payment
10.A.8	Affidavit of Payment
10.A.9	Final Completion Certificate
10.A.10	Notice of Beneficial Occupancy
10.A.11	Reserved
10.A.12	Application and Certificate for Payment and Continuation Sheet (2 pages)
10.A.13	Labor Burden Log
10.A.14	Quality Control Daily Report
10.A.15	Quality Control Deficiency Notice
10.A.16	Quality Control Deficiency Log
10.A.17	Corrective Action for Notice of Non Conformance
10.A.18	Preparatory Inspection Checklist (4 pages)
10.A.19	Initial Inspection Checklist (2 pages)
10.A.20	Notification of Preparatory/Initial Inspection
10.A.21	Notification of Testing
10.A.22	Not to Exceed Field Order
10.A.23	Time Extension Request
10.A.24	Time Extension

B. The following forms will be used by TDCJ staff and/or consultants, and are included for the Contractor's information only:

10.B.1	Quality Assurance Field Report and Supplementary Page (2 pages)
10.B.2	Quality Assurance Remedial Action Request
10.B.3	Quality Assurance Remedial Action Request Log
10.B.4	Quality Assurance Notice of Non Conformance
10.B.5	Quality Assurance Notice of Non Conformance (N/C) Log

C. Some of the forms listed above are represented as samples reduced in size for purposes of this Project Manual. Full size forms shall be made available to the Contractor upon request.

10.A.1
STATE OF TEXAS
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
PAYMENT VOUCHER

Agency No. 696	Remit Voucher to: TDCJ-Facilities Division-Finance #2 Financial Plaza Suite # 400 Huntsville, TX 77340		Voucher No.	
			Voucher Amount	
			\$	
Contract No.	Contract Date	SA No. or JOE No.	Period Covered for this Voucher	
			From:	To:
Project Location		Project Description		
TDCJ Project No.	TDCJ Tracking No.			
Pay To: (Name, Address, City, State, Zip)				
SERVICE AUTH/JOB ORDER/CONTRACT AMOUNT			\$	
ADDITIONS			\$	
TOTAL			\$	
DEDUCTIONS			\$	
TOTAL NET AMOUNT			\$	
TOTAL AMOUNT EARNED TO DATE			\$	
TOTAL RETAINED TO DATE			\$	
TOTAL EARNED LESS RETAINED AMOUNT			\$	
TOTAL PREVIOUSLY APPROVED			\$	
AMOUNT DUE THIS ESTIMATE			\$	
ARCHITECT/ENGINEER CERTIFICATION I certify that I have verified this construction estimate and that it is a true and correct statement of work performed and materials supplied by the contractor, and that the contractor's statement of his account and the amount due him is correct and that all work and material included in the estimate have been performed in full accordance with terms and conditions of the corresponding construction contract documents and authorized changes thereto. <div style="text-align: right;">(Print Name)</div>		PAYEE'S CERTIFICATION I hereby certify that I am duly authorized to make this certification for and on behalf of <div style="text-align: center;">(Name of Payee Company/Claimant)</div> I further certify that the attached invoice is correct and that it corresponds in every particular with the supplies and/or services contracted for. I further certify that the account is true, correct and unpaid. <div style="text-align: right;">(Print Name)</div>		
Signature	Date	Signature	Date	
AGENCY CERTIFICATION				
I certify that the above services were rendered, or goods received, and that they correspond in every particular with the contract under which they were procured and that the invoice is true, and unpaid.				
Date Approved for Payment _____				
Name	Title	Date	Name	Title
Name	Title	Date	Name	Title

10.A.2
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

Distribution to:
OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

REQUEST FOR INFORMATION

TO: _____ DATE: _____
FROM: _____ TDCJ JOB NUMBER: _____
RFI #: _____ PROJECT: _____

DESCRIPTION OF REQUEST FOR INFORMATION

SUBJECT: _____

SPECIFICATIONS: _____

DRAWING(S): _____

SIGNED: _____

REPLY

SIGNATURE: _____

TITLE _____ DATE: _____

**10.A.3
CHANGE PROPOSAL REQUEST**

TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

Distribution to:

OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

PROJECT: _____
(name & address)

CHANGE PROPOSAL NO: _____

OWNER: Texas Department of Criminal Justice
Facilities Division

DATE: _____

TO: _____
(contractor)

ARCHITECT'S PROJECT NO.: _____

CONTRACT FOR: _____

NOTICE TO PROCEED DATE: _____

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the Contract Documents described herein.

This is not a change order nor a direction to proceed with the work described herein.

Description: (Written description of the work)

Attachments: (List attached documents that support description)

Owner: Texas Department of Criminal Justice - Facilities Division

By: _____ Signature
Date

Architect/Engineer:

By: _____ Signature
Date

10.A.4

**TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION**

PENDING CHANGE REQUEST COST ANALYSIS

To be completed by General Contractor or Subcontractor
as outlined in the Uniform General Conditions Section 6.6.1

Work to be performed by: _____ PCR: _____

General Contractor Subcontractor TDCJ-FD JOB NO: _____

CONTRACTOR: _____

If Subcontractor, give company name: _____

Time Extension (if any): _____

Description of Change: _____

ADDITIONS AND/OR [CREDITS]

Description	Quantity	Unit	Cost/Unit	A	B	C	D	E
				Material	Labor	Equip	Trans	Storage
Subtotals								

Line I Enter total of Columns A+B+C+D: _____

Line II If Line I indicates to an ADD, enter 15% of Line I:
If Line I indicates CREDIT, enter -0-: _____

Line III Enter total Column E (Storage) _____

Line IV Enter ____ % of Column B for Workman's Comp
Social Security and like taxes: _____

Line V Total Line I thru Line IV
Enter here & on Summary Sheet _____

SIGNATURE _____ DATE _____
Contractor/Subcontractor

SIGNATURE _____ DATE _____
TDCJ-PA

10.A.5
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

PENDING CHANGE REQUEST COST ANALYSIS
SUMMARY SHEET

To be completed by General Contractor

Project: _____ PCR Number: _____
 TDCJ-FD Job No: _____
 Contractor _____
 Description of Change: _____

SUBCONTRACTOR (Company Name)			Subcontractor Adjustment from Line V of Subcontractor PCRCA.
1.			
2.			
3.			
4.			
5.			
6.			
7.			

- I. Total Adjustment (this item) of work performed by subcontractors: _____
- II. If General Contractor PCR/CA indicated CREDIT, enter here: _____
- III. Total Line I - Line II: _____
- IV. If Line III is an add, enter 5% of Line III for General Contractor: _____
- V. If General Contractor PCR/CA indicates an ADD, enter here: _____
- VI. Total Line III, Line IV and Line V (Equals total adjustment this item): _____
- VII. Total Time Extension Requested (days): _____

SIGNATURE: _____ DATE: _____
 Contractor

SIGNATURE: _____ DATE: _____
 TDCJ-PA

10.A.6
STATE OF TEXAS
 Texas Department of Criminal Justice – Facilities Division

CHANGE ORDER

Change Order No.:	
Distribution <input type="checkbox"/> TDCJ-FD <input type="checkbox"/> DP <input type="checkbox"/> CONTRACTOR <input type="checkbox"/> FIELD <input checked="" type="checkbox"/> OTHER	
To:	Contract No.
Project:	MWR No.
Location:	Lonestar No.
	Date:

You are hereby authorized to make the following changes in the work under contract:

N.T.E. Field Order No./PCR No. _____ Cost \$ _____

Description of Work: (NO MORE THAN 4 LINES)

It is mutually agreed that the (Payment) (Deduction) of \$ _____ and a _____ Calendar Day Time Extension provided for in this Change Order constitutes full compensation to the Contractor. Whether direct, consequential or otherwise, in any wise incident to, or arising out of, or resulting directly from the work performed or modified by the Contractor under this Change Order. The contract date, including any Time Extensions is _____

For the above changes, the sum of: _____

will be applied to the contract price as follows:

ORIGINAL CONTRACT SUM	\$	
PREVIOUS ADDITIONS:	\$	
PREVIOUS DEDUCTIONS:	\$	
NET BALANCE:	\$	
<input type="checkbox"/> ADDITION or <input type="checkbox"/> DEDUCTION	\$	
ADJUSTED CONTRACT PRICE	\$	

Approved by:

Contractor:		Date
TDCJ-Project Eng.	\$5,000.00	Date
Eng. Branch Manager	\$10,000.00	Date
Director, Engineering	\$15,000.00	Date
Director, Facilities	\$25,000.00	Date
Chief Financial Officer	\$25,000.00+	Date
Executive Director	Contract ≥ \$1,000,000.00	Date

Program Administration Manager's Coordination _____ Date _____

10.A.7
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

CONSENT OF SURETY
To Final Payment

Project: _____

Location: _____

Contractor: _____

Project Number: _____

In accordance with the provisions of the above-named contract between the Owner and the Contractor, the following named Surety:

on the Payment Bond of the following named Contractor:

hereby approves of final payment to the Contractor, and further agrees that said final payment to the Contractor shall not relieve the Surety Company named herein of any of its obligations to the following named Owner: as set forth in said Surety company's bond.

The State of Texas, by and through the Board of Directors of the Texas Department of Criminal Justice-Facilities Division IN WITNESS WHEREOF, the Surety Company has hereunto set its hand and seal this _____ day of _____ 20 _____

(NAME OF SURETY COMPANY)

AFFIX CORPORATE
SEAL HERE

(SIGNATURE OF AUTHORIZED REPRESENTATIVE)

TITLE _____

10.A.8
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

AFFIDAVIT OF PAYMENT

Project: _____
Location: _____
Contractor: _____
Project Number: _____

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by the Texas Department of Criminal Justice - Facilities Division to furnish labor and materials for work, under a contract # _____ for the property described as Job # _____ in the _____ of _____ County of _____ State of Texas, of which the Texas Department of Criminal Justice - Facilities Division is the Owner.

NOW, THEREFORE, this _____ day of _____ 20 _____ the undersigned, as the Contractor for the above named Contract pursuant of the Conditions of the Contract hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor and services performed, and for all know indebtedness and claims against the Contractor for damages arising in any matter in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write "NONE". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

ATTACHMENTS:

1 Consent of Surety to Final Payment. (Whenever Surety is involved, Consent of Surety is required).

(Affix Corporate Seal Here)

Contractor (Name of sole ownership, corporation or partnership)

Signature of Authorized Representative

Title

Sworn and Subscribed before me this _____ day of _____ 20 _____

NOTARY PUBLIC

10.A.10
 TEXAS DEPARTMENT OF CRIMINAL JUSTICE
 FACILITIES DIVISION

NOTICE OF BENEFICIAL OCCUPANCY
 HUNTSVILLE, TEXAS

TO: _____
 CONTRACT ADMINISTRATOR

DATE:

FROM: _____
 PROJECT ADMINISTRATOR

CONTRACT NO. _____		_____	
JOB NUMBER _____	PROJECT NAME _____		_____
BUILDING NO. _____	UNIT NAME _____		_____
OCCUPANCY DATE _____	UNIT LOCATION _____		_____
BUILDING DESCRIPTION (purpose) _____			
TYPE OF PROJECT		<input type="checkbox"/> NEW	<input type="checkbox"/> MODIFICATION / ADDITION
COST \$ _____	BUILDING SIZE: _____	AREA: _____	SQ. FT. _____
TYPE OF CONSTRUCTION		<input type="checkbox"/> Wood	<input type="checkbox"/> Block
<input type="checkbox"/> Single Story	<input type="checkbox"/> Metallic	<input type="checkbox"/> Concrete	
<input type="checkbox"/> Multi-Story	<input type="checkbox"/> Brick	<input type="checkbox"/> Combination (explain)	
WORK PERFORMED BY		<input type="checkbox"/> General Contractor	<input type="checkbox"/> Construction
	<input type="checkbox"/> Other (explain)	<input type="checkbox"/> Maintenance	
COMMENTS/EXPLANATIONS _____			

TDCJ-FD PE/ARCHITECT	DATE	ARCHITECT/ENGINEER	DATE
CONTRACTOR	DATE	PROJECT ADMINISTRATOR	DATE

C: TDCJ-FD PROJECT ADMINISTRATOR
 ARCHITECT/ENGINEER

10.A.11

RESERVED

APPLICATION AND CERTIFICATE FOR PAYMENT
 TEXAS DEPARTMENT OF CRIMINAL JUSTICE
 FACILITIES DIVISION

TO TDCJ:	FROM (CONTRACTOR):	APPLICATION NO:	Distribution to:	
			T.D.C.J.	
			A/E	
PROJECT:	TDCJ PROJECT NO.:	PERIOD TO:	CONTRACTOR	
			FIELD	
CONTRACT FOR:		CONTRACT DATE:	OTHER	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for Payment, as shown below, in connection with the Contract Continuation Sheet, is attached.

CHANGE ORDER SUMMARY		
Change Orders approved in previous months by Owner	ADDITIONS	DEDUCTIONS
TOTAL		
Approved this Month		
Number	Date Approved	
TOTALS		
Net change by Change Orders		

1. ORIGINAL CONTRACT SUM _____
2. Net change by Change Order _____
3. CONTRACT SUM TO DATE (Line 1 ± 2) _____
4. TOTAL COMPLETED & STORED TO DATE (Column G on Continuation Sheet) _____
5. RETAINAGE:
 - a. 5.00 % of Completed Work (Column D + E) _____
 - b. 5.00 % of Stored Material (Column F) _____
 - Total Retainage (Line 5a + 5b or Total in Column I) _____
6. TOTAL EARNED LESS RETAINAGE (Line 4 less Line 5 Total) _____
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) _____
8. CURRENT PAYMENT DUE _____
9. BALANCE TO FINISH, PLUS RETAINAGE (Line 3 less Line 6) _____

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of: _____ County of: _____

Subscribed and sworn to before me this _____ day of _____, 19____

Notary Public: _____

My Commission expires: _____

CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the A/E certifies to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$0.00

(Attach explanation if amount certified differs from the amount applied for.)

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

**10.A.14
Quality Control Daily Report**

To: _____ TDCJ Project Administrator From: _____ Quality Control Manager

Project Name: _____ Date: _____
 Project Location: _____ Report No.: _____
 General Contractor: _____ Calendar Day: _____

Weather					
Sky	AM _____	Wind	AM _____	Temp	HI _____
	PM _____		PM _____		LO _____
				Precip	AM _____
				Amount	PM _____

Site Conditions: _____

A) Major Work Activities:

Work Started: _____

In Progress: _____

Completed: _____

Materials Received: _____

B) Q C Inspections and Tests:

C) Manpower and Equipment

Contr. / Sub.	CRAFT	SUPV	JRNY	APPR	EQUIPMENT

D) Reports Prepared / Issued / Cleared: (List by No.)

Deficiency Notices: _____ Remedial Action Requests: _____
 Notices Of Non-conformance: _____ Other (_____): _____

E) Summary Remarks:

**10.A.15
Quality Control Deficiency Notice**

Page 1 of _____

Project Name/ Location: _____ Def. No. _____

To: Contractor/ Subcontractor: _____

ATTENTION: _____ Contract Day No: _____

Pursuant to Inspection conducted on this date, you are hereby requested to immediately perform Corrective Actions relative to deficiencies detected in the work, as fully described below:

Receipt of your Corrective Action Proposal is due by: _____
Receipt acknowledgement is _____ is not _____ required.

By: _____
Quality Control Manager Date

CORRECTIVE ACTION PROPOSAL

Drawings attached: _____

Approved/ Disapproved _____
A/E Date

Approved/ Disapproved _____
TDCJ - PE Date

Approval/Disapproval _____
TDCJ-PA Date

Reinspection of your Corrective Actions will take place on: _____
Date Quality Control Manager

FOLLOW - UP

Deficiency Cleared: _____ By: _____
Quality Control Manager Date

10.A.17

**QUALITY CONTROL
CORRECTIVE ACTION FOR NOTICE OF NON-CONFORMANCE**

Attention: _____ N/ C Report No: _____ Page No: ____ of _____

Proposal

Contractor's Description of Proposed Corrective Action (Use attachment if necessary)

Drawings attached: _____

Proposal Date: _____ Proposal By: _____
Quality Control Manager

Acceptance

Approved/ Disapproved: _____
A/ E Date

Approved/Disapproved: _____
TDCJ-PE Date

Approved/ Disapproved: _____
TDCJ - PA Date

Performance

Field Inspection Remarks (Reference Quality Assurance Field Report No.)

Disposition

The status of the subject Non-Conforming Item and of proper corrective action is as follows:

TDCJ Project Administrator _____

B) Shop Drawings & Submittals Involved:

List All Submittals and Shop Drawings Required

Type of Approval Received

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

Have all items involved been submitted? Yes No

What items involved have not been approved or submitted ?

<u>Item</u>	<u>Status</u>
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____

C) Contractor's Quality Control Program Requirements:

D) Adequacy of Previous Operations (List of Problems Encountered):

E) Availability of Required Materials and Equipment:

Are all materials on hand? Yes No
Are all materials on hand in accordance with Contract Documents? Yes No

List items not on hand or not in accordance with Contract Documents:

- | | |
|----------|-----------|
| 1. _____ | 7. _____ |
| 2. _____ | 8. _____ |
| 3. _____ | 9. _____ |
| 4. _____ | 10. _____ |
| 5. _____ | 11. _____ |
| 6. _____ | 12. _____ |

F) General Contractors Quality Control Inspections and Tests:

Provide Descriptions of Inspections to be performed:

Provide Descriptions of Required Tests to be performed:

G) TDCJ Quality Assurance Inspections and Tests:

H) Familiarity and Proficiency of General Contractor's work force to perform work to required workmanship standards:

List anticipated problems:

I) Mockups:

Describe Mockup requirements:

J) Safety and Environmental Precautions(s) to be Observed:

Will Additional Safety Programs be required (i.e. Trench Safety): Yes No

List these::

K) List any Attachments to this Form:

Quality Control Manager -
General Contractor

Quality Control -
Discipline Involved

10.A.19

INITIAL INSPECTION CHECKLIST

Project Name/Location: _____ Date: _____

General Contractor: _____

MAJOR DEFINABLE SEGMENT OF WORK:

Related Specification Sections: _____

PERSONNEL PRESENT

(Print)

NAME	POSITION	COMPANY
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

(List additional personnel on reverse side)

A) Is workmanship provided acceptable?

Yes _____ No _____ If not, explain:

B) Does Baseline Sample of Work conform to Contract Drawings, Specifications, submittals, and shop drawings?

Yes _____ No _____ If not, explain:

C) Are materials on-hand adequate to complete work?

Yes _____ No _____ If not, explain:

D) Are Quality Control Inspections and Testing methods adequate?

Yes _____ No _____ If not, explain:

E) Are shop drawings adequate?

Yes _____ No _____ If not, explain:

F) Are Safety and Environmental precautions adequate?

Yes _____ No _____ If not, explain:

Quality Control Inspector -
General Contractor

Quality Control -
Discipline Involved

10.A.22
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

Distribution to:
TDCJ-FD
ARCHITECT
CONTRACTOR
FIELD
OTHER

FIELD ORDER

FIELD ORDER NO.:

TDCJ- JOB NO.:

DATE:

PROJECT:

LOCATION:

TO:
(Contractor)

RE:

WORK DESCRIPTION:

Cost: _____

Time Extension: _____

Approved by:

Contractor:	_____		_____
TDCJ-Project Eng.	_____	\$5,000.00	_____
Eng. Branch Manager	_____	\$10,000.00	_____
Director, Engineering	_____	\$15,000.00	_____
Director, Facilities	_____	\$25,000.00	_____

Program Analysis Manager's Coordination _____ Date _____

10.A.23
TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

Distribution to:
TDCJ-FD
ARCHITECT
CONTRACTOR
FIELD
OTHER

TIME EXTENSION **REDUCTION REQUEST**

TDCJ-FD JOB NO.:

REQUEST NO.:

DATE:

PROJECT:

LOCATION:

FROM:

Number of Calendar Days Requested Credited: _____

Reason for Request:

Contractor: _____

Signature

**10.A.24
FACILITIES DIVISION
TIME EXTENSION/REDUCTION**

Distribution to:

- TDCJ/FD
- ARCHITECT
- CONTRACTOR
- SCHEDULING
- FIELD

PROJECT:

TIME EXTENSION/REDUCTION NUMBER:

TDCJ-FD NO:

DATE: [Click here to enter a date.](#)

PROJECT:

LOCATION:

TO:

Your request for a Time Extension Reduction has been disapproved; approved in the amount of
Calendar Days granted for

The New Contract Completion Date, including this Time Extension Reduction, will be [Click here to enter a date.](#)

Project must be completed on or before the above date or liquidated damages may be assessed per Contractual Agreement.

Texas Department of Criminal Justice – PE _____

Previous Time Extensions Reductions _____ Calendar Days

This Time Extension Reduction _____ Calendar Days

Total Time Extension Reduction _____ Calendar Days

For Internal Purposes Only:

CONCUR

NON-CONCUR

FDEBM _____ DATE _____

DE _____ DATE _____

FDPAM _____ DATE _____

DFD _____ DATE _____

Texas Department of Criminal Justice

Address:

Phone:

Fax:

DAILY REPORT

No. _____

COMPANY:

DATE:

REPORT PERIOD:

DAY:

PROJECT:

JOB: #

TEMPERATURE:

PRECIPITATION:

SKY:

WIND:

ACTIVITY

MEETINGS

TDCJ Quality Assurance Inspector: _____

Date _____

EQUIPMENT					
Description	Source	Unit	Type	Work Area	Remarks

FIELD FORCE LABOR							
Category	Source	Supv	Frmn.	Jrny.	Appr.	Work Area	Remarks

VISITORS			
Time	Company	Visitor Name	Remarks

Remedial Action Request

Page 1 of _____

Project Name _____

RAR. No. _____

Location: _____

ATTENTION: _____
Quality Control Manager

Contract Day No: _____

Pursuant to Inspection conducted on this date, you are hereby requested to immediately perform Corrective Actions relative to deficiencies detected in the work, as fully described below:

Receipt of your Corrective Action Proposal is due by: _____
Receipt acknowledgment is _____ is not _____ required.

By: _____
Texas Department of Criminal Justice Date

CORRECTIVE ACTION PROPOSAL

Drawings attached: _____

Approved/ Disapproved _____
Design Professional Date

Approved/ Disapproved _____
TDCJ Project Engineer Date

FOLLOW - UP

Reinspection of your Corrective Actions will take place on: _____

RAR Cleared: _____ By: _____
Texas Department of Criminal Justice Date

Quality Assurance Notice of Non-Conformance

Page 1 of _____

Project Name/
Location: _____

N/ C. No. _____

To: Contractor/ Subcontractor: _____

ATTENTION: _____
General Contractor Quality Control Manager

Contract Day No: _____

Notice is hereby given that the terms, materials, and or/ items of the work, as fully described below, were reviewed, inspected, or tested by this office and were found **not** to be in conformance with the requirements of the subject contract and **your immediate attention and corrective actions are required.**

Be also advised that **no payment** will be made for the work deemed to be in non-conformance with the contract until such time as your corrective actions have been submitted, approved, and performed. (See Supplementary page for corrective action proposal, acceptance, and performance form).

Description of work elements requiring remedial actions:

Contract References:

Receipt By: _____
Title: _____
Company: _____
Date: _____

By: _____
TDCJ Project Administrator
Date: _____

ATTACHMENT NO. 11

Specifications are located in Specifications Manual

ATTACHMENT NO. 12

Drawings

Deleted

Attachment No. 13

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

PO Box 4018 Huntsville, TX 77342-4018

**VENDOR MAINTENANCE
DIRECT DEPOSIT
AND
SUBSTITUTE W-9 FORM**

Agency Use Only

CPA AP DDS
 New Set-up New Mail Code
 Other:

Box 1 Legal Name (as shown on your tax return):

Box 2 DBA:

Box 3 Tax Information Mailing Address: **Box 4** Payment Address (If different from Tax Address):

City: State: Zip: City: State: Zip:

Phone: Fax: Email:

Box 5 Taxpayer Identification Number: Social Security Number (SSN)
 Employer Identification Number (EIN)
Note: Enter the same number used when filing your tax return

Box 6 Federal Tax Classification:

<input type="checkbox"/> Texas Corporation	<input type="checkbox"/> Limited Partnership	<input type="checkbox"/> Sole Owner
<input type="checkbox"/> Out-of-State Corporation	<input type="checkbox"/> General Partnership	<input type="checkbox"/> Individual Recipient
<input type="checkbox"/> Foreign Corporation	<input type="checkbox"/> Professional Association	<input type="checkbox"/> Government Entity
<input type="checkbox"/> Limited Liability Company	<input type="checkbox"/> Financial Institution	<input type="checkbox"/> TX State Agcy/University
<input type="checkbox"/> Other (Please Explain):		

Business Designation:

Box 7 State Charter Information: State of Jurisdiction: File or Charter Number:

Box 8 Sole Ownership Info: Sole Owner Name and SSN:

Box 9 Partnership Information:
 Partner 1 Name and SSN/EIN:
 Partner 2 Name and SSN/EIN:

Box 10 Profit Status: Profit Non-Profit

Box 11 Backup Withholding: Exempt from Backup Withholding
* Please see IRS Website

Box 12 Certification:

Under penalties of perjury, I certify that:

- 1) I have provided my correct taxpayer identification number and that
- 2) I am not subject to backup withholding as specified on the instruction page for this form and that
- 3) I am a US citizen or other US person.

Signature: _____

Print Preparer's Name: _____

Phone Number: _____ Date: _____

Box 13 DIRECT DEPOSIT INFORMATION

Direct Deposit Setup Direct Deposit Change Direct Deposit Cancel I Decline Direct Deposit at this time

Financial Institution Name: Type: Checking Savings

Routing Transit Number: Account Number:

Will these payments be forwarded to a financial institution outside the United States? Yes No

I authorize the Texas Comptroller of Public Accounts to deposit my payments from the State of Texas to my financial institution electronically. I understand that the Texas Comptroller of Public Accounts will reverse any payments made to my account in error.

I further understand that the Texas Comptroller of Public Accounts will comply at all times with the National Automated Clearing House Association's rules. For further information on these rules, please contact your financial institution.

Authorized Signature Required: _____

Printed Name Required: Date: _____

**TDCJ ALL INCLUSIVE VENDOR FORM
INSTRUCTIONS**

Box	Required Information
1	Legal Name: Legal business name filed with the IRS. For Sole Ownership or Individual Recipient, excluding LLC, enter name of owner.
2	DBA: Name you are "Doing Business As" if different from legal business name.
3	Tax Information Mailing Address: Address where IRS tax information is sent. (i.e. W9, 1099, etc.)
4	Payment Address: Remit Address for payments if different from address in box 3.
5	<p>Taxpayer Identification: Select the appropriate check box for the taxpayer identification number you are entering. Enter only one number.</p> <p>Social Security: enter your social security number only if you are doing business under your social security number and you report taxes to the IRS using a "DBA" or you are a Sole Proprietor.</p> <p align="center">OR</p> <p>Federal Tax Identification Number: enter the Federal Employee Identification Number (FEIN) assigned to your business by the IRS if this is the number you use to report taxes to the IRS.</p>
6	Federal Tax Classification: Select only one that describes the ownership type of business.
7	State Charter Information: The state where corporation or partnership status is filed and the file or charter number of corporation or partnership in that state.
8	Sole Ownership Info: Name and Social Security Number of Sole Owner (excluding LLC) if using an Employer Identification Number (EIN).
9	Partnership Information: Name and Social Security Number or EIN of all partners involved in the general partnership. Please attach additional sheet if needed.
10	Profit Status: Select only one that describes the profit status of the business.
11	Exemption from Backup Withholding: check this box if the business is exempt from Backup Withholding. For further information on Backup Withholding, see the following IRS Web site: http://www.irs.gov/pub/irs-pdf/fw9.pdf?portlet=3
12	Certification: You must cross out item 2 if you have been notified by the IRS that you are currently subject to Backup Withholding because you have failed to report all interest and dividends on your tax return. THIS BOX MUST BE SIGNED AND DATED. For more information go to IRS website at: http://www.irs.gov/pub/irs-pdf/fw9.pdf?portlet=3
13	Please check the box that is appropriate for this Direct Deposit Request. Enter name of Financial Institution. Check appropriate box for type of account. Enter the Routing Transit number (9 digits) for the Financial Institution listed. Enter bank account number. Please read the next three statements and check the appropriate box. THIS BOX MUST BE SIGNED AND DATED. Please enter the contact information of person completing this form.

Submit Completed form to:

Texas Department of Criminal Justice - Accounts Payable

PO Box 4018

Huntsville, TX 77342-4018

Email: tdcj.ap-invsvs@tdcj.texas.gov

Phone Number: 936/437-6350 or 936/437-8476 Fax Number: 936/437-6290

**ATTACHMENT 14
RELEASE OF CLAIMS**

CONTRACT NUMBER: _____

KNOW ALL MEN BY PRESENTS: In consideration of the premise and sum of
\$ _____ (\$ _____) of which \$ _____ (\$ _____)
has been paid, and a balance due of \$ _____ (\$ _____) is to be paid
by the Texas Department of Criminal Justice (TDCJ) under the above noted Contract, the
undersigned Contractor does release and discharge TDCJ, its officers, agents and employees, of
and from all liabilities, obligations and claims whatsoever in law and equity arising out of or by
virtue of said Contract, except specified claims in stated amounts, or in estimated amounts when
the amounts are not susceptible of exact statement by the Contractor, as follows:

IN WITNESS WHEREOF, this release has been executed this _____ day of _____
_____.

(Contractor)

BY _____

TITLE _____

CERTIFICATE

I, _____, certify that I am the _____ secretary of the
Corporation named as Contractor in the foregoing release; that _____
who signed said release on behalf of the Contractor was then _____
of said Corporation; that said release was duly signed for and on behalf of said Corporation by
authority of its governing body and is within the scope of its corporate powers.

(Corporate Seal) _____

EXHIBIT 1



HUB Subcontracting Plan (HSP)

In accordance with Texas Gov't Code §2161.252, the contracting agency has determined that subcontracting opportunities are probable under this contract. Therefore, all respondents, including State of Texas certified Historically Underutilized Businesses (HUBs) must complete and submit this State of Texas HUB Subcontracting Plan (HSP) with their response to the bid requisition (solicitation).

NOTE: Responses that do not include a completed HSP shall be rejected pursuant to Texas Gov't Code §2161.252(b).

The HUB Program promotes equal business opportunities for economically disadvantaged persons to contract with the State of Texas in accordance with the goals specified in the 2009 State of Texas Disparity Study. The statewide HUB goals defined in 34 Texas Administrative Code (TAC) §20.13 are:

- 11.2 percent for heavy construction other than building contracts,
- 21.1 percent for all building construction, including general contractors and operative builders' contracts,
- 32.9 percent for all special trade construction contracts,
- 23.7 percent for professional services contracts,
- 26.0 percent for all other services contracts, and
- 21.1 percent for commodities contracts.

- - Agency Special Instructions/Additional Requirements - -

In accordance with 34 TAC §20.14(d)(1)(D)(iii), a respondent (prime contractor) may demonstrate good faith effort to utilize Texas certified HUBs for its subcontracting opportunities if the total value of the respondent's subcontracts with Texas certified HUBs meets or exceeds the statewide HUB goal or the agency specific HUB goal, whichever is higher. When a respondent uses this method to demonstrate good faith effort, the respondent must identify the HUBs with which it will subcontract. If using existing contracts with Texas certified HUBs to satisfy this requirement, only the aggregate percentage of the contracts expected to be subcontracted to HUBs with which the respondent **does not** have a **continuous contract*** in place for **more than five (5) years** shall qualify for meeting the HUB goal. This limitation is designed to encourage vendor rotation as recommended by the 2009 Texas Disparity Study.

The TDCJ HUB goals are defined as:

- 17.5 percent for heavy construction other than building contracts. This goal is higher than the statewide goal and therefore must be the utilized goal for this category,
- 36.9 percent for all building construction, including general contractors and operative builders contracts. This goal is higher than the statewide goal and therefore must be the utilized goal for this category,
- 32.7 percent for all special trade construction contracts,
- 23.6 percent for professional services contracts,
- 24.6 percent for all other services contracts, and
- 21 percent for commodities contracts.

The TDCJ has determined that the HUB Category for this contract falls under the **Building Construction Contracts Category.**

The HUB Goal for this category is therefore identified as 36.9 %.

For assistance in completing the HSP contact:

Sharon Schultz @ 936-437-7026
sharon.schultz@tdcj.texas.gov

SECTION-1: RESPONDENT AND REQUISITION INFORMATION

a. Respondent (Company) Name: Emerald Standard Services, Inc.  State of Texas VID #: 18000046120
 Point of Contact: Rogelio R. Pombrol, Jr., President Phone #: 713-473-1000
 E-mail Address: roger@emerald-standard.com Fax #: 713-473-1006

b. Is your company a State of Texas certified HUB? - Yes - No

c. Requisition #: 696-FD-16-B025 Replace Service Entrance Switchgear - Ellis Unit Bid Open Date: 08/02/2016
(mm/dd/yyyy)

Enter your company's name here: Emerald Standard Services, Inc.

Requisition #: 696-FD-16-B025

SECTION-2 RESPONDENT'S SUBCONTRACTING INTENTIONS

After dividing the contract work into reasonable lots or portions to the extent consistent with prudent industry practices, and taking into consideration the scope of work to be performed under the proposed contract, including all potential subcontracting opportunities, the respondent must determine what portions of work, **including contracted staffing, goods, services, transportation and delivery will be subcontracted**. Note: In accordance with 34 TAC §20.11, a "Subcontractor" means a person who contracts with a prime contractor to work, to supply commodities, or to contribute toward completing work for a governmental entity.

a. Check the appropriate box (Yes or No) that identifies your subcontracting intentions:

- Yes, I will be subcontracting portions of the contract. (If Yes, complete Item b of this SECTION and continue to Item c of this SECTION.)

- No, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources, including employees, goods, services, transportation and delivery. (If No, continue to SECTION 3 and SECTION 4.)

b. List all the portions of work (subcontracting opportunities) you will subcontract. Also, based on the total value of the contract, identify the percentages of the contract you expect to award to Texas certified HUBs, and the percentage of the contract you expect to award to vendors that are not a Texas certified HUB (i.e., Non-HUB).

Item #	Subcontracting Opportunity Description	HUBs		Non-HUBs
		Percentage of the contract expected to be subcontracted to HUBs with which you <u>do not</u> have a <u>continuous contract*</u> in place for more than five (5) years.	Percentage of the contract expected to be subcontracted to HUBs with which you have a <u>continuous contract*</u> in place for more than five (5) years.	Percentage of the contract expected to be subcontracted to non-HUBs.
1	Electrical Equipment	0%	0%	39%
2		%	%	%
3		%	%	%
4		%	%	%
5		%	%	%
6		%	%	%
7		%	%	%
8		%	%	%
9		%	%	%
10		%	%	%
11		%	%	%
12		%	%	%
13		%	%	%
14		%	%	%
15		%	%	%
Aggregate percentages of the contract expected to be subcontracted:		0%	0%	39%

(Note: If you have more than fifteen subcontracting opportunities, a continuation sheet is available online at <http://window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/>.)

c. Check the appropriate box (Yes or No) that indicates whether you will be using only Texas certified HUBs to perform all of the subcontracting opportunities you listed in SECTION 2, Item b.

- Yes (If Yes, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for each of the subcontracting opportunities you listed

- No (If No, continue to Item d, of this SECTION.)

d. Check the appropriate box (Yes or No) that indicates whether the aggregate expected percentage of the contract you will subcontract with Texas certified HUBs with which you do not have a continuous contract* in place with for more than five (5) years, meets or exceeds the HUB goal the contracting agency identified on page 1 in the "Agency Special Instructions/Additional Requirements."

- Yes (If Yes, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for each of the subcontracting opportunities you listed.

- No (If No, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed.

***Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service, to include transportation and delivery under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into "new" contracts.

Enter your company's name here: Emerald Standard Services, Inc.

Requisition #: 696-FD-16-B025

SECTION-3 SELF PERFORMING JUSTIFICATION (If you responded "No" to SECTION 2, Item a, you must complete this SECTION and continue to SECTION

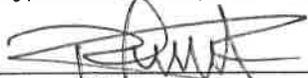
If you responded "No" to SECTION 2, Item a, in the space provided below explain how your company will perform the entire contract with its own employees, supplies, materials and/or equipment, to include transportation and delivery.

[Large empty rectangular box with a large 'X' drawn across it, indicating no response was provided.]

SECTION-4 AFFIRMATION

As evidenced by my signature below, I affirm that I am an authorized representative of the respondent listed in SECTION 1, and that the information and supporting documentation submitted with the HSP is true and correct. Respondent understands and agrees that, if awarded any portion of the requisition:

- The respondent will provide notice as soon as practical to all the subcontractors (HUBs and Non-HUBs) of their selection as a subcontractor for the awarded contract. The notice must specify at a minimum the contracting agency's name and its point of contact for the contract, the contract award number, the subcontracting opportunity they (the subcontractor) will perform, the approximate dollar value of the subcontracting opportunity and the expected percentage of the total contract that the subcontracting opportunity represents. A copy of the notice required by this section must also be provided to the contracting agency's point of contact for the contract no later than ten (10) working days after the contract is awarded.
- The respondent must submit monthly compliance reports (Prime Contractor Progress Assessment Report – PAR) to the contracting agency, verifying its compliance with the HSP, including the use of and expenditures made to its subcontractors (HUBs and Non-HUBs). (The PAR is available at <http://www.window.state.tx.us/procurement/prog/hub/hub-forms/progressassessmentrpt.xls>).
- The respondent must seek approval from the contracting agency prior to making any modifications to its HSP, including the hiring of additional or different subcontractors and the termination of a subcontractor the respondent identified in its HSP. If the HSP is modified without the contracting agency's prior approval, respondent may be subject to any and all enforcement remedies available under the contract or otherwise available by law, up to and including debarment from all state contracting.
- The respondent must, upon request, allow the contracting agency to perform on-site reviews of the company's headquarters and/or work-site where services are being performed and must provide documentation regarding staffing and other resources.


Signature

Rogelio R. Pombrol, Jr.
Printed Name

President
Title

08/02/16
Date
(mm/dd/yyyy)

Reminder:

- If you responded "Yes" to SECTION 2, Items c or d, you must complete an "HSP Good Faith Effort - Method A (Attachment A)" for each of the subcontracting opportunities you listed in SECTION 2, Item b.
- If you responded "No" SECTION 2, Items c and d, you must complete an "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

Enter your company's name here: Emerald Standard Services, Inc.

Requisition #: 696-FD-16-B025

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 01 Description: Electrical Equipment

SECTION B-2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)

- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B-3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you MUST comply with items a, b, c and d, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs at least seven (7) working days to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) and Historically Underutilized Business (HUB) Search directory located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB Status code "A" signifies that the company is a Texas certified HUB.
- b. List the three (3) Texas certified HUBs you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the company's Vendor ID (VID) number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
See list of six (06) companies ATTACHED			<input type="radio"/> - Yes <input type="radio"/> - No
			<input type="radio"/> - Yes <input type="radio"/> - No
			<input type="radio"/> - Yes <input type="radio"/> - No

- c. Provide written notification of the subcontracting opportunity you listed in SECTION B-1 to two (2) or more trade organizations or development centers in Texas to assist in identifying potential HUBs by disseminating the subcontracting opportunity to their members/participants. Unless the contracting agency specified a different time period, you must provide your subcontracting opportunity notice to trade organizations or development centers at least seven (7) working days prior to submitting your bid response to the contracting agency. A list of trade organizations and development centers that have expressed an interest in receiving notices of subcontracting opportunities is available on the Statewide HUB Program's webpage at <http://www.window.state.tx.us/procurement/prog/hub/mwb-links-1/>.
- d. List two (2) trade organizations or development centers you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
See list of five (05) organizations ATTACHED		<input type="radio"/> - Yes <input type="radio"/> - No
		<input type="radio"/> - Yes <input type="radio"/> - No

HSP Good Faith Effort - Method B (Attachment B) Cont.

Rev. 09/15

Enter your company's name here: Emerald Standard Services, Inc.

Requisition #: 696-FD-16-B025

SECTION B-4: SUBCONTRACTOR SELECTION

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

a. Enter the item number and description of the subcontracting opportunity for which you are completing this Attachment B continuation page.

Item Number: 01 Description: Electrical Equipment

b. List the subcontractor(s) you selected to perform the subcontracting opportunity you listed above in SECTION B-1. Also identify whether they are a Texas certified HUB and their Texas Vendor Identification (VID) Number or federal Employer Identification, the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN Do not enter Social Security Numbers: If you do not know their VID / EIN, leave their VID / EIN field blank.	Approximate Dollar Amount	Expected Percentage of Contract
Consolidated Electrical Distributors (CED Houston)	<input type="radio"/> - Yes <input checked="" type="radio"/> - No		\$ 98,679.00	44.95%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%

c. If any of the subcontractors you have selected to perform the subcontracting opportunity you listed in SECTION B-1 is not a Texas certified HUB, provide written justification for your selection process (attach additional page if necessary):

CED provided the best price. Wholesale Electric was higher. Also, our company, Emerald Standard Services, Inc., is a Texas HUB certified company so this entire contract, 100%, can be counted as HUB, so we exceed the HUB goal for this solicitation, achieving 100% HUB participation.

REMINDER: As specified in SECTION 4 of the completed HSP form, if you (respondent) are awarded any portion of the requisition, you are required to provide notice as soon as practical to all the subcontractors (HUBs and Non-HUBs) of their selection as a subcontractor. The notice must specify at a minimum the contracting agency's name and its point of contact for the contract, the contract award number, the subcontracting opportunity it (the subcontractor) will perform, the approximate dollar value of the subcontracting opportunity and the expected percentage of the total contract that the subcontracting opportunity represents. A copy of the notice required by this section must also be provided to the contracting agency's point of contact for the contract no later than ten (10) working days after the contract is awarded.



HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report

This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.

Contract/Requisition Number: 696-FD-17-17-C040 Date of Award: _____ Object Code: _____

(Agency Use Only)

Contracting Agency/University Name: **Texas Department of Criminal Justice**

Contract Administrator Name: Teresa Rhodes, CTPM, CTCM

Contractor (Company) Name: Emerald Standard Services, Inc. State of Texas VID #: 18000046120

Point of Contact: Rogelio R. Pombrol, Jr. Phone #: (713) 473-1000

roger@emerald-standard.com

Email:

Reporting (Month) Period: _____ Total Amount Paid this Reporting Period to Contractor: \$

Report HUB and Non-HUB subcontractor information

*Note: Texas certified HUB status can be verified on line at: <https://mycpa.cpa.state.tx.us/tpasscmblsearch/index.jsp>

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number <small>(Required if Texas certified HUB)</small>	*Texas Certified HUB? <small>(Yes or No)</small>	Total Contract \$ Amount from HSP with Subcontractor	Total \$ Amount Paid This Reporting Period to Subcontractor	Total Contract \$ Amount Paid to Date to Subcontractor	Object Code <small>(Agency Use Only)</small>
Consolidated Electrical Distributors (CED Houston)		No	\$ 98,679.00	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
TOTALS:			\$ 98,679.00	\$	\$	

Signature: _____ Title: _____ Date: _____

APPENDIX

	Page
Section A, Solicitation, Offer and Award	1
Table of Contents.....	3
Section B, The Schedule (Bid Schedule).....	4
Section C, Specification and Drawings	5
Section D, Conditions Precedent to Award	6
Section E, Inspection and Acceptance	7
Section F, Deliveries or Performance	9
Section G, Contract Administration Data	10
Section H, Special Conditions.....	11
Section I, General Conditions.....	17
Section J, List of Documents, Exhibits and Attachments.....	81
J.12 Deleted Drawings – Contains Security Information	
Section K, Representations, Certifications and Other Statements of Bidders	82
K.2 Deleted – Contains Proprietary Information	
Section L, Instructions, Conditions and Notices to Offerors.....	88
Section M, Evaluation Factors for Award.....	94

ELLIS UNIT

1697 FM 980
HUNTSVILLE, TEXAS 77343

REPLACE SERVICE
ENTRANCE SWITCHGEAR BACKGATE
MWR #01015008



MAY 31 2016

TDCJ FACILITIES DIVISION
ENGINEERING

JAMES W. DILTS, P.E.

Texas Department of Criminal Justice
Ellis Unit
REPLACE SERVICE ENTRANCE SWITCHGEAR BACKGATE
MWR #01015008

This document is released for Construction.

TABLE OF CONTENTS

DIVISION 01

- 01 00 00 - Scope of Work
- 01 10 00 - Summary (Rev 3-16)
- 01 25 00 - Substitution Procedures
- 01 33 00 - Submittals
- 01 42 00 - References
- 01 45 16.13 - Contractor Quality Control
- 01 45 23 - Testing and Inspection Services (Not Used)
- 01 70 00 - Execution Requirements
- 01 73 29 - Cutting and Patching
- 01 77 00 - Closeout Procedures
- 01 78 23 - Operation and Maintenance Data
- 01 78 36 - Warranties
- 01 78 39 - Project Record Documents



DIVISION 03

- 03 30 00 Cast-in-Place Concrete

DIVISION 26

- 26 00 00 - Basic Electrical Methods
- 26 05 13 - Medium Voltage Electrical Power Conductors and Cables
- 26 05 26 - Grounding & Bonding for Electrical Systems
- 26 05 33 - Raceway & Boxes for Electrical System
- 26 05 53 - Identification for Electrical Systems
- 26 08 15 - Electrical Acceptance Testing
- 26 13 30 - Pad Mounted Switchgear

END OF TABLE OF CONTENTS

SECTION 01 00 00 – SCOPE OF WORK [Standard TDCJ Specification]

PART 1 – GENERAL

1.1 PROJECT DESCRIPTION (SCOPE OF WORK)

- A. This project consist of replacing two existing metal enclosed 50 and 40 year old respectfully medium voltage switchgear with new pad-mounted switchgear, this will also include replacement of the riser feeders and a distribution riser.

One new switchboard is replacing the existing service entrance switchgear "SG1" that is feed from a directly overhead Arial 4160v 3 phase Y circuit. The other switchboard feed by a short run underground to Arial riser that is to be rebuilt. Both of these service entrance switchboards are feed from the 7500 KVA TDCJ/utility substation.

The existing concrete slab for SG1 will be re-used after the removal of the current metal enclosed switchgear is removed. The concrete slab under switchgear SG will be replaced with a new slab prior to installation of new pad-mounted switchgear for SG.

1.2 PROVISIONS FOR PROJECT SUPPORT

- A. Provide and install temporary extensions and connections to utilities as required for construction operations.

1. For a construction duration greater than 30 days, Sanitation Facilities are required to be provided and installed as part of Project Scope of Work. For a construction duration 30 days or less, use of TDCJ's Sanitation Facilities will be permitted.

- B. For a construction duration greater than 120 days, a Field Office is required to be provided as part of Project Scope of Work. For a construction duration of 120 days or less, a Field Office is not required to be provided as part of Project Scope of Work, but may be provided for contractor's convenience.

- C. Irrespective of the provision of a Field Office:

1. Provide one (1) cell phone with voicemail and "smart phone" service that includes web-based e-mail application OR one (1) cell phone with voicemail and one (1) desktop computer, laptop computer, electronic notebook, electronic tablet or similar device with web-based e-mail application.

END OF SECTION 01 10 00

[Revision March 2016]

SECTION 01 10 00 – SUMMARY [Standard TDCJ Specification]

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Definitions
- B. Interrelation of Specifications
- C. Work sequence
- D. TDCJ occupancy (Texas Department of Criminal Justice occupancy)

1.2 DEFINITIONS

The listed terms may, or may not, appear in this Specification Section or other Specification Sections included in this solicitation. If a term listed below appears in this Specification Section or other Specification Sections included in this solicitation, the term shall be interpreted according to the meaning identified.

- A. Architect – shall be interpreted to intend either Architect or Engineer (A/E).
- B. Authority Having Jurisdiction (AHJ) – An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.
- C. Closeout/Close-Out – final activities as may be identified to demonstrate compliance with Construction Documents requirements and/or to transfer of operation, maintenance, and/or control to TDCJ.
- D. Construction Documents – shall be interpreted to intend the IFC Drawings and Specifications as may be altered by Change Orders, Field Orders, Request For Information, Architectural Supplemental Instructions, Engineering Supplemental Instructions, etc.
- E. Engineer – shall be interpreted to intend either Architect or Engineer (A/E).
- F. Exposed – any area less than 16' above finished floor, or grade, or less than 10' from any platform that can be climbed, in any area that can be traversed while standing.
 - 1. Unless otherwise identified in writing, interpret areas such as basements, offices, equipment rooms, pipe chases, and other such areas as 'Exposed', to include areas with lay-in type ceilings.
- G. Issued-For-Construction (IFC) Documents – Drawings and Specifications that were Issued-For-Bid with changes resulting from Issued Addenda incorporated into a "clean" set of Drawings and Specifications, or Drawings and Specifications that were issued directly for construction upon final seal and signature of A/E.
- H. Owner's Representative – see Project Administrator.

- I. Project Administrator (PA) – TDCJ resource responsible for project management activities on behalf of Owner.
 - 1. Where references of 'Owner', 'Owner's Representative', 'TDCJ', 'TDCJ's representative'; etc. appear in relation to coordination activities, construction related required submittals, and/or obtaining approvals, these references shall be interpreted to intend the PA.
 - a. Where instructions identify a submission to the A/E, the submission shall be to the PA.
 - 2. If requirements indicate that an approval, etc. is to be obtained, or provided, by the PA, it shall be interpreted to intend the PA will obtain and/or provide subject approval, etc. from the appropriate entity, which may or may not be the PA.
- J. Tamper-resistant – elements resistant to loosening and/or disconnection with common tools. E.g. torx head screws.
- K. Quality Assurance Inspector (QA) – TDCJ resource responsible for quality assurance activities such as inspections, etc. as may be required by Construction Documents or otherwise determined by Owner.

1.3 INTERRELATION OF SPECIFICATIONS

- A. This specification document is comprised of standard TDCJ specifications applicable to the subject project. Appearance of an item or an element in these specifications shall not be interpreted to indicate that item or element is specifically required for the subject project. If an item or element is specifically identified as required or required in order to provide the proper execution and completion for the subject project, these specifications are required to be met.

1.4 WORK SEQUENCE

- A. Construct Work in stages or phases with each to be substantially complete before beginning next to accommodate TDCJ occupancy requirements during the construction.
 - 1. For interior work, to the extent possible, all work including demolition, installation, repair, restoration, functional testing, etc. shall be completed in one area before beginning work in another area.
 - 2. Coordinate work between Specification Sections as required to properly execute the Work and as necessary to maintain satisfactory progress of the Work of other Sections.
 - 3. At no time will construction and/or installation personnel be permitted to work in areas where direct contact with offenders is possible, such as through a window opening.

1.5 TDCJ OCCUPANCY

- A. TDCJ will occupy the site and premises during entire period of construction for the conduct of normal operations.
 - 1. TDCJ will occupy site and/or existing building(s) during entire construction period.
 - a. Day-to-day operations will continue during the construction period.

2. Coordinate offender relocation and schedule shut-downs of equipment and utilities, as needed/applicable, for construction progress.
 - a. All interruptions to TDCJ operations shall be minimized to the fullest extent possible.
 - 1) All services shall remain operational at all times in areas outside the work area.
 - 2) Provide temporary services for planned outages of permanent services in work areas for periods in excess of 4 hours (consecutive or cumulative) in any 24 hour period unless otherwise approved in writing.
 - 3) Correct inadvertent interruption of TDCJ operations due to construction activities immediately.

PART 2 – PRODUCTS

2.1 GENERAL

- A. Brand or manufacturer's references are descriptive only, and indicate type and quality to be provided. All references to brand or manufacturer names shall be interpreted to include the language "or A/E approved equal", unless advertised as a proprietary purchase under Government Code, Title 10, Subtitle D, Section 2155.067. Any brand or manufacturer meeting specifications will be considered, irrespective of the language "or A/E approved equal" appearing in conjunction with the brand or manufacturer name.

PART 3 – EXECUTION

3.1 GENERAL

- A. The intent of Specifications and/or Drawings (Construction Documents) is to require all items necessary for the proper execution and completion of the work. The Specifications and/or Drawings are complementary and by their intent a complete and usable work product is expected to be provided. To meet this requirement, provide construction in place to include that which is indicated in the Specifications and/or Drawings and that which may be reasonably expected to be required to make the work complete in all respects and consistent with established and accepted construction practices.
 1. Compliance with requirements of these specifications includes all tools, connections, applications, inspections by AHJ, consumable products, meters, gages, dispensing means and mechanisms, and miscellaneous items required for storage, installation, operation, maintenance, and/or removal for all temporary and/or permanent elements and services provided until such is removed or accepted by TDCJ at Beneficial Occupancy as required by project objectives.
 - a. Compliance includes provision in a manner and condition acceptable to TDCJ.
 2. A complete set of Construction Documents shall be provided. Perform complete scope of work regardless of where in the Construction Documents a requirement, or related requirement, appears.
- B. All occurrences of the instruction, "unless other is approved in writing" etc., or similar, shall be interpreted to intend the alternate will be considered after Award and upon submission of appropriate request(s) per requirements.

END OF SECTION 01 10 00
[Revision March 2016]

SECTION 01 25 00 – SUBSTITUTION PROCEDURES [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for Substitution Requests.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Unless a Substitution has been approved and published in a written Addendum, the material, product, equipment, or service to be used and/or provided are those specified. However, during the course of work, a Substitution may be approved if a specified or previously approved material, equipment, product and/or service is determined to be unavailable due to strikes, lockouts, bankruptcy, discontinuance of production, documented shortages or similar occurrences.

2.2 PRODUCT REQUIREMENTS

- A. All Substitution requests under this Section require prior approval by TDCJ.
- B. All Substitution requests under this Section require review and approval by A/E.

2.3 THRU 2.5

- A. Not applicable.

PART 3 - PRODUCTS

3.1 PERFORMANCE QUALIFICATIONS

- A. Not applicable.

3.2 PREPARATION

- A. Review and coordinate all aspects of each item for conformance in all respects with specifications and requirements.
- B. Prepare documentation that the requested substitution is equal or superior to the specified material, product, or equipment and shall consist of applicable information which would aid the A/E in making an informed decision. Include **side by side product comparisons**, technical data, laboratory test results, product drawings, etc.
 - 1. If use of the proposed material, product, or equipment would result in changes to the design of other elements, the Substitution Request shall describe fully the changes required to the drawings or specifications.

3.3 EXECUTION REQUIREMENTS

- A. Do not substitute material, product, equipment or service unless Substitution has been specifically approved in writing.

B. No material, equipment, product or service is "equal" to such specified until a Substitution Request has been approved.

C. Any cost differences resulting from modifications to the drawings and/or specifications and the cost of making the changes, including charges for required design time by A/E, is the responsibility of Contractor/Vendor.

3.4 QUALITY CONTROL

A. Maintain copies of Approved Substitution Request(s) as Record Submittals,

3.5 COMMISSIONING

A. Not applicable.

3.6 EXECUTION SUBMITTALS

A. Substitution Request with attached required documentation.

3.7 Thru 3.8:

A. No additional requirements.

END OF SECTION 01 25 00
[Revision February 2016]

SECTION 01 33 00 – SUBMITTALS [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for Submittal of Product Data, Shop Drawings, Samples, Mock-Ups, Requests for Information and other work-related submittals, other than Substitution Requests.
- B. Definitions:
 - 1. Action Submittals – written and graphic information and physical samples that require responsive action.
 - 2. Closeout Submittals – project completion related information that may or may not require review and approval.
 - 3. Informational Submittals – written and graphic information and physical samples that may or may not require responsive action.
 - 4. Product Data – illustrations, standard schedules, performance charts, instructions, manufacturer's certificates, brochures, diagrams, test data and other information furnished to illustrate material, product, equipment or system for some portion of the Work.
 - 5. Shop Drawings – drawings, diagrams, schedules and other data specially prepared for the Work to illustrate some portion of the Work.
 - 6. Samples – physical examples which illustrate materials, equipment or workmanship to establish standards for the Work and/or to demonstrate compliance with the established standard of the Work.
 - 7. Quality Control submittals – information and/or items required to demonstrate conformance with standards or other requirements of the Construction Documents which may or may not require review and approval.
 - 8. Request For Information (RFI) – requests for additional information, interpretation, clarification of, or to identify conflicts with, the Construction Documents.

PART 2 - PRODUCTS, EQUIPMENT, MATERIALS AND/OR REQUIRED FIELD SERVICES

2.1 GENERAL REQUIREMENTS:

- A. Submittal Schedule:
 - 1. Required information in tabular format. Required information includes:
 - a. Specification number and title.
 - b. Submittal category (action or informational).
 - c. Name of supplier.
 - d. Description of the Work covered.
 - 2. Demonstrate number of days for review and processing of Submittals and Resubmittals, and in such sequence and duration as to cause no delay in the Work.
 - a. Additional time for coordination with subsequent Submittals/ Resubmittals as required.
 - b. Product Data before or concurrent with Samples/Mock-Ups and/or Shop Drawings.
 - c. Single submittal for each element of construction and type of product or equipment with all required information.

3. Coordination:
 - a. Fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - b. Different types of submittals for related parts of the Work when processing will not be delayed because of need to review submittals concurrently for coordination.
 - c. Logical groupings to facilitate interrelation of Products and Systems:
 - 1) Simultaneous submittal of associated items of operating systems which require correlation for efficient function and installation.
 - 2) Coordinated with other related submittals.
 - 3) Samples/Mock-Ups that contain multiple, related components such as accessories together as one submittal package.

B. Contractor's Approval Stamp: A uniform stamp with a statement certifying that submittal has been reviewed, checked and approved for compliance with the Construction Documents and provide a place for Contractor's signature.

C. Transmittal Form: Contractor's letterhead and title block on a pre-printed form or a permanently affixed label with applicable letterhead.

1. Label or title block:
 - a. Project name
 - b. Date
 - c. Submittal number with applicable resubmittal/revision identifier.
 - d. Name and address of A/E (Texas Department of Criminal Justice, for Construction Documents prepared by TDCJ personnel)
 - e. Name and address of Contractor if information is not contained in pre-printed letterhead, title block or label.
 - f. Name and address of Sub-contractor, if applicable.
 - g. Name and address of supplier, if applicable.
 - h. Name of manufacturer, if applicable.
 - i. Name of preparer of Submittal.
 - j. A 6" x 8" space for Contractor's review and approval markings and action taken by A/E.

D. Prepared written statement:

1. Number and title of applicable Specification Section.
2. Drawing number and detail references, as applicable.
3. Type of element.
4. Locations(s) where product is to be installed, as applicable.
 - a. Reference sheet number, detail, and/or specification number.
 - b. Number and name of room or space.
 - c. Location within room or space.
5. Other necessary identification:
 - a. Clear indication of specific part number, etc. where product specification sheets contain multiple part numbers.
 - b. Applicable available options clearly marked.
 - c. Complete with respect to quantities, dimensions, specific performance, materials, and similar data.
6. All information relating to means and methods of construction, fabrication, assembly, installation, or erection redacted or otherwise deleted unless

such is specifically identified in applicable Specification Section as required.

- E. Binders: Where individual Specification Sections require submittals in a Binder:
1. Commercial quality, sized for 8-1/2 in. x 11 in. documents, with cleanable covers equipped with clear view covers for insertion of a custom printed Cover Sheet and Spine insert.
 2. Unless other is approved in writing, separate binders for each identified category.
 3. Appropriately deep for amount of documents, not to exceed 3".
 - a. Additional binders as required for documents not accommodated by 3" binder(s).
 - 1) Labeling on coversheet shall include identification of "No. 1 of x", etc., where x is the total number of binders for that category.
 4. Cover Sheet elements:
 - a. Project Name.
 - b. Date.
 - c. Name and location of project.
 - d. Name of A/E firm (Texas Department of Criminal Justice if design was not provided by a separately engaged A/E firm).
 - e. Submittal label as identified in specification.
 - f. Where dividers are specified: Tabbed fly-leaf with typed labels.
 5. Spine insert elements:
 - a. Submittal label as identified in specification.
 - b. Project Name.
 6. Table of Contents: Neatly typed, using Table of Contents of Project Manual as format.
 7. Fold larger sheets to fit into binders.

2.2 WORK PRODUCT REQUIREMENTS

A. Action Submittals:

1. Product Data:
 - a. Prepared written statement.
 - b. Include the following information, as applicable:
 - 1) Manufacturer's written recommendations.
 - 2) Manufacturer's product specifications.
 - 3) Manufacturer's installation instructions.
 - 4) Standard color charts.
 - 5) Manufacturer's catalog cuts.
 - 6) Wiring diagrams showing factory-installed wiring.
 - 7) Printed performance curves.
 - 8) Operational range diagrams
 - 9) Mill reports
 - 10) Standard product operation and maintenance manuals.
 - 11) Compliance with specified referenced standards.
 - 12) Testing by recognized testing agency.
 - 13) Application of testing agency labels and seals.
 - 14) Notation of coordination requirements.
 - 15) Indication mark on each Submittal showing which products and options are applicable.
2. Shop Drawings:

- a. Prepared written statement.
 - b. Project-specific information, drawn accurately to scale, not based on reproductions of the Construction Documents or standard printed data.
 - 1) Electronic copies of CAD Drawings of the Construction Drawings will not be provided for use in preparing Shop Drawings.
 - c. Fully illustrated requirements of the Construction Documents. Include the following information, as applicable:
 - 1) Field dimensions.
 - 2) Identification of products.
 - 3) Fabrication and installation drawings.
 - 4) Roughing-in and setting diagrams.
 - 5) Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - 6) Shopwork manufacturing instructions.
 - 7) Templates and patterns.
 - 8) Schedules.
 - 9) Design calculations.
 - 10) Compliance with specified standards.
 - 11) Notation of coordination requirements.
 - 12) Notation of dimensions established by field measurement.
 - 13) Relationship to adjoining construction clearly indicated.
 - 14) Seal and signature of professional engineer if specified.
 - 15) Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - d. Sheet Size: Except for templates, patterns, and similar full-size drawings, at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
3. Samples and Mock-Ups:
- a. Prepared written statement.
 - b. Manufacturer's charts consisting of units or sections of units showing the full range of colors, textures, patterns, and other similar characteristics available.
 - c. Complete, full-size Mock-Ups, at Project site, unless other is indicated in applicable Specification Section or approved in writing, prepared from same material to be used for the Work, cured and/or finished in manner specified, and physically identical with material or product proposed for use.

B. Close-out Submittals:

- 1. Per requirements of individual Specification Sections.

C. Information Submittals:

- 1. Compatibility Test Report(s): Prepared report(s) written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- 2. Coordination Drawing(s): Per requirements in individual Specification Sections. To scale, showing connections, clearances, tolerances, interface requirements, etc.

3. Design Data: Prepared written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include diagrams if applicable. Provide name and version of software, if any, used for calculations.
4. Field Inspection Report(s): Written report(s) required by Construction Documents for recording inspection(s) and/or observation(s). Include the following:
 - a. Date of Field Inspection.
 - b. Type and Scope of Inspection.
 - c. Name of person who performed inspection, qualifications and contact information.
 - d. Attendees, if applicable.
 - e. Weather conditions and/or conditions of project area to be inspected.
 - f. Description of the Work to be inspected.
 - g. Reference to Specification and/or Drawing where requirement for inspection is identified.
 - h. Description of elements found to be in compliance with Construction Documents.
 - i. Deficiencies noted to include condition of substrates; unacceptable installation tolerances; and/or any other item(s) that conflicts with requirements of Construction Documents.
 - j. Identification of specification or other requirement that conflicts with the detrimental condition, unacceptable tolerance(s), etc.
 - k. Corrective actions taken.
 - l. Corrective actions recommended.
5. Field Test Report(s): Written report(s) provided by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Construction Documents. Information included in Field Test Report(s) shall be the same as for Field Inspection Report(s).
6. Installer Certificate(s): Prepared written statement(s) on manufacturer's letterhead certifying that Installer complies with requirements in the Construction Documents and, where required, is authorized by manufacturer for this specific Project.
7. Material Certificate(s): Prepared report(s) written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Construction Documents.
8. Preconstruction Test Report(s): Prepared report(s) written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Construction Documents.
9. Product Test Report(s): Prepared written report(s) indicating current product produced by manufacturer complies with requirements in the Construction Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
10. Product Certificate(s): Prepared written statement(s) on manufacturer's letterhead certifying that product complies with requirements in the Construction Documents.

11. Report(s):
 - a. Cover page with the following information:
 - 1) Project name.
 - 2) Date of report.
 - 3) Type of report.
 - 4) Name, contact information, qualifications of preparer.
 - 5) Specification Section specifying report.
 - b. Footer includes page numbers.
12. Research/Evaluation Report(s): Prepared written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.
 - f. Test procedures and results.
 - g. Limitations of use.
13. Manufacturer Certificate(s): Prepared written statement(s) on manufacturer's letterhead certifying that manufacturer meets or exceeds requirements in the Construction Documents. Include evidence of manufacturing experience where required.
14. Manufacturer's Instruction(s): Prepared written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing, operating, and maintaining product or equipment.
 - a. Include the following, as applicable:
 - 1) Name of product.
 - 2) Name, address, and telephone number of manufacturer.
 - 3) Preparation of adjoining elements.
 - 4) Required tolerances.
 - 5) Sequence of installation or erection.
 - 6) Required adjustments.
 - 7) Recommendations for cleaning and protection.
 - b. Specifically identify requirements for special post commissioning maintenance activities required to maintain warranties that are outside of typical Periodic Maintenance requirements.
15. Manufacturer's Field Report(s): Prepared written information documenting factory-authorized (manufacturer) service representative's tests and inspections. Include the following, as applicable:
 - a. Name of product.
 - b. Name, address, and telephone number of factory-authorized service representative making report.
 - c. Statement of observed field conditions, conditions of surfaces and installation and quality of workmanship.
 - d. Statement on condition of adjoining elements and acceptability for installation of product.
 - e. Statement that products at project site comply with manufacturer's requirements.
 - f. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - g. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - h. Statement whether conditions, products, and installation will affect warranty.

- i. Other required items indicated in individual Specification Sections.
- 16. Material Safety Data Sheet(s) (MSDS): document(s) that contain information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products.
- 17. Qualification Data: Prepared written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects, engineers and owners, and other information specified.
- 18. Welding Certificate(s): Prepared written certification dated less than one calendar year previous that welding procedures and personnel comply with requirements in the Construction Documents. Include record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include name of firms and personnel certified.

D. Request For Information:

- 1. Name of project.
- 2. RFI number.
- 3. RFI description.
- 4. Date.
- 5. Detailed identification and description of problem encountered, information required, item for which interpretation or clarification is required, conflicting requirements, such as Manufacturer's Instructions conflict with instructions in Construction Documents, etc. Include applicable specification and/or drawing numbers.
- 6. Recommended resolution to include sizes, ratings, sketches, etc. in compliance with applicable specifications and requirements.
- 7. Hard-Copy RFIs: Each page of attachments with the RFI number and sequential page number.
- 8. Software-Generated RFIs: Substantially the same content as Hard-Copy RFIs and Attachments, provided as electronic files in Adobe Acrobat PDF format numbered as for Hard-Copy submission.
- 9. Supplementary Drawings: Include dimensions, thicknesses, structural grid references, details of affected or adjoining material, assemblies, attachments, products, components, equipment, etc needed to evaluate subject RFI and render an informed response.

2.3 REQUIRED FIELD SERVICES

- A. Not applicable.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. As required per individual Specification Sections.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES SUBMITTALS

- A. Elements as required per individual Specification Sections.

PART 3 - EXECUTION

3.1 INSTALLER AND/OR PERFORMANCE QUALIFICATIONS

- A. Per requirements of individual Specification Sections.

3.2 PREPARATION

- A. All submittals, other than RFIs, attached to a completed Transmittal Form.
- B. Information specially prepared for submittal because standard printed data are not suitable for use, prepare as for Shop Drawings.
- C. No more than 3 sets of Samples/Mock-Ups shall be required.
- D. Partial or incomplete Submittals shall be returned, without review, for resubmission.
- E. Prepare and maintain a tabular Log for each type of Submittal(s) (including RFIs) organized by submittal type and submittal number. Include in Log:

1. Project name.
2. Submittal number with applicable resubmittals/revision identifier including submittals that were dropped or otherwise cancelled.
 - a. Submittal number: Specification Section number followed by decimal point and a sequential number (e.g. 15 08 10.01).
 - 1) Remain consistent throughout submittal type.
 - b. Resubmittal/revision identifier: Alphabetic suffix after another decimal point added to Submittal number (e.g. 15 08 10.01.A)
3. Description.
4. Date of submittal.
5. Date response was received.
6. Identification of related Minor Change in the Work, Field Order, Proposal Request, etc. as applicable.

- F. Immediately upon discovery of the need for information, interpretation, clarification, or direction, submit a Request for Information.

1. Coordinate and submit RFIs in a prompt manner so as to avoid delays in work.
2. Allow 72 hours for response.
3. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for interpretation of A/E's action on submittals or substitutions.
 - d. Requests for coordination information already indicated in the Construction Documents.
 - e. Incomplete RFIs.
 - f. RFIs with numerous or significant errors.

3.3 EXECUTION REQUIREMENTS

- A. General:
 1. Time for review shall commence upon receipt of Submittal.
 2. Retain responses for reference for Quality Control and Quality Assurance activities and coordination with other elements.

- B. Submittals for Quality Control will be reviewed for compliance with the construction documents only. The review may not constitute a detailed review of adequacy of submitted design calculations. The appropriateness and accuracy of calculations is the responsibility of the Contractor (and Contractor's professional engineer when such calculations are required to be professionally sealed).

3.4 QUALITY CONTROL

- A. As required by individual Specification Sections.

3.5 COMMISSIONING

- A. As required by individual Specification Sections.

3.6 EXECUTION SUBMITTALS

- A. Every seven (7) calendar days, provide submittal logs.

3.7 INSTALLATION AND/OR WORKMANSHIP WARRANTY REQUIREMENTS

- A. As required by individual Specification Sections.

3.8 CLOSE-OUT

- A. As required by individual Specification Sections.

END OF SECTION 01 33 00
[Revision March 2016]

SECTION 01 42 00 – REFERENCES [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 STANDARDS

- A. **Applicability:** For Products specified by reference to an association or trade standard, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Construction Documents, or applicable codes establish stricter standards.
- B. **Publication Dates:**
1. Except as otherwise indicated, where compliance with a reference standard is required, comply with standard in effect as of date of issue of Construction Documents, except when a specific date is specified.
 2. **Copies of Standards:** Where copies of standards are needed for proper performance of Work, obtain such copies directly from publication source.

1.2 SCHEDULE OF ABBREVIATIONS.

- A. **Abbreviations and Names:** Following is a partial list of construction industry standards organizations. Reference standards of these organizations are listed in respective specification sections using abbreviations contained below.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Boilers Manufacturer's Association
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ADC	Air Diffusion Council
AGA	American Gas Association
AHRI	Air Conditioning, Heating and Refrigeration Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASTM	American Society of Testing and Materials
AWI	The Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood-Preservers Bureau
AWWA	American Water Works Association

AWS	American Welding Society
BHMA	Builders' Hardware Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CPSC	Consumer Product Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard of NBS (U.S. Dept. of Commerce)
FCC	Federal Communications Commission
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association
FM	Factory Mutual System
FS	Federal Specification (General Services Admin)
IBC	International Building Code (International Code Council)
IEEE	Institute of Electrical and Electronic Engineers Inc
MBMA	Metal Building Manufacturers Association
MIL	Military Standardization Documents (U.S. Dept. of Defense)
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code (by NFPA)
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code (IEEE)
NFPA	National Fire Protection Association
PCI	Pre-stressed Concrete Institute
PDI	Plumbing and Drainage Institute
SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SSPC	Steel Structures Painting Council
TCA	Tile Council of America
TXDOT	Texas Department of Transportation
UL	Underwriters Laboratories
WCLIB	West Coast Lumber Inspection Bureau (Grading Rules)
WWPA	Western Wood Products Association (Grading Rules)

END OF SECTION 01 42 00
[Revision February 2016]

SECTION 01 45 16.13 - CONTRACTOR QUALITY CONTROL [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

A. Requirements for Contractor Quality Control (QC) System:

1. Plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements,
2. Applicable to all construction operations, both on-site and off-site, and
3. Keyed to construction sequence.

B. Definitions:

1. **Control Phases:** Defined phases utilized to organize QC inspections and other activities for each Definable Unit of Work within the Quality Control Plan: Preparatory, Initial, Follow-up.
2. **Corrective Action(s):** Action(s) required to correct completed work identified to be in Non-conformance, to include:
 - a. Complete removal and replacement of non-conforming Work, or Action(s) required to correct/prevent recurring Deficiencies.
 - b. Review by A/E to:
 - 1) Determine the cause of Non-Conformance
 - 2) Evaluate for potential of recurrence.
 - 3) Evaluate potential for significant conditions that may be adverse to quality.
 - 4) Identify Follow-up Action(s) and/or Follow-up Inspection(s) required.
3. **Contractor's Daily Quality Control Report:** A Field Inspection Report documenting QC activities and status of such each day.
 - a. Attach Field Test Reports for subject day.
 - 1) Where Field Test Reports are unavailable for subject day due to off-site sample testing, results analysis, etc., note that such test was completed that day on Contractor's Daily Quality Control Report and include an estimated date for delivery.
4. **Deficiency:** An element of the Work in-progress where damage, unsatisfactory results and/or other discrepancies can be rectified as the work proceeds.
5. **Deficiency Notice:** Notification of a Deficiency issued upon identification of workmanship or materials etc. found to be out of compliance with Construction Documents by inspection and/or testing.
6. **Definable Unit of Work:** a portion of the Work, as may be identified as a Feature, Segment, etc. which is separate and distinct from other portions of the Work and has separate control requirements.
 - a. Each section of the Specifications may generally be considered as a Definable Unit of the Work; however, the organization of the Specifications shall not determine the extent or scope of a Definable Unit of the Work.
7. **Follow-up Action(s):** Action(s) as determined to be required to confirm satisfactory completion of Corrective Action(s) and/or Remedial Action(s).
8. **Follow-up Inspection(s):** Beginning of Follow-up [Control] Phase, if required. Final Inspections and other actions conducted to confirm satisfactory completion of Follow-up Action(s) prior to the start of

- subsequent Definable Unit(s) of Work which may be affected by the identified Deficiencies.
9. Initial Inspection: Beginning of Initial [Control] Phase. Required Inspection conducted upon completion of a representative sample of a given feature of the Work (also identified as a Definable Unit of Work), and prior to the start of a new or changed operation.
 10. Non-Conformance: Work identified to be in violation of the terms of the Contract, including, but not limited to:
 - a. Equipment and/or materials received and/or completed items of the Work found to be in noncompliance with contract requirements.
 - b. Work or material that cannot be corrected and must be replaced.
 - c. Work that in order to correct it must have a deviation from Construction Documents approved.
 - d. Work in which an item must be substituted in lieu of that specified in the Construction Documents
 11. Notice of Non-Conformance: Notification of Non-Conformance provided in compliance with Contract Documents.
 12. Remedial Action: Action(s) required to correct Deficiencies to either provided, but uninstalled elements or other as yet uncompleted Work.
 13. Preparatory Meeting: Beginning of an identified Preparatory [Control] Phase.
 - a. Identified as the meeting required to be held prior to the start of Work under each separate Specification section, or prior to the start of Work where a change in a construction operation is contemplated.
 - b. Meeting held prior to the start of work under each separate Definable Unit of Work.
 14. Three Point Inspection Plan: Inspection plan based on three (3) fundamental elements:
 - a. Development, implementation and maintenance of an inspection and record system to ensure compliance with Construction Documents.
 - b. Conformance to requirements of the Construction Documents irrespective of inspection and/or testing by Owner.
 - c. Removal and replacement of Work not in compliance with Construction Documents.

PART 2 - CONTRACTOR'S QUALITY CONTROL SYSTEM

2.1 GENERAL REQUIREMENTS

- A. An all-encompassing program, including a sufficiently staffed QC Organization, required to accomplish the Three Point Inspection Plan, for compliance with QC requirements of the Contract Documents.
 1. Review each individual Specification Section for specific requirements to be incorporated into the Three Point Inspection Plan.

2.2 QUALITY CONTROL SYSTEM REQUIREMENTS

- A. Quality Control Organization:
 1. Quality Control (QC) Manager: Separate from and in addition to the Contractor's Superintendent or other project management staff, plus an identified Alternate QC Manager.

2. QC Organizational Staffing:
 - a. QC staff shall be maintained under the direction of the QC Manager of sufficient size to perform QC activities for all phases, shifts, and crews required to accomplish the Work, with complete authority to take any action necessary to effect the resolution of quality problems to ensure compliance with the Contract Documents.
 - 1) These personnel may be assigned other duties in addition to assigned QC activities.
 - a) Where QC personnel are assigned other duties in addition to QC activities, QC activities shall have priority.
 - 2) The actual number of the QC Staff shall increase and/or decrease as required during any specific work period to cover the needs of the work period.

B. Quality Control Plan (QC Plan): Shall identify required qualifications, duties, and responsibilities for entities required to accomplish procedures, control, instructions, tests, etc. identified in QC Plan, to include completion of applicable documentation, to be used to cover all construction operations, both on-site and off-site, including work by Subcontractors, Fabricators, Suppliers and Purchasing Agents. At minimum, include the following:

1. A description of the Quality Control Organization, including a chart showing lines of authority for each member of the QC Organization and acknowledgement that the QC Staff shall implement the QC Plan for all aspects of the Work.
2. The required qualifications, duties, responsibilities, and authorities for each QC function.
 - a. QC Plan shall include, in resume format, the names, qualifications, duties, QC function and responsibilities of each proposed individual with demonstration of sufficient staff for required activities included or attached.
3. A copy of a letter on Contractor's letterhead authorizing and delegating sufficient authority to the QC Manager to perform duties as described to include the responsibilities and authority to stop work which is not in compliance with the Contract.
 - a. Copies of letters issued by the QC Manager providing direction to each of the other various Quality Control Representatives outlining duties, authorities and responsibilities.
4. Procedures for:
 - a. Scheduling, reviewing, approving, and managing submittals, including those of Subcontractors, off-site Fabricators, Suppliers and Purchasing Agents.
 - b. Control, verification and acceptance of testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.
 - c. Tracking Preparatory, Initial, and Follow-up control phases and control, verification, and acceptance tests including documentation.
 - d. Tracking Deficiencies and Non-conformances from identification through satisfactory completion of Follow-up Action(s).
 - 1) Deficiency and Non-conformance Log – continuous listing of ongoing work which is deficient where Deficiency Notice and/or Notice of Non-conformance has been issued. Includes,

- a) References to Notice of Deficiency, Remedial Action Request(s), Notice of Non-conformance(s), Corrective Action(s) and/or Follow-up Inspection(s), etc. for each Deficiency.
 - b) Receipt and provision dates of all notices, actions, etc.
- 5. Reporting procedures, including proposed reporting formats.
 - 6. A list of all Definable Features, Units or Segments of the Work required for completion of subject project scope.

2.3 REQUIRED FIELD SERVICES

- A. As required by individual Specification Sections.

2.4 CONTRACTOR'S QUALITY CONTROL SYSTEM WARRANTY REQUIREMENTS

- A. As required by individual Specification Sections.

2.5 CONTRACTOR'S QUALITY CONTROL SYSTEM SUBMITTALS

- A. As required by individual Specification Sections.

PART 3 - EXECUTION

3.1 PERFORMANCE QUALIFICATIONS

- A. QC Manager:

- 1. Directly employed by the Contractor and report directly to the Contractor's home office Management.
- 2. A graduate Engineer, graduate Architect, or a graduate of Construction Management, with a minimum of 4 years construction experience on similar type construction to this contract or an experienced construction person with a minimum of 5 years' experience in related work and a minimum of 5 years verifiable experience as a Construction Contractor Quality Control Representative.

- B. QC Staff:

- 1. Fully qualified by experience and technical training and/or certification to perform assigned QC responsibilities

3.2 PREPARATION

- A. Quality Control Meeting: After the Pre-Construction Conference, before start of construction and prior to acceptance of the Contractor's QC Plan, attend Quality Control Meeting chaired by the QA to discuss requirements of the Contractor's QC System.

- 1. Attendees: In addition to other required attendees shall be representatives from Contractor's Independent Testing and Inspection Lab and TDCJ's Quality Assurance Testing Lab shall, if required.
- 2. Cooperate with QA for development of details, including required forms for recording QC operations, control activities, testing, administration of the System for both on-site and off-site work, and the interrelationship of

- Contractor's Management and QC with the QA to be incorporated into final QC Plan.
3. Subsequent Quality Control Meetings may be called by either party to reconfirm requirements and/or address Deficiencies in the QC System or procedures which may require Corrective Action(s) by the Contractor.
- B. Interim QC Plan (Interim Plan): May be approved for the first [30] days of operation and/or for a Definable Unit of Work.
- C. Construction will be permitted to begin only after acceptance of the QC Plan or acceptance of an Interim Plan. Work outside of the Definable Unit of Work included in an accepted Interim Plan will not be permitted to begin until acceptance of a QC Plan or another Interim plan containing the additional Definable Unit of Work to be started.
- D. Acceptance of Plan: Acceptance is conditional and shall be predicated on satisfactory performance during construction. TDCJ reserves the right to require changes in QC Plan and operations.
1. Organizational Changes: Requests for approval for changes in QC staff shall include the same requirements as for original QC staff.
 2. Notification of Changes: After acceptance of the QC Plan, provide notification in writing a minimum of seven calendar days prior to any proposed change in the QC Plan or QC Personnel.
- E. Product Delivery: To the extent possible before unloading, inspect all elements for damage, identification, quantity and compliance with Construction Documents, to include approved Submittals.
1. Requirements include inspection of elements provided by TDCJ (TCI).
 2. Reject shipments if Deficiency or Non-conformance is identified before unloading.
 3. Perform thorough inspection for damage, compliance and sufficiency as soon as practical after unloading and again just prior to incorporation into the Work.
 - a. Identify issue(s) as a Deficiency, and segregate from accepted elements.
 - 1) Identification of Deficiency includes damage as a result of improper shipment, storage or handling.
 - a) Consult with A/E for resolution of issues that are judged to be minor and will not delay or jeopardize completion of construction or invalidate Manufacturer's warranty. An example is scratched paint without a corresponding dent or scratch to metal below.
 - 2) Identify Remedial Action(s) and/or Corrective Action(s) necessary to include results of an inspection by the Manufacturer to determine requirements to validate the warranty and/or restore element to like new condition as approved by A/E.
 - 3) Where Deficiencies in Owner-Furnished items are noted, assist Owner with documentation of Deficiencies, packaging and loading items for return to manufacturing plant.

- b. Do not incorporate into the Work until Remedial Action(s) and/or Corrective Action(s) have been completed plus Follow-up Action(s), if required.

3.3 EXECUTION REQUIREMENTS

A. QC Manager: On-site at all times Work is in-progress.

- 1. Upon approval of an identified Alternate QC Manager, the Alternate QC Manager may serve in the event of QC Manager's absence
- 2. Any absence of QC Manager shall not exceed 2 weeks at any one time and not more than 20 workdays during a calendar year.

B. Quality Control Procedures: The QC Plan shall incorporate the following requirements:

- 1. Preparatory Meeting(s) and Initial Inspection(s) for each Definable Unit of Work:
 - a. Shall be:
 - 1) Repeated on the same Definable Unit(s) of Work as required if:
 - a) The quality of on-going work is unacceptable;
 - b) There are changes in the applicable QC staff, in the on-site production supervision or work crew;
 - c) Work on Definable Unit(s) of Work is resumed after a substantial period of inactivity; or
 - d) Other issues develop.
 - 2) Preceded by 72 hours' notice.
 - 3) Chaired by QC Manager.
 - b. Attendees: In addition to required attendees, the Contractor's Independent Testing and Inspection entity, if such is required for the Definable Unit of Work.
 - c. Agenda shall include review of Minutes of immediately previous Preparatory Meeting or Initial Inspection.
 - d. QC Manager shall prepare Minutes that include results of the meeting and attach to the Contractor's Daily Quality Control Report.
 - 1) Results shall include specific documentation relating to Deficiencies, Remedial Action(s) and/or Request(s), Notice(s) of Nonconformance, Corrective Action(s), and/or Follow-up Action(s)/Inspection(s).
- 2. Follow-up Inspection, if applicable:
 - 1) Shall meet applicable requirements for notification, attendance, documentation and/or review.
- 3. Deficiency Notice:
 - a. Deficiency Notice shall:
 - 1) Be issued by QC Manager
 - a) With notice to appropriate other QC entities.
 - b) TDCJ reserves the right to advise the QC Manager of work that is deficient.
 - 2) Include:
 - a) Complete description of the nature and extent of Deficiency including references to applicable portion(s) of the Construction Documents.
 - b) Recommended Remedial Action(s).

- c) A request to Contract Manager to perform Recommended Remedial Action(s).
- 4. Remedial Action(s) and Requests:
 - a. Remedial Action(s) proposed and/or considered by Contractor shall be submitted for approval.
 - b. Remedial Action Request(s) shall be:
 - 1) Issued by TDCJ on deficient work that has not been corrected on an ongoing daily basis, recurring deficient work or materials, or deficient work that is scheduled to be concealed.
 - a) A Remedial Action Request Log maintained by TDCJ's QA shall be provided to Contractor each week.
 - 2) Provided to QC Manager upon issuance.
 - a) QC Manager's response shall:
 - i. Include proposed Remedial Action(s).
 - ii. Be provided within 24 hours of issuance.
 - c. Upon receipt of approval of proposed and/or considered Remedial Action(s) per a Deficiency Notice or Remedial Action Request(s), complete Remedial Action(s) within 15 calendar days.
 - 1) If Deficiencies are not resolved within 15 calendar days, the identified Deficiencies, shall become a Non-conformance and a Notice of Non-conformance issued.
 - a) Upon satisfactory completion of the Remedial Action where testing and/or inspection is required by Contractor's Independent Testing and Inspection entity, if Independent Testing or Inspection Report(s) reveal nonconforming work or materials in which the work effort has been completed and no longer correctable, the Contractor's QC Manager shall direct the Contractor to remove the work.
 - i. Non-conforming Work shall not be built on or otherwise concealed.
- 5. Notice of Non-conformance:
 - a. Notice of Non-conformance shall:
 - 1) Be issued by PA.
 - 2) Be proved to QC Manager upon issuance.
 - 3) Fully describe the nature and extent of nonconforming elements including Construction Documents references.
 - a) Notice of Non-conformance may, or may not, include suggested Corrective Action(s). Lack of suggested Corrective Action(s) shall not impact timeliness of response to Notice of Non-conformance.
 - 4) Preclude payment for the elements noted and will remain in effect until Follow-up Inspection(s) demonstrate conformance with Construction Documents.
 - 5) Include space on document(s) for:
 - a) Contractor's Corrective Action Proposal,
 - b) A/E review of the Contractor's Corrective Action Proposal,
 - c) Results of Follow-up Action(s) and/or Follow-up Inspection(s).
 - d) Disposition of the Nonconformance matter.
- 6. Corrective Action:

- a. Requirements for completion of Corrective Action(s) approved to address Non-conformance(s) shall include actions identified by A/E to address/prevent potential of recurrence and/or mitigate effects of, or affects to, significant conditions relating to quality.
- C. Contractor's Daily QC Report: Original Field Inspection Report(s) signed by the QC Manager documenting QC activities that day, including days no Work was performed.
- 1. All calendar days shall be accounted for throughout the duration of the Contract.
 - 2. Require and include Reports prepared by all subordinate QC staff and QC representatives of Subcontractors for applicable portions of participation.
 - 3. Record:
 - a. Quality Control operations, activities, and tests performed, including the work of Subcontractors and Suppliers, to include factual evidence that activities and specified tests have been performed, including but not limited to the following:
 - 1) Contractor /Subcontractor and their area of responsibility.
 - 2) Operating plant/equipment with hours worked, idle, or down for repair.
 - 3) Work performed that day, to include location, description, and by whom.
 - 4) Description of trades working that day; the number of personnel working; weather conditions encountered; and any delays encountered.
 - 5) Conforming and Deficient Features to include a statement that equipment and materials incorporated in the Work and workmanship comply with the Contract where applicable.
 - b. Test and/or control activities performed. Include:
 - a) Results.
 - b) References to Contract requirements.
 - c) Control phase (Preparatory, Initial and/or Follow-up).
 - d) List of noted Deficiencies and/or Non-conformances with Remedial and/or Corrective Action(s).
 - 1) Material received with statement as to its acceptability and storage.
 - 2) Identify submittals reviewed, with contract reference, by whom, and action taken.
 - 3) Off-site QC activities, including actions taken.
 - c. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
 - d. Instructions given/received in the field.
 - 4. Attach copies of Deficiency Notice(s) issued that day.

3.4 QUALITY CONTROL

- A. The QC Manager shall be present for all QC activities conducted for all Definable Units of Work.

3.5 COMMISSIONING

- A. No additional requirements.

3.6 EXECUTION SUBMITTALS

- A. At Pre-Construction meeting: QC Plan for approval (acceptance).
- B. With 24 hours of each calendar day: Contractor's Daily Quality Control Report.
- C. Every seven (7) calendar days: Deficiency Notice Log

3.7 PERFORMANCE WARRANTY REQUIREMENTS

- A. As required per individual Specification Sections.

3.8 CLOSE-OUT

- A. No additional requirements.

END OF SECTION 01 45 16.13
[Revision February 2016]

SECTION 01 70 00 – EXECUTION REQUIREMENTS [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for execution of the Work including but not limited to:
 - 1. Examination.
 - 2. Preparation.
 - 3. Construction Layout.
 - 4. Installation.
 - 5. Progress cleaning.

PART 2 - PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICE REQUIREMENTS

2.1 GENERAL

- A. New products, equipment and/or material suitable for project conditions, temperature and location, produced, manufactured and distributed for purpose.
- B. References to codes and standards are provided as a basis for compliance requirements; if there is a conflict between specifications and the code or standard, the code prevails.
- C. Additional Source and/or Manufacturer Qualifications:
 - 1. Provided elements shall be the standard products of a manufacturer regularly engaged in the production of such and is the manufacturer's current and standard design.
 - 2. Provided elements shall be from a manufacturer legally authorized to sell such in the United States.
 - 3. To the extent possible, package elements shall be from a manufacturer with a service center located within 200 miles of the project site that is capable of providing training, parts, and emergency repairs.
 - 4. To the extent possible, provided elements that interfaces with and/or connects to other provided elements shall be provided from the same manufacturer. (Example: fittings for PVC conduit shall be provided by same manufacturer as PVC conduit; etc.)
 - a. Provided elements that interfaces with and/or connects to existing elements ARE NOT required to be provided from the same manufacturer as existing elements.
 - b. Provided fittings, mountings, and/or connectors shall be designed, produced, listed and approved for such purpose for application and conditions; and shall be from a manufacturer approved by the producer of the elements to be fitted, mounted, connected, etc.
 - 2. Manufacturers of equipment assemblies, which include components made by others, shall assume complete responsibility for specified performance of final assembled unit and shall meet UL requirements for intended use as an assembled unit.

2.2 PRODUCT, EQUIPMENT AND/OR MATERIAL REQUIREMENTS

- A. When such is commercially available, provide and utilize products and installation materials that are not considered hazardous.

2.3 REQUIRED FIELD SERVICES

- A. Where services of an Independent Testing Entity are identified to perform services, inspections and/or testing, require Independent Testing Entity and representatives of such to:

1. Comply with applicable portion(s) of this Section and other applicable portions of the Construction Documents.
2. Cooperate with all personnel engaged and/or tasked with portions of the Work.
3. Perform specified inspections, sampling and testing of materials, methods of construction, equipment, systems, etc. as required by applicable portions of the Construction Documents.
4. Provide prompt notification of observed irregularities, deficiencies and/or non-conformance of products, work and/or work products.
 - a. Verbal notification immediately upon observation.
 - b. Written notification as part of a signed Independent Test Report and/or Independent Inspection Report.
5. Not release, revoke, alter or enlarge on requirements of Construction Documents.
6. Not approve or accept any portion of the Work.
7. Not perform any duties other than required and/or specified inspections, sampling, and/or testing.
8. Submit Independent Test Report of each test and Independent Inspection Report for each Inspection within three (3) calendar days of completion of test(s) or inspection date.
 - a. Laboratory Test Reports: Describe variances from specified requirements, and state whether tested product and/or material meets specification requirements.
 - b. Field Test Reports: Furnish a report stating results for each test and/or for each required area.
 - c. Reports may be combined on a daily basis, if so desired, provided that location of each test, inspection and applicable identification data are clearly identified.
 - d. Each Report shall include:
 - 1) Date issued.
 - 2) Project title and number.
 - 3) Testing entity name, address and telephone number.
 - 4) Name and signature of inspector/technician and responsible reviewer.
 - 5) Date and time of sampling, inspection and/or test.
 - 6) Record of temperature, humidity and/or any factor that may impact or influence testing results.
 - 7) Identification of product and Specification Section.
 - 8) Location of sample or test in the Work.
 - 9) Type of inspection or test.
 - 10) Test equipment used and references to calibration records.
 - 11) Results of tests and compliance with Construction Documents.
 - 12) Interpretation of test results that indicate unsatisfactory conditions.
 - 13) Indication of as-found condition and as-left results.

9. Submit certificates of testing, inspection or approval that are required by laws, ordinances, rules, regulations, orders or approval of public authorities.

B. Where individual Specification Sections require Field Services, require supplier or manufacturer to provide Manufacturer's Representative to provide identified services including, but not limited to: inspect delivered products from subject Manufacturer, start-up equipment, adjust and balance equipment, provide instructions as applicable, make appropriate recommendations, provide training to up to eight (8) maintenance personnel and provide a Manufacturer's Field Report.

2.4 Thru 2.5

A. As required per individual Specification Sections.

PART 3 - EXECUTION

3.1 INSTALLER AND/OR PERFORMANCE QUALIFICATIONS

A. For all services required by applicable Authority Having Jurisdiction (AHJ) to be performed by individuals or entities with a license or certification:

1. Individual or entity shall be legally qualified to practice or perform in jurisdiction of project site.
2. Maintain a physical file containing a hard copy of each required license and/or certification accessible on-site when work required by such licensed entities is in progress.
3. TDCJ shall stop work requiring license or certification until such is provided.

B. Where specifications require qualifications that include resume type information such as documented work experience, for the individual proposed to perform required work, provide required documentation for installation, performance and/or construction similar in scope, or larger, as the work required for the subject project. Include name and contact information for references who will confirm provided information.

C. Where Qualifications are identified, the installer and/or performer with the identified qualifications, if not performing actual work, unless otherwise indicated, at minimum shall be on site performing visual observation(s) and providing direction(s)/instruction(s) during progress of such work.

D. In addition to requirements of individual Specifications, Work shall be performed by persons qualified to produce workmanship of specified quality, to include required tolerances and specified precision.

3.2 PREPARATION

A. Transit, Delivery, Handling and Storage:

1. Ship provided elements to project site according to manufacturer's recommendations and instructions and according to applicable trade standards. During shipment, further protect elements from damaging affects including, but not limited to, impact, abrasion, corrosion, chemicals, entrance of debris, and sunlight.

- a. Utilize hoists, cranes, slings and/or other equipment designed and constructed for purpose with sufficient load capabilities.
 - b. Do not subject provided elements to damage as a result of their own weight, movement of their own moving parts, etc.
 - 1) Provide all material and other elements required to provide required protection during transit, storage and other handling.
 - 2) Do not utilize attachments to provided elements for connections to lifting, loading and/or moving equipment unless attachment is intended, designed and rated for such purpose.
 - 2. Store provided elements in areas identified by Warden or designee and continue required protections.
 - 3. Requirements of this section extend to Owner-Furnished items, if applicable.
- B. Perform all coordination with other than TDCJ as may be required by local, state and/or federal AHJs.
- C. Project Drawings are diagrammatic. Carefully coordinate installation requirements with existing and/or planned structural, architectural, electrical, mechanical and other applicable conditions and field adjust to avoid conflict.
- 1. Unless otherwise noted, the locations of both existing and planned elements are approximate and are not intended to convey the exact details and installation. Field determine exact locations by actual measurements and conditions before installation commences.
 - a. Verify space requirements and dimensions of items relative to identified installation location.
 - b. Verify dimensions of other construction by field measurement before fabrication or installation.
 - c. Verify layout in relation to existing elements, the property survey and/or existing benchmarks, as applicable.
 - 2. The existence and location of site improvements, above and underground utilities and other elements indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of utilities, mechanical and electrical systems and other elements affecting the Work. Verify the location and points of connection of utility services, location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping, and underground electrical services.
 - a. Unless other is approved in writing,
 - 1) Utilize x-ray, ground penetrating radar or other standard locating methods to locate utilities within concealing elements and/or under surfaces including, but not limited to, earth, slabs, decks and/or walls.
 - a) For applications where earth will be disturbed,
 - i. Provide notification(s) as required by regulations.
 - ii. For earth disturbances greater than 6-inches in depth, if qualified personnel and/or standard locating equipment as typically used for required locations are not direct resources of Contractor, engage a

Subsurface Utility Engineering (SUE) company.

- (a) Repair to inadvertent damage of a utility or other concealed element undetected by the SUE, x-ray and/or ground penetrating radar in an area examined by these means, shall not be required to be provided as part of the Work.
 - 2) TDCJ resources shall not be utilized as primary resource for location of concealed elements. Such information shall be independently verified.
 - b. Adjust, move or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by new construction.
 - c. Furnish obtained location data for work related to Project that must be performed by public utilities serving Project Site.
 3. Acceptance of Conditions: Examine substrates, areas, and conditions, with the installer or Applicator present for compliance with requirements for installation tolerances and other conditions affecting performance.
 - a. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - b. Examine walls, floors, roofs, foundations, soil compaction, etc. for suitable conditions where products and systems are to be installed.
 - c. Record observations.
 4. Proceed with installation only after unsatisfactory conditions have been corrected; proceeding with Work indicates acceptance of conditions.
- D. Establish benchmarks and control points to set lines and levels as needed to locate each element of Work.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Make the log available for reference. For exterior Work, include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments, and tapes used.

3.3 EXECUTION REQUIREMENTS

- A. All provided products, material, equipment, services, installations, and/or construction shall be in accordance with applicable AHJ, per applicable trade standards, and per manufacturer instructions and/or recommendations and shall be customarily used for intended purpose.
 1. Maintain a copy of manufacturer's installation instructions and/or recommendations on project site.
 - a. Comply with instructions in full detail, including each step in sequence.
 - b. Where Construction Documents require more restrictive tolerances, indicate more rigid standards, and/or more precise workmanship, conform with these requirements.
 2. Where installation requires compliance with a code or standard, comply with latest published version and obtain such from original publication source.

- a. Promptly submit written notice of observed variance of Construction Documents from legal requirements.
 - b. Assume responsibility for Work known to be contrary to such requirements and completed without providing this notification.
- B. Locate the Work and components of the Work accurately, in correct alignment and elevation.
 - 1. Install all elements flush, square, level, plumb, true and clean of dust, debris, paint, splatter, and other material (inside and out) with unused openings enclosed with the manufacturer's recommended product(s) for such purpose.
 - a. Check location, level and plumb, of every major element as Work progresses.
 - b. Make notification per requirements if deviations from required lines and levels exceed allowable tolerances.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- C. Progress Cleaning:
 - 1. Clean Project area where work is in progress as necessary to facilitate work progress, protect surfaces, and maintain safety requirements.
 - 2. Secure all construction related debris, equipment, material, and tools at the conclusion of construction activities each day.
 - a. Requirements include removal of all debris, equipment, material and tools to exterior lay-down areas each day.
 - 3. Remove debris from concealed spaces before enclosing the space.
- D. Protection of Installed Construction:
 - 1. Install products at the time and under conditions that will ensure the best possible results. Provide protection and maintain conditions per manufacturers' recommendation for temperature, humidity, and air quality that ensure installed Work is without damage or deterioration at time of Beneficial Occupancy.
 - 2. Ensure that no part of construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during construction period.
 - a. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
 - b. Clean according to written instructions of manufacturer or fabricator, using only cleaning materials specifically recommended. If specific materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage.
 - c. Provide and/or perform required maintenance per manufacturer's recommendations and instructions.

3.4 QUALITY CONTROL

- A. As required by individual Specification Sections.

- B. Unless otherwise indicated in writing, specified Inspections and Testing is required for newly installed elements only.
- 3.5 COMMISSIONING
- A. As required by individual Specification Sections.
- 3.6 EXECUTION SUBMITTALS
- A. Required resumes, licenses and/or certifications prior to commencement of Work requiring such.
 - B. Where coordination documents and/or other forms are required of Contractor by AHJ or Construction Documents:
 - 1. Copy to PA.
 - 2. Maintain a file copy on project site.
 - C. Field Inspection and/or Test Reports associated with required Inspections and/or Tests, whether required by AHJ(s) or Construction Documents, unless otherwise indicated, within (7) calendar days of Inspection(s) or Test(s).
- 3.7 INSTALLATION AND/OR WORKMANSHIP WARRANTY REQUIREMENTS
- A. As required per individual Specification Sections.
- 3.8 CLOSE-OUT:
- A. Retain possession of provided and removed elements not to be retained by TDCJ.
 - B. Document findings from field verification activities on Record Drawings.

END OF SECTION 01 70 00
[Revision February 2016]

SECTION 01 73 29 – CUTTING AND PATCHING [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for cutting and patching.
- B. Definitions:
 - 1. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
 - 2. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

PART 2 - PRODUCTS

2.1 GENERAL

- A. General: Comply with requirements specified in other Sections.

2.2 PRODUCT, EQUIPMENT AND/OR MATERIAL REQUIREMENTS

- A. In-Place Materials: Use material identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

2.3 REQUIRED FIELD SERVICES

- A. No additional requirements.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. No additional requirements.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES SUBMITTALS

- A. Product Data for products, equipment and/or material provided in compliance with Section which will be incorporated into final Work.

PART 3 - EXECUTION

3.1 INSTALLER QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have
- B. Temporary Support: Provide temporary support of Work to be cut.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

3.3 EXECUTION REQUIREMENTS

- A. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original installer; comply with original installer's written recommendation.
1. In general, use hand or small power tools designed and intended for purpose. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from exposed or finished side to concealed surface.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or diamond core drill.
 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 5. Proceed with patching after construction operations requiring cutting are complete.
- B. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other sections.
1. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 2. Exterior Building Enclosure: Patch components in a manner that restores enclosures to a weathertight condition.

3.4 QUALITY CONTROL

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load deflection ratio.

- B. Operation Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Fire-suppression systems.
 - 3. Mechanical systems piping and duct.
 - 4. Electrical wiring systems.

- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 - 1. Water, moisture or vapor barriers.
 - 2. Membranes and flashings.
 - 3. Equipment supports.
 - 4. Piping, duct work and equipment.
 - 5. Noise- and vibration-control elements and systems.

- D. Visual Requirements: Do not cut or patch construction in a manner that results in visual evidence of cutting and patching. Do not cut or patch construction exposed on the exterior or in occupied spaces in a manner that would reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

- E. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

- F. Completed "patched" construction shall be approved prior to Beneficial Occupancy.

3.5 COMMISSIONING

- A. No additional requirements.

3.6 EXECUTION SUBMITTALS

- A. Cutting and Patching Plan describing the cutting and patching to be performed, for approval before identified work commences.
 - 1. Include the following information:
 - a. Extent: Description of cutting and patching, including method of performance, and indication of why the cutting and patching is required.
 - b. Changes to In-Place Construction: Description of anticipated results, including changes to structural elements and operating components as well as changes in the buildings appearance and other significant visual effects
 - c. Products: List of products to be used and firms or entities that will perform the Work.
 - d. Dates: Indication of when cutting and patching will be performed.

- e. Utility Services and Mechanical/Electrical Systems: Listing of services / systems that cutting and patching procedures will disturb or affect. Listing of services / systems that will be relocated and those that will be temporarily out of service. Indication of how long services / systems will be disrupted.
 - f. Structural Elements: Identification of where cutting and patching involve adding reinforcement to structural elements, details and engineering calculations showing integration of reinforcement with the original structural.
2. Approval of cutting and patching plan does not waive a later requirement to remove and replace unsatisfactory work.

3.7 INSTALLATION AND/OR WORKMANSHIP WARRANTY REQUIREMENTS

- A. No additional requirements.

3.8 CLOSE-OUT

- A. No additional requirements.

END OF SECTION 01 73 29
[Revision March 2016]

SECTION 01 77 00 – CLOSEOUT PROCEDURES [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including but not limited to, the following:

1. Final cleaning.
2. Beneficial Occupancy procedures.
3. Pre-Final Inspection procedures
4. Final Inspection procedures.

PART 2 - PRODUCTS AND/OR MATERIALS

2.1 GENERAL REQUIREMENTS

- A. No additional requirements.

2.2 PRODUCTS AND/OR MATERIALS REQUIREMENTS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

2.3 Thru 2.5

- A. No additional requirements.

PART 3 - EXECUTION

3.1 PERFORMANCE QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. No additional requirements.

3.3 EXECUTION REQUIREMENTS

- A. Final Cleaning:
1. Employ experienced workers or professional cleaners for final cleaning in compliance with manufacturer's written instructions. Clean, or repair by replacement, each exterior and interior surface to include interior and exterior surfaces of equipment, fixtures, exposed exterior and interior hard-surfaced finishes of all elements within construction area and areas impacted by construction such as settled dust on furniture.
 - a. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment.
 - b. Remove dust, excess lubrication, paint and mortar dropping, and other foreign substances.
 - c. Replace parts subjected to unusual operating conditions.

- d. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - 1) Requirements include clearing drains of construction debris.
- e. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- f. Clean ducts, blowers, and coils if units were operated without filters during construction.
- g. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in florescent and mercury vapor fixtures to comply with requirements of new fixtures.
- h. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- i. Remove all temporary structures, fences, utility connections and extensions.
- j. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- k. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- l. Remove tools, construction equipment, machinery, and surplus material from Project site.
- m. Remove snow and ice to provide safe access to building.
- n. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- o. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- p. Sweep concrete floors broom clean in unoccupied spaces.
- q. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- r. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirror and glass, taking care not to scratch surfaces.
- s. Remove labels that are not permanent.
- t. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
- u. Leave Project clean and ready for occupancy.

B. Certificate of Beneficial Occupancy: Should Owner and Contractor agree to process an area for a Certificate of Beneficial Occupancy, prepare a list of items within the subject area to be completed and corrected, if applicable.

- 1. Requirements for Beneficial Occupancy include Final Cleaning activities as may be required to the greatest extent as can be accomplished per limitations of other Work progress, if applicable.

2. Items on list shall be:
 - a. For areas other than entirety of Work area, limited to items which cannot be completed until and/or unless other portions of the Construction are completed due to scheduling of Subcontractors or other issues and will not require full occupancy to be returned to Contractor for completion.
 - b. Identified and processed as Deficiencies.
3. Identification on list shall include the value of item(s) and reason(s) why the Work is not complete.
4. Organization of list:
 - a. Identify each space within area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - b. List spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 - c. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - d. Include the following information at the top of each page:
 - 1) Project name.
 - 2) Date.
 - 3) Name of Record A/E
 - 4) Name of Construction Manager.
 - 5) Name of Contractor.
 - 6) Page number.
5. Additional items identified during joint inspection tour shall be identified and processed as Deficiencies.

C. Pre-Final Inspection:

1. The Pre-Final Inspection shall be scheduled upon receipt and confirmation of Contractor's Pre-Final Inspection Request and demonstrated completion of Contractor's punch list.
 - a. A Pre-Final Inspection request shall not be submitted until/unless Contractor, in good faith, determines all items per the Construction Documents are complete and ready for TDCJ occupancy, to include Final Cleaning.
 - 1) At discretion of PA, for areas where a Certificate of Beneficial Occupancy has previously been issued and Deficiencies were identified as part of the Beneficial Occupancy certification and/or discovered at a later time, an Inspection may be required as part of Final Inspection activities.
 - b. At PA's discretion, the Pre-Final Inspection shall not be scheduled if items are not in compliance with Construction Documents irrespective of that which may be represented on Contractor's punch list.
 - 1) PA is under no obligation to provide any written and/or oral listing of unresolved and/or incomplete issues that might be interpreted as a comprehensive final requirement for remaining items to complete in order to request Pre-Final Inspection.
 - a) Unless other is specifically identified in writing, all requirements of the Contract Documents shall

prevail irrespective of otherwise identification as a
Deficiency or Non-conformance.

2. Should unresolved and/or incomplete items be identified during Pre-Final Inspection, these shall be identified and processed as Deficiencies.

3.4 Thru 3.8

- A. No additional requirements.

END OF SECTION 01 77 00
[Revision March 2016]

SECTION 01 78 23 – OPERATION AND MAINTENANCE DATA [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for compilation of information related to operation and maintenance of systems and equipment to include spare parts and maintenance materials.

PART 2 - PRODUCT

2.1 GENERAL REQUIREMENTS

- A. Data prepared in the form of an instructional manual.
- B. Drawings: Reinforced punched binder tab, bound in with text.
- C. Indexing: Tabbed for each separate product, or each piece of operating equipment.
- D. Table of contents: For each volume, arranged in a systematic order.
 - 1. A list of each product included, indexed to content of volume.
 - 2. Each product identified by product name and other identifying symbols as set forth in Construction Documents, not solely with Manufacturer's catalog number.

2.2 PRODUCT REQUIREMENTS

- A. Product Data:
 - 1. Include only those sheets which are pertinent to specific product.
 - 2. Annotate each sheet to clearly identify specific product or part installed and data applicable to installation.
- B. Drawings:
 - 1. Supplement Product Data with drawings as necessary to clearly illustrate relations of component parts of equipment and systems and control and flow diagrams.
 - 2. Drawings coordinated with drawings with information in Project Record Documents for correct illustration of completed installation.
 - 3. Maintenance drawings are a separate item from Project Record Documents.
- C. Written Text:
 - 1. English language as required to supplement Product Data for particular installation, organized in a consistent format and in logical sequence of instructions for each procedure.
- D. Spare Parts and Materials:
 - 1. Quantities of spare parts and tools, maintenance materials and extra material as specified in individual specification sections.

2. Spare Parts and Tools: Packaged in clearly identified boxes. On each box:
 - a. Manufacturer's name, part name and stock number.
 - b. Piece of equipment for which part or tool is intended.
 - c. Specification number.
 - d. Name, address and phone number of closest supplier.
3. Maintenance Materials: Packaged in clearly identified boxes. On each box:
 - a. Trade name and stock number.
 - b. Item for which material is to be used for.
 - c. Name, address and phone number of closest supplier.
4. Extra Materials: Packaged in clearly identified containers.
 - a. Products identical to those installed in Work, included in original purchase from Manufacturer to avoid variations in manufacture. On each container:
 - (1) Trade name, stock number, size, color.
 - (2) Location for product use.
 - (3) Name, address and phone number of closest supplier.

E. Manuals:

1. Equipment and Systems: For each unit of equipment and/or system, original print and originally bound manuals that include:
 - a. Description of unit and component parts.
 - (1) Function, normal operating characteristics, and limiting conditions.
 - (2) Performance curves, engineering data and tests.
 - (3) Complete nomenclature and commercial number of replaceable parts.
 - b. Operating procedures:
 - (1) Start-up, break-in, routine and normal operating instructions.
 - (2) Regulation, control, stopping, shutdown and emergency instructions.
 - (3) Summer and winter operating instructions.
 - (4) Special operating instructions.
 - c. Maintenance Procedures:
 - (1) Routine operations.
 - (2) Guide to "trouble-shooting".
 - (3) Disassembly, repair and reassembly.
 - (4) Alignment, adjusting and checking.
 - d. Servicing and lubrication schedule.
 - e. Manufacturer's printed operating and maintenance instructions.
 - f. Description of sequence of operation by control Manufacturer.
 - g. Original Manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 - h. As-installed control diagrams by controls Manufacturer.
 - i. Each contractor's coordination drawings including as-installed color coded piping diagrams.
 - j. Charts of valve tag numbers, with location and function of each valve.
 - k. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
 - l. Include testing and balancing reports.
 - m. Other data as required under pertinent sections of specifications.
2. Electric and electronic systems: For each electric and electronic system:
 - a. Description of system and component parts.

- (1) Function, normal operating characteristics, and limiting conditions.
- (2) Performance curves, engineering data and tests.
- (3) Complete nomenclature and commercial number of replaceable parts.
- b. Circuit directories of panel-boards.
 - (1) Electrical service.
 - (2) Controls.
 - (3) Communications.
- c. As-installed color coded wiring diagrams.
- d. Operating procedures:
 - (1) Routine and normal operating instructions.
 - (2) Sequences required.
 - (3) Special operating instructions.
- e. Maintenance procedures:
 - (1) Routine operations.
 - (2) Guide to "trouble-shooting".
 - (3) Disassembly, repair and reassembly.
 - (4) Adjustment and checking.
- f. Manufacturer's printed operating and maintenance instructions.
- g. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
- h. Other data as required under pertinent sections of specifications.
- 3. Additional requirements for operating and maintenance data: As identified in respective sections of Specifications.
- 4. Materials and Finishes:
 - a. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products.
 - b. Instructions for Care and Maintenance: Include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
 - c. Moisture-protection and Weather-exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- 5. Additional Requirements: As specified in individual Specifications sections.

2.3 Thru 2.5

- A. No additional requirements.

PART 3 - EXECUTION

3.1 PERFORMANCE QUALIFICATIONS

- A. Personnel trained and experienced in accepted conventions and construction documentation practices.

3.2 Thru 3.5

- A. No additional requirements.

3.6 EXECUTION SUBMITTALS

- A. Unless other is approved in writing, 120 days prior to Pre-Final Inspection: Two (2) copies of proposed format and outline of manuals.
- B. Unless other is approved in writing, 30 days prior to Pre-Final Inspection: Two (2) copies of each completed data manual in final.
- C. Unless other is approved in writing, 10 days prior to Pre-Final Inspection: Four (4) copies of approved data manuals in final form.
- D. Draft copies of manuals as required for instruction of TDCJ personnel, if required by other Specification Sections.

3.7 Thru 3.8

- A. No additional requirements.

END OF SECTION
[Revision March 2016]

SECTION 01 78 36 – WARRANTIES [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for Warranties and Certificates.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Unless otherwise stated in Construction Documents, warranties shall commence on the date whichever is earlier of Final Acceptance or Beneficial Occupancy for entire work or designated portion thereof.
- B. Warranties shall be written in the name of TDCJ.
- C. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, Manufacturers, and subcontractors required to countersign special warranties with the Contractor.
- D. Additional Source and/or Manufacturer Qualifications: None.

2.2 PRODUCT REQUIREMENTS

- A. Warranties and certificates executed by each respective Manufacturer, supplier and Subcontractor.
 - 1. Cover and spine printed with title "WARRANTIES" and project title.
 - 2. For each item:
 - a. Tabbed for each separate product or system.
 - b. Date of beginning and duration of warranty, to include time period identified in respective Specification Section.
 - c. Specific information regarding:
 - (1) Proper procedure in case of failure.
 - (2) Instances which might affect validity of warranty.
 - 3. Manufacturer's Warranty shall include a stated agreement to repair or replace elements that fail in materials or workmanship of provided elements for the duration of the required warranty period.
 - 4. Warranties terms shall include costs for travel, removal, shipment, repair and reinstallation for duration of required warranty period.

2.3 REQUIRED FIELD SERVICES

- A. Where manufacturer, supplier, etc. requires start-up, initial inspections, etc. to be performed by personnel with specific qualifications such as a certification issued by the manufacturer, or similar, for warranty purposes, such is included in Scope of Work whether specifically identified.

2.4 PRODUCT WARRANTY REQUIREMENTS

- A. No additional requirements.

2.5 PRODUCT SUBMITTALS

- A. If required by Contract Documents, provide copies of unexecuted Warranties and Certificates as specified.

PART 3 - EXECUTION REQUIREMENTS

3.1 PERFORMANCE QUALIFICATIONS

- A. Where manufacturer, supplier, etc. requires installation to be performed by personnel with specific qualifications such as a certification issued by the manufacturer, or similar, for warranty purposes, such is included in Scope of Work whether specifically identified.

3.2 PREPARATION

- A. No additional requirements.

3.3 EXECUTION REQUIREMENTS

- A. **Related Damages and Losses:** When correcting warranted Work that has failed, remove and/or replace other Work that has been damaged as a result of such failure or that must be removed and/or replaced to provide access for correction of warranted Work.
- B. **Reinstatement of Warranty:** When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. **Replacement Cost:** Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Construction Documents. Replace and/or rebuild defective Work regardless of whether TDCJ has benefited from use of the Work through a portion of its anticipated useful service life.
- D. **TDCJ Recourse:** Written warranties made to TDCJ are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which TDCJ can enforce such other duties, obligations, rights, or remedies.
 - 1. **Rejection of Warranties:** TDCJ reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Construction Documents.
- E. TDCJ reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

3.4 QUALITY CONTROL

- A. No additional requirements.

3.5 COMMISSIONING

- A. Where manufacturer, supplier, etc. requires specific commissioning activities including, but not limited to, testing, documentation, training of operation

personnel, etc., in addition to start-up and/or inspections for warranty purposes, such is included in Scope of Work whether specifically identified.

3.6 EXECUTION SUBMITTALS

- A. As required by Contract Documents.

3.7 INSTALLATION AND/OR WORKMANSHIP REQUIREMENTS

- A. Installing entity's Warranty shall include a stated agreement to repair or replace installations that fail in materials or workmanship of provided elements for the duration of the required warranty period.
- B. Warranties terms shall include costs for travel, removal, shipment, repair and reinstallation for duration of required warranty period.

3.8 Not Applicable.

3.9 CLOSE-OUT

- A. As required by Contract Documents.

END OF SECTION
[Revision February 2016]

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings (including Record Electronic Drawings)
 - 2. Record Specifications.
 - 3. Record Submittals (including Product Data, Samples and/or Mock-ups).

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Record Drawings, Record Specifications, and Record Product Data, and Record Submittals stored apart from such used for construction.
- B. Physical Record documents marked with red erasable pen or pencil; other erasable pen or pencil colors utilized to distinguish between variations in separate categories of the Work.
 - 1. Each color legibly reproducible on a black and white copier.
- C. Printed Record Drawing sheets organized into manageable sets, bound with durable paper cover sheets.
- D. Record Specifications, Record Product Data, and Record Submittals (other than Samples or Mock-ups) in separate Binders.
 - 1. Labeled Divider page(s) followed by the applicable Log.
 - a. If log was maintained as a single document for all submittals, location of log identified on Cover Page and on each Divider page.
 - 2. Labeled "PROJECT RECORD DRAWINGS (SPECIFICATIONS/ PRODUCT DATA/ SUBMITTALS)"
 - 3. Contractor's certification statement.

2.2 PRODUCT REQUIREMENTS

- A. Content of Record Documents:
 - 1. Demonstration of actual construction and elements installed with complete details that include, but are not limited to: propriety name, manufacturer name, model number of furnished elements with options selected, supplier, installer and other applicable information.
 - 2. Dimensional changes to the Drawings.
 - 3. Revisions to details shown on Drawings.
 - 4. Revisions to routing of piping and conduit.
 - 5. Revisions to electrical circuitry.
 - 6. Dimensioned locations and details of existing and newly installed elements including utilities and including concealed elements.

7. Changes made by Change Order, RFI, A/ESI, or other Submittal(s) to include notations of document type and number(s).
8. Notations of related Drawing, Specification and Product Data information.
9. Changes made following A/E's written orders.
10. Details not on the original Construction Drawings.
11. Field records for variable and concealed conditions.
12. Record information on the Work shown only schematically.

B. Records:

1. Record Drawings: Full set blue- or black-line white prints of the Construction Drawings and Shop Drawings.
2. CAD Record Electronic Drawings: Full set of CAD Record Electronic Files of the Record Drawings.
 - a. Format: AutoCAD Release 2007 (with .dwg extension) or later, operating in Microsoft Office operating system.
 - b. Information from Record Drawings incorporated.
3. Record Specifications and Addenda: Full set of printed Specifications and Addenda
 - a. If applicable, include loose documents in binder.
4. Record Product Data: Product Data for principle elements, assembled in applicable sections.
 - a. Where documents are required to be submitted as part of operation and maintenance manuals, provide duplication for Record Product Data to be submitted.
5. Record Samples: Samples/Mock-ups not incorporated into Final Construction, but identified as required for project record.
6. Record Submittals: Change Orders, RFIs, A/ESIs, and other miscellaneous records required by other Specification Sections for record keeping and submittal in connection with actual performance of Work.

2.3 REQUIRED FIELD SERVICES

- A. Not applicable.

2.4 PRODUCT SUBMITTALS

- A. As required by individual Specification Sections.

PART 3 - EXECUTION

3.1 PERFORMANCE QUALIFICATIONS

- A. Personnel trained and experienced as draftspersons using commonly accepted conventions and construction documentation practices.
1. Require the individual or entity who obtained record data, whether the individual or entity is the installer, subcontractor or similar entity, to prepare the Record Drawings.

3.2 PREPARATION

- A. In addition to other requirements of this section maintain at site one physical, clean, undamaged, and unmarked copy of the following: Construction Documents, issued Addenda, reviewed Shop Drawings and Product Data, Samples, Change Orders

and other Modifications to Contract, field test reports, A/ESIs and certifications. Either at site, or at another location, maintain one electronic copy of unedited Construction Drawings in native format.

- B. Maintain at site one physical Record copy of following: Construction Drawings, Specifications, issued Addenda, reviewed Shop Drawings and Product Data, Samples, Change Orders and other Modifications to Contract, field test reports, A/ESIs and certifications. Either at site, or at another location, maintain one record electronic copy of Construction Drawings in native format.

3.3 EXECUTION REQUIREMENTS

A. Record Drawings:

- 1. Shop Drawings may be utilized if required to show actual physical conditions, completely and accurately. If the Shop Drawings are utilized:
 - a. Show a cross-reference on the Construction Drawings.
 - b. For incorporation into Record Electronic Drawing:
 - 1) Insert a Sheet numbered with an extension to original applicable Sheet number with the Shop Drawing(s) scanned as .PDF and inserted as a Detail.
 - a) Assign a Detail Name and Number.
 - b) Utilize functionality of CAD program to further illustrate important details.
- 2. Dimension depths of various elements of foundation and drilled piers in relation to first floor and/or grade datum.
- 3. Tape a copy of RFI/response, Change Orders, A/ESIs, etc. to backside of previous page of affected Construction Drawing Sheet.

B. Record Specifications and Addenda:

- 1. Refer to individual Specification Sections.

C. Record Product Data:

- 1. Refer to individual Specification Sections.

D. Record Sample(s) and/or Mock-ups:

- 1. Refer to individual Specification Sections.

E. Record Submittals:

- 1. Refer to individual Specification Sections.

3.4 Thru 3.7

- A. No additional requirements.

3.8 CLOSE-OUT:

A. Provide:

- 1. Record Drawings,

2. Printed CAD of Record Electronic Drawings plus CD with .dwg files of Record Electronic Drawings,
 3. Record Specifications,
 4. Record Product Data,
 5. Record Samples not incorporated into the Final Construction and not to be retained by TDCJ, and
 6. Record Submittals.
- B. Retain possession of Samples not incorporated into the Final Construction and not retained by TDCJ.
- C. A/E's certification shall only indicate that the compiled record information as submitted is accurate to the extent as can be verified by A/E's records and shall not be interpreted as an approval for any other purpose.
1. If A/E cannot provide certification statement due to inaccurate or incomplete Record Documents, the documents shall be returned for correction.

END OF SECTION
[Revision February 2016]

SECTION 03 30 00 – CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for cast-in-place concrete including reinforcement, concrete materials, mixture design, placement procedures, and finishes; to include repair of surface defects of concrete, finishing concrete surfaces including both formed and unformed surfaces, and preparation of concrete floor to receive finish flooring.

PART 2 - PRODUCTS, EQUIPMENT, MATERIAL AND/OR REQUIRED FIELD SERVICES

2.1 PRODUCT REQUIREMENTS

- A. Products, equipment, material and/or services provided under this Section shall comply with:
1. Building Code Requirements for Reinforced Concrete, ACI 318
 2. Specification for Structural Concrete, ACI 301
 3. Specifications for Tolerances for Concrete Construction and Materials ACI 117
- B. Additional Source and/or Manufacturer Limitations:
1. Each type of cement of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
 2. A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

2.2 PRODUCT, EQUIPMENT AND/OR MATERIAL REQUIREMENTS:

- A. Formwork:
1. Formwork and formwork accessories according to ACI 301.
- B. Steel Reinforcement
1. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
 2. Plain-Steel Wire: ASTM A 82 as-drawn.
 3. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
 4. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.
- C. Concrete Materials:
1. Cement: Gray Portland cement, ASTM C150, Type II, with early rise admixture except:
 - a. Type III may be used when specifically authorized by A/E.
 - b. Use same brand of cement used in concrete mix design.
- D. Admixtures: Use following admixtures as required or approved.

1. Air-Entraining Admixtures: ASTM C260, liquid vinsol resin compound compatible with chemical admixtures used.
 2. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - a. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - b. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - c. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - d. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - e. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - f. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
 3. High-Range Water Reducer (Superplasticizer): ASTM C-494, Type F or G.
- E. Aggregates: Use coarse aggregate from only one source and fine aggregate from only one source.
1. Coarse aggregate: Normal weight, gravel, crushed gravel or crushed limestone, ASTM C 33.
 2. Fine aggregate: Limestone or natural sand, ASTM C 33. Natural sand may be used with limestone coarse aggregate.
 3. Limestone aggregate shall meet following additional requirements:
 - a. Clean, hard, strong and durable particles free of chemicals, coatings of silt or clay, or other fine materials that may affect hydration and bond of cement paste.
 - b. High-calcium limestone (minimum 95% CaCO₃ and maximum 3.5% MgCO₃) with maximum Los Angeles Abrasion loss of 38%; when tested in accordance with ASTM C 131 or ASTM C 535.
 - c. Tested for soundness in accordance with ASTM C 88. Maximum loss not to exceed 18% after 5 cycles of the magnesium sulfate test.
- F. The maximum size of coarse aggregate: Not to exceed 1/5 narrowest dimension between sides of forms nor 1/3 depth of slabs, except as otherwise scheduled.
- G. Curing Materials:
1. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
 2. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
 3. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
 4. Water: Potable.
 5. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- H. Related Materials:

1. Vapor Retarder: Multi-ply reinforced polyethylene sheet, ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 10 mils thick.
2. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

I. Concrete Mixtures:

1. Comply with ACI 301 requirements for concrete mixtures.
2. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301
 - a. Minimum Compressive Strength: 5000 psi at 28 days, unless otherwise indicated.
 - b. Slump Limit: 4 inches, plus or minus 1 inch, unless otherwise indicated.
 - c. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor slabs to receive troweled finished to exceed 3 percent.

J. Concrete Mixing:

1. Ready-Mixed Concrete: Require measured, batched, mixed, and delivered concrete according to ASTM C 94/C 94M.
 - a. Collect batch ticket information for each batch discharged and used in the Work, indicating Project Name, MWR number, date, mix type, mix time, quantity, and amount of water added. Submit with daily report.
 - 1) Record approximate location of final deposit in structure and include in final batch ticket information.
2. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - a. Collect batch ticket information for each batch discharged and used in the Work, indicating Project Name, MWR number, date, mix type, mix time, quantity, and amount of water added. Submit with daily report.
 - 1) Record approximate location of final deposit in structure and include in final batch ticket information.

K. Bonding Agents, Injection Resins, and Mixes:

1. All products shall be manufactured for application, scheduled finish, and appropriate environment to include interior vs. exterior.
2. All mixes shall be mixed according to Manufacturer's instructions and recommendations.
3. Comply with the following Standards as applicable:
 - a. C 881/C 881 M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
 - b. C 887 - Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar
 - c. C 928/C 928 M - Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs Flex-Con by Euclid Chemical Co.
 - d. C 932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering

- e. C 1059/C 1059 M - Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete
 - f. C 1107/C 1107 M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
4. Acceptable manufacturer's:
- a. Euclid Chemical Co.
 - b. Master Builders.
 - c. Sika Chemical Co.
 - d. A/E approved equal

2.3 REQUIRED FIELD SERVICES

- A. No additional requirements.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. No additional requirements.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY SUBMITTALS

- A. In compliance with requirements of ACI 301:

1. For each type of cement, aggregate, and admixtures proposed to be used for subject project, certification of 1.5.A of this Section.
 - a. For bulk cement, provide Mill Certificate.
2. Admixture Certification:
 - a. Manufacturer's product data sheet.
 - b. Certification that the admixtures proposed for use with cement containing fly ash are compatible with the fly ash.
 - c. Certification that admixtures proposed for use along with a super plasticizer are compatible with proposed super plasticizer.
3. Air-Entraining Admixture Requirements:
 - a. Manufacturer's instructions to control percent of air content under every condition, including temperature variations and presence of other admixtures.
4. Chemical Admixtures Requirements:
 - a. Manufacturer's instructions for quantities and types to be used under various temperature and job conditions to produce a uniform, workable concrete mix.
 - b. Submit evidence of compatibility with other admixtures proposed for use in the design mix.
5. Design Mixes:
 - a. Test data on proposed design mixes for each type of concrete in the project including each strength class and any variations in fly ash source and quantity, admixture, aggregate source or maximum coarse aggregate size. The mix is to be proportioned by one of the following three methods as outlined in ACI 318:
 - 1) Field Experience Method
 - 2) Laboratory Trial Batch Method
 - 3) ACI 318 - Table 5.4

- b. Include type and brand of cement used; mixed design proportions; brand, type and amount of each admixture; brand and amount of fly ash; slump, amount of entrained air; aggregate sources, gradations, specific gravity and coarse aggregate dry rodded unit weight; total water (including moisture in aggregate); water/cement ratio; and compressive strength test results for 7 and 28 days.
 - c. Review and acceptance of design mix does not relieve Contractor/Vendor of responsibility to provide concrete of quality and strength required by the Construction Documents.
6. Fly Ash Certification:
- a. Fly ash producer's documentation of quality, control procedures and compliance with specification.
7. High-Range Water Reducer (Superplasticizer):
- a. Submit proposed plan for measuring and adding superplasticizer to concrete mix at job site.
 - b. Submit a dosing area on site with holding tanks and metering devices.
 - c. Submit Manufacturer's technical information on the superplasticizer proposed for use.
 - d. Identify portions of project on which superplasticizer is proposed for use.
8. Hot and Cold Weather Concrete Plan:
- a. Proposed plans for hot and cold weather concrete. Review and acceptance of proposed procedure will not relieve the Contractor/Vendor of responsibility for the quality of finished product.
9. Jointing Layout:
- a. Proposed layout of construction and control joints. Identify each type of joint in layout.
10. Limestone Aggregate Test Reports:
- a. Test data confirming that limestone aggregate proposed for use on project conforms to specifications.
11. Bonding Agents, Injection Resins, and Mixes:
12. Manufacturer's product data sheets.

PART 3 - EXECUTION

3.1 INSTALLERS QUALIFICATIONS

- A. For other than TDCJ personnel:
 - 1. An individual with one (1) year of documented experience placing concrete as specified for subject project shall be on project site during installation.

3.2 PREPARATION

- A. Verify field measurements and locations for planned elements in all locations prior to rough-in.
- B. Coordinate with other trades to avoid damages caused by conflicting requirements.
- C. Coordination:

1. Coordinate schedules of concrete pours to allow adequate time for installation of other related work.
2. Coordinate placement of anchor bolts and other embedments to be cast into concrete.
3. Coordinate size and location of mechanical and electrical equipment concrete pads.

3.3 EXECUTION

A. Formwork

1. Design, construct, erect, brace, and maintain formwork according to ACI 301.

B. Vapor Retarders

1. Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
 - a. Lap joints 6 inches and seal with manufacturer's recommended adhesive or joint tape.

C. Steel Reinforcements

1. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
 - a. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

D. Joints

1. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
2. Construct Joints: Locate and install so strength and appearance of concrete are not impaired, as approved by A/E or designee.
3. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces such as column pedestals, foundation walls, grade beams, and other locations as indicated by conditions.
4. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

E. Concrete Placement

1. Comply with ACI 301 for measuring, batching, mixing, transporting, and placing concrete.
2. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
3. Consolidate concrete with mechanical vibrating equipment.

F. Finishing Formed and Related Unformed Surfaces

1. Unfinished Surfaces:
 - a. A finish is not required on surfaces concealed from view, ie; above ceilings, crawl spaces, chases or below grade, unless otherwise indicated.
 - b. Exposed to View Surfaces:

- 1) Exposed to view walls shall receive a Grout Cleaned Finish in accordance with ACI 301, Chapter 10.
 - 2) After stripping of forms and prior to finishing operations, lightly sandblast walls to expose air pockets and other subsurface defects. Patch tie holes and defects. Rub fins and joint marks with wooden blocks to leave a smooth, unmarred finished surface.
 - 3) Exterior face of perimeter grade beams shall have a smooth form finish extending to 4 in. below grade produced using smooth form finish materials in as large sheets as practicable and with joints taped or caulked.
2. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding 1/2 inch.
 - a. Apply to concrete surfaces not exposed to public view.
 3. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch.
 - a. Apply to concrete surfaces exposed to public view, or to be covered with a coating or covering material applied directly to concrete.
 4. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

G. Finishing Slabs and Similar Unformed Surfaces

1. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
2. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.
 - a. Do not further disturb surfaces before starting finishing operations.
3. Shaping to Contour: Use strike-off templates or approved compacting-type screeds riding on screed strips or edge forms to bring concrete surface to the proper contour.
4. Consolidation: Thoroughly consolidate concrete in slabs and use internal vibration in beams and girders of framed slabs and along bulkheads of slabs on grade. Obtain consolidation of slabs and floors with vibrating bridge screeds, roller pipe screeds, or other approved means. Concrete to be consolidated shall be dry as practicable. Do not permit manipulation of surfaces prior to finishing operations.
5. Tolerances for Finished Surfaces: Check tolerances by placing a straightedge of specified length anywhere on slab. Gap between slab and straightedge shall not exceed tolerance listed for specified class and is non-cumulative.

Class	Straightedge Length In Feet	Tolerance In Inches
A	10	1/8
B	10	1/4

6. Scratch Finish: Apply scratch finish to surfaces to receive concrete floor topping or bonded cementitious floor finishes unless otherwise indicated. After placing

- slabs, strike off to a plane to a tolerance not exceeding ¼ inch in 10'-0": when tested with a 10 foot straightedge. Slope surfaces uniformly to drains. After leveling, roughen surfaces before final set with stiff brushes, brooms, or rakes.
7. Float Finish: Apply float finish to surfaces indicated on surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing; or fluid-applied or direct-to-deck-applied membrane roofing.
 8. After concrete has been placed, struck off, consolidated and leveled, do not work further until ready for floating. Begin floating when water sheen has disappeared, or when the mix has stiffened sufficiently to permit proper operation of a power-driven float. Consolidate surface with power-driven floats. Use hand floating with wood or cork-faced floats in locations inaccessible to a power-driven machine and on small, isolated slabs.
 9. Recheck tolerance of the surface after initial floating with a 10-foot straightedge applied at not less than two different angles. Cut down high spots and fill low spots to Class B tolerance. Immediately refloat slab to uniform, smooth, granular texture.
 10. Provide a floated finish to surfaces that are to receive a trowel finish and for pit floors and trench floors.
 11. Trowel Finish: Apply a hard trowel finish to surfaces indicated on slab surfaces exposed to view or to be covered with resilient flooring, carpet, paint, or another thin film-finish coating system.
 - a. To obtain a troweled finish, apply a floated finish as previously specified. After power floating, use a power trowel to produce a smooth surface which is relatively free of defects but which may still contain some trowel marks. Do additional trowelings by hand after surface has hardened sufficiently. Do final troweling when a ringing sound is produced as trowel is moved over surface. Thoroughly consolidate surface by hand troweling operations.
 - b. Produce a finished surface free of trowel marks, uniform in texture and appearance and conforming to Class A tolerance.
 - c. Provide a troweled finish for interior floors except those which are specified to have scratch finish.
 - d. Provide a troweled finish for exterior slabs that are to receive broom finishes.
 12. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
 13. Nonslip Broom Finish: Apply a nonslip broom finish to exterior concrete platforms, steps (stoops), and ramps. Immediately after trowel or float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

H. CONCRETE SURFACE REPAIRS

1. Definition - Defective Areas:
 - a. Formed Surfaces: Concrete surfaces requiring repairs includes honeycombs, rock pockets and voids exceeding 1/4 in. in any dimension, holes left by tie rods or bolts, cracks in excess of 0.05 in. wide for slabs-on-grade, cracks in excess of 0.025 in. wide in other concrete members and other defects that affect durability or structural integrity of concrete.

- b. Unformed Surfaces: Concrete surfaces requiring repair includes surface defects such as crazing, cracks in excess of 0.05 in. wide for slabs-on-grade, cracks in excess of 0.025 in. wide in other concrete members, popouts, spalling and honeycombs.
 - c. Exposed to View Surfaces: Concrete surfaces requiring repair includes defects which can be seen through a painted coating. This applies to vertical surfaces which are exposed to view and not covered up by architectural finishes.
2. Classification:
- a. Structural Concrete Repair: Major defective areas in concrete members that are load carrying, are highly stressed, and are vital to structural integrity of structure shall require structural repairs, including cracks in slabs-on-grade in excess of 0.05 in. wide and cracks in other concrete members in excess of 0.025 in. wide.
 - 1) Structural concrete repairs shall be made using a two component epoxy product as approved by A/E.
 - b. Cosmetic Concrete Repair: Defective areas in concrete members that are non-load carrying and minor defective areas in load carrying concrete members shall require cosmetic concrete repair, including cracks in exposed to view surfaces which are not wide enough to be classified for structural concrete repairs, but are wide enough to be seen through a painted coating.
 - 1) Cosmetic concrete repairs may be made using a non-epoxy non-shrink patching mortar and bonding compound or epoxy patching mortar manufactured for application.
3. Repairing Structural Surface Defects: Repair defective areas immediately after removal of forms. Remove honeycombed and other defective concrete down to sound concrete but in no case to a depth less than one-half inch. Make edges of cuts perpendicular to concrete surface. Utilizing an epoxy patching mortar manufactured for application and approved by A/E, prepare defective area per Manufacturer's instructions and apply epoxy patching mortar in accordance with Manufacturer's instructions.
4. Repairing Structural Concrete Cracks: Repair defective areas with a two-component epoxy resin suitable for injection into cracks. Prepare defective area and inject epoxy products in accordance with Manufacturer's instructions.
5. Repairing Cosmetic Surface Defects:
- a. Defective Areas Greater Than 1/8 in. Deep: Repair defective areas immediately after removal of forms. If two component epoxy products are used, follow structural surface defects procedure. If a non-epoxy patching mortar is used, remove honeycombed and other defective concrete down to sound concrete but in no case to a depth less than one inch. Make edges of cuts perpendicular to concrete surface. Dampen defective area and a strip 6 inches wide surrounding area to be patched. Coat surface with bonding compound in accordance with Manufacturer's instructions. Apply premixed patching mortar over areas to be patched. Thoroughly

consolidate mortar into place and strike off to leave patch slightly higher than surrounding surface. Leave undisturbed for at least one hour before final finishing. Keep patched area damp for 7 days. Do not use metal tools in finishing patches in a formed wall which will be exposed.

6. Defective Areas 1/8 in. Deep or Less: Use Grout Cleaned Finish procedures.
7. Tie Holes: Patch holes immediately after removal of forms. After cleaning and thoroughly dampening tie hole, fill solid with patching mortar.
8. Cosmetic Concrete Cracks: Grind concrete to form a 1/2 in. deep groove along length of crack. In other areas follow patching procedure for repairing defective areas greater than 1/8 in. deep.
9. Surfaces inside Cell Units: Use epoxy patching mortar to fill grooves and for patching other defects. Follow structural surface defects procedure.

I. Sub-Floor Maintenance and Preparation

1. Prepare concrete subfloors scheduled to receive finish floor coverings:
 - a. Prior to installation of finish floor coverings, remove dirt, oil, grease, paint and other foreign matter from surfaces.
 - b. Examine surfaces for holes, cracks and other abrasions, and fill with floor-leveling compound as required for scheduled finish.
 - c. Examine surfaces for deviations beyond allowable tolerances. Fill depressions with floor-leveling compound as required for scheduled finish and grind down high spots to within allowable tolerances.
 - d. Trowel and featheredge leveling compound to a smooth and level surface.
2. Leave sub-floors clean, true to plane within allowable tolerances, and ready to receive finish flooring.

3.4 QUALITY CONTROL

- A. Remove and replace concrete that does not comply with requirements of this Section at no additional cost to TDCJ.
- B. Laboratory Control and Tests: Per requirements of Section 01 45 23 – Testing and Inspection Services, engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements of this Section.
- C. Tests: Perform according to ACI 301.
 1. Testing Frequency: One composite sample shall be obtained for each day's pour of each concrete mix exceeding 5 cu. yd. but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

3.5 THRU 3.8

- A. No additional requirements.

END OF SECTION 03 30 00
[March 2016]

SECTION 26 00 00 - BASIC ELECTRICAL METHODS [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. General requirements for electrical installations, including electrical connections to equipment specified under other sections, if applicable.

PART 2 - PRODUCTS, EQUIPMENT, MATERIALS AND/OR REQUIRED FIELD SERVICES

2.1 GENERAL REQUIREMENTS:

- A. Equipment, products, material, and/or services provided under Division 26 shall comply with:

1. Terms and conditions of the electrical utility and other authorities having lawful jurisdiction pertaining to the work required.
2. National Electrical Code (NEC).
3. National Electrical Contractors Association (NECA) Standards
4. National Electrical Safety Code (NESC).
5. American National Standards Institute.
6. Conform to applicable codes and regulations regarding toxicity of combustion products of insulating materials.
7. All material shall be listed, inspected, and approved by a nationally accepted testing laboratory such as UL and/or ETL for purpose and conditions. All material shall bear the UL or ETL label where available.

- B. The electrical requirements for equipment specified in Division 26 and other Divisions, if applicable, are based on information available at the time of design.

1. If furnished elements have electrical requirements other than specified, make required changes to wire and conduit size, controls, overcurrent protection, installation accommodations, and perform coordination with other trades as required.
2. Employ an A/E, either directly or by contract, to sign/seal required changes and document on an RFI.
3. Submit RFI to A/E of Record for approval.

2.2 PRODUCT, EQUIPMENT AND/OR MATERIAL REQUIREMENTS

- A. No splices or taps with crimp or indenter-type connectors.
- B. All bolts, nuts, and washers used to connect connections and terminations to bus bars or other termination points shall be zinc-plated, cadmium-plated, or steel.
- C. As required per individual Division 26 Specification Sections.

2.3 GENERAL REQUIRED FIELD SERVICES

- A. Field Inspections: If required for warranty purposes for elements provided under Division 26, provide for inspection of installation by manufacturer trained and certified personnel.
- B. Start-Up: If required for warranty purposes for elements provided under Division 26, provide for start-up by manufacturer trained and certified personnel.
- C. Training: If required for warranty purposes for elements provided under Division 26, provide for training by manufacturer trained and certified personnel.

2.4 GENERAL WARRANTY REQUIREMENTS (PRODUCT, EQUIPMENT, MATERIAL, AND/OR FIELD SERVICES)

- A. As required by individual Specification Sections.

2.5 GENERAL SUBMITTALS (PRODUCT, EQUIPMENT, MATERIAL, AND/OR FIELD SERVICES)

- A. Manufacturer's catalog data, cut sheets, testing data, schematic drawings, etc., for elements to be provided under Division 26.
- B. For elements specified under other than Division 26 sections requiring electrical connection, if applicable, shop drawings, product data, and manufacturer's instructions for proposed elements demonstrating electrical connection requirements together with product data for proposed wiring device(s) indicating application conditions and limitations of use stipulated by Product testing agency.

PART 3 - EXECUTION

3.1 GENERAL INSTALLERS QUALIFICATION REQUIREMENTS

- A. For installers other than TDCJ personnel: For all installation work under Division 26 Sections:
 - 1. Electrician licensed under Subchapter D, Occupations Code, unless otherwise specifically identified for special installations.
 - 2. A person with documented experience for installations similar in scope, or larger, shall be on project site while installation of elements provided under Division 26 is in progress.

3.2 GENERAL PREPARATION REQUIREMENTS

- A. Determine connection locations and requirements for all elements to be electrically connected as part of project scope, including elements specified in other Divisions, if applicable.
 - 1. Refer to manufacturer reference drawings to determine manufacturer specific conduit and wiring requirements and provide conduit, wiring, boxes and devices as indicated on these documents.

2. Provide and install matching cord/receptacle for all equipment not furnished with such equipment and required for scope of project.
 3. Verify and install power and control wiring as required to serve equipment per manufacturer recommendations and instructions and per NEC.
- B. Sequence rough-in of electrical connections to coordinate with installation schedule for equipment.
- C. Sequence electrical connections to coordinate with start-up schedule for equipment.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Fabrication, erection and installation of the complete electrical system shall be done in accordance with accepted good practice and shall proceed in an orderly manner so as not to impede the progress of the project.
1. Comply with latest published version of:
 - a. American National Standards Institute (ANSI)
 - b. American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) – 90.1
 - c. National Electrical Code (NEC)
 - d. National Electrical Safety Code (NESC)
 - e. National Electrical Installation Standards (NEIS)
 - f. National Electrical Testing Association (NETA)
 2. Check all areas and surfaces where electrical equipment material is to be installed, removed or relocated and report any unsatisfactory conditions before starting work. Commencement of work signifies acceptance of existing conditions.
 3. Surfaces requiring coatings shall be completed prior to installation of any electrical work on these surfaces.
- B. All equipment and material shall be installed and connections made in accordance with the applicable manufacturer's recommendations, instructions and applicable trade standards.
- C. All work shall be concealed in walls, ceilings, chases, etc. to the extent possible, including conduit serving roof-mounted equipment.
1. If project objectives require provision of roof-mounted equipment requiring electrical connection, if available from proposed manufacturer, equipment that provides for connections interior to the mounting curb shall be provided.
 - a. Where connections interior to the mounting curb are not available from proposed manufacturer, connections shall be accomplished meeting specifications for Exposed areas.
 - 1) Rigid conduit shall be attached and supported per trade standards.
 - 2) Roof mounting of conduit and/or provided supports shall be approved by A/E prior to installation.
 2. In areas identified as Exposed:

- a. All conduit shall be rigid galvanized steel secured with two-hole straps with security-type screws to within 12-inches of enclosure or connection. Make final connections to equipment using flexible conduit. Use liquid tight flexible conduit with watertight connectors in damp or wet locations.
 - b. All junction boxes and similar elements, regardless of location and conditions, shall not have knock-outs and be provided with covers secured with security type screws.
- D. Do not install conductors until raceway system is complete and properly cleaned.
 - E. Pulling Lubricant: Use a manufacturer-approved wire-pulling compound when pulling large conductors and where necessary for smaller conductors.
 - F. Appearance: Neatly and securely bundle or cable all conductors in an enclosure using nylon straps with a locking hub or head on one end and a taper on the other.
 - G. Tighten electrical connectors and terminals, including screws and bolts, in accordance with Manufacturer's published torque tightening values. Where Manufacturer's torqueing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A and UL 486B.
 - H. For electrical connections to electrically energized equipment:
 - 1. Install disconnect switches, controllers, control stations, and control devices as required for project scope.
 - a. Modify equipment control wiring with terminal block jumpers as required.
 - 2. Install interconnecting conduit and wiring between devices and equipment.
 - a. Unless otherwise indicated, connection "runs" greater than five (5)-ft in length shall be made utilizing rigid conduit to within 12-in of connection. Make final connections to equipment using flexible conduit. Use liquid tight flexible conduit with watertight connectors in damp or wet locations.
 - b. Make wiring connections using wire and cable with insulation suitable for temperatures encountered in heat producing equipment.
 - c. Install receptacle outlet where connection with attachment plug is required. Install cord and cap where field-supplied attachment plug is required. Install matching cord/receptacle for all equipment provided for project scope not furnished with such equipment.
 - d. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.
 - 3. Check and modify phase connections as required for proper motor rotation.
 - 4. Make final connection to equipment only after equipment supplier (TDCJ Maintenance personnel for existing) verifies acceptance to receive and approves energization in writing.

3.4 GENERAL QUALITY CONTROL REQUIREMENTS

- A. Perform all testing required by Division 26 Sections for conformance with specifications, project requirements and required by manufacturers of elements

installed as part of project scope prior to connection to permanent utility unless other is approved in writing.

3.5 COMMISSIONING

- A. Where complete electrical systems are installed as part of project scope, in addition to requirements under other Division 26 Specification Sections, prepare Prefunctional Checklist(s) and Functional Performance Test(s) (FPT) for each independent electrical system, developed from, at minimum, Manufacturer's Detailed Start-Up procedures, full Sequences of Operation, Operating and Maintenance data, Performance data, Functional Performance Test Procedures, Control Drawings, and details of other required test(s) and as recommended by applicable trade testing standards.
1. Incorporate Shop Drawings and other product submittal data for elements provided under other Divisions.
 2. Incorporate information from Start-up certification forms.
 3. Incorporate testing required to confirm accuracy and functionality for interfaces between two systems or equipment from differing manufacturers.

3.6 GENERAL INSTALLATION SUBMITTALS

- A. Ten (10) days prior to Commissioning or Pre-Final Inspection, whichever is earlier, submit drafts of Prefunctional Checklist(s) and Functional Performance Test(s) for review and approval.

3.7 GENERAL CLOSE-OUT REQUIREMENTS

- A. Submit completed Prefunctional Checklist(s) and Functional Performance Test(s).

END OF SECTION
[February 2016]

SECTION 26 05 13 - MEDIUM VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 GENERAL

- A. Requirements for conductors, connectors, and connections for wiring systems rate 600 V and above.

PART 2 - PRODUCTS, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES

2.1 GENERAL

1. For high temperature applications, use ratings per NEC for ambient conditions.
2. Stranded conductors not terminated at solderless connectors shall be furnished with copper connecting lugs, drilled and reamed the full diameter of the bare conductors.
3. Mains and feeders shall run their entire lengths in continuous sections without joints or splices.

B. Additional Source and/or Manufacturer Qualifications:

1. Cables tested and inspected according to ICEA S-97-682 before shipping.
2. Strand-filled cables tested for water-penetration resistance according to ICEA Ti31-610, using a test pressure of 5 psig (35 kPa).

2.2 CABLES

A. Cable Type: UL Type MV105.

B. Comply with UL 1072, AEIC CS 8, ICEA S-93-639, and ICWA S-97-682

C. Conductor Material:

1. Annealed uncoated copper single conductor (No aluminum)
2. Conductor Stranding: Compact round, concentric lay, Class B per ASTM B-496.
3. Strand Filing: Conductor interstices are filled with impermeable compound.
4. Strand Screen: Extruded semiconducting strand screen.

D. Conductor Insulation: Ethylene-propylene rubber (EPR).

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1. Meets or exceeds electrical and physical requirements of ICEA S-93-639 and UL 1072.
 2. Voltage Rating for 4160 volt system: 8 kV.
 3. Insulation Thickness: 133 percent insulation level.
 4. Soft-drawn annealed copper.

E. Shielding: 5 mil bare copper tape, helically applied over semiconducting insulation shield.

F. Cable Jacket: Chlorosulfonated polyethylene (CPE)

G. Manufacturer's: Subject to compliance with requirements, provide products by one of the following:

1. General Cable Technologies Corporation.
2. Kerite Co. (The); Hubbell Incorporated.
3. Okonite Company (The).
4. Pirelli Cables & Systems NA
5. Southwire Company
6. Or A/E approve equal

2.3 TERMINATING PRODUCTS AND SPLICES

A. Manufacturer's:

1. Raychem Corp.; Telephone Energy and Industrial Division; Tyco International Ltd
2. G&W Electric Company.
3. Elasmold/ Thomas & Betts Corporation
4. RTE Components; Cooper Power Systems, Inc.
5. Scotch 3M; Electrical Products Division.
6. Or A/E Approved Equal

2.4 SOURCE QUALITY CONTROL

1. Test and inspect cables according to ICEA S-97-682.
2. Test strand-filled cables for water-penetration resistance according to ICEA T131-610, using a test pressure of 5 psig (35 kPa).

PART 3 - EXECUTION

3.1 INSTALLERS QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. No additional requirements.

3.3 INSTALLATION

- A. Install cables according to IEEE 576.
- B. Install separable insulated-connector components as follows:
1. Protective Cap: At each terminal junction, with one on each terminal to which no feeder is indicated to be connected.
 2. Portable Feed-Through Accessory: Three.
 3. Standoff Insulator: Three.
- C. Arc Proofing: Unless otherwise indicated, arc proof medium-voltage cable at locations not protected by conduit, cable tray, direct burial, or termination materials. In addition to arc-proofing tape manufacturer's written instructions, apply arc proofing as follows:
1. Clean cable sheath.
 2. Wrap metallic cable components with 10-mil (250-micrometer) pipe-wrapping tape.
 3. Smooth surface contours with electrical insulation putty.
 4. Apply arc-proofing tape in one half-tapped layer with coated side toward cable.
 5. Band arc-proofing tape with 1-inch- (25-mm-) wide bands of half-tapped, adhesive, glass-cloth tape 2 inches (50 mm) o.c.
- D. Ground shields of shielded cable at terminations, splices, and separable insulated connectors. Ground metal bodies of terminators, splices, cable and separable insulated-connector fittings, and hardware.

3.4 QUALITY CONTROL

- A. Prior to energizing installed circuits, perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.1.

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1. Make field adjustments, corrections, and/or repairs to installed products required to achieve compliance.
 2. Perform each visual and mechanical inspection and electrical test stated in NETA ATS (Hi-Pot testing). Certify compliance with test parameters.
 3. After installing medium-voltage cables and before electrical circuitry has been energized, test for compliance with requirements.
 4. Prepare written report recording procedures used, results, and required corrective actions.

3.5 THRU 3.8

- A. No additional requirements.

END OF SECTION 26 05 13
[September March 2016]

SECTION 26 05 26 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

[Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

A. Requirements for grounding system(s) and elements, as applicable for subject project.

1. Main Grounding Electrode System (If a Lightning Protection System is required, such requirements are addressed in separate Section)
2. Circuit and System Grounding
3. Enclosure and Equipment Grounding System
4. Isolated Ground System
5. Signal Reference Grid
6. Static Electricity Grounding and Bonding

Special grounding requirements described in other Sections are supplemental to requirements specified in this Section.

PART 2 - PRODUCTS, EQUIPMENT, MATERIALS AND/OR FIELD SERVICES

2.1 GENERAL REQUIREMENTS

A. Additional Source and/or Manufacturer Qualifications: None.

2.2 PRODUCT, EQUIPMENT AND/OR MATERIAL REQUIREMENTS

A. Grounding Electrodes (Rods)

1. Solid copper, diameter as required for a Maximum Resistance of 10 ohms, 8 ft in direct contact with earth.

B. Ground Electrode Cable/Conductor

1. Bare stranded, soft temper copper cable that conforms to ASTM B8 Standard Specification for Concentric-Lay Stranded Copper Conductors.

C. Equipment Grounding Conductors

1. THHN/THWN insulated copper wire.
 - a. Solid for No.8 AWG and smaller where not subject to vibration or repeated flexing.
2. Stranded for No.6 AWG and larger and
 - 1) Where subject to vibration or repeated flexing,
 - 2) In flexible conduit at motor connections.
3. Bare Copper Conductors: Comply with the following:

- a. Solid Conductors: ASTM B 3
- b. Assembly of Stranded Conductors: ASTM B 8
- c. For use for grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.
- 4. Grounding Conductors: Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.
 - a. Comply with Division 26 Sections for Conductors and Cables;
 - b. For use as applicable by NFPA 70.
 - c. Color:
 - 1) Equipment Grounding Conductors: Green colored insulation
 - 2) Isolated ground: Green colored insulation with continuous yellow stripe
 - d. Use only copper for applications in direct contact with earth, concrete, masonry, crushed stone, and similar materials.
- 5. Underground Grounding Conductors:
 - a. Bare copper, stranded, unless otherwise indicated.
 - b. No. 2/0 AWG minimum.

D. Grounding Bus/Bar:

- 1. Bare, annealed copper bars of rectangular cross section, minimum 12" long, fabricated from ¼ inch thick, 4 inch wide copper stock with 1-3/4" x 2" bolt hole pattern to accept NEMA standard lugs. Mount on 2700 volt standoff insulators.
- 2. Provide 25 ft 4/0 AWG copper pigtail exothermically welded to the ground bar.
- 3. Manufacturer: Harger "GBIT" or A/E approved equal.

E. Ground Plates:

- 1. Listed for application and conditions, tested according to the requirements of IEEE Std. 837 IEEE Standard for Qualifying Permanent Connections Used in Substation Grounding.
- 2. Copper alloy casting with threaded holes at NEMA spacing and a welding stud or compression connection suitable for copper conductor sized for application.
- 3. Manufacturer: Burndy "YGF" or A/E approved equal.

F. Copper Bonding jumpers/straps:

- 1. Copper tape, braided copper conductors, terminated with copper ferrules.
 - a. For use only in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

G. Pipe Grounding Connectors

- 1. Listed copper-alloy for application, conditions, and materials for making cable to pipe connections.
- 2. Manufacturer: O-Z/Gedney "ABG" or "CG" or A/E approved equal.

- H. Conduit Grounding Bushings
 - 1. Listed for application and conditions, galvanized malleable iron, 150 Deg.C rated insulated throat grounding bushings with lay-in type ground cable lugs.
 - 2. Manufacturer: O-Z/Gedney "BLG" or A/E approved equal.
- I. Exothermic Weld Grounding Connections
 - 1. Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
 - a. Underground connections except at Test Wells, unless a disconnect-type connection is required.
 - b. Connection to structural steel.
 - c. Low smoke emission type for interior locations and in vaults.
 - 2. Match mold and weld material to material types, shapes and sizes to be joined.
 - 3. Manufacturer: ERICO Cadweld or A/E approved equal.
- J. Bolted Grounding Connections: Copper or copper alloy, listed for application and conditions.
 - 1. Underground connections where disconnect-type connection is required: bolts, nuts, flat washers and toothed lock washers.
 - 2. Equipment ground conductor connection to equipment grounding conductor terminals: Bolted pressure clamps.
 - 3. Connection to ground rod at Test Wells: Bolted pressure clamps with at least two bolts.
 - 4. Irreversible bolted connections: tamper-resistant bolts and tamper-resistant nuts along with flat washers, and toothed lock washers.
- K. Compression Grounding Connections:
 - 1. Listed for application and conditions, tested according to the requirements of IEEE Std. 837 IEEE Standard for Qualifying Permanent Connections Used in Substation Grounding.
 - a. Terminals, taps, and splices where irreversible compression grounding connections are required.
 - b. Two-hole heavy-duty compression lugs for bolted connections to ground bars, ground plates, and equipment ground pads.
 - 2. Requirements include connector manufacturer's hydraulic compression tools and dies that match the connectors.
 - a. Match connector and die size to material shapes and conductor sizes to be joined.
 - 3. Manufacturer: Burndy "Hyground" or A/E approved equal.
- L. Signal Reference Grid (SRG)

1. Pre-fabricated grid: 2 inch wide by 26 gage copper strips on two foot centers with factory welded crossover connections.
2. Low impedance risers: 2 inch wide by 26 gage copper.
3. Manufacturers: ERICO Cadweld, Harger or A/E approved equal.

M. Static Electricity Grounding and Bonding

1. Static ground bus complete with clamps, connectors, and mounting hardware.
 - a. Ground bus cable: 1/0 AWG bare stranded, soft temper copper cable that conforms to ASTM B8 Standard Specification for Concentric-Lay Stranded Copper Conductors.
 - b. Connectors: Copper compression ring tongue terminals. Requirements include connector manufacturer's compression tools and dies that match the connectors. Manufacturer: Burndy YAV-L or A/E approved equal.
 - c. Cable holders: Preformed copper support loops, 5/8 inch wide. Manufacturer: Thompson Lighting Protection or A/E approved equal.
2. Retractable static grounding reels with an enclosed cable drum of 3/32 inch galvanized cable having a spring compression grounding clamp. Manufacturer: Stewart R. Browne Manufacturing or A/E approved equal.
3. Spring compression grounding clamps having a plier type cast aluminum body and two stainless steel contact points. Manufacturer: Stewart R. Browne Manufacturing or A/E approved equal.
4. Cast bronze clamps for static bonding of metal pipes. Manufacturer: Stewart R. Browne Manufacturing JR150 series or A/E approved equal. Cast bronze or galvanized steel C-clamps for semi-permanent connections to drums and containers. Manufacturer: Stewart R. Browne Manufacturing type EP or A/E approved equal.

2.3 REQUIRED FIELD SERVICES

- A. No additional requirements.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. No additional requirements.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES SUBMITTALS

- A. Product data for equipment to be provided under this section, but requires advance order by manufacturer.

PART 3 - EXECUTION

3.1 INSTALLER'S QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. If project objectives requires abandonment of grounding system elements:
 - 1. Disconnect abandoned grounding and bonding system elements and remove, including that abandoned above accessible ceiling finishes.
 - 2. Provide access to existing grounding and bonding connections remaining active and requiring access by modifying existing installation or installing an access panel.
 - 3. If required by project objectives, extend existing grounding and bonding systems using materials and methods required by NEC.
 - 4. Patch surfaces where elements are removed or otherwise damaged by removal efforts.

3.3 EXECUTION REQUIREMENTS

A. General Installation

- 1. Do not use the grounding systems specified in this section for lightning protection grounding except for connection to the main electrode system at the service entrance ground bar. If applicable, lightning protection grounding system is specified in separate section.
- 2. Install insulated equipment grounding conductor with circuit conductors for the following items in addition to those required by NEC:
 - a. Feeders and branch circuits.
 - b. Lighting circuits.
 - c. Receptacle circuits.
 - d. Single-phase motor and appliance branch circuits.
 - e. Three-phase motor and appliance branch circuits.
 - f. Flexible raceway runs.
 - g. Armored and metal-clad cable runs.
- 3. Install an equipment grounding conductor in nonmetallic raceways unless they are designated for telephone or data cables.
- 4. Drive ground rods until tops are 2 inches below final grade or finished floor, unless otherwise is indicated.
- 5. Use hydraulic compression tools with an embossing die code or other standard visible indication method to provide the correct circumferential pressure for compression connectors. Follow connector manufacturer's installation instructions and use tools and dies recommended by the manufacturer of the connectors.
- 6. Install exothermic welds in accordance with manufacturer's instructions and recommendations. Welds that are puffed up or that show convex surfaces will be rejected.

7. Make connections in such a manner as to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
 - a. Use electroplated or hot-tin-coated materials to assure high conductivity and make contact points closer in order of galvanic series.
 - b. Make connections with clean bare metal at points of contact.
 - c. Make aluminum to steel connections with stainless steel separators and mechanical clamps.
 - d. Make aluminum or galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
 - e. Coat and seal connections involving dissimilar metals with inert material against penetration of moisture to contact surfaces.

B. Main Grounding Electrode System

1. Concrete Encased Electrode: Where available, use the building concrete grade beam or strip footing to make a concrete encased main grounding electrode; use either copper ground cable or reinforcing steel as follows:
 - a. A continuous ground cable in the bottom one-third of the grade beam around the entire perimeter of the building. Use ground cable as indicated on the Drawings, not smaller than the grounding electrode cable and not smaller than 4 AWG. Space cable from the bottom and sides of the grade beam so it has at least 2 inches of concrete coverage.
 - b. Make one or more reinforcing bars located in the bottom one-third of the footing, electrically continuous around the entire perimeter of the building. Use galvanized or uncoated reinforcing bars not smaller than the following sizes based on the total length of the interconnected and paralleled reinforcing bars:

Total length of reinforcing bars: Minimum reinforcing bar size:

112 ft	1-3/8" (#11 bar)
150 ft	1" (#8 bar)
192 ft	3/4" (#6 bar)
223 ft	5/8" (#5 bar)
268 ft	1/2" (#4 bar)

Bond the reinforcing bars together using bare copper ground cable jumpers that are either exothermically welded to the reinforcing bars or connected using hydraulically compressed tap connectors. Use jumpers compatible with the tap fitting that are not smaller than the grounding electrode cable and not smaller than 4 AWG.

2. Supplemental Electrodes: Install a bare copper ground cable not smaller than the grounding electrode cable and not smaller than 4 AWG at least 20 ft long in the concrete envelope for the building electrical service conduits. Position ground cable in concrete to provide not less than 2 inches cover on all sides.
3. Main Ground Electrode Ground Bar:

- a. Install main electrode ground bar in an accessible location in the main electrical room adjacent to the service entrance equipment.
 - b. Make an irreversible connection between the main electrode ground bar and the main grounding electrode conductor; use exothermic weld connection or compression grounding lug with tamper-resistant fasteners.
 - c. Main ground electrode ground bar extensions may be established at additional locations by installing ground bars or ground plates connected to the main electrode ground bar using 4/0 AWG insulated ground conductor with an irreversible connection to each ground bar.
 - d. Connections to the main ground electrode ground bar [or extensions] shall be considered as connections directly to the main ground electrode.
4. Label each newly installed conductor connected to the main ground electrode ground bar or main ground electrode ground bar extensions.

C. Circuit and System Grounding

1. Connect the service entrance equipment ground bus to the main electrode ground bar; use ground cable as indicated on Project Drawings, if provided, or not smaller than the grounding electrode conductor required by NEC and not smaller than 4 AWG.
2. For service entrance equipment with a neutral bus: in the service entrance equipment, connect the neutral bus to the ground bus using a bonding jumper not smaller than the grounding electrode conductor required by the NEC; do not use a bonding screw. Make no other neutral-to-ground connections on the load side of the service entrance disconnect.
3. Separately Derived Systems (SDS) (e.g. dry type transformers, power distribution units, generators, and uninterruptible power supplies):
 - a. For SDS located within vicinity of the main electrical equipment room: connect ground bus of the first disconnecting means for SDS to the main electrode ground bar; use grounding conductor sized as shown on the Project Drawings, if provided, or as required by NEC.
 - b. For SDS that is located remote from the main electrical equipment room and near an effectively grounded metal water pipe or near an effectively grounded structural steel column: connect ground bus of first disconnecting means for SDS to the nearest effectively grounded metal water pipe or effectively grounded structural steel column; use grounding conductor sized as shown on the Project Drawings, if provided, or as required by NEC.
 - c. For SDS that is located remote from the main electrical equipment room and is neither located near an effectively grounded metal water pipe nor an effectively grounded structural steel column: connect ground bus of first disconnecting means for SDS to an extension of the main electrode ground bar; use grounding conductor sized as shown on the Project Drawings, if provided, or as required by NEC.

- d. At the first system overcurrent device or disconnecting means, connect the neutral bus to the ground bus using a bonding jumper sized as required by NEC; do not use a bonding screw. Make no other neutral-to-ground connections on the load side of the separately derived system disconnect.

D. Enclosure and Equipment Grounding

1. Provide permanent and effective equipment, enclosure, and raceway grounding.
2. Bonding Bushings in compliance with NEC.
3. Provide an insulated equipment grounding conductor for each feeder and branch circuit.
4. Connect receptacle grounding terminals to the equipment ground system using minimum 12 AWG equipment grounding conductor. Do not use a "self-grounding" receptacle strap as the only equipment grounding path.
5. Bond raceways served from cable tray using conduit clamps or grounding bushings that are listed and approved for the purpose and conditions.
6. Install busways with a separate, internal equipment ground bus bar. Install separate insulated equipment ground conductor from the ground bus in the switchgear, switchboard, or distribution panel to the equipment ground bar terminal on busway. Size conductor in accordance with NEC.

E. Isolated Ground System

1. Install an isolated ground system as shown on Project Drawings, if provided.
2. In addition to the equipment ground bar, provide a separate, insulated, isolated copper ground bar in panel boards and switchboards supplying isolated ground circuits.
3. Run the isolated grounding conductor together with the phase, neutral, and equipment grounding conductors in isolated ground system feeder and branch circuit conduits.
4. Make the isolated ground conductor the same size as the associated phase conductors.
5. At the first isolated ground system phase conductor overcurrent device or disconnecting means, bond the isolated ground bus to the equipment ground bus. Make no other isolated ground to equipment ground connections on the load side of the separately derived system disconnect.
6. Connect the isolated ground conductors to the isolated ground bars in switchboards and panel boards and to the isolated ground terminals at receptacles and equipment.

F. Signal Reference Grid

1. Install a signal reference grid (SRG) on the concrete subfloor under raised computer flooring as indicated on Project Drawings, if provided. Join pre-fabricated grid sections by exothermic welding. Position copper strip so sharp burrs on edge of strip face down.

2. Bond structure, conduits, water pipes, ducts, etc., entering the computer room to the SRG. Bond to the nearest intersecting point of SRG using 6 AWG grounding conductor.
3. Bond computer equipment to the SRG using low impedance riser (LIR).
 - a. Do not connect LIR to the SRG strip closest to the outside edges.
 - b. Cut LIR to the shortest possible length.
 - c. If length of LIR exceeds 24 inches, use two parallel LIR's. Make the second LIR 20% to 40% longer than the first and connect to equipment at opposite corners.
4. Bond power distribution units and power distribution panel boards to the SRG using LIR.
5. Bond every sixth raised floor pedestal in each direction to the nearest intersecting point of the SRG using 6 AWG grounding conductor. Keep conductors as short as possible

G. Static Electricity Grounding and Bonding

1. Install static electricity grounding and bonding material as indicated on Project Drawings, if provided.
2. Install ground bus cable from the closest of the main electrode ground bar, the main electrode ground bar extension, or effectively grounded building structural steel member to the static electricity grounding and bonding locations indicated on the Project Drawings, if provided.
3. Make connections to and between ground bus cable using compression connectors, nuts, bolts, flat washers, and lock washers. Install compression connectors using tools and compression dies recommended by the connector manufacturer.
4. Install static grounding cable reels at locations indicated on Project Drawings, if provided; coordinate location with luminaires, equipment, piping, and ductwork.
5. Install pipe clamps and C-clamps to bond pipes, drums, and tanks in the static electricity control areas.

3.4 QUALITY CONTROL

A. Inspection by Qualified personnel:

1. Building grounding electrode system. Requirements include the bonding of the foundation reinforcing bars, bonding of the structural steel columns, and bonding of other metallic systems and other grounding electrode systems where applicable.
2. Ground plates and grounding bars.
3. Signal reference grid (SRG).
4. All other underground grounding installations.

B. Inspection and/or Testing by Independent Testing Agency:

1. Perform ground-impedance measurements using the "fall-of-potential" method in accordance with IEEE 81 Guide for Measuring Earth Resistivity, Ground Impedance and Earth Surface Potentials of a Grounding System; unless sufficient spacing of electrodes is impractical for the "fall-of-

potential" method. In such case, perform ground-impedance measurements using either the "intersecting curves method" or the "slope method", referenced in IEEE Std. 81. Investigate and correct ground resistances that exceed the following values:

- a. Service rated 50 kVA or less: as required by the NEC
 - b. Service rated more than 50 kVA but less than 2500 kVA: 5 Ohms
 - c. Service rated 2500 kVA or greater: 1 Ohm
2. Test equipment ground resistances for the listed items utilizing the "two-point method" of IEEE Std. 81. Investigate and correct equipment ground resistances that exceed 0.5 ohm.
- a. Transformers
 - b. Switchgear and Switchboards
 - c. Panel boards
 - d. Generators
 - e. Motor Control Centers
 - f. Motors larger than 1 HP
 - g. UPS Systems
- C. Test static electricity bonding and grounding system utilizing the "two-point method" of IEEE Std. 81. Investigate and correct equipment ground resistances that exceed 10 ohms.

3.5 COMMISSIONING

- A. No additional requirements.

3.6 EXECUTION SUBMITTALS

- A. No additional requirements.

3.7 INSTALLATION AND/OR WORKMANSHIP WARRANTY

- A. No additional requirements.

3.8 CLOSE-OUT

- A. Record Drawings with locations of grounding electrodes installed in compliance with this section.

END OF SECTION 26 05 26
[March 2016]

SECTION 26 05 33 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
[Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

A. Requirements for raceways, fittings, and certain electrical boxes.

1. Section includes requirements for:
 - a. Metal conduit.
 - b. Liquidtight flexible metal conduit.
 - c. Electrical metallic tubing.
 - d. Non-metallic PVC Conduit.
 - e. Fittings and conduit bodies.
 - f. Wall and ceiling outlet boxes.
 - g. Pull and junction boxes.

B. Definitions:

1. EMT: Electrical metallic tubing
2. ENT: Electrical nonmetallic tubing.
3. FMC: Flexible metal conduit.
4. IMC: Intermediate metal conduit.
5. LFMC: Liquidtight flexible metal conduit.
6. LFNC: Liquidtight flexible nonmetallic conduit.
7. PVC: Polyvinyl Chloride
8. RNC: Rigid nonmetallic conduit.
9. RTRC: Reinforced Thermoset Resin Conduit (Fiberglass)
10. NUCC: Nonmetallic Underground Conduit with Conductors

PART 2 - PRODUCTS

2.1 GENERAL

- A. No additional requirements.

2.2 PRODUCT REQUIREMENTS

A. Conduit Requirements

1. Minimum Size:
 - a. 3/4-inch trade size for utilization voltage levels.
 - b. 1/2-inch trade size for communication or signaling voltage levels.
2. Outdoors:
 - a. Exposed: Rigid steel conduit, RTRC (No EMT).

- b. Concealed: Rigid steel, IMC, RTRC.
 - c. Underground: RNC, RTRC (No EMT).
 - d. Connection to Vibrating Equipment (including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven equipment): LFMC.
 - e. Boxes and Enclosures: NEMA 250, Type 3R.
3. Indoors:
- a. All conduits installed in areas identified as 'Exposed' as defined by 01 10 00 - Summary shall be rigid galvanized steel, installed with 2-hole conduit straps utilizing tamper resistant fasteners. This shall include locations with lay-in, type ceilings. All such routing shall be approved by the PA after Award. All other dry indoor areas: EMT.
 - b. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven equipment): FMC; except use LFMC in damp or wet locations (as determined by actual site conditions).
 - c. Damp or Wet Locations: Rigid steel conduit with corrosion resistance or RTRC.
 - d. Boxes and Enclosures: NEMA 250, Type 1; except use Type 4, stainless steel is damp or wet locations (as determined by actual site conditions).
4. Below Slab: Non metallic PVC conduit is acceptable within limitations specified.
5. Below Grade: Use only PVC coated rigid galvanized steel, wrapped rigid steel, or non metallic PVC conduit within limitations specified.
- B. Metal Conduit
- 1. Rigid Steel Conduit: ANSI C80.1.
 - 2. Intermediate Metal Conduit (IMC): ANSI C80.6.
 - 3. Fittings and Conduit Bodies: ANSI/NEMA FB 1; all steel fittings compatible with conduit and tubing materials.
 - 4. Manufacturers:
 - a. Allied.
 - b. Wheatland.
 - c. Or A/E approved equal.
- C. Liquidtight Flexible Metal Conduit
- 1. Description: Interlocked steel construction with PVC jacket.
 - 2. Fittings: ANSI/NEMA FB 1.
 - 3. Manufacturers:
 - a. Ultatite.
 - b. Electri-flex.
 - c. Or A/E approved equal.
- D. Electrical Metallic Tubing (EMT)
- 1. Description: ANSI C80.3; galvanized tubing.

2. Fittings and Conduit Bodies: ANSI/NEMA FB 1; all steel, compression or set screw type.
 - a. Set-screw required for 2 1/2" and larger.
3. Manufacturers:
 - a. Allied.
 - b. Or A/E approved equal.

E. PVC Coated Metal Conduit

1. Description: NEMA RN-1, rigid steel conduit with external PVC coating, 20 mil thick.
2. General: Protective layer may be factory applied or galvanized rigid steel conduit may be applied with two layers of corrosion resistant tape.
3. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel fittings with external PVC coatings to match conduit.
4. Manufacturers:
 - a. Cantex Inc.
 - b. Lamson Pipe Company
 - c. North American Specialty Products
 - d. Robroy Industries
 - e. Thomas & Betts Corporation
 - f. Or A/E approved equal.

F. Non-Metallic PVC Conduit

1. Description: NEMA TC2, Schedule 40 PVC. Flame retardant type resistant to bending and cracking.
2. Fittings and Conduit Bodies: NEMA TC3.
3. Vertical risers and ells installed below grade shall be rigid steel conduit with protective wrapping or galvanized.
4. Joints made with PVC fittings shall be applied with solvent compound after thorough cleaning.
5. Manufacturers:
 - a. Cantex Inc.
 - b. Lamson Pipe Company
 - c. North American Specialty Products
 - d. Robroy Industries
 - e. Thomas & Betts Corporation
 - f. Or A/E approved equal.

G. Other Conduit Fittings

1. Provide insulated nylon conductor protection for all conduits terminating at boxes or other electrical equipment.
 - a. Conduit stubbed to above the ceiling shall have a nylon bushing on the end.
 - b. All conduit stubs for vertical runs up walls and conduits installed between buildings shall be provided with insulated, non-metallic bushings.

2. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.

H. Boxes, Enclosures, and Cabinets

1. Provide manufacturer's standard color paint applied to factory-assembled surface raceways, enclosures, and cabinets before shipping.
2. All boxes installed in areas identified as 'Exposed' as defined in Section 01 10 00 – Summary shall have no "knock-outs".
3. Outlet Boxes:
 - a. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
 - b. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include half-inch male fixture studs where required.
 - c. Cast Boxes:
 - 1) Provide gasketed cover by box manufacturer.
 - 2) Interior applications: ANSI/NEMA FB 1.
 - (a) Type FD where applicable.
 - 3) Exterior or Damp/Wet applications: NEMA 250, Type 4; flat-flanged, galvanized cast iron, surface mounted. Provide cover with flange and stainless steel fasteners.
4. Pull and Junction Boxes:
 - a. For all applications, comply with requirements as for 2.2.H.3, above.
5. Hinged-Cover Enclosures:
 - a. NEMA 250, Type 1.
 - b. Continuous hinge cover and flush latch.
 - c. For metal enclosures: steel, finished inside and out with manufacturer's standard enamel.
6. Cabinets:
 - a. Galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - b. NEMA 250, Type 1.
 - c. Hinged door in front cover with flush latch and concealed hinge.
 - d. Key latch to match panelboards.
 - e. Include metal barriers from manufacturer as required to separate wiring of different systems and voltages.
 - f. Include accessory feet from manufacturer as required for freestanding equipment.
7. Manufacturers:
 - a. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
 - b. Emerson/General Signal; Appleton Electric Company
 - c. Erickson Electrical Equipment Co.
 - d. Hoffman
 - e. Hubbell, Inc.; Killark Electric Manufacturing Co.
 - f. O-Z/Gedney; Unit of General Signal.
 - g. RACO; Division of Hubbell, Inc.
 - h. Spring City Electrical Manufacturing Co.
 - i. Thomas & Betts Corporation

- j. Walker Systems, Inc.; Wiremold Company (The)
- k. Or A/E approved equal.

2.3 THRU 2.5

- A. No additional requirements.

PART 3 - EXECUTION

3.1 INSTALLERS QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. Coordinate with other trades such that control devices are grouped (i.e., thermostats, wall switches, volume controls, etc.).
 - 1. All installations of wireways and gutters for feeders and branch circuits in existing areas shall be pre-approved PA prior to installations.
 - 2. In no case shall the number of conductors in a wireway exceed a count of thirty conductors.

3.3 EXECUTION

- A. General:
 - 1. Complete raceway installation before starting conductor installation.
 - 2. Use tools and equipment designed and intended for specific applications. I.e. tighten set screws of thread less fittings with tools designed for that purpose.
 - 3. Install horizontal raceway runs above water and steam piping. Arrange conduit to maintain headroom and present neat appearance.
 - 4. Maintain adequate clearance between conduit and piping.
 - 5. Maintain 12 inch clearance between conduit surfaces with temperatures exceeding 104 °F.
 - 6. Provide suitable fittings to accommodate expansion and deflection where conduit crosses control and expansion joints.
 - 7. Provide pull string in each empty raceways except sleeves and nipples. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull string.
 - 8. Ground and bond conduit under provisions of Section 26 05 26 – Grounding and Bonding for Electrical Systems.
 - 9. Identify conduit under provisions of Section 26 05 53 Identification for Electrical Systems.
- B. Penetrations:
 - 1. Perform and construct penetrations as may be required by project objectives, unless Project Drawings are provided and Project Drawings indicate penetrations are available or will be accomplished by TDCJ.

- a. Unless otherwise approved in writing, penetrations are NOT available and ARE required as part of project Scope.
 - b. Whether an existing penetration is identified for use for subject project, provide and install products and materials as may be required to meet project objectives for installation.
2. Install conduit/raceways through penetrations constructed to preserve structural and envelop integrity of exterior walls, using products and materials manufactured and recommended for application.
 3. Install conduit/raceways through penetrations constructed to preserve structural integrity of walls. If other sealing requirements are indicated due to hot/cold boundaries or presence of hazardous material, use products and materials manufactured, recommended, and/or listed for application and appropriate for construction material of the wall.
 4. Install conduit/raceways through penetrations constructed to preserve fire resistance ratings, using materials UL-listed for application and methods to match construction of element penetrated.
 5. Install conduit/raceway sealing fittings where required by code that are listed and approved for application and fill with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces.
 6. Roof Penetrations: Unless other is approved in writing, use materials manufactured for application and methods that maintain structural and envelop integrity of the roof.

C. Supports:

1. Arrange supports to prevent misalignment during wiring installation.
2. Fasten conduit supports to building structure and surfaces per best trade practice.
3. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
4. Do not support conduit with wire or perforated pipe straps.
5. Do not attach conduit to ceiling support wires or support devices for other equipment.
6. Remove wire used for temporary supports.

D. Group related conduits into parallel banks and support using a common rack.

1. Construct rack using steel channel.
2. Route parallel and perpendicular to nearby surfaces or structural members and follow surface contours as much as possible.
3. Make parallel bends in parallel banks. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.

E. Boxes:

1. Support boxes independently of conduit.
2. Locate outlet boxes to allow positioning of installed equipment per equipment manufacturer recommendation or as otherwise specified.
3. Use adjustable steel channel fasteners for hung ceiling outlet box.
4. Use gang box where more than one device is mounted together.
5. Use gang box with plaster ring for single device outlets.

6. Large Pull Boxes: Use hinged enclosure in interior dry locations, surface-mounted cast metal box in other locations.
7. Use flush mounting outlet box in finished areas. Install without damaging wall insulation or reducing its effectiveness.
8. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
9. Do not install flush mounting box back-to-back in walls; provide minimum 6 inches separation. Provide minimum 24 inches separation in acoustic rated walls.
10. Use stamped steel bridges to fasten flush mounting outlet box between studs.
11. Refer to Specification Section 26 05 53 – Identification for Electrical Systems for junction box cover labeling.

F. Raceways Embedded in Slabs:

1. Install in middle 1/3 of slab thickness where practical and leave at least 2 inches of concrete cover.
2. Secure raceways to reinforcing rods as required to prevent sagging or shifting during concrete placement.
3. Space raceways laterally as required to prevent voids in concrete.
4. For conduit larger than 1-inch trade size:
 - a. Run parallel or at right angles to main reinforcement.
 - b. Where at right angles to reinforcement, place conduit close to slab support.
5. Change from nonmetallic tubing to Schedule 80 nonmetallic conduit, rigid steel conduit, or IMC before rising above the floor.

G. Conduit buried below grade:

1. Minimum cover for underground conduits shall be 30 inches unless otherwise noted on Project Drawings, if provided
2. Install warning tape per Specification Section 26 05 53 – Identification for Electrical Systems.

H. Stub-ups to above the ceiling: Install a 90 degree turn into the area served by the conduit.

I. Stub-ups through concrete:

1. For slab-on-grade applications, all conduits shall be installed below the slab.
2. All conduits passing vertically through slabs on grade shall be PVC-coated, or galvanized rigid steel.
3. The transition to above grade conduit application shall be below grade.
4. Curved portions on bends shall not be visible above finished slab.
5. Extend to equipment greater than 6" above floor with rigid steel conduit.
6. For equipment less than 6" above the floor, FMC may be used.
7. For plugs flush with floor, install adjustable top or screwdriver-operated, threaded plugs.

J. Stub-ups at poles, equipment, and at building entrances through floor:

1. Install manufactured rigid steel duct elbows.

2. Encase elbows for stub-up ducts throughout the length of the elbow.
 - a. Couple steel conduits to ducts with adapters designed for this purpose and encase coupling with 3 inches of concrete.
 - b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation.

K. Flexible Connections:

1. Use a maximum of 72" of flexible conduit for:
 - a. Recessed and semi-recessed lighting fixtures.
 - b. Equipment subject to vibration, noise transmission, or movement.
 - c. All motors.
2. Use LFMC in damp or wet locations.

L. Terminations:

1. Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against box. Use two locknuts (interior and exterior).
2. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used, align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.

M. Interface with Other Products

1. Coordinate installation of outlet box for equipment connected under other sections. Provide outlet box at mounting heights per equipment manufacturer recommendations.

N. Cleaning and Painting

1. Ducts shall be cleaned with a flexible mandrel assembly.
2. Paint all exposed conduits to match the adjacent finish color at all locations except mechanical rooms.

3.4 THRU 3.8

- A. No additional requirements.

END OF SECTION
[Revision March 2016]

SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

[Standard TDCJ Specifications]

PART 1 - GENERAL

1.1 GENERAL

- A. Requirements for nameplates, labels, cable tags, conduit markers, box markers, and detectable warning tape.

PART 2 - PRODUCTS

2.1 GENERAL

- A. No additional requirements.

2.2 PRODUCT REQUIREMENTS

- A. Nameplates and Labels

1. Engraved three-layer laminated plastic, white letters on black background.
 - a. Locations:
 - 1) Each electrical distribution and control equipment enclosure.
 - 2) Communication cabinets and computer cabinets.
 - 3) Field disconnects, start stop stations, control panels.
 - b. Letter Size:
 - 1) Use 1/4 inch letters for identifying individual equipment and loads.
 - 2) Use 1/4 inch letters for identifying grouped equipment and loads.
 - 3) Use 3/8 inch letters for identifying Main Disconnect equipment.
2. Engraved 304 stainless steel 20 gauge tags:
 - a. Locations:
 - 1) Fire alarm remote test switches.
 - 2) Fire alarm equipment enclosure (FACP, EFACP, Power Supply, etc.)
 - b. Letter Size:
 - 1) Use 1/4 inch letters for identification.

- B. Cable Tag/Conduit/Box Markers

1. Description: Heat-Shrink Polyolefin markers.
 - a. Typed, identifying each termination end point of the conductor.
 - b. RoHS complaint to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.
 - c. DC conductors shall identify polarity.
2. Locations:
 - a. Each conductor at wireway, pull boxes, outlet and junction boxes, and each load connection.
 - b. All conduit penetrations identifying the location of each end.
3. Boxes:
 - a. Label each junction box in accessible locations to indicate the type of system
(i.e.; security; power circuit - 1, 3, 5; etc. to include the type of power; life-safety, critical, etc.).
4. Fire alarm conduits shall be painted with red bands every 10 feet.

- a. Use paint specified for application and project conditions.
- b. At each 10' mark, apply two bands, approximately 1 inch wide each, approximately .5 inch apart. Marks are not required to be "masked" or otherwise to ensure what might be described as "clean lines".
- c. Where 10' mark occurs within 3 feet of beginning or termination of conduit run, application of red bands is not required.

C. DETECTABLE WARNING TAPE

- 1. Description: Acid and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6" wide and 4 mils thick, continuously inscribed with a description of utility, with metallic core encased in a protective jacket, detectable by metal detector when tape is buried up to 30" deep; colored as follows:
 - a. Red: Electric
 - b. Yellow: Gas, oil, steam, and dangerous materials
 - c. Orange: Telephone and other communications
 - d. Blue: Water systems
 - e. Green: Sewer systems

D. Manufacturers

- 1. Brady
- 2. QualTek

2.3 THRU 2.5

- A. No additional requirements.

PART 3 - EXECUTION

3.1 INSTALLER QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. No additional requirements.

3.3 EXECUTION

- A. Install nameplate and label parallel to equipment lines.
- B. Secure nameplate to equipment front using screws or rivets.
- C. If underground conduits are required, identify underground conduits using underground warning tape. Install one tape per trench at 12 inches below finished grade, 6 inches below subgrade under pavements and slabs. Identify all conduit at exposed locations into all boxes, cabinets, etc.
- D. Identify all conductors at every termination indicating endpoints of termination and tag identification as required.
- E. Color coding for phase identification:
 - 1. 120/240V or 120/208V; 3Ph, 4W –
 - Phase A Black
 - Phase B Red
 - Phase C Blue
 - Neutral White
 - Ground Green
 - 2. 277/480V; 3Ph, 4W –

Phase A Brown
Phase B Violet
Phase C Yellow
Neutral Gray
Ground Green

3. 277/480V; 3Ph, 3W –
Phase A Brown
Phase B Orange
Phase C Yellow
Ground Green

Conductor phase and voltage identification shall be made by color-coded insulation for all conductors smaller than No. 6 AWG. For conductors No. 6 AWG and larger, identification shall be made by color-coded insulation, or conductors with black insulation may be furnished and identified by colored electrical tape. Conductor identification shall be provided within each enclosure where a tap, splice, or termination is made.

3.4 THRU 3.8

- A. No additional requirements.

END OF SECTION
[Revision March 2016]

26 08 15 – ELECTRICAL ACCEPTANCE TESTING SERVICES (Medium Voltage)

PART 1 GENERAL

1.1 SUMMARY

- A. Requirements for services of a qualified Electrical Testing Agency (ETA) as required, including:
- B. Acceptance tests, inspections, and system function tests of certain electrical systems, equipment, components, and material (elements) installed per requirements of Division 26.
- C. The following power system studies based on the installed elements WITH in THE SCOPE OF WORK:
 - 1. Final short circuit study
 - 2. Final coordination study
 - 3. Arc-flash hazard analysis
 - 4. Load flow analysis study
 - 5. Stability study

1.2 DEFINITIONS

- A. ETA – Electrical Testing Agency

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Products, equipment, materials, and/or services provided under this Section shall comply with:
 - 1. InterNational Electrical Testing Association - NETA ATS-current edition, Acceptance Testing Specifications (ANSI). NETA ATS forms a part of this specification to the extent referenced.
 - 2. National Fire Protection Association – NFPA
 - a. NFPA 70: National Electrical Code (ANSI) (NEC)
 - b. NFPA 70B: Recommended Practice for Electrical Equipment Maintenance (ANSI)
 - c. NFPA 70E: *Standard for Electrical Safety in the Workplace* (ANSI).
 - 3. Institute of Electrical and Electronics Engineers - IEEE
 - a. IEEE Std 242: IEEE Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems
 - b. IEEE Std 399: IEEE Recommended Practice for Industrial and Commercial Power Systems Analysis
 - c. IEEE Std 1584: *IEEE Guide for Performing Arc-Flash Hazard Calculations*

2.2 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES REQUIREMENTS

- A. Qualifications of Testing and/or Inspection Entities:
 - 1. Authorized to operate in the State of Texas.
 - 2. A member company of the International Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA 1910.7 or as otherwise acceptable to TDCJ and approved in writing.

3. Under the direction of a Registered A/E licensed in the State of Texas and having a minimum of 5 years engineering experience in inspection and testing of electrical elements.
4. Testing equipment calibrated at 12 months intervals by devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.
5. Unless otherwise approved in writing, for applications greater than 600V, testing ETA shall:
 - a. Be an independent testing organization professionally independent of TDCJ, the manufacturers, suppliers, and installers of the equipment or systems to be evaluated.
 - b. Be regularly engaged in the testing of electrical equipment devices, installations, and systems.
 - c. Have a documented quality assurance program, documented inspection and test procedures, and a documented electrical safety program.
 - d. Have successfully completed not less than five acceptance testing, inspection and calibration projects of similar scope to subject project.
 - e. Have a calibration program, and test instruments calibrated in accordance with NETA ATS.
6. Unless otherwise approved in writing, for applications greater than 600 V, testing, inspection, calibration, and adjustments shall be performed or supervised on the Project site by an ETA employee with the following minimum qualifications:
 - a. A minimum of 5 years' experience inspecting, testing, and calibrating electrical distribution and generation equipment, systems, and devices, and
 - b. One of the following certifications/registrations:
 - 1) An engineering technician certified to at least Level III in accordance with ANSI/NETA ETT *Standard for Certification of Electrical Testing Technicians* (ANSI), or
 - 2) An engineering technician certified to at least the NICET ET-grade in Electrical Testing Engineering Technology.
1. For applications at 600V or less: An engineering technician certified by the ETA's internal training/qualification program. As part of the submittal of qualifications, ETA must provide material demonstrating that its certification program is at least equivalent to ANSI/NETA ETT Level III and that the on-site technician's training and certification is up to date.

2.3 REQUIRED FIELD SERVICES

- A. As required per individual specification sections.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. As required per individual specification sections.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES SUBMITTALS

- A. Copies of certificates of calibration for testing equipment utilized by testing entities.

- B. Copies of licenses, certificates, etc. demonstrating qualifications of testing entities and/or laboratories.

PART 3 EXECUTION

3.1 PERFORMANCE QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. Schedule the project to allow adequate time for electrical acceptance testing BEFORE equipment or system is energized.
 - 1. Notify the ETA when equipment becomes available for acceptance inspections and tests.
 - 2. Coordinate work to expedite inspections and tests.
- B. Perform the installation insulation-resistance, continuity, and rotation tests for electrical elements described in each Section of these Specifications before, and in addition to, tests performed by the ETA that are specified in this Section.
- C. Supply suitable and stable electrical power, adequate lighting, and heating or ventilation as required at each test site for the ETA to perform the specified acceptance testing.
- D. Supply one set of the following to ETA prior to the performance of any final testing:
 - 1. Preliminary short-circuit analysis
 - 2. Preliminary coordination study and protective device setting table
 - 3. Complete set of electrical Drawings, Specifications, and any pertinent Change Orders
 - 4. Approved construction submittal documents for material and equipment
 - 5. Site specific hazard notification and safety training.
 - 6. Other information necessary for a safe and accurate test and inspection of the system.

3.3 EXECUTION REQUIREMENTS

- A. General:
 - 1. The ETA shall perform the acceptance tests and inspections.
 - 2. The ETA shall use test methods, follow procedures, and evaluate test values in accordance with the applicable sections of the NETA ATS, the manufacturer's recommendations, and each applicable specification section.
 - 3. Tests identified as optional in NETA ATS are not required unless specified.
 - 4. Where thresholds identified in Table 3 are exceeded, make corrections and re-test.
 - 5. Place equipment in service only after completion of required tests and evaluation of the test results.
- B. Inspection and Test Procedures
 - 1. The ETA shall perform acceptance tests and inspections on electrical elements as identified in the following paragraphs. Perform tests and inspections as specified in the applicable clauses of the NETA ATS and as modified by the following paragraphs:
 - a. Grounding and Bonding for Electrical Systems.

- 1) Test grounding and bonding for each system and circuit rated more than 800 amperes.
 - b. Switchboards
 - 1) Test each switchboard rated more than 800 amperes. Test each included insulated case circuit breaker and power circuit breaker. Test included molded case circuit breakers using the graded approach indicated in Table 2 of this Section.
 - f. Engine-Generators Medium Voltage
 - 1) Test each NFPA 110 Level 1 engine-generator system.
 - 2) Test each NFPA 110 Level 2 engine-generator system rated more than 1000 kW.
 - g. Automatic Transfer Switches Medium Voltage
 - 1) Test each automatic transfer switch associated with an NFPA 110 Level 1 engine-generator system.
 - 2) Test each automatic transfer switch associated with an NFPA 111 Level 1 UPS system.
 - h. Test each automatic transfer switch associated with an NFPA 110 Level 2 engine-generator system rated more than 1000 kW.
 - 1) Test each automatic transfer switch associated with an NFPA 111 Level 2 UPS system rated more than 1000 kW.
 - Lightning Protection Surge Arresters and Suppressors
 - 1) Test lightning protection surge arresters and suppressors for each system and circuit rated more than 800 amperes.
- C. System Function Tests
- 1. The ETA shall develop and perform system function tests on the following elements in accordance with NETA ATS after completion of the inspection and test procedures described above.
 - a. Switchboards
 - 1) Verify proper operation of zone-selective interlock system.
 - 2) Verify proper operation of arc-flash reduction maintenance switch.
 - 3) Verify proper operation of interfaces with building automation system.
 - b. Enclosed Switches and Circuit Breakers
 - 1) Verify proper operation of interlock and shunt trip systems.
- D. Thermographic Survey
- 1. After completion of specified inspection and test procedures and system functional tests, the ETA shall perform system thermographic survey of current-carrying devices rated 800 amperes and greater in accordance with NETA ATS.
 - 2. Conduct thermographic survey with circuits and devices operating within 20 percent of the design load. Provide additional circuit loads as required if building loads are inadequate to obtain required circuit loading.
- E. Power System Studies
- 1. The ETA shall provide power system studies described below based on the installed electrical distribution system and equipment in accordance with procedures described in NETA-ATS and the referenced codes and standards.

- a. Include in the study the effect of all portions of the electrical distribution system including alternate sources of power.
 - b. Address normal system operating configuration plus any plausible alternate configurations and operations that could result in maximum fault condition.
2. Final Short-Circuit Study. Perform final short circuit calculations using procedures outlined in IEEE Std 242.
- a. As a minimum, calculate the short-circuit momentary and interrupting duty on the basis of maximum available fault current at each bus in the distribution system down to the following points in the low-voltage system:
 - 1) 480 volt system where available short circuit current is less than 14,000 amperes RMS symmetrical.
 - 2) 208 or 240 volt system where available short circuit current is less than 10,000 amperes RMS symmetrical.
 - b. Extend the short-circuit study to include the medium voltage branch-circuit overcurrent protective devices for the following systems if present:
 - 1) Safety Class Systems
 - 2) Safety Significant Systems
 - 3) Emergency Systems (NEC Article 700)
 - 4) Legally-required Standby Systems (NEC Article 701)
 - 5) Critical Operations Power Systems (NEC Article 708)
3. Final Coordination Study. Perform final coordination study using procedures outlined in IEEE Std 242.
- a. As a minimum, include in the coordination study all medium voltage classes of equipment from the utility incoming line protective device(s) down to and including each low voltage load protective rated 15 amperes and larger.
 - b. Include on-site medium voltage emergency power systems and standby power systems if present.
 - c. Extend the coordination study to include the medium voltage branch-circuit overcurrent protective devices for the following systems if present:
 - 1) Safety Class Systems
 - 2) Safety Significant Systems
 - 3) Emergency Systems (NEC Article 700)
 - 4) Legally-required Standby Systems (NEC Article 701)
 - 5) Critical Operations Power Systems (NEC Article 708)
4. Arc-Flash Hazard Analysis. Perform arc-flash hazard analysis and shock hazard analyses based on the final short-circuit study and the final coordination study. Use procedures outlined in IEEE Std 1584 and NFPA 70E. Provide the following information in tabular form for the arc-flash warning labels described in Section 26 0553, *Identification for Electrical Systems*:
- a. Flash hazard boundary (inches) calculated in accordance with IEEE Std 1584 or NFPA 70E.
 - b. Arc-flash incident energy (cal/cm²) calculated in accordance with IEEE Std 1584 or NFPA 70E.
 - c. Working distance (inches) selected from IEEE Std 1584 or NFPA 70E (Annex D) based on equipment type.

- d. Hazard/risk category number from NFPA 70E Table 130.7(C)(9) for operations with doors closed and covers on
- e. System phase-to-phase voltage
- f. Condition that exposes worker to electrical shock hazard
- g. Limited Approach Boundary from NFPA 70E Table 130.2(C) based on nominal system phase-to-phase voltage.
- h. Restricted Approach Boundary from NFPA 70E Table 130.2(C) based on nominal system phase-to-phase voltage.
- i. Prohibited Approach Boundary from NFPA 70E Table 130.2(C) based on nominal system phase-to-phase voltage.
- j. Class for insulating gloves based on system voltage (e.g. Class 00 for up to 500 volts).
- k. Voltage rating for insulated or insulating tools based on system voltage (e.g. 1000 volts).
- l. Equipment ID code based on Drawings and including TA number, building number, and system identifier.
- m. Date that hazard analysis was performed.
- n. "Served from" circuit directory information including the serving equipment ID code, location (e.g. room number), circuit number, and circuit voltage/phases/wires.
- o. If applicable, "serves" circuit directory information including the served equipment ID code, location (e.g. room number), circuit number, and circuit voltage/phases/wires.

5. Load Flow Study. Perform load flow study using procedures outlined in IEEE Std 399.

3.4 QUALITY CONTROL

A. No additional requirements.

3.5 COMMISSIONING

A. No additional requirements.

3.6 EXECUTION SUBMITTALS

A. Certifications:

- 1. Name and qualifications of the ETA.
- 2. Quality assurance program of the ETA.
- 3. Instrument calibration program of the ETA.
- 4. Electrical safety program of the ETA.
- 5. Name and qualifications of the lead engineer or engineering technician performing the required testing services. Include a list of three comparable jobs performed by the individual with specific names and telephone numbers for reference.

B. Test Plans: Acceptance and system functions test plan for each item of equipment or system to be field tested at least 45 days prior to planned testing date. Include applicable procedures, forms, and lists of test equipment. Do not perform testing until test plan and procedures have been approved.

C. Test Reports: Certified copies of inspection reports, test reports, and system function tests. Reports shall include certification of compliance with specified requirements including test instrument calibration, identification of deficiencies, and recommendation of corrective action when appropriate. Type and neatly bind test reports to form a part of the Project Record.

- D. Calculations: Certified copies of power system studies listed below. Calculations shall include certification of compliance with specified requirements, identify deficiencies, and recommend corrective action when appropriate. Type and neatly bind Calculations to form a part of the final record. Submit power system studies in paper format and also in electronic format transmitted on a CD-ROM.
1. Final short circuit study
 2. Final coordination study
 3. Arc-flash hazard analysis
 4. Load flow study
 5. Stability study
- E. Field Inspection Report to include:
1. Power system studies.
 2. Equipment identification: Equipment ID based building number and system identifier.
 3. Description of inspections, tests, maintenance, and function tests performed and recorded.
 4. Test equipment used and references to calibration records.
- 3.7 INSTALLATION AND/OR WORKMANSHIP WARRANTY REQUIREMENTS
- A. No additional requirements.
- 3.8 CLOSE-OUT
- A. No additional requirements.

TABLE 1 - Low Voltage Electrical Power Conductors										
N/A										
Conductor Type/Size/Rating										
	Service	Feeder	Branch ≥6 AWG	Branch <6 AWG	Control ≥ 120V	Service >800 A	Feeder > 800 A	Branch ≥6 AWG	Branch <6 AWG	Control ≥ 120V
Inspection or Test per NETA ATS										
Compare conductor data with drawings and specifications.	X	X	X	X	X	X	X			
Inspect for physical damage and correct connections.	X	X	X	X	X	X	X			
Inspect connections for high resistance.	X	X	X	X	X	X	X			
Inspect compression applied connections for correct cable match and indentation.	X	X	X	X	X	X	X			
Inspect for correct identification and arrangements.	X	X	X	X	X	X	X			
Inspect jacket insulation.	X	X	X	X	X	X	X			
Test connections for high resistance using low-resistance ohmmeter.	X	X	X	X	X	X	X			
Perform insulation-resistance test on each conductor to ground and other conductors.	X	X	X	X	X	X	X			
Perform continuity tests to insure correct connections.	X	X	X	X	X	X	X			
Verify uniform resistance of parallel conductors.	X	X	X			X	X			

TABLE 2 - Molded Case Circuit Breakers							
Circuit Breaker Type/Size	Main C/B	Feeder C/B	Branch Circuit C/B	C/B >800 A Frame	If C/B is part of a switchboard, panelboard, MCC or busway rated >800 A.		
					C/B ≥400 A Frame	C/B ≥150A Frame	C/B <150A Frame
Inspection or Test per NETA ATS							
Compare nameplate data with drawings and specifications	X	X	X	X	X	X	X
Inspect physical and mechanical condition.	X	X	X	X	X	X	X
Inspect anchorage and alignment.	X	X	X	X	X	X	
Verify the unit is clean.	X	X	X	X	X	X	
Operate the circuit breaker to assure smooth operation.	X	X	X	X	X	X	
Inspect connections for high resistance.	X	X	X	X	X	X	
Inspect compression applied connections for correct cable match and indentation.	X	X	X	X	X	X	
Measure resistance through connections with a low-resistance ohmmeter.	X	X	X	X	X		
Measure insulation-resistance on each pole phase-to-phase and phase-to-ground with the circuit breaker closed and across each open pole.	X	X	X	X	X		
Measure contact/pole resistance.	X	X	X	X	X		
Perform insulation resistance tests on all control wiring,	X	X	X	X	X		
Perform adjustments for final setting in accordance with coordination study.	X	X	X	X	X		
Determine long-time pickup and delay by primary current injection.	X	X	X	X	X		
Determine short-time pickup and delay by primary current injection.	X	X		X	X		
Determine ground fault pickup and delay by primary current injection.	X	X	X	X	X		
Determine instantaneous pickup by primary current injection.	X	X	X	X	X		
Verify correct operation of auxiliary functions.	X	X	X	X	X		

Table 3.		
NETA ATS Clause	System or Component Type (Note 1)	Threshold:
7.1	Switchgear and Switchboards	
	Medium-Voltage Switchgear	Any
	Low-Voltage ANSI Switchgear NA	Any
	Low-Voltage NEMA Switchboards NA	> 800 A Main Bus
7.2	Transformers	
	Low-Voltage, Dry-Type NA	>225 kVA Rating
	Medium-Voltage, Dry-Type	Any
	Liquid-Filled	Any
7.3	Cables	
	Low-Voltage NA	> 800 A Circuit
	Medium- and High-Voltage	Any
7.4	Metal-Enclosed Busways	> 800 A Rating
7.5	Switches	
	Low-Voltage NA	> 800 A Rating
	Medium- or High-Voltage	Any
7.6	Circuit Breakers	
	Low-Voltage Molded Case NA	> 800 A Frame
	Low-Voltage Insulated Case NA	Any
	Low-Voltage Power NA	Any
	Medium- or High-Voltage	Any
7.7	Circuit Switchers (Medium-Voltage)	Any
7.8	Network Protectors (Low-Voltage) NA	Any
7.9	Protective Relays	Any
7.1	Instrument Transformers	> 800 A Circuit
7.11	Metering Devices	> 800 A Circuit
7.12	Regulating Apparatus	Any
7.13	Grounding Systems	
	Main Grounding Electrode	> 800 A Service

	System Grounding	> 800 A Service
	Equipment Bonding	> 800 A Circuit
7.14	Ground Fault Protection Systems	> 800 A Circuit
7.15	Rotating Machinery	
	AC Induction Motors and Generators	
	Low-Voltage NA	> 100 HP or 100 kW
	Medium-Voltage	Any
	Synchronous Motors and Generators	
	Low-Voltage NA	Any
	Medium-Voltage	Any
	DC Motors and Generators	Any
7.16	Motor Control	
	Low-Voltage Motor Starters NA	> 100 HP Motor
	Medium-Voltage Motor Starters	Any
	Low-Voltage Motor Control Centers NA	> 200 HP Connected
	Medium-Voltage Motor Control Centers	Any
7.17	Adjustable Speed Drive Systems	> 50 HP Rating
7.18	Direct-Current Systems	
	Flooded Cell Lead-Acid Batteries	>100 V or 1 kWh storage
	Valve-Regulated Lead-Acid Batteries	>100 V or 1 kWh storage
	Battery Chargers	>100 V or 1 kW output
7.19	Surge Arresters	
	Low-Voltage NA	> 800 A Circuit
	Medium- and High-Voltage	Any
7.2	Capacitors and Reactors	
	Low-Voltage NA	>50 kVAR Rating
	Medium- and High-Voltage	Any
7.21	Outdoor Bus Structures	Any
7.22a	Emergency Systems (Level 1)	
	Engine-Generator and Transfer Switch(es)	Any

	Uninterruptible Power Systems	Any
7.22b	Standby Systems (Level 2)	
	Engine-Generator and Transfer Switch(es)	>150 kW Generator
	Uninterruptible Power Systems	>150 kW Rating
7.23	Communications Systems (Reserved)	
7.24	Automatic Circuit Reclosers and Line Sectionalizers	
	Vacuum (Medium-Voltage)	Any
	Oil (Medium-Voltage)	Any
7.25	Fiber Optic Cables (Used for Power Systems)	Any

Notes:

- 1 Thresholds for formal electrical acceptance inspection and testing apply on an individual system or component type basis.

END OF SECTION 26 08 15
[REVISION MARCH 2016]

SECTION 26 13 30 – PAD-MOUNTED SWITCHGEAR [Standard TDCJ Specification]

PART 1 - GENERAL

1.1 SUMMARY

- A. Requirements for pad-mounted switchgear,

1.2 DEFINITIONS

- A. BIL: Basic Impulse Insulation Level.
- B. Bushing: An insulation structure including a central conductor, or providing a central passage for a conductor, with provision for mounting on a barrier, conduction or otherwise, for insulating the conductor from the barrier and conducting current from one side of the barrier to the other.
- C. Hotstick: An insulated stick, usually made of fiberglass that is used to work energized overhead conductors and operate electrical equipment that is overhead, underground, and compartmentalized.
- D. NETA ATE: Acceptance Testing Specification.
- E. SCADA: Supervisory control and data acquisition.
- F. Way: A three-phase or single-phase circuit connection to the bus that may contain combinations of switches and protective devices or may be a solid bus.

PART 2 - PRODUCTS, EQUIPMENT, MATERIALS AND/OR FIELD SERVICES

2.1 GENERAL REQUIREMENTS

- A. Pad-mounted Switchgear: A single self-supporting NEMA 3R enclosure, with one non fused service entrance interrupter switch, and 3 fused power interrupter switches with the necessary accessory components. Switches and components provided from the same manufacturer, factory installed in the enclosure, and operationally tested and warranted as a single unit.
- B. Additional Source and/or Manufacturer Qualifications: The manufacturer of the pad-mounted gear shall be completely and solely responsible for the performance of the basic switch and fuse components as well as the complete integrated assembly as rated.

2.2 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES REQUIREMENTS

A. GENERAL REQUIREMENTS

- 1. Product, Equipment, Material and/or Field Services provided under this

Section shall comply with:

- a. Applicable portions of ANSI C57.12.28, covering enclosure integrity for pad-mounted equipment.
- b. Article 490.21(e) in the National Electrical Code, which specifies that the interrupter switches in combination with power fuses shall safely withstand the effects of closing, carrying, and interrupting all possible currents up to the assigned maximum short-circuit rating.
- c. All portions of ANSI, IEEE, and NEMA standards applicable to the basic switch and fuse components.
- d. Comply with IEEE C2.
- e. Comply with IEEE C37.74.

B. System Requirements:

1. **Manufactured Unit:** PMH-12, Pad-mounted switchgear, designed for application in solidly grounded neutral underground and aerial distribution system.
2. **Ratings:** The short-circuit and three-time duty-cycle fault-closing ratings of switches, short-circuit rating of bus, interrupting ratings of fuses, and duty-cycle fault-closing capabilities of fuses with integral load interrupters shall equal or exceed the short-circuit ratings of the pad-mounted gear.
 - a. **Nominal Voltage:** 14.4 kV
 - b. **Maximum Voltage:** 17.0 kV
 - c. **BIL Voltage:** 95 kV
 - d. **Short-Circuit**
 - 1) **Peak Withstand Current, Amperes, Peak:** 36.4 kA
 - 2) **One-Second Short-Time Withstand Current, Amps, RMS, Symmetrical:** 14. kA
 - 3) **MVA, Three-Phase Symmetrical, at Rated Nominal Voltage:** 350 MVA
 - e. **Main Bus**
 - 1) **Continuous Current, Amperes:** 600 A
 - 2) **Peak Withstand Current, Amperes, Peak:** 36.4 kA
 - 3) **One-Second Short-Time Withstand Current, Amps, RMS, Symmetrical:** 14 kA
 - f. **Three-Pole Interrupter Switches**
 - 1) **Continuous Current, Amperes:** 600 A
 - 2) **Load Dropping Current, Amperes:** 600 A
 - 3) **Peak Withstand Current, Amperes, Peak:** 36.4 kA
 - 4) **One-Second Short-Time Withstand Current, Amps, RMS, Symmetrical:** 14.0 kA
 - 5) **Three-Time Duty-Cycle Fault-Closing Current, Amps, RMS, Symmetrical:** 14.0 kA
 - g. **Fuses with Integral Load Interrupters**
 - 1) **Maximum Current, Amperes:** 300E or 300K
 - 2) **Load Dropping Current, Amperes:** 300A
 - 3) **Duty-Cycle Fault-Closing Current Capability, Amps, RMS,**

C. System Elements

1. **Insulators, High-Voltage Bus and Ground-Connection Pads**
 - a. **Insulators – interrupter-switch and fuse-mounting insulators shall be of a cycloaliphatic epoxy resin system with characteristics and restrictions as follows:**
 - 1) Operating experience of at least 25 years under similar conditions.
 - 2) Adequate leakage distance established by test per IEC Publication 507, "Artificial Pollution Test on High Voltage Insulators to be used on AC Systems."
 - 3) Adequate strength for short-circuit stress established by test.
 - 4) Conformance with applicable ANSI standards.
 - 5) Homogeneity of the cycloaliphatic epoxy resin throughout each insulator to provide maximum resistance to power arcs.
 - a) Ablation due to high temperatures from power arcs shall continuously expose more material of the same composition and properties so that no change in mechanical or electrical characteristics takes place because of arc-induced ablation.
 - b) Any surface damage to insulators during installation or maintenance of the pad-mounted gear shall expose material of the same composition and properties so that insulators with minor surface damage need not be replaced.
 - b. **High-Voltage Bus**
 - 1) Before installation of the bus, all electrical contact surfaces shall first be prepared by machine-abrading to remove any aluminum-oxide film. Immediately after this operation, the electrical contact surfaces shall be coated with a uniform coating of an oxide inhibitor and sealant.
 - 2) Bus and interconnections:
 - a) Aluminum bar of 56% IACS conductivity.
 - b) Withstand the stresses associated with short-circuit currents up through the maximum rating of the pad-mounted gear.
 - 3) Bolted aluminum-to-aluminum connections:
 - a) Suitable number of 1/2—13 galvanized steel bolts, with two Belleville spring washers per bolt, one under the bolt head and one under the nut.
 - b) Tightened to 50 foot-pounds torque.
 - c. **Ground-Connection Pad in each compartment of the pad-mounted gear:**
 - 1) Constructed of 3/16 in. thick steel,

- 2) Nickel plated and welded to the enclosure, with a short-circuit rating equal to that of the pad-mounted gear.
 - 3) Coated with a uniform coating of an oxide inhibitor and sealant prior to shipment.
2. Enclosure, Doors and Finish
- a. Enclosure:
 - 1) Pad-mounted gear constructed in accordance with the specifications of the fuse and/ or switch manufacturer for electrical clearances and space for fuse handling.
 - 2) Unitized monocoque (not structural-frame-and bolted-sheet) construction.
 - 3) 11-gauge hot-rolled, pickled and oiled steel sheet.
 - 4) All structural joints and butt joints: gas-metal-arc welded with external seams ground flush and smooth.
 - 5) All hardware (including door fittings, fasteners, operating mechanism parts, and other parts) subject to abrasive action from mechanical motion shall be of either nonferrous materials, or galvanized or zinc-nickel-plated ferrous materials.
 - a) Cadmium-plated ferrous parts shall not be used.
 - b) No externally accessible hardware.
 - 6) Base: Constructed for bolt connection to concrete pad with continuous 90-degree flanges, turned inward and welded at the corners.
 - 7) Enclosure top side edges: Overlap with roof side edges or other mechanism to allow ventilation of high-voltage compartments, minimize moisture infiltration, and inhibit tampering or insertion of foreign objects.
 - 8) Inside surface of roof: Heavy coat of insulating "no-drip" compound.
 - 9) Insulating barrier separating front compartments from rear compartments and to isolate tie bus (if applicable): NEMA GPO3-grade fiberglass-reinforced polyester.
 - a) Requirements include insulation for interphase and end barriers for each interrupter switch and each set of fuses where required to achieve BIL ratings.
 - 10) Side-by-side compartments: Separated by full-length steel barriers.
 - 11) Interrupter Switches and Fuses include Dual-Purpose Front Barriers (DPFB): DPFB:
 - a) In normal hanging positions: guard against inadvertent contact with live parts.
 - b) Possible to lift barriers out and insert into the open gap when the switch is open.
 - c) Comply with Section 381G of the National Electrical Safety Code (ANSI Standard C2).
 - 12) Miscellaneous:
 - a) Instruction manual holder.

- b) Removable lifting tabs with blind-tapped sockets. A closed-cell resilient material placed between the lifting tabs and the enclosure.
- 13) Doors:
- 14) 11-gauge hot-rolled, pickled and oiled steel sheet.
- 15) Doors and/or dividers: Polyurethane self-adhesive bumpers.
- 16) Hinges: Minimum of two, extruded-aluminum with stainless-steel hinge pins, and interlocking extruded-aluminum hinge supports for the full length of the door.
 - a) Mounting hardware: Stainless steel or zinc nickel-plated steel, not be externally accessible.
- 17) Door openings: 90-degree flanges, facing outward, with deep overlapping between doors and door openings.
- 18) Door-edge flanges: Overlap with door-opening flanges formed to guard against water entry tampering or insertion of foreign objects, but shall allow ventilation.
- 19) Equipped with an automatic three-point latching mechanism.
 - a) Spring-loaded to latch automatically when the door is closed.
 - b) All latch points latch at the same time.
 - c) Tamper-resistant: Specialized tool required to actuate the mechanism to unlatch the door and, in the same motion, recharge the spring for the next closing operation.
 - d) Provisions for padlocking that incorporates a means to protect the padlock shackle from tampering and coordinated with the latches such that:
 - i. Not possible to unlatch the mechanism until the padlock is removed, and
 - ii. Not possible to insert the padlock until the mechanism is completely latched closed.
- 20) Doors providing access to solid-material power fuses:
 - a) Provisions to store spare fuse units or refill units.
 - b) Zinc-nickel-plated steel door holder located above the door opening, hidden from view when the door is closed, and not be possible for the holder to swing inside the enclosure.

b. Finish:

- 1) Process enclosures independently of components such as doors and roofs before assembly into unitized structures.
 - a) Exterior seams: filled and sanded smooth.
 - b) Resilient closed-cell material, such as PVC gasket, applied to underside of enclosure bottom flange.
 - c) Wax-based anticorrosion moisture barrier on welds along the enclosure bottom flange.
- 2) Pretreatment process: Fully automated system of cleaning,

rinsing, phosphatizing, sealing, drying, and cooling before any protective coatings are applied.

- 3) Finishing system: Factory applied coating(s) meeting specifications as identified for requirements of Representative Test Specimens. Representative Test Specimens coated by the enclosure manufacturer's finishing system shall satisfactorily pass the following tests:
 - a) 4000 hours of exposure to salt-spray testing per ASTM B 117 with:
 - i. Under film corrosion not to extend more than 1/32 in. from the scribe, as evaluated per ASTM D 1645, Procedure A, Method 2 (scraping); and
 - ii. Loss of adhesion from bare metal not to extend more than 1/8 from the scribe.
 - b) 1000 hours of humidity testing per ASTM D 4585 using the Cleveland Condensing Type Humidity Cabinet, with no blistering as evaluated per ASTM D 714.
 - c) 500 hours of accelerated weathering testing per ASTM G 53 using lamp UVB-313, with no chalking as evaluated per ASTM D 659, and no more than 10% reduction of gloss as evaluated per ASTM D 523.
 - d) Crosshatch-adhesion testing per ASTM D 3359 Method B, with no loss of finish.
 - e) 160-inch-pound impact, followed by adhesion testing per ASTM D 2794, with no chipping or cracking.
 - f) 3000 cycles of abrasion testing per ASTM 4060, with no penetration to the substrate.
- 4) Finish color: Olive green, Munsell 7GY3.29/1.5 green.

3. Basic Components

- a. Interrupter Switches: Factory assembled and adjusted on a single rigid mounting frame.
 - 1) Frame: Welded steel construction such that the frame intercepts the leakage path which parallels the open gap of the interrupter switch to positively isolate the load circuit when the interrupter switch is in the open position.
 - 2) Interrupter: Positively and inherently sequenced with the blade position.
 - a) Not possible for the blade and interrupter to become out of sequence.
 - b) Immediate operation contained within the interrupter, with no external arc or flame.
 - c) Exhaust vented in a controlled manner through a deionizing vent.
 - 3) Operable by means of an externally accessible 3/4 in. hex

switch-operating hub (Switch-operating hub) located within a recessed stainless-steel pocket (Switch-operating hub pocket) mounted on the side of the pad-mounted gear enclosure.

- a) Switch-operating hub: Stops installed to prevent over travel resulting in damage to the interrupter switch quick-make quick-break mechanism.
- b) Switch-operating hub pocket:
 - i. Sized to accommodate a provided 3/4 in. deep-socket wrench or a 3/4 in. shallow-socket wrench with extension.
 - ii. Pad lockable stainless-steel access cover that incorporates a hood to protect the padlock shackle from tampering.
 - iii. Labeled to indicate switch position.
- 4) Folding switch-operating handle secured to the inside of the switch-operating-hub pocket by a brass chain and stored behind the closed switch-operating-hub access cover.
- 5) Factory installed quick-make quick-break mechanism.
 - a) Integrally mounted on the switch frame,
 - b) Swiftly and positively open and close the interrupter switch independent of the switch-operating-hub speed.
- 6) Readily visible open gap when in the open position.
- 7) Single blade per phase for circuit closing, to include fault closing, continuous current carrying, and circuit interrupting.
 - a) Spring-loaded auxiliary blades not permitted.
 - b) Switch blade supports permanently molded in place in a unified insulated shaft constructed of the same cycloaliphatic epoxy resin as the insulators.
- 8) Contacts: backed up by stainless-steel springs.
- 9) Ground studs: Momentary rating equal to or greater than short-circuit rating of the pad-mounted gear.
 - a) At all switch terminals.
 - b) On ground pad in each interrupter switch compartment
 - c) On the terminals and ground pad in any bus compartment.
- 10) Base-mounted distribution-class surge arresters, metal-oxide type rated (9 kV) shall be provided at all source switch terminals.
- 11) Switch and bus-compartment terminals with adapters to accommodate two cables per phase.
- 12) Cable guides at switch terminals and bus-compartment terminals.

b. Fuses:

- 1) Solid-Material Power Fuses:
 - a) Refill-unit-and-holder or fuse-unit-and-end-fitting

- construction.
 - i. Readily replaceable.
 - ii. Fuse mountings: disconnect style.
 - iii. Fusible elements for refill unit or fuse unit:
 - iv. Ratings at 10 amperes or larger applications: helically coiled.
 - (a) Non-aging and non-damageable.
 - (b) Continuous current applications: Supported in air.
 - (c) Single fusible element to eliminate the possibility of unequal current sharing in parallel current paths.
 - b) Melting time-current characteristics
 - i. Permanently accurate to within a maximum total tolerance of 10% in terms of current.
 - ii. Characteristics which permit coordination with source-side and load-side protective relays, automatic circuit reclosers, and other fuses.
 - c) Capable of detecting and interrupting all faults, whether large, medium, or small (down to minimum melting current); under all realistic conditions of circuitry; and with line-to-line or line-to-ground voltage across the fuse.
 - d) Capable of handling the full range of transient recovery voltage severity associated with these faults.
 - e) Blown-fuse indicator: Visible evidence of fuse operation while installed in the fuse mounting.
 - f) All arcing accompanying solid-material power fuse operation shall be contained within the fuse, and all arc products and gases involved shall be effectively contained within the exhaust control device during fuse operation.
- 2) Fuse-mounting jaw contacts: incorporate an integral load interrupter permitting live switching of fuses with a hotstick.
- a) The integral load interrupter housing: Thermoplastic material.
 - b) The integral load interrupter:
 - i. In the current path continuously. Auxiliary blades or linkages shall not be used.
 - ii. Hard pull to unlatch the fuse, reducing the possibility of an incomplete opening operation.
 - iii. Internal moving contacts: self-resetting after each opening operation that permits a closing operation to be performed immediately.

- iv. Circuit interruption completely within, with no external arc or flame.
 - v. Separate fault-closing contacts and separate current-carrying contacts from fuse.
 - vi. Circuit-closing inrush currents and fault currents shall be picked up by the fault-closing contacts, not by the current-carrying contacts or interrupting contacts.
 - vii. Fuses:
 - (a) 14.4 kV rated pad-mounted gear shall have a three-time duty-cycle fault-closing capability equal to the interrupting rating of the fuse.
 - (b) 25 kV rated pad-mounted gear shall have a two-time duty-cycle fault-closing capability equal to the interrupting rating of the fuse.
 - c) Live switching: Hotstick with no other load-interrupting tool required.
 - 3) Fuse terminal pads: two-position adapter, for accommodation of a variety of cable-terminating devices.
 - 4) Ground studs at all fuse terminals:
 - a) One ground stud on the ground pad in each fuse compartment.
 - i. Momentary rating of the ground studs: equal or exceed the short-circuit rating of the pad-mounted gear.
 - 5) Bus and switch terminals, fuse connector adapters, and bus terminals: Copper.
 - 6) Each terminal and ground pad in the fuse compartment(s), switch and bus compartment(s): Copper ground stud.
4. Labeling
- a. Hazard-Alerting Signs
 - 1) All external doors providing access to high voltage signage: "Warning— Keep Out—Hazardous Voltage Inside Can Shock, Burn, or Cause Death".
 - 2) Inside of each door providing access to high voltage signage: "Danger—Hazardous Voltage—Failure to Follow These Instructions Will Likely Cause Shock, Burns, or Death".
 - a) Further signage: Require operating personnel to know and obey the employer's work rules, know the hazards involved, and use proper protective equipment and tools to work on this equipment.
 - 3) Interrupter switch compartments signage: "Danger", "Switches May Be Energized by Back feed."
 - 4) Fuse compartments signage: "Danger", "Fuses May Be Energized by Back feed."

- 5) Barriers used to prevent access to energized live parts signage: "Danger—Keep Away—Hazardous Voltage—Will Shock, Burn, or Cause Death".
- b. Nameplates, Ratings Labels, and Connection Diagrams
- 1) The outside of each set of double doors providing access to high voltage: Nameplate indicating the manufacturer's name, catalog number, model number, date of manufacture, and serial number
 - 2) On inside of each set of double doors: Ratings label indicating the following:
 - a) Overall pad-mounted gear ratings: nominal voltage, kV; maximum voltage, kV; BIL voltage, kV; power frequency, Hz; short-circuit peak withstand current, amperes, peak; short-circuit one-second short-time withstand current, amperes, RMS, symmetrical; and short-circuit MVA, three-phase symmetrical, at rated nominal voltage.
 - b) Main bus ratings: continuous current, amperes; peak withstand current, amperes, peak; and one-second short-time withstand current, amperes, RMS symmetrical.
 - c) Switch ratings: continuous current, amperes; load splitting current, amperes; load dropping current, amperes; peak withstand current, amperes, peak; one-second short-time withstand current, amperes, RMS, symmetrical; and three-time duty-cycle fault-closing current, amperes, RMS symmetrical.
 - d) Fuse type and integral load interrupter ratings and capabilities: maximum current, amperes; load splitting current, amperes; load dropping current, amperes; and duty-cycle fault-closing current, amperes, RMS symmetrical or asymmetrical.
 - 3) On the inside of each door (or set of double doors), and on the inside of each switch-operating-hub access cover: Three-line connection diagram showing interrupter switches, fuses with integral load interrupters, and bus, along with the manufacturer's model number.

D. Manufacturers:

1. S&C Electric Company.
2. Or A/E approved equal.

2.3 REQUIRED FIELD SERVICES

- A. No additional requirements.

2.4 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES WARRANTY REQUIREMENTS

- A. No additional requirements.

2.5 PRODUCT, EQUIPMENT, MATERIAL AND/OR FIELD SERVICES SUBMITTALS

- A. Manufacturer Certification of ratings of the basic switch and fuse components and/or the integrated pad-mounted gear assembly with the switch and fuse components in combination with the enclosure.

PART 3 - EXECUTION

3.1 INSTALLER QUALIFICATIONS

- A. No additional requirements.

3.2 PREPARATION

- A. Verify removal of any shipping bracing after placement.

3.3 EXECUTION REQUIREMENTS

- A. Orient and align over the existing underground branch feeders and install to provide access and working clearance per NESC/NEC, without removing connections or accessories.

3.4 QUALITY CONTROL

- A. Visual and Mechanical Inspection;
 - 1. Inspect bolted electrical connections for high resistance using one of the following two methods:
 - a. Use a low-resistance ohmmeter to compare bolted connection resistance value to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of the lowest value.
 - b. Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method according to manufacturer's published data or NETA ATS, Table 100.12. Bolt-torque levels shall be according to manufacturer's published data. In the absence of manufacturer's published data, use NETA ATS, Table 100.12.
 - 2. Confirm correct operation and sequencing of electrical and mechanical interlock systems.
 - a. Attempt closure on locked-open devices. Attempt to open locked-closed devices.
 - b. Make key exchange with devices operated in off-normal positions.
 - 3. Verify appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
 - 4. Inspect insulators for evidence of physical damage or contaminated surfaces.
 - 5. Verify correct barrier and shutter installation and operation.
 - 6. Exercise active components.

7. Inspect mechanical indicating devices for correct operation and indication.
8. Verify that filters are in place and vents are clear.

B. Electrical Test:

1. Perform dc voltage insulation-resistance tests on each bus section, phase to phase and phase to ground, for one minute. If the temperature of the bus is other than plus or minus 20 deg C, adjust the resulting resistance as provided in NETA ATS, Table 100.11.
 - a. Insulation-resistance values of bus insulation shall be according to manufacturer's published data. In the absence of manufacturer's published data, comply with NETA ATS, Table 100.1.
 - b. Do not proceed to the dielectric withstand voltage tests until insulation-resistance levels are raised above minimum values.
2. Perform a dielectric withstand voltage test on each bus section, each phase to ground with phase not under test grounded, according to manufacturer's published data. If manufacturer has no recommendation for this test, conduct according to NETA ATS, Table 100.2. Apply the test voltage for one minute.
 - a. If no evidence of distress or insulation failure is observed by the end of the total time of voltage application during the dielectric withstand test, the test specimen is considered to have passed the test.

3.5 THRU 3.8

- A. No additional requirements.

END OF SECTION 26 13 30

[Revision March 2016]