

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-16-16-C110	2. SOLICITATION NO. 696-FD-15-B032	3. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	4. DATE ISSUED 08/14/2015	5. PROJECT NUMBER 005384	6. TRACKING NO. 00513004
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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 LYNNE PIIPPO, CTPM, CTCM	B. TELEPHONE NO. (NO COLLECT CALLS) PHONE NO.: (936) 437-7114 FAX NO. (325) 223-0310
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Document Type: 9 Statutory Cite: 2166.003 (b)	ESTIMATED BUDGET: \$322,900.00
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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 Roof-Administration Building – Clemens Unit
11034 Hwy. 36
Brazoria, Texas 77422

As designed by:
TDCJ Facilities Engineering
Thomas Stafford, P.E.

Please provide the following information:

DUNS # 84-920-4532 TAX ID # 76-0393668 CHARTER # 01262364

11. The Contractor shall begin performance within 10 calendar days and complete it within 210 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 2:00 p.m. local time September 29, 2015. 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) TEXAS LIQUA TECH SERVICES, INC. 1819 MILBY STREET HOUSTON TX 77003	15A. Telephone No. (Include Area Code) (713) 225-5325 15B. Fax No.: (713) 225-2755	16. EMAIL ADDRESS CHARLES@LIQUATECH.COM
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AMOUNTS →	SEE BID SCHEDULE
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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.	A001										
DATE	9/21/15										

19A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) ANGIE PALLADINI, PRESIDENT	19B. SIGNATURE 	19C. OFFER DATE 9/28/15
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AWARD (To be completed by State)

20. ITEMS ACCEPTED:

01 Replace Roof-Administration Building at the Clemens Unit

21. AMOUNT \$367,589.00	22. AMOUNT IN WRITING Three hundred sixty-seven thousand five hundred eighty-nine dollars and no 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 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 696-FD-15-B032 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 10/23/15
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SECTION B

THE SCHEDULE
BID SCHEDULE

ITEM NO.	DESCRIPTION	QUANTITY	PRICE
01	Base Bid		
	Replace Roof-Administration Building at the Clemens Unit, located at 11034 Hwy. 36, Brazoria, Texas as shown by the construction plans as prepared by TDCJ Facilities Engineering.		
		Lump Sum	\$ 367,589.00

The Base Bid is separated as follows:

(1) Materials incorporated into the realty (Cannot be less than the price Contractor paid for materials)	\$ 162,721.00
(2) Labor	\$ 132,868.00
(3) Overhead and Profit (includes the cost of the Payment and Performance Bonds)	\$ 72,000.00
TOTAL	\$ 367,589.00

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.

NONE

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.
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).

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 **two hundred ten (210)** 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 Ninety Dollars (\$390.00)** 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 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**

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 Department makes no commitment as to the length of time to complete a background check.

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 they have been assigned to as a former TDCJ offender.
5. The Warden may not allow a Contract Construction Worker on 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, 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 with an effective start date on the following Monday.

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 workdays lost monthly due to Anticipated Adverse Weather Days:

Jan	Feb	Mar	April	May	Jun	July	Aug	Sept	Oct	Nov	Dec
6	6	5	5	6	5	4	4	6	5	4	5

SECTION I

GENERAL CONDITIONS

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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.

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.

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 all available surveys describing the physical characteristics, legal description and limitations, known site utility locations and other information necessary to the Contractor which is under the Owner's control. Communication with the Contractor shall be in accordance with paragraph 4.1.2. Necessary actions of the Owner, including processing

of payments to the Contractor, shall be accomplished with reasonable promptness and subject to Government Code, Title 10, Chapter 2251.

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. Upon such notice, or upon his/her own observation of such conditions, the A/E, with the approval of the Owner, will promptly make such changes in the Drawings and Specifications as deemed necessary to conform to the different conditions, and any increase or decrease in the cost of the Work, or in the time within which

the Work is to be completed, resulting from such changes will be adjusted by Change Order, subject to the prior approval of the Owner.

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 MINIMUM INSURANCE COVERAGES

<u>Type of Coverage</u>	<u>Minimum Limits of Liability</u>
1. Workers' Compensation	Statutory
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 such changes cause an increase or decrease in the Contractor's costs of, or time required for, performance of the Contract, an equitable adjustment shall be made and confirmed in writing in a Change Order.

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 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.

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.

8.3.2 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.

8.3.3 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:

8.3.3.1 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.

8.3.3.2 Proposed Commissioning / Inspection Activities

8.3.3.3 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.

8.3.3.4 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.

8.3.3.4.1 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.

- (1) Activity identity number utilizing a numeric designation concept.

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

(3) 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.

8.3.4 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.

8.3.5 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.

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.

8.3.5.1 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.

8.3.6 RECOVERY SCHEDULE:

8.3.6.1 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.

8.3.6.2 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.

8.3.6.2.1 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.

8.3.6.2.2 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.

8.3.6.2.3 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.

8.3.7 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.

8.3.8 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.

8.3.9 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.

8.3.10 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 a 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.

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 Contractor, or to provide information timely
- (5) Delays in transportation or unavailability of material, equipment or supply
- (6) Strikes and Lockouts
- (7) Design defects in accordance with paragraph 6.1.3
- (8) Late delivery of OFCI items
- (9) Any other unforeseeable causes which in the sole discretion of the Owner is 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.

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.

8.4.4.5 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: Lynne Piippo, CTPM, CTCM, Contract Administrator and to Contractor at:

TEXAS LIQUA TECH SERVICES, INC. 1819 MILBY STREET, HOUSTON TX 77003

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 (Heavy and Highway Construction)	4
5	Prevailing Wage Schedule (Building Construction)	6
6	Substitution Request (Bidding Phase)	
7	Substitution Request	2
8	Contractor Qualifications	
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)	10
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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 ZERO percent (0 %) 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 [X] (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 [] (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.

Form with three rows for name and SSN input. Each row has a line for (Print Name) and a line for 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. 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.

12. 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.

13. 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: _____ N/A _____

Name of State Agency: _____

Date of Separation from State Agency: _____

Position with Bidder: _____

Date of Employment with Bidder: _____

14. 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.

SAME AS MAILING ADDRESS

15. 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>.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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 Texas Light Tech Sus Inc.
By Angie Palladin
Signature Angie Palladin
Title President
Date 9/28/15

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, ten (10) 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 Architect/Engineer 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 Roof-Administration Building Clemens Unit. Do Not Open Until 2:00 p.m., September 29, 2015**".
- 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: Lynne Piippo, CTPM - Contract Administrator

(BIDS MUST BE RECEIVED BY 2:00 P.M. ON SEPTEMBER 29, 2015 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. Read and completed the blanks and signature block in Section K.
- D. Completed the blanks in paragraph 14.8 of Section I.
- E. Completed all required Attachments, including "Contractor's Qualification Form" (use Attachment 8 furnished in documents).
- F. 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.***

- G. Have provided the required 5% bid deposit.
- H. 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.
- I. 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

ATTACHMENT NO. 2

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 _____, 20____, 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:

ATTACHMENT NO. 3

**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 _____, 20_____.

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)

Landscape.....	\$ 7.35	0.00
Mason Tender Cement.....	\$ 9.96	0.00
Pipelayer.....	\$ 9.63	1.50
PIPEFITTER.....	\$ 17.00	0.04
POWER EQUIPMENT OPERATOR:		
Backhoe.....	\$ 12.74	0.00
Bulldozer.....	\$ 12.46	0.00
Crane.....	\$ 11.00	0.74
Excavator.....	\$ 16.74	0.00
Front End Loader.....	\$ 10.47	1.28
Grader.....	\$ 12.20	1.48
Tractor.....	\$ 11.29	1.45
TRUCK DRIVER.....	\$ 14.42	1.00

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.

=====

END OF GENERAL DECISION

ATTACHMENT NO. 5

**PREVAILING WAGE SCHEDULE
(Building Construction)**

General Decision Number: TX150282 07/31/2015 TX282

Superseded General Decision Number: TX20140282

State: Texas

Construction Type: Building

County: Brazoria County in Texas.

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

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. 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	01/02/2015
1	01/30/2015
2	03/06/2015
3	05/15/2015
4	07/31/2015

* ASBE0022-009 06/01/2015

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 22.63	11.90

BOIL0074-003 01/01/2014

	Rates	Fringes
BOILERMAKER.....	\$ 23.14	21.55

CARP0551-009 04/01/2015

	Rates	Fringes
CARPENTER (Excludes Drywall Hanging, Form Work, and Metal Stud Installation).....	\$ 22.50	8.33

ELEC0716-005 08/29/2011

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring and Installation of Alarms).....	\$ 27.65	7.70

ELEV0031-003 01/01/2015

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 38.52	28.385

FOOTNOTES: A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR Cranes.....	\$ 34.85	9.85

IRON0084-011 06/15/2014

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 22.02	6.35

IRON0135-002 12/01/2013

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 27.30	8.55

PLAS0079-004 01/01/2010

	Rates	Fringes
PLASTERER.....	\$ 19.42	1.00

PLUM0068-012 10/01/2013

	Rates	Fringes
PLUMBER (Excludes HVAC Pipe Installation).....	\$ 31.30	9.49

PLUM0211-010 10/01/2013

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 29.39	10.31

 SHEE0054-003 07/01/2014

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct and Unit Installation).....	\$ 25.67	12.39

 SUTX2014-008 07/21/2014

	Rates	Fringes
ACOUSTICAL CEILING MECHANIC.....	\$ 16.41	3.98
BRICKLAYER.....	\$ 19.86	0.00
CAULKER.....	\$ 15.36	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.33	0.00
DRYWALL FINISHER/TAPER.....	\$ 16.30	3.71
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 17.45	3.96
ELECTRICIAN (Alarm Installation Only).....	\$ 17.97	3.37
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 18.00	1.68
FLOOR LAYER: Carpet.....	\$ 20.00	0.00
FORM WORKER.....	\$ 12.57	0.00
GLAZIER.....	\$ 19.12	4.41
INSULATOR - BATT.....	\$ 14.87	0.73
IRONWORKER, REINFORCING.....	\$ 12.10	0.00
LABORER: Common or General.....	\$ 10.55	0.00
LABORER: Mason Tender - Brick...	\$ 13.37	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.86	0.00
LABORER: Pipelayer.....	\$ 12.94	0.00
LABORER: Roof Tearoff.....	\$ 11.28	0.00
LABORER: Landscape and Irrigation.....	\$ 9.49	0.00
LATHER.....	\$ 19.73	0.00

OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 15.56	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93	0.00
OPERATOR: Bulldozer.....	\$ 20.77	0.00
OPERATOR: Drill.....	\$ 16.22	0.34
OPERATOR: Forklift.....	\$ 15.64	0.00
OPERATOR: Grader/Blade.....	\$ 13.37	0.00
OPERATOR: Loader.....	\$ 13.55	0.94
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 16.00	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 16.77	4.51
ROOFER.....	\$ 15.40	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 20.05	4.19
SHEET METAL WORKER (HVAC Unit Installation Only).....	\$ 19.67	2.24
SPRINKLER FITTER (Fire Sprinklers).....	\$ 22.17	9.70
TILE FINISHER.....	\$ 12.00	0.00
TILE SETTER.....	\$ 16.17	0.00
TRUCK DRIVER: 1/Single Axle Truck.....	\$ 14.95	5.23
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11
WATERPROOFER.....	\$ 14.39	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)).

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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

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
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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
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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.

=====

END OF GENERAL DECISION

ATTACHMENT NO. 6

**SUBSTITUTION REQUEST
BIDDING PHASE**

Furnished with Invitation for Bids

ATTACHMENT NO. 7

SUBSTITUTION REQUEST - AFTER EXECUTION OF CONTRACT

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

PROJECT: _____ PROJECT NO.: _____

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

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:	<input type="checkbox"/> yes	<input type="checkbox"/> 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
Completed copy to TDCJ Master Contract File

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 2. 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 (to include, but not limited to parent, brother, sister, spouse, or child) related to any TDCJ offender (incarcerated or on parole)? Yes No Unknown
14b. Are you now or have you ever been involved in a spousal relationship with a TDCJ offender (incarcerated or on parole)? This includes marriage, common-law marriage, lived together, or had a child together. Yes No
14c. Do you have a current business partnership or gang association with a current TDCJ offender (incarcerated or on parole)? 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		PAYEE'S 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.		I hereby certify that I am duly authorized to make this certification for and on behalf of		
(Print Name)		(Name of Payee Company/Claimant)		
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.		(Print Name)		
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: _____ Date _____ Signature _____

Architect/Engineer:

By: _____ Date _____ Signature _____

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 checked="" type="checkbox"/> CONTRACTOR <input type="checkbox"/> FIELD <input 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:	\$
THIS Choose an item.	\$
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. _____		PROJECT NAME _____	
JOB NUMBER _____		UNIT NAME _____	
BUILDING NO. _____		UNIT LOCATION _____	
OCCUPANCY DATE _____			
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"/> Combination (explain)
<input type="checkbox"/> Multi-Story	<input type="checkbox"/> Brick		
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

10.A.12

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

Page one of _____

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: _____ From: _____
 TDCJ Project Administrator Quality Control Manager

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

Weather

Sky AM _____ Wind AM _____ Temp HI _____ Precip AM _____
PM _____ PM _____ LO _____ 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: _____ Date
Quality Control Manager

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: _____ Date
Quality Control Manager

**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 _____

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:	_____		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 _____

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 REQUEST

TDCJ-FD JOB NO.:

REQUEST NO.:

DATE:

PROJECT:

LOCATION:

FROM:

Number of Calendar Days requested:

Reason for Request:

Contractor:

Signature

**Exhibit 10.A.24
FACILITIES DIVISION
TIME EXTENSION**

Distribution to:
 TDCJ/FD { X }
 ARCHITECT { X }
 CONTRACTOR { X }
 SCHEDULING { X }
 FIELD ()

CONTRACT JOB NO: _____ TIME EXTENSION NUMBER: _____
 TDCJ-FD JOB NO: _____ DATE: _____
 PROJECT: _____ LOCATION: _____
 TO: _____

Your request for a Time Extension has been (disapproved)(approved) in the amount of _____
 Calendar Days granted for _____

The New Contract Completion Date, including this Time Extension, will be _____
 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 Extension(s) _____ Calendar Days
 This Time Extension _____ Calendar Days
 Total Time Extension _____ 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

EQUIPMENT					
Description	Source	Unit	Type	Work Area	Remarks

FIELD FORCE LABOR							
Category	Source	Supv	Frnm.	Jrny.	Appr.	Work Area	Remarks

VISITORS			
Time	Company	Visitor Name	Remarks

TDCJ Quality Assurance Inspector

Date

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

Furnished with the Invitation for Bids.

ATTACHMENT NO. 12

Drawings

Furnished with the Invitation for Bids.

**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

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 contracts that have been in place for five years or less 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: Texas Liquor Tech Sys. Inc. State of Texas VID #: 76-0393668
 Point of Contact: Charles Small Phone #: 713-225-5325
 E-mail Address: charles@liquortech.com Fax #: 713-225-2755
- b. Is your company a State of Texas certified HUB? - Yes - No
- c. Requisition #: 696-FD-15-B032 Bid Open Date: 09/29/2015
(mm/dd/yyyy)

Enter your company's name here: Texas Liqua Tech Svcs Inc

Requisition #: 696-FD-15-B032

SECTION 2: SUBCONTRACTING INTENTIONS RESPONDENT

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 goods and services, will be subcontracted. Note: In accordance with 34 TAC §20.11., an "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. (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 have a <u>continuous contract*</u> in place for <u>five (5) years or less.</u>	Percentage of the contract expected to be subcontracted to HUBs with which you have a <u>continuous contract*</u> in place for <u>more than five (5) years.</u>	Percentage of the contract expected to be subcontracted to non-HUBs.	
1	Roofing Materials	0 %	0 %	25 %	
2	Electrical	0 %	0 %	7 %	
3	Trash Hauling/Portacans	0 %	0 %	1 %	
4		%	%	%	
5		%	%	%	
6		%	%	%	
7		%	%	%	
8		%	%	%	
9		%	%	%	
10		%	%	%	
11		%	%	%	
12		%	%	%	
13		%	%	%	
14		%	%	%	
15		%	%	%	
Aggregate percentages of the contract expected to be subcontracted:		0 %	0 %	33 %	

(Note: If you have more than fifteen subcontracting opportunities, a continuation sheet is available online at <http://window.state.tx.us/procurement/proq/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 have a continuous contract* in place with for five (5) years or less 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 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: Texas Liqua Tech Svcs Inc Requisition #: 696-FD-15-B032

SECTION-3: SELF PERFORMING JUSTIFICATION (If you responded "No" to SECTION 2, Item a, you must complete this SECTION and continue to SECTION 4)

Check the appropriate box (Yes or No) that indicates whether your response/proposal contains an explanation demonstrating how your company will fulfill the entire contract with its own resources.

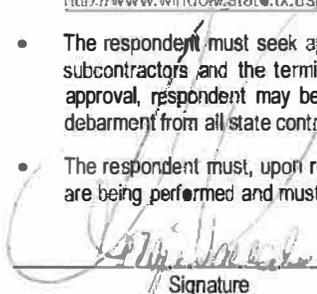
- Yes (If *Yes*, in the space provided below list the specific page(s)/section(s) of your proposal which explains how your company will perform the entire contract with its own equipment, supplies, materials and/or employees.)
- No (If *No*, in the space provided below explain how your company will perform the entire contract with its own equipment, supplies, materials and/or employees.)

N/A

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/brog/hub/hub-forms/progressassessmentrot.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.


Angie Palladini
President
09/28/2015
 Signature Printed Name Title 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. 10/14

Enter your company's name here: _____	Requisition #: _____
---------------------------------------	----------------------

IMPORTANT: If you responded "Yes" to SECTION 2, Items c or 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: 1 Description: Roofing Materials

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, to 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 your 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.state.tx.us/tpasscmbsearch/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	VID Number	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
Alissa & Company	1200517772500	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Woodson Lumber & Hardware	1741177623400	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Mollica & Associates Inc	1201479708300	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - 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 (mm/dd/yyyy)	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Women's Business Enterprises Alliance	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev. 10/14

Enter your company's name here: _____ Requisition #: _____

IMPORTANT: If you responded "Yes" to SECTION 2, Items c or 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: 2 Description: Electrical

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, to 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 your 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.state.tx.us/tpasscmlsearch/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	VID Number	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
McCaffety Electric Co Inc	1742035035100	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Gulf Coast Electric Co Inc	1741557032800	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
3D Electric	1900613436500	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - 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 (mm/dd/yyyy)	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Women's Business Enterprises Alliance	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev. 10/14

Enter your company's name here: _____ Requisition #: _____

IMPORTANT: If you responded "Yes" to SECTION 2, Items c or 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-subcont-plan-of-e-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: 3 Description: Trash Hauling/Portacans

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**, to 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.

- 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 your 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://mycoa.state.tx.us/passcmblsearch/index.jsp>. HUB Status code "A" signifies that the company is a Texas certified HUB.
- 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	VID Number	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
Apache Disposal Inc	1742784105500	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Waste Disposal Service	1752897756800	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Austin Trash Valet Services	1463768822800	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

- 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/>.

- 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 (mm/dd/yyyy)	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Women's Business Enterprises Alliance	09/16/2015	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B) Cont.

Rev. 10/14

Enter your company's name here: Texas Liqua Tech Svcs Inc Requisition #: 696-FD-15-B032

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: 3 Description: Trash Hauling/Portacans

b. List the subcontractor(s) you selected to perform the subcontracting opportunity you listed in SECTION B-1. Also identify whether they are a Texas certified HUB and their VID number, the approximate dollar value of the work to be subcontracted, the expected percentage of work to be subcontracted, and indicate whether the company is a Texas certified HUB.

Company Name	Texas certified HUB	VID Number (Required if Texas certified HUB)	Approximate Dollar Amount	Expected Percentage of Contract
Houston Waste Solutions	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 6,500	1 %
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - 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):

Solicited HUB Vendors were non-responsive

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-16-16-C110 Date of Award: _____ Object Code: 914-73
(Agency Use Only)

Contracting Agency/University Name: **Texas Department of Criminal Justice**

Contract Administrator Name: Lynne Piippo, CTPM, CTCM

Contractor (Company) Name: Texas Liqua Tech Services, Inc. State of Texas VID #: 1760393668

Point of Contact: Angie Palladini Phone #: (713) 225-5325

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/tpasscmb/search/index.jsp>

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number <small>(Required if Texas certified HUB)</small>	*Texas Certified HUB? (Yes or No)	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>
Siplast		No	\$ 95,000.00	\$	\$	
Midwest Electric		No	\$ 27,500.00	\$	\$	
Houston Waste Solutions		No	\$ 6,500.00	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
TOTALS:			\$ 129,000.00	\$	\$	

Signature: _____ Title: _____ Date: _____

Specifications

**Texas Department of Criminal Justice
CLEMENS Unit
Tracking # 00513004**

Replace Roof – Administration Building

**Clemens Unit
11034 Hwy 36, Brazoria,
Brazoria County TX 77422**

July 8, 2015

Issue For Construction



Thomas A. Stafford
7-8-2015

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SECTION 01 10 00 – SUMMARY

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Project; work covered by Construction Documents
- B. Contractor use of site and premises
- C. TDCJ occupancy
- D. Work sequence

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable.
 - 1. The entirety of the Division 1 Specifications included are TDCJ Standard Specifications. An item or element appearing within a Division 1 Specification, or an entire Division 1 Specification shall not be interpreted to be specifically required for the subject project. If an item, element, or specification section is applicable for the subject project, the specification(s) is/are required to be met.

1.3 PROJECT – WORK COVERED BY CONSTRUCTION DOCUMENTS

- A The Work consists of the following:
 - 1 The work of this contract consist of furnishing all labor, materials services, equipment and appliances required in conjunction with the reroofing to the Clemens Administration Building located at 11034 Hwy 36, Brazoria, Texas 77422, as indicated on the drawings and specifications herein. The work includes the removal of the existing built up roofing system down to the concrete deck. The roofing contractor shall verify the existing conditions. Inspect, repair and render the existing concrete deck surface acceptable to receive the new roofing system. Remove abandoned roof curbs, equipment supports, electrical and venting penetrations as indicated on the roof plan and verified by the contractor. Prior to removal of these items, verify with the TDCJ Project Administrator status of all items to be removed and all the items to be preserved. Patch roof openings with matching products to the existing materials and products to meet or exceed quality and performance intended and in compliance with current codes and standards. Install a new basic roof insulation system (two layers of roof insulation plus one layer of ½” cover board) to the complete roof area. Add at the top of the basic roof insulation tapered polyisocyanurate roof insulation to create the roof slope described on the drawings. Install new fire retardant pressure treated wood nailers, fascia boards roof curbs and all other wood around the perimeter of the roof, roof curbs, blocking, and elsewhere for a complete replacement of all roof wood carpentry. Provide new minimum 24 gauge pre-finished galvanized perimeter metal edging,

coping, flashing and counter flashing. Install new polyisocyanurate roof insulation on to the existing concrete deck and adhere to the top of the top layer of polyisocyanurate insulation a layer of ½" cover board. Install a new fully adhered, two ply cold process modified bitumen mineral surfaced roof system to the entire roof.

The roof on the Administration Building has not been tested for Asbestos content therefore if the Contractor encounters suspected materials, contact TDCJ Unit Maintenance and the existing roofing materials shall be removed using manual methods (axes, hatchets, knives, spud bars, power slicers or plows, but not saws) as outlined in Title 40 Code of Federal Regulations Part 61, Subpart M, Appendix A entitled, "Interpretive Rule Governing Roof Removal Operations" (Section I Paragraph 1.C.1) Debris generated from such removal operations shall be disposed of as regular construction debris (Section III Paragraph 3.C.1.)

- B. Perform Work under a single Lump Sum contract on Forms provided.
 - 1. Work of this Contract is identified in Technical Specifications and on Drawings. Unless incorporated via an issued Addenda or Change Order, no other work is authorized.
 - 2. Except as specifically noted, provide and pay for:
 - i. Labor, material, and equipment.
 - a. Owner is exempt from sales tax on products permanently incorporated in work.
 - 1. Obtain sales tax exemption certificate number from Owner.
 - ii. Tools, construction equipment, and machinery.
 - iii. Other facilities and services necessary for proper execution and completion of work.
 - 3. Contractor to acquire and pay for all required permits.
 - i. Comply with codes, ordinances, rules, regulations, orders, standards, and other legal requirements of public authorities, which bear on performance of Work.
 - ii. Promptly submit written notice to Design Professional of observed variance of Construction Documents from legal requirements. Assume responsibility for Work known to be contrary to such requirements, without notice.

1.4 TDCJ OCCUPANCY

- A. TDCJ will occupy the site and premises during entire period of construction for the conduct of normal operations.
 - 1. Owner will occupy site and/or existing building(s) during entire construction period.
 - i. Day-to-day operations will continue during the construction period.
 - 2. Maintain existing exits, unless otherwise indicated on drawings.
 - 3. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors,

or other occupied or used facilities without written permission obtained through PA.

4. Coordinate offender relocation and schedule shut-downs of equipment and utilities, as needed/applicable, for construction progress with PA.
 - i. Provide not less than 48 hours' notice to PA of activities that will affect Owner's operations.
 - ii. All interruptions to Owner operations shall be minimized to the fullest extent possible.
 1. Contractor provided temporary services for planned outages of permanent services for periods in excess of 4 hours (consecutive or cumulative) in any 24 hour period shall be required unless otherwise indicated in Project Documents, documented via an Addenda during Bid, or approved through the PA after Award.
 2. If required, reference construction drawings for requirements for auxiliary equipment and services for extended outages required for construction activities.
 3. Inadvertent interruption of Owner operations due to construction activities shall be corrected immediately by Contractor.
5. Protect areas being utilized by Owner from dust and debris by construction barriers, if required due to proximity of Owner occupation to construction area.
6. Use appropriate safety cautions, including barriers, to protect areas that are occupied, if required due to proximity of Owner occupation to construction area.

B. Cooperate with TDCJ to minimize conflict and to facilitate TDCJ operations.

C. Schedule Work to accommodate Owner occupancy.

1.5 CONTRACTOR USE OF SITE AND PREMISES

A. Use of Site: The construction site is a detention facility and therefore a secured facility.

1. Entry into the Unit is restricted and shall be coordinated with security and maintenance personnel. Offenders are present at the site. Caution and compliance with corrections officers and other TDCJ personnel instructions are strictly required. Security provisions necessary shall be included in Contract Sum.
2. Confine construction operations to areas indicated on drawings.
3. Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - i. Schedule deliveries to minimize use of driveways and entrances.
 - ii. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
4. No tobacco products are permitted on site.

1.6 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 period.
1. Coordinate construction schedules and operations through PA.
 2. 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.
- B. For bidding purposes:
1. The work week shall be Monday through Friday, 8 hours per day, except for State Holidays. (Hours of access, i.e. 8-5, 7-4, etc. shall be determined at Pre-Construction Meeting.)
 2. For all projects other than Fire Alarm System projects, there shall be security provided for only one construction crew. For Fire Alarm System projects, there shall be security provided for two construction crews.
 3. These requirements shall not be altered by determinations at Pre-Bid or during the Bid process.
 - i. An Addendum or Addendum item that changes identified work week or number of security crew(s) provided is null and void for bidding purposes.
 - ii. An alternate work week and/or additional security may be approved by the Warden after Notice of Award and shall not alter other requirements of the bidding process or the subsequent Contract.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

- A. The intent of Construction documents is to require all items necessary for the proper execution and completion of the work by Contractor. The Construction Documents are complementary and by their intent a complete and usable work product is expected to be provided. To meet this requirement the Contractor is expected to provide construction in place to include that which is indicated in the Construction Documents 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.

END OF SECTION 01 10 00
[Revision August 2013]

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Procedures for Substitution Requests as required by the Contract Documents. Revise and resubmit Substitution Requests as necessary to establish compliance with the specified requirements.

1.2 RELATED REQUIREMENTS

- A. General Conditions (Article 5.9) and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALITY ASSURANCE

- A. Coordination of submitted substitutions:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specifications and contract requirements.
- B. Substitutions:
 - 1. The contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when submitted on required Form provided in bid/contract documents, and when substantiated by the Contractor's submittal of required data.
 - 2. Where any material, product, or equipment is specified by proprietary name, trade name, manufacturer name, generic name, or catalog number with the addition of such expressions as "or A/E approved equal", material, product, or equipment named is intended and no substitution will be allowed without written approval, per bid/contract documents.
 - 3. Unless otherwise indicated the material, product, or equipment to be used are those specified and denote the type, quality, performance, etc. required. All proposals shall be based upon the use of specified material, product, or equipment, unless a substitution is approved and published in a written Addendum to the project.
 - 4. Do not substitute material, product, or equipment unless substitution has been specifically approved in writing by the A/E.
- C. "Or A/E approved equal",
 - 1. Where the phrase "or A/E approved equal" occurs in the Construction Documents, do not assume that the material, product, equipment, will be approved as equal unless the material, product, or equipment has been specifically approved in writing by the A/E.
 - 2. A Contractor who proposes to quote on the basis of an "or A/E approved equal" alternate material, product, equipment shall submit a Substitution Request (Attachment 6) **10 days** prior to Bid Opening, per General Conditions, SECTION L, 7.A. Approved Substitutions must be issued in an Addendum to be considered for proposal. If an Addendum with approved substitution is not issued, specified material, product, or equipment must be used.

3. During the course of work, the Owner's representative may secure from the job site samples of material, equipment, or product being used and submit the samples to an independent testing laboratory for comparison. If the results demonstrate that the material, equipment, or products being used are not approved materials, the owner shall issue a Notice of Nonconformance, per 01 45 16.13 – Contractor's Quality Control.
4. During the course of work, if a specified or previously approved material, equipment, or product is determined to be unavailable due to strikes, lockouts, bankruptcy, discontinuance of production, documented shortages or similar occurrences, submit a Substitution Request (Attachment 7) as soon as unavailability is identified. Claim of unavailability is subject to approval by owner. Time Extension requests will be approved as a separate matter and will not be approved due to failure of Contractor to submit Substitution Request in a timely manner.

D. Procedure for Substitution Request Form,

1. Substitution request **including all required documentation** shall be submitted to Owner's Representative
 - a. During Bid – 10 days prior to Bid Opening, to Contract Administrator.
 - b. During Contract Performance Period – as soon as unavailability is identified, to Project Administrator.
2. The Substitution Request must include documentation that the requested substitution is equal or superior to the specified material, product, or equipment. Failure to provide clear, accurate, and adequate documentation will be grounds for rejection.
3. Required documentation 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.
4. If use of the proposed material, product, or equipment would result in changes to the design of other elements, the submittal shall describe fully the changes required to the drawings or specifications. Any cost differences resulting from modifications to the drawings and specifications and the cost of making the changes, including charges for required design time by A/E, is the responsibility of the bidder/contractor.
5. **No** material, equipment, or product is considered "as equal" to the material, equipment, product specified until a Substitution Request has been approved by the A/E.

END OF SECTION 01 33 00

[Revision April 2014]

SECTION 01 33 00 – SUBMITTALS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Procedures for Submittal of Product Data, Shop Drawings, Samples, Mock-Ups, Requests for Information and other work-related submittals required by Contract Documents.

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable

1.3 DEFINITIONS

- A. Product Data – illustrations, standard schedules, performance charts, instructions, brochures, diagrams, test data and other information furnished by Contractor to illustrate material, product, equipment or system for some portion of the Work.
- B. Shop Drawings – drawings, diagrams, schedules and other data specially prepared for the Work by Contractor or a Subcontractor, Sub-Subcontractor, Manufacturer, supplier or distributor to illustrate some portion of the Work.
- C. Samples – physical examples which illustrate materials, equipment or workmanship to establish standards for the Work. Samples include field samples.
- D. Action Submittals – written and graphic information and physical samples that require A/E's responsive action.
- E. Informational Submittals – written and graphic information and physical samples that may or may not require A/E's responsive action.
- F. Request For Information (RFI) – requests from Contractor for additional information, interpretation, clarification of, or to identify conflicts with, the Construction Documents.
- G. Quality control submittals – pertain to quality control and TDCJ information which may or may not require review and approval by A/E. If reviewed, project information 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 submitting Contractor (and Contractor's professional engineer when such calculations are required to be professionally sealed). Examples of quality control submittals:
 - 1. Design data and calculations.
 - 2. Test reports.
 - 3. Certifications.
 - 4. Manufacturer's installation instructions.
 - 5. Manufacturer's field reports.

- H. Contract Closeout Submittals – contract closeout related information that requires review and approval by the A/E and are to be retained for project files.
1. Project record information.
 2. Warranties.
 3. Operation and maintenance data.
 4. TDCJ instruction reports.
 5. Contractor, subcontractors, suppliers, manufacturers contact information.

1.4 SUBMITTALS (Other than RFIs and Contract Close-out submittals)

- A. Per ARTICLE V., within 20 days after receipt of Notice to Proceed submit Submittal Schedule to Project Administrator for approval. Arrange the following information in tabular format.
1. Scheduled date for first submittal.
 2. Specification number and title.
 3. Submittal category (action or informational).
 4. Name of supplier.
 5. Description of the Work covered.
 6. Scheduled date for Design Professional's final release or approval. (30 days after submittal.)
- B. Coordinate preparation and processing of Submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
- C. Schedule Submittals to allow number of days for review and processing of Submittals by A/E as stipulated in the General Conditions and in such sequence as to cause no delay in the Work.
- D. Make Submittals promptly in accordance with approved Submittal Schedule.
1. Time for review shall commence on A/E's receipt of Submittal.
 - a. Submittal review: 30 calendar days for each Submittal.
 - b. Resubmittal review: 14 calendar days for review of each Resubmittal.
 - c. Allow additional time if coordination with subsequent Submittals/Resubmittals is required.
 2. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including Resubmittals.
- E. Per approved Submittal Schedule:

1. Submit number of copies of Shop Drawings as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
 2. Submit number of copies of Product Data as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
 3. Submit number of sets of Samples/Mock-Ups as determined at Pre-Construction Meeting (no more than 3) and meeting requirements set forth in relative Specification Section.
 4. Submit number of sets of other Submittals as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
- F. Coordinate Submittals into logical groupings to facilitate interrelation of Products and Systems:
1. Simultaneously submit associated items of operating systems which require correlation for efficient function and installation.
 2. A/E reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received and shall not be considered as a delay to Work progress.
- G. Provide complete Submittals for review. Partial or incomplete Submittals will be returned, without review, for resubmission.
1. Check for coordination with other Work of the Contract and for compliance with the Construction Documents.
 2. Mark with Contractor's approval stamp and provide Contractor's signature before submission to Project Administrator.
 - a. Stamp each submittal with a uniform approval stamp with a statement certifying that submittal has been reviewed, checked and approved for compliance with the Construction Documents.
- H. Transmittal Form:
1. Use Contractor's Transmittal form with Contractor's letterhead with title block or a permanently affixed label with Contractor's letterhead.
 - a. Transmit each submittal using transmittal form or label.
 - (1) Indicate name of firm or entity that prepared each Submittal on label or title block.
 - (2) Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by A/E.
 - (3) Include the following information on label for processing and recording action taken:
 - (a) Project name.
 - (b) Date.
 - (c) Name and address of A/E.

- (d) Name and address of Contractor.
 - (e) Name and address of subcontractor.
 - (f) Name and address of supplier.
 - (g) Name of manufacturer.
 - (h) Submittal number and revision identifier.
 - i) Submittal number shall use Specification Section number followed by decimal point and then a sequential number (e.g. 15 08 10.01). Resubmittal shall include an alphabetic suffix after another decimal point (e.g. 15 08 10.01.A)
 - (i) Number and title of appropriate Specification Section.
 - (j) Drawing number and detail references, as applicable.
 - (k) Locations(s) where product is to be installed, as applicable.
 - (l) Other necessary identification
 - i) Product specification sheets that contain multiple part numbers shall contain indication of specific part number applicable to submittal.
 - (m) Specifically identify deviations from the Construction Documents.
 - i) On attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by A/E and PA on previous submittals, and deviations from requirements in the Construction Documents, including minor variations and limitations.
2. Package each submittal individually and appropriately for transmittal and handling.
 3. A/E will return submittal without review, received from sources other than Contractor.
 4. Maintain a Submittal Log tracking the following information:
 - a. Submittal Number
 - b. Date of submission of Submittal
 - c. Date of receipt of Submittal response
 - d. Response – Approved, No Exception Taken, Revise and resubmit, Rejected, etc.
 - e. Date of Resubmittal
 5. Only use material, equipment, products upon receipt of a Submittal response of "Approved" or "No Exception Taken".
 - a. Informational Submittals that do not comply with requirements will be returned by A/E to be resubmitted by Contractor.
 - b. Submittals not required by the Construction Documents may not be reviewed and may be discarded.
 6. Approval – upon receipt of a Submittal response of "Approved" or "No Exception Taken", furnish copies to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.

- I. Resubmittals: Make Resubmittals in same form and number of copies as initial Submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit Submittals having made adjustments indicated in A/E response until they are marked "Approved" or "No Exceptions Taken" and dated by A/E.

1.5 REQUESTS FOR INFORMATION (RFI)

- A. Immediately upon discovery of the need for information, interpretation, clarification, or direction, submit a Request for Information.
- B. RFIs shall originate with the Contractor. RFIs submitted by entities other than Contractor shall be returned with no response.
- C. Coordinate and submit RFIs in a prompt manner so as to avoid delays in work.
 1. Allow 72 hours for A/E response.
 2. Requests for Time due to Contractor's failure to submit complete and accurate RFIs in a timely manner will not be considered.
- D. Use TDCJ form provided in Attachment 10 titled "State Documents and Forms". Include the following:
 1. Project name.
 2. Date.
 3. Name of Contractor.
 4. RFI number, numbered sequentially.
 5. Detailed description of needed information or identified conflict.
 6. References to drawings, details, notes, specification sections, etc.
 7. Field dimensions and conditions.
 8. Attached drawings, photos, Product Data, Shop Drawings, and other information necessary to communicate issue(s).
 9. Proposed resolution if subject matter of RFI is within practice of Construction Contractor or a Sub-contractor on Project.
 10. Preliminary estimation of anticipated costs/savings and/or additional Contract Time.
 - a. If there is no anticipated change to Contract Sum or Contract Time, such shall be indicated.
 - b. **An approved RFI does not constitute an approved change to Contract Sum or Contract Time. Use TDCJ forms provided in Attachment 10 titled "State Documents and Forms" to submit a Pending Change Request and/or Time Extension Request, as applicable, according to Contract procedures.**
- E. The following RFIs will be returned without action:
 1. Requests for approval of submittals.
 2. Requests for approval of substitutions.

3. Requests for interpretation of A/E's action on submittals or substitutions.
 4. Requests for coordination information already indicated in the Construction Documents.
 5. Requests for adjustments in Contract Sum or Contract Time.
 6. Incomplete RFIs.
 7. RFIs with numerous or significant errors.
- F. Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. RFI number including RFIs that were dropped or otherwise cancelled.
 4. RFI description.
 5. Date RFI was submitted.
 6. Date response was received.
 7. Identification of related Minor Change in the Work, Field Order, Proposal Request, as appropriate.
- G. Upon receipt of response:
1. Retain a copy of RFI/response with RFI log.
 2. Tape a copy of RFI/response to backside of previous page of affected Construction Drawing set utilized for Red Line set.
 3. If RFI response requires a re-statement of original content of RFI, re-submit using same RFI number with a revision qualifier such as .1 or -a. (Remain consistent throughout all RFIs.)
 4. Respond within 10 calendar days if A/E's response requires additional consideration.

1.6 CONTRACT CLOSEOUT SUBMITTALS

- A. Prepare and submit Contract Closeout submittals as required per individual Specification Sections.

PART 2 – PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals as required by individual Specification Sections.
1. Product Data:
 - a. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - b. Prepare written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

- (1) Type of product. Include unique identifiers for each product.
 - (2) Reference sheet number, detail, and/or specification number.
 - (3) Number and name of room or space.
 - (4) Location within room or space.
- c. Submit Product Data before or concurrent with Samples/Mock-Ups and/or Shop Drawings.
 - d. Collect information into a single submittal for each element of construction and type of product or equipment.
 - e. 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.
 - f. Mark each copy of each Submittal to show which products and options are applicable.
 - g. Upon approval:
 - (1) Retain one copy of each Product Data Submittal.
 - (2) Utilize for quality control of provided product.
 - (3) Utilize for coordination with other elements.
 - (4) Mark up and return as Project Record Document.

2. Shop Drawings:

- a. Prepare written summary indicating types of elements required for the Work and their intended location. Include the following information in tabular form:
 - (1) Type of element. Include unique identifiers for each element.
 - (2) Reference sheet number, detail, and/or specification number.
 - (3) Name of room or space.
 - (4) Location within room or space.
- b. Prepare project-specific information, drawn accurately to scale. Do not base Shop Drawings 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 Contractor's use in preparing Shop Drawings.
 - c. If not previously submitted, submit Product Data concurrent with Shop Drawings.
 - d. Submit applicable Samples/Mock-Ups concurrent with Shop Drawings.
 - e. Collect information into a single submittal for each element of construction and type of product or equipment.
 - f. Fully illustrate requirements in 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.
 - g. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 34 by 44 inches.
 - h. Upon approval:
 - (1) Retain one copy of each Shop Drawing Submittal.
 - (2) Utilize for quality control of provided manufactured elements.
 - (3) Utilize for coordination with other elements.
 - (4) Mark up and return as Project Record Document.
3. Samples and Mock-Ups:
- a. Prepare written summary indicating types of Samples and Mock-Ups required for the Work and intended location for selected and final product(s). Include the following information in tabular form:
 - (1) Type of product. Include unique identifiers for each product.

- (2) Reference sheet number, detail, and/or specification number.
 - (3) Name of room or space.
 - (4) Location within room or space.
- b. If not previously submitted, submit Product Data concurrent with Samples and Mock-Ups.
 - c. Submit applicable Shop Drawings concurrent with Samples/Mock-Ups.
 - d. Submit Samples/Mock-Ups that contain multiple, related components such as accessories together in one submittal package.
 - e. For review/ selection/ approval of kind, color, pattern, texture and similar characteristics, submit manufacturer's charts consisting of units or sections of units showing the full range of colors, textures, patterns, and other similar characteristics available.
 - f. For review/ selection/ approval of assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics, submit or erect complete, full-size Mock-Ups, at Project site, unless other is indicated in applicable Specification Section or approved by A/E, 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.
 - g. Upon approval:
 - (1) Retain one unit of each Sample/Mock-Up Submittal.
 - (a) Samples/Mock-Ups that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples/Mock-Ups must be in an undamaged condition at time of use.
 - (b) If not to be incorporated into Work, leave in place for duration of the project or until approved for removal through the Project Administrator.
 - (c) Samples/Mock-Ups not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 - (2) Utilize for quality control of provided elements.
 - (3) Utilize for coordination with other elements.
 - (4) Document approved changes and submit record of Documentation as Project Record Document.

4. Requests for Information (RFI):

- a. Hard-Copy RFIs shall have each page of attachments with the RFI number and sequential page number.
- b. Software-Generated RFIs shall contain substantially the same content as Hard-Copy RFIs and Attachments shall be provided

as electronic files in Adobe Acrobat PDF format numbered as for Hard-Copy submission.

- c. Supplementary drawings prepared by Contractor shall 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.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by individual Specification Sections.
 - 1. Reports:
 - a. All reports shall include a cover page with the following information:
 - (1) Project name.
 - (2) Type of report.
 - (3) Name, contact information, qualifications of preparer.
 - (4) Specification Section specifying report.
 - b. All reports shall include footer information that, at minimum, includes page numbers.
- B. Coordination Drawings: Comply with requirements in individual Specification Sections.
- C. Product Test Reports: Prepare written reports 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.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Construction Documents.
- E. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- F. Preconstruction Test Reports: Prepare reports 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.

- G. Compatibility Test Reports: Prepare reports 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.
- H. Material Certificates: Prepare reports 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.
- I. Field Test Reports: Prepare reports written 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.
- J. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Construction Documents. Include evidence of manufacturing experience where required.
- K. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing, operating, and maintaining product or equipment. 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.
 8. Specifically identify requirements for special post commissioning maintenance activities required to maintain warranties that are outside of typical Periodic Maintenance requirements.
- L. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name of product.
 2. Name, address, and telephone number of factory-authorized service representative making report.
 3. Statement on condition of adjoining elements and acceptability for installation of product.
 4. Statement that products at project site comply with manufacturer's requirements.
 5. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 6. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 7. Statement whether conditions, products, and installation will affect warranty.

8. Other required items indicated in individual Specification Sections.
- M. Qualification Data: Prepare 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.
- N. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Construction Documents. Submit of record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include name of firms and personnel certified.
- O. Installer Certificates: Prepare written statements 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.
- P. Design Data: Prepare 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.
- Q. Material Safety Data Sheets (MSDSs): submit per requirements in individual Specification Sections.

PART 3 – EXECUTION
(Not Used)

END OF SECTION 01 33 00
[Revision March 2015]

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 STANDARDS

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.

SCHEDULE OF ABBREVIATIONS

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
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
ARI	Air Conditioning and Refrigeration
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
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 March 2015]

SECTION 01 45 00 - QUALITY CONTROL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Manufacturer's Field Services.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 QUALITY CONTROL, GENERAL:

- A. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Owner.
- B. Inspection and testing services are required to verify compliance with requirement specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Construction Document requirements.
- C. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality control requirements for individual construction activities may be specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
 - 2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Construction Document requirements.

3. Requirements for the Contractor to provide quality control services required by the Owner or authorities having jurisdiction are not limited by provisions of this Section.

1.4 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances specified requirements indicate more rigid standards and more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.5 MANUFACTURER'S INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Construction Documents, request clarification from Owner before proceeding.

1.6 MANUFACTURER'S CERTIFICATES

- A. When required by individual Specifications Section, submit six manufacturer's certificates stating that products meet or exceed specified requirements.

1.7 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification Sections, require supplier or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and to provide instructions as applicable, and to make appropriate recommendations.
- B. Representative shall submit written report to Project Administrator listing observations and recommendations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 45 00

[Revision March 2015]

SECTION 01 45 16.13 - CONTRACTOR QUALITY CONTROL

PART 1 – GENERAL

1.1 GENERAL

- A. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the General and Special Conditions. The Quality Control System shall consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALITY CONTROL PLAN/PROGRAM

- A. General: The Contractor shall furnish for review by the TDCJ Project Administrator (PA) at the Pre-Construction Meeting the Contractor Quality Control (QC) Plan proposed to implement the requirements of the General and Special Conditions. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The PA will consider an interim plan for the first [30] days of operation. Construction will be permitted to begin only after acceptance of the QC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features 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 features of work to be started.
- B. Content of the QC Plan: The QC Plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by Subcontractors, Fabricators, Suppliers and Purchasing Agents:
 - 1. A description of the Quality Control Organization, including a chart showing lines of authority and acknowledgement that the QC Staff shall implement the three phase control system for all aspects of the Work specified.
 - 2. The pertinent qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.
 - 3. A copy of the letter to the QC Manager signed by an authorized official of the Firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the QC Manager including authority to stop work which is not in compliance with the Contract. The QC Manager shall issue letters of direction to all other various Quality Control Representatives outlining duties, authorities and responsibilities. Copies of these letters will also be furnished to the PA.
 - 4. Procedures for scheduling, reviewing, approving, and managing submittals, including those of Subcontractors, off-site Fabricators,

Suppliers and Purchasing Agents. These procedures shall be in accordance with the General Conditions and Submittals Section.

5. 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.
 6. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
 7. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
 8. Reporting procedures, including proposed reporting formats.
 9. A list of the definable features or units of work. A definable feature or unit of work is a portion of the Work, which is separate and distinct from other portions of the Work and has separate control requirements. Although each section of the Specifications may generally be considered as a definable feature or unit of work, the organization of the Specifications shall not determine the extent or scope of a definable feature or unit of work. This list will be mutually agreed upon by the PA, the A/E and the Contractor during the Coordination Meeting.
- C. Acceptance of Plan: Acceptance of the Contractor's plan or interim plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. TDCJ reserves the right to require the Contractor to make changes in his QC Plan and operations including replacement of personnel, as necessary, to obtain the quality specified.
- D. Notification of Changes: After acceptance of the QC Plan, the Contractor shall notify the PA in writing a minimum of seven calendar days prior to any proposed change in the QC Plan or QC Personnel. Proposed changes are subject to acceptance by A/E.

1.4 COORDINATION MEETING

- A. After the Pre-Construction Conference, before start of construction, and prior to acceptance of the Quality Control Plan by the Quality Assurance Inspector (QA), a meeting shall be held to discuss the Contractor's Quality Control System. Attending this meeting shall be the Contractor's Project Manager, Contractor's General Superintendent, TDCJ's Quality Assurance Inspector (QA), PA and Site Staff. If required, the A/E, the Contractor's Quality Control Material Testing Lab, and TDCJ's Quality Assurance Testing Lab shall also attend. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the 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 Quality Control with the QA. Minutes of the meeting shall be prepared by the QA and signed by both the Contractor and the QA. The minutes shall become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the QC system or procedures which may require corrective action by the Contractor.

1.5 QUALITY CONTROL ORGANIZATION

- A. Quality Control (QC) Manager:
1. The Contractor shall identify an individual within his organization at the Site of the Work who shall be responsible for overall management of QC and have the authority to act in all QC matters for the Contractor. This **QC Manager shall be on the site at all times** during construction and will be employed by the Contractor, except as noted in the following. An alternate for the QC System Manager will be identified in the plan to serve in the event of the System Manager's absence. Any period of absence may not exceed 2 weeks at any one time, and not more than 20 workdays during a calendar year. The requirements for the alternate will be the same as for the designated QC Manager.
 2. **The Quality Control Manager shall be separate from and in addition to the Contractor's Superintendent** or other project management staff. The QC Manager shall report directly to the Contractor's home office Management. The Quality Control Manager shall not be removed without TDCJ's written consent.
- B. QC Organizational Staffing:
1. The Contractor shall provide and maintain a QC Staff which shall be at the Site of Work at all times during progress, with complete authority to take any action necessary to ensure compliance with the contract.
 2. Organizational Changes: The Contractor shall obtain TDCJ acceptance before replacing any member of the QC Staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement. TDCJ reserves the right to have replaced, any member of the Quality Control Staff who is in the opinion of TDCJ not accomplishing their assigned duties.
- C. QC Staff Qualifications: Following are the minimum requirements for the QC Staff. These minimum requirements will not necessarily assure an adequate staff to meet the QC requirements at all times during construction. The actual strength of the QC Staff may vary during any specific work period to cover the needs of the work period. When necessary for a proper QC organization, the Contractor shall add additional staff at no cost to TDCJ. This listing of minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with contract requirements. All QC Staff members shall be subject to acceptance by TDCJ.
1. **QC Manager: 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.
 2. Supplemental Personnel: A staff shall be maintained under the direction of the QC Manager to perform all QC activities. The Staff must be of sufficient size to ensure adequate QC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities. The QC plan will clearly state the duties and responsibilities of each staff member.

1.6 QUALITY CONTROL PROCEDURES

- A. General: Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of Subcontractors and Suppliers, complies with the requirements of the Contract. The Quality Control shall be adequate to cover all construction operations, including both on-site and off-site fabrication, and shall be coordinated to the proposed construction sequence. **Quality Controls shall include a three point inspection plan.** The Quality Control shall be conducted by the QC Manager for all definable features of work.
- B. **Three Point Inspection Plan:** The Quality Control Manager with the Contractor's appropriate staff shall utilize the Three Point Inspection Plan as the basis of the following Quality Control procedures to assure conformance of the work performed by the Contractor to the requirements of the Construction Documents and to the approved Submittals.
- C. Quality Control Procedures: In addition to the basic Three Part Inspection Plan requirements, the QC Manager shall conduct and implement the following Quality Control procedures for each definable feature of work:
1. Preparatory Coordination: Prior to the start of work under each separate definable segment of work, 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 Quality Control Manager, Contractor's Quality Control Material Testing Lab-if testing is required in the definable segment of work, PA, QA, and appropriate representatives of TDCJ. Supervisory and Quality Control representatives of all applicable Subcontractors will also attend. The purpose of the meeting is to ensure 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 will be on site all times during the work and shall have the authority to effect the resolution of quality problems including stopping the Work. The following items will be reviewed at the meeting as a minimum:
 - 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 Contractor's and Subcontractor's work force to perform the operation to required workmanship standards;
 - i. Any other preparatory steps dependent upon the particular operation.
 2. The PA shall be notified a minimum of 72 hours prior to the beginning of any preparatory coordination meeting. The Contractor's Quality Control Manager will chair the meeting. The results of the preparatory Coordination Meeting shall be documented by separate minutes prepared by the Quality Control Manager and Attached to the Daily Quality Control Summary Report.
 3. Initial Inspection: Upon completion of a representative sample of a given feature of the Work, and prior to the start of a new or changed operation, QA, PA, and the A/E will meet with the Contractor's Superintendent,

Quality Control Manager and applicable Subcontractor's Superintendent and their Quality Control Representatives, and Contractors Quality Control Material Testing Lab-if testing is required in the definable segment of work. 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. Review minutes of Preparatory Meeting.
 - b. Conformance to Construction Drawings, Specifications and the accepted Shop Drawings or Submittal;
 - c. Adequacy of materials and articles utilized;
 - d. Adequacy and results of inspection and testing methods;
 - e. Adequacy of safety and environmental precautions.
4. Once approved, the representative sample will become the physical baseline by which ongoing work is compared 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. During this inspection all differences will be resolved. The initial phase should be repeated for each new crew to work on site or at any time acceptable specified quality standards are not being met.
 5. The PA shall be notified a minimum of 72 hours prior to the beginning of any initial inspection. The Contractors Quality Control Manager will chair the initial inspection. The results of the initial inspection shall be documented by separate minutes prepared by the Quality Control Manager and attached to the daily quality control summary report.
 6. Follow-up Phase: Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the QC documentation. Final follow-up-checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.
 7. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the TDCJ A/E if the quality of on-going work is unacceptable; or if there are changes in the applicable QC staff or in the on-site production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.
 8. Pre-Final Acceptance Inspection: When the work is completed, the Contractor shall make a written request for Pre-Final Inspection in accordance with the General Conditions, giving the TDCJ PA at least 72 hours advance notice. The PA will schedule the Pre-Final Acceptance Inspection and will prepare a list of deficient or incomplete items (Punch List) discovered during the inspection. The Punch List will be transmitted to the Contractor for correction of the deficient or incomplete items. Following correction of the deficient or incomplete items and notification by the Contractor in accordance with the General Conditions, the PA and the TDCJ's A/E will conduct the Final Acceptance Inspection.
 9. Punch List: During Pre-Final or Final Acceptance Inspections, Work that is found to be incomplete, needing repair or in nonconformance with the Contract requirements such as loose bolts, damage, unsatisfactory workmanship, etc., will be identified on a Punch List. The Punch List will

- be distributed to the Contractor, the TDCJ's A/E and the Inspector Team, by the PA in accordance with the General Conditions.
10. Final Acceptance Inspection: After the Contractor has completed all items on the Punch List (generated from the Pre-Final Acceptance Inspection) he shall request a Final Acceptance Inspection on a definite date. Seventy-two (72) hours advance notice shall be given to the PA. Upon verification to the TDCJ's A/E by the QC Manager that the work is ready for Final Inspection and Acceptance, the TDCJ's A/E will within ten calendar days make a Final Inspection.

1.7 DEFICIENT AND NON-CONFORMING WORK

A. General:

1. Workmanship or materials which are found to be not in conformance with the Construction Documents shall be identified with a Deficiency issued by the Contractor's Quality Control Manager.
2. TDCJ reserves the right to maintain a staff of inspectors for random sampling of the materials and the work for conformance to Construction Documents. This does not relieve the Contractor in any way from his responsibility of Quality Control.
3. TDCJ may utilize the services of a Quality Assurance Material Testing Laboratory to perform tests of Materials as necessary to verify any testing performed by the Contractor's Material Testing Lab.
4. The Quality Control Manager shall request the Contractor to take remedial actions via a Deficiency where indicated by nonconforming work or materials found by test results.
5. All deficiencies instituted by Contractor must include the proposed corrective action to be taken, and submitted to the TDCJ's A/E, PA, and QA for approval.
6. Upon satisfactory completion of the Remedial Action, the results shall be documented by the Contractor's Quality Control Material Testing Laboratory, with a copy of the results to the TDCJ's A/E. If Material Testing Laboratory Test Reports reveal nonconforming work or materials in which the work effort has been completed and no longer correctable, the Quality Control Manager shall direct the Contractor to remove the work.

B. Deficiency Notice:

1. Ongoing work which is deficient shall be noted by the Contractor's Quality Control Manager via a Deficiency Notice. A log shall be kept by the Contractor on all such items and notice on all such items shall be given to the appropriate parties by the Contractor's Quality Control Manager. A copy of such notices shall be made on a daily basis to the TDCJ's PA, attached to the Quality Control Summary Report, and an updated copy of the Log shall be forwarded to the TDCJ's PA on a weekly basis, by the Contractor's Quality Control Manager. TDCJ reserves the right to advise the Contractor's Quality Control Manager of work that is deficient.
2. Deficient work is when the affected element of work is in-progress and discrepancies can be rectified as the work proceeds.

C. Remedial Action Request: TDCJ reserves the right to issue a remedial action request on deficient work that has not been corrected on an ongoing daily basis,

recurring deficient work or materials, or deficient work that is in danger of being covered up. The Remedial Action Request will be copied to the Contractor's Quality Control Manager on a same day basis and shall require a written response by the Contractor's Quality Control Manager within 24 hours of issuance to the PA. Upon approval of the Contractor's proposed corrective action, the Contractor shall have 15 calendar days to successfully complete his remedial work. If after 15 calendar days, the Deficient Work is not resolved, the work identified shall become in nonconformance and a notice of nonconformance will be issued. When issued, a Notice of Nonconformance will preclude payment for the elements noted and will remain in effect until corrective actions have been submitted, approved and performed. A Remedial Action Request Log will be kept by the QA and a copy of this Log will be forwarded to the Contractor's Quality Control Manager on a weekly basis.

- D. Notice of Nonconformance: A Notice of Nonconformance will be issued to the Contractor by the PA whenever there are violations of the terms of the Contract, including materials received and/or completed items of the Work found to be in nonconformance with contract requirements. Work not in conformance with the Construction Documents can be identified as work or material that cannot be corrected and must be replaced, work that in order to correct it must have a deviation from Construction Documents approved, or work in which an item must be substituted in lieu of that specified in the Construction Documents. When issued, a Notice of Nonconformance will preclude payment for elements noted and will remain in effect until corrective actions have been submitted, approved and performed. The Notice of Nonconformance Form will fully describe the nature and extent of nonconforming elements and will include space for the Contractor's Corrective Action Proposal, the TDCJ's A/E review of the Contractor's Proposal, TDCJ reinspection and/or verification of approved corrective rework and a space for the PA disposition of the Nonconformance matter.
- E. Corrective Action: Correction of Deficient or Nonconforming Work will be monitored by the TDCJ's A/E. TDCJ will verify that the Deficient or Nonconforming work has been corrected, corrective action has been taken to prevent recurrence, and will record when the correction was completed. Significant conditions adverse to quality will be reviewed by the TDCJ's A/E to determine the cause and to review the Contractor's recommended corrective action that will preclude recurrence. Follow-up action shall be taken to verify implementation of the corrective action. The corrective action will be documented by the PA.

1.8 QUALITY CONTROL OF PRODUCT DELIVERY

- A. Inspection of Products and Equipment to be incorporated into the work;
 - 1. Products and equipment delivered to the project site shall be subject to inspection by the Quality Control Manager for conformance with the Construction Documents and Submittals, prior to incorporation into the Work. TDCJ Inspectors may monitor the Contractor's inspection procedures.
 - 2. All products and equipment furnished by TDCJ and delivered to the Project Site shall be inspected by the QA Inspector and the Quality Control Manager for shipping damage, and for identification and quantity, prior to incorporation into the Work.

3. Items which are found to be in nonconformance with the Contract requirements shall be identified and issued as a Deficiency by the Quality Control Manager and segregated from accepted Products and Equipment. These items shall not be incorporated into the Work until corrective action acceptable to TDCJ's A/E has been completed.
4. Special requirements for storage, handling and tracking of hazardous material shall be monitored in strict accordance with Materials Safety Data Sheet requirements.
5. Items which are determined to have been improperly shipped, stored, or handled shall be deemed deficient and shall not be incorporated into the Work until the Manufacturer has inspected the item in question and determined the repair work or corrective actions necessary to validate the Product Warranty or restore the Product to like new condition, subject to approval of the TDCJ's A/E.

1.9 DOCUMENTATION

- A. The Contractor shall maintain current records of quality control operations, activities, and tests performed, including the work of Subcontractors and Suppliers. These records shall be on the sample forms included herein and shall include factual evidence that required quality control 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 today, giving location, description, and by whom.
 4. Test and/or control activities performed with results and references to Contract requirements. The control phase shall be identified (Preparatory, Initial, and Follow-up). List deficiencies noted along with corrective action.
 5. Material received with statement as to its acceptability and storage.
 6. Identify submittals reviewed, with contract reference, by whom, and action taken.
 7. Off-site surveillance activities, including actions taken.
 8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
 9. Record instructions given/received in the field.
- B. These records shall indicate a description of trades working on the Project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. The original of these records in report form shall be furnished to the PA daily within 24 hours after the date(s) covered by the report, including reports for days on which no work is performed. All calendar days shall be accounted for throughout the life of the Contract. Reports shall be signed and dated by the QC Manager. The report from the QC Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

1.10 QUALITY CONTROL OF REGULATORY REQUIREMENTS

- A. Inspection of Clean Water Act Section 402(p): Provide Inspections required by Section 402(p) as follows:

1. Inspection shall as a minimum be performed once every 7 days or within 24 hours of rainfall of 1/2 inch or more. If the area in which the construction activity is taking place is an arid or semi arid zone, (10 to 20 inches annual rainfall average or less), the requirement for reporting is still within 24 hours of a 1/2 inch rainfall, but only once every 30 days if no such rainfall occurs.
2. Inspectors shall observe: Disturbed areas, areas used for storage of materials exposed to precipitation, structural control methods, and areas where vehicles enter and exit site.
3. Disturbed area or storage area shall be inspected for evidence of or the potential for pollutants entering the runoff from the site. Examine erosion and sediment controls to ensure they are performing correctly. If a location where runoff is discharged into U.S. waters (creeks, rivers, etc.) is accessible, it shall be inspected for significant impacts. Entrances and exits shall be inspected for off-site tracking. Non-storm water discharges such as water discharges are created as a result of construction activities and its associated activities, (i.e. truck washing, etc.) shall be inspected.
4. Inspections may result in alterations of the original Pollution Prevention Plan. Documentation of these recommended changes shall be included in the Inspection Reports.

B. Documentation of Inspections:

1. An Inspection Report shall include as a minimum: scope of inspection, name and qualifications of inspector, date of inspection, major observations, actions taken and actions recommended.
2. The Contractor shall maintain current records of inspection.
3. The original of these records shall be submitted to the PA within 24 hours after the date(s) covered by the report. Reports shall be signed by the QC Manager.

1.11 FORMS:

A. Refer to **TDCJ Attachment 10** for referenced copies of State Documents and Forms.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION 01 45 16.13

[Revision March 2015]

SECTION 01 45 23 - TESTING AND INSPECTION SERVICES

PART 1 - GENERAL

1.1 GENERAL

- A. Contractor shall employ and pay for the services of an Independent Testing Laboratory (Contractor's Quality Control Laboratory) to perform specified services and testing.
- B. Employment of laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.
- C. Contractor shall not employ an Independent Testing Laboratory currently under a separate contract to provide such services to TDCJ.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALIFICATIONS OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E 329, "Practice for Use in the Evaluation of Inspection and Testing Agencies as Used in Construction" and ASTM E543, "Practice for Determining the Qualification of Nondestructive Testing Agencies."
- C. Authorized to operate in the State of Texas
- D. Acceptable to TDCJ and approved in writing by TDCJ
- E. 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 construction materials.
- F. Testing equipment calibrated at 12 month intervals by devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants. Submit copies of certificates of calibration.
- G. Voluntarily participate in American Association of Laboratory Accreditation (AALA) program.
 - 1. Laboratory shall possess a current Scope of Accreditation Certificate in type of tests required for the project.
 - 2. Testing and Inspection Services performed at laboratory facility which has received A2LA accreditation, unless TDCJ specifically approves an alternate A2LA accredited laboratory or an acceptable project QA/QC program which provides for an adequate "extension" of accredited

laboratory. Such an "extended" laboratory which will operate more than a year must be separately assessed and accredited. A temporary field or project laboratory operating less than a year shall be under the fulltime supervision of management from an accredited laboratory. Test reports produced by the temporary field or project laboratory shall be signed by one of the accredited laboratory's signatories.

- H. Inspectors and technicians with demonstrated competence in performing relevant tests and inspections and under direct supervision of persons meeting following requirements:
 - 1. NICET Level II Certification in concrete, soils, or asphalt fields; or ACI Level II Certification in concrete.
 - 2. AWS Certified Welding Inspector in structural steel field.
 - 3. ASNT Level II Certification in Radiographic or Ultrasonic Nondestructive Testing of shop and field welding.
- I. Soils inspections for pier drilling, structural excavation and structural fill earthwork performed by a registered A/E or Geologist licensed in the State of Texas and having a minimum of 5 years experience in providing Geotechnical services. This individual shall be present at site and provide continuous inspections during pier drilling, structural excavation and structural fill earthwork procedures.

1.4 AUTHORITY AND DUTIES OF LABORATORY

- A. Cooperate with Architect/Engineer (A/E) and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction.
- C. Promptly notify PA, A/E and Contractor of observed irregularities or deficiencies of work or products.
- D. Laboratory is not authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of Construction Documents.
 - 2. Approve or accept any portion of the Work.
 - 3. Perform any duties of the Contractor.
- E. Promptly submit written report of each test and inspection; 2 copies each to A/E and PA and one copy to Contractor. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector/technician and responsible reviewer
 - 5. Date and time of sampling or inspection
 - 6. Record of temperature and weather conditions
 - 7. Date of test
 - 8. Identification of product and Specification Section
 - 9. Location of sample or test in the Project

10. Type of inspection or test
 11. Results of tests and compliance with Construction Documents
 12. Interpretation of test results that indicate unsatisfactory conditions
- F. Submit certificates of testing, inspection or approval that are required by laws, ordinances, rules, regulations, orders or approval of public authorities. Submit same number of copies as required for tests and inspections.

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and provide access to Work or to Manufacturer's operations.
- B. Deliver to laboratory adequate quantities of representative samples of materials proposed for use and which require testing.
- C. Provide to laboratory preliminary design mix proposed to be used for concrete, and other materials mixes which require control by testing laboratory.
- D. Notify laboratory and PA sufficiently in advance of operations (minimum of 48 hours) to allow for laboratory assignment of personnel and scheduling of tests.
- E. Furnish incidental labor and facilities:
 1. To provide access to Work to be tested
 2. To obtain and handle samples at Project Site or at source of product to be tested.
 3. To facilitate inspections and tests, including scaffolding, or hoisting; required to inspect, and test structural elements.
 4. For storage and curing of test samples
- F. For TDCJ's Quality Assurance inspection and testing, furnish same incidental labor and facilities specified in this Article for Contractor's Quality Control Testing.
- G. Provide adequate facilities for safe storage and proper curing of concrete test samples on project site for the first 24 hours and also for subsequent field curing in accordance with ASTM C31.
- H. Make arrangements with laboratory and pay for additional samples and tests required for Contractor's convenience, including additional compressive strength tests required to confirm strength requirements for early form recovery.
- I. Make arrangements with laboratory and pay for services to perform additional inspections, sampling and testing required when initial tests indicate Work does not comply with Construction Documents.
- J. Coordinate and integrate inspection and testing services with Contractor's Quality Control Plan/Program, including:
 1. Compile and submit complete list of inspections and tests required by the Construction Documents. List shall include test name, frequency, specification reference, and estimate of quantities.

2. Record results of inspections and tests conducted at site on appropriate Quality Control Reports.
3. Record results of off-site inspections and tests on appropriate Quality Control Reports.

1.6 TDCJ'S QUALITY ASSURANCE INSPECTION AND TESTING

- A. The PA may, from time to time, perform additional Quality Assurance inspections and testing in accordance with the General & Special Conditions of the Contract.
 1. The TDCJ will employ and pay for services of an independent testing laboratory to perform any additional Quality Assurance inspections and testing.
- B. Quality Assurance inspections and testing conducted by the TDCJ's Quality Assurance Laboratory shall not relieve the Contractor from performing inspections and tests required by the Construction Documents or regulatory agencies.
- C. The TDCJ reserves the right to utilize the Contractor's on-site Quality Control Laboratory Facilities, if any, for incidental handling, curing or storage of Quality Assurance samples.

1.7 REFERENCES

- A. American Concrete Institute:
 1. ACI 301-84 - Specifications for Structural Concrete for Buildings.
 2. ACI 318-89 - Building Code Requirements for Reinforced Concrete
- B. American Institute of Steel Construction:
 1. AISC-Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, June 1, 1989.
 2. AISC-Specification for Structural Joints, using ASTM A325 or A490 Bolts, November 13, 1985, approved by Research Council on Riveted and Bolted Structural Joints of the Design Professional Foundation.
- C. American Society of Testing Materials:
 1. ASTM C31 - Making and Curing Concrete Test Specimens in the Field
 2. ASTM C39 - Compressive Strength of Cylindrical Concrete Specimens
 3. ASTM C78 - Flexural Strength of Concrete
 4. ASTM C42 - Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 5. ASTM C91 - Masonry Cement
 6. ASTM C94 - Ready Mixed Concrete
 7. ASTM C109 - Compressive Strength of Hydraulic Cement Mortars
 8. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates
 9. ASTM C143 - Slump of Portland Cement Concrete.
 10. ASTM C172 - Sampling Fresh Concrete
 11. ASTM C231 - Test for Air Content of Freshly Mixed Concrete by the Pressure Method
 12. ASTM C780 - Preconstruction and Construction Evaluation of Mortars

13. ASTM C1019 - Sampling and Testing Grout
14. ASTM D75 - Sampling Aggregates
15. ASTM D4318 - Liquid Limit, Plastic Limit and Plasticity Index of Soils
16. ASTM D698 - Moisture-Density Relations of Soils
17. ASTM D1188 - Bulk Specific Gravity of Compacted Bituminous Mixtures
18. ASTM D1556 - Density of Soil in Place by Sand-Cone Method
19. ASTM D1557 - Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-16 Rammer and 18 inch Drop.
20. ASTM D2167 - Density of Soil in Place by Rubber-Balloon Method
21. ASTM D2172 - Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
22. ASTM D2216 - Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil - Aggregate Mixtures
23. ASTM D2922 - Density of Soil and Soil Aggregate in Place by Nuclear Method
24. ASTM E164 - Ultrasonic Contact Inspection of Weldments
25. ASTM E447 - Compressive Strength of Masonry Prisms

D. American Welding Society:

1. AWS D1.1 - Structural Welding Code, Steel, including latest revisions.

PART 2 – NOT APPLICABLE

PART 3 – EXECUTION

3.1 SOILS TESTING

- A. Laboratory Sampling and Testing: For each type of off-site borrow material and site excavated soil material proposed for use, analyze samples to provide engineering soil classification, gradation and quality description, and perform 2 representative tests for each 10,000 cubic yards of soil material as follows:
1. Tests for liquid limit, plastic limit and plasticity index of soils in accordance with ASTM D4318.
 2. Tests for moisture/density relations (optimum moisture and laboratory maximum density) of soil in accordance with ASTM D698 or D1557, as applicable.
 3. Laboratory moisture content test in accordance with ASTM D 2216 for each soil type to calibrate nuclear density gauge.
- B. In Place Moisture Density Tests:
1. Optimum Moisture-Density Relationship: If changes in soil occur which may affect optimum moisture content or laboratory maximum dry density, conduct one additional moisture-density relationship for each changed soil material in accordance with ASTM D698 or D1557.
 2. In-Place Compaction Tests: Perform in-place compaction test for moisture content, and dry density of materials-in-place, to determine that

subgrades, backfill and embankment fill materials have been compacted to specified density in accordance with ASTM D2167 or ASTM #2922. Perform at following frequencies:

- a. One test for each 10,000 square feet of area of each lift of subgrade fill or backfill placed under pavement or floor slabs, except that pavement test rate may be at minimum of 400 linear foot intervals along pavement center line. Stagger test locations in each lift from those in previous lift. Provide a minimum of 3 tests for each lift for each building pad or pavement area.
- b. One test for each 100 linear feet, or portion thereof, of each lift of trench backfill, with locations staggered between lifts.
- c. One test for each 100 linear feet, or portion thereof, of each lift of backfill placed against foundation walls or grade beams, with locations staggered between lifts.
- d. One test of each lift placed at any free-standing footing, pier, or similar support, with locations taken on a different side, in each case, from the lift below.
- e. One test for each 100 square feet, or portion thereof, of each lift of fill placed beneath isolated footings, with locations staggered between lifts.
- f. One test for each 100 linear feet, or portion thereof, of each lift of fill placed beneath strip footing, with locations staggered between lifts.
- g. One test for each 15,000 square feet of area of each lift of embankment fill placed on site. Stagger test locations in each lift from those in previous lift.

C. Testing Reports:

1. Laboratory Test Reports: Furnish a report for each test, describing variances from specified requirements, and state whether material meets specification requirements.
2. Field Test Reports: Furnish a report stating results for each test for each area. Identify soil type, location, lift and area. Reports may be combined on a daily basis, if so desired, provided that location of each test and applicable lift are clearly identified.

3.2 FLEXIBLE BASE

A. Sampling:

1. Base Material at Source: Prior to production and delivery of materials, take at least one initial sample in accordance with ASTM D 75. Collect each sample by taking three incremental samples at random from source material to make a composite sample of not less than 50 pounds. Repeat above sampling when source of material changes or when unacceptable deficiencies or variation from specified grading of materials are found in testing.
2. During construction: Take one random sample from each 1,000 tons of completed course material, but not less than one random sample per day's run. Take samples in accordance with ASTM D75.

B. Testing:

1. Base Material: Test each sample of base course material. Make graduation tests from each sample in accordance with ASTM C136.
2. Field Density Tests: Perform one test for each 500 square yards of each layer of base course in accordance with ASTM D1556 or D2922.
3. Laboratory Density Tests: Perform one representative test of base course material in accordance with ASTM D1557, Method D.
4. Thickness Tests: Measure thickness of base course at intervals such that there will be depth measurement for at least each 500 square yards of complete base course. Make depth measurements by test holes, at least 3 inches in diameter through base course. Report to Contractor immediately where base course deficiency is more than ½ inch.

3.3 TESTING SOIL STABILIZATION

A. Lime Mixture:

1. Determine optimum lime content and mixture for Contractor.
2. Report optimum lime content and required site mix to Project Administrator. Site mix recommendation shall include pounds of lime per sq. yd. Lime slurry quantity will be computed on basis of solids furnished by supplier.

B. Field Inspection:

1. Inspect lime stabilization procedures for proper mix of lime and proper application procedures.
2. Inspect cement stabilization procedures to determine type of cement used, amount of cement used and depth of treatment.

- C. Compaction Tests: Perform one in-place density test for each 10,000 sq. ft. of soil stabilized subgrade in accordance with ASTM D2922.

3.4 INSPECTING STRUCTURAL EXCAVATION AND FILLING

- A. Inspecting Structural Excavation: Provide continuous inspection of each concrete spread footing excavation to determine if proper bearing stratum is obtained and utilized, if excavations are properly clean and dry before concreting, and if footing excavation is within specified allowable dimensional tolerances.

B. Field Inspection:

1. Inspect exposed subgrade after excavation is complete to determine if subgrade is suitable to receive select fill.
2. Inspect select fill material prior to placement of each lift to determine if select fill meets specified requirements.

3. Provide continuous inspection of placement and compaction of select fill material for each lift for conformance to requirements of Construction Documents.

3.5 ASPHALTIC CONCRETE TESTS

- A. Make one laboratory density and stability test on each type of asphaltic concrete for each day's operation in accordance with SDHPT Bulletin C14.
- B. Make one extraction and gradation test on each type of asphaltic concrete for each day's operation in accordance with ASTM D2172.
- C. Make one field in-place density test on each type of asphaltic concrete for each day's operation in accordance with ASTM D1188.

3.6 CONCRETE MIX DESIGN

- A. Prepare and test proposed mix design for each scheduled class of concrete in accordance with procedures specified in Submittals - Section 01 33 00.
- B. Compressive strengths shall meet or exceed values specified for each class of concrete scheduled for each portion of the work. Requirements are based on 28-day compressive strength.
- C. After sufficient data becomes available during construction, mix proportions may be adjusted in accordance with ACI 301, Section 3.11, if approved by Design Professional.

3.7 INSPECTION AND CONTROL OF CONCRETE (if applicable)

- A. Inspect batch plant facilities for conformance to ASTM C94. Inspect initial weighing and batching of controlled concrete at batch plant at start of each day's placement.
- B. Verify that materials used are in accordance with requirements of Construction Documents. Visually inspect aggregate stockpiles to determine uniformity of grading, cleanliness and possible moisture variations. Confirm visual determinations by tests taken randomly, either daily or on lot basis.
- C. Check for adjustment in batch weights to compensate for variations in moisture content.
- D. Inspect plastic concrete at site to determine if concrete is thoroughly and properly mixed. Control consistency of mix to prevent segregation due to excessive water. Adjust amounts of mixing water to obtain uniform consistency of each batch.
- E. Verify unauthorized addition of water which will exceed maximum allowable water/cement ratio for each mix design.
- F. Monitor mixing time of concrete in trucks.
- G. Certify each delivery ticket indicating class of concrete delivered, and record amount of water added, time of mixing, time of discharge, slump and location of placement.

- H. Promptly report to PA details of reasons for rejection of any quantities of concrete. Report locations of concrete placements, quantities, date of placements and other pertinent facts concerning concrete represented by rejected specimens.

3.8 TESTING OF CONCRETE

A. Test Cylinders:

1. During progress of Work, mold, cure and test specimens of each different mix design or class of concrete placed in any one day.
2. For each 75 cubic yards of concrete placed, or part thereof over 10 cubic yards, make four compressive test cylinders during pour.
3. Mold and cure test cylinders in accordance with ASTM C31.
4. Test cylinders in accordance with ASTM C39: one at 7 days and two at 28 days.
5. Hold remaining cylinder for additional testing as directed by through
6. Make additional sets of four cylinders when obvious changes in mix are apparent.
7. Additional compressive test cylinders required for determination of early form removal shall be made at Contractor's option and expense.

B. Slump Tests:

1. Make slump tests for each 50 cubic yards of concrete placed, or for each set of cylinders in accordance with ASTM C143, whichever is greater.
2. Slump shall be measured to determine if conformance to limits specified have been achieved.

C. Strength:

1. Seven day compressive strength of concrete shall be a minimum of 65% of required 28 day compressive strength, unless otherwise specified or unless mix design tests indicate otherwise.
2. Strength level of concrete will be considered satisfactory if averages of all sets of 3 consecutive strength test results equal or exceed specified strength and no individual test result is below specified strength by more than 500 psi. Strength test shall consist of two specimens.
3. When strength of test cylinders falls below design strength, the Design Professional may require core tests, structural analysis or load tests as specified below.

- D. Air Content of Normal-Weight Concrete: Determine total air content of air entrained concrete for each compressive strength test in accordance with ASTM C231.
- E. Additional Testing for Concrete Paving: In addition to above specified testing, mold four beam specimens for each 150 cubic yards. Test beams in accordance with ASTM C78, two at 7 days and two at 28 days. (Third point loading).

3.9 TESTING DEFICIENT CONCRETE IN PLACE

- A. General: When strength of concrete has been determined to be potentially deficient based on test results, provide core tests, structural analysis or load test as directed by AP to determine actual strengths.
- B. Core Tests:
 - 1. Obtain and test core specimens of at least 3 inches in diameter in accordance with ASTM C42. Cores shall be air dried (temperature 60°F to 80°F, relative humidity less than 60 percent) for 7 days before test and shall be tested dry.
 - 2. At least three representative cores shall be taken from each member or area of concrete in place that is considered potentially deficient. The location of cores shall be determined by the PA so as least to impair strength of structure. If, before testing, one or more of the cores show evidence of having been damaged subsequent to or during removal from structure, it shall be replaced.
 - 3. Concrete in the area represented by a core test will be considered adequate if the average strength of the cores is equal to at least 85 percent of and if no single core is less than 75 percent of the specified design strength.
 - 4. Patch core holes as specified for patching in Section 01 73 10 – Cutting and Patching.
- C. Structural Analysis: If core holes are inconclusive or impractical to obtain, the TDCJ may perform additional structural analysis at the Contractor's expense to determine safety of structure.
- D. Load Test: If core holes and structural analysis do not confirm the safety of the structure, load tests may be required and their results evaluated in accordance with Chapter 20, "Strength Evaluation of Existing Structures" of ACI 318.
- E. Other Testing: Testing by impact hammer, sonoscope, or other nondestructive devices may be permitted by TDCJ to determine relative strengths at various locations in structure or for selecting areas to be cored. Such test shall not be used as a basis for acceptance or rejection of the structure's safety.
- F. Failed Tests: Concrete work judged inadequate by core tests, structural analysis or by results of a load test shall be replaced at Contractor's expense.

3.10 REINFORCING STEEL INSPECTION

- A. Perform visual inspection prior to concrete placement for size, type, and quality of materials.
- B. Observe and report on placement of reinforcement for conformance with Construction Documents and Shop Drawings, including size, and number of bars, vertical location, horizontal spacing, correctness of bends, splices, clearance between bars and forms, adequacy and security of supports and ties, and excessive congestion of reinforcing steel.
- C. Visually inspect placement of anchor bolts for correct size, location and spacing.
- D. Visually inspect embedded metal assemblies and deformed bar anchors for conformance with Construction Documents.
- E. Visually inspect mechanical couplers for conformance with Construction Documents and Manufacturer's recommendations.
- F. Immediately report conditions of non-conformance with Construction Documents and Shop Drawings to TDCJ PA for correction. If Contractor fails to correct reported conditions, submit written report of non-conforming work to PA and A/E.

3.11 TESTING REINFORCED MASONRY CONSTRUCTION

- A. Field Compressive Test for Mortar: Sample and test in accordance with ASTM C780.
- B. Field Compressive Test for Grout: Sample and test in accordance with ASTM C1019.
- C. Prism Tests:
 - 1. Fabrication: Fabricate from masonry units and mortar used at site. Fabricate under same condition as for structure, including bonding, joint thickness and workmanship.
 - 2. Dimensions – CMU: Unit width by 16 in. long and 16 in. high. Do not fill hollow core with grout.
 - 3. Storage: Store preconstruction prisms in air at minimum temperature of 65°F. Store site control prisms at site for 24 hours, thereafter in air at minimum temperature of 65 °F.
 - 4. Testing:
 - a. Test after 7 and 28 day aging.
 - b. Cap each prism with calcined gypsum or sulphur compound to provide bearing surfaces plane within 0.003 inches and perpendicular to axis prism.
 - c. Test in accordance with applicable provisions of ASTM E447.
 - d. Compute value of ultimate net compressive strength of CMU by dividing ultimate load by net area of masonry units used in constructing prisms.

5. Test Reports: Indicate age of prism, storage conditions, dimensions compressive strength of individual prisms and ultimate compressive strength. Compute coefficient of variation against other specimens in set and specimens tested to date.
- D. Preconstruction Testing:
1. Mortar: Three compressive strength tests, (six test cubes each). Test three at 7 days and three at 28 days.
 2. Grout: Three compressive strength tests, (four test cylinders each). Test two at 7 days and two at 28 days.
 3. Prisms: six CMU prisms. Test half at 7 days and remainder at 28 days.
- E. Job Site Quality Control Testing : Perform following tests during construction of reinforced concrete masonry construction:
1. Mortar: Six compressive test cubes for each day's production of mortar used in reinforced grouted masonry. Test 3 at 7 days and 3 at 28 days.
 2. Grout: Four compressive test cylinders for each day's production of grout. Test two at 7 days and two at 28 days.
 3. CMU Prisms: Provide three prisms for each 5000 sq. ft. of reinforced grouted concrete masonry wall constructed. Test one at 7 days and two at 28 days.
 - a. If average strength of a set of prisms does not meet specified compressive strength (f_m), masonry corresponding to test results shall be unacceptable.
 - b. Notify A/E and Contractor immediately of unacceptable tests.

3.12 INSPECTING STRUCTURAL STEEL

- A. Inspect structural steel during fabrication and during and after erection for conformance with Construction Documents and Shop Drawings.
- B. Shop inspection shall include:
1. Inspection of steel for straightness and alignment.
 2. Visual inspection of shop welding.
 3. Ultrasonic testing of full penetration welds.
 4. Inspection of galvanizing.
 5. Inspection of installation of shop welded shear studs.
 6. Inspection of surface preparation and shop painting.
- C. Field inspection shall include:

1. Proper erection of elements.
 2. Proper installation of bolts, including checking of calibration of impact wrenches used with high-strength bolts.
 3. Plumbness of structure and proper bracing.
 4. Proper field painting.
 5. Visual examination of field welding.
 6. Ultrasonic testing of penetration field welds.
 7. Installation of field welded shear studs.
 8. Inspection of shop fabricated members, upon their arrival at jobsite, for defects incurred during transit and handling.
 9. Measure and record camber of beams upon arrival and before erection for compliance with specified camber. Measure lying flat with web horizontal. Members outside specified camber tolerance shall be returned to shop for correction.
- D. Verification of welding procedures, welding operations, and welder and tacker certificates of qualification in accordance with AWS D1.1 and for metal deck welding in accordance with AWS D1.3.
- E. Inspect shop and field welds in accordance with AWS D1.1 and as follows:
1. Visually inspect welds for size and appearance.
 2. Inspect penetration welds by ultrasonic testing in accordance with ASTM E164.
- F. No burning or other field corrections of steel members are permitted without express permission of A/E obtained through the PA. Immediately report violations.
- G. Perform inspection of stud welding in accordance with Section 7.8 of AWS D1.1 and as follows:
1. A minimum of 2 shear studs shall be welded at start of each production period in order to determine proper generator, control unit and stud welder setting. Test studs visually examined to determine if they exhibit full 360° flash.
 2. In addition to visual examination, test shall consist of bending studs after they are allowed to cool, to an angle of approximately 30° from their original axes by either striking studs with a hammer or placing a pipe or other suitable hollow device over stud and manually or mechanically bending stud. At temperatures below 50°F (10°C), use continuous slow application of load to bend studs.

3. If on visual examination test studs do not exhibit 360° flash, or if on testing failure occurs in weld zone of either stud, correct procedures and weld two more studs to separate material or on production member and test as above. If either of second two studs fails, continue additional welding on separate plates until two consecutive studs are tested and found to be satisfactory before allowing additional production studs to be welded to member.
 4. Direction of bending for studs with less than a 360° flash shall be opposite to missing portion of flash.
 5. Bent stud shear connectors to be embedded in concrete that show no sign of failure shall be acceptable for use and left in bent position.
 6. When temperature is below 32°, stud welding is prohibited.
- H. Visually examine bolted connection joints to determine that bolts and washers are properly installed and have been tensioned.
- I. Perform inspection of high-strength bolted construction in accordance with AISC Specification for Structural Joints using ASTM A325 bolts.

3.13 TESTING NON-SHRINK GROUT (if applicable)

- A. Make one strength test for each ten base plates grouted and for each ten bags of grout used in joints between members.
- B. Each test shall consist of six cubes, three tested at 7 days, and three at 28 days, made and tested in accordance with ASTM C109, with the exception that grout shall be restrained from expansion by a top plate.

END OF SECTION 01 45 23
[Revision March 2015]

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

- A. Requirements for temporary utilities, support facilities, and security and protection facilities. Unless otherwise indicated all equipment, material, service, etc. is required to be provided by Contractor, shall remain property of Contractor, and included in Project Sum.
- B. Related Requirements:
 - 1. General Conditions and Special Conditions.
 - 2. Other Specification Sections as applicable.

1.2 DEFINITIONS

- A. Permanent Enclosure: As determined by the A/E, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

- A. General:
 - 1. TDCJ provided utilities are provided at no charge for use.
 - 2. Cost or use charges for temporary facilities not provided by TDCJ shall be included in Contract Sum.
 - 3. Allow other entities to use temporary services and facilities without cost, including, but not limited to TDCJ's construction forces, occupants of Project, testing agencies, A/E, and authorities having jurisdiction.
 - 4. For connection to TDCJ provided utilities, coordinate interruption of services for connections through the PA. Follow notification requirements of Construction Documents.
 - 5. Assume responsibility for operation, maintenance, and protection of each service connection and extension installed and utilized by Contractor. All utilities shall be maintained in a condition acceptable to TDCJ, irrespective of responsible party.
 - 6. Restore utilities and site to pre-project condition upon completion of project, unless other is approved in writing through the PA.

1.4 SUBMITTALS

- A. Site Plan:
 - 1. Show temporary buildings, sheds, storage containers, facilities, fencing, utility hookups, staging areas, and parking areas for construction personnel.
 - 2. Refer to Construction Drawings for location of lay-down area(s) and location of TDCJ provided utilities, if available.
 - 3. Submit to PA for approval prior to mobilization.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before TDCJ's acceptance regardless of previously assigned responsibilities.

PART 2 – PRODUCTS (if applicable)

2.1 TEMPORARY FENCING

A. Fixed Chain-Link Fencing:

1. Minimum 2-inch, 0.148-inch- thick (9-gauge), galvanized steel, chain-link fabric fencing; minimum 8 feet high;
2. Galvanized 16-gauge steel pipe posts;
3. Minimum 2-3/8-inch- OD line posts;
4. 2-7/8-inch- OD corner and pull posts;
5. 1-5/8-inch-OD top and bottom rails, with galvanized barbed-wire top strand.
6. Provide posts with length capable of 4-foot embedment depth into soil.
7. Post spacing: no greater than 6'-0" on center.
8. Provide 30-inch embedment anchoring pins for anchorage of horizontal bottom rails at no greater than 24-inches on center.
9. For fencing located on pavement, core pavement for passage of posts and pins.
10. Provide swing gates with provision for locking accessible from both sides of gate. Gates shall remain locked when not in use.

B. Portable Chain-Link Fencing:

1. Minimum 2-inch, 9-gauge, galvanized steel, chain-link fabric fencing;
2. Minimum 8 feet high;
3. Galvanized 16-gauge steel pipe posts;
4. minimum 2 3/8-inch- OD line posts;
5. 2 7/8-inch- OD corner and pull posts;
6. 1 5/8-inch- OD top and bottom rails.
7. Line post or panel spacing suited to conditions, including wind loads.
8. Provide concrete or galvanized steel bases for supporting posts.
9. Provide swing gates where needed for efficient use, with latches and provision for locking accessible from both sides of gate. Gates shall remain locked when not in use.

2.2 TEMPORARY BUILDINGS

- A. Field Offices, General: Need for Contractor provided Field Office shall be determined at Pre-Bid Meeting. Record of determination will be published in Addendum A-001 in Meeting Minutes. If Field Office is required by Addendum,

1. Provide prefabricated or mobile unit(s) sized and furnished for construction operations, including required project meetings, with serviceable finishes, lockable entrances, and foundations adequate for normal loading.
2. Provide heating and air conditioning with temperature controls to maintain an average uniform temperature of 68 to 72 °F.
3. Provide interior lighting for average illumination of 20 fc.

4. Locate Field Office in identified Lay-down area exterior to TDCJ's secured perimeter unless other is approved in writing through PA.
 5. Field Office shall be locked when not in use.
- B. Storage and Fabrication Sheds: Provide sheds or shipping containers sized, furnished, and equipped to accommodate delivered materials requiring physical protection and equipment for construction operations.
1. Storage and Fabrication Sheds shall be located in identified Lay-down areas and locked when not in use.
 2. Store combustible materials in a separate building/shed/container from other materials.

2.3 TEMPORARY UTILITIES

A. Sewer Service: Sewer service is not available for extension to Field Office or temporary sanitation facilities without payment of use charges. Use of existing TDCJ sanitary facilities will not be permitted. Maintenance includes daily cleaning and sufficient supply of hand soap and paper products as required.

B. WATER SERVICE

1. Water from TDCJ's existing water system is available for use for Field Office operations without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required. Provide protection of permanently installed elements from damage due to operation of temporary service.
2. Water from TDCJ's existing water system is available for use for construction operations without payment of use charges. If these services are required for construction operations, provide connections and extensions of services from local water service provider as required and provide protection of permanently installed elements from damage due to operation of temporary service. Include applicable installation, metering
3. Water for all uses shall be with an elevated stationary pipe and support a delivery hose that will supply an air gap.
4. Provide drinking water for construction force from a potable source at all times for as needed access both interior and exterior to secure perimeter.

C. Electric Power Service:

1. Electric power from TDCJ's existing system is available for use for Field Office without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required from local electric service provider for Field Office operations and provide protection of permanently installed elements from damage due to operation of temporary service.
2. Electric power from TDCJ's existing system is available for use for construction operations without payment of use charges. If these services are required for construction operations, provide connections and extensions of services as required from local electric service provider for construction operations and provide protection of permanently installed elements from damage due to operation of temporary service.

D. Telephone Service:

1. "Land line" telephone service from TDCJ's existing system for use for Field Office operations is not available for use without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required from local telephone service provider for Field Office operations and provide protection of permanently installed elements from damage due to operation of temporary service. If land line telephone service is installed for Field Office operations,
 - i. Contractor to provide necessary telephonic equipment for use by Contractor personnel for project activities and will remain property of Contractor at conclusion of project.
 - ii. These items are to be provided for use by TDCJ personnel, testing agencies, Authority Having Jurisdiction (AHJ), etc. for project related activities at no additional charge to TDCJ.

2. Irrespective of installation of land line telephone service, provide two (2) cell phones with voicemail and "smart phone" service that includes web-based e-mail application OR two (2) cell phones with voicemail and two (2) laptops, notebooks, tablets or similar devices with web-based e-mail application.
 - i. These cell phones, and only these cell phones, will be permitted beyond security check points.
 1. Cell phones shall have keypads secured by usage of a numeric pin.
 2. Provide phone numbers, numeric pin, name of the service provider, and description of device to the PA and the Warden's office.
 3. Upon request, surrender device to PA or Warden for security screening. If suspect usage is noted (including inability to access device by the pin on record), device will be confiscated and possibly not returned
 - ii. Laptops and other devices will not be permitted beyond security check points unless expressly approved by the Warden.
 - iii. Warden's approval for all devices, including cell phones, is subject to be withdrawn at Warden's discretion.
 - iv. These items are to be provided for use by Contractor personnel for use for project activities. These items will remain property of Contractor at conclusion of project.

E. Lighting:

1. Provide temporary lighting with local switching that provides adequate illumination for safety, security, construction operations, observations, inspections, and traffic conditions.

F. Other Office Equipment:

1. Provide 2 each hand-held, short range, two-way radio transceivers in a frequency range that does not conflict with Unit communication devices. Provide Serial Numbers of transceivers to PA and Warden's office.
2. Provide means to print project related documents up to size 8 ½" x 11" received via e-mail or other electronic means to facilitate delivery of physical documents to Contractor's decision-making entity within 30 minutes of receipt.

3. Provide means to print project related documents up to size 24" x 36" received via e-mail or other electronic means to facilitate delivery of physical documents to Contractor's decision-making entity within 24 hours of receipt.
 4. Provide means to scan project related documents up to size 8 ½" x 11" to "flattened" .pdf format for attachment to e-mail within 30 minutes of receipt or other preparation of physical documents.
 5. Provide means to scan project related documents up to size 24" x 36" to "flattened" .pdf format for attachment to e-mail or other electronic file transfer processing within 24 hours of receipt or other preparation of physical documents.
 6. Provide means to prepare, print, scan, copy, and file project related documents on project site for access during project related activities, both formal and informal.
 7. These items are to be provided for use by Contractor personnel for use for project activities. These items will remain property of Contractor at conclusion of project.
- G. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations.
1. Use of TDCJ waste-collection containers shall not be permitted.
 2. Comply with Section 01 70 00 – Execution Requirements for progress cleaning requirements.
 3. Include waste-collection service charges in Contract Sum.
- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses.
1. Comply with NFPA 241.
 2. Supervise welding operations, combustion-type temporary heating units, and sources of fire ignition as required.
 3. Coordinate an overall fire-prevention and -protection program with Unit Risk Manager. Fire prevention and protection related to construction activities is responsibility of Contractor.
 4. Hoses and other devices installed for fire-protection purposes shall have signage posted indicating intended use and prohibiting removal or any other use.

2.4 TEMPORARY CONSTRUCTION

- A. Materials utilized for temporary construction shall meet applicable specifications in Construction Documents for permanent construction unless otherwise approved in writing through PA. Materials shall be provided by Contractor.
- B. All materials shall meet applicable standards and shall be materials customarily used for intended purpose.
- C. Temporary construction shall remain in place until no longer required for progress of work and removal is approved in writing by the PA.
- D. Areas affected by placement of temporary construction shall be returned to original conditions, matching content, material, and finishes to include

replacement of lost or damaged landscape unless otherwise approved in writing, in advance, through the PA.

2.5 TEMPORARY EQUIPMENT

- A. Equipment required for temporary support of TDCJ occupancy, to support Construction activities, and for safety of project occupants shall be provided by Contractor.
- B. Periodic Maintenance, for equipment provided for A. immediately above shall be responsibility of Contractor, to include all tools and devices as may be required for metering, measuring, etc.
- C. Consumable material and products required for temporary equipment maintenance and operation shall be provided on project site by Contractor.
 - 1. Storage and dispensing of consumable material and products is responsibility of Contractor.
 - 2. Storage and dispensing of consumable material and products shall be per security requirements.
 - 3. Storage and dispensing means shall be per manufacturer recommendations, per regulatory requirements, and as approved by PA. Coordination of fuel dispensation shall be through TDCJ Maintenance and shall require approval from Warden or Warden's designee.
 - 4. Remaining consumable material and products shall be provided to TDCJ.
- D. Equipment temporarily installed to support TDCJ occupancy for extended outages of permanent services shall meet applicable specifications in Construction Documents for permanent construction, except where a specific code permits an alternate, unless otherwise approved in writing through the PA. In the absence of appropriate specifications and/or specific code permitted alternate, obtain approval through PA for requested temporary equipment installation.
- E. Equipment installed to support Construction requirements and/or activities including but, not limited to, ventilation, heating, cooling, humidity control, and lighting shall meet applicable specifications in Construction Documents for permanent construction, except where a specific code permits an alternate, unless otherwise approved in writing through the PA. In the absence of appropriate specifications and/or specific code permitted alternate, obtain approval through PA for requested temporary equipment installation.
- F. Temporary equipment and consumable products used for operation of temporary equipment shall meet applicable codes and standards and be approved by AHJ for intended use and purpose.
- G. For C., D. and E., above use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
- H. Permanent equipment and surfaces, utilities, construction, and project occupants shall be protected from effects of construction activities and operation of temporary equipment (to include dust, noise, and fumes) by use of appropriate equipment selection, partitions, coverings, curtains, screens, insulation, blowers, purging equipment, ventilation, pans, surge suppression devices, or other means

as necessary to maintain ambient environmental conditions required and prevent dust, damage, harm, or subsequent hazard.

- I. Temporary equipment shall remain in operation until no longer required and removal is approved in writing through the PA. Temporary equipment and material shall remain property of Contractor.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

- A. Coordinate the location of facilities with the Unit Warden, thru the Project Administrator (PA), where they will serve the project adequately and result in minimum interference with performance of the Work while not adversely affecting the unit security. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 1. Arrange with utility company, PA, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 2. Comply with authorities having jurisdiction for type, number, location, size, capacity, operation, cleaning, maintenance, and other characteristics for temporary services and construction operations.
 - i. Comply with additional requirements that may be identified in individual specification sections.
 3. Securely cover all roof penetrations at end of each day.
 4. At Beneficial Occupancy, restore facilities to condition existing before initial use unless other is identified in Construction Documents or approved in writing through PA.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Arrange with TDCJ for temporary parking areas for construction personnel.

1. Restrict Contractors' personnel to assigned areas.
 2. When site space is not adequate, provide additional off-site parking.
- D. Temporary Roads and Paved Areas: If required by Project Documents or for means and methods of Construction, construct and maintain temporary roads and paved areas adequate for construction operations.
1. Coordinate elevations with permanent roads and paved areas.
 2. Prepare subgrade and install sub-base and base.
 3. For temporary roads that will remain un-paved during construction operations, provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
 4. For temporary roads that will remain as permanent:
 - i. Recondition base after temporary use, including removing contaminated material, re-grading, proof-rolling, compacting and testing.
 - ii. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Beneficial Occupancy. Repair hot-mix asphalt base-course pavement before installation of final course.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project site or adjacent properties, nor endanger permanent Work or temporary facilities.
 2. If required by project conditions, remove snow and ice as required.
- F. Cranes, Lifts, and Hoists: Provide facilities necessary for hoisting, setting, and/or erecting equipment, materials and/or personnel.
1. Cranes, Lifts, and Hoists utilized within secure perimeter shall be temporarily installed in a "fixed" manner or permitted to remain in a stationary location only upon approval of the Warden; otherwise, shall be removed to exterior lay-down yard at the conclusion of construction activities each day.
 - i. Exception: Large cranes that customarily remain in one location due to obvious extensive measures required for relocation will not be required to be removed to exterior lay-down yard.
 1. Notify PA of intent to use a large crane at Pre-Construction meeting.
 2. Schedule project activities to limit the time the crane will be required on site.
 3. Provide crane schedule to PA at Pre-Construction meeting or as approved by PA.
 2. Cranes, Lifts, and Hoists shall be key operated with the key removed when operator is more than 5 feet from operation position.
- G. Stairs:
1. If stairs are required where no stairs exist or are planned, provide temporary stairs per other applicable requirements.
 2. Use of existing stairs shall be permitted.

- i. Protect finishes as required.
 - ii. Clean and maintain daily.
 - iii. Restore to pre-construction conditions after use.
 - 3. Use of installed stairs shall be permitted.
 - i. Protect finishes as required.
 - ii. Clean and maintain daily.
 - iii. After use, restore conditions per installation requirements.
- H. Temporary Partitions: As indicated on plans or as required per 2.5.H of this section, provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
 - 1. Construct dustproof partitions from fire-retardant wood or metal studs with gypsum wall board with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 - 2. Construct dustproof partitions with 2 layers of 3-mil polyethylene sheet on each side. Cover floor with 2 layers of 3-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
 - i. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
 - 3. Insulate partitions to provide noise protection to occupied areas.
 - 4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 5. Weather strip openings.
 - 6. Provide walk-off mats at each entrance through temporary partition.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 01 10 00 – Summary.
- B. Temporary Erosion and Sediment Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways according to authorities having jurisdiction.
 - 1. Inspect, repair, and maintain erosion- and sedimentation-control measures until Beneficial Occupancy or until written approval from the A/E is provided through the PA.
- C. Storm Water Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located outside drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
 - 1. Provide barricades to prevent unauthorized entry to construction areas, to allow for TDCJ's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

- F. Covered Walkway: For walkways located within 10 feet of construction activities occurring at an elevation greater than 15 feet above elevation of walkway and will be utilized by pedestrian traffic other than project occupants, erect structurally adequate, protective, covered walkway.
 - 1. Coordinate with entrance, gates, other facilities, and obstructions.
 - 2. Comply with regulations of authorities having jurisdiction.
 - 3. Construct using scaffold or shoring framing.
 - 4. Provide wood-plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
 - 5. For covered walkways that will remain in-use for a period exceeding 60 days (inclusive of time periods that walkway covering may be relocated to another area of the project), paint with weather resistant white paint.
 - 6. Clean and repair daily to maintain safety and functionality.

- G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

- H. Temporary Fencing: Erect temporary Fixed Chain-Link Fencing and Portable Chain-Link Fencing for protection of construction and stored materials and equipment, and where indicated on plans.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Limit availability of temporary facilities to essential and intended uses.

- B. Maintenance: Maintain facilities in good operating condition until removal to include protection from weather.

- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Beneficial Occupancy. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor.

2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances.
3. At Beneficial Occupancy, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 – Closeout Procedures.

END OF SECTION 01 50 00
[Revision August 2013]

SECTION 01 64 00 – OWNER-FURNISHED PRODUCTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Ordering, receiving, storing, handling, assembling (as required) of Owner- (TDCJ-TCI)-furnished products as indicated.
- B. Providing supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for installing Owner- (TDCJ-TCI)-furnished products

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable

1.3 SUBMITTALS

- A. A schedule of Owner- (TDCJ-TCI)-furnished products/material and TCI Shop/Quote Drawings are included in the Project Manual following this Section. Contractor shall review the TCI Shop/Quote Drawings and at Pre-Construction Meeting shall provide quantity list and verification of dimensions of Owner- (TDCJ-TCI)-furnished products.
 - 1. Owner- (TDCJ-TCI)-furnished products are Contractor or Owner installed as indicated on Construction drawings.
 - 2. TCI is required to perform field verification of product dimensions prior to fabrication. Coordinate through Project Administrator.
 - 3. Upon request from Contractor, TDCJ shall conduct a coordination meeting at TDCJ Fabrication Facilities.

1.4 CONTRACTOR REQUIREMENTS

- A. At Pre-Construction Meeting:
 - 1. Submit Shop/Quote Drawings included in this section with verification of dimensions or an indication of modifications required for Contractor's construction plan with Contractor's Quality Control Manager's signature and date.
 - 2. Submit quantity validation to Project Administrator.
 - 3. Submit critical path (CPM) schedule showing scheduled delivery dates required for Owner- (TDCJ-TCI)-furnished products.
- B. TDCJ shall deliver materials to Contractor's on-site storage area. Contractor shall furnish equipment and labor for unloading and storing materials.
- C. Contractor shall unload, properly store and protect Owner- (TDCJ-TCI)-furnished products from time of delivery until installation and acceptance. Claims for re-priming or refinishing of Owner- (TDCJ-TCI)-furnished products shall be made within 15 days of receipt of products.

1.5 HANDLING

- A. Receive fabricated Owner- (TDCJ-TCI)-furnished products as specified above.
- B. Inspect Owner- (TDCJ-TCI)-furnished products for compliance with specifications.
- C. Report damaged or non-compliant products to Project Administrator within 15 days of delivery.
- D. Assist Project Administrator in return of damaged items to fabrication plant for repair or remanufacture (packaging and loading).

PART 2 - PRODUCTS

2.1 TDCJ FURNISHED PRODUCTS

- A. Refer to the Construction Drawings for locations of Owner- (TDCJ-TCI)-Furnished/Contractor Installed Equipment/Material and schedule of Owner- (TDCJ-TCI)-Furnished/Contractor Installed Items.

2.2 CONTRACTOR ITEMS

- A. Provide required hardware and fasteners for items not shown included on attached Owner- (TDCJ-TCI)-furnished products list or drawings.
 - 1. Provide embeds required for Owner- (TDCJ-TCI)-furnished products.
 - 2. Provide anchoring devices required for attaching Owner- (TDCJ-TCI)-furnished products as specified in Construction Drawings.
 - 3. Provide other accessories, hardware, and fasteners, required for a complete installation.
- B. Perform utility work, wiring, and connections as required per other specification sections as required.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Refer to respective Specification sections and Drawings for installation requirements.
- B. Perform field assembly required.
- C. If applicable, perform field painting on metal items with exception of stainless steel. Owner- (TDCJ-TCI)-furnished products shall be shop primed by TDCJ. Field paint shop primed Owner- (TDCJ-TCI)-furnished products with a top of the line heavy duty industrial exterior high gloss paint system approved by the TDCJ PA.
- D. Clean products free of dirt, grease or other foreign matter and leave ready for use.

END OF SECTION 01 64 00

[Revision March 2015]

SECTION 01 70 00 – EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1. SUMMARY

- A. This section includes general procedural requirements governing execution of the Work including but not limited to, the following
 - 1. Examination.
 - 2. Preparation.
 - 3. Construction Layout.
 - 4. Installation.
 - 5. Progress cleaning.
- B. Related Requirements
 - 1. General Conditions and Special Conditions
 - 2. Other Specification Sections as applicable
- C. Identification of a requirement in this Section shall not be interpreted as necessary for this project unless specifically identified in other Specification Divisions or on Project Drawings.

1.2. QUALITY ASSURANCE

- A. Trade and Professional services: For all services required by 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 file on-site containing a copy of each required license and certification.
 - 3. Provide access to PA upon request.
 - 4. Provide copies to PA upon request.
 - 5. PA has authority to stop work requiring license or certification until such is provided and TDCJ shall not be responsible for resulting delays.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1. EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities and other elements indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other elements affecting the Work.

- B. Existing Utilities: The existence and location of underground and other utilities indicated as existing are not guaranteed. Before beginning site work, investigate and verify existence and location of underground utilities 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.
 - 1. If required by project conditions and/or requirements, engage a Subsurface Utility Engineering (SUE) company.
 - a. Irrespective of engagement of SUE, notification per 49 U.S.C. Section 6105 is required for exterior excavation work. Provide ticket number to PA.
 - b. Document findings on Record Drawings.
 - 2. If required by project conditions and/or requirements, utilize x-ray or ground penetrating radar to locate utilities in or under concrete slabs or in concrete decks or walls. Document findings on Record Drawings.
 - 3. If Contractor inadvertently damages a utility or other concealed element undetected by the SUE, x-ray or ground penetrating radar in an area examined by these means, repair shall not be direct responsibility of Contractor.
 - 4. If required for work progress, furnish location data for work related to Project that must be performed by public utilities serving Project Site.

- C. 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. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other sections, include the following.
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine walls, floors, roofs, foundations, soil compaction, etc. for suitable conditions where products and systems are to be installed.

4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with Work indicates acceptance of conditions.

3.2. PREPARATION

- A. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- B. Field Measurements: Verify dimensions of other construction by field measurement before fabrication or installation.
- C. Existing Utilities: Contractor shall adjust, move or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by new construction. Coordinate with authorities having jurisdiction.
- D. Review of Construction Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Construction Documents, submit a Request for Information (RFI) to A/E. Include a detailed description of problem encountered, together with recommendations for changing the Construction Documents (Reference Section 01 33 00 – Submittals). Use TDCJ form provided in Attachment 10 titled "State Documents and Forms".

3.3. CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the work, verify layout information shown on the Drawings, in relation to existing elements, the property survey and/or existing benchmarks, as applicable. If discrepancies are discovered, notify TDCJ's Project Administrator immediately and submit an RFI.
- B. Establish benchmarks and control points to set lines and levels as needed to locate each element of Project.
- C. Check location, level and plumb, of every major element as Work progresses.
- D. Notify A/E if deviations from required lines and levels exceed allowable tolerances.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Make the log available for reference by TDCJ's Project Administrator. 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.

3.4. INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
 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.
- B. Comply with manufacturers written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Beneficial Occupancy.
- D. Use products and installation materials that are not considered hazardous.
- E. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

3.5. PROGRESS CLEANING

- A. Clean Project area where work is in progress as necessary to facilitate work progress, protect surfaces, and maintain safety requirements.
- B. Clean Project site and work areas daily. Secure all construction related debris, equipment, material, and tools at the conclusion of construction activities each day. Security requirements other than the removal of all such items to the exterior lay-down areas each day is subject to Warden's approval award.
1. Specific security requirements will be determined at Pre-Construction meeting. For bidding purposes all debris, equipment, material and tools shall be required to be removed to exterior lay-down areas each day.
- C. Remove debris from concealed spaces before enclosing the space.
- D. Ensure that no part of construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during construction period.
1. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
 2. 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.
 3. Provide Periodic Maintenance per manufacturer's recommendations until Beneficial Occupancy.

- E. Burying or burning waste materials on-site shall not be permitted.
- F. Washing waste materials down sewers or into waterways shall not be permitted. (Incidental soil and rock debris consistent with amounts as may be discharged during an average rain event under non-construction conditions is acceptable.)
 - 1. TDCJ reserves the right to not permit discharge of incidental soil and rock debris of any amount if site specific conditions preclude such.
- G. Comply with requirements of authorities having jurisdiction. Comply with requirements of NFPA 241 for removal of combustible waste material debris.
- H. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 °F.
- I. Containerize hazardous, dangerous, and unsanitary waste materials separately from each other and other waste.
 - 1. If hazardous, dangerous, or unsanitary waste will be produced by construction operations, clearly label hazardous, dangerous, and unsanitary waste containers.
 - a. Mark all containers as may be required by codes and standards and legally dispose
 - b. Provide waste management plan that includes types and quantities expected to be produced, on-site storage location(s), and means and schedule for disposal to PA and Pre-Construction meeting.
- J. For dumpsters with a volume capacity of 2 cubic yards or more, provide an AVIAN Heartbeat Detector™, or A/E approved equal, for each. (Shall remain property of Contractor.)

3.6. PROTECTION OF INSTALLED CONSTRUCTION

- A. 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. Reference 01 50 00 – Temporary Facilities and Controls for additional requirements.

3.7. CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damage substrates and finishes to include replacing defective parts, refinishing damaged surfaces, and adjusting operating equipment. Comply with requirements of 01 73 29 - Cutting and Patching.
 - 1. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair; to

include chipped, scratched, and broken glass or reflective surfaces.

- B. Repair components of installed equipment that do not operate properly. Remove and replace operating components that cannot be repaired.
- C. Clean, renovate, and restore permanent facilities, equipment, and structures used, damaged, altered, or removed during construction to their specified condition unless approved through the PA to leave in altered condition. Comply with final cleaning requirements specified in 01 77 00 Closeout Procedures.

END OF SECTION 01 70 00
[Revision March 2015]

SECTION 01 73 29 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Requirements
 - 1. General Conditions and Special Conditions.
 - 2. Other Specification Sections as applicable.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in the buildings appearance and other significant visual effects
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utility Services and Mechanical/Electrical Systems: List services / systems that cutting and patching procedures will disturb or affect. List services / systems that will be relocated and those that will be temporarily out of service. Indicate how long services / systems will be disrupted.
 - 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structural.
 - 7. A/E's Approval: Obtain approval of cutting and patching proposal before proceeding. Approval does not waive the right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- 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, in TDCJ's A/E opinion, would reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. 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.

PART 3 – EXECUTION

3.1 EXAMINATION

- 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 been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- 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 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. 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 for sawing and grinding, not hammering or chopping. 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.
- C. 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. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. 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.
 3. Exterior Building Enclosure: Patch components in a manner that restores enclosures to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar materials.

END OF SECTION
[Revision March 2015]

SECTION 01 77 00 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including but not limited to the, the following:
1. Beneficial Occupancy procedures.
 2. Final completion procedures.
 3. Operation and Maintenance manuals.
 4. Warranties.
 5. Final cleaning.
- B. Related requirements include:
1. General Conditions and Special Conditions
 2. Other Specification Sections as applicable

1.2 BENEFICIAL OCCUPANCY

- A. Preliminary Procedures: Before requesting inspection for determining date of Beneficial Occupancy, complete the following. List items below that are incomplete in request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 3. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 4. Deliver tools, spare parts, extra materials, and similar items to location designated by Project Administrator. Label with manufacturer's name and model number where applicable.
 5. Make final changeover of permanent locks and deliver keys to Project Administrator. Advise Project Administrator of changeover in security provision.
 6. Complete startup testing of systems.
 7. Submit test/adjust/balance records.
 8. Terminate and remove temporary facilities from Project site, along with mock-ups, construction tools, and similar elements.
 9. Advise Project Administrator of changeover in heat and other utilities.
 10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 11. Compete final cleaning requirements, including touchup painting.
 12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Beneficial Occupancy. On receipt of request, A/E will either proceed with inspection or notify Contractor of

unfulfilled requirements. A/E will prepare the Certificate of Beneficial Occupancy after inspection or will notify Contractor of items, either on Contractor's list and/or additional items identified by A/E that must be complete or corrected before certificate will be issued.

1. Reinspection: Request reinspection with the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit certified copy of A/E's Beneficial Occupancy inspection list of items to be completed or corrected (punch list), endorsed and dated by A/E. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of list: Include name and identification of each space and 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. Use TDCJ form provided in Attachment 10 titled "State Documents and Forms."

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Record A/E
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Page number.
4. Submit 5 copies of list of incomplete items. A/E will return one copy.

PART 2 – PRODUCTS

2.1 MATERIALS

- 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.

PART 3 – EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Beneficial Occupancy for entire Project or for a portion of Project.
 - a. 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.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. 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.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - j. 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.
 - k. Remove labels that are not permanent.
 - l. 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.
- m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar dropping, and other foreign substances.
 - n. Replace parts subject to unusual operating conditions.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - r. 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 fluorescent and mercury vapor fixtures to comply with requirements of new fixtures.
 - s. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 78 23 – OPERATION & MAINTENANCE DATA

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Compilation of product data and related information required for maintenance of products.
- B. Preparation of operation and maintenance data and instructions for systems and equipment.
- C. Procedures for storage, handling, and delivery of spare parts and maintenance materials.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 FORM OF O & M (Operating & Maintenance) SUBMITTALS

- A. Prepare data in the form of an instructional manual.
- B. Assemble data in durable 3-ring binders.
- C. Format:
 - 1. Size: 8-1/2 in. x 11 in.
 - 2. Drawings: Provide reinforced punched binder tab, bind in with text; fold larger drawings to size of text pages.
 - 3. Indexing: Provide tabbed fly-leaf for each separate product, or each piece of operating equipment.
 - 4. Identification: Each binder cover and spine printed with title "OPERATING AND MAINTENANCE INSTRUCTIONS" and project title.
 - 5. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers, custom printed.
- D. Contract Closeout Information:
 - 1. Spare Parts: To TDCJ with letter of transmittal.
 - 2. Maintenance Materials: To TDCJ with letter of transmittal.
 - 3. Extra Materials: To TDCJ with letter of transmittal.
 - 4. Copies of Transmittals: To A/E.

1.4 CONTENT OF O & M MANUALS

- A. Table of contents: Provide for each volume, arranged in a systematic order.
 - 1. Contractor, name of responsible principal, address and telephone number.
 - 2. A list of each product required to be included, indexed to content of volume.
 - 3. List, with each product, name, address and telephone number of subcontractor or installer and local source of supply for parts and replacement.
 - 4. Identify each product by product name and other identifying symbols as set forth in Construction Documents, not solely with Manufacturer's catalog number.
- B. 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.
- C. 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. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
 - 3. Do not use Project Record Documents as maintenance drawings.
- D. Written Text: Provide in 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.

1.5 SPARE PARTS AND MATERIALS-- PRODUCTS REQUIRED

- A. Provide to TDCJ quantities of spare parts and tools, maintenance materials and extra material as specified in individual specification sections.
- B. Spare Parts and Tools: Package in clearly identified boxes.
 - 1. Indicate Manufacturer's name, part name and stock number.
 - 2. Indicate piece of equipment for which part or tool is intended.
 - 3. Indicate name, address and phone number of closest supplier.
 - 4. Indicate specification number.
- C. Maintenance Materials: Package in clearly identified boxes.

1. Indicate trade name and stock number.
 2. Indicate for which item material is to be used.
 3. Indicate name, address and phone number of closest supplier.
- D. Extra Materials: Package in clearly identified containers, or install where indicated.
1. Provide products identical to those installed in Work. Include quantities in original purchase from Manufacturer to avoid variations in manufacture.
 2. Indicate trade name, stock number, size, color.
 3. Indicate where product is to be used.
 4. Indicate name, address and phone number of closest supplier.

1.6 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Content, for each unit of equipment and system, as appropriate:
1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Operating procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shutdown and emergency instructions.
 - c. Summer and winter operating instructions.
 - d. Special operating instructions.
 3. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and reassembly.
 - d. Alignment, adjusting and checking.
 4. Servicing and lubrication schedule.
 5. Manufacturer's printed operating and maintenance instructions.
 6. Description of sequence of operation by control Manufacturer.
 7. Original Manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 8. As-installed control diagrams by controls Manufacturer.
 9. Each contractor's coordination drawings including as-installed color coded piping diagrams.

10. Charts of valve tag numbers, with location and function of each valve.
 11. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
 12. Include testing and balancing reports.
 13. Other data as required under pertinent sections of specifications.
- B. Content, for each electric and electronic system, as appropriate:
1. Description of system and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Circuit directories of panel-boards.
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed color coded wiring diagrams.
 4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
 5. Maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and reassembly.
 - d. Adjustment and checking.
 6. Manufacturer's printed operating and maintenance instructions.
 7. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Other data as required under pertinent sections of specifications.
- C. Additional requirements for operating and maintenance data: respective sections of Specifications.

1.7 MANUAL FOR 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.
- D. Additional Requirements: As specified in individual Specifications sections.

1.8 SUBMITTAL SCHEDULE

- A. Submit 2 copies of proposed format and outline of manuals at least 120 days prior to Pre-Final Inspection.
- B. Submit two copies of each completed data manual in final form 30 days prior to Pre-Final Inspection. Copy will be returned approved or with comments for revisions.
- C. Submit 4 copies of approved data manuals in final form within 10 days prior to Pre-Final Inspection.
- D. Have copies of manuals available for instruction of TDCJ personnel, if required by other Specification Sections.

1.9 DELIVERY OF SPARE PARTS OR MATERIALS

- A. Deliver to TDCJ at time of Beneficial Occupancy or Final Completion unless TDCJ requests earlier delivery.
- B. Deliver to location on site as directed by TDCJ.
- C. Obtain receipt for delivered materials.

PART 2 - (Not Applicable)

PART 3 - (Not Applicable)

END OF SECTION

SECTION 01 78 36 - WARRANTIES

PART 1 - GENERAL

1.1 GENERAL

- A. Compile specified warranties.
- B. Review to verify compliance with Construction Documents.
- C. Warranties shall be written in the name of TDCJ.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 WARRANTY DATES

- A. Unless otherwise stated in Construction Documents, warranties shall commence on the date of Final Acceptance or if requested by TDCJ, on date of Beneficial Occupancy for entire work or designated portion thereof.

1.4 SUBMITTAL REQUIREMENTS

- A. Assemble warranties and certificates executed by each of respective Manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: 2 each.
- C. Table of Contents: Neatly typed, using Table of Contents of Project Manual as format.
- D. Provide complete information for each item.
 - 1. Name and location of project.
 - 2. Name and address of Contractor.
 - 3. Product, equipment or system.
 - 4. Firm, with name of principal, address and telephone number.
 - 5. Scope.
 - 6. Date of beginning and duration of warranty.
 - 7. Provide information for TDCJ personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect validity of warranty.

1.5 FORM OF SUBMITTALS

- A. Assemble warranties and certificates in two separate 3-ring binders.
- B. Format:
 - 1. Size: 8-1/2 in. x 11 in., fold larger sheets to fit into binders.
 - 2. Indexing: Tabbed fly-leaf for each separate product or system.

3. Identification: Each binder cover and spine printed with title "WARRANTIES" and project title.

C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers, custom printed.

1.6 TIME OF SUBMITTALS

A. For equipment or component parts of equipment put into service during progress of construction: Submit documents within 10 days after inspection and acceptance.

B. Otherwise make submittals on date of Pre-Final Inspection, prior to final request for payment.

1.7 SUBMITTALS REQUIRED

A. Submit warranties as specified in respective sections of Specifications.

1.8 WARRANTY PROVISIONS - GENERAL

A. 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.

B. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

C. 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.

D. 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. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether TDCJ has benefited from use of the Work through a portion of its anticipated useful service life.

E. 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.

- F. 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.

PART 2 - (Not Applicable)

PART 3 - (Not Applicable)

END OF SECTION
[Revision March 2015]

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Record Submittals.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 MAINTENANCE OF DOCUMENTS

- A. Maintain at site one physical record copy of following: Construction Drawings, Specifications, Addenda, reviewed Shop Drawings and Product Data, Samples, Change Orders and other Modifications to Contract, field test reports, supplemental instructions and certifications. Either at site, or at another location, maintain one electronic copy of Construction Drawings in native format.
- B. Store physical documents apart from other documents used for construction. Provide means and store documents in a manner to maintain good order and in a clean, dry, legible condition, protected from deterioration and loss.
- C. Do not use Record Documents for construction purposes.
- D. Make physical documents available at all times for inspection by the A/E and Project Administrator.
- E. Label each physical document, "PROJECT RECORD" in two-inch-high printed letters.

1.4 RECORDING

- A. Keep Record Documents current with construction progress. Post and update on weekly basis.
- B. Do not conceal any work until required information is recorded.
- C. Record information on Record Construction Drawings and Record Specifications; record information by personnel who have been trained as draftspersons using commonly accepted drafting conventions
 - 1. Construction and Shop Drawings:

- a. Maintain a clean, undamaged set of black line white-prints of Construction Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Construction Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- b. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work. Insure that each color used will reproduce successfully by means indicated herein.
- c. Mark new information not shown on Construction Drawings or Shop Drawings. Also legibly mark to record actual construction:
 - (1) Mark depths of various elements of foundation and drilled piers in relation to first floor datum.
- d. Note related Submittal numbers, Change Order numbers, RFI numbers, and ASI/ESI (Architectural Supplemental Instructions / Engineering Supplemental Instructions) numbers where applicable.

2. Specifications and Addenda:

- a. Maintain one complete copy of the Specifications, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.
- b. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
- c. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
- d. Note related record drawing information and Product Data. Legibly mark each section.
- e. Note related Submittal numbers, Change Order numbers, RFI numbers, and A/ESI numbers where applicable.

3. Record Product Data:

- a. Maintain one copy of each Product Data submittal.
- b. Mark these documents to show significant variations in the actual Work performed in comparison with information submitted.

- c. Include variations in products delivered to the site, and from the Manufacturer's installation instructions and recommendations.
 - d. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation.
 - e. Note related Submittal numbers, Change Order numbers, RFI numbers, and A/ESI numbers where applicable.
4. Record Sample Submitted:
- a. Refer to related Specification Section for instructions to maintain Samples during construction.
5. Miscellaneous Record Submittals:
- a. Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work.

1.5 SUBMITTALS

- A. At Final Inspection, deliver one copy of physical Record Documents (all documents other than Samples) and one copy of electronic drawings on CD to the A/E.
- B. Accompany submittal with transmittal letter in duplicate, containing: date, project title and number, Contractor's name and address, title and number of each Record Document and signature of Contractor or his authorized representative.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Construction Drawings and Shop Drawings for recording actual construction.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require the individual or entity who obtained record data, whether the individual or entity is the installer, subcontractor or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the mark-up before enclosing concealed installations.
 - 2. Content: Types of items requiring marking include, but are not limited to the following:
 - a. Dimensional changes to the Drawings.

- b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduit.
 - d. Revisions to electrical circuitry.
 - e. Actual equipment locations.
 - f. Locations of concealed internal utilities.
 - g. Changes made by Change Order, RFI, or A/ESI.
 - h. Changes made following A/E's written orders.
 - i. Details not on the original Construction Drawings.
 - j. Field records for variable and concealed conditions.
 - k. Record information on the Work shown only schematically.
3. Mark the Construction Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If the Shop Drawings are marked, show a cross-reference on the Construction Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 5. Mark important additional information that was either shown schematically or omitted from the original drawings.
 6. Note Change Order numbers, RFI numbers, A/ESI numbers, and similar identification, where applicable.
 7. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets. Cover sheet shall identify the following:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD DRAWINGS"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor
 - f. Contractor's certification statement
- B. Record Electronic CAD Files: Maintain a full set of corrected Record Electronic CAD Files of the Construction Drawings.
1. A/E shall provide one set of AutoCAD files of Construction Drawings on CD at Pre-Construction meeting.
 - a. Format: AutoCAD Release 2007 (with .dwg extension) or later, operating in Microsoft Office operating system.
 2. Contractor shall incorporate changes and additional information from Record Prints.
 - a. Delete, redraw, and add details and notations where applicable.
 - b. Changes to be incorporated include, those identified in 2.1.A.2. a-k immediately above.
 - c. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in prominent location.

2.2 RECORD SPECIFICATIONS

- A. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the propriety name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
 4. Note related Change Orders, RFIs, A/ESIs, and Record Drawings where applicable.
 5. Bind loose documents with Specifications with Cover sheet indicating:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD SPECIFICATIONS"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor
 - f. Contractor's certification statement

2.3 RECORD PRODUCT DATA

- A. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in the Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 3. Include significant changes in the product delivered to the Project site and changes in manufacturer's written installation for installation.
 4. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
 5. Bind together with Product Data Submittal Log and a Cover sheet indicating:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD PRODUCT DATA"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor

f. Contractor's certification statement

2.3 RECORD SAMPLES

- A. In preparation for Final Inspection, coordinate with A/E and Project Administrator to determine Samples to be retained by TDCJ. Provide Samples to be retained by TDCJ to Project Administrator at Final Inspection. Remaining Samples shall remain property of Contractor.
- B. Project Administrator shall provide Samples to Unit Maintenance.

2.4 RECORD MISCELLANEOUS SUBMITTALS

- A. Assemble 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.
- B. Assemble in applicable sections with appropriately labeled divider page. Divider page for Change Orders, RFIs, and A/ESIs shall be followed by the applicable Log. If log was maintained as a single document for all submittals, identify location of log on Cover Page and on each Divider page.
- C. Bind with a Cover Page identifying:
 - 1. Project Name
 - 2. Date
 - 3. Designation "PROJECT RECORD SUBMITTALS"
 - 4. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - 5. Name of Contractor
 - 6. Contractor's certification statement

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of the Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples apart from the Construction Documents used for construction.

3.2 RECORD DRAWINGS

- A. At Final Inspection, provide 3 sets each of marked-up Record Prints, printed CAD of Record Prints, Record Specifications, Record Product Data, Record Submittals to A/E.
- B. A/E shall provide approval of record documents by A/E's certification statement.
 - 1. A/E's certification shall only indicate that the compiled information as submitted by the Contractor 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.

2. If A/E cannot provide certification statement due to inaccurate or incomplete Record Documents, the A/E shall return documents to Contractor for correction.
3. Final application for payment will not be processed until record documents are complete and approved by the A/E.

END OF SECTION
[Revision March 2015]

SECTION 06 10 55 – ROOFING CARPENTRY

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Roof curbs and cants; concealed wood blocking, with hardware and attachment accessories.
- B. Refer to schedule at end of Section.

1.2 REFERENCES

- A. American Lumber Standards Committee (ALSC): National Design Specification for Wood Construction.
- B. American Wood Preservers Bureau (AWPB): APA Design Construction Guide.
- C. Product Standard of NBS (PS):
 - 1. PS 1 – Construction and Industrial Plywood.
 - 2. PS 20 – American Softwood Lumber Standard.

1.3 QUALITY ASSURANCE

- A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).
- B. Preservative Treatment: Confirm to applicable requirements of AWWA.

1.4 REGULATORY REQUIREMENTS

- A. Conform to applicable building codes, latest edition, for treatment of wood.
- B. Each piece with visible product identification stamp showing treatment issued by an approved agency.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, accessories, and locations to a minimum scale of 1 1/2" to one foot.
- C. Manufacturer's Certifications: Submit certification that wood treatment is in accordance with applicable requirements and that formulator/treater warrants material for intended use (pressure treated, fire, etc.).

PART 2 – PRODUCTS

2.1 ROUGH CARPENTRY MATERIALS

- A. Lumber: PS 20; No. 1 grade in accordance with established Grading rules; maximum moisture content of 19%; of following species:
 - 1. Southern Yellow Pine.
 - 2. Coast Region Douglas Fir.
- B. Plywood: PS 1; select sheathing grade or APA rated 5/8" minimum thickness; CD-X or better.
- C. Nails, Spikes, and Staples: Galvanized; size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Medium carbon steel, hot dipped galvanized; sized to suit application.
- E. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or power activated type for anchorage to steel.

2.2 PRESERVATIVE WOOD TREATMENT

- A. Shop Preservative (Pressure Treatment Type): AWPA U1.
- B. Shop pressure treat and provide identification on preservative treated materials, including all wood blocking, cants and plywood.
- C. Dry all PTW after treatment to the following maximum moisture content:
 - 1. Plywood: 15%.
 - 2. Lumber: 19%.

2.3 SOURCE QUALITY CONTROL

- A. Factory mark each piece of lumber with type, grade, mill and Grading Agency.
- B. Nominal sizes are indicated. Provide actual sizes as required by PS 20.
- C. Provide dressed lumber, sized four sides.

PART 3 – EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that surfaces are ready to receive work and field measurements are as shown on Shop Drawings.
- B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this work.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

3.2 INSTALLATION

- A. Discard units or material with defects that might impair quality of work and units that are too small to use in fabricating work with minimum joints.

- B. Set Carpentry Work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- C. Securely attach Carpentry Work to substrate by anchoring and fastening as required by recognized standards. Use common wire nails, except as otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting or wood; pre-drill as required.
- D. Install components with fasteners suited to materials.
 - 1. Nailable Surfaces: Galvanized or galvanically compatible nails, sized as follows:
 - a. $\frac{3}{4}$ " and 1" materials: 8d nails.
 - b. 1 $\frac{1}{2}$ " or 2" materials: 16d nails.
 - 2. Hollow Masonry Walls: Toggle bolts.
 - 3. Solid masonry: Rawl Zamac pin drive or Architect/Engineer (A/E) approved equal.
 - 4. Steel Members: Bolts or power actuated Hilti pin or A/E approved Equal.
 - 5. Maximum Spacing: 12" on center, unless noted otherwise.
 - 6. Top of Hollow Masonry Wall: Set 12" minimum J-bolts in fully set bed of concrete; minimum 18" on center (minimum 3000 psi).
- E. Remove all bent or deformed nails from finished work and dispose of.

3.3 CLEANING

- A. Pick up spilled, unused nails and fasteners daily from the Site.

3.4 PROTECTION

- A. Protective Walkways – Traffic Area Protection: Install full sheets of $\frac{3}{4}$ " exterior grade plywood and minimum $\frac{1}{2}$ " wood fiber insulation to those areas of new roof surface to be trafficked by personal and wheeled vehicles.

3.5 SITE TREATMENT OF WOOD MATERIALS

- A. Treat site-sawn ends. Allow preservative to cure prior to erecting materials.

3.6 SCHEDULE

- A. Rough Carpentry Work:
 - 1. Miscellaneous blocking and canting for built-up roofing system and related flashings and sheet metal.
 - 2. Blocking and canting for roof mounted mechanical items.
 - 3. Wood plant and plywood deck repair.

END OF SECTION 06 10 55

SECTION 07 01 50.19 – PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following:

1. Remove roofing membranes, roof gravel, lightweight insulating concrete, roofing insulation, metal flashings, and unused accessories, curbs, vents, and any other unused system and penetrations, and fill holes in roof deck as required in drawings and specifications.
2. Remove materials and debris from Site.
3. Raise rooftop appurtenances and parapet curbs where required to achieve minimum recommended heights (8 inches min.) and clearances for new roof installation.
4. Protection of building and its contents.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.

B. Related Sections:

1. Division 6 - Division 6 - Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips.
2. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
3. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: for copings, flashing and counter flashing.
4. Division 7 - Section 07 72 00 Roof Accessories: for Roof curbs and roof hatches.
5. Division 22 - Section 22 05 00 Common Work Results for Plumbing: for procedures for modifying, repairing, or replacing roof mounted plumbing and replacement of roof mounted piping.
6. Division 23 - Section 23 05 00 Common Work Results for HVAC: for procedures for modifying mechanical equipment.
7. Division 26 - Section 26 05 00 Common Work Results for Electrical: for procedures for modifying, repairing, or replacing roof mounted electrical equipment and devices, and repair or replacement of roof mounted electrical items, fixtures and conduit.

1.3 SUBMITTALS

A. Demolition and Removal Procedures and Schedule: Outline all work tasks and schedule them, showing clearly when each area is to be performed. Coordinate with TDCJ Representative and Prison Unit personnel to avoid impact to TDCJ occupancy.

B. Project Record Documents: Indicate extent of work installed, actual locations of appurtenances and items that will be hidden from view at Completion of Work.

- C. Product Data: For each type of product indicated, submit product data and general recommendations from materials manufacturer for types of materials required. Submit manufacturer's instructions for use and installation of all materials including lightweight concrete patching material.
- D. Manufacturer Recommendations for temperature range for storage and application of materials and any special cold weather application requirements or limitations.

1.4 REGULATORY REQUIREMENTS

- A. The presence of asbestos containing materials is not expected. If the contractor encounters suspected material, contact the TDCJ Project Administrator and existing roofing material shall be removed using manual methods (axes, hatches, knives, spud bars, power slicers or plows, but not saws) as outlined in Title 40 Code of Federal Regulations Part 61, Subpart M, Appendix A entitled, "Interpretive Rule Governing Roof Removal Operations" (Section I Paragraph 1.C.1). Debris generated from such removal operations shall be disposed of as regular construction debris (Section III Paragraph 3.C.1.).
- B. Provide Certification of Inspection confirming approvals by all Authorities having jurisdiction.

1.5 PRE-INSTALLATION CONFERENCE

- A. TDCJ's Project Administrator (PA) will convene a Pre-Construction Meeting prior to commencing Work of this Section.

1.6 PROJECT CONDITIONS

- A. Observe Owner's limitations or restrictions for site use, security, and accessibility.
- B. Do not close or obstruct roadways or sidewalks without permits.
- C. Conduct operations with minimum interference to thoroughfares. Maintain required egress (exit way) and access at all times.
- D. Provide, erect, and maintain temporary barriers and security devices.
- E. Conduct demolition to minimize interference with adjacent roofing and siding, roof mounted equipment, and roof deck and structure to remain.
- F. Conduct demolition and removal operations and coordinate new roofing work to avoid or minimize material and equipment set-up, and movement of equipment and materials over new roofing during construction. Provide temporary protection of new roofing from damage where material and equipment set-up and movement of material and equipment over new roofing cannot be avoided.
- G. When roof exceeds one-story or fifteen feet in height, or when debris must be discharged adjacent to windows, pedestrian or vehicular traffic, or where other conditions dictate extra precautions, provide enclosed chute from rooftop to trash containers.
- H. Do not remove more existing material than can be replaced with new material or made watertight by the end of the workday.

- I. During removal operations, have sufficient and suitable materials on site to facilitate rapid installation of temporary protection in the event of unexpected rain. Do not remove existing materials when precipitation is eminent.

PART 2 - PRODUCTS

2.1 DECK AND SUPPORT MATERIALS

- A. Curbs and Support Members: Wood or metal curbs and support items as indicated and required by existing conditions.
- B. Miscellaneous Metals: Match existing Materials and Products.
- C. Plumbing, HVAC and Electrical equipment, items, and devices when applicable: Match existing where practical and conform to Products and Execution specified in Sections 22 05 00 Common Work Results for Plumbing, 23 05 00 Common Work Results for HVAC, and 26 05 00 Common Work Results for Electrical.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that areas to be demolished are clear of encumbrances.
- B. Prevent movement or settlement of adjacent structures and paving. Provide bracing and shoring.
- C. Protect existing landscaping materials, appurtenances, structures, paving, roofing, and siding, roof mounted equipment, roof deck and structures which are not to be demolished.
- D. Examine existing mechanical and electrical items to determine existing conditions and operability. Notify TDCJ Representative in writing of any inoperable items or unsafe conditions.
- E. Beginning Work indicates acceptance of existing conditions, including operability of mechanical and electrical items.

3.2 EXECUTION

- A. Remove indicated roofing and appurtenances in an orderly and careful manner. CAUTION: Provide necessary additional shoring, shielding, and support to ensure the safety of workers and building occupants.
- B. Evenly cut edges of existing materials that are to be expanded, replaced, or modified. Completely remove materials from areas to be replaced or repaired each day.

- C. Cease operations and notify TDCJ immediately if adjacent structures or materials appear to be endangered. Do not resume operations until corrective measures have been taken.
- D. Except when instructed otherwise, immediately remove demolished material from Site as work progresses.
- E. Remove materials to be re-installed or retained in a manner to prevent damage. Store and protect until re-installation.
- F. Remove and properly dispose of contaminated, vermin infested, or dangerous materials encountered.
- G. Do not burn or bury materials on the Site.
- H. Remove roofing materials, roofing insulation, flashing, and damaged nailers and nails.
- I. Ensure replacement gypsum form board is cleaned completely to remove all debris.
- J. Clean up debris on a daily basis. Leave Site in clean condition.
- K. Modifications to existing mechanical and electrical items:
 - 1. When required to achieve recommended clearances, minimum curb heights, or other modifications, disconnect, modify, and reconnect mechanical and electrical services using qualified and licensed personnel.
 - 2. Do not disrupt any service unless specifically approved by TDCJ PA and on-site personnel.
 - 3. Restore services and verify proper operational conditions to satisfaction of Owner's Representative.

3.3 REPLACEMENT OF EXISTING VENTILATORS

- A. Remove all existing non-mechanically operated vents and ventilators and replace with new products of identical design, function, and configuration, unless otherwise indicated.
- B. Install curbs for all ventilators with a deck opening of 12 inches or greater.

END OF SECTION 07 01 50.19

SECTION 07 52 00 – MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
1. Removal of the existing roof system, down to the existing concrete deck. Inspection of the existing concrete deck and repair of deck if required. Preparation of concrete deck, application of two layers of rigid roof insulation board, creation of a roof slope by the application of tapered insulation, installation of one layer of cover board and installation of a two-ply modified bituminous membrane roof fully adhered with a cold applied adhesive.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
1. Division 6 - Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips
 2. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 3. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: for copings, flashing and counter flashing.
 4. Division 7 - Section 07 72 00 Roof Accessories: for roof curbs and roof hatches.
 5. Division 7 – Section 07 92 00 Joint Sealants
 6. Division 22 - Section 22 05 00 Common Work Results for Plumbing: for procedures for modifying, repairing, or replacing roof mounted plumbing and replacement of roof mounted piping.
 7. Division 23 - Section 23 05 00 Common Work Results for HVAC: for procedures for modifying mechanical equipment.
 8. Division 26 - Section 26 05 00 Common Work Results for Electrical: for procedures for modifying, repairing, or replacing roof mounted electrical equipment and devices, and repair or replacement of roof mounted electrical items, fixtures and conduit.

1.3 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Roofing Systems Manufacturer: Any of the manufacturers whose systems are specified under "Acceptable Roofing System Manufacturers", and herein called "Manufacturer".

- C. Square: 100 square feet.

1.4 SYSTEM DESCRIPTION

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.
 - 1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
 - 2. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 4272.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by Roofing-System Manufacturer based on testing and field experience.
- C. Roofing System Design: Shall comply with the latest edition of the International Building Code, chapter 6 Wind Loads of the ASCE 7 and all applicable Texas Coastal Windstorm Requirements.
- D. Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
 - 1. Roof Area Field Uplift Pressure: 42.6 pounds per square foot
 - 2. Roof Area Perimeter Uplift Pressure: 67.9 pounds per square foot
 - 3. Roof Area Corners Uplift Pressure: 100.2 pounds per square foot
 - 4. Design Wind Speed: 130
 - 5. Exposure Category: C
 - 6. Occupancy Category: III
 - 7. Importance Factor 1.15
 - 8. Safety Factor: Two (2)
 - 9. Roof assembly shall meet the design intent and capabilities associated with FM 1-120 wind uplift rating.
 - 10. The roof system shall have a UL Class A fire rating for external flame spread on the roof surface.
 - 11. The Roofing Manufacturer shall provide a signed certificate certifying that the roofing system complies with all the specified requirements including wind uplift.
- E. Asbestos Containing Materials: Install only asbestos free materials. Asbestos containing materials inadvertently installed to be immediately removed in accordance with all applicable regulations.
- F. Energy Performance: Roofing system that will meets State of Texas Commercial Energy Codes; 2009 International Energy Conservation Code (IECC) or 2007 ASHRAE 90.1.

1. Minimum R-Value: 20.96 - entire roof assembly. This system shall consist of a minimum of two layers of 1.8 inch polyisocyanurate insulation overlaid with tapered polyisocyanurate and a high density gypsum coverboard. Roof insulation shall be adhered to the deck per requirements of the manufacturer and Project Documents.
 2. Initial Solar Reflectance: Not less than 0.70 when tested in accordance with ASTM E 903, E 1175 and E 1918.
 3. Thermal Emittance: Not less than 0.75 when tested according with ASTM E 408, E 835, and E 1371.
- G. Exterior Fire Test Exposure: ASTM E 108 or UL790, Class A for applications and roof slopes indicated, testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- H. Underwriters Laboratory Classification: Material and components of the roofing system to meet UL Class A requirements.

1.5 SUBMITTALS

- A. Product Data: Roofing-System Manufacturer's literature, including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and application instructions.
1. Provide for membrane and base flashing materials, and roofing cement, adhesives, primer, mastic sealant, and fasteners.
 2. Include temperature ranges for storage and application of materials, and special weather applications requirements or limitations.
- B. Shop Drawings: Include Manufacturer's reviewed and approved plans, elevations, sections, details, and attachments to other work; for details and fabrications not shown on drawings. These drawings shall be **approved details that are project and site specific**. Manufacturer's generic standard details will not be accepted.
1. Base flashings and membrane terminations. Draw to scale.
 2. Tapered insulation layout, including crickets, saddles, and tapered edge strips, including amount and direction of slopes.
 3. Dimensions and locations of all roof field, perimeter, and corners areas.
 4. Base sheet/Insulation fastening/attachment patterns for corner, perimeter, and field-of-roof locations.
 5. Proposed temporary, watertight, tie-off details for each substrate type.
 6. Interface with sheet metal components including, but not limited to:
 - a. Counterflashing.
 - b. Stack flashing assemblies.
 - c. Edge and fascia sections.
 - d. Interface with coping cap assemblies.
 - e. Interface with roofing accessories, including, but not limited to:
 - 1) Equipment curbs.
 - 2) Roof hatches.
 - 3) Expansion joints assemblies.

- C. Samples for verification: For the following 3-inch-by-4-inch product samples:
1. Membrane vented base sheet.
 2. Membrane base sheet.
 3. Granule-surfaced membrane cap sheet.
 4. Flashing base sheet.
 5. Flashing cap sheet.
 6. Insulation.
 7. Cover board.
 8. Six insulation fasteners of each type, length, and finish.
- D. Installer's Certificate:
1. Signed by roofing-system manufacturer, certifying that Roofing Installer complies with manufacturer's requirements to install specified, warranted, roofing system.
 2. Submit evidence that Installer's **existing company** has minimum of 5 years continuous experience in application of specified materials. Submit list of at least 5 completed projects of similar scope and size, including:
 - a. Project name.
 - b. Owner's name.
 - c. Owner's Representative name, address, and telephone number.
 - d. Description of work.
 - e. SBS-modified-bitumen materials used.
 - f. Project supervisor.
 - g. Total cost of roofing work and total cost of project.
 - h. Completion date.
- E. Manufacturer Certificate: Signed by Roofing-System Manufacturer, certifying that roofing system complies with specified requirements.
1. Written approval by Roofing-System Manufacturer for use and performance of membrane over specified board insulation, including that materials supplied for project comply with requirements of cited ASTM standards and Project Documents. Approval should also indicate materials are suitable for ASTM E 108, Class 1A roof and meet specified wind uplift classification.
 2. Submit evidence of meeting performance requirements including relevant FM Global assembly numbers.
 3. Certify that materials are free of asbestos.
- F. Maintenance Data: Roofing-System Manufacturer to include Product Maintenance Manuals.
- G. Following Completion of Work, submit Roofing-System Manufacturer's Inspection Report of completed roofing installation and completed warranty; submit Installer's completed Warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified Manufacturer with a minimum of ten (10) years documented experience that has UL listing and FMG approval for roofing systems identical to that used for this Project.

- B. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by membrane Roofing-System Manufacturer to install roofing-system products and that is eligible to receive Manufacturer's Roofing-System Warranty. Must have installations of specified materials in the local area in use for a minimum of five (5) years.
- C. **Source Limitations:** Obtain components including roofing insulation, fasteners, membrane sheet materials, adhesives, all miscellaneous roofing accessories for membrane roofing system *from same Manufacturer as membrane roofing or approved by Membrane Roofing Manufacturer.*
- D. Pre-Roofing Conference: Conduct conference at Project site to review requirements for roofing system including:
 - 1. The Roofing Contractor shall schedule a Conference after Notice of Award.
 - 2. **Required Attendance:** TDCJ Regional Maintenance or designated representative, TDCJ PA, Roofing Contractor, Roofing Contractor's Site Foreman (full-time working foreman), Roofing-System Manufacturer's Technical Representative, A/E shall attend.
 - 3. Review construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review site use, access, staging, and set-up location limitations.
 - 5. Review installation procedures, storage and protection of materials prior to installation, surface preparation and roof deck condition and pre-treatment.
 - 6. Review structural loading limitations of roof deck during and after roofing.
 - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 8. Review governing regulations and requirements for insurance and certificates, if applicable.
 - 9. Review temporary protection and repairs of roofing system.
 - 10. Testing and inspection procedure requirements.
 - 11. Documentation required for Manufacturer's Warranty.
 - 12. Quality Control and Quality Assurance Plans.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Site in original containers with seals unbroken and labeled with Roofing-System Manufacturer's name, product brand name and type, lot number, date manufactured, approval or listing agency markings, and directions for storing and mixing with other components. Material storage procedures will be constantly monitored and strictly enforced.
- B. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, installation. Reject and remove from Site new materials which exhibit evidence of moisture during application or which have been exposed to moisture.

- C. Store materials in original, undamaged containers in clean, dry, protected location on raised platforms with weather-protective coverings, with temperature range required by Roofing-System Manufacturer. Use breathable tarps for protection of moisture-sensitive roofing materials. Protect stored materials from direct sunlight. ***Roofing-System Manufacturer's standard packing and covering is not considered adequate weather protection.***
- D. Limit stored material on structures to safe loading of structure at time materials are stored, and to avoid permanent deflection of deck.
- E. Handle materials to avoid damage and store in designated area that has been approved by Warden.
- F. Do not store materials at locations where new roofing materials have been installed.
- G. Store rolled asphalt-based materials on ends only, unless otherwise required by Roofing-System Manufacturer's written instructions. Discard rolls that have been flattened, creased, or otherwise damaged.
- H. Conspicuously mark wet or damaged materials and promptly remove from Site.
- I. Remove and replace materials that cannot be applied within stated shelf life.

1.8 PROJECT CONDITIONS

- A. Safety:
 - 1. Take all necessary precautions regarding worker health and safety when using solvents, adhesives, and other asphalt products.
 - 2. Store flammable liquid and materials away from open sparks, flames, and extreme heat.
 - 3. Take necessary precautions when using solvents and adhesives near fresh air intakes.
 - 4. Comply with all OSHA requirements for construction.
- B. Daily site cleanup shall be performed to minimize debris and hazardous congestion.
- C. Weather limitations: Proceed with installation only when existing and forecasted weather conditions, e.g., extreme temperature, high winds, high humidity and moisture, permit roofing system to be installed according to Manufacturer's written instructions and Warranty requirements.
- D. Verify existing dimensions and details prior to installation of materials. Notify A/E of conditions found to be different than those indicated in Contract Documents. A/E will review situation and inform Contractor and Installer of changes.
- E. Comply with Owner's limitations and restrictions for site use and accessibility.

- F. Install materials in strict accordance with safety requirements required by Roofing-System Manufacturer, Material Safety Data Sheets, and Local, State, and Federal rules and regulations.
- G. Protection:
 - 1. Schedule installation sequence to limit access and utilization of the newly installed membrane for material storage, construction staging, mechanical and/or excessive foot traffic.
 - 2. Protect roofing membrane, building surfaces, paving, and landscaping from traffic and roofing equipment. Provide temporary walkways constructed of plywood and set on protective material in traffic and construction areas.
 - 3. Restore or replace all work or materials damaged by the roofing operation.
 - 4. Remove protection materials upon Completion of Work.
 - 5. Adverse weather could have a detrimental effect on adhesives, general production efforts or the quality of the finished installation. Contact Manufacturer for recommendations and acceptable tolerances.
- H. Daily Seal: Ensure that moisture does not penetrate beneath any completed sections of the roof by sealing temporary roof terminations at the end of each work day and prior to the arrival of inclement weather. Inspect existing components for moisture intrusion along the temporary terminations at temporary cut-offs, tie-ins, and night seals after opening the seal on the next workday. Remove any wet, damp, or moisture-damaged materials.
- I. All construction debris shall be removed from the construction site and legally disposed of offsite daily.

1.9 WARRANTIES

- A. Manufacturer's Warranty.
 - 1. Written Warranty, without monetary limitation, signed by Roofing-System Manufacturer, including:
 - a. Repair or replace components of roofing-system that do not comply with requirements; that do not remain watertight; that fail in adhesion, cohesion, or general durability; or that deteriorate in manner not clearly specified by submitted Roofing-System Manufacturer's Data as inherent quality of material for application indicated.
 - b. Manufacturer Warranty includes roofing membrane, base flashings, roofing accessories, roof insulation, fasteners, cover board, substrate boards, and other components of the roofing system.
 - c. Failures includes roof leaks, and defects that do not result in roof leaks such as blisters, wrinkles, and excessive granule loss.
 - 2. Warranty Period: Fifteen (15) years from date of Beneficial Occupancy.
- B. Applicator Warranty
 - 1. Completed Applicator Warranty, signed by Applicator

- a. Repair or replace components of roofing system that do not comply with requirements; that do not remain watertight; that fail in adhesion, cohesion, or general durability; or that deteriorate in manner not clearly specified by submitted Roofing-System Manufacturer's data as inherent quality of material for application indicated. Warranty includes defects such as blisters, ridging, and excessive surfacing loss.
 - b. Removal and replacement of base sheets, insulation, cover boards, and other components of roofing system. Warranty includes replacing materials as necessary.
 - c. Labor and materials to perform warranty work.
2. Warranty Period: Three (3) years from date of Beneficial Occupancy.

1.10 COORDINATION

- A. Prior to installation of materials, a pre-roofing conference should be held with the roofing contractor, and TDCJ's Project Administrator (PA) to discuss the specified roofing system, coordinate its proper application, and the expectations of all parties involved. The authorized Roofing Contractor and the TDCJ's PA shall notify all parties a minimum of 14 days prior to the meeting.
- B. Plan and coordinate the installation of the roofing system with other trades in such a manner to avoid membrane damage, keeping the complete installation weather tight and in accordance with all approved details and Warranty requirements.
- C. Manufacturer shall be available to make recommendations necessary to ensure compliance with project Specifications and Specification alternatives due to unforeseen job conditions.

PART 2 – PRODUCTS

2.1 MODIFIED-BITUMEN MEMBRANE ROOFING SYSTEM

- A. General
 1. Roofing-System Manufacturer with at least 10-years documented experience and FM Global approval for roofing system identical to that specified for this Project
 2. FM Global Listing: Provide roofing membrane, base flashing, and component materials that comply with requirements in FM Global Approval Guide Standards 4450 and 4470 as part of roofing system and that are listed in FM Global Guide for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.
 - a. Fire/Windstorm Classification: ASTM E 108, Class 1A-120 for application and roof slopes indicated, based on testing
 3. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by Roofing-System Manufacturer based on testing and field experience.

4. Asbestos-Containing Materials: Install only asbestos-free materials. Immediately remove asbestos-containing materials inadvertently installed, in accordance with applicable regulations.
5. Source Limitations: Obtain components for roofing system from or approved by the Roofing-System Manufacturer.

B. SBS-Modified-Bitumen Membrane Roof Assemblies

1. Derbigum Americas, Inc.
 - a. Bottom Ply: Derbibase Ultra
 - b. Cap sheet: Derbibrite
2. Siplast, Inc
 - a. Bottom Ply: Paradiene 20 HV set in cold process adhesive.
 - b. Cap Sheet: Paradiene 30 CR FR set in cold process adhesive.
3. Substitutions: Under provisions of Section 01 25 00.

C. Base Flashing Systems

1. Performance Roof Systems Inc.
 - a. Backer Sheet: Derbibase Ultra
 - b. Flashing Sheet: Derbibrite
 - c. PMMA Liquid Membrane Flashing - PMMA Flashing System
2. Siplast, Inc.
 - a. Backer Sheet: Paradiene 20 HV
 - b. Flashing Sheet: Paradiene 30 CR FR
 - c. PMMA Liquid Membrane Flashing - Parapro
3. Substitutions: Under provisions of Section 01 25 00.
4. Flashing sheet to be coated with granules or integrated white acrylic surfacing . Color of roofing membrane to match cap sheet color.
5. Glass-Fiber Fabric: ASTM D 1668, Type I, woven glass-fiber cloth treated with asphalt.

D. Penetration Flashing Systems

1. Performance Roof Systems Inc. - PMMA Flashing System
2. Siplast, Inc.: Parapro Flashing
3. Substitutions: Under provisions of Section 01 25 00.

2.2 OTHER ROOFING-SYSTEM MATERIAL

A. Insulation

1. General: Provide preformed insulation boards that comply with requirements and referenced standards, selected from insulation Manufacturer's standard sizes and of thicknesses indicated on Drawings.
2. Polyisocyanurate Boards: Material shall comply with the requirements of ASTM D1621 for a minimum compressive strength of 20 psi, and meet flame spread requirements of ASTM E84. ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces. Minimum LTTR 5.6 per inch. Acceptable products and manufacturers as recommended by the Roofing Membrane Manufacturer for a System Warranty and as approved by A/E.

3. Tapered Insulation: Tapered polyisocyanurate boards will have a minimum thickness of 1/2" and a minimum slope of 1/4" per foot. Drainage crickets and saddles will have a minimum thickness of 1/2" and a minimum slope of 1/2" per foot. Tapered and Flat polyisocyanurate boards will be surfaced with either fiber reinforced or fiberglass facer sheets. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated. Acceptable products and manufacturers as recommended by the Roofing Membrane Manufacturer for a System Warranty and as approved by A/E
 4. Insulation Accessories
 - a. General: Insulation accessories recommended by Insulation Manufacturer for intended use and compatible with membrane roofing.
 - b. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.
 - c. Tapered Edge and Cant Strips: ASTM C 728, perlite insulation board.
- B. Cover Boards: ASTM C 1177; glass-mat, water-resistant, gypsum substrate, 1/2 inch thick. Dens-Deck manufactured by Georgia-Pacific Corporation, or A/E approved equal.
- C. Walkways
1. Walkway Pads: Same cap sheet product as used in the field area of the roof and as follows: Color: To contrast with roof color.
 - a. Size: As standard with manufacturer.

2.3 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by Roofing-System Manufacturer for intended use and compatible with roofing membrane.
- B. Flashing Cement: ASTM D 4586, asbestos free, of consistency required by roofing-system manufacturer for application. Use for sealing laps in membrane or base flashing, surface or stripping flashing at equipment penetrations and drains, or repairs to membrane or flashing.
- C. Mastic Sealant: Polyisobutylene, plain or modified bitumen, non-hardening, non-migrating, non-skinning, and non-drying.
- D. Termination Bars: Roofing-System Manufacturer's standard; Type-304-stainless-steel or aluminum bars, approximately 1-inch wide by 1/8-inch thick; with predrilled holes 8 inches on center.
- E. Fasteners, General: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM GLOBAL 4470 and acceptable to Roofing-System Manufacturer.

1. Designed for fastening roofing membrane components to substrate and tested by Roofing-System Manufacturer for required pullout strength.
- F. Fasteners for Base Flashings
1. Wood and Plywood Substrates: Coated and threaded wood screw of sufficient length to provide 1-inch-minimum embedment or pass through bottom side of wood or plywood.
 2. Masonry Substrate: Stainless steel with hex washer head
 - a. 410 Stainless Steel Tapcon, manufactured by ITW Buildex or A/E approved equal.
 - b. Type 304 Stainless Steel Tapper, 1/4-inch diameter with hex washer head, manufactured by Rawl or A/E approved equal.
 - c. 1-3/4-inch-minimum length, or as noted on details.
 3. Metal substrate: No. 12 x 1 1/2 inch, 410 stainless steel, self-drilling screws with 1-inch, stainless steel washers.
- G. Adhesive: Manufacturer's standard adhesive formulated to adhere roof insulation to concrete substrate and subsequent layers of insulation and coverboard to each other.
- H. Roofing Granules: **Where applicable** use ceramic-coated roofing granules provided by Roofing-System Manufacturer, color to match roofing membrane for touchup and repairs.
- I. Miscellaneous Accessories: Provide miscellaneous accessories recommended by Roofing-System Manufacturer.

PART 3 – EXECUTION

3.1 SUBSTRATE EXAMINATION

- A. Examine substrates and conditions, with Installer and Roofing-System Manufacturer's Representative for compliance with requirements and for other conditions affecting performance of roofing system.
1. Ensure that Work done by other trades is complete and ready to receive roofing system, including:
 - a. Roof openings and penetrations are in place and set and braced, and any roof drains (if applicable) are securely clamped in place.
 - b. Wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and nailers match thicknesses of insulation.
 2. Notify Architect/Engineer in writing of conditions which may adversely affect roofing-system installation or performance. Do not proceed with roofing-system installation until these conditions have been corrected and reviewed by Architect/Engineer

3.2 COORDINATION

- A. Coordinate Work to ensure that new insulation and roofing materials and building interior are kept continuously dry and that continuous, watertight, new roofing system is provided.
Coordinate:
 - 1. With TDCJ's PA.
 - 2. With other trades to avoid or minimize work on, or in immediate vicinity of, installation in progress and completed new roofing.
 - 3. To avoid or minimize adverse effects on completed new roofing.
- B. Ensure that drains are operational (if applicable) at end of each workday or if precipitation is forecast.

3.3 SUBSTRATE PREPARATION (Re-Roofing)

- A. Summary:
 - 1. Removal of Existing Roof System:
 - a. Remove all existing roofing material(s), membranes, light weight insulating concrete, insulation, flashing, metal and wood blocking and legally dispose off-site.
 - b. Remove only enough roofing to accommodate the day's work and ensure the exposed area can be made 100% watertight at the end of the day or first sign of inclement weather.
 - 2. Requirements: Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
- B. Mask adjoining surfaces not receiving roofing system to prevent spillage or migration affecting other construction.
- C. Close penetrations to prevent materials from entering and clogging drains and conductors, and from spilling or migrating onto adjacent surfaces.
- D. Installer and Roofing-System Manufacturer's Representative shall examine substrate to ensure that it is properly prepared and ready to receive roofing system. Roofing-System Manufacturer's Representative shall report in writing to Installer and Architect/Engineer conditions which will adversely affect roofing-system installation or performance. Do not proceed with roofing-system installation until these conditions have been corrected and reviewed by Architect/Engineer.
- E. Proceed with installation only after unsatisfactory conditions have been corrected. Commencing installation constitutes acceptance of work surfaces and conditions.

3.4 ROOFING-SYSTEM INSTALLATION, GENERAL

- A. Install roofing membrane and base flashings according to Roofing-System Manufacturer's written instructions and applicable recommendations of NRCA/ARMA quality Control Guidelines for Application of Polymer Modified Bitumen Roofing.

- B. Install materials in strict accordance with safety requirements required by Roofing-System Manufacturer, Material Safety Data Sheets, and Local, State, and Federal rules and regulations.
 - 1. Follow safety procedures of OSHA and other applicable governing agencies. Assume responsibility for work area safety at all times.
 - 2. Provide fully-charged fire extinguishers, appropriately sized and rated, and water within 50 feet of open flame.
 - 3. No torches allow on project at anytime.
- C. Maintain adequate ventilation during installation of roofing materials. Notify TDCJ's PA at least 1 week in advance of work with materials with noxious vapors. Review application schedule and venting precautions with TDCJ's PA prior to beginning application.
- D. Substrate-Joint Penetrations: Prevent roofing cold application adhesive from entering building or damaging roofing-system components or adjacent building construction.
- E. Coordinate installing roofing-system components so insulation and roofing membrane sheets are not exposed to precipitation, or left exposed at end of workday or when rain is forecast.
- F. Provide tie-offs at end of each day's work to cover exposed roofing-system membrane sheets and insulation with course of coated felt set in cold application adhesive with joints and edges sealed.
- G. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
- H. Remove and discard temporary seals before beginning work on adjoining roofing.
- I. Prohibit foot traffic and equipment movement over roofing system until adhesive has cured. Minimize foot traffic and equipment movement over base ply prior to installation of membrane top ply/cap sheet.
- J. Cooperate with A/E in performing inspections and testing of roofing system.

3.5 ROOF INSULATION, AND COVER BOARD INSTALLATION

- A. Concrete Substrate: Prime surface to receive roofing with asphalt primer at rate of $\frac{3}{4}$ gallon per square, and allow primer to dry.
- B. Insulation Installation:
 - 1. Comply with Roofing-System Manufacturer's written instructions for installing insulation.
 - 2. Coordinate installation so insulation is not exposed to precipitation or left exposed at end of workday.
 - 3. Install tapered insulation to conform to slopes indicated.
 - 4. Install insulation with long joints in continuous, straight line; with end joints staggered between rows; and abutting edges and ends between boards.

- a. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
 - b. Fill gaps exceeding 1/4 inch with insulation
 - 5. Where overall insulation thickness is 2 inches or greater, install 2 or more layers with joints of each succeeding layer staggered.
 - 6. Trim surface of insulation where necessary at roof drains (if applicable) so finished surface is flush with top of drain-bowl flange and does not restrict flow of water.
 - 7. Install and secure preformed, 45-degree insulation cant strips at junctures with vertical surfaces or angle changes greater than 45 degrees.
 - 8. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
 - 9. Set each layer of insulation in adhesive using Manufacturers approved sprayer, roller, or notched squeegee.
- C. Coverboard Insulation: Install coverboards over insulation with long joints in continuous, straight lines, and with end joints staggered between rows. Stagger joints from joints in insulation below at least of 6 inches in each direction. Loosely butt coverboards together. Set in approved adhesive.

3.6 WALKWAY INSTALLATION

- A. Walkway Pads: Cap sheet product as used in the field area of the roof and as follows: Color: To contrast roof color of cap sheet.
 - 1. Fully adhere walkway sheets in same cold applied adhesive in accordance with recommendations of the roofing-system manufacturers.
- B. Use only full-size units, except partial units at corners if necessary to provide neat, finished appearance.
- C. Provide 2 inches minimum between adjacent units. Extend walkway 6 inches minimum beyond edges of equipment or supports.
- D. Sweep loose surfacing material and debris from walkway locations before applying walk surface.

3.7 BASE FLASHING AND STRIPPING INSTALLATION

- A. General: Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrate according to Roofing-System Manufacturer's written instructions.
 - 1. Accurately align base flashing sheets without stretching, and maintain uniform side and end laps required by Roofing-System Manufacturer for selvage and non-selvage laps.
 - a. Start wall and curb base flashing at low point of roof deck and shingle with slope of deck.
 - b. Extend base flashing plies to top of curbs, to within 1 inch of counterflashing reglets, at least 8 inches above finished surface of roofing system, and 4 inches onto field of roofing membrane. At locations where height of wall exceeds height acceptable to

Roofing-System Manufacturer, comply with recommendations of Roofing-System Manufacturer for flashing high walls. Recommendations include flashing in two stages: bottom half to recommended maximum height preceded by top half over remainder of wall.

- c. Bond and seal laps, leaving no voids. Repair wrinkles and voids in laps and lapped seams. Prepare and prime non-selvage laps as recommended by Roofing-System Manufacturer.
 2. Install at least one ply of base flashing membrane same day that roofing membrane is installed to provide temporary watertight seal.
- B. Flashing Sheet Application: Adhere flashing sheet to substrate in solid coating of flashing cement. Press sheet firmly into place to ensure continuous adhesion to substrate with no voids, wrinkles, or un-adhered base flashing.
1. Cut sheets off end of roll and install vertically, working to selvage edge.
 2. For sheets without selvage edges or where selvage edge cannot be provided, limit length of sheets to 5' maximum. Prepare and prime non-selvage edges as recommended by roofing-system manufacturer.
 3. Stagger end lap seams in top ply at least 6" from lap seams in bottom plies.
 4. Extend base flashing up walls or parapets a minimum of 8" above roofing membrane and 4" onto field of roofing membrane.
- C. Mechanically fasten upper edge of base flashing securely at terminations and perimeter of roofing, using termination bars and fasteners spaced 8 inches on center and within 2 inches of end termination in base flashing.
- D. Install sheet metal flashing or counter flashing at top termination of base flashing, per Section 07 62 00.
- E. Equipment Penetrations. Flash per Drawing details or per Roofing-System Manufacturer's recommendations.
1. Prime flange of sheet-metal flashing, allow to dry, and set in modified-bitumen mastic.
 2. Apply sealant at base flashing termination on sheet metal flashing.
- G. At Perimeters
1. Prime both sides of metal edging, gravel stop, and gutter flanges, and allow to dry.
 2. Set in modified mastic over membrane as recommended by roofing-system manufacturer.
 3. Mechanically fasten flanges 3 inches on center, staggered, and strip over with additional layer of base flashing, as recommended by roofing-system manufacturer.
 4. Apply sealant along edge of base flashing at base of raised gravel stop dam to fill gap between base flashing and dam.
- H. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to Roofing-System Manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

- A. Roof cement shall not be incorporated into the roof membrane or flashing system.
- B. A/E will inspect roofing system at various stages of construction and at completion.
- C. If indicated by inspections, test cuts may be made to evaluate observed problems with roofing system.
 - 1. Approximate quantities of components within roofing membrane will be determined according to ASTM D 3617.
 - 2. Test specimens will be examined for interply voids according to ASTM D 3617 and to comply with criteria established in Appendix 3 of NRCA/ARMA Quality Control Guidelines for Application of Polymer Modified Bitumen Roofing.
 - 3. Repair areas where test cuts were performed according to Roofing-System Manufacturer's written instructions.
- D. Final Roof Inspection: Arrange for Roofing-System Manufacturer's technical personnel to inspect roofing installation on completion.
 - 1. Notify TDCJ PA 48 hours in advance of date and time of inspection so PA can be present for inspection with Roofing-System Manufacturer's technical personnel.
- E. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 CLEANING AND PROTECTING

- A. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by Manufacturer.
- B. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to TDCJ PA.
- C. Repair or remove and replace roofing system that does not comply with requirements, to condition free of damage and deterioration prior to final acceptance and according to Warranty requirements.

3.10 TEMPORARY SEALS

- A. At the end of each working day or at the sign of rain, install temporary, 100% watertight seal(s) where the completed new roofing adjoins the uncovered deck or existing roof surface.

- B. The authorized Roofing Contractor shall create and maintain the temporary seal in such a manner to prevent water from traveling beneath the new and/or existing roof system.
- C. The use of plastic roofing cement is permissible when sealing to an existing built up roof.
- D. If water is allowed to enter beneath the newly completed roofing, the affected area(s) shall be removed and replaced at no additional expense to the building owner.
- E. Prior to the commencement of work, cut out and remove all contaminated membrane, insulation, roof cement or sealant, and properly dispose off site.

3.11 COMPLETION

- A. Remove any and all debris, excess materials and scrap of any kind from the roof and surrounding premises prior to demobilization.
- B. Inspect all field welds, detailing and terminations to ensure a 100% watertight installation.

3.12 WARRANTY INSPECTION

- A. Upon completion of the project, the authorized Roofing Contractor shall complete and submit the Project Completion Notice to Manufacturer.
- B. Upon receipt of the Notice of Completion, a Manufacturer's Representative will schedule an inspection with a representative of the authorized Roofing Contractor to thoroughly review the installation and verify compliance with the Manufacturer's requirements.
- C. Any corrections or modifications necessary for compliance with the Specifications and acceptance for Warranty (Punch List) will be noted on the Final Inspection for Warranty Form.
- D. Upon completion of all Punch List items and Final Acceptance of the installation, a warranty as authorized by the approved Manufacturer Notice of Award and Warranty Request Form will be issued.

3.13 APPLICATOR WARRANTY

- A. In accordance with Applicator Warranty in Section 01 78 36.

END OF SECTION 07 52 00

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Shop or field formed sheet metal work for moisture protection.
- B. Formed wall flashing and trim.
- C. Formed low-slope roof flashing and trim.
- D. Related accessories.

1.2 RELATED SECTIONS

- A. Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips.
- B. Section 07 92 00 - Joint Sealants.
- C. Section 07 72 00 - Roof Accessories – For set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.

1.3 REFERENCES

- A. American Society For Testing and Material (ASTM) standards as referenced herein.
- B. SMACNA - Architectural Sheet Metal Manual, Fifth Edition, 1993.
- C. American Iron & Steel Institute (AISI) "Stainless Steel Data Manual".
- D. NRCA - National Roofing Contractors Association, Fifth Edition, 2001.
- E. FS FF-S-325 - Shield Expansion; Nail, Expansion; and Nail, Drive-Screw.
- F. FS TT-C-494A - Coating Compound, Bituminous, Solvent Type, Acid Resistant.
- G. FS TT-S-00230C(2) - Sealing Compound, Elastomeric Type, Single Component (For Caulking, Sealing and Glazing in Buildings and Other Structures).

1.4 SUBMITTALS

- A. Procedures for Submittals: Section 01 33 00.
- B. Shop Drawings: Indicate joints, types and locations of fasteners, shapes, sizes, expansion joints, special conditions, and installation details.
- C. Samples: Two 6 inch square samples of each sheet metal material or 1'-0" length in type and finish specified.

1.5 WARRANTY

- A. Provide a joint written warranty of Fabricator and Contractor, on a single document, against leaks and defects in materials and workmanship for 10 years after date of Beneficial Occupancy.

PART 2 - PRODUCTS

2.1 SHEET METAL MATERIAL

- A. Prefinished galvanized steel – Kynar coated or A/E approved equal, min. 24 ga. galvanized steel for use at roof edge, coping, counter flashing, gutters, leader heads and down spouts.
- B. Galvanized steel – Minimum 22 ga. For use at continuous cleat beneath edge metal and coping.

2.2 FASTENERS

- A. Nails: Galvanized steel wire, flat head, barbed, with soft neoprene washers where exposed.
- B. Screws: Self tapping sheet metal type; material and finish compatible with metal being fastened.
- C. Rivets: Material and finish compatible with metal being fastened, type and size as recommended by sheet metal Manufacturer **with PA's approval only**.
- D. Fasteners for Concrete: Round-head stainless steel screw and neoprene washer with lead expansion anchor, FS FF-S-325, Group IV, Type 2.

2.3 RELATED MATERIAL

- A. Sealant: Polyurethane, FS TT-S-00230c, Type II, Class A.
- B. Bituminous Plastic Cement: ASTM D 4586, Type I; asbestos free.
- C. Asphaltic Coating Compound: FS TT-C-494A, Type II.
- D. Underlayment: ASTM D 226, Type II (No. 30 pound), asphalt saturated organic felt, unperforated.
- E. Slip Sheet: Rosin-sized building paper, 3 pounds/100 square feet.

2.4 FABRICATION - GENERAL

- A. Fabricate work in accordance with SMACNA Architectural Sheet Metal Manual and reviewed Shop Drawings.

- B. Form sheet metal on bending brake.
- C. Shape, trim and hand seam metal on bench insofar as practicable.
- D. Make angle bends and folds for interlocking metal with full regard for expansion and contraction to avoid buckling or fullness in metal after installation.
- E. Fabricate cleats and starter strips of same material as sheet metal.
- F. Form materials with straight lines, sharp angles and smooth curves.
- G. Fold back edges on concealed side of exposed edge to form hem.
- H. Weld or solder all joints on parts that are to be permanently and rigidly assembled.
- I. Provide expansion joints in sheet metal exceeding 15 feet in length. Place expansion joints at 10 feet O.C. maximum, and 3 feet from corners and intersections. Make joints minimum width consistent with type of material.

2.5 FABRICATED ITEMS

- A. Flashings and Counter flashings: Formed in minimum 10 foot lengths, 2 piece system with metal flashing receiver at masonry walls, in accordance with NRCA.
- B. Pipe Penetration Flashing: in accordance with NRCA.

2.6 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Downspouts: Fabricate rectangular downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
 - 1. Fabricate downspouts from the following material:
 - a. Pre-finished Steel: 24 gauge.
- B. Parapet Scuppers: Fabricate scuppers of dimensions required with closure flange trim to exterior, 4-inch-wide wall flanges to interior, and base extending 4 inches beyond cant or tapered strip into field of roof. Fasten gravel guard angles to base of scupper.
 - 1. Fabricate parapet scuppers from the following material:
 - a. Pre-finished Steel: 24 gauge.
- C. Conductor Heads: Fabricate conductor heads with flanged back and stiffened top edge and of dimensions and shape indicated complete with outlet tubes as detailed on contract documents.
 - 1. Fabricate conductor heads from the following material:

- a. Pre-finished Steel: 24 gauge.

2.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings: Fabricate in minimum 96-inch long, but not exceeding 10-foot long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.
 - 1 Fabricate copings from the following material: Pre-finished galv. steel: 24 gauge.
- B. Base Flashing: Fabricate from the following material: Pre-finished galv. steel: 24 gauge.
- C. Counterflashing: Fabricate from the following material: Pre-finished galv. steel: 24 gauge.
- D. Roof-Penetration Flashing: Fabricate from the following material: Stainless Steel: 24 gauge.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate, areas, and conditions, with installer present to verify that substrates are smooth and clean to extent needed for sheet metal work.
- B. Verify that expansion joints, nails, cants, and blocking to receive sheet metal are installed and free of concrete and soil.
- C. Prepare a written report, endorsed by the installer and PA, listing conditions detrimental to performance of the Work
- D. Do not start sheet metal work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General:
 - 1. Install work watertight, without waves, warps, buckles, fastening stresses or distortion, allowing for expansion and contraction.
 - 2. Install fabricated sheet metal items in accordance with SMACNA Architectural Sheet Metal Manual or NRCA standard details.
 - 3. Coat contact surfaces of dissimilar metals with asphalt coating or zinc chromate paint as recommended by SMACNA. Do not use materials incompatible with single ply membrane sheet roofing. Coat back side of uncoated aluminum and stainless-steel sheet metal flashing and trim with

bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.

4. Install cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners. Starter strips before starting installation of sheet metal.
5. Secure flashings with concealed fasteners.
6. Fit flashings tight, with square corners and surfaces true and in straight lines and planes.
7. Seam and seal joints
8. Install sealant tape where indicated.
9. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
10. Torch cutting of sheet metal flashing and trim is not permitted.
11. Do not use graphite pencils to mark metal surfaces.

B. Flashings and Counterflashing:

1. Where nailing is required, nail at 6 inches O.C.
2. Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with sealant. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.

C. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

D. Parapet Scuppers: Install scuppers where indicated through parapet. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.

E. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1 inch below scupper discharge.

F. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49.

G. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:

1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
2. Seal with sealant recommended by Manufacturer and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

H. Pipe, Conduits or Post Counterflashing: Fully solder connections and seams. Install counterflashing umbrella with close-fitting collar with top edge flared for

elastomeric sealant, extending a minimum of 4 inches over base flashing. Install stainless-steel draw band and tighten.

- I. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
- J. Soldered Joints; Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1 1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.

3.3 CLEANING

- A. Remove flux and residual acid immediately by neutralizing with baking soda and washing with clean water. Leave work clean and free of stains, scrap, and debris. Clean off excess solder.
- B. Clean off excess sealant.
- C. Remove temporary protective covering and strippable films as sheet metal flashing and trim are installed unless indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

END OF SECTION 07 62 00

SECTION 07 72 00 – ROOF ACCESSORIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Equipment supports and curbs.
- B. Related Sections include the following:
 - 1. Section 06 10 55 Roofing Carpentry: for wood cants and wood nailers.
 - 2. Section 07 52 00 Modified Bituminous Membrane Roofing.
 - 3. Section 07 62 00 Sheet Metal Flashing and Trim: for shop and field fabricated metal flashing and counterflashing, and miscellaneous sheet metal trim and accessories.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. A 123/A 123M: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 2. A 153 – Zinc Coating (Hot-Dip) Steel and Iron Hardware.
 - 3. A 653/A 653MB – Steel Sheet, Zinc Coated, (Galvanized) on Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, Structural (Physical) Quality Property.
 - 4. A 755/A 755M: Steel Sheet, Metallic Coated by the Hot-Dip process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 5. A 780-01: Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
 - 6. A 924 – Steel Sheet, Zinc Coated, (galvanized) by the Hot-Dip Process.
 - 7. C 208: Cellulosic Fiber Insulating Board.
 - 8. C 920: Elastomeric Joint Sealants.
 - 9. D 226: Asphalt-Saturated Organic Felts used in Roofing and Waterproofing.
 - 10. D 4397: Specification for Polyethylene Sheeting for Construction, Industrial and Agricultural Applications.
 - 11. D 4586: Asphalt Roof Cement, Asbestos-Free.
 - 12. D 4802: Poly (Methyl Methacrylate) Acrylic Plastic Sheet.
- B. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- C. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.

D. Underwriters' Laboratories (UL): Fire Hazard Classifications.

1.4 SYSTEM DESCRIPTION

A. Manufactured Curbs: Engineered, prefabricated structural box curb assembly designed for installation onto roof deck or structural framing, capable of supporting weight of roof-mounted equipment without deformation. Include integral base plate, treated wood nailer and insulation.

B. Manufactured roller supports for piping.

1.5 DESIGN REQUIREMENTS

A. Fabricate and install Roof Accessories to comply with NRCA recommendation that top of curb to top of roofing membrane be a minimum of 8 inches.

1.6 SUBMITTALS

A. Product List: Submit list of proposed Products and Manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.

B. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

C. Shop Drawings: Show fabrication and installation details for roof accessories. Show layouts of roof accessories including plans and elevations. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other work.

D. Manufacturer's Installation Instructions: Include installation sequence, special instructions and precautions, and Material Safety Data Sheets (MSDS).

E. Certification: Provide current letter(s) on Company's letterhead, signed by an authorized employee or corporate officer attesting to all following items:

1. Qualifications: Certify and document items in Article on Qualifications.
2. Products: Certify that selected products meet or exceed specified requirements:
 - a. Quality Assurance/Control Data: Provide Design Data, Test Reports, Certificates, Manufacturer's Installation Instructions, and Manufacturer's Field Reports.
 - b. Test Reports: Certified test reports or labeling agency file numbers indicating compliance with specified performance characteristics and physical properties.
 - c. Manufacturer's Certification: Each product meets or exceeds specified requirements.

F. Warranty: Special Warranty specified in this Section.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in installing the work of this Section with minimum three years documented experience and approved by the manufacturer.
- C. Supervisor/Foreman: Individual that is a direct employee of Installer's Company experienced in using selected Manufacturer's Products.

1.8 QUALITY ASSURANCE

- A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
- B. Perform Work in accordance with MSS SP-59.
- C. Maintain one copy of each document accessible to Site.

1.9 PRE-INSTALLATION CONFERENCE

- A. TDCJ's Project Administrator (PA) will convene a Pre-Installation Meeting prior to commencing Work of this Section.
- B. Require attendance of parties directly affecting Work of this Section.
- C. Review conditions of installation, installation procedures, and coordination with related work.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. NOT USED
- B. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.
- C. Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
 - 1. Protect from damage from sunlight, weather, excessive temperatures and construction operations.

1.11 PROJECT/SITE CONDITIONS

- A. Regulatory Requirements:
 - 1. Conform to International Building Code for fire and wind loading requirements.

2. Provide verification of inspection confirming approval of by authority having jurisdiction.
- B. Environmental Requirements:
1. Do not install roof accessories when chances for inclement weather exist, or might occur before installation can be completed and accessories made weatherproof.
 2. Maintain waterproof integrity of building during and after installation of roof accessories.
- C. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

1.12 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leak-proof, weather-tight, secure, and non-corrosive installation.
1. With TDCJ's Architect/Engineer (A/E) approval, adjust location of roof accessories that would interrupt roof drainage routes.
- B. Sequence Work to allow installation of roof accessories that are mounted directly on roof deck during installation of new roofing system. Do not cut into new roofing system to retrofit roofing accessories unless specifically permitted by A/E.
- C. Coordinate with installation of mechanical and electrical equipment, hardware, and assemblies to ensure roof accessories are properly located and in place to receive equipment installed by Others.

1.13 WARRANTY

- A. Warranty: Cover damage to roof accessories and substrates resulting from failure of roof accessories to perform as intended, including resist penetration of water. Include replacement of defective materials and labor:
1. Manufactured Curbs and Equipment Supports: Provide Warranty on curbs against structural failure.
 2. Warranty Period:
 - a. Five years from date of Beneficial Occupancy.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, Manufacturers offering Products that may be incorporated into the Work include, but are not limited to, Manufacturer's listed in other Part 2 articles.
- B. Manufacturers: Subject to compliance with requirements, provide Products by one of the Manufacturer's listed in other Part 2 articles.

2.2 METAL MATERIALS

- A. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coated.
- B. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, AZ50 coated.

2.3 MISCELLANEOUS MATERIALS

- A. Cellulosic-Fiber Board Insulation: ASTM C 208, Type II, Grade 1, 1-inch thick.
- B. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for above-ground use, complying with AWPA U1; not less than 1 ½ inches thick.
- C. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type non-corrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- D. Polyethylene Sheet: 6-mil- thick, polyethylene sheet complying with ASTM D 4397.
- E. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, non-perforated.
 - 1. Slip Sheet: Rosin-sized paper, minimum 3 lb/100 sq. ft.
- F. Fasteners: Same metal as metals being fastened, or non-magnetic stainless steel or other non-corrosive metal as recommended by roof accessory manufacturer. Match finish of exposed fasteners with finish of material being fastened. Provide non-removable fastener heads to exterior exposed fasteners.
- G. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- H. Elastomeric Sealant: ASTM C 920, polyurethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- I. Roofing Cement: ASTM D 4586, non-asbestos, fibrated asphalt cement designed for trowel application or other adhesive compatible with roofing system.

2.4 EQUIPMENT SUPPORTS

- A. Equipment Supports: Provide metal equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate with welded or sealed mechanical corner joints, with integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
 - 1. Available Manufacturers:
 - a. Custom Curb, Inc.
 - b. LM Curbs.

- c. Pate Company (The).
 - d. Thaler Metal Industries Ltd.
 - e. ThyCurb; Div. of Thybar Corp.
 - f. Or A / E approved equal.
2. Load Requirements: As required to support equipment.
 3. Material: Galvanized or aluminum-zinc alloy-coated steel sheet, 0.052-inch thick.
 4. Factory-install continuous wood nailers 3 ½ inches wide at tops of equipment supports.
 5. Metal Counterflashing: Manufacturer's standard removable counterflashing, fabricated of same metal and finish as equipment support.
 6. Fabricate units to minimum height of 12 inches, unless otherwise indicated.
 7. Sloping Roofs: Where *slope of roof deck exceeds 1:48*, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of Work.
 1. Verify that substrate is sound, dry, smooth and clean, sloped for drainage, and securely anchored and is ready to receive roof accessories.
 2. Verify dimensions of roof openings for roof accessories.
 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect adjacent surfaces, including Roofing-System from damage during installation of roofing accessories.
- B. Clean surfaces of roof to receive pipe support bases. Remove dirt, dust, oils, and other foreign materials from all roofs. Prime existing substrate or membrane with primer that is compatible with and acceptable to Roofing-System Manufacturer.

3.3 INSTALLATION

- A. General: Install roof accessories according to Manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Coordinate installation with adjacent Work such as roofing, sheet metal, and other work to ensure creation of a complete weatherproof assembly. Anchor work securely to supporting structure, but allow for differential and thermal movement.

- C. Install roof accessories to fit substrates and to result in watertight performance.
- D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 - 1. Coat concealed side of roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing exposed-to-view components of roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene underlayment.
 - 3. Bed flanges in thick coat of asphalt roofing cement where required by roof accessory manufacturers for waterproof performance.
- E. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
- F. Equipment Support Installation:
 - 1. Set equipment support so top surface of equipment support is level.
- G. Roof Mounted Pipe / Equipment Support Installation:
 - 1. Locate bases and support framing as indicated on Shop Drawings or as required for existing conditions. Completely support all piping, conduit, ducts, and equipment, whether indicated or not.
 - a. Do not use wood or wire to support items.
 - b. Maximum Deflection: 1/240th of span.
 - c. Maximum Load on Membrane: Two and one-half (2 ½) pounds per square inch.
 - 2. Set bases with adhesive in accordance with Manufacturer's installation instructions and as acceptable to Roofing-System Manufacturer. Accurately locate and align bases. Where applicable, replace gravel around bases.
 - 3. Install framing system at spacing's to support weight of piping and conduit, but in no case exceeding 10 feet on center.
 - 4. Set framing posts into bases and assemble framing structure as indicated.
 - 5. Use galvanized fasteners for galvanized framing and stainless steel fasteners for stainless steel framing.
- H. Seal joints with elastomeric sealant as required by Manufacturer of roof accessories.

3.4 FIELD QUALITY CONTROL

- A. Site inspection shall be performed under provisions of Division 1 Section 01 45 00 "Quality Control".
- B. Provide Manufacturer's field services under provisions of Division 1 Section 01 45 00 "Quality Control".

- C. Request Site attendance of Roof Accessory Manufacturer during installation of the Work if required to confirm compliance with instructions or for special or unusual conditions.

3.5 TOUCH UP

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.6 CLEANING

- A. Clean exposed surfaces according to Manufacturer's written instructions.
 - 1. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products.
 - 2. Clean metal and glazing using non-abrasive materials and methods. Remove and replace work that cannot be successfully cleaned.
 - 3. Remove adhesive from supports, pipes and bases, and leave work in clean condition.
- B. Remove all construction debris, packaging, unused fasteners, adhesives, and other installation materials from Project Site and dispose of legally.
- C. Re-clean as necessary to prevent damage. Protect completed Work from damage and deterioration and inspect immediately before Final Acceptance of Project.

3.7 PROTECTION

- A. Protect finished installation.
- B. Do not permit traffic over unprotected roof surfaces.

END OF SECTION 07 72 00

SECTION 07 92 00 – JOINT SEALANTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract.

1.2 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
 - 1. Clean and prepare joint surfaces.
 - 2. Joint sealants and backer materials for all applications, including those specified by reference to this Section.
- B. Related Sections:
 - 1. Section 07 52 00 – Modified Bituminous Membrane Roofing: for application and locations for sealants used in conjunction with roofing.
 - 2. Section 07 62 00 - Sheet Metal Flashing and Trim: for sealants used in conjunction with metal flashing for roofing.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C 920 – Elastomeric Joint Sealants.
 - 2. D 1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.

1.4 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.5 SUBMITTALS

- A. Product List: Submit list of proposed Products and Manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: Provide data for each selected product indicating sealant chemical characteristics, performance criteria, preparation, limitations, colors available, and Material Safety Data Sheets (MSDS).
- C. Samples for Initial Selection: Manufacturer's color charges consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Manufacturer's Installation Instructions: Include substrate preparation requirements, special precautions and installation temperature range.
- E. Warranties: Special Warranties specified in this Section.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- B. Pre-Installation Conference: Contractors shall Conduct Conference at the Project Site.

1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. When contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.8 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within Specified Warranty period.
 - 1. Warranty Period: Two years (2) from date of Beneficial Occupancy.
- B. Special Warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding Design Specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 – PRODUCTS

2.1 MATERIALS – GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by TDCJ Design Professional (DP) from manufacturer's full range.

2.2 URETHANE JOINT SEALANTS

- A. Single-Component, Non-sag, Urethane Joint Sealant – ES-1: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.
- B. Single-Component, Pourable, Traffic-Grade, Urethane Joint Sealant – ES-2: ASTM C 920, Type S, Grade P, Class 25, for Use T.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.
- C. Multi-component, Non-sag, Urethane Joint Sealant – ES-3: ASTM C 920, Type M, Grade NS, Class 25, for Use NT.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.

2.3 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of materials and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant Manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or

other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
- B. Joint Priming: Prime joint substrates, where recommended by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by Sealant Manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint configuration per Figure 8A in ASTM C 1193, unless otherwise indicated.
 - 4. Provide flush joint configuration where indicated per Figure 8B in ASTM C 1193.

3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by Manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Beneficial Occupancy. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application JS-1: Joints in flashing and sheet metal components.
 - 1. Joint Sealant: Single-component non-sag urethane sealant ES-1.
 - 2. Joint-Sealant Color: As selected by A/E from Manufacturer's full range to match sheet metal color.

- B. Joint-Sealant Application JS-2: Pitch Plan Filler.
 - 1. Joint Sealant: Single-component non-sag urethane sealant ES-2.
 - 2. Joint-Sealant Color: Black

- C. Joint-Sealant Application JS-3: Exterior joints in vertical surfaces.
 - 1. Joint Locations:
 - a. Existing joints in walls between lower and upper roof levels scheduled for roof replacement.
 - b. Other joints as indicated.
 - 2. Urethane Joint Sealant: Multi-component, non-sag, Class 25.

END OF SECTION 07 92 00

SECTION 22 05 00 COMMON WORK RESULTS FOR PLUMBING

PART 1 – GENERAL

1.1 SUMMARY

- A. **Section is provided as reference and guidance for Common Work Results for Plumbing that may be encountered in roofing projects. The Clemens Unit Admin. Bldg. Reroofing Project will involve minimal Plumbing work other than existing soil/exhaust vents. Verification of all work to be done is the responsibility of the contractor.**
- B. Section includes:
 - 1. Common Work Results for Plumbing specifically applicable to Division 22 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing plumbing and piping for roof drains, soil pipes, and vents; and equipment piping, drain lines, service lines, and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
- D. Provide layout of affected piping, including:

1. Riser diagrams.
2. Hanger diagrams indicating proposed attachment and locations.
3. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1.5 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.6 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals

1.7 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Plumbing: Conform to applicable Plumbing and Mechanical Codes.
- D. Obtain permits, and request inspections from authority having jurisdiction.

1.8 FIELD CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before processing.
- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.

- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.10 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced plumbing, piping, connections, and equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Plumbing and piping shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Piping Materials
 1. Cast-Iron Soil Pipe and Fittings: ASTM A 74, Class SV.
 2. Push-on Gaskets for Cast iron Soil Pig: ASTM C 564.
 3. Caulked Joints for CI Soil Pipe: FS HH- P-117, Type II.
 4. No Hub Joints: ASTM D 3183.
 5. Copper Tubing: ASTM B 75.
 6. Wrought Copper Solder Fittings: ANSI B 16.22.
 7. Steel Pipe: ASTM A 53B.
 8. Malleable Iron Threaded Fittings: ANSI B 16.3.
 9. Cast-Iron Threaded Fittings: FS WW-P-501 E.
 10. Flange Bolt Sets: ASME Pressure Piping.
 11. PVC Piping and Fittings: Schedule 40.
 12. Unions in Copper or Brass Lines: 125 pound all brass, screwed pattern, ground joint, equal to Chase, Crane or Mueller.
 13. Mechanical Couplings: Victaulic Style 77 or Architect/Engineer approved equal.

14. Piping Insulation and Cover: Closed cell insulation, minimum 2-inches thick.
 - a. Exterior Exposure: Minimum 26 gage aluminum jacket protective cover, with lock bands.
 - b. Interior: Match existing.
- C. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of "General and Special Conditions of the Contract."

2.3 TESTS

- A. Provide testing of all relocated or modified systems and equipment.
- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify PA 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to PA with Project Record Documents.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.5 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements"
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 22 05 00

SECTION 23 05 00 COMMON WORK RESULTS FOR HVAC

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section is provided as reference and guidance for Common Work Results for HVAC that may be encountered in roofing projects. The Clemens Unit Admin. Bldg. Reroofing Project will involve minimal HVAC work other than exhaust vents, roof mounted exhaust fans and removal of abandoned equipment curbs. Verification of all work to be done is the responsibility of the contractor.
- B. Section includes:
 - 1. Common Work Results for HVAC specifically applicable to Division 23 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing equipment, curbs, and service lines and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Provide layout of affected ductwork and piping, including:
 - a. Riser diagrams.
 - b. Hanger diagrams indicating proposed attachment and locations

- c. Ductwork jointing and all special sheetmetal and insulating conditions.
- 2. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
- 3. Wiring Diagrams: For power, signal, and control wiring.

1.5 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.6 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals

1.7 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to applicable Mechanical Code and other applicable regulations for all work performed under this Division.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application

1.8 FIELD CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before processing.

- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.10 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced HVAC equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Ductwork shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Ductwork Materials
 1. Metallic-Coated Steel: ASTM A 446, Grade A, G90, 24-gage minimum core steel, or as required for conditions.
 2. Duct Lining: Mat faced duct liner; neoprene coated one side; minimum 1-inch thick; Linacoustic manufacturer by Manville or Architect/Engineer approved equal.
 - a. Average Thermal Conductivity: Maximum 0.26 BTU in/sq.ft/degree F at mean temperature of 75 F.
 3. Interior and Exterior Duct Joints Sealer: Kingco Seal-Rite 18-120, Blue Glue, and Hardcast or Architect/Engineer approved equal.
- C. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of "General and Special Conditions of the Contract."

2.3 FABRICATION

- A. Provide ductwork extensions or modifications where required due to movement or raising of mechanical equipment, in accordance with recognized industry standards and the following:
 - 1. Low Pressure Ducts: SMACNA HVAC Duct Construction Standards, Latest Edition.
 - 2. Pressure Class: 1-inch w.g., unless otherwise indicated.
 - 3. Elbows: Match existing or square, with factory-fabricated turning vanes.
 - 4. Changes in Direction: Rounded elbows with centerline radius equal to 1-1/2 times duct width, in plane of bend.
 - 5. Transitions in Size or Shape: Gradual slopes on all sides.
 - a. Increases in Dimensions in the Direction of Air Flow: Maximum slope of 1:7 on any side.
 - b. Decreases in Dimensions in the Direction of Air Flow: Maximum slope of 1:4.
 - 6. Ducts in Excess of 36-inches: Use SMACNA "J" and "F" connections.
- B. Install duct liner in accordance with manufacturer's instructions using weld pins or Tuffbond adhesive and adhesive type metal clips.
 - 1. Do not reduce airflow area of existing ductwork.
- C. Seal all joints water and air tight.

2.4 TESTS

- A. Provide testing of all relocated or modified systems and equipment.
- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify PA 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to PA with Project Record Documents.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.5 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements.
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 23 05 00

SECTION 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section is provided as reference and guidance for Common Work Results for Electrical that may be encountered in roofing projects. The Clemens Unit Admin Bldg. Reroofing Project may involve minimal, if any, electrical work encountered other than power to a roof mounted exhaust fan and demolition of abandoned electrical circuits; the dormitory has no lightning protection system to be restored. Verification of all work to be done is the responsibility of the contractor.
- B. Section includes:
 - 1. Common Work Results for Electrical specifically applicable to Division 23 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing equipment, and service lines and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code..

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.

- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Wiring Diagrams: For power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- B. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals.
- C. Project Record Documents: Accurately record exact location of roof penetrations and any items installed but not visible after installation of roofing system or other Products.
 - 1. Submit copies of as-built shop drawings with LPI Form LPI-1-R91 to finalize LPI Certified System Application.

1.8 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to NFPA 70 and applicable Building Code for all electrical work.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application

1.9 FIELD CONDITIONS

- A. Repair electrical conduit and devices as required by roofing replacement Work in existing locations and as directed or as required unless prevented by Project conditions.
- B. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- C. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding.
- D. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- E. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- F. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.10 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Coordinate with other Trades and PA to ensure electrical installation does not inhibit other Work.
- C. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.11 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced electrical equipment and appliances shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Electrical components shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 ELECTRICAL WIRING AND SYSTEMS REPAIR

- A. Verify need and extent of all repairs with PA. Coordinate shut down and start-up requirements for each systems and each occurrence.

- B. Replace all existing electrical conduit on all parapet walls and where indicated, including flexible connections to light fixtures and appurtenances to which conduit is connected.
- C. Remove conduit and associated materials from damaged point to nearest pull box or other connection point in both directions, unless instructed otherwise by PA.
- D. Replace with new conduit and wiring of same diameter and gage as original.
- E. Use screwed or welded connections to match existing conditions.
- F. After repairs are completed, but prior to covering or concealing repaired elements, test repairs at full load or power, under observation by PA.
- G. Seal all connections watertight, including those between new and existing materials

3.5 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.6 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements.
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 26 05 00

NOTICE TO BIDDERS

The Texas Department of Criminal Justice (TDCJ) is inviting bids to Replace Roof-Administration Building at the Clemens Unit in Brazoria, Texas.

This project consists of replacement of the roof on the Administration Building, approximately 10,600 sq. ft. The work includes removal of the existing built up roofing system down to the concrete deck, removal of abandoned roof curbs, equipment supports, electrical and venting penetrations. Installation of the new roof shall include an insulation system. All work shall be performed as shown in the construction plans prepared by TDCJ Facilities Engineering.

Contractor must provide evidence that demonstrates the contractor is qualified to satisfactorily perform the specified work and must have worked in this trade for at least five (5) years. The contractor 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 owner's name, telephone number, location, type of facility, construction cost and the date of completion with all bid proposals.

Contractor must be bondable and insurable at the levels required. All bid proposals must be accompanied by a Bid Deposit in the amount of 5% of greatest amount bid. Performance and Payment Bonds in the amount of 100% of the contract amount will be required upon award of a contract.

The Owner reserves the right to reject any or all bids, and to waive any informality or irregularity.

It is the Owner's intent to issue the Notice to Proceed at the Pre-Construction Meeting with the performance period to begin on the following day.

Bid Documents can be purchased from the Contract Administrator at a cost of \$60.00 (Sixty Dollars), non-refundable per set, inclusive of mailing/delivery costs, or they may be viewed at various plan rooms. Payment checks for documents should be made payable to TDCJ and sent to:

**Texas Department of Criminal Justice
Attn: Lynne Piippo, CTPM, CTCM
Contracts and Procurement Department
Two Financial Plaza, Suite 525
Huntsville, TX 77340
Phone: (936) 437-7114
Email: lynne.piippo@tdcj.texas.gov**

A Pre-Bid Conference will be held at 10:00 a.m. on **Thursday, September 3, 2015** at the Clemens Unit, 11034 Hwy. 36, Brazoria, Texas, followed by a site-visit. **ONLY ONE SCHEDULED SITE VISIT WILL BE HELD FOR REASONS OF SECURITY AND PUBLIC SAFETY; THEREFORE, BIDDERS SHOULD ATTEND.**

Due to strict security please be aware that entrance to the unit will be denied to anyone in possession of any items to include, but not limited to, any of the following: weapons (including pocket knives), tobacco products, alcohol, cell phones, pagers and more than \$25.00. Visitors are subjected to searches as they enter the facility and may be required to walk through electronic scanning equipment such as metal detectors. Access to the facility will be denied to anyone not willing to be searched. Appropriate attire required.

Bids will be publicly opened and read at **2:00 p.m. on September 29, 2015**, in the Contracts and Procurement Conference Room located at Two Financial Plaza, Suite 525, Huntsville, Texas. Attention is called to the fact that not less than the minimum wage rates prescribed in the Special Conditions must be paid on these projects.

SOLICITATION, OFFER AND AWARD (Construction, Alteration, or Repair)	Page 1 of 90 Pages
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IMPORTANT – The “offer” section on Page 2 must be fully completed by offeror.

1. CONTRACT NO.	2. SOLICITATION NO. 696-FD-15-B032	3. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	4. DATE ISSUED 08/14/2015	5. PROJECT NUMBER 005384	6. TRACKING NO. 00513004
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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)
--	--

9. FOR INFORMATION CALL: →	A. NAME LYNNE PIIPPO, CTPM, CTCM	B. TELEPHONE NO. (NO COLLECT CALLS) PHONE NO.: (936) 437-7114 FAX NO. (325) 223-0310
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Document Type: 9 Statutory Cite: 2166.003 (b)	ESTIMATED BUDGET: \$322,900.00
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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 Roof-Administration Building – Clemens Unit
11034 Hwy. 36
Brazoria, Texas 77422

As designed by:
TDCJ Facilities Engineering
Thomas Stafford, P.E.

Please provide the following information:

DUNS # _____ TAX ID # _____ CHARTER # _____

11. The Contractor shall begin performance within 10 calendar days and complete it within 210 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 2:00 p.m. local time September 29, 2015. 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)	15A. Telephone No. (Include Area Code) () 15B. Fax No.: ()	16. EMAIL ADDRESS

AMOUNTS →	SEE BID SCHEDULE
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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.																				
DATE																				

19A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	19B. SIGNATURE	19C. OFFER DATE
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AWARD (To be completed by State)

20. ITEMS ACCEPTED:

21. AMOUNT	22. AMOUNT IN WRITING
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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 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 696-FD-15-B032 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
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SECTION B

**THE SCHEDULE
 BID SCHEDULE**

ITEM NO.	DESCRIPTION	QUANTITY	PRICE
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01 Base Bid

Replace Roof-Administration Building at the Clemens Unit, located at 11034 Hwy. 36, Brazoria, Texas as shown by the construction plans as prepared by TDCJ Facilities Engineering.

Lump Sum \$ _____

The Base Bid is separated as follows:

(1) Materials incorporated into the realty (Cannot be less than the price Contractor paid for materials) \$ _____

(2) Labor \$ _____

(3) Overhead and Profit (includes the cost of the Payment and Performance Bonds) \$ _____

TOTAL \$ _____

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.
3. RESERVED

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 **two hundred ten (210)** 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 Ninety Dollars (\$390.00)** 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 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**

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 Department makes no commitment as to the length of time to complete a background check.

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 they have been assigned to as a former TDCJ offender.
5. The Warden may not allow a Contract Construction Worker on 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, 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 with an effective start date on the following Monday.

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 workdays lost monthly due to Anticipated Adverse Weather Days:

Jan	Feb	Mar	April	May	Jun	July	Aug	Sept	Oct	Nov	Dec
6	6	5	5	6	5	4	4	6	5	4	5

SECTION I

GENERAL CONDITIONS

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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.

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 RESERVED

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.

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 all available surveys describing the physical characteristics, legal description and limitations, known site utility locations and other information necessary to the Contractor which is under the Owner's control. Communication with the Contractor shall be in accordance with paragraph 4.1.2. Necessary actions of the Owner, including processing of payments to the Contractor, shall be accomplished with reasonable promptness and subject to Government Code, Title 10, Chapter 2251.

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. Upon such notice, or upon his/her own observation of such conditions, the A/E, with the approval of the Owner, will promptly make such changes in the Drawings and Specifications as deemed necessary to conform to the different conditions, and any increase or decrease in the cost of the Work, or in the time within which the Work is to be completed, resulting from such changes will be adjusted by Change Order, subject to the prior approval of the Owner.

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 MINIMUM INSURANCE COVERAGES

<u>Type of Coverage</u>	<u>Minimum Limits of Liability</u>
1. Workers' Compensation	Statutory
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 sepia may 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 such changes cause an increase or decrease in the Contractor's costs of, or time required for, performance of the Contract, an equitable adjustment shall be made and confirmed in writing in a Change Order.

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 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.

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.

8.3.2 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.

8.3.3 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:

8.3.3.1 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.

8.3.3.2 Proposed Commissioning / Inspection Activities

8.3.3.3 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.

8.3.3.4 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.

8.3.3.4.1 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.

- (1) Activity identity number utilizing a numeric designation concept.

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

(3) 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.

8.3.4 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.

8.3.5 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.

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.

8.3.5.1 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.

8.3.6 RECOVERY SCHEDULE:

8.3.6.1 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.

8.3.6.2 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.

8.3.6.2.1 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.

8.3.6.2.2 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.

8.3.6.2.3 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.

8.3.7 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.

8.3.8 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.

8.3.9 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.

8.3.10 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 a 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.

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 Contractor, or to provide information timely
- (5) Delays in transportation or unavailability of material, equipment or supply
- (6) Strikes and Lockouts
- (7) Design defects in accordance with paragraph 6.1.3
- (8) Late delivery of OFCI items
- (9) Any other unforeseeable causes which in the sole discretion of the Owner is 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.

8.4.4.5 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.

13.3 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: Lynne Piippo, CTPM, Contract Administrator and to Contractor at:

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 (Heavy and Highway Construction)	4
5	Prevailing Wage Schedule (Building Construction)	6
6	Substitution Request (Bidding Phase)	2
7	Substitution Request (After execution of Contract)*	1
8	Contractor Qualifications	7
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*	1
14	Release of Claims*	1
*	To be provided at time of award	

EXHIBITS:

1	HUB Subcontracting Plan (HSP)	53
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SECTION K

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF BIDDERS

1. RESERVED

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 _____ (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. 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.

12. 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.

13. 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: _____

14. 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.

15. 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>.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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 _____
By _____
Signature _____
Title _____
Date _____

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, ten (10) 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 Architect/Engineer 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 Roof-Administration Building Clemens Unit. Do Not Open Until 2:00 p.m., September 29, 2015**".
- 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: Lynne Piippo, CTPM - Contract Administrator

(BIDS MUST BE RECEIVED BY 2:00 P.M. ON SEPTEMBER 29, 2015 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. Read and completed the blanks and signature block in Section K.
- D. Completed the blanks in paragraph 14.8 of Section I.
- E. Completed all required Attachments, including "Contractor's Qualification Form" (use Attachment 8 furnished in documents).
- F. 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.***
- G. Have provided the required 5% bid deposit.
- H. 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.
- I. 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

ATTACHMENT NO. 2

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 _____, 20____, 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:

ATTACHMENT NO. 3

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 _____, 20____.

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)

ATTACHMENT NO. 4

**PREVAILING WAGE SCHEDULE
(Heavy and Highway Construction)**

General Decision Number: TX150044 01/02/2015 TX44

Superseded General Decision Number: TX20140044

State: Texas

Construction Type: Heavy

County: Brazoria County in Texas.

HEAVY CONSTRUCTION PROJECTS (Including Water and Sewer Lines (Does Not Include Flood Control))

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. 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	01/02/2015

* SFTX0669-001 07/01/2013

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 26.36	16.62

SUTX2005-018 05/18/2005

	Rates	Fringes
Carpenter.....	\$ 14.38	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 11.37	1.13
ELECTRICIAN.....	\$ 18.40	1.34
Formbuilder/Formsetter.....	\$ 9.83	1.69
IRONWORKER, REINFORCING.....	\$ 11.29	0.00
Laborers:		
Common.....	\$ 8.99	1.25

Landscape.....	\$ 7.35	0.00
Mason Tender Cement.....	\$ 9.96	0.00
Pipelayer.....	\$ 9.63	1.50
PIPEFITTER.....	\$ 17.00	0.04
POWER EQUIPMENT OPERATOR:		
Backhoe.....	\$ 12.74	0.00
Bulldozer.....	\$ 12.46	0.00
Crane.....	\$ 11.00	0.74
Excavator.....	\$ 16.74	0.00
Front End Loader.....	\$ 10.47	1.28
Grader.....	\$ 12.20	1.48
Tractor.....	\$ 11.29	1.45
TRUCK DRIVER.....	\$ 14.42	1.00

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
(Building Construction)**

General Decision Number: TX150282 07/31/2015 TX282

Superseded General Decision Number: TX20140282

State: Texas

Construction Type: Building

County: Brazoria County in Texas.

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

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. 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	01/02/2015
1	01/30/2015
2	03/06/2015
3	05/15/2015
4	07/31/2015

* ASBE0022-009 06/01/2015

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 22.63	11.90

BOIL0074-003 01/01/2014

	Rates	Fringes
BOILERMAKER.....	\$ 23.14	21.55

CARP0551-009 04/01/2015

	Rates	Fringes
CARPENTER (Excludes Drywall Hanging, Form Work, and Metal Stud Installation).....	\$ 22.50	8.33

ELEC0716-005 08/29/2011

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring and Installation of Alarms).....	\$ 27.65	7.70

ELEV0031-003 01/01/2015

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 38.52	28.385

FOOTNOTES: A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR Cranes.....	\$ 34.85	9.85

IRON0084-011 06/15/2014

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 22.02	6.35

IRON0135-002 12/01/2013

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 27.30	8.55

PLAS0079-004 01/01/2010

	Rates	Fringes
PLASTERER.....	\$ 19.42	1.00

PLUM0068-012 10/01/2013

	Rates	Fringes
PLUMBER (Excludes HVAC Pipe Installation).....	\$ 31.30	9.49

PLUM0211-010 10/01/2013

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 29.39	10.31
<hr/>		
SHEE0054-003 07/01/2014		
	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct and Unit Installation).....	\$ 25.67	12.39
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SUTX2014-008 07/21/2014		
	Rates	Fringes
ACOUSTICAL CEILING MECHANIC.....	\$ 16.41	3.98
BRICKLAYER.....	\$ 19.86	0.00
CAULKER.....	\$ 15.36	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.33	0.00
DRYWALL FINISHER/TAPER.....	\$ 16.30	3.71
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 17.45	3.96
ELECTRICIAN (Alarm Installation Only).....	\$ 17.97	3.37
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 18.00	1.68
FLOOR LAYER: Carpet.....	\$ 20.00	0.00
FORM WORKER.....	\$ 12.57	0.00
GLAZIER.....	\$ 19.12	4.41
INSULATOR - BATT.....	\$ 14.87	0.73
IRONWORKER, REINFORCING.....	\$ 12.10	0.00
LABORER: Common or General.....	\$ 10.55	0.00
LABORER: Mason Tender - Brick...	\$ 13.37	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.86	0.00
LABORER: Pipelayer.....	\$ 12.94	0.00
LABORER: Roof Tearoff.....	\$ 11.28	0.00
LABORER: Landscape and Irrigation.....	\$ 9.49	0.00
LATHER.....	\$ 19.73	0.00

OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 15.56	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93	0.00
OPERATOR: Bulldozer.....	\$ 20.77	0.00
OPERATOR: Drill.....	\$ 16.22	0.34
OPERATOR: Forklift.....	\$ 15.64	0.00
OPERATOR: Grader/Blade.....	\$ 13.37	0.00
OPERATOR: Loader.....	\$ 13.55	0.94
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 16.00	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 16.77	4.51
ROOFER.....	\$ 15.40	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 20.05	4.19
SHEET METAL WORKER (HVAC Unit Installation Only).....	\$ 19.67	2.24
SPRINKLER FITTER (Fire Sprinklers).....	\$ 22.17	9.70
TILE FINISHER.....	\$ 12.00	0.00
TILE SETTER.....	\$ 16.17	0.00
TRUCK DRIVER: 1/Single Axle Truck.....	\$ 14.95	5.23
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11
WATERPROOFER.....	\$ 14.39	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).

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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

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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.

=====

END OF GENERAL DECISION

SUBSTITUTION REQUEST - BIDDING PHASE

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

PROJECT: _____ PROJECT NO.: _____

TO: (ARCHITECT) FROM: (BIDDER)

HEREBY REQUESTS ACCEPTANCE OF THE FOLLOWING PRODUCT OR SYSTEMS AS A SUBSTITUTION IN ACCORD WITH PROVISIONS OF THE BIDDING DOCUMENTS:

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

Spare Parts Source: _____

4. PREVIOUS INSTALLATIONS:
Identification of similar projects on which proposed substitution was used: (Attach list)
Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

5. REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEMS:

6. EFFECT OF SUBSTITUTION:
Proposed substitution affects other parts of Work: No Yes (If yes, explain)

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

No Yes (If yes, attach complete data.)

7. BIDDER'S/SUPPLIER'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:

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

- believe that it is equal or superior in all respects to specified product, except as stated above; and
- will provide the same warranty as specified for specified product; and
- have included complete implications of the substitution; and
- will pay redesign and other costs caused by the substitution which subsequently become apparent; and
- will pay costs to modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning resulting from the substitution.
- warrant and represent to the Owner and the Architect 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 Architect nor the Owner makes any warranty or representation to the Contractor or any Subcontractor regarding the existence or potential for such infringement.

Bidder/Supplier: _____ Date: _____
By: _____

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

REVIEW AND ACTION:

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

- Sign Bidder's/Supplier's Statement of Conformance.
- Substitution is accepted.
- Substitution is accepted, with the following comments: _____

- Substitution not accepted.
- No action taken. Substitution Request received less than time set forth in Section L.7.

Architect's Signature

Date

ATTACHMENT NO. 7

SUBSTITUTION REQUEST - AFTER EXECUTION OF CONTRACT

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

Copies will be provided to the successful bidder after the bid opening or after award as applicable and will be made available upon request.

ATTACHMENT NO. 8

TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

CONTRACTOR'S QUALIFICATIONS

Name of Firm

() Corporation

() Partnership

() Proprietorship

Address _____

City State Zip Code

Telephone Nos. _____ FAX No. _____

How long has company worked in this trade? ____ year(s).

Parent Company

Owners and/or Partners

<u>Name</u>	<u>Percentage of Ownership</u>
_____	_____ %
_____	_____ %
_____	_____ %

Affiliates, Divisions & Subsidiaries (add sheets as required)

Name _____

Address _____

Telephone _____ FAX No. _____

Name _____

Address _____

Telephone _____ FAX No. _____

Name _____

Address _____

Telephone _____ FAX No. _____

FOR CORPORATION ONLY

Date of Incorporation

Name of State(s) in which incorporated

If not incorporated in Texas: Give Certificate
of Authority to do business in Texas

Certificate # & Date

President's Name

Vice President's Name

Secretary's Name

Treasurer's Name

FOR PARTNERSHIP ONLY

Date of Organization

Is the Partnership :
General Limited Association

Names and addresses of all partners (include zip codes). Use additional sheet if necessary.

- 1. _____
- 2. _____
- 3. _____

FINANCIAL CONDITION

Dun & Bradstreet Rating and I.D. code _____

MAXIMUM BONDING CAPACITY:

Individual Project Bonding Company with mailing address, zip code and telephone number

Aggregate Bonding Company with mailing address, zip code and telephone number

Attach statement of Financial Condition, including Contractor's latest regular dated financial statement or balance sheet which must contain the following items:

CURRENT ASSETS: (Cash, joint venture accounts, accounts receivable, accrued interest on notes, deposits and materials and prepaid expenses), net fixed assets and other assets.

CURRENT LIABILITIES: (Accounts payable, notes payable, accrued interest on notes, provision for income taxes, advances received from owners, accrued salaries, accrued payroll taxes), other liabilities and capital, (capital stock, authorized and outstanding shares par values, earned surplus).

Date of Statement or Balance Sheet

Name & address with zip code

Bank Reference: _____

Finance/Credit Reference _____

Institution Name _____

Address _____

Officer's Names/Titles _____

Name, Telephone Number/FAX Number Of Contact _____

Institution Name _____

Address _____

Officer's Names/Titles _____

Name, Telephone Number/FAX Number Of Contact _____

Institution Name _____

Address _____

Officer's Names/Titles _____

Name, Telephone Number/FAX Number Of Contact _____

What is largest contract you have financed (if applicable) U.S. \$ _____

What is largest contract you have arranged financing for (if applicable) U.S. \$ _____

Business Volume

Average annual billable volume during the past five years U.S. \$ _____

Estimated billable volume this year: U.S. \$ _____

Estimated volume carryover next year: U.S. \$ _____

Contract Values

Preferred Contract Value:	_____	50,000.00 (and under)	
(in U.S. Dollars)	_____	50,000.00	- 100,000.00
	_____	100,000.00	- 300,000.00
	_____	300,000.00	- 500,000.00
	_____	500,000.00	- 1,000,000.00
	_____	1,000,000.00	- 5,000,000.00
	_____	5,000,000.00	- 10,000,000.00
	_____	10,000,000.00	- 50,000,000.00
	_____	50,000,000.00	- 100,000,000.00
	_____	100,000,000.00	(and over)

Maximum contract value that can be handled effectively:

U. S. \$ _____ over _____ months.

GENERAL INFORMATION

Percent (%) of work done by own staff _____

No. years in business _____

If you have done business under different name, please give name and address. _____

Has firm ever failed to complete project or defaulted on a contract? If so, state where and why. _____

Has firm ever been engaged in litigation over any contract? If so, explain. _____

PERSONNEL

Total permanent employees:

Construction _____

Administration _____

Engineering _____

Type of engineering performed: _____

Highest manpower level in past three years: _____

Lowest manpower level in past three years: _____

Proposed organization for the execution of the work; listing all personnel committed to participate in the execution of the work, including their previous experience and positions held in previous jobs as well as in bidder's organization. **(List on separate sheet using the following format)**

Name	Present Position or Office	Years of Experience	Typical Amount	Type of Work Responsible for
------	----------------------------	---------------------	----------------	------------------------------

EQUIPMENT

List the major equipment, type and quantity proposed for the execution of the work.

Name of Firm (Contractor) _____

Signature of Owner or Officer _____

Title of Person Signing _____

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. (As it appears on your Social Security Card)

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 If yes, give unit(s)/department(s), position(s) held, and dates:

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 If yes, list name, relationship, and unit/department of assignment:

14a. Are you or any immediate member of your family (to include, but not limited to parent, brother, sister, spouse, or child) related to any TDCJ offender (incarcerated or on parole)? Yes No Unknown If yes, provide the name of the offender(s):

14b. Are you now or have you ever been involved in a spousal relationship with a TDCJ offender (incarcerated or on parole)? This includes marriage, common-law marriage, lived together, or had a child together. Yes No If yes, provide the name of the offender(s):

14c. Do you have a current business partnership or gang association with a current TDCJ offender (incarcerated or on parole)? Yes No If yes, provide the name of the offender(s):

14d. Are you on a current TDCJ offender's visitation list? Yes No If yes, provide the name of the offender(s):

14e. Have you corresponded in the last year with a current TDCJ offender? Yes No If yes, provide the name of the offender(s):

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

Copies will be provided to the successful bidder after the bid opening or after award as applicable and will be made available upon request.

ATTACHMENT NO. 11

Specifications are located in Part 2

ATTACHMENT NO. 12

Drawings

Deleted

ATTACHMENT NO. 13

Contractor Direct Deposit Authorization Package

Copies will be provided to the successful bidder after the bid opening or after award as applicable and will be made available upon request.

ATTACHMENT NO. 14

Release of Claims

Copies will be provided to the successful bidder after the bid opening or after award as applicable and will be made available upon request.

APPENDIX

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EXHIBIT

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 contracts that have been in place for five years or less 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 INFORM

- a. Respondent (Company) Name: _____ State of Texas VID #: _____
 Point of Contact: _____ Phone #: _____
 E-mail Address: _____ Fax #: _____
- b. Is your company a State of Texas certified HUB? - Yes - No
- c. Requisition #: _____ Bid Open Date: _____
(mm/dd/yyyy)

Enter your company's name here: _____ Requisition #: _____

SECTION 2: SUBCONTRACTING INTENTIONS RESPONDENT

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 goods and services, will be subcontracted. Note: In accordance with 34 TAC §20.11., an "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. (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 have a <u>continuous contract*</u> in place for five (5) years or less.	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		%	%	%
2		%	%	%
3		%	%	%
4		%	%	%
5		%	%	%
6		%	%	%
7		%	%	%
8		%	%	%
9		%	%	%
10		%	%	%
11		%	%	%
12		%	%	%
13		%	%	%
14		%	%	%
15		%	%	%
Aggregate percentages of the contract expected to be subcontracted:		%	%	%

(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 have a continuous contract* in place with for five (5) years or less 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 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: _____ Requisition #: _____

SECTION-3: SELF PERFORMING JUSTIFICATION (If you responded "No" to SECTION 2, Item a, you must complete this SECTION and continue to SECTION 4)

Check the appropriate box (Yes or No) that indicates whether your response/proposal contains an explanation demonstrating how your company will fulfill the entire contract with its own resources.

- Yes** (If **Yes**, in the space provided below **list the specific page(s)/section(s)** of your proposal which explains how your company will perform the entire contract with its own equipment, supplies, materials and/or employees.)
- No** (If **No**, in the space provided below **explain how** your company will perform the entire contract with its own equipment, supplies, materials and/or employees.)

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 Printed Name Title 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)

Enter your company's name here: _____	Requisition #: _____
---------------------------------------	----------------------

IMPORTANT: If you responded "Yes" to SECTION 2, Items c or 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 #: _____ Description: _____

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, to 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 your 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.state.tx.us/tpasscmbsearch/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	VID Number	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
			<input type="checkbox"/> - Yes <input type="checkbox"/> - No
			<input type="checkbox"/> - Yes <input type="checkbox"/> - No
			<input type="checkbox"/> - Yes <input type="checkbox"/> - 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 (mm/dd/yyyy)	Was the Notice Accepted?
		<input type="checkbox"/> - Yes <input type="checkbox"/> - No
		<input type="checkbox"/> - Yes <input type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B) Cont.

Enter your company's name here: _____ Requisition #: _____

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 #: _____ Description: _____

b. List the subcontractor(s) you selected to perform the subcontracting opportunity you listed in SECTION B-1. Also identify whether they are a Texas certified HUB and their VID number, the approximate dollar value of the work to be subcontracted, the expected percentage of work to be subcontracted, and indicate whether the company is a Texas certified HUB.

Company Name	Texas certified HUB	VID # (Required if Texas certified HUB)	Approximate Dollar Amount	Expected Percentage of Contract
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - No		\$	%
	<input type="checkbox"/> - Yes <input type="checkbox"/> - 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):

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 Opportunity Notification Form

In accordance with Texas Gov't Code, Chapter 2161, each state agency that considers entering into a contract with an expected value of \$100,000 or more shall, before the agency solicits bids, proposals, offers, or other applicable expressions of interest, determine whether subcontracting opportunities are probable under the contract. The state agency I have identified below in **Section B** has determined that subcontracting opportunities are probable under the requisition to which my company will be responding.

34 Texas Administrative Code, §20.14 requires all respondents (prime contractors) bidding on the contract to provide notice of each of their subcontracting opportunities to at least three (3) Texas certified HUBs (who work within the respective industry applicable to the subcontracting opportunity), and allow the HUBs at least seven (7) working days to respond to the notice prior to the respondent submitting its bid response to the contracting agency. In addition, at least seven (7) working days prior to submitting its bid response to the contracting agency, the respondent must provide notice of each of its subcontracting opportunities to two (2) or more trade organizations or development centers (in Texas) that serves members of groups (i.e., Asian Pacific American, Black American, Hispanic American, Native American, Woman, Service Disabled Veteran) identified in Texas Administrative Code, §20.11(19)(C).

We respectfully request that vendors interested in bidding on the subcontracting opportunity scope of work identified in **Section C, Item 2**, reply no later than the date and time identified in **Section C, Item 1**. Submit your response to the point-of-contact referenced in **Section A**.

SECTION A PRIME CONTRACTOR'S INFORMATION

Company Name: _____ State of Texas VID #: _____
 Point-of-Contact: _____ Phone #: _____
 E-mail Address: _____ Fax #: _____

SECTION B CONTRACTING STATE AGENCY AND REQUISITION INFORMATION

Company Name: _____
 Point-of-Contact: _____ Phone #: _____
 Requisition #: _____ Bid Open Date#: _____
(mm/dd/yyyy)

SECTION C SUBCONTRACTING OPPORTUNITY RESPONSE DUE DATE, DESCRIPTION, REQUIREMENTS AND RELATED INFORMATION

1. Potential Subcontractor's Bid Response Due Date:

If you would like for our company to consider your company's bid for the subcontracting opportunity identified below in Item 2, we must receive your bid response no later than _____ on _____
(Central Time) Date (mm/dd/yyyy)

In accordance with 34 TAC §20.14, each notice of subcontracting opportunity shall be provided to at least three (3) Texas certified HUBs, and allow the HUBs at least seven (7) working days to respond to the notice prior to submitting our bid response to the contracting agency. In addition, at least seven (7) working days prior to us submitting our bid response to the contracting agency, we must provide notice of each of our subcontracting opportunities to two (2) or more trade organizations or development centers (in Texas) that serves members of groups (i.e., Asian Pacific American, Black American, Hispanic American, Native American, Woman, Service Disabled Veteran) identified in Texas Administrative Code, §20.11(19)(C). (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.)

2. Subcontracting Opportunity Scope of Work:

3. Required Qualifications: - Not Applicable

4. Bonding/Insurance Requirements: - Not Applicable

5. Location to review plans/specifications: - Not Applicable



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: _____ Date of Award: _____ Object Code: _____
(mm/dd/yyyy) (Agency Use Only)

Contracting Agency/University Name: **Texas Department of Criminal Justice**

Contractor (Company) Name: _____

Contractor (Company) Name: _____ State of Texas VID #: _____

Point of Contact: _____ Phone #: _____

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/lpasscmb1search/index.jsp>

Subcontractor's Name	*Texas certified HUB? <small>(Yes or No)</small>	Subcontractor's VD or HUB Certificate Number <small>(Required if Texas certified HUB)</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>
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
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			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
			\$	\$	\$	
TOTALS:			\$	\$	\$	

Signature: _____ Title: _____ Date: _____

TRADE ORGANIZATIONS/DEVELOPMENT CENTERS

ORGANIZATION	MAILING ADDRESS	PHONE	FAX	EMAIL
American Indian Chamber of Commerce of Texas	11245 Indian Trail, Dallas, TX 76679	972-241-6450	972-241-6454	tcce@txbiz.org
Asian Contractor Association	4201 Ed Bluestein Blvd., Austin, TX 78721	512-926-5400	512-926-5410	asiancontractor@gmail.com
Black Contractors Association – Dallas/Fort Worth	1409 S. Lamar Street, Suite 251, Dallas, TX 75215	214-928-7097	214-485-0467	rwashington@blackcontractors.org
Dallas Black Chamber of Commerce	2838 Martin Luther King Jr. Boulevard, Dallas, TX 75215	214-421-5200	214-421-5510	chum@dbcc.org
DFW Minority Supplier Development Council	8828 N Stemmons Frwy, 5 th Floor, Suite 550, Dallas, TX 75247	214-630-0747	214-637-2241	construction@dfwmsdc.com
Dallas Hispanic Chamber of Commerce	4622 Maple Avenue, Suite. 207, Dallas, TX 75219	214-521-6007	214-520-1687	gquezada.gdhcc.com
Del Mar College PTAC, Corpus Christi Black C of C	101 Baldwin Blvd., CED-146, Corpus Christi, TX 78404	361-698-1025	361-698-1024	ptac@delmar.edu
El Paso Hispanic Chamber of Commerce	2401 E. Missouri, El Paso 79903	915-566-4066	915-566-9714	treed@elpasombdcenter.com
Fort Worth Metropolitan Black Chamber of Commerce	1150 South Freeway, Suite 211, Fort Worth, TX 76104	817-871-6538	817-332-6438	bbolden@fwmbcc.org
Golden Triangle Minority Business Council	PO Box 21664, Beaumont, TX 77720	409-962-8530	409-722-5402	hatcher.beverly@gtmbc.com
Greater Asian Chamber of Commerce	8001 Centre Park Dr STE 160, Austin, TX 78754	512-407-8240	use email	Exec.Admin@AustinAsianChamber.org
Greater Austin Black Chamber	912 E. 11 th Street, Suite A, Austin, TX 78702	512-459-1181	512-459-1183	nmc@austinbcc.org
Greater Houston Business Procurement Forum	17071/2 South Post Oak Blvd., PMB 273, Houston, TX 77056	832-216-2185	713-436-8333	milonthibodeaux@gmail.com
Hispanic Contractors Association - Houston	7 Parker Road, Houston, TX 77076	832-883-5078	Use email	randymagdaleno@yahoo.com
Hispanic Contractors Association –San Antonio	8300 Pat Booker, RM 233 Live Oak, San Antonio, TX 78233	210-444-1100	210-444-1101	dave@hcadesa.org
Hispanic Contractors Association – Regional	2210 W. Illinois Avenue, Dallas, TX 75224-1636	972-786-0909	972-786-0910	yolanda@regionalhca.org
Houston Hispanic Chamber of Commerce	1801 Main Street, Suite 890, Houston, TX 77002	713-644-7070	713-644-7377	mzarate@houstonhispanicchamber.com
Houston Minority Supplier Development Council	Three Riverway, Suite 555, Houston, TX 77056	713-271-7805	713-271-9770	angela.freeman@hmsdc.org
National Association of Minority Contractors Inc.– Houston	3825 Dacoma St., Houston, TX, 77092	713-843-3791	713-843-3743	info@namctexas.org
San Antonio Hispanic Chamber of Commerce	200 East Grayson, Suite 203, San Antonio, TX 78215	210-225-0462	210-225-2485	briannad@sahcc.org
Southwest Minority Supplier Development Council	912 Bastrop Highway, Ste. 101, Austin, TX 78741	512-386-8766	512-386-8988	smsdc@smsdc.org
	4100 NW Loop 410 Ste 230, San Antonio, TX 78229	512-659-2160	Use email	xenia@smsdc.org
Texas Association of African American Chambers of Commerce (TAAACC)	P.O. Box 13064, Austin, TX 78711-3064	512-535-5610	Use email	taaacc179@yahoo.com
Texas Association of Historically Underutilized Businesses	P.O. Box 684726, Austin, TX 78768-4726	512-468-0113	915-5857751	rmata@tgsaustin.com
Texas Association of Mexican American Chambers of Commerce (TAMACC)	P.O. Box 41780, Austin, TX 78704	512-444-5727	512-444-4929	panton@tamacc.org
Tri-County Black Chamber of Commerce	P.O. Box 88376, Houston, TX 77288	832-875-3977	281-336-0870	procurement@tcbcc.org
U.S. Hispanic Contractors Association de Austin	920 E Dean Keeton, Austin, TX 78705	512-922-0507		info@ushca-austin.com
U.S. Pan Asian American Chamber of Commerce SW	202 E. Border Street, Suite 144, Arlington, TX 76010	682-367-1393	817-469-9485	gmcdermott@uspaacc-sw.org
Women's Business Council - Southwest	2201 North Collins, Suite 158, Arlington, TX 76011	817-299-0566	817-299-0949	astele@wbcsouthwest.org
Women's Business Enterprise Alliance (WBEA)	9800 NW Frwy, Suite 120, Houston, TX 77092	713-681-9232	713-681-9242	bids@wbea-texas.org
Women Contractors Association (WCA)	134 Vintage Park Blvd. Houston, TX 77070	713-807-9977	713-807-9917	director@womencontractors.org



HUB Subcontracting Plan (HSP)

QUICK CHECKLIST

While this HSP Quick Checklist is being provided to merely assist you in readily identifying the sections of the HSP form that you will need to complete, it is very important that you adhere to the instructions in the HSP form and instructions provided by the contracting agency.

- If you will be awarding all of the subcontracting work you have to offer under the contract to only Texas certified HUB vendors, complete:
 - Section 1 - Respondent and Requisition Information
 - Section 2 a. - Yes, I will be subcontracting portions of the contract
 - Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors
 - Section 2 c. - Yes
 - Section 4 - Affirmation
 - GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.
- If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you have a continuous contract in place for five (5) years or less meets or exceeds the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements"; complete:
 - Section 1 - Respondent and Requisition Information
 - Section 2 a. - Yes, I will be subcontracting portions of the contract
 - Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors
 - Section 2 c. - No
 - Section 2 d. - Yes
 - Section 4 - Affirmation
 - GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.
- If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors or only to Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you have a continuous contract in place for five (5) years or less does not meet or exceed the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements"; complete:
 - Section 1 - Respondent and Requisition Information
 - Section 2 a. - Yes, I will be subcontracting portions of the contract
 - Section 2 b. - List all the portions of work you will subcontract, and indicated the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors
 - Section 2 c. - No
 - Section 2 d. - No
 - Section 4 - Affirmation
 - GFE Method B (Attachment B) - Complete an Attachment B for each of the subcontracting opportunities you listed in Section 2 b.
- If you will not be subcontracting any portion of the contract and will be fulfilling the entire contract with your own resources, complete:
 - Section 1 - Respondent and Requisition Information
 - Section 2 a. - No, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources
 - Section 3 - Self Performing Justification
 - Section 4 - Affirmation

***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 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.

HU B SUBCONTRACTOR LISTING - REPLACE ROOF / CLEMENS UNIT

Company Name	Contact Person	Address	City	Zip	Email	Phone	Fax	Business Description
3 B'S CONSTRUCTION	Andrew Rosas	11945 S. FM 2790 WEST	LYTLE	78052	andrewrosas@sbcglobal.net	210-382-0984		New construction, remodeling to include wood frame, metal stud,drywall. Installation of suspended ceiling, concrete work and demolition.
3I CONSTRUCTION LLC	Micheal Williams	400 N. ST. PAUL, STE. 420	DALLAS	75201	ccade@3iconstruction.com	214-231-0675	214-231-0672	Industrial Building Construction
3J CONTRACTING	Jose Mondragon	1224 16TH ST	CORPUS CHRISTI	78404-3524	3jcontracting@gmail.com	361-548-4937	361-961-1207	Remodel, repair, Paint, Lawn Services,constructions,electrical, plumbing, fencing all types, demolition of small building,& hauling land waste.
3MCW CONSTRUCTION SERVICES, LLC	JODI MULLIS	3562 SWEET LEE LN UNIT A	PONDER	76259	j.MULLIS@3MCW.BIZ	940-479-2104	940-479-2236	General Contracting for commercial construction.
A & A ELECTRIC COMPANY OF BEAUMONT, INC.	Lee Acevedo Jr	PO BOX 22986	BEAUMONT	77720	gina@aaelectricbmt.com	409-842-4437	409-842-5230	ELECTRICAL CONTRACTOR-COMMERCIAL & RESIDENTIAL
A & L SANCHEZ PAINTING AND	Lesley S. Greer	CONSTRUCTION, INC.	KILLEEN	76540-2018	lgreer@al-sanchezpainting.com	254-213-1197		General Construction, renovations, new construction, mold remediation, lead abatement, framing, sheetrock, acoustical finishes, painting.
A PLUS SEALANTS	TERRISIA SCHIER	1507 LARKWOOD DR.	AUSTIN	78723	terrisia@hotmail.com	512-454-3388	512-452-4343	SEALANTS, WATER AND DAMP PROOFING, FIRE STOPPING
A&L CLEANING	LUZ E. MARQUEZ	12350 US HIGHWAY 183 S	BUDA	78610-9481	aandlcleaning@yahoo.com	512-577-6001		JANITORIAL CLEANING SERVICES
A-PLUS PAVING & CONSTRUCTION, INC.	JUAN PUENTE	PO BOX 5463	CORPUS CHRISTI	78465-5463	apluspave@sbcglobal.net	361-289-1506	361-299-1903	PAVING & CONSTRUCTION
A.G. CORREA PAINTING	A.G. Correa	1303 CERALVO ST	SAN ANTONIO	78207-7336	adolfo_correa@yahoo.com	210-394-2202		Painting, wall covering, roofing, flooring and siding installation.

AARON CONCRETE CONTRACTORS, L.P.	NORMA CAMARGO-CABAZA	P.O. BOX 27107	AUSTIN	78755-1107	acabaza@aaronconcrete.com	512-926-7326	512-926-2291	CONCRETE SUBCONTRACTOR
ABATEMENT SPECIALISTS, LLC	JOSE R. ORTIZ	1330 SHERWOOD FOREST ST	HOUSTON	77043-5613	JOE@ABATEMENTSPECIALISTS.COM	832-230-4293	832-850-7478	REMEDICATION SERVICES (ASBESTOS, LEAD & MOLD);STRUCTURE (OUTSIDE & INSIDE) BUILDING DEMOLITION
ABSOLUTE DEMOLITION, INC.	Melanye Gabel	PO BOX 789	CEDAR PARK	78630-0789	kelli@absolutedemolition.com	512-515-0705	512-515-0706	Demolition, deconstruction, recycling
ADG CONSTRUCTION, L.L.C.	Eric Armstead	1314 TEXAS ST	HOUSTON	77002-3512	adgenterprise2@yahoo.com	713-236-9100	713-236-9127	provide full service demolitions of all sizes, both commercial and residential.
ADRIAN ENTERPRISES, INC.	Anna C. Adrian	825 CANTWELL LANE	CORPUS CHRISTI	78408	anna@adrian.pro	361-883-7007	361-883-7037	ELECTRICAL, TROUBLESHOOTING, NEW COMMERCIAL, SPORTS FIELD LIGHTS, PARKING LOT LIGHTS, UNDERGROUND ELECTRICAL, COMMERCIAL AND RESIDENTIAL SERVICE WORK, LAND CLEARING, GENERAL CONSTRUCTION, CONCRETE AND ASPHALT, ROOFING, PAINTING, TRENCHING
AF ENVIRONMENTAL SOLUTIONS	Owner/Andy Fierro	P. O. BOX 151875	FORT WORTH	76108	af3521@att.net	817-501-5002	888-959-7631	Asbestos, Mold remediation and selective Demolition
AJ TREVINO CONSTRUCTION	Aaron J. Trevino	7014 KARI LN	RICHMOND	77469-7493	ajt-construction@att.net	281-924-4989	281-232-9326	New Home or Commercial Construction, Remodeling, all phases. Contract for Electrical, Plumbing, Etc.
ALAS CONCRETE SERVICES, INC.	Armando Montoya	27845 LOWA GARDENS RD	SAN BENITO	78586-9434	alasc4020@gmail.com	956-622-2491	956-276-0198	Concrete subcontractor
ALBO CONSTRUCTION, LLC	Felesia D. Boegner	1144 FAWN LAKE DR	BRYAN	77808	office@albollc.com	979-450-8088	979-314-0003	Demolition, Asbestos & Lead Abatement
ALL AMERICAN BROTHERS COMPANY, L.L.C.	Hector Diaz	5312 ELM	HOUSTON	77081	americanholding@hotmail.com	713-825-0552	713-839-1285	General contractor - New Construction, Renovations, concrete, roofing, HVAC, roads, interior Finish, drywall, flooring, painting, etc

ALL AMERICAN ELECTRIC &	Laura MacKnight	GENERAL CONTRACTING	GREENVILLE	75402	aagcontracting@yahoo.com	903-454-0289		General Contracting, Construction & Services
ALL PRO GENERAL CONSTRUCTION, INC.	Raul Scott	2221 E CHAVANEAUX RD	SAN ANTONIO	78214-3701	rs@allprogencon.com	210-627-2563	210-627-9244	General Contracting Maintenance/Repairs Division; commercial, industrial, institutional, utility install, power, communication line, masonry, foundation & construction, finish carpentry, site preparation, roofing, concrete work, painting, siding.
ALLY ROOFING SERVICES LLC	Mike Martin	1408 N SAM HOUSTON PKWY E	HOUSTON	77032-2968	mikewithars@yahoo.com	832-617-8653	832-617-8656	Roofing, Waterproofing and Related Sheet Metal
ALMAN CONSTRUCTION SERVICES LPC	Samuel J. Guzman	7677 HUNNICUT ROAD	DALLAS	75228	sguzman@almanelec.com	214-388-1800	214-388-1818	Electrical Contractors
ALPHA SERVICES CORPORATION	Jane Tapken	4535 SUNBELT DRIVE	ADDISON	75001	jtapken@janikingdfw.com	972-380-0800	972-380-6870	Janitorial services including environmental cleaning, clean room, carpet, etc.
AMBRECO, LTD.	ROBERT DOMINGUEZ	703 N MAIN ST	BELTON	76513-3053	ambreco@ambreco.com	254-939-5175	254-939-7888	GENERAL CONTRACTOR, CONSTRUCTION MGMT, DESIGN/BUILD
AMERICA ROOF SOLUTIONS, INC.	JOSE BALDERAS	6919 LEE MANOR COVE	MANOR	78653	AMERICAROOF@SBCGLOBAL.NET	512-844-9051	512-670-1232	ROOFING SYSTEMS
AMERICAN CONTRACTING USA INC	LETICIA BARCENAS	1606 S. REYNOLDS	RIO HONDO	78583-3023	acusainc@aol.com	956-748-4030	956-748-2891	ROOFING & GENERAL CONSTRUCTION
AMERICAN DREAM SOLUTIONS LLC	Troy D. Refuge	5802 VAL VERDE ST	HOUSTON	77057-5656	adslc7@gmail.com	832-819-5004		Roofing, General Contractor, Contract Labor Supplier
AMERITEX CONCRETE CONCEPTS, INC.	Dabid Hurtado	1204 N. MAIN ST	TEMPLE	76501	ameritexcc@yahoo.com	512-608-8604	866-794-3299	All types of flat work, Commercial and Residential Foundations, Slabs, Curbs, Sidewalks, Reinforced Concrete. Stamped Concrete, Stained Concrete, Overlays, Scoring and sealing
AMERY CONSTRUCTION, INC.	Adam R. Gallegos	11669 TONY TEJEDA DR	EL PASO	79936	ameryconinc@gmail.com	915-630-7798		General Contractor.

AMSTAR, INC.	Mary Teresa Flores	P. O. BOX 14311	SAN ANTONIO	78214-1940	tflores@amstar-incgc.com	210-927-5705	210-927-5710	General Contracting
ANCHOR COMMUNITY SERVICES, INC.	Chris Hyde	3001 N MAIN ST STE 100	EULESS	76039-7614	ancprop@sbcglobal.net	817-354-9800	817-354-9803	GENERAL CONTRACTOR-INTERIOR & EXTERIOR PAINT, CARPENTRY, FIRE & WATER DAMAGE RESTORATION, CONCRETE WORK, ROOFING & WELDING
ANGELO TRUCKING AND CONSTRUCTION	Robert Trevino, Jr.	2020 S CHADBOURNE ST	SAN ANGELO	76903	rtrevino.atc@suddenlinkmail.com	325-212-2087		Hauling, demolition, new construction, and underground utilities.
AO GENERAL CONTRACTOR, INC.	ABELARDO OLIVAS	1050 DIESEL DRIVE	EL PASO	79907-3100	high.ridge@live.com	915-860-4871	915-860-8876	BUILDING CONSTRUCTION SERVICES.
APEX ROOFING, INC.	Sergio Rodriguez	3900 COUNTY ROAD 805	CLEBURNE	76031	sergio@apextx.com	817-239-8744	817-202-3840	Roofing installation and repair-membrane, composite, metal, all types of roofing materials.
APEX UNIVERSAL EMPLOYMENT SERVICES	Sandra See	3021 AVENUE K	FORT WORTH	76105-3109	JSee1@live.com	817-353-0893		light industrial cleanup services, dry wall,roofing,debris removal,hvac, steel,
ARC DEMOLITION AND CONSTRUCTION, LLC	Karim Lakhani	1001 DELAWARE DR	CARROLLTON	75010	karim.lakhani23@gmail.com	469-855-2137		provides the service of demolishing residential and commercial buildings.
ARCHITECTURE ROOFING AND REMODELING	Samuel M. Imbriaco	1605 CHAPPELL LN	AUSTIN	78748-2764	Samuel@ArtechRoof.com	512-843-7663	877-695-6426	Roofing and Sheet Metal Installations. Single Ply roof systems, Standing Seam, Tile, Modified Bitumen, Stone Coated Metal, Wall Panel Systems, and composition asphalt shingles.
ARCJF, INC.	JEFF FOLSOM	3303 LEE PARKWAY, SUITE 270	DALLAS	75219-0933	jfolsom@alpineroofing.com	214-528-9897	214-528-2852	Roofing services, sheet metal fabrication, siding
ARGIO ROOFING & CONSTRUCTION, LLC	Roger Escobedo	29729 NORMAN ROAD	RIO HONDO	78583	rescobedo@argioroofing.com	832-250-9417	956-748-3940	Roofing,re-roofing & roof repair services
ARMCON CONSTRUCTION LLC	RICHARD JANICE	9821 MONTANA AVE	EL PASO	79925	RICH@ARMCON.CONSTRUCTI	915-726-4651	915-633-9019	General contractors for new and remodeling construction.

ARMOR CONSTRUCTION CO., INC.	Hector Loya	11841 EMILY CT	EL PASO	79936	hector@armorconstruction.com	915-921-6423	915-859-8561	GENERAL CONTRACTOR - RESIDENTIAL & COMMERCIAL.
ASHER CONTRACTORS LLC	Martha M. Garza	4157 JUNG RD	SAN ANTONIO	78247-2715	martha@ashercontractors.com	210-598-9409	877-497-3402	provides plumbing, HVAC, utility site work, underground utilities, Pipe & Structural Steel Welding, underground natural gas, general construction and demolition.
ASHLEY CONSTRUCTION & DEVELOPMENT, LLC	Dennis Ashley	PO BOX 841784	PEARLAND	77584-0023	acandd.llc@gmail.com	979-265-4099	832-230-4911	Roofing,Framing,Siding,Foundation, Plumbing,HVAC,Electrical,Drywall,Painting,Finish Carpentry,Cabinets and Countertops. In case of a catastroph(Wind,Fire or Flood) AC&D,LLC has licensed adjusters on staff too assit you with your insurance claims.
ASSOCIATED CONSTRUCTION PARTNERS, LTD.	Jillian R. Simpson	215 W BANDERA RD STE 114-461	BOERNE	78006-2820	jill@acpartners.org	210-698-8714	210-698-8712	Heavy, Water & Wastewater Plant Construction, Utility, Electrical, General Construction
ATC CONTRACTORS, INC.	PATRICIA ROPPOLO	P.O. BOX 932	GEORGETOWN	78627	atwpcf@aol.com	512-930-3988	512-869-1189	BUILDING RESTORATION/NEW CONSTRUCTION/WATERPROOFING /MASONRY WORK
AZTEC CONTRACTORS, INC	Frank Spencer	1200 WYOMING AVE	EL PASO	79902-5521	f.spencer@aztecccontractors.com	915-577-9685	915-577-9683	COMMERCIAL, RESIDENTIAL AND ENGINEERING CONSTRUCTION
AZTECA ENTERPRISES INC.	Mark Reinhardt	2518 CHALK HILL ROAD	DALLAS	75212	thaliap@azteca-omega.com	214-905-0612	214-905-0828	Commercial and Institutional Building Construction
B & B WASTE TRANSIT, INC.	Amy C. Drew	1916 BRIDGESTONE DR.	CORINTH	76210	amy.drew@centurytel.net	214-803-3184	940-497-0600	SPECIAL AND REGULAR WASTE DISPOSAL
B.I.T CONSTRUCTION	Britanie L. Olvera	7103 E RIVERSIDE DR	AUSTIN	78741-6709	britanie@bitservicesinc.com	512-258-5336	512-258-5072	Construction interior finish out and repair; construction remodel ,painting,carpentry, concrete, electrical

BAKERS BACKHOE SERVICES	Kathy Baker	142 WAYSIDE DR	ELGIN	78621-5675	bakersbackhoe@sbcbglobal.net	559-287-6267	512-285-9656	Excavation, Grading, Trenching Wet, Dry & Plumbing, communication, fire, Auger, Footings, Compacting and consulting (Brush & Land clearing)
BARRAZA CODE ELECTRIC, INC.	Ricardo Barraza	5049 CROSSROADS	EL PASO	79932	codeelectric.inc@gmail.com	915-581-6979	915-581-7018	ILLUMINATION; UNDERGROUND AND UTILITY WORK
BASECOM INC	OSCAR OAXACA	5209 VESTA FARLEY ROAD	FORT WORTH	76119	ooaxaca@basecominc.com	817-589-0050	817-483-2609	GENERAL CONTRACTOR
BBC CONSTRUCTION SERVICES	Veronica Chapa	608 PUIG DR	LAREDO	78045	veronicachp@yahoo.com	210-422-5558	956-568-0132	Construction- install; tile, carpet, vct, concrete, sheet rock and metal works.
BEACH CONSTRUCTION, INC.	MICHELLE BEACH	1271 RECORD CROSSING RD	DALLAS	75235-6001	michelle@beachconstructiontx.com	214-920-9100	214-920-9103	GENERAL Construction & Remodeling, specializing in medical and laboratory
BELKNAP CONCRETE, CUTTING & DRILLING,	KIMBERLY D. BELKNAP	INC.	HOUSTON	77362	kim@belknapconcrete.com	281-955-6812	832-912-6738	CONCRETE SLAB SAWING, WALL SAWING, CORE DRILLING, GREEN SAWING AND CONCRETE PREP AND POURBACK.
BELTRAN ELECTRICAL CONTRACTORS, INC.	Alfredo Beltran	860 KASTRIN	EL PASO	79907	melissab1121@yahoo.com	915-599-8777	915-599-1330	Electrical Contractors
BENCO CONSTRUCTION SERVICES, INC.	Alvaro Nunez	10101 HICKS FIELD RD.	FORT WORTH	76179-5243	bert@bencorfg.com	817-740-8866	817-740-8918	COMMERCIAL ROOFING- INSTALLATION, REPAIR AND MODIFICATION
BOBOCONSTRUCTION	Robert Rodriguez	416 BROADWAY ST	SAN MARCOS	78666	burrus_sherry@yahoo.com	512-665-6978		specializes in remodeling of commercial buildings / concret and road work.
BORDER DEMOLITION AND	BONNIE SOLIS	ENVIRONMENTAL, INC.	EL PASO	79907-3100	bonniesol@borderdemoenviro.com	915-860-8855	915-860-8494	Demolition and Asbestos Abatement Contractor.
BRADLEY DOUGLAS CONSTRUCTION	OLGA DOUGLAS	SERVICES, L.L.C.	FORT WORTH	76112	clm5762@yahoo.com	817-429-2443	817-429-6062	NEW CONSTRUCTION, DEMOLITION, STREET WORK, SITE CLEAN UP
BREAICO, LLC	Brenda Harper	PO BOX 747	FRISCO	75034	briaharp@gmail.com	972-877-6805		General contractors. Roofing, remodels, buildouts, electrical, plumbing, hvac sheetrock, drywall, painting.

BRJ PAVING, INCORPORATED	BARBARA JONES	12448 RENDON RD	BURLESON	76028	BARBARA@BRJ PAVING.COM	817-478- 0927	817-478- 1672	SITE EXCAVATION, CONCRETE & ASPHALT PAVING INSTALLATION, SITE DEMOLITION, SOIL STABILAZATION.
BROUSSARD & BROUSSARD COMPANIES, LLC	ARNOLD BROUSSARD	1228 TERRACE DR	GRAPEVINE	76051-4060	AB5TOAB@GM AIL.COM	817-819- 0153	817-251- 1854	Provider of facility services including building maintenance.
BROWNSVILLE-GMS LTD	Drew Claes	PO BOX 333	LAREDO	78042	drew@souther nlaredo.com	956-723- 3333	956-723- 7775	Trash removal and transportation to the landfill
BUDGET ROOFING LLC	Raymon Goff	PO BOX 593	TEXAS CITY	77592	rkgoft@comcas t.net	409-457- 5379	409-938- 3052	commercial and residential roof replacement and repair services
BUILDMORE CONSTRUCTION, INC.	Tanya Brown	16607 BLANCO RD, SUITE 705	SAN ANTONIO	78232	tanya@buildm oreinc.com	210-281- 4977	210-579- 6954	General Contractor for renovations and new construction.
BY TRUCK INC	Jeff Scott Jr	PO BOX 174161	ARLINGTON	76003-4161	bytruck- corp@usa.net	817-455- 6333	817-516- 1866	Hauling services provided by dump truck, transport road construction aggregates, landscaping materials, demolition haul off.
BYERS CONSTRUCTION, INC.	CARMEN BYERS	3662 DONIPHAN DRIVE	EL PASO	79922	carmen@byers- email.com	915-581- 7797	915-599- 2829	GENERAL CONTRACTOR, DESIGN BUILD, CONSTRUCTION MGR
C & C CLEANING & JANITORIAL SERVICE	CECILIA Salinas	1709 CALLE DE AMISTAD	SAN JUAN	78589-3317	cecysalinas71 @yahoo.com	956-783- 7051	956-782- 8426	JANITORIAL SERVICE, CARPET SHAMPOO, FLOOR WAXING
C & J MODERN SERVICES, LLC	Coretha Clark	PO BOX 142573	AUSTIN	78714	cjmodernservic es@ymail.com	512-498- 7575	512-498- 7574	Building Maintenance, Repairs, Janitorial, Make Ready & Site Clean Up Services
C & R SYSTEMS, INC.	RAYNE KNIGHT	P.O. BOX 67	FRANKLIN	77856-0067	rknight@crsyst emsinc.com	979-828- 5583	979-828- 5923	Metal busilding construction, foam roofing, metal restoration specialty foundations.
C3 ENVIRONMENTAL SPECIALTIES, LP	Daniel O. Corrigan	132 NELL DEANE BLVD	SCHERTZ	78154-1500	nathan@c3envi ronmental.com	210-653- 7801	210-650- 3306	Environmental / Erosion Control Services.
C6 DISPOSAL SYSTEMS, INC.	JORGE CANTU	PO BOX 160489	SAN ANTONIO	78280-2689	jorge@c6dispo sal.com	210-375- 0066	210-657- 4627	GARBAGE COLLECTION, WASTE REMOVAL, TRASH COLLECTION

CABLE TRAY SOLUTIONS LLC	Bill Torres	2412 RIDGEDALE DRIVE	CARROLLTON	75006	BillCTS@outlook.com	972-740-4560	469-579-4667	General Construction as well as Interior Demolition.
CALDERON GENERAL CONTRACTORS, INC.	Alfonso Calderon	812 N VIRGINIA ST STE 214	EL PASO	79902-5307	malfonso53@yahoo.com	915-926-9305	915-613-1861	General new Construction Residential Commercial additions,new Concrete demolition,framing,plumbing electrical HVAC roofing, ifs,stucco drywall,metal studs,flooring,paiting,suspended ceilings,Ceramic tile,vct, milk work,fencing,dirt work,and more
CALTIA CONSTRUCTION, LLC	Raul A. Perez	PO BOX 3613	MISSION	78573-0062	raul@caltiaconstruction.com	956-522-7918	210-568-6759	General Contractor - commercial, residential, utility and industrial.
CAMACHO DEMOLITION LLC	Julian Camacho	5113 AGNES ST	CORPUS CHRISTI	78405-3713	julian@camachorecycling.net	361-289-1095	361-882-1944	Asbestos and Lead Abatement, Mold Remediation and Demolition Services
CAMPOS ROOFING & CONSTRUCTION,	ALBERT CAMPOS	LLC CO.	EL PASO	79924	camposroofing01@sbglobal.net	915-755-3916	915-755-6919	COMMERCIAL & RESIDENTIAL ROOFING - GENERAL CONSTRUCTION
CANVASBACK CONSTRUCTION, INC.	Sherri Barnes	4775 NORTH PARTHER CREEK	THE WOODLANDS	77381	sherri@canvasbackconstruction.com	713-302-3088		Roofing, waterproofing, siding, windows, general construction
CAP CONSTRUCTION & ENVIRONMENTAL, LLC	Jesse Pina	1716 S. SAN MARCOS #105	SAN ANTONIO	78207-7096	jesse@cap-ce.com	210-227-1800	210-227-1802	Remediation Services, Commercial & Institutional Building Construction, Residential Remodeling, and Site Preparation Contractors
CAPTAIN CONSTRUCTION COMPANY LLC	Bobby Captain	990 HWY 287 NORTH SUITE 106-275	MANSFIELD	76063	cccbuilders@aol.com	682-518-1448	866-751-6639	roofing, plumbing, electrical, landscaping, concrete, flooring, general repair and remodeling to include modular trailer finish out.
CASILLAS TRUCKING, LLC	Remedios M. Casillas	16674 C.R. 221	FORNEY	75126	casillas_remedi-os@yahoo.com	214-779-4735	469-728-7204	End Dump/Tandem Dump, haul in/off construction materials-dirt/grovel/concrete.

CASTILLO CONSTRUCTION SERVICES	SANTIAGO E. CASTILLO	8527 MAJESTIC BROOK DRIVE	HOUSTON	77095	scastillo47@comcast.net	832-282-0053		GENERAL CONSTRUCTION SERVICES (NEW)/GENERAL CONSTRUCTION SERVICES, RENOVATIONS.
CECO CONTRACTING COMPANY LLC	Richard E Rick Bloomfield	708 NORTH MAIN ST	FORT WORTH	75229	gene@cecocontracting.com	817-429-1866	817-882-9999	roofing contracting
CEDA-TEX SVCS INC	FRED ODANGA	500 BRUSHY CREEK RD STE 306	CEDAR PARK	78613	contact@cedatex.com	512-339-0155	512-339-2829	General construction. New construction, Site, drainage, Interior drywall, plumbing, electrical Painting, concrete work etc
CLASSIC TEJAS CONSTRUCTION, INC.	Moises Hernandez, Jr.	P. O. BOX 429	EULESS	76039	moises@classictejas.com	817-231-0290	817-231-0384	Interlock Concrete Pavers, Modular Retaing Walls, ADA Ramps and Concrete Work.
CLASSICAL CONCEPTS CONSTRUCTION,	Mario Villacres	LLC.	GRAPEVINE	76051-4751	classicalconcepts@contractor.net	214-425-6595		Sub-contractor construction and carpentry work
CLEAN AIR REMEDIATION ENVIRONMENTAL	Sylvester White	SERVICE	MESQUITE	75150	caresweclean@att.net	214-324-1080	214-324-7572	Asbestos Abatement Removal and Demolition
CLOVIS CONTRACTING COMPANY LLC	Bert Kivell	1821 S. CRANES MILL RD.	NEW BRAUNFELS	78132	admin@cloviscontracting.com	512-465-2055		provide supplies/materials for the construction trade and the services to complete and maintain projects.
COMMERCIAL EXTERIOR TECHNOLOGIES	Keethan S. Carter	P. O. BOX 1176	FORT WORTH	76101	k.carter@cetsupply.com	817-984-6520	817-984-6525	Independent Roof Consultant with HUB Certification, U.S. Ply Commercial Roofing Material (APP,SBS Modified Bitumen, and Reflective liquid roof membranes) and Maintenance Accessories.
COMMERCIAL MECHANICAL, INC.	CATHY J. CHRISTOPHER	201 GOLD STREET, #100A	GARLAND	75042	cathy@cmi-tx.com	800-657-9591	972-487-0674	TO PROVIDE GENERAL CONSTRUCTION AND CONSTRUCTION MANAGEMENT SPECIALIZING IN SITE DEVELOPMENT, PAVING, AND MECHANICAL SERVICES TO THE PUBLIC & PRIVATE SECTORS.

CON-COR INC.	Lloyd (Cy) Canales-Jary	426 SEGUN STREET	SAN ANTONIO	78208	cyjary@con-corinc.com	210-375-8484	210-375-8494	Building construction, general contractor, remodeling contractor
CONCRETE STRAIGHTLINE SAWING LLC	Laura Moraida	7319 CHARPIOT LN	HUMBLE	77396	lmoraida@msn.com	713-473-0757		Concrete saw cutting and demoliton
CONQUEST CONSTRUCTION, LLC	Kim Holmes	PO BOX 591792	HOUSTON	77259-1792	kholmes@conquestvob.com	713-417-0424	832-932-5790	General Construction Services
CONSTRUCTION IDEAS	andrea welch	8127 MISTY RIDGE LN	HOUSTON	77071-2909	andrea.welch4@yahoo.com	713-446-9944	713-995-7793	construction renovation, remodeling,concrete work,demolition, excavations, windows,etc
COPELAND CONCRETE CONTRACTOR, INC.	M LOUIS VANDERGRIF	PO BOX 251673	PLANO	75025	copelandcement10@aol.com	214-270-8143	888-472-7147	CONCRETE CONSTRUCTION, SIDEWALKS, CONCRETE FOUNDATIONS, RETAINING WALLS, CONCRETE CURB, CONCRETE PAVEMENT
CORNER POST SERVICES LLC	Jill K. Miller	10473 COUNTY ROAD 2180	WHITEHOUSE	75791	cornerpostservices@hotmail.com	817-823-4941	903-839-2605	Environmental, demolition and remediation services
CORPCARE, INC.	Mark Massey	PO BOX 382640	DUNCANVILLE	75138-2640	mmassey@corpcareservices.com	214-876-0642	817-764-6321	Janitorial, temporary labor, pressure washing, special event cleaning.
COX CONCRETE CONTRACTORS, INCORPORATED	Sandra J. Cox	PO BOX 631447	NACOGDOCHES	75963-1447	scox@coxcontractors.com	936-564-6500	936-564-8242	Concrete Construction, General Construction, Construction Management.
CRITICAL ELECTRIC SYSTEMS GROUP, LLC	Danny Espino	PO BOX 861330	PLANO	75086	despino@cesgllc.com	469-368-7112	469-368-7101	Electrical Contractor formed
CT WALKER LLC	CASSANDRA WALKER	PO BOX 142691	AUSTIN	78714-2691	ct.walker@austin.rr.com	512-300-3080	512-233-2708	General contractor, site work, concrete, utilities, fencing, landscaping, demolition, drywall, roofing, painting, construction management, material and equipment suppliers
CUEVA'S TRANSPORTATION CO	FELIPE CUEVA-ARIAS	3401 HYCREEK DR., #B	AUSTIN	78723	FELIPECUEVA@YAHOO.COM	512-825-6079		DUMP TRUCK SERVICES
CUSTOM WELDING AND METAL FABRICATION	Micah Garza	1319 PARK ST	BRYAN	77803	anglertx23m@yahoo.com	979-224-4400		Concrete, Metal Buildings, Land Clearing, Fence building, Earth Work.

CVI DEVELOPMENT, LLC.	Karl Daniels	1801 LAVACA 2-J	AUSTIN	78701	KarlDaniels.m c@me.com	512-944- 0280	512-597- 2767	Building Construction, including General Contractors and Operative Builders
D & G QUALITY ROOFING, INC.	Christa Weatherby	4305 E FM 1187 STE 100	BURLESON	76028-7984	christa@dgqro ofing.com	817-568- 8300	817-568- 0029	Roofing commercial
D & L CONSTRUCTION, INC.	Linda M. Young	PO BOX 161304	FORT WORTH	76161-1304	lyoung@dandlc onstructioninc. com	817-886- 6836	817-886- 6837	General contracting for commercial, industrial & residential, including new construction, finish-out and remodeling.
D&G CONSTRUCTION	Sylvia D. Gonzalez	5526 KENITH CIR	CORPUS CHRISTI	78413	sd.dgconstructi on@gmail.com	361-562- 8957	361-980- 0402	concrete such as foundations, parking lots, roofing, drywall, tape, float, texture, painting, stucco, framing and mold remediation.
D&S DIVERSIFIED SERVICES, INC.	Vivian Divin	13121 LOUETTA RD # 1120	CYPRESS	77429	DSDIVERSIFIED @YAHOO.COM	832-534- 8293	281-351- 8395	Contraction and Distributors for Insulation, Electrical, HVAC and Plumbing.
D&SS CONSTRUCTION INC	JANNA SCHURY	P O BOX 8313	CORPUS CHRISTI	78468	jschury@aol.co m	361-992- 3566	361-992- 8627	GENERAL CONTRACTOR.
D. GRIMM, INC.	Dawn Mallard	PO BOX 2087	WILLIS	77378-2087	bids@dgrimmi nc.com	936-228- 7802	936-228- 2974	Site preparation, earth work, foundation installation, erosion control, Right of Way Clearing and Maintenance
D.B.M SERVICES, LP	Daniel Mendoza	3111 EXECUTIVE BLVD	MESQUITE	75149-2805	dmendoza@db mserviceslp.co m	214-275- 7930	214-275- 7940	Drywall, Ceilings, Paint, Patch and Paint, Wall Covering (Vyniyl and Fabric), Texture
DE LA CERDA CONSTRUCTION	JUAN DE LA CERDA	RR 20 1155	PHARR	78577-9234	DeLACERDAJU ANMANUEL@Y AHOOCOM	956-493- 1059		CONSTRUCTION SERVICES, INCLUDING GENERAL REMODELING, PAINTING, CONCRETE WORK AND ROOFING.
DECENT CONSTRUCTION COMPANY, INC	SYED HASHMI	1008 HYANNIS STRETT	PLANO	75094	construction.de cent@gmail.co m	214-846- 5113		General Contracting, Project Management, Site Work, Concrete, Masonry, MEP, Damp Proofing, Caulking, Sealing, Fire Safing and Selective Demolotion

DIVERSE ROOFING	Gilbert Garzoria	3052 BASQUE DR	BROWNSVILLE	78520-9006	ggarzoria@gmail.com	956-496-7473		Roofing specializes in roofing, re-roofing, metal, concrete, TPO, tile, composition shingle, elastomeric coating, flat roof system
DIVERSIFIED SERVICES	Calvin Moore	PO BOX 35705	HOUSTON	77235	MOORE-CALVIN@SBCGLOBAL.NET	832-438-3417	281-438-3418	Construction, Plumbing, Demolition Services, Industrial Plumbing, Consulting, Green Building, Flooring, Fire Services, and Concrete.
DIVISION 16 CONSTRUCTION CORPORATION	JUAN HERNANDEZ	13330 LEOPARD ST., SUITE #6	CORPUS CHRISTI	78410-5753	juan@division16construction.com	361-241-8888	361-241-8889	All phases of Electrical Construction & GENERAL CONSTRUCTION
DK WINSHIP COMPANY, LLC	Darla K. Winship	3922 RORER CIR	CORPUS CHRISTI	78410-6024	winshipco@aol.com	361-241-6233	361-241-6233	General Construction.
DNA TRUCKING, INC.	Arthur Pena	3346 BOXELDER DRIVE	HOUSTON	77082	dnatrucking@yahoo.com	281-650-5518	281-558-5427	Dump Truck Hauling Service
DORAME GENERAL REPAIR AND LAWN LLC	Ramon Dorame	4213 HAMLIN DR	CORPUS CHRISTI	78411-3055	do-rame@hotmail.com	361-533-6728		construction services including new construction & remodeling, i.e. drywall, painting, cabinetry, tile, framing, carpentry, siding, impact resistant or standard glass installation & concrete work. Electrical and Plumbing work through sub
DRACO'S JANITORIAL & AUTO DETAILING, INC	Draco Miller	2103 FISK	BROWNWOOD	76801	draco.miller@yahoo.com	325-646-0611	325-646-7351	Full service buiding janitorial services, power washing services, and full service auto detailing service including pick up and drop off.
DRW JANITORIAL SERVICE, LLC	Nichole Williams	3281 STAMPEDE DR	BRYAN	77808-7576	drwjantorial@gmail.com	979-575-8239	979-778-7400	Full Service Janitorial/Cleaning Company, Servicing Commercial & Residential Properties.
DUFFIN CONSTRUCTION LLC	Teresa Duffin	PO BOX 1215	DRIPPING SPGS	78620	td82660@gmail.com	512-413-2393		Commercial and residential construction & remodeling

E-CON GROUP, LLC	Gilbert Enriquez	PO BOX 2999	EDINBURG	78540	genriquez@enriquezenterprise.net	956-793-0178	956-259-8009	General Construction and Construction Management. Civil Engineering Design.
EDWARD & LEE CONSTRUCTION LLC	Johnny Greenwood	PO BOX 12145	AUSTIN	78711-2145	greenwoodjohnny37@yahoo.com	512-791-8781	512-853-2653	Remodeling/Demolition, flooring, gypsum board, painting, general construction
EDWARDS CONSTRUCTION GROUP LLC	Edgar L. Edwards	6609 SNAPPER CT	FORT WORTH	76135	eedwards@ecgllc.us	702-461-7042	827-237-3521	General construction, earthwork, site preparation and underground utilities.
EL DORADO SERVICES, LLC	J. Frank Lopez	10703 SAGEMEADOW LN	HOUSTON	77089-3009	eldoconstruction@gmail.com	713-530-6204	281-501-0478	Concrete/Ashalt paving, Demolition, Site Clearing
ELLECO CONSTRUCTION, INC.	JANE A. WEEMPE	201 W. COMMERCE ST. SUITE 101	DALLAS	75208	jweempe@elleconstruction.com	214-760-9241	214-760-9244	General contractor provides commercial office & retail tenant finish out and remodeled services.
EMPIRE ENVIRONMENTAL GROUP, LLC .	MARGARITA ROBLEDO	11405 MOLLY MAC DRIVE	BALCH SPRINGS	75180	empireenvirog@msn.com	214-327-3653	214-321-5669	demolition, asbestos abatement, lead abatement and mold remediation
EXIOM SITE SERVICES LLC	Anthony Roman	555 REPUBLIC DR STE 200	PLANO	75074-5469	julio@exioms2.com	903-498-7827	903-498-7829	Excavation, demolition, erosion control, site preparation, grading, clearing and grubbing
F. HALL MOWING	Floydell Hall	P.O. BOX 271101	DALLAS	75227-2828	halldevin@msn.com	214-381-5570	214-381-5570	demolition, asbestos abatement, sand and gravel
FALLS CONSTRUCTION COMPANY, INC.	Rob Ojeda	PO BOX 9132	WICHITA FALLS	76308-9132	rob@fallsconstructionoftexas.com	940-761-3839	940-761-2432	General building construction and renovation; metal building erection; fence construction
FAMILY BUSINESS PROTECTION, LLC	William T. Fuller	16903 RED OAK DR	HOUSTON	77090-3914	familybusinessprotection@gmail.com	281-893-0850	832-442-5041	Construction Sub-contractor services.
FELIX MALDONADO TRUCKING, INC.	Felix Maldonado	11250 HIGHWAY 16 S	SAN ANTONIO	78224-3054	maldrkg@aol.com	210-628-1605	210-628-6217	Transportation of materials to and from jobsites.
FELIX SALINAS GROUP, INC.	Felix Salinas	6105 DENTON HWY STE 10	HALTOM CITY	76148-3018	fsalinas@excelcg.com	817-380-1500	817-527-1900	Roofing, foundation repair, remodel, restoration, painting, drywall, commercial renovations
FOAM APPLICATIONS LLC	Francisco E. Molinar	2617 E MISSOURI AVE	EL PASO	79903	foamapp@hotmail.com	915-566-5110	915-564-1856	ROOFING and INSULATION services

FORTHRIGHT CONSTRUCTION	JOSE I. RAMIREZ	PO BOX 285	BARKER	77413-0285	JRAMIREZ@FO RTHRIGHTCON STRUCTION.CO M	713-979- 6611		General contractor for residential and commercial new construction, remodeling, and build outs.
FST CONSTRUCTION	FERNANDO SANCHEZ	15103 SW LOOP 410	SAN ANTONIO	78221-3917	fstconstruction @yahoo.com	210-843- 5725	210-267- 9803	Building and construction.
G MARIN REBAR, INC	Guillermo Marin	8178 FM 1346	SAN ANTONIO	78263	GMREBAR@G MAIL.COM	210-379- 6931	210-666- 0654	CONCRETE REINFORCEMENT (REBAR POST TENSION)
G. P. WATERPROOFING & RESTORATION SERVIC	LUIS ROSILES/OWNER	PO BOX 566142	DALLAS	75356	lrosiles@aol.co m	972-642- 4335	972-642- 0161	WATERPROOFING AND RESTORATION.
GADBERRY CONSTRUCTION COMPANY, INC.	Dustin Gadberry	1312 CONANT ST	DALLAS	75207-6006	dustin@gccorp. net	214-935- 1696	888-252- 3851	General Contracting Company
GERSON ENTERPRISES LLC	Jennifer Eichelbaum	1927 FAR NIENTE	SAN ANTONIO	78258-4517	gersonent@ya hoo.com	210-481- 7601		Roofing material, wood, merchant wholesaler; Sheet metal roofing material merchant wholesalers
GHR CONCRETE INC	Paul Gonzales	PO BOX 224946	DALLAS	75222-4946	katie@ghrconc rete.com	214-232- 3622	214-292- 8509	Full Service Paving Contractor, Offering Concrete Sawing, Removal and Replacement, Pourback
GLOBE BUILDERS, LLC	Angelina Rodriguez Chavez	3009 PERSHING DR. #1	EL PASO	79903-2534	mariochavez@ globebuilders.c om	915-533- 8700	206-888- 0326	Building Construction, including General Contractors, and Operative Builders
GRECO CONSTRUCTION, INC.	Diane Greco	15710 WOLF CREEK ST	SAN ANTONIO	78232-2753	Greco@satx.rr. com	210-496- 2420		Electrical, Painting, Masonry, Site Work, Sheetrock, Framing, Tile Work, Demo, Roofing, Waterproofing, Landscaping.
GREENHALL LLC	Cindy Green	PO BOX 680336	SAN ANTONIO	78268-0336	cindy@greenha llco.com	210-381- 0601	210-595- 1577	Commercial Building General Contractor.

H3 CONSTRUCTION SERVICES, LLC	Cesar Ortiz	PO BOX 270215	FLOWER MOUND	75027	Cesar@H3-Construction.com	940-295-4488		Concrete Work, Concrete Cutting/Coring, Wall Sawing, Electric Sawing, Flat Sawing, Selective Soft Demolition, Concrete Repair/Paving/Removal, Excavation, Hydro Excavation, Dirt Work, Ground Penetrating Radar, Roll Off Dumpster Rentals,
HAMPSHIRE CONSTRUCTION & ASSOCIATES	Colean Hampshire	442 FM 421	LUMBERTON	77657	colean@hampshireconst.com	409-751-6826	409-755-0632	General Contractor
HARENDT CONSTRUCTION GROUP, LLC	Kristi Harendt	12650 N BEACH ST	FORT WORTH	76244-4243	kharendt@harendtconstruction.com	817-854-3080	817-854-3081	Commercial, General Contracting; Estimating; Facilities Maintenance
HBS NATIONAL CORPORATION	Jason Yoo	11777 KATY FREEWAY	HOUSTON	77079	timothy.kim@hbsnational.com	281-679-5332	281-679-5336	Janitorial Services and Facilities Maintenance
HENOCK CONSTRUCTION, LLC	Henock Perez	1882 S. BRAZOS ST.	SAN ANTONIO	78207-7006	henock@henockconstruction.com	210-661-2737	210-661-2705	General Contracting, and Specialty trade contractor: Framing, Drywall, Paint, Acoustical tile and insulation materials installation.
HH & S SERVICES, L.L.C.	Jose J. Ayala	1920 DUVAL AVENUE #101	HARLINGEN	78550		888-505-6347	888-519-1168	ROOFING, FLOORING, ELECTRICAL, PLUMBING, PRIVACY FENCING & LANDSCAPING.
HILBRICK INCORPORATED	Michael P. Resk	3004B WINDSOR ROAD	AUSTIN	78703-2348	mresk@hilbrick.com	214-453-4222	214-453-3999	General Building Contractor.
HILLS OF TEXAS ROOFING & REMODELING LLC	Raymond Hernandez	273 B. NICKS ROAD	COMFORT	78013	ray.hernandez@hillsoftexas.com	830-995-3356	830-995-3656	Roofing & Remolding/Drywall/Painting/Capentry
HM VENTURA CORPORATION	CESAR HERRERA	PO BOX 13092	EL PASO	79913	hqhcustom@yahoo.com	915-727-6308	915-532-0380	general construction contractor repair & remodel
HOBBS CONSTRUCTION, INC.	LUZ MARIA S. HOBBS	568 OLD LEXINGTON RD.	ELGIN	78621	sandrahobbs1@msn.com	512-281-5775	512-285-5755	Commercial general contractor

HOLCHEMONT, LTD.	Michael Montalvo	900 N MAIN ST	MCALLEN	78501-4327	bids@holchemont.com	956-686-2901	956-686-2925	general commercial construction projects, remodels, additions;
HOLES INCORPORATED	CEO/SUSAN M. HOLLINGSWORTH	9911 FRANKLIN ROAD	HOUSTON	77070-4199	kvazquez@holesinc.com	281-469-7070	281-469-6207	CONCRETE SAWING, DRILLING, BREAKING, DEMOLITION, LOAD & HAUL
HOLMES SERVICES DESIGN & CONSTRUCTION	Maurice Holmes	20014 CYPRESSWOOD LAKE DR	SPRING	77373	jykm5050@yahoo.com	866-521-5558	866-431-8764	General & Sub-contractor for exterior & interior construction projects.
HUNTER DEMOLITION & WRECKING CORP.	Marty P. Hunter	P. O. BOX 786	POTEET	78065-0786	dhunterdemo@aol.com	210-227-5100	830-769-3090	Demolition & Abatement Contractor
HYNES SERVICES, INC.	MICHAEL W. HYNES	3965 FM 1781	ROCKPORT	78382-7614	HynesServiceslnc@aol.com	361-729-7180	361-729-9741	ROOFING, GENERAL CONSTRUCTION, GENERAL MAINTENANCE
ICON CONTRACTING ENTERPRISES	NELSO MOLINA	203 VALLADOLID AVE	LAREDO	78046	nelso1976@hotmail.com	956-220-3908	956-724-4174	MAINTENANCE, JANITORIAL, CONSTRUCTION SERVICES
IMPERIAL CONSTRUCTION & ROOFING	Alejandro Garcia	11450 JAMES WATT DR STE B4	EL PASO	79936-6458	agicr50@yahoo.com	915-219-7152	915-219-7854	New roofs, re-roofs, roof repairs, build-ups, roof system
INCA-SOL ENVIRONMENTAL SERVICES INC	PAMELA LOPEZ DE BICKLE	P.O. BOX 171798	ARLINGTON	76003	incasol@comcast.net	817-323-4630	866-733-8492	ASBESTOS AND LEAD HAZAROUS ABATEMENT AND DEMONLITION CONTRACTORS
INFINITY RECYCLING AND DEMOLITION	Sanjet Kennedy	1410 ALGOA FRIENDSWOOD RD	ALVIN	77511-8474	infinityrandd@gmail.com	832-755-5078	409-925-2484	Selective and complete demolition. Construction material recycling.
INLAND ENVIRONMENTS, LTD.	Jed A Landrey	PO BOX 6751	KINGWOOD	77325-6751	lori@inlandenvironments.com	281-354-7500	281-354-7540	Asbestos Abatement, Lead Abatement, Mold Rediation, Interior & Structural Demolition.
INTERCON ENVIRONMENTAL, INC.	Karen Andrews	210 S WALNUT CREEK DR	MANSFIELD	76063-2013	karen@intercon-environmental.com	817-477-9995	817-477-9996	Asbestos, Lead & Mold Abatement, Demolition & Construction Services, Interior Demolition
J & J INSULATION AND ACOUSTICS INC	MARTHA ANN MAJEK	800 CANTWELL LN	CORPUS CHRISTI	78408-2606	justin@jandjinsulation.com	361-887-6603	361-882-5872	DEMOLITION, ASBESTOS ABATEMENT, LEAD ABATEMENT, MOLD REMEDIATION, FIRE AND FLOOD RESTORATION AND LAND CLEARING
J E SPECIALTIES, INC.	James W. Harris	6031 SOUTH LOOP EAST	HOUSTON	77033	sales@je-assoc.com	713-640-1177	713-645-8048	Janitorial Supplies and Supplies

J&K TRACTOR SERVICE	Keith woods	4720 SOUTH ST	BROOKSHIRE	77423	keithwoods71@yahoo.com	832-641-6791		Concrete, demolition clean up services
J-R INTEREST, INC.	RICHARD SANTOS	1207 DORAL COURT	SAN ANTONIO	78260	RICKYPUH2001@YAHOO.COM	210-559-7150	210-559-7150	FRAMING, DRYWALL, CEILING GRID, MISC. REPAIRS
J. SANCHEZ CONTRACTING, INC.	Jose L. Sanchez	P.O. BOX 240580	SAN ANTONIO	78224-1803	jsanchez121@adol.com	210-924-3696	210-924-3694	General contractor offering framing, painting, concrete, electrical, site work, paving, utilities installation, interior finish out, exterior & interior
J.R. RAMON & SONS, INC.	Joe Ramon	1325 FRIO CITY ROAD	SAN ANTONIO	78226-7321	tnramon@ramondemolition.com	210-225-1583	210-225-7955	Demolition, Excavation, Site Cleaning, Site Preparation
JAG SERVICES	GILBERTO GUAJARDO JR	31273 FM 510	SAN BENITO	78586	CABLEDIGGER1956@YAHOO.COM	956-456-1923		CONCRETE CONSTRUCTION, UTILITIES, PAVING SEPTIC TANKS, BURY (TELEPHONE CABLES)
JAKECO CONSTRUCTION, INC.	Nicole	347 ROSE MEADOW DR	LA VERNIA	78121-4764	jacoinc@aol.com	210-745-1302	210-745-1357	Industrial/commercial Contracting, general contracting Electrical contracting
JAN-CAR, INCORPORATED	G.L. Bob Jarvis	12300 GATEWAY BLVD E	EL PASO	79927-7727	bjarvisclan@aol.com	915-852-9500	915-852-9331	General Construction Commercial Buildin
JK COMMERCIAL CLEANING	Robert Ochoa	PO BOX 91121	AUSTIN	78709-1121	rochoa@jkcleaning.org	512-228-1837	512-582-0690	commercial janitorial services to include, day porters, window cleaning, carpet cleaning, floor work, and post construction cleaning.
JMR DEMOLITION, LTD.	Martha Robles	12200 ROBERTA LYNNE DR.	EL PASO	79936	jmrddemolition@yahoo.com	915-858-0376	915-858-3387	Demolition of Commercial and Residential Properties; Interior and Exterior, For Private Owners and/or General Contractors.

JNI CONTRACTORS	Jose A. Perez	2704 N. MLK. JR. BLVD.,	LUBBOCK	79403	isaacperez22@msn.com	806-747-6773	806-747-1012	Construction, General (Backfill Services, Digging, Ditching, Road Grading, Rock Stabilization, etc.)Demolition and Excavation Services
JOB DISTRIBUTING, INC.	Billye A. Osborn	139 ELKINS LAKE	HUNTSVILLE	77340-7303	retirement@suddenlink.net	936-435-1407	936-435-1001	building materials, hardware, flooring
JOE GARCIA COMPANY	JOE GARCIA	JOE GARCIA	AUSTIN	78756	joejgc1@aol.com	512-459-1996	512-459-1996	NEW & REMODEL CONSTRUCTION
JOEL RODRIGUEZ CONSTRUCTION, INC.	Joel Rodriguez	120 E. 74TH STREET	LUBBOCK	79404	joel-rodriguez@sbcglobal.net	806-438-8102	806-745-1465	Construction Site Cleanup/Demolition/Excavation.
JOHNSON ROOFING, INC.	SHERRI MCDONALD	PO BOX 11009	WACO	76716-1009	SHERRI@JROOF.COM	254-662-5571	254-662-4807	Install commercial and residential roofing systems.
JON TUCKER CONSTRUCTION, LTD.	ALLISON L TUCKER	7441 MIZE ROAD	BRYAN	77808	tuckerconstruction@mac.com	979-777-9427	979-589-3471	FLAT WORK, LAND LEVELING, DIRT WORK, CONCRETE WORK
JR'S DEMOLITION & EXCAVATING, INC.	Tami Lindamood	1926 PARKSIDE AVE	IRVING	75061-6944	Tami@JRDemolition.com	972-254-1212	972-254-1211	Complete site demolition and removal of both residential and commercial structures.
JRJ ENTERPRISE LLC	Denise Anderson	1471 FM 933	AQUILLA	76622	rdandersonus@windstream.net	254-694-3891	254-694-3983	General contractor, subcontractor and maintenance contractor
JS CONSTRUCTION	Jean Straughn	242 W LIVE OAK ST	JACKSBORO	76458-1748	jsconstruction24@sbcglobal.net	940-507-0828	940-567-5573	Installation of acoustical ceilings, drywall, framing, all interior finishes
KA-TEX CONSTRUCTORS, INC.	RENE GRIFFITH	855 WAKEFIELD DR.	HOUSTON	77018	rene@katexconstructors.com	713-692-0707	713-692-8517	GENERAL CONTRACTOR - COMMERCIAL CONSTRUCTION/OFFICE BUILDOUT, ETC.
KD'S JANITORIAL SERVICE	Kenneth Demerson	4000 HORIZON HILL BLVD APT 2107	SAN ANTONIO	78229	kds-755@ah.net	830-370-0367	210-257-8807	Custodial work, Window cleaning.
KENNEDY CONSTRUCTION COMPANY	Karen Kennedy	PO BOX 807	GRANDVIEW	76050-0807	karen@kccenviro.com	817-556-9421	817-556-9422	environmental construction, demolition, excavation & dump truck service, site clean ups

KIMZEY CONSTRUCTION, LLC	PAUL SCHURR	7510 W MAIN ST	FRISCO	75033-5361	PAUL@KIMZEY CONSTRUCTIO N.COM	214-391- 3111	214-295- 9450	Commercial & residential construction, new home construction, fencing, flooring, swim ming pools, landscape design, remodeling & general construction.
L & G CONCRETE CONSTRUCTION, INC.	Erasmio Lopez	2100 W. EXPRESSWAY 83	MERCEDES	78570	pgarzajr@lgcon crete.com	956-565- 6334	956-565- 1089	Concrete construction specializing in Title walls, foundations and concrete paving.
LAREDO CLEAN SWEEP, INC.	Roberto Luis Trevino	P.O. BOX 333	LAREDO	78042	drew@souther nlaredo.com	956-723- 3333	956-723- 7775	TRASH REMOVAL.
LARGIN CONSTRUCTION SERVICES, LLC	Jerry Jo Largin	6645 LONG MEADOW DR	CORPUS CHRISTI	78413-2234	jerryjo@largin construction.co m	361-723- 1573	361-723- 1579	General Contractor - Commercial construction
LASALLE AFFORDABLE BUILDERS LLC	Maribel Morales	P.O. BOX 982	CASTROVILLE	78009-2480	lasalleab@yah oo.com	210-415- 7912	877-207- 2275	General Construction Services
LEETEX CONSTRUCTION, LLC	Richard L. Karlos	4925 GREENVILLE AVE STE 1300	DALLAS	75206-4022	rkarlos@leetex lc.com	214-360- 4700	214-360- 9494	Construction Management, Program Management, General Contractor/Inspections, roofing, electrical
LEMCO CONSTRUCTION SERVICES, L.P.	JUDY LEMBKE	14131 MIDWAY RD STE 660	ADDISON	75001-3660	jlembke@lemc ocs.com	214-637- 4222	214-637- 4220	full service commercial construction firm providing construction management, general contracting, design-build and consulting services.
LIFESAVER CONSTRUCTION AND SUPPLY	GINA ALSUP	7713 LONGLEAF DR	PEARLAND	77581-8989	choiceins@hot mail.com	281-997- 2903	281-997- 2294	General Contractor and various supplies
LINDAMOOD DEMOLITION, INC.	KAYLA LINDAMOOD	2020 S NURSERY RD	IRVING	75060-7031	k1925@aol.co m	972-721- 0898	972-438- 6745	Demolition of structures and excavating

LONE STAR GRADING & MATERIALS, LLC	Vicki Helm	PO BOX 1162	SALADO	76571-1162	vicki.helm@lonestargrading.com	254-947-0149	254-933-7904	EXCAVATION, SITEWORK, STREETS, DRIVEWAYS, SUBDIVISIONS, BUILDING PADS, LAND CLEARING/LEVELING, CONCRETE CURB, & GUTTER, SIDE WALKS, PADS, ETC. PARKING LOTS, HAULING, PIT MATERIALS, SITE CLEAN UP, TOP SOIL SALES & INSTALLATION. CHIP & SEAL COATING, ETC
LONE STAR RECYCLING, LTD.	TRACY K. SARVER	919 ECHO LN	HOUSTON	77024-2736	tsarver@lascoddevelopment.com	713-365-0389		Waste Hauling & Recycling.
LOVEJOY CONSTRUCTION	Keith Ziegelman	4701 STAGGERBRUSH RD APT 1222	AUSTIN	78749-1046	keith@lovejoyconstruction.com	512-553-2006		General Contractor
LOZANO CONSTRUCTION CO., INC.	Pres./Pete G. Lozano, Jr.	19347 TRUMBO RD.	SAN ANTONIO	78264	rosanloza@aol.com	210-626-2880	210-626-9958	BUILDING AND CONSTRUCTION
LOZANO TRUCKING COMPANY, INC.	Irma Camarillo/President	307 W. CHAVAVEAUX ROAD	SAN ANTONIO	78221	irma.camarillo@sbcglobal.net	210-924-4311	210-927-9400	Demolition, Hauling, Sitework, Excavation
LPR CLEANING SOLUTIONS, LLC	Elizabeth Roth	PO BOX 160254	SAN ANTONIO	78280-2454	liz@lprcleaningsolutions.com	210-788-1033		Cleaning Services and Janitorial, Custodial Services.
LUIS DOORS & CLOSER SERVICE	LUIS ESTRADA	6216 JM HOLLOWAY LN	AUSTIN	78724	luisdoors1329@sbcglobal.net	512-785-6054	512-933-1906	DOORS, FRAMES, HARDWARE, INSTALLATION & SERVICES & DEMOLITION.
M K MIDDLETON INC	Kimmie Middleton	PO BOX 1897	HEREFORD	79045	kim@mkmiddleton.com	806-364-5358	806-364-0975	Crane service, steel fabrication and steel erection, welding, conveyors and general contracting.

M. CHRISTOPHER AND COMPANY	Owner & Pres./Rudy Rivas	630 OAKMONT COURT	FAIRVIEW	75069	rudy@mchristopherinc.com	972-974-2777	972-529-1078	Custom home builder, residential & commercial remodeling, commercial, medical, hospitality, food service & retail finish out construction, multi family exterior renovations & new construction.
MAGNUM ELECTRICAL CONTRACTORS INC.	Edward Garcia	2504 SW LOOP 410, STE.B	SAN ANTONIO	78227-2545	magnumelectric@att.net	210-674-3141	210-674-9342	Electrical and General Contractor
MALTBY BUILDERS INC	SANDRA MALTBY	P O BOX 5083	KINGSVILLE	78364	maltbybuilders@sbcglobal.net	361-592-8426	361-592-8447	COMMERCIAL & RESIDENTIAL-NEW & REMODELING
MARIO L CARLIN MANAGEMENT, LLC	Mario L. Carlin	605 CANYON TRAIL CT	ROUND ROCK	78664-7150	MARIOCARLIN@AOL.COM	512-417-7495		Heavy Construction other than Building Contracts
MARLOWE ROOFING, INC.	Mark Marlowe	7150 WHIPPOORWILL LANE #1	SAN ANTONIO	78263	marloweroofing@att.net	210-648-9380	210-648-9380	Roofing contractor for commercial, industrial & residential building & remodeling.
MASTER'S DESIGN BUILD	Otoh Chinedu	6508 TOM STOCK ST APT D	FORT WORTH	76116	chinedu020@yahoo.com	972-352-1260		general construction contracting
MCS CONTRACTORS, INC.	Kimberly A. Chitwood	PO BOX 64895	LUBBOCK	79464	kimberly@mcscontractors.com	806-686-0255	806-722-3087	General Contractor - Building Construction.
MD MADISON CONSTRUCTION, LLC	Marcus D. Madison	19818 SHALLOW SHAFT LN	RICHMOND	77407-3997	info@mdmadison.net	713-418-0272	713-493-0077	Commercial and Residential General Construction interior, exterior, facilities management.
MDP MULTI SERVICES LLC.	MICHAEL PAUL	8415 MACOW CT	ROSHARON	77583-6594	SERVICESBYMDP@YAHOO.COM	281-972-9133	281-972-9133	Residential and Commercial Services: Construction Project Management, Renovation, Remodeling, Maintenance, Cleaning, Flooring
MEB CONSTRUCTION LLC	Eve Clark	3100 MAIN STREET	DALLAS	75226	eve@mebconstructionllc.com	817-490-1616	817-490-1624	Commercial and Institutional Building Construction
MEDINA'S JANITORIAL SALES & SERVICE	HELEN MEDINA	P.O BOX 28167	SAN ANTONIO	78228	MEDINASBIS@AOL.COM	210-434-2090	210-497-5705	JANITORIAL SUPPLIES SALES & SERVICE.

MEDTRONIX SOLUTIONS USA LLC	CEO & OWNER/ Sarfraz Taj	503 CASTLEFORD DRIVE	ALLEN	75013	usallcms@gmail.com	469-767-9645	972-747-7126	Provide pre construction management services. It includes Demolition, Dirt & Debris removal & hauling, Site Preparation, Grading.
MFH ENVIRONMENTAL CORP.	PRES/JOSIE NICKOLAS	1932 W. PAISANO	EL PASO	79922	rnickolas@mfh-corp.com	915-351-6004	915-351-6166	Asbestos Removal, And Demolition
MID-AMERICA CONTRACTORS, LLC	Elizabeth Cravens	3900 E PARKWAY ST	GROVES	77619-3608	elizabeth@mid-americacontractors.net	409-962-3600	409-962-3601	Construction, Metal Roofing, Siding, Pre-Engineered Bldgs, Steel Erection, Insulation, Painting, Coating, Scaffolding, FW/CSA/BW, Bldng Maintenance, Custodial Bldng Srvc, Janitorial Srvc, General Labor, Lawn Care, Site Support Srvc & Flaggers
MILLENNIUM PROJECT SOLUTIONS, INC.	Luke Morgan	14026 FM 2100 RD STE C	CROSBY	77532-9165	mmorgan@mps-team.com	281-328-2200	281-328-2251	Building construction, infection/dust control, asbestos abatement, mold remediation in the commercial, healthcare and educational facilities.
MLP VENTURES INC.	Liborio Perez	PO BOX 840	VON ORMY	78073-0840	mlp@att.net	210-623-8172	210-623-8168	General Contractors specializing in remodeling and new construction. Scope of work includes any and all phases of construction including design/build, project management, quality control, and specific trade construction (arch, mech, elect work).
MONTEMAYOR MANAGEMENT, INC.	Oscar R. Montemayor, Jr.	PO BOX 10866	HOUSTON	77206-0866	oscar@6100construction.com	713-449-9909	713-316-0913	Wood Framing and Siding Contractor. Multi-family, single family projects.
MPM COMMERCIAL SERVICES	Darrell Little	17519 PATTIGLEN	HOUSTON	77084	MPM_INVESTMENTS@Yahoo.COM	832-512-4828	409-935-2219	Janitorial services, housekeeping urethane painting exterior window cleaning powerwashing trash removal.

MST CONSULTING, INC.	Amada S. Flores	1523 E YANDELL DR	EL PASO	79902-5629	aimconstruction@att.net	915-545-2246	915-545-1218	Remodeling, new construction and roofing
MULTI-CONSTRUCTION & CLEANING SERVICE	CHARLES E BANKS	AIR COND. HEATING	AUSTIN	78752	multi.construction@yahoo.com	512-687-0437	512-687-0437	GENERAL CONTRACTOR, PAINTING, BUILDING CONSTRUCTION, REMODELING, CONCRET SLABS.
MYELYN CONTRACTORS, LLC	LAURA PORTER	1407 SCOTTSBORO LN	RICHARDSON	75082-3005	MYELYNCONTRACTORS@GMAIL.COM	214-418-5936		Painting, flooring, siding.
N.A.E. ENTERPRISES, INC.	Chantal Dauenhauer	P. O. BOX 1792	SPRINGTOWN	76082	chantal@naeelctric.com	817-220-2200	817-220-2221	Electrical Contracting. General Contracting
NATION WASTE, INC.	Maria Rios	P.O. BOX 91017	HOUSTON	77291	mrios@nationwaste.us	713-649-7776	281-260-9877	Solid Waste Collection, Other Waste Collection, Compaction Services & Recycling Services
NATIONS ENVIRONMENTAL SERVICES,	Tasha Alexander	INC.	IRVING	75039	talexander@nations-services.com	972-725-9345	972-725-9346	CONSTRUCTION AND ENVIRONMENTAL REMEDIATION
NATIVE ENERGY & TECHNOLOGY, INC.	JOHN MORRIS	110 BROADWAY ST	SAN ANTONIO	78205-1948	jmorris@native-energy.com	210-231-6060	210-231-6098	ENVIRONMENTAL CONSULTING & REMEDIATION SERVICES. OPERATIONS & MAINTENANCE OF FACILITIES, SPECIALIZED CONSTRUCTION PROJECTS
NEXT LEVEL BUILDERS, INC.	Tamra K. Crosson	P. O. BOX 32	AUBREY	76227-0032	tamrac@nxlbi.com	940-365-9189	940-365-0351	General construction/commercial contracting.
NORTH AMERICAN COMMERCIAL	Lynn Dunlap	CONSTRUCTION, L. P.	DALLAS	75229	lynn@naccolp.com	972-620-9975	972-620-9979	General contracting specializing in interior finishout and all related trades
O.G. CONSTRUCTION COMPANY, LLC	OMAR F. GARCIA	222 W. UNIVERSITY DRIVE	EDINBURG	78539	omar@ogbuild.com	956-292-0008	956-668-1333	INSTALLATION OF UNDERGROUND UTILITIES, ROADWAY CONSTRUCTION, AND SITE WORK.

ONSITE CONTRACTING, LLC	Benny Ximenez	PO BOX 624	WAXAHACHIE	75168-0624	benny@onsite-contracting.com	972-935-0150	972-938-7061	Building Construction, Site Construction, Rehab, Concrete, Steel, Renovations
PATE JONES PAVING	Eddie Jones Jr.	PO BOX 1112	KENNEDALE	76060-1112	patejonespaving@aol.com	817-561-5229	817-483-5233	Asphalt & concrete paving contractor, building pads, clearing & grubbing, moisture conditioning, lime stabilization. On parking lots, roadways, turning lanes & shoulder work.
PAYLESS INSULATION, INC.	VP/ELISA DIAS	1331 SEAMIST DRIVE	HOUSTON	77008	lmk@paylessinsulation.com	713-868-1021	713-868-7014	INSTALLATION OF INSULATION, FIREPROOFING & ACOUSTICAL-DISTRIBUTORS OF COTTON INSULATION & DUCTS
PEABODY GENERAL CONTRACTORS, INC.	SHELLEY PEABODY	P.O. BOX 3	DRIPPING SPRINGS	78620	shelley@peabodygeneral.com	800-443-7457	512-858-4132	INSTALLATION OF SITE UTILITIES, WATER, WASTEWATER, STORM SEWER, LIFT STATIONS
PEAK CONTRACTORS, LLC	Michael Herrera	100 TAYLOR ST STE 270	SAN ANTONIO	78205-1324	mherrera@peakcontractorstx.com	210-227-4322	210-495-0990	General Contracting, painting, flooring install, demo, new construction, remodel, finish work, carpentry, electrical, plumbing, drywall, telecommunications installation
PENINSULA SANITATION SERVICE, INC.	Teresa D. Parker	P. O. BOX 1931	CRYSTAL BEACH	77650	psspeople@aol.com	409-684-1925	409-684-4141	Roll off Dumpsters Rental for Construction, Demolition.
PEOPLE'S CHOICE ROOFING & REMODELING	MICHAEL R. SANCHEZ	P.O. BOX 10772	SAN ANTONIO	78210	peopleschoicerefg@yahoo.com	210-333-0802	844-274-0067	ROOF MAINTENANCE--SPECIAL-TILE
PIATRA INC.	Mirela Glass	PO BOX 9593	AUSTIN	78766-9593	info@piatrainc.com	512-299-0404	512-371-7476	Construction company focused on concrete, masonry, welding and fencing projects.
PILGRIM CONTRACTORS, INC.	Elise Carranza	12522 PATRIDGE CIRCLE	PINEHURST	77362		281-356-7647	281-252-6633	Commercial and Residential construction.
PILLAR AND STRONG INC.	Owner/Lee Olawale	7447 HARWIN DR., STE. 218	HOUSTON	77036	lee@pillarandstrong.com	713-780-3100	713-780-8996	Construction.

PINTO CONSTRUCTION CO., INC.	Theresa Ann Ainsworth Lewis	PO BOX 631878	NACOGDOCH ES	75963-1878	pat@netdot.com	936-569-6155	936-569-6334	HEAVY HWY CONSTRUCTION
PMG CUSTOM HOMES, INC.	Phillip Garcia	920 MILAM ST	COLUMBUS	78934	countrytimehomes@sbcglobal.net	979-732-5001	979-732-5002	General contractor that also subcontracts interior finishings of flooring, cabinets, countertops, hardware, etc.
POSEY'S CONSTRUCTION & DEVELOPMENT INC.	Babby Posey	7618 SERENE AVENUE	HUMBLE	77338	poseystractor@yahoo.com	832-754-5683	281-361-5683	Demolition, Land Clearing, Grading, Water line and Underground Utility Services/Broker of Plumbing Pipes and Supplies
PREMIER ROOFING SERVICES, INC.	Jackie Gallagher	624 VIA DEL SUR	MESQUITE	75150	garrettgallagher@tx.rr.com	214-755-1960		Roofing and Roof Repairs
PRIDE GENERAL CONTRACTORS LLC	Ramon T. Salgado	5959 GATEWAY BLVD W STE 512	EL PASO	79925-3319	pridegeneralcontractorsllc@gmail.com	915-771-9601	915-771-9600	General Construction, Demolition, Paving and Janitorial Services.
PRIME CONCRETE & EARTHWORK, LLC	Patricia A. Miner	9314 CLIFFWOOD DR	HOUSTON	77096	primece@yahoo.com	713-529-3001	713-529-6321	Earthwork and concrete construction, rough carpentry.
PRIME IRRIGATION & LANDSCAPE, INC.	RICARDO GUTIERREZ	5438 GATEWAY BLVD E	EL PASO	79905-1718	rgutierrez@primeirrigation.org	915-532-6215	915-351-9569	LANDSCAPING, IRRIGATION, DEMOLITION, ROCKWALLS, CONCRETE WORK
PRIME MAINTENANCE & CONSTRUCTION	Christina C. Cruz	1519 DELWOOD LANE	ALICE	78332	ccc1102@yahoo.com	361-701-1960	361-664-5200	General Construction services and building maintenance.
PRIMIS CORPORATION	Luis Carranza	3123 MONA LEE LANE	HOUSTON	77080	primiscorp@peoplepc.com	713-492-2936	713-583-9581	WOODEN PALLET/LUMBER SUPPLIER/EXCAVATION WORK/CONCRETE
PRISM DEVELOPMENT INC	Michael von Ohlen	2709 E 5TH ST	AUSTIN	78702	betty@prismdevelopmentinc.com	512-479-9587	512-479-9591	Heavy Construction other than Building Contracts
PROJECT MANAGEMENT SPECIALITIES, INC.	CHIQUETA FISHER	10298 WESTERN OAKS RD	FORT WORTH	76108-9738	clf@pmscontractors.com	817-246-3053	817-246-4841	General Contractor, Construction Management
PSE CONTRACTING, LLC	Alfredo Gonzalez	1825 S. W. W. WHITE ROAD	SAN ANTONIO	78220	fred@psecontracting.com	210-226-9797	210-226-1070	Full service electrical contractor, in-house frame, drywall & mill shop, General contractor and construction

PYRAMID CONCRETE UNLIMITED, L.L.C.	Hugo Seca	1701 JACAMAN ROAD, SUITE 11	LAREDO	78041	hseca@seca-engineering.com	956-753-3014	956-753-3017	General public works and land development construction
QUAD-TEX CONSTRUCTION INC	SUSAN C.CHMELAR	3600 PARK MEADOW LN	BRYAN	77802	qtc@quadtex.net	979-774-9341	979-774-9351	COMMERCIAL CONSTRUCTION OF BUILDINGS
QUALITY INNOVATIONS, INC.	MICHELE L. MORGAN	509 RED OAK DR	BOERNE	78006-7874	MICHELE@QI2.LLC.COM	281-705-8709	830-537-3611	GENERAL CONTRACTOR AND MATERIAL SUPPLIER FOR CONSTRUCTION PROJECTS
R. J. HARRIS CONSTRUCTION (GULF COAST),	Roger Harris	611 FM 1960 BYPASS RD E	HUMBLE	77338-3777	bids@harrisconstruction.us.com	281-548-1600	281-548-2100	Construciton -Commercial General Contractor - All phases Specializes in Interior Build-out & renovation. ADA upgrades, medical & restaurant facilities
R. L. H. CONSTRUCTION, INC.	Maxine W. Hughes	8001 BAYSIDE AVENUE	GALVESTON	77554	mhughesrlh@comcast.net	409-740-6988	409-740-6985	General Contractors specializing in the medical industry.
RAIN KING INC	TERESA CAIN	P O BOX 192	VICTORIA	77902	tcain@raining.com	361-576-0606	361-576-2089	COMMERCIAL ROOFING, SHEETMETAL.
RAMA ENTERPRISES LLC	Luis R.Spinola	1333B OAK LAWN	DALLAS	75207-3001	luisrs@ramament.com	817-303-9681	214-442-0171	All Other Specialty Trade Contractors
RAMROC CONSTRUCTION COMPANY	JOE RAMIREZ	LTD., L.L.P.	SAN ANTONIO	78209	info@ramroccoconstruction.com	210-226-4828	210-226-5650	GENERAL CONTRACTORS FOR COMMERCIAL AND RESIDENTIAL
RAPIDHAUL, L.L.C.	President/Marcos Ramirez	PO BOX 1013	ZAPATA	78076-1013	rapidhaul@yahoo.com	956-765-4585	956-765-9030	All aspects dealing with road paving and construction.
REAL NETWORK SERVICES INC.	Jose Reyes	14209 PROTON RD	DALLAS	75244-3606	bids@aboutreal.com	214-475-3065	972-284-7221	Electrical Contractors
REDHORSE LABOR, LLC	Marcie Solano	2022 ORCHID AVE	MCALLEN	78504-4152	marcie@redhorselabor.com	956-627-0507		The primary services provided by our business include: general labor, clean up, demolition, and loss prevention.
RFIELDHOUSE	dylan tomlin	4120 CUMMINGS DR	N RICHLAND HILLS	76180-8640	reubenpie@netzero.net	817-715-1047	817-421-8960	excavation,materials provider,demolition, design/build, go green energy

RG ENTERPRISES LLC	RENE GARZA	5125 S BUSINESS HIGHWAY 281	EDINBURG	78539-7831	RGARZAJR26@YAHOO.COM	956-283-7030	956-283-7040	Commercial and Residential construction, CDBG & HUD funded projects.
RHINO CONTRACTORS, LLC	President/Nancy W Russell	26163 ALTAS PALMAS RD	HARLINGEN	78552	nancy@rhino-rgv.com	956-364-1737	956-412-6240	General construction specializing in commercial, industrial and residential building and remodeling under one million dollars. Rhino performs all tasks related to rebuilding and remodeling.
RICHARDSON AND SON ROOFING AND	PRES./REGGIE RICHARDSON	CONSTRUCTION, INC.	ROWLETT	75088	reggie@richardsonandsonconstruction.com	972-780-3720		GENERAL REMODELING & CONSTRUCTION SUCH AS CONCRETE ASPHALT, PAINTING, MASONRY, WINDOWS, ROOFING, FOUNDATION REPAIRS, SIDING
RIGNEY CONSTRUCTION & DEVELOPMENT, LLC	Pres./John Rigney	7011 N. SEMINARY RD.	EDINBURG	78541	rigneyconstruct@aol.com	956-638-6421	956-287-1646	General Contractor.
RIO BREWSTER WASTE MANAGEMENT LLC	Patricia Chisum	PO BOX 868	LEAKEY	78873-0868	rbwastemanagement@yahoo.com	830-232-6727	830-232-5404	waste service, aggregates, concrete, tractor work, building supplies, plumbing supplies
RIO ROOFING, INC.	TOM GONZALEZ	310 HANMORE INDUSTRIAL PKWY	HARLINGEN	78550-7673	rioroofermama@aol.com	956-423-3359	956-423-3382	COMMERCIAL ROOFING; ROOFING AND SHEET METAL
RIOS CONSTRUCTION	Cheryl Rios Chavez	10118 BOXING PASS	SAN ANTONIO	78251-3244	riosconstruction@yahoo.com	210-547-0515	210-547-0515	Paving and Earthwork
RIVER CITY DISPOSAL	Odis Spencer	PO BOX 831503	SAN ANTONIO	78283	rcd3678@aol.com	210-863-1421	210-735-9104	rufuse company that offers waste collection and disposal services to commercial, government, and state entities
RNDI COMPANIES, INC.	DIANA I. CROSS	2255 RIDGE RD STE 216	ROCKWALL	75087-5146	diana@rndicompanies.com	214-771-3977	214-771-3988	ASBESTOS, LEAD, MOLD ABATEMENT/DEMOLITION/RENOVATION.

ROBLES 1, LLC	VICE-PRESIDENT/SAUL ROBLES	2331 BOLTON RD.	MARION	78124	SROBLES@ROBLES1.NET	210-566-8787	210-568-2611	DEMOLITION CONTRACTOR
RODCON SERVICES	Owner/Rene Rodriguez	635 MARY ST.	TAFT	78390	rodriguezconstruction361@yahoo.com	361-877-0683	361-528-0427	Construction
ROK9, LLC	Sonja Alexander	309 PARTRIDGE DR	ROCKWALL	75032-7403	sflash9@yahoo.com	214-395-1380	927-771-6121	Asbestos Abatement, Demolition and Interior Demolition.
ROLLINS CONSTRUCTION SERVICES INC	Debbie Thompson	3102 MAPLE AVENUE, #140	DALLAS	75201-1208	mrollins@rollinsconstruction-inc.com	214-678-1000	214-678-1999	Commercial and Institutional Building Construction
ROLLO GURSS CONSTRUCTION, INC.	Rollo Gurss	1120 E SLATON RD	LUBBOCK	79404-6006	rollo@gurssconstruction.com	806-763-3083	806-763-0380	Framing, drywall, ceilings, roofing, eifs, insulation, tape and texture, and painting.
ROWELL INVESTMENTS, INC.	Ernie Longoria	2571 MERRELL RD	DALLAS	75229	estimating@jerichodemo.com	972-247-6618	972-247-6619	Selective Interior Demolition
RRC CONSTRUCTION	VP/Michael Ramirez	5023 PRINCETON AVE STE 5	MIDLAND	79703-4540	michaelr@rrc-construction.com	432-618-9939	432-618-9939	General contractors in any type of building.
RTM CONSTRUCTION CO., INC.	Gen. Partner/Thomas J. Smith	P.O. BOX 689	ADKINS	78101	tom@rtmconstructionltd.com	210-649-4600	210-649-4602	Installation of underground utilities, water lines, sewer lines, gas lines, storm drain lines, duct banks, roads & parking lot base & asphalt work.
RUCOBA & MAYA CONSTRUCTION, LLC	Rodolfo Rucoba	PO BOX 14532	AUSTIN	78761-4532	rudy@rucobaconstruction.com	832-867-6673		concrete; flatwork, retaining walls, box culverts, concrete walls
RUFF CORPORATION	MARLA S. McDANIEL	P.O. BOX 5458	SAM RAYBURN	75951	marla@ruffcorp.com	409-698-2893	409-698-2897	CONCRETE; COMMUNICATION TOWERS; METAL BUILDINGS; ELECTRICAL; CIVIL, LAND CLEARING & DEBRIS REMOVAL; FENCING; CONSTRUCTION & MAINTENANCE
RUSTIC CEDAR CABINS OF TEXAS, INC.	Abbie NAVARRO	1036 HWY 71 WEST	SMITHVILLE	78957	abbie@txcabin.com	512-360-3359	866-830-5119	CONSTRUCTION OF CEDAR CABINS.

S & C SERVICE ENTERPRISES, LLC	SYLVIA KERSTEN	24810 JACANA DR	MAGNOLIA	77355-3443	SYLVIAKERSTE N@AOL.COM	713-298- 2027	866-381- 9033	Residential & commercial roofing contractor. We specialize in storm damage repairs from wind, hail, and hurricane.
S & R WATERPROOFING AND ROOFING, LLC	Stephanie Petersen	7402 MILLIES RUN RD	MONTGOME RY	77316-6802	randall@srwat erproofing.com	281-726- 2305	936-588- 7493	Waterproofing , Roofing and Parking structure repairs
S&H WASTE DISPOSAL SERVICES, L.L.C.	Mailo Lozano	11417 LONG ST.	BALCH SPRING	75180-3231	shrolloff@yaho o.com	972-682- 3727	972-286- 2929	Solid Waste Disposal/Garage Trash Removal.
S-L-F CONSTRUCTION	Suzanne Mikel	PO BOX 927	HEMPSTEAD	77445	suzanne.mikel @yahoo.com	713-805- 1435	979-826- 4944	All phases of construction - new, maintenance, and/or repair, from foundations to plumbing to finishing work including fencing of all types.
SABA QUALITY SYSTEMS INC	SABA RIAZ	5902 THEALL ROAD	HOUSTON	77066	QUALITYSYSTE M.QS@GMAIL. COM	832-715- 3415		Also provides computer related services including home/networking as well as data back up and recovery.
SALEK, INC.	Pres./Jila Sharghi	6105 SIERRA ARBOR	AUSTIN	78759	jila_shar@yaho o.com	512-850- 2626		Professional engineering services related to civil engineering design, permitting and site construction.
SALMAC CONSTRUCTION & EXCAVATING, LLC	Roy Salinas	6408 LYNCH LN	AUSTIN	78741-2413	salmacco@aol. com	512-385- 2209	512-385- 2289	Labor, Backhoe, Bobcat, Concrete Repairs-Demolition
SAM'S PLUMBING & ENVIRONMENTAL	Partn/Graciela M. Favela	CONTROL LLC	EL PASO	79915-2414	sfavela1940@g mail.com	915-778- 8517		Plumbing-Residential& Commercial HVAC Systems residential& Commercial Flooring, Demolition, Painting& Drywall
SCARBOROUGH INDUSTRIES, INC.	Terri N. Scarborough	8480 HWY. 87 N.	ORANGE	77632	rscarborough@ ijntb.net	409-886- 7419	409-886- 8264	Insulation
SCHULTE ROOFING, INC.	Josh Schulte	PO BOX 1416	NAVASOTA	77868-1416	josh@schultero ofing.com	936-825- 3690	936-825- 3842	Roofing Contractor
SEAL CONSTRUCTION	Joe Fonseca	21784 US 77 EXPRESSWAY	HARLINGEN	78552	Joe.fonseca@g mail.com	956-440- 7325	956-440- 8784	Residential/Commercial General Contractor.

SHELTON & SHELTON PLUMBING, L.P.	President/Lana R. Shelton	PO BOX 690159	KILLEEN	76549	Lshelton@sheltonsplumbing.com	254-699-2115	254-554-8039	COMMERCIAL PLUMBING, PIPELINE UTILITIES & ROAD BORING
SILVER STAR LOGISTICS LLC	Adrian Jarrell	PO BOX 541811	DALLAS	75354-1811	ajarrell10@gmail.com	214-734-8336		We Haul dirt, asphalt, concrete, rock, and other materials.
SITEK OMNI SERVICES, LLC	Jonathan Woodard	1710 1ST ST E	HUMBLE	77338-5233	jwoodard@sitek.comni.com	713-203-6897		Environmental (Asbestos, Lead, Mold, PCB, Universal Waste) Remediation and Demolition (Selective and Structural) Work.
SKYSTONE ROOFING GROUP	Wayne T Lawrence	2777 STEMMONS FREEWAY	DALLAS	75207	wlawrence@skystoneroofing.com	469-802-5187	214-279-0788	Roofing Contractors
SOLID CONSTRUCTION SOLUTIONS	Agustin Gomez	LIMITED LIABILITY COMPANY	CHANNELVIEW	77530	agustin@solidconstructionsolutions.com	281-864-9151	281-864-9153	Commercial and Institutional building renovation and expansions. Interior finishes, concrete pour, and roofing for metal and flat roof membranes.
SOLID STRUCTURES, INC.	President/Francisco Arriaga	3040 FM 802, SUITE A	BROWNVILLE	78526	sstructures63@yahoo.com	956-544-5459	956-541-7518	Residential Homes-Construction.
SOLIS CONSTRUCTORS, INC.	J EDWARD LOWENBERG	9100 UNITED DR	AUSTIN	78758-7716	estimating@solisconstructors.com	512-450-0280	512-380-9670	General Contractor - Building Construction, including General Contractors and Operative Builders
SOUTH TEXAS CONSTRUCTION, CORP	Jose Macedo Jr	418 N GULF BLVD	FREESPORT	77541-4310	jmacedo@southtexasconstruction.net	979-239-3018	979-230-9408	Insulation, Scaffolding, Fireproofing, Sandblasting, Painting, Roofing&Siding, Concrete Work
SP DESIGN & CONSTRUCTION LLC	Project Manager/Aaron Eddy	5326 EAST HWY 71	DEL VALLE	78617	Aaron@sproofsystems.com	512-322-0098	512-236-5172	Roofing, Siding, Interior Finish Out
SPEEDWAY BUILDING SYSTEMS, INC.	Jane K. Crawford	16135 COLLEGE OAK	SAN ANTONIO	78249	sbssat@aol.com	210-561-2540	210-561-2542	Building Construction, General Contractor, Pre-fabricated, Pre-engineered buildings.
SPOTLESS CLEANING	Caren Wendt	13903 THERMAL DR	AUSTIN	78728-7736	sciclean@spotcleaninc.com	512-784-6844	512-233-0820	Commercial Janitorial

SR ROOFING SOLUTIONS, INC.	Dee Rainey	1357 N WALTON WALKER BLVD	DALLAS	75211-1042	dee@srrsinc.com	214-298-5486	972-317-9607	Roofing solutions for commercial properties.
STEVEN R. HILL CONSTRUCTION CO., INC.	STEVEN HILL	7782 HAMMERLY BLVD	HOUSTON	77055	steven@srhillconstruction.com	713-956-5861	713-956-5817	CONCRETE SUBCONTRACTOR, EARTHWORK, DEMOLITION
STRUCTURAL ROOFING	Hector Leija	2616 FONVILLE DR	DALLAS	75227-6833	hectorleija@inbox.com	214-864-9310		Commercial Roofing Systems Contractor.
STRUHS COMPANY, INC.	Elizabeth N. Falconer	1209 EAST BELKNAP	FORT WORTH	76102	efalconer@struhsco.com	817-318-8000	817-332-4211	General Contracting/Construction.
STRUHS II, LLC	Elizabeth N. Falconer	1209 E BELKNAP ST	FORT WORTH	76102-2406	efalconer@struhsco.com	817-318-8000	817-332-4211	General Contracting/Construction Services.
SUPER CLEAR LAND CLEARING INC.	Charles T Perry	12342 CAROLA FOREST DR.	HOUSTON	77044	landisclear@yahoo.com	281-436-1541	281-436-1541	Specializing in demolition, excavation, asphalt, concrete, tree removal, underbrush removal.
T. B. TRANSPORT SERVICES, LLC	Terry L. Brown	3115 WASHINGTON BLVD	BEAUMONT	77705	tbrown1009@yahoo.com	409-454-1782		demolition,debris clean up,construction builing,highway road construction
TABEZA HOLDINGS, LLC	Francisco Meza	10604 N 24TH ST	MCALLEN	78504-6313	fmeza.usp1@gmail.com	956-739-8201		Training, Security, Logistics.
TDT, INC.	David Rivera	9191 WHITE CREEK RD	COLLEGE STATION	77845	Shellytdt@verizon.net	979-846-3339	979-260-2979	Dirt Contractors/Demolition
TEJAS PREMIER BUILDING CONTRACTOR, INC.	President / Julissa Carielo	1711 S. LAREDO ST.	SAN ANTONIO	78207-7077	julissa@tejaspremierbc.com	210-821-5858	210-821-5862	full service commercial general contractor
TEX-AM CONSTRUCTION LLC	Amber Gebert	106 SWENSON DR	HUTTO	78634-4374	amber_chainy@yahoo.com	512-225-4915		General Constuction including masonry, painting, demolition, new and renovation construction.
TEX-STAR CONSTRUCTION	Darlene SINGLETON	1003 ROCKY DR	AUSTIN	78732	RSTR787@AOL.COM	512-695-2152	512-266-2625	general contractor
TEXAS DRYWALL SERVICE	Owner - Oscar Del Fierro	535 WARE BLVD	SAN ANTONIO	78221	txsdrywall@yahoo.com	210-534-4315	210-532-4569	HANG SHEETROCK, TAPE/FLOAT. SPRAY TEXTURE & ALL OTHER DRYWALL WORK

TEXAS LIQUA TECH SERVICES, INC.	Angie Palladini	1819 MILBY ST	HOUSTON	77003-5607	angie@liquatech.com	713-225-5325	713-225-2755	Waterproofing, Roofing & Sheetmetal(caulking,glazing, repellents, deck coatings,elastomeric coatings,concrete & masonry repair, leak repairs, pressure washing, reroofs, roof repairs, roof coatings
TEXAS ROOF MANAGEMENT, INC.	Pres./CATHERINE AWTRY	728 LINGCO DRIVE	RICHARDSON	75081-1975	CAWTREY@TEXASROOF.COM	972-272-7663	972-271-6933	COMMERCIAL RE-ROOFING, REPAIR & MAINTENANCE
THE GONZALEZ GROUP, LP	Michael Gonzalez	1245 ANDERSON STREET	HOUSTON	77081	Michael@the-gonzalezgroup.com	832-242-2300	832-242-2310	Construction Management Only For Building Finishing
THE ROOF METAL & CONSTRUCTION CO.	Pres./Carmen Ortiz	4016 JOHNSON AVE.	EL PASO	79930-6856	cortizroofing@aol.com	915-566-2236	915-842-8632	Construction/Roofing
THE TREVINO GROUP, INC.	Gilbert De La Cruz	1616 W 22ND ST	HOUSTON	77008-1504	gdelacruz@trevinogroup.com	713-863-8333	713-863-8522	GENERAL CONTRACTING, CONSTRUCTION MANAGEMENT, DESIGN BUILDER JOB ORDER CONTRACT, CMAR
THE YAHN GROUP, INC.	Barbara J. Yahn	11701 GARRETT RD	HOUSTON	77044-5166	byahn@yahngroup.com	281-436-1781		Excavation, demolition, site preparation, site construction, site utilities, concrete recycling
TICE ENTERPRISES, LTD.	CAROLYN B. COLEMAN	6909 LAKEWOOD BLVD	DALLAS	75214-3557	CAROLYN@TICEENTERPRISES.NET	214-319-0040	214-550-2564	ROOFING - COMMERCIAL & RESIDENTIAL.
TIDY ENTERPRISE, INC.	Myong S. Kim	501 W. POWELL LANE. #307	AUSTIN	78753	tidyenterprise@hotmail.com	512-490-6642	512-490-6643	Janitorial service and construction
TIEMPO COMMUNICATIONS AND UTILITY	Pres./Belinda Flores	SERVICES, INC.	HOUSTON	77099	tiempocomm@aol.com	281-924-6924	281-530-4857	Communications, site work, clearing, all underground and aerial utilities, water, gas, phone, cable tv, fiber optics
TIERRA FIRME CONSTRUCTION, INC.	ADRIAN RUIZ	5861 CLEVELAND AVE	EL PASO	79905	tierrafirmeco@aol.com	915-881-0200	915-881-0269	STRUCTURAL CONCRETE AND SITE PREPARATION

TOPSIDE CONTRACTING, LLC	Jerry Fernandez	703 CUPPLES RD	SAN ANTONIO	78237-4331	jerry.fernandez@topsidecontracting.com	210-438-1030	210-438-1911	Commercial Roofing Application and repair.
TOUCH & AGREE PROPERTY MANAGEMENT AND MA	Alfred Booker Jr.	15914 BLUERIDGE RD	MISSOURI CITY	77489-1306	touchandagree svcs@sbcglobal.net	281-437-0566	281-437-0566	Provide janitorial services; lawn maintenance services; power washing of building exteriors, decks & fences and provides local trash hauling.
TRI-GEN CONSTRUCTION, L.L.C.	Jorge Gonzalez	509 E PIKE BLVD STE A	WESLACO	78596-4907	jgonzalez@tri-gen.com	956-447-1048	956-447-2003	General contractor for commercial building and general construction.
TRINI CONSTRUCTION BUILDER LLC	Reginald Worlds	PO BOX 81431	AUSTIN	78708-1431	info@triniconstructionbuilder.com	512-282-2262	512-535-7962	Building Construction, including General Contractors and Operative Builders,
TROY STEEL, INC.	Carole Kent	1951 S. MAGNOLIA AVE	LULING	78648	magmatx1@att.net	830-875-9088	830-875-8769	Demolition, Salvage, Tank Removal, Shearing of Metal Structures, Removal of concrete slabs, trucking, sand, gravel, materials
UNDERGROUND WATER SOLUTIONS	Mauel Martinez	13342 OLK KIMBRO RD	MANOR	78653-0000	manuel@uwsc o.net	512-278-9333	512-278-9133	Underground Utilities, site work and concrete work
UNIDAD CONSTRUCTION, LLC	Robert Terrazas	17 S CHADBOURNE ST STE 504	SAN ANGELO	76903	rt828@wcc.net	326-234-6205		Construction
VERTEX CONTRACTORS, LLC	Ana Lilia Archuleta	8800 YERMOLAND DR	EL PASO	79907-1804	erruiz@vertexc ontractors.net	915-591-6170	915-591-6199	Heavy Construction other than building construction, earthwork, storm drain, Site concrete, Bldg Concrete and utilites
VERTEX CORPORATION	Robert Verette	27888 DOS CERROS CIR	BOERNE	78006	vertex@gvtc.com	830-446-6601	866-639-6912	New Construction, remodeling, site work...
VIP CONSTRUCTION, LLC	Victor C. Jones	8542 MARIANNA WAY	ALVARADO	76009-8764	victorjones98@gmail.com	817-783-2123	817-783-2123	Remodeling home and common building.
W.A. ROBBINS CONSTRUCTION CO., INC.	Wendell Robbins III	4622 DAGG ROAD	HOUSTON	77048-0019	warobbjr@aol.com	713-644-5823	713-644-5422	Commercial Construction

W.S.J CLEANOUT/REMOVAL SERVICE	Shaun K. Smith	201 ODYSSEY LN	MANSFIELD	76063-3439	Wsjcleanout@yahoo.com	817-583-9265		Cleanout/Removal Services provides trash and debris removal for Foreclosed homes and cleaning of those foreclosed homes and or commercial buildings.
WALKERS' CONSTRUCTION & DEMOLITION L L C	Cornelius Walker	1141 HARVEST HILL	LANCASTER	75146	karen36891@s.com	214-235-9791	972-227-5776	RESIDENTIAL AND COMMERCIAL CONSTRUCTION - All Trades
WCSA, INC.	Joe Whiteside	PO BOX 20634	AMARILLO	79114	joewhiteside@wcsainc.com	806-383-1060	806-383-0550	Construction excavation, maint., demolition, & vacuum truck services to industrial plants/municipal operations. Excavation-demolition, building/repairing pads, ponds, ditches, roads & project management. Vac Truck-spills, ponds, tanks,silos,& vaults.
WEIR 777, LLC	Al Weir	10850 LUNA RD	DALLAS	75220-7012	alweir777@gmail.com	469-708-8549		Aggregate materials, crushing and recycling. Bridge Work, Roadways and Demolition.
WEST TEXAS CONTRACTORS	BALTAZAR URIAS	1200 N. TEXAS STREET	FT. STOCKTON	79735	wtexascontractors@sbcglobal.net	432-336-6855	432-336-6855	GENERAL CONSTRUCTION, REMODELING, GENERAL CONTRACTING
WHOLE ENVIRONMENTAL	Brenda Keilers	5500 RANGER DR	ROCKWALL	75032-8481	Brenda@WholeEnvironmental.com	214-500-6338	972-771-1838	Licensed asbestos, lead, mold and demolition contractors.
WILLIS DEMOLISHING/DISPOSAL CO.	Harold Willis	4612 FALLS ST.	HOUSTON	77026	willisdemolishing@hotmail.com	713-299-4182	832-433-7646	Demolition amd Debris Hauling

WOODLEY CONTRACTING INC	Freddie L. Woodley	4323 PALMER PLANTATION DR	MISSOURI CITY	77459	info@myitswor king.com	713-245-9034	281-416-5361	General Contracting Personnel Management Permit Site work Procurement Sub-contracting Inspections Masonry Debris Removal Site Work Concrete installation services Painting Interior and Exterior Painting Gypsum/Drywall Electrical Plumbing HVAC
WORLEY GENERAL CONTRACTORS, LLC	Luke Worley	10415 WESTFIELD PLACE	SAN ANTONIO	78240-4001	luke@worleygeneral.com	210-693-1560	210-693-1562	New Construction, remodel, and repair, and demolition.
XPRESS PAINTING & REMODELING	Melissa Mucino/Owner	781 COUNTRY PLACE DR APT 2057	HOUSTON	77079	xpress_services@yahoo.com	832-638-8778	281-506-8669	Interior/Exterior painting, concrete and remodeling services.
YUCCA CONTRACTING	Israel Vaquera	PO BOX 13589	EL PASO	79913-3589	yuccaconstruction@yahoo.com	915-525-7135	915-564-0648	Painting, insulation, plumbing, electrical, demolitions, flooring, roofing, suspending ceilings, door/window frames all types,concrete slabs, sidewalks,footings asphalt excavation, field and shop welding, field and shop steel fabrication
ZAGROS CONSTRUCTION CO	Shokoofeh Ghobadimanesh	15058 BELTWAY DR	ADDISON	75001	zagrosconstruction@yahoo.com	972-385-7574	972-385-7579	Heavy Construction, General Contractor, Concrete, Flat work, Demolition, Site Prep, Excavation, Grading, Rehab
ZAZA CONSTRUCTION, LLC	AMY DOWNS	4211 MEADOWVIEW LN	SACHSE	75048-6601	AMYDOWNS29@GMAIL.COM	972-754-9675		Steel fabrication / Metal building construction / Residential Construction, Renovation, Repairs.
#1 QUALITY ELECTRIC, INC.	JOE SANCHEZ	22784 SAN MIGUEL ST	HARLINGEN	78552-2580	QUALSAN@AOL.COM	956-421-2078	956-421-4026	ELECTRICAL CONTRACTOR
1-STOP ENTERPRISES LLC	Raymond Lockhart	2640 DEER HOLLOW DRIVE	LITTLE ELM	75068	raymond@1stopent.com	678-485-9873		Electrical Contractors and Other Wiring Installation Contractors

360 ROOFING LLC	Bryan Wiest	305 E SAINT ELMO RD	AUSTIN	78745-1268	bwiest@gmail.com	512-280-7663	512-727-6891	Provide roofing services and materials
3J CONTRACTING	Jose Mondragon	1224 16TH ST	CORPUS CHRISTI	78404-3524	3jcontracting@gmail.com	361-548-4937	361-961-1207	Remodel, repair, Paint, Lawn Services, constructions, electrical, plumbing, fencing all types, demolition of small building, & hauling land waste.
A & A ELECTRIC COMPANY OF BEAUMONT, INC.	Lee Acevedo Jr	PO BOX 22986	BEAUMONT	77720	gina@aaelectricbmt.com	409-842-4437	409-842-5230	ELECTRICAL CONTRACTOR-COMMERCIAL & RESIDENTIAL
A PLUS ELECTRIC, INC.	Johnny Loza	1214 LUKE ST.	IRVING	75061	jloza@apluselec.com	972-313-8686	972-313-8211	ELECTRICAL CONSTRUCTION AND MAINTENANCE SERVICE. In the Dallas-FT. Worth area. We can bond projects up to \$800,000.00
ADVANTAGE ELECTRICAL CONTRACTING &	VP/THELMA J. CANALES	PO BOX 27	CORPUS CHRISTI	78403-0027	advantage.elect@hotmail.com	361-888-5979	361-888-5978	ELECTRICAL CONTRACTING & MAINTENANCE. GENERAL CONTRACTOR, pole lighting, mobile home hook up
ALBERT ELECTRIC	Pres./Albert R. Mondragon	8117 NAZARETH	CORPUS CHRISTI	78413	armondragon59@yahoo.com	361-814-4141	361-814-4141	Electrical Contracting. Repairs, Remodeling, Special installations.
ALLIED ELECTRIC	RUBEN L. PULIDO	1209 MIAMI DR	CORPUS CHRISTI	78404		361-563-4479		Master Electrician, residential & commercial.
ALLIED ELECTRIC SERVICES, INC.	Paige Paul	P O BOX 2691	GEORGETOWN	78627	paige@alliedelectric.us	512-930-0767	512-868-1250	Electrical Contractor
ALLY ROOFING SERVICES LLC	Mike Martin	1408 N SAM HOUSTON PKWY E	HOUSTON	77032-2968	mikewithars@yahoo.com	832-617-8653	832-617-8656	Roofing, Waterproofing and Related Sheet Metal
AMER ELECTRIC	OWNER/ OLGA ESPERICUETA	11903 FM 1937	SAN ANTONIO	78221	amer.electric@yahoo.com	210-473-1685	210-627-2937	ELECTRIC CONTRACTOR
AMERICAN CONTRACTING USA INC	President / LETICIA BARCENAS	1606 S. REYNOLDS	RIO HONDO	78583-3023	acusainc@aol.com	956-748-4030	956-748-2891	ROOFING & GENERAL ONSTRUCTION
AMERICAN DREAM SOLUTIONS LLC	Troy D. Refuge	5802 VAL VERDE ST	HOUSTON	77057-5656	adslc7@gmail.com	832-819-5004		Roofing, General Contractor, Contract Labor Supplier

AMERICAN ELECTRIC CORPORATION	President/MARGARITA BEHRENDT	1993 POST ROAD	NEW BRAUNFELS	78130	margie_americanelectric@yahoo.com	830-606-1345	830-606-0128	ELECTRICAL CONTRACTING
ANCHOR ROOFING SYSTEMS, LTD.	GINA TANKERSLEY	2809 N. HOUSTON	FORT WORTH	76106	gtanchor@yahoo.com	817-625-4351	817-625-7886	COMMERCIAL ROOFING,DECKING, SHEETMETAL,WATERPROOFING
ANGELO TRUCKING AND CONSTRUCTION	Robert Trevino, Jr.	2020 S CHADBOURNE ST	SAN ANGELO	76903	rtrevino.atc@suddenlinkmail.com	325-212-2087		Hauling, demolition, new construction, and underground utilities.
ARBER, INC.	Pres./ROBERT M. LOZANO	1716 S. SAN MARCOS, SUITE 120	SAN ANTONIO	78207	corporate@asezinc.com	210-736-6200	210-231-0301	Providing Security Officers and Security Systems
ARMCON CONSTRUCTION LLC	RICHARD JANICE	9821 MONTANA AVE	EL PASO	79925	RICH@ARMCONCONSTRUCTION.COM	915-726-4651	915-633-9019	General contractors for new and remodeling construction.
ARTILLERY HOME & COMMERCIAL SERVICES, IN	Raquel Garza	1511 DANDRIDGE DR	CEDAR PARK	78613-5458	rgarza@artilleryhcs.com	512-258-5559	512-821-3193	General contracting, duct cleaning, replacement, plumbing, electrical, mold remediation.
ASSOCIATED CONSTRUCTION PARTNERS, LTD.	Jillian R. Simpson	215 W BANDERA RD STE 114-461	BOERNE	78006-2820	jill@acpartners.org	210-698-8714	210-698-8712	Heavy, Water & Wastewater Plant Construction, Utility, Electrical, General Construction
AZTEC CONTRACTORS, INC	Frank Spencer	1200 WYOMING AVE	EL PASO	79902-5521	f.spencer@aztecccontractors.com	915-577-9685	915-577-9683	COMMERCIAL, RESIDENTIAL AND ENGINEERING CONSTRUCTION
B & E RESOURCES, LTD	Jennifer Branch	39772 U.S. HIGHWAY 96	BUNA	77612-1077	jenniferbranch@berltd.com	409-994-2653	409-994-2680	Industrial and Civil construction, Fabrication, plant maintenance
BBC CONSTRUCTION SERVICES	Veronica Chapa	608 PUIG DR	LAREDO	78045	veronicachp@yahoo.com	210-422-5558	956-568-0132	Construction-install;tile,carpet,vct,concrete,sheet rock and metal works.
BBG GENERAL CONTRACTING, LLC.	Penny Harvey	4204 GARDENDALE ST	SAN ANTONIO	78229-3132	penny@bbggeneralcontracting.com	210-949-0722	210-949-0702	Roofing, Remodeling, Decking, Gutters and Property Restoration

BENMAR ELECTRIC, LLC	BENITO MARTINEZ	PO BOX 720861	MCALLEN	78504-0861	BENMAR@BEN MARELECTRIC. COM	956-631- 9995	956-631- 9996	Electrical contractor - Commercial service and new construction.
BICK'S CONSTRUCTION, INC.	Pres./MS. BICKEL	2608 W WAGGOMAN ST	FORT WORTH	76110-4629	dsbickel@bicks construction.co m	817-429- 6107	817-921- 9791	asphalt paving & chip seal
BM TRANSPORT	Erik Munoz	PO BOX 70	MAXWELL	78656-0070	erikmunoz@y ahoo.com	512-749- 8126		road base, asphalt haul, gravel, milling
BRADLEY DOUGLAS CONSTRUCTION	OLGA DOUGLAS	SERVICES, L.L.C.	FORT WORTH	76112	clm5762@yaho o.com	817-429- 2443	817-429- 6062	NEW CONSTRUCTION, DEMOLITION, STREET WORK, SITE CLEAN UP
BRIDGES ELECTRIC, INC.	Hollis J. Bridges	15330 LBJ FRWY, STE #315	MESQUITE	75150	bridgeselectric nc@sbcglobal. net	972-686- 8100	972-686- 8101	ELECTRICAL CONTRACTOR
BRIETH ELECTRIC, LLC	Brian Cude	1300 BOOTY RD	GEORGETOW N	78628	brian@briethel ectric.com	512-868- 2075	512-868- 0909	Commercial Electrical contracting, complete rough-in and trim-out for commercial applications. Secondary power panel distribution. New construction and remodel.
BRJ PAVING, INCORPORATED	BARBARA JONES	12448 RENDON RD	BURLESON	76028	BARBARA@BRJ PAVING.COM	817-478- 0927	817-478- 1672	SITE EXCAVATION, CONCRETE & ASPHALT PAVING INSTALLATION, SITE DEMOLITION, SOIL STABILAZATION.
BRYANT ELECTRIC, INC.	Karen Bader	P.O. BOX 3464	SAN ANGELO	76902-3464	karen.bader@b ryelec.com	325-658- 8485	325-653- 2434	Electrical Contracting
BRYNCO, INC.	Katherine Garza	1803 FRANCIS CIR	COLLEGE STATION	77840	BRYCOINC@G MAIL.COM	979-220- 8856	979-595- 1347	General Contractors specializing in Commercial and high-end residential consruction and consruciton material supply
CALTIA CONSTRUCTION, LLC	Raul A. Perez	PO BOX 3613	MISSION	78573-0062	raul@caltiacon struction.com	956-522- 7918	210-568- 6759	General Contractor - commercial, residential, utility and industrial.
CAPITOL CONCRETE CONTRACTORS, INC.	Sandra Moore	P.O. BOX 438	LIBERTY HILL	78642	sandra@capitol concrete.net	512-515- 0650	512-515- 0645	CONCRETE CONSTRUCTION; CURB & GUTTER, STRUCTURES, PAVING

CARCON INDUSTRIES & CONSTRUCTION, LLC	DIANA MUNOZ	1341 W MOCKINGBIRD LN	DALLAS	75247-6913	dmunoz@carconindustries.com	214-352-8515	214-352-0608	GENERAL CONSTRUCTION SERVICES CONSTRUCTION PRODUCTS PURCHASING- TELECOMMUNICATIONS SERVICES
CASILLAS TRUCKING, LLC	Remedios M. Casillas	16674 C.R. 221	FORNEY	75126	casillas_remedi os@yahoo.com	214-779-4735	469-728-7204	End Dump/Tandem Dump, haul in/off construction materials- dirt/grovel/concrete.
CASTRO ROOFING OF TEXAS, L.L.C.	RODOLFO RODRIGUEZ	4854 OLSON DR	DALLAS	75227-2103	rudy@castroro ofing.com	214-381-8108	214-381-8109	ROOFING & RELATED SHEET METAL/COMMERCIAL ROOFING CONTRACTOR ESPECIALIZING IN BUILT UP, MODIFIED & SHEETMETAL ROOFS
CECO CONTRACTING COMPANY LLC	Richard E Rick Bloomfield	708 NORTH MAIN ST	FORT WORTH	75229	gene@cecocon tracting.com	817-429-1866	817-882-9999	roofing contracting
CEDA-TEX SVCS INC	FRED ODANGA	500 BRUSHY CREEK RD STE 306	CEDAR PARK	78613	contact@cedat ex.com	512-339-0155	512-339-2829	General construction. New construction, Site, drainage, Interior drywall, plumbing, electrical Painting ,concrete work etc
CENTRAL TEXAS EXPRESS METALWORK, LLC	Kara Clayton	420 MILAM	SAN ANTONIO	78202-1125	kara@myexpre sscontracting.c om	210-337-2260	210-359-0059	General Construction contractor with experience in structural and miscellaneous steel, site work, roofing, electrical and and mechanical scopes for industrial, municipal and federal sectors.
CONQUEST CONSTRUCTION, LLC	Kim Holmes	PO BOX 591792	HOUSTON	77259-1792	kholmes@conq uestvob.com	713-417-0424	832-932-5790	General Construction Services

COOPER'S PURCHASING	Lauro Valdez	608 PUIG DR	LAREDO	78045-6548	coopersop43@yahoo.com	956-740-6616	956-726-8028	Constructio inswtall metal studs, sheetrock, suspended ceiling, tile carpet, vct
COX CONCRETE CONTRACTORS, INCORPORATED	Sandra J. Cox	PO BOX 631447	NACOGDOCHES	75963-1447	scox@coxcontractors.com	936-564-6500	936-564-8242	Concrete Construction, General Construction, Construction Management.
CRAGG'S DO IT BEST LUMBER AND	Douglas Cragg	HOME CENTER, INC.	SPRING BRANCH	78070-6177	craggsdib@gvtc.com	830-438-4732	830-438-4785	Building materials, hardware,electrical,plumbing,paint, housewares,lawn and garden supplies. Equipment rental.
CS ADVANTAGE USAA, INC.	Oscar G. Galvan	PO BOX 12407	COLLEGE STATION	77842-2407	o_ggalvan@hotmail.com	210-771-0720	210-579-2157	Roofing, sheet Metal, Renovations
D & D ROOF SERVICES, INC.	DANIELA COROIESCU	P. O. BOX 2353	NEW CANEY	77357	donnacoroiescu@ddroofservices.com	281-429-1555	281-429-9122	Roofing and related sheet metal.
D & G QUALITY ROOFING, INC.	Christa Weatherby	4305 E FM 1187 STE 100	BURLESON	76028-7984	christa@dgqroofing.com	817-568-8300	817-568-0029	Roofing commercial: : composition shingles, metal roofing system
D & S ELECTRIC SERVICES, INC.	Tricia C. Sepmoree	726 W ELM ST	TYLER	75702-7033	tsepmoree@dandselectricinc.com	903-593-3779		Electrical Contractor serving commercial, residential and industrial markets in new construction, remodel, tenant finish out, service and maintenance throughout East Texas.
D K HANEY ROOFING, INC.	Dustin Haney	6795 CORPORATION PKWY STE 300	FORT WORTH	76126-1764	dustinh@dkhaneyroofing.com	817-546-2266	817-546-2212	Roofing, Re-Roofing and roofing repairs.

D&G ELECTRICAL SERVICES LLC	Amy Garrett	PO BOX 1739	DRIPPING SPGS	78620-1739	amy@dghotwire.com	512-829-4711	512-894-0340	Electrical Contractor for Commercial & Residential
D&S DIVERSIFIED SERVICES, INC.	Vivian Divin	13121 LOUETTA RD # 1120	CYPRESS	77429	DSDIVERSIFIED@YAHOO.COM	832-534-8293	281-351-8395	Specialty Trade Construction and Distributors for Insulation, Electrical, HVAC and Plumbing.
D&SS CONSTRUCTION INC	JANNA SCHURY	P O BOX 8313	CORPUS CHRISTI	78468	jschury@aol.com	361-992-3566	361-992-8627	GENERAL CONTRACTOR.
DAYSTAR ELECTRI-COMM, INC.	Terry & Valerie Arnold	PO BOX 8660	TYLER	75711	daystar@nctv.com	903-534-5850	903-534-5839	Electrical Contractors - Commercial/Industrial, Generator Systems, Renewable Energy - Solar
DECENT CONSTRUCTION COMPANY, INC	SYED HASHMI	1008 HYANNIS STRETT	PLANO	75094	construction.decent@gmail.com	214-846-5113		General Contracting, Project Management, Site Work, Concrete, Masonry, MEP, Damp Proofing, Caulking, Sealing, Fire Safing and Selective Demolotion
DELARIVA, INC DBA ART'S ELECTRIC	Arturo Delariva, Sr.	8707 GATEWAY BLVD S	EL PASO	79904-1212	art@artselectric.net	915-755-5832	915-751-2361	PROVIDE ALL ELECTRICAL SERVICE FOR RESIDENTIAL AND COMMERCIAL
DIVERSE ROOFING	Gilbert Garzoria	3052 BASQUE DR	BROWNSVILLE	78520-9006	ggarzoria@gmail.com	956-496-7473		roofing, re-roofing, metal, concrete, TPO, tile, composition shingle, elastomeric coating, flat roof system
DL CONSTRUCTION LP, LLP.	dlconstruction,lp llp	2307 BALSAM DR L 104	ARLINGTON	76006	bids@dlconstructionllp.com	817-999-0379		general construction services- construction product purchasing, telecommunications service.building construction including contractors and operative builders
DSB ELECTRIC L L C	SUE A. BONNET	14 COACH HOUSE RD.	AUSTIN	78737	DSBELECTRIC@AUSTIN.RR.CO	512-301-8601	512-301-8336	ELECTRICAL CONTRACTOR

EAGLE REMEDIATION AND DEMO SERVICES, LLC	Mark Anderson	1517 CENTRAL PARK DR	HURST	76053-7401	mark.anderson@eremservices.com	214-884-2096		ASBESTOS & LEAD ABATEMENT DEMOLITION
EDGE ELECTRIC, INC.	RUSSELL JOHNSON	PO BOX 252	DRIFTWOOD	78619-0252	RUSSELL@EDGEELECTRICINC.COM	512-853-9647	512-853-9020	COMMERCIAL ELECTRICAL SERVICES - NEW CONSTRUCTION, REMODEL, TENANT FINISH OUT, SERVICE WORK/REPAIRS/MAINTENANCE.
EHH ELECTRIC SERVICE, LLC	Stella Grinage	1423 S. WW WHITE RD, SUITE 2	SAN ANTONIO	78220-4901	ehardemon@bcglobal.net	210-385-0220	866-943-7308	Electrical--Layout, Bid, Demo, Install outlets, Power, Fixtures
EL PASO A.R.C. ELECTRIC, INC.	EULOGIO ORTIZ	PO BOX 370087	EL PASO	79937	dolores.reyes@elpasoarc.com	915-593-3700	915-590-5500	electrical and mechanical contractors
ELIAS COMMERCIAL ROOF SYSTEMS	Leticia Elias	448 W 19TH ST # 152	HOUSTON	77008	leticia@ecroofsystms.com	832-339-2865	832-553-8008	Roofing all kinds
ELLECO CONSTRUCTION, INC.	JANE A. WEEMPE	201 W. COMMERCE ST. SUITE 101	DALLAS	75208	jweempe@elleconstruction.com	214-760-9241	214-760-9244	General constructor provides commercial office & retail tenant finish out and remodeled services.
EMLI INC.	Lisa Putney	1743 WESTEND PL	ROUND ROCK	78681-2252	lputney1@austin.rr.com	512-791-7695	512-296-2232	Commodities Wholesale
FOAM APPLICATIONS LLC	Francisco E. Molinar	2617 E MISSOURI AVE	EL PASO	79903	foamapp@hotmail.com	915-566-5110	915-564-1856	ROOFING and INSULATION services
FORT WORTH ELECTRIC, L.P.	Sherri Aaron	812 E 9TH ST	FORT WORTH	76102-5513	sherria@fwetx.com	817-870-2266	817-870-2268	Electrical Contractor - Commercial, Residential, Service, Thermal Imaging, Data Cabling
FOX QUALITY CONCRETE, LLC	Rey Lafuente	15298 TOEPPERWEIN RD	SAN ANTONIO	78233-3817	rey@foxqualityconcrete.com	210-273-3666	210-651-1319	Concrete Structures, Sidewalks, Machine Curbs, Foundations, Concrete Paving, Driveways, Drainage Structures, Rip Rap

FRANK'S PAVING CO.	Sandra Deleon Lopez	2072 SE LOOP 410	SAN ANTONIO	78220-4928	frankspaving@sbcglobal.net	210-333-2000	210-648-2849	Excavation, Dirtwork, building pads, approaches, base & asphalt.
FUNK AND COMPANY	ALEX AGUIRRE	2000 MYRTLE AVE	EL PASO	79901-1907	alex@funkandcompany.com	915-542-1502	915-534-4409	Mechanical/Electrical/Plumbing Contractor
G. L. MORRIS ENTERPRISES, INC.	Marla K. Murphy	DBA SUNBELT INDUSTRIAL SERVICE	FORT WORTH	76107	marla@sunbelt.com	817-877-0866	817-877-0428	Environmental Contractors, Excavation, Tank Removal, Drum Transportation, Soil Transportation & Disposal, Demolition
GARCO CONSTRUCTION, LLC	BENITO GARCIA	20296 S US HIGHWAY 281	SAN BENITO	78586-7104	garcollc@msn.com	956-399-6715	956-399-8440	General Contractor - Assisting clients in Commercial, Industrial, Residential & Multifamily bldg.
GENERAL CONTRACTOR SERVICES, INC.	Teltschick, Pamela	8400 LA PORTE RD	HOUSTON	77012-3738	genconser@aol.com	713-270-5300	713-270-5305	GENERAL CONTRACTOR - NEW CONSTRUCTION, RENOVATIONS, RESIDENTIAL, COMMERCIAL
GENESIS 1:4 ELECTRIC LLC	JAVIER CASIANO	MR. ELECTRIC	BRYAN	77806	MRELECTRIC1@VERIZON.NET	979-775-0777	979-775-0776	Electrical contractor - residential, commercial, industrial electrical repair
GERSON ENTERPRISES LLC	Jennifer Eichelbaum	1927 FAR NIENTE	SAN ANTONIO	78258-4517	gersonent@yahoo.com	210-481-7601		Roofing material, wood, merchant wholesaler; Sheet metal roofing material merchant wholesalers
GILMAR CONSTRUCTION, LTD.	ARADILLAS, SERGIO A.	9804 STARLA CT	LAREDO	78045	GILMAR5493@SBCGLOBAL.NET	956-717-1776	956-727-5737	ASPHALT; CONCRETE PAVING & INCIDENTALS; EARTHWORK

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Specifications

**Texas Department of Criminal Justice
CLEMENS Unit
Tracking # 00513004**

Replace Roof – Administration Building

**Clemens Unit
11034 Hwy 36, Brazoria,
Brazoria County TX 77422**

July 8, 2015

Issue For Construction



Thomas A. Stafford
7-8-2015

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A-1	ROOF PLAN, NOTES
A-2	ROOF SECTIONS & DETAILS
A-3	DETAILS
A-4	DETAILS

SECTION 01 10 00 – SUMMARY

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Project; work covered by Construction Documents
- B. Contractor use of site and premises
- C. TDCJ occupancy
- D. Work sequence

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable.
 - 1. The entirety of the Division 1 Specifications included are TDCJ Standard Specifications. An item or element appearing within a Division 1 Specification, or an entire Division 1 Specification shall not be interpreted to be specifically required for the subject project. If an item, element, or specification section is applicable for the subject project, the specification(s) is/are required to be met.

1.3 PROJECT – WORK COVERED BY CONSTRUCTION DOCUMENTS

- A The Work consists of the following:
 - 1 The work of this contract consist of furnishing all labor, materials services, equipment and appliances required in conjunction with the reroofing to the Clemens Administration Building located at 11034 Hwy 36, Brazoria, Texas 77422, as indicated on the drawings and specifications herein. The work includes the removal of the existing built up roofing system down to the concrete deck. The roofing contractor shall verify the existing conditions. Inspect, repair and render the existing concrete deck surface acceptable to receive the new roofing system. Remove abandoned roof curbs, equipment supports, electrical and venting penetrations as indicated on the roof plan and verified by the contractor. Prior to removal of these items, verify with the TDCJ Project Administrator status of all items to be removed and all the items to be preserved. Patch roof openings with matching products to the existing materials and products to meet or exceed quality and performance intended and in compliance with current codes and standards. Install a new basic roof insulation system (two layers of roof insulation plus one layer of ½” cover board) to the complete roof area. Add at the top of the basic roof insulation tapered polyisocyanurate roof insulation to create the roof slope described on the drawings. Install new fire retardant pressure treated wood nailers, fascia boards roof curbs and all other wood around the perimeter of the roof, roof curbs, blocking, and elsewhere for a complete replacement of all roof wood carpentry. Provide new minimum 24 gauge pre-finished galvanized perimeter metal edging,

coping, flashing and counter flashing. Install new polyisocyanurate roof insulation on to the existing concrete deck and adhere to the top of the top layer of polyisocyanurate insulation a layer of ½" cover board. Install a new fully adhered, two ply cold process modified bitumen mineral surfaced roof system to the entire roof.

The roof on the Administration Building has not been tested for Asbestos content therefore if the Contractor encounters suspected materials, contact TDCJ Unit Maintenance and the existing roofing materials shall be removed using manual methods (axes, hatchets, knives, spud bars, power slicers or plows, but not saws) as outlined in Title 40 Code of Federal Regulations Part 61, Subpart M, AppendixA entitled, "Interpretive Rule Governing Roof Removal Operations" (Section I Paragraph 1.C.1) Debris generated from such removal operations shall be disposed of as regular construction debris (Section III Paragraph 3.C.1.)

- B. Perform Work under a single Lump Sum contract on Forms provided.
 - 1. Work of this Contract is identified in Technical Specifications and on Drawings. Unless incorporated via an issued Addenda or Change Order, no other work is authorized.
 - 2. Except as specifically noted, provide and pay for:
 - i. Labor, material, and equipment.
 - a. Owner is exempt from sales tax on products permanently incorporated in work.
 - 1. Obtain sales tax exemption certificate number from Owner.
 - ii. Tools, construction equipment, and machinery.
 - iii. Other facilities and services necessary for proper execution and completion of work.
 - 3. Contractor to acquire and pay for all required permits.
 - i. Comply with codes, ordinances, rules, regulations, orders, standards, and other legal requirements of public authorities, which bear on performance of Work.
 - ii. Promptly submit written notice to Design Professional of observed variance of Construction Documents from legal requirements. Assume responsibility for Work known to be contrary to such requirements, without notice.

1.4 TDCJ OCCUPANCY

- A. TDCJ will occupy the site and premises during entire period of construction for the conduct of normal operations.
 - 1. Owner will occupy site and/or existing building(s) during entire construction period.
 - i. Day-to-day operations will continue during the construction period.
 - 2. Maintain existing exits, unless otherwise indicated on drawings.
 - 3. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors,

or other occupied or used facilities without written permission obtained through PA.

4. Coordinate offender relocation and schedule shut-downs of equipment and utilities, as needed/applicable, for construction progress with PA.
 - i. Provide not less than 48 hours' notice to PA of activities that will affect Owner's operations.
 - ii. All interruptions to Owner operations shall be minimized to the fullest extent possible.
 1. Contractor provided temporary services for planned outages of permanent services for periods in excess of 4 hours (consecutive or cumulative) in any 24 hour period shall be required unless otherwise indicated in Project Documents, documented via an Addenda during Bid, or approved through the PA after Award.
 2. If required, reference construction drawings for requirements for auxiliary equipment and services for extended outages required for construction activities.
 3. Inadvertent interruption of Owner operations due to construction activities shall be corrected immediately by Contractor.
5. Protect areas being utilized by Owner from dust and debris by construction barriers, if required due to proximity of Owner occupation to construction area.
6. Use appropriate safety cautions, including barriers, to protect areas that are occupied, if required due to proximity of Owner occupation to construction area.

B. Cooperate with TDCJ to minimize conflict and to facilitate TDCJ operations.

C. Schedule Work to accommodate Owner occupancy.

1.5 CONTRACTOR USE OF SITE AND PREMISES

A. Use of Site: The construction site is a detention facility and therefore a secured facility.

1. Entry into the Unit is restricted and shall be coordinated with security and maintenance personnel. Offenders are present at the site. Caution and compliance with corrections officers and other TDCJ personnel instructions are strictly required. Security provisions necessary shall be included in Contract Sum.
2. Confine construction operations to areas indicated on drawings.
3. Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - i. Schedule deliveries to minimize use of driveways and entrances.
 - ii. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
4. No tobacco products are permitted on site.

1.6 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 period.
1. Coordinate construction schedules and operations through PA.
 2. 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.
- B. For bidding purposes:
1. The work week shall be Monday through Friday, 8 hours per day, except for State Holidays. (Hours of access, i.e. 8-5, 7-4, etc. shall be determined at Pre-Construction Meeting.)
 2. For all projects other than Fire Alarm System projects, there shall be security provided for only one construction crew. For Fire Alarm System projects, there shall be security provided for two construction crews.
 3. These requirements shall not be altered by determinations at Pre-Bid or during the Bid process.
 - i. An Addendum or Addendum item that changes identified work week or number of security crew(s) provided is null and void for bidding purposes.
 - ii. An alternate work week and/or additional security may be approved by the Warden after Notice of Award and shall not alter other requirements of the bidding process or the subsequent Contract.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

- A. The intent of Construction documents is to require all items necessary for the proper execution and completion of the work by Contractor. The Construction Documents are complementary and by their intent a complete and usable work product is expected to be provided. To meet this requirement the Contractor is expected to provide construction in place to include that which is indicated in the Construction Documents 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.

END OF SECTION 01 10 00
[Revision August 2013]

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Procedures for Substitution Requests as required by the Contract Documents. Revise and resubmit Substitution Requests as necessary to establish compliance with the specified requirements.

1.2 RELATED REQUIREMENTS

- A. General Conditions (Article 5.9) and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALITY ASSURANCE

- A. Coordination of submitted substitutions:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specifications and contract requirements.
- B. Substitutions:
 - 1. The contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when submitted on required Form provided in bid/contract documents, and when substantiated by the Contractor's submittal of required data.
 - 2. Where any material, product, or equipment is specified by proprietary name, trade name, manufacturer name, generic name, or catalog number with the addition of such expressions as "or A/E approved equal", material, product, or equipment named is intended and no substitution will be allowed without written approval, per bid/contract documents.
 - 3. Unless otherwise indicated the material, product, or equipment to be used are those specified and denote the type, quality, performance, etc. required. All proposals shall be based upon the use of specified material, product, or equipment, unless a substitution is approved and published in a written Addendum to the project.
 - 4. Do not substitute material, product, or equipment unless substitution has been specifically approved in writing by the A/E.
- C. "Or A/E approved equal",
 - 1. Where the phrase "or A/E approved equal" occurs in the Construction Documents, do not assume that the material, product, equipment, will be approved as equal unless the material, product, or equipment has been specifically approved in writing by the A/E.
 - 2. A Contractor who proposes to quote on the basis of an "or A/E approved equal" alternate material, product, equipment shall submit a Substitution Request (Attachment 6) **10 days** prior to Bid Opening, per General Conditions, SECTION L, 7.A. Approved Substitutions must be issued in an Addendum to be considered for proposal. If an Addendum with approved substitution is not issued, specified material, product, or equipment must be used.

3. During the course of work, the Owner's representative may secure from the job site samples of material, equipment, or product being used and submit the samples to an independent testing laboratory for comparison. If the results demonstrate that the material, equipment, or products being used are not approved materials, the owner shall issue a Notice of Nonconformance, per 01 45 16.13 – Contractor's Quality Control.
4. During the course of work, if a specified or previously approved material, equipment, or product is determined to be unavailable due to strikes, lockouts, bankruptcy, discontinuance of production, documented shortages or similar occurrences, submit a Substitution Request (Attachment 7) as soon as unavailability is identified. Claim of unavailability is subject to approval by owner. Time Extension requests will be approved as a separate matter and will not be approved due to failure of Contractor to submit Substitution Request in a timely manner.

D. Procedure for Substitution Request Form,

1. Substitution request **including all required documentation** shall be submitted to Owner's Representative
 - a. During Bid – 10 days prior to Bid Opening, to Contract Administrator.
 - b. During Contract Performance Period – as soon as unavailability is identified, to Project Administrator.
2. The Substitution Request must include documentation that the requested substitution is equal or superior to the specified material, product, or equipment. Failure to provide clear, accurate, and adequate documentation will be grounds for rejection.
3. Required documentation 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.
4. If use of the proposed material, product, or equipment would result in changes to the design of other elements, the submittal shall describe fully the changes required to the drawings or specifications. Any cost differences resulting from modifications to the drawings and specifications and the cost of making the changes, including charges for required design time by A/E, is the responsibility of the bidder/contractor.
5. **No** material, equipment, or product is considered "as equal" to the material, equipment, product specified until a Substitution Request has been approved by the A/E.

END OF SECTION 01 33 00

[Revision April 2014]

SECTION 01 33 00 – SUBMITTALS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Procedures for Submittal of Product Data, Shop Drawings, Samples, Mock-Ups, Requests for Information and other work-related submittals required by Contract Documents.

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable

1.3 DEFINITIONS

- A. Product Data – illustrations, standard schedules, performance charts, instructions, brochures, diagrams, test data and other information furnished by Contractor to illustrate material, product, equipment or system for some portion of the Work.
- B. Shop Drawings – drawings, diagrams, schedules and other data specially prepared for the Work by Contractor or a Subcontractor, Sub-Subcontractor, Manufacturer, supplier or distributor to illustrate some portion of the Work.
- C. Samples – physical examples which illustrate materials, equipment or workmanship to establish standards for the Work. Samples include field samples.
- D. Action Submittals – written and graphic information and physical samples that require A/E's responsive action.
- E. Informational Submittals – written and graphic information and physical samples that may or may not require A/E's responsive action.
- F. Request For Information (RFI) – requests from Contractor for additional information, interpretation, clarification of, or to identify conflicts with, the Construction Documents.
- G. Quality control submittals – pertain to quality control and TDCJ information which may or may not require review and approval by A/E. If reviewed, project information 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 submitting Contractor (and Contractor's professional engineer when such calculations are required to be professionally sealed). Examples of quality control submittals:
 - 1. Design data and calculations.
 - 2. Test reports.
 - 3. Certifications.
 - 4. Manufacturer's installation instructions.
 - 5. Manufacturer's field reports.

- H. Contract Closeout Submittals – contract closeout related information that requires review and approval by the A/E and are to be retained for project files.
1. Project record information.
 2. Warranties.
 3. Operation and maintenance data.
 4. TDCJ instruction reports.
 5. Contractor, subcontractors, suppliers, manufacturers contact information.

1.4 SUBMITTALS (Other than RFIs and Contract Close-out submittals)

- A. Per ARTICLE V., within 20 days after receipt of Notice to Proceed submit Submittal Schedule to Project Administrator for approval. Arrange the following information in tabular format.
1. Scheduled date for first submittal.
 2. Specification number and title.
 3. Submittal category (action or informational).
 4. Name of supplier.
 5. Description of the Work covered.
 6. Scheduled date for Design Professional's final release or approval. (30 days after submittal.)
- B. Coordinate preparation and processing of Submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
- C. Schedule Submittals to allow number of days for review and processing of Submittals by A/E as stipulated in the General Conditions and in such sequence as to cause no delay in the Work.
- D. Make Submittals promptly in accordance with approved Submittal Schedule.
1. Time for review shall commence on A/E's receipt of Submittal.
 - a. Submittal review: 30 calendar days for each Submittal.
 - b. Resubmittal review: 14 calendar days for review of each Resubmittal.
 - c. Allow additional time if coordination with subsequent Submittals/Resubmittals is required.
 2. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including Resubmittals.
- E. Per approved Submittal Schedule:

1. Submit number of copies of Shop Drawings as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
 2. Submit number of copies of Product Data as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
 3. Submit number of sets of Samples/Mock-Ups as determined at Pre-Construction Meeting (no more than 3) and meeting requirements set forth in relative Specification Section.
 4. Submit number of sets of other Submittals as determined at Pre-Construction Meeting (no more than 8) and meeting requirements set forth in relative Specification Section.
- F. Coordinate Submittals into logical groupings to facilitate interrelation of Products and Systems:
1. Simultaneously submit associated items of operating systems which require correlation for efficient function and installation.
 2. A/E reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received and shall not be considered as a delay to Work progress.
- G. Provide complete Submittals for review. Partial or incomplete Submittals will be returned, without review, for resubmission.
1. Check for coordination with other Work of the Contract and for compliance with the Construction Documents.
 2. Mark with Contractor's approval stamp and provide Contractor's signature before submission to Project Administrator.
 - a. Stamp each submittal with a uniform approval stamp with a statement certifying that submittal has been reviewed, checked and approved for compliance with the Construction Documents.
- H. Transmittal Form:
1. Use Contractor's Transmittal form with Contractor's letterhead with title block or a permanently affixed label with Contractor's letterhead.
 - a. Transmit each submittal using transmittal form or label.
 - (1) Indicate name of firm or entity that prepared each Submittal on label or title block.
 - (2) Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by A/E.
 - (3) Include the following information on label for processing and recording action taken:
 - (a) Project name.
 - (b) Date.
 - (c) Name and address of A/E.

- (d) Name and address of Contractor.
 - (e) Name and address of subcontractor.
 - (f) Name and address of supplier.
 - (g) Name of manufacturer.
 - (h) Submittal number and revision identifier.
 - i) Submittal number shall use Specification Section number followed by decimal point and then a sequential number (e.g. 15 08 10.01). Resubmittal shall include an alphabetic suffix after another decimal point (e.g. 15 08 10.01.A)
 - (i) Number and title of appropriate Specification Section.
 - (j) Drawing number and detail references, as applicable.
 - (k) Locations(s) where product is to be installed, as applicable.
 - (l) Other necessary identification
 - i) Product specification sheets that contain multiple part numbers shall contain indication of specific part number applicable to submittal.
 - (m) Specifically identify deviations from the Construction Documents.
 - i) On attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by A/E and PA on previous submittals, and deviations from requirements in the Construction Documents, including minor variations and limitations.
2. Package each submittal individually and appropriately for transmittal and handling.
 3. A/E will return submittal without review, received from sources other than Contractor.
 4. Maintain a Submittal Log tracking the following information:
 - a. Submittal Number
 - b. Date of submission of Submittal
 - c. Date of receipt of Submittal response
 - d. Response – Approved, No Exception Taken, Revise and resubmit, Rejected, etc.
 - e. Date of Resubmittal
 5. Only use material, equipment, products upon receipt of a Submittal response of "Approved" or "No Exception Taken".
 - a. Informational Submittals that do not comply with requirements will be returned by A/E to be resubmitted by Contractor.
 - b. Submittals not required by the Construction Documents may not be reviewed and may be discarded.
 6. Approval – upon receipt of a Submittal response of "Approved" or "No Exception Taken", furnish copies to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.

- I. Resubmittals: Make Resubmittals in same form and number of copies as initial Submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit Submittals having made adjustments indicated in A/E response until they are marked "Approved" or "No Exceptions Taken" and dated by A/E.

1.5 REQUESTS FOR INFORMATION (RFI)

- A. Immediately upon discovery of the need for information, interpretation, clarification, or direction, submit a Request for Information.
- B. RFIs shall originate with the Contractor. RFIs submitted by entities other than Contractor shall be returned with no response.
- C. Coordinate and submit RFIs in a prompt manner so as to avoid delays in work.
 1. Allow 72 hours for A/E response.
 2. Requests for Time due to Contractor's failure to submit complete and accurate RFIs in a timely manner will not be considered.
- D. Use TDCJ form provided in Attachment 10 titled "State Documents and Forms". Include the following:
 1. Project name.
 2. Date.
 3. Name of Contractor.
 4. RFI number, numbered sequentially.
 5. Detailed description of needed information or identified conflict.
 6. References to drawings, details, notes, specification sections, etc.
 7. Field dimensions and conditions.
 8. Attached drawings, photos, Product Data, Shop Drawings, and other information necessary to communicate issue(s).
 9. Proposed resolution if subject matter of RFI is within practice of Construction Contractor or a Sub-contractor on Project.
 10. Preliminary estimation of anticipated costs/savings and/or additional Contract Time.
 - a. If there is no anticipated change to Contract Sum or Contract Time, such shall be indicated.
 - b. **An approved RFI does not constitute an approved change to Contract Sum or Contract Time. Use TDCJ forms provided in Attachment 10 titled "State Documents and Forms" to submit a Pending Change Request and/or Time Extension Request, as applicable, according to Contract procedures.**
- E. The following RFIs will be returned without action:
 1. Requests for approval of submittals.
 2. Requests for approval of substitutions.

3. Requests for interpretation of A/E's action on submittals or substitutions.
 4. Requests for coordination information already indicated in the Construction Documents.
 5. Requests for adjustments in Contract Sum or Contract Time.
 6. Incomplete RFIs.
 7. RFIs with numerous or significant errors.
- F. Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. RFI number including RFIs that were dropped or otherwise cancelled.
 4. RFI description.
 5. Date RFI was submitted.
 6. Date response was received.
 7. Identification of related Minor Change in the Work, Field Order, Proposal Request, as appropriate.
- G. Upon receipt of response:
1. Retain a copy of RFI/response with RFI log.
 2. Tape a copy of RFI/response to backside of previous page of affected Construction Drawing set utilized for Red Line set.
 3. If RFI response requires a re-statement of original content of RFI, re-submit using same RFI number with a revision qualifier such as .1 or -a. (Remain consistent throughout all RFIs.)
 4. Respond within 10 calendar days if A/E's response requires additional consideration.

1.6 CONTRACT CLOSEOUT SUBMITTALS

- A. Prepare and submit Contract Closeout submittals as required per individual Specification Sections.

PART 2 – PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals as required by individual Specification Sections.
1. Product Data:
 - a. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - b. Prepare written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

- (1) Type of product. Include unique identifiers for each product.
 - (2) Reference sheet number, detail, and/or specification number.
 - (3) Number and name of room or space.
 - (4) Location within room or space.
- c. Submit Product Data before or concurrent with Samples/Mock-Ups and/or Shop Drawings.
- d. Collect information into a single submittal for each element of construction and type of product or equipment.
- e. 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.
- f. Mark each copy of each Submittal to show which products and options are applicable.
- g. Upon approval:
- (1) Retain one copy of each Product Data Submittal.
 - (2) Utilize for quality control of provided product.
 - (3) Utilize for coordination with other elements.
 - (4) Mark up and return as Project Record Document.

2. Shop Drawings:

- a. Prepare written summary indicating types of elements required for the Work and their intended location. Include the following information in tabular form:
- (1) Type of element. Include unique identifiers for each element.
 - (2) Reference sheet number, detail, and/or specification number.
 - (3) Name of room or space.
 - (4) Location within room or space.
- b. Prepare project-specific information, drawn accurately to scale. Do not base Shop Drawings 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 Contractor's use in preparing Shop Drawings.
 - c. If not previously submitted, submit Product Data concurrent with Shop Drawings.
 - d. Submit applicable Samples/Mock-Ups concurrent with Shop Drawings.
 - e. Collect information into a single submittal for each element of construction and type of product or equipment.
 - f. Fully illustrate requirements in 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.
 - g. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 34 by 44 inches.
 - h. Upon approval:
 - (1) Retain one copy of each Shop Drawing Submittal.
 - (2) Utilize for quality control of provided manufactured elements.
 - (3) Utilize for coordination with other elements.
 - (4) Mark up and return as Project Record Document.
3. Samples and Mock-Ups:
- a. Prepare written summary indicating types of Samples and Mock-Ups required for the Work and intended location for selected and final product(s). Include the following information in tabular form:
 - (1) Type of product. Include unique identifiers for each product.

- (2) Reference sheet number, detail, and/or specification number.
 - (3) Name of room or space.
 - (4) Location within room or space.
- b. If not previously submitted, submit Product Data concurrent with Samples and Mock-Ups.
 - c. Submit applicable Shop Drawings concurrent with Samples/Mock-Ups.
 - d. Submit Samples/Mock-Ups that contain multiple, related components such as accessories together in one submittal package.
 - e. For review/ selection/ approval of kind, color, pattern, texture and similar characteristics, submit manufacturer's charts consisting of units or sections of units showing the full range of colors, textures, patterns, and other similar characteristics available.
 - f. For review/ selection/ approval of assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics, submit or erect complete, full-size Mock-Ups, at Project site, unless other is indicated in applicable Specification Section or approved by A/E, 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.
 - g. Upon approval:
 - (1) Retain one unit of each Sample/Mock-Up Submittal.
 - (a) Samples/Mock-Ups that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples/Mock-Ups must be in an undamaged condition at time of use.
 - (b) If not to be incorporated into Work, leave in place for duration of the project or until approved for removal through the Project Administrator.
 - (c) Samples/Mock-Ups not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 - (2) Utilize for quality control of provided elements.
 - (3) Utilize for coordination with other elements.
 - (4) Document approved changes and submit record of Documentation as Project Record Document.

4. Requests for Information (RFI):

- a. Hard-Copy RFIs shall have each page of attachments with the RFI number and sequential page number.
- b. Software-Generated RFIs shall contain substantially the same content as Hard-Copy RFIs and Attachments shall be provided

as electronic files in Adobe Acrobat PDF format numbered as for Hard-Copy submission.

- c. Supplementary drawings prepared by Contractor shall 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.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by individual Specification Sections.
 - 1. Reports:
 - a. All reports shall include a cover page with the following information:
 - (1) Project name.
 - (2) Type of report.
 - (3) Name, contact information, qualifications of preparer.
 - (4) Specification Section specifying report.
 - b. All reports shall include footer information that, at minimum, includes page numbers.
- B. Coordination Drawings: Comply with requirements in individual Specification Sections.
- C. Product Test Reports: Prepare written reports 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.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Construction Documents.
- E. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- F. Preconstruction Test Reports: Prepare reports 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.

- G. Compatibility Test Reports: Prepare reports 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.
- H. Material Certificates: Prepare reports 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.
- I. Field Test Reports: Prepare reports written 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.
- J. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Construction Documents. Include evidence of manufacturing experience where required.
- K. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing, operating, and maintaining product or equipment. 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.
 - 8. Specifically identify requirements for special post commissioning maintenance activities required to maintain warranties that are outside of typical Periodic Maintenance requirements.
- L. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Name of product.
 - 2. Name, address, and telephone number of factory-authorized service representative making report.
 - 3. Statement on condition of adjoining elements and acceptability for installation of product.
 - 4. Statement that products at project site comply with manufacturer's requirements.
 - 5. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 6. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 7. Statement whether conditions, products, and installation will affect warranty.

8. Other required items indicated in individual Specification Sections.
- M. Qualification Data: Prepare 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.
- N. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Construction Documents. Submit of record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include name of firms and personnel certified.
- O. Installer Certificates: Prepare written statements 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.
- P. Design Data: Prepare 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.
- Q. Material Safety Data Sheets (MSDSs): submit per requirements in individual Specification Sections.

PART 3 – EXECUTION
(Not Used)

END OF SECTION 01 33 00
[Revision March 2015]

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 STANDARDS

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.

SCHEDULE OF ABBREVIATIONS

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
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
ARI	Air Conditioning and Refrigeration
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
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 March 2015]

SECTION 01 45 00 - QUALITY CONTROL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Manufacturer's Field Services.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 QUALITY CONTROL, GENERAL:

- A. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Owner.
- B. Inspection and testing services are required to verify compliance with requirement specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Construction Document requirements.
- C. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality control requirements for individual construction activities may be specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
 - 2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Construction Document requirements.

3. Requirements for the Contractor to provide quality control services required by the Owner or authorities having jurisdiction are not limited by provisions of this Section.

1.4 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances specified requirements indicate more rigid standards and more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.5 MANUFACTURER'S INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Construction Documents, request clarification from Owner before proceeding.

1.6 MANUFACTURER'S CERTIFICATES

- A. When required by individual Specifications Section, submit six manufacturer's certificates stating that products meet or exceed specified requirements.

1.7 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification Sections, require supplier or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and to provide instructions as applicable, and to make appropriate recommendations.
- B. Representative shall submit written report to Project Administrator listing observations and recommendations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 45 00

[Revision March 2015]

SECTION 01 45 16.13 - CONTRACTOR QUALITY CONTROL

PART 1 – GENERAL

1.1 GENERAL

- A. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the General and Special Conditions. The Quality Control System shall consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALITY CONTROL PLAN/PROGRAM

- A. General: The Contractor shall furnish for review by the TDCJ Project Administrator (PA) at the Pre-Construction Meeting the Contractor Quality Control (QC) Plan proposed to implement the requirements of the General and Special Conditions. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The PA will consider an interim plan for the first [30] days of operation. Construction will be permitted to begin only after acceptance of the QC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features 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 features of work to be started.
- B. Content of the QC Plan: The QC Plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by Subcontractors, Fabricators, Suppliers and Purchasing Agents:
 - 1. A description of the Quality Control Organization, including a chart showing lines of authority and acknowledgement that the QC Staff shall implement the three phase control system for all aspects of the Work specified.
 - 2. The pertinent qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.
 - 3. A copy of the letter to the QC Manager signed by an authorized official of the Firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the QC Manager including authority to stop work which is not in compliance with the Contract. The QC Manager shall issue letters of direction to all other various Quality Control Representatives outlining duties, authorities and responsibilities. Copies of these letters will also be furnished to the PA.
 - 4. Procedures for scheduling, reviewing, approving, and managing submittals, including those of Subcontractors, off-site Fabricators,

Suppliers and Purchasing Agents. These procedures shall be in accordance with the General Conditions and Submittals Section.

5. 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.
 6. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
 7. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
 8. Reporting procedures, including proposed reporting formats.
 9. A list of the definable features or units of work. A definable feature or unit of work is a portion of the Work, which is separate and distinct from other portions of the Work and has separate control requirements. Although each section of the Specifications may generally be considered as a definable feature or unit of work, the organization of the Specifications shall not determine the extent or scope of a definable feature or unit of work. This list will be mutually agreed upon by the PA, the A/E and the Contractor during the Coordination Meeting.
- C. Acceptance of Plan: Acceptance of the Contractor's plan or interim plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. TDCJ reserves the right to require the Contractor to make changes in his QC Plan and operations including replacement of personnel, as necessary, to obtain the quality specified.
- D. Notification of Changes: After acceptance of the QC Plan, the Contractor shall notify the PA in writing a minimum of seven calendar days prior to any proposed change in the QC Plan or QC Personnel. Proposed changes are subject to acceptance by A/E.

1.4 COORDINATION MEETING

- A. After the Pre-Construction Conference, before start of construction, and prior to acceptance of the Quality Control Plan by the Quality Assurance Inspector (QA), a meeting shall be held to discuss the Contractor's Quality Control System. Attending this meeting shall be the Contractor's Project Manager, Contractor's General Superintendent, TDCJ's Quality Assurance Inspector (QA), PA and Site Staff. If required, the A/E, the Contractor's Quality Control Material Testing Lab, and TDCJ's Quality Assurance Testing Lab shall also attend. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the 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 Quality Control with the QA. Minutes of the meeting shall be prepared by the QA and signed by both the Contractor and the QA. The minutes shall become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the QC system or procedures which may require corrective action by the Contractor.

1.5 QUALITY CONTROL ORGANIZATION

- A. Quality Control (QC) Manager:
1. The Contractor shall identify an individual within his organization at the Site of the Work who shall be responsible for overall management of QC and have the authority to act in all QC matters for the Contractor. This **QC Manager shall be on the site at all times** during construction and will be employed by the Contractor, except as noted in the following. An alternate for the QC System Manager will be identified in the plan to serve in the event of the System Manager's absence. Any period of absence may not exceed 2 weeks at any one time, and not more than 20 workdays during a calendar year. The requirements for the alternate will be the same as for the designated QC Manager.
 2. **The Quality Control Manager shall be separate from and in addition to the Contractor's Superintendent** or other project management staff. The QC Manager shall report directly to the Contractor's home office Management. The Quality Control Manager shall not be removed without TDCJ's written consent.
- B. QC Organizational Staffing:
1. The Contractor shall provide and maintain a QC Staff which shall be at the Site of Work at all times during progress, with complete authority to take any action necessary to ensure compliance with the contract.
 2. Organizational Changes: The Contractor shall obtain TDCJ acceptance before replacing any member of the QC Staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement. TDCJ reserves the right to have replaced, any member of the Quality Control Staff who is in the opinion of TDCJ not accomplishing their assigned duties.
- C. QC Staff Qualifications: Following are the minimum requirements for the QC Staff. These minimum requirements will not necessarily assure an adequate staff to meet the QC requirements at all times during construction. The actual strength of the QC Staff may vary during any specific work period to cover the needs of the work period. When necessary for a proper QC organization, the Contractor shall add additional staff at no cost to TDCJ. This listing of minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with contract requirements. All QC Staff members shall be subject to acceptance by TDCJ.
1. **QC Manager: 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.
 2. Supplemental Personnel: A staff shall be maintained under the direction of the QC Manager to perform all QC activities. The Staff must be of sufficient size to ensure adequate QC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities. The QC plan will clearly state the duties and responsibilities of each staff member.

1.6 QUALITY CONTROL PROCEDURES

- A. General: Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of Subcontractors and Suppliers, complies with the requirements of the Contract. The Quality Control shall be adequate to cover all construction operations, including both on-site and off-site fabrication, and shall be coordinated to the proposed construction sequence. **Quality Controls shall include a three point inspection plan.** The Quality Control shall be conducted by the QC Manager for all definable features of work.
- B. **Three Point Inspection Plan:** The Quality Control Manager with the Contractor's appropriate staff shall utilize the Three Point Inspection Plan as the basis of the following Quality Control procedures to assure conformance of the work performed by the Contractor to the requirements of the Construction Documents and to the approved Submittals.
- C. Quality Control Procedures: In addition to the basic Three Part Inspection Plan requirements, the QC Manager shall conduct and implement the following Quality Control procedures for each definable feature of work:
1. Preparatory Coordination: Prior to the start of work under each separate definable segment of work, 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 Quality Control Manager, Contractor's Quality Control Material Testing Lab-if testing is required in the definable segment of work, PA, QA, and appropriate representatives of TDCJ. Supervisory and Quality Control representatives of all applicable Subcontractors will also attend. The purpose of the meeting is to ensure 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 will be on site all times during the work and shall have the authority to effect the resolution of quality problems including stopping the Work. The following items will be reviewed at the meeting as a minimum:
 - 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 Contractor's and Subcontractor's work force to perform the operation to required workmanship standards;
 - i. Any other preparatory steps dependent upon the particular operation.
 2. The PA shall be notified a minimum of 72 hours prior to the beginning of any preparatory coordination meeting. The Contractor's Quality Control Manager will chair the meeting. The results of the preparatory Coordination Meeting shall be documented by separate minutes prepared by the Quality Control Manager and Attached to the Daily Quality Control Summary Report.
 3. Initial Inspection: Upon completion of a representative sample of a given feature of the Work, and prior to the start of a new or changed operation, QA, PA, and the A/E will meet with the Contractor's Superintendent,

Quality Control Manager and applicable Subcontractor's Superintendent and their Quality Control Representatives, and Contractors Quality Control Material Testing Lab-if testing is required in the definable segment of work. 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. Review minutes of Preparatory Meeting.
 - b. Conformance to Construction Drawings, Specifications and the accepted Shop Drawings or Submittal;
 - c. Adequacy of materials and articles utilized;
 - d. Adequacy and results of inspection and testing methods;
 - e. Adequacy of safety and environmental precautions.
4. Once approved, the representative sample will become the physical baseline by which ongoing work is compared 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. During this inspection all differences will be resolved. The initial phase should be repeated for each new crew to work on site or at any time acceptable specified quality standards are not being met.
 5. The PA shall be notified a minimum of 72 hours prior to the beginning of any initial inspection. The Contractors Quality Control Manager will chair the initial inspection. The results of the initial inspection shall be documented by separate minutes prepared by the Quality Control Manager and attached to the daily quality control summary report.
 6. Follow-up Phase: Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the QC documentation. Final follow-up-checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.
 7. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the TDCJ A/E if the quality of on-going work is unacceptable; or if there are changes in the applicable QC staff or in the on-site production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.
 8. Pre-Final Acceptance Inspection: When the work is completed, the Contractor shall make a written request for Pre-Final Inspection in accordance with the General Conditions, giving the TDCJ PA at least 72 hours advance notice. The PA will schedule the Pre-Final Acceptance Inspection and will prepare a list of deficient or incomplete items (Punch List) discovered during the inspection. The Punch List will be transmitted to the Contractor for correction of the deficient or incomplete items. Following correction of the deficient or incomplete items and notification by the Contractor in accordance with the General Conditions, the PA and the TDCJ's A/E will conduct the Final Acceptance Inspection.
 9. Punch List: During Pre-Final or Final Acceptance Inspections, Work that is found to be incomplete, needing repair or in nonconformance with the Contract requirements such as loose bolts, damage, unsatisfactory workmanship, etc., will be identified on a Punch List. The Punch List will

- be distributed to the Contractor, the TDCJ's A/E and the Inspector Team, by the PA in accordance with the General Conditions.
10. Final Acceptance Inspection: After the Contractor has completed all items on the Punch List (generated from the Pre-Final Acceptance Inspection) he shall request a Final Acceptance Inspection on a definite date. Seventy-two (72) hours advance notice shall be given to the PA. Upon verification to the TDCJ's A/E by the QC Manager that the work is ready for Final Inspection and Acceptance, the TDCJ's A/E will within ten calendar days make a Final Inspection.

1.7 DEFICIENT AND NON-CONFORMING WORK

A. General:

1. Workmanship or materials which are found to be not in conformance with the Construction Documents shall be identified with a Deficiency issued by the Contractor's Quality Control Manager.
2. TDCJ reserves the right to maintain a staff of inspectors for random sampling of the materials and the work for conformance to Construction Documents. This does not relieve the Contractor in any way from his responsibility of Quality Control.
3. TDCJ may utilize the services of a Quality Assurance Material Testing Laboratory to perform tests of Materials as necessary to verify any testing performed by the Contractor's Material Testing Lab.
4. The Quality Control Manager shall request the Contractor to take remedial actions via a Deficiency where indicated by nonconforming work or materials found by test results.
5. All deficiencies instituted by Contractor must include the proposed corrective action to be taken, and submitted to the TDCJ's A/E, PA, and QA for approval.
6. Upon satisfactory completion of the Remedial Action, the results shall be documented by the Contractor's Quality Control Material Testing Laboratory, with a copy of the results to the TDCJ's A/E. If Material Testing Laboratory Test Reports reveal nonconforming work or materials in which the work effort has been completed and no longer correctable, the Quality Control Manager shall direct the Contractor to remove the work.

B. Deficiency Notice:

1. Ongoing work which is deficient shall be noted by the Contractor's Quality Control Manager via a Deficiency Notice. A log shall be kept by the Contractor on all such items and notice on all such items shall be given to the appropriate parties by the Contractor's Quality Control Manager. A copy of such notices shall be made on a daily basis to the TDCJ's PA, attached to the Quality Control Summary Report, and an updated copy of the Log shall be forwarded to the TDCJ's PA on a weekly basis, by the Contractor's Quality Control Manager. TDCJ reserves the right to advise the Contractor's Quality Control Manager of work that is deficient.
2. Deficient work is when the affected element of work is in-progress and discrepancies can be rectified as the work proceeds.

- ### C. Remedial Action Request: TDCJ reserves the right to issue a remedial action request on deficient work that has not been corrected on an ongoing daily basis,

recurring deficient work or materials, or deficient work that is in danger of being covered up. The Remedial Action Request will be copied to the Contractor's Quality Control Manager on a same day basis and shall require a written response by the Contractor's Quality Control Manager within 24 hours of issuance to the PA. Upon approval of the Contractor's proposed corrective action, the Contractor shall have 15 calendar days to successfully complete his remedial work. If after 15 calendar days, the Deficient Work is not resolved, the work identified shall become in nonconformance and a notice of nonconformance will be issued. When issued, a Notice of Nonconformance will preclude payment for the elements noted and will remain in effect until corrective actions have been submitted, approved and performed. A Remedial Action Request Log will be kept by the QA and a copy of this Log will be forwarded to the Contractor's Quality Control Manager on a weekly basis.

- D. Notice of Nonconformance: A Notice of Nonconformance will be issued to the Contractor by the PA whenever there are violations of the terms of the Contract, including materials received and/or completed items of the Work found to be in nonconformance with contract requirements. Work not in conformance with the Construction Documents can be identified as work or material that cannot be corrected and must be replaced, work that in order to correct it must have a deviation from Construction Documents approved, or work in which an item must be substituted in lieu of that specified in the Construction Documents. When issued, a Notice of Nonconformance will preclude payment for elements noted and will remain in effect until corrective actions have been submitted, approved and performed. The Notice of Nonconformance Form will fully describe the nature and extent of nonconforming elements and will include space for the Contractor's Corrective Action Proposal, the TDCJ's A/E review of the Contractor's Proposal, TDCJ reinspection and/or verification of approved corrective rework and a space for the PA disposition of the Nonconformance matter.
- E. Corrective Action: Correction of Deficient or Nonconforming Work will be monitored by the TDCJ's A/E. TDCJ will verify that the Deficient or Nonconforming work has been corrected, corrective action has been taken to prevent recurrence, and will record when the correction was completed. Significant conditions adverse to quality will be reviewed by the TDCJ's A/E to determine the cause and to review the Contractor's recommended corrective action that will preclude recurrence. Follow-up action shall be taken to verify implementation of the corrective action. The corrective action will be documented by the PA.

1.8 QUALITY CONTROL OF PRODUCT DELIVERY

- A. Inspection of Products and Equipment to be incorporated into the work;
 - 1. Products and equipment delivered to the project site shall be subject to inspection by the Quality Control Manager for conformance with the Construction Documents and Submittals, prior to incorporation into the Work. TDCJ Inspectors may monitor the Contractor's inspection procedures.
 - 2. All products and equipment furnished by TDCJ and delivered to the Project Site shall be inspected by the QA Inspector and the Quality Control Manager for shipping damage, and for identification and quantity, prior to incorporation into the Work.

3. Items which are found to be in nonconformance with the Contract requirements shall be identified and issued as a Deficiency by the Quality Control Manager and segregated from accepted Products and Equipment. These items shall not be incorporated into the Work until corrective action acceptable to TDCJ's A/E has been completed.
4. Special requirements for storage, handling and tracking of hazardous material shall be monitored in strict accordance with Materials Safety Data Sheet requirements.
5. Items which are determined to have been improperly shipped, stored, or handled shall be deemed deficient and shall not be incorporated into the Work until the Manufacturer has inspected the item in question and determined the repair work or corrective actions necessary to validate the Product Warranty or restore the Product to like new condition, subject to approval of the TDCJ's A/E.

1.9 DOCUMENTATION

- A. The Contractor shall maintain current records of quality control operations, activities, and tests performed, including the work of Subcontractors and Suppliers. These records shall be on the sample forms included herein and shall include factual evidence that required quality control 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 today, giving location, description, and by whom.
 4. Test and/or control activities performed with results and references to Contract requirements. The control phase shall be identified (Preparatory, Initial, and Follow-up). List deficiencies noted along with corrective action.
 5. Material received with statement as to its acceptability and storage.
 6. Identify submittals reviewed, with contract reference, by whom, and action taken.
 7. Off-site surveillance activities, including actions taken.
 8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
 9. Record instructions given/received in the field.
- B. These records shall indicate a description of trades working on the Project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. The original of these records in report form shall be furnished to the PA daily within 24 hours after the date(s) covered by the report, including reports for days on which no work is performed. All calendar days shall be accounted for throughout the life of the Contract. Reports shall be signed and dated by the QC Manager. The report from the QC Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

1.10 QUALITY CONTROL OF REGULATORY REQUIREMENTS

- A. Inspection of Clean Water Act Section 402(p): Provide Inspections required by Section 402(p) as follows:

1. Inspection shall as a minimum be performed once every 7 days or within 24 hours of rainfall of 1/2 inch or more. If the area in which the construction activity is taking place is an arid or semi arid zone, (10 to 20 inches annual rainfall average or less), the requirement for reporting is still within 24 hours of a 1/2 inch rainfall, but only once every 30 days if no such rainfall occurs.
2. Inspectors shall observe: Disturbed areas, areas used for storage of materials exposed to precipitation, structural control methods, and areas where vehicles enter and exit site.
3. Disturbed area or storage area shall be inspected for evidence of or the potential for pollutants entering the runoff from the site. Examine erosion and sediment controls to ensure they are performing correctly. If a location where runoff is discharged into U.S. waters (creeks, rivers, etc.) is accessible, it shall be inspected for significant impacts. Entrances and exits shall be inspected for off-site tracking. Non-storm water discharges such as water discharges are created as a result of construction activities and its associated activities, (i.e. truck washing, etc.) shall be inspected.
4. Inspections may result in alterations of the original Pollution Prevention Plan. Documentation of these recommended changes shall be included in the Inspection Reports.

B. Documentation of Inspections:

1. An Inspection Report shall include as a minimum: scope of inspection, name and qualifications of inspector, date of inspection, major observations, actions taken and actions recommended.
2. The Contractor shall maintain current records of inspection.
3. The original of these records shall be submitted to the PA within 24 hours after the date(s) covered by the report. Reports shall be signed by the QC Manager.

1.11 FORMS:

A. Refer to **TDCJ Attachment 10** for referenced copies of State Documents and Forms.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION 01 45 16.13

[Revision March 2015]

SECTION 01 45 23 - TESTING AND INSPECTION SERVICES

PART 1 - GENERAL

1.1 GENERAL

- A. Contractor shall employ and pay for the services of an Independent Testing Laboratory (Contractor's Quality Control Laboratory) to perform specified services and testing.
- B. Employment of laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.
- C. Contractor shall not employ an Independent Testing Laboratory currently under a separate contract to provide such services to TDCJ.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions
- B. Other Specification Sections as applicable

1.3 QUALIFICATIONS OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E 329, "Practice for Use in the Evaluation of Inspection and Testing Agencies as Used in Construction" and ASTM E543, "Practice for Determining the Qualification of Nondestructive Testing Agencies."
- C. Authorized to operate in the State of Texas
- D. Acceptable to TDCJ and approved in writing by TDCJ
- E. 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 construction materials.
- F. Testing equipment calibrated at 12 month intervals by devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants. Submit copies of certificates of calibration.
- G. Voluntarily participate in American Association of Laboratory Accreditation (AALA) program.
 - 1. Laboratory shall possess a current Scope of Accreditation Certificate in type of tests required for the project.
 - 2. Testing and Inspection Services performed at laboratory facility which has received A2LA accreditation, unless TDCJ specifically approves an alternate A2LA accredited laboratory or an acceptable project QA/QC program which provides for an adequate "extension" of accredited

laboratory. Such an "extended" laboratory which will operate more than a year must be separately assessed and accredited. A temporary field or project laboratory operating less than a year shall be under the fulltime supervision of management from an accredited laboratory. Test reports produced by the temporary field or project laboratory shall be signed by one of the accredited laboratory's signatories.

- H. Inspectors and technicians with demonstrated competence in performing relevant tests and inspections and under direct supervision of persons meeting following requirements:
 - 1. NICET Level II Certification in concrete, soils, or asphalt fields; or ACI Level II Certification in concrete.
 - 2. AWS Certified Welding Inspector in structural steel field.
 - 3. ASNT Level II Certification in Radiographic or Ultrasonic Nondestructive Testing of shop and field welding.
- I. Soils inspections for pier drilling, structural excavation and structural fill earthwork performed by a registered A/E or Geologist licensed in the State of Texas and having a minimum of 5 years experience in providing Geotechnical services. This individual shall be present at site and provide continuous inspections during pier drilling, structural excavation and structural fill earthwork procedures.

1.4 AUTHORITY AND DUTIES OF LABORATORY

- A. Cooperate with Architect/Engineer (A/E) and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction.
- C. Promptly notify PA, A/E and Contractor of observed irregularities or deficiencies of work or products.
- D. Laboratory is not authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of Construction Documents.
 - 2. Approve or accept any portion of the Work.
 - 3. Perform any duties of the Contractor.
- E. Promptly submit written report of each test and inspection; 2 copies each to A/E and PA and one copy to Contractor. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector/technician and responsible reviewer
 - 5. Date and time of sampling or inspection
 - 6. Record of temperature and weather conditions
 - 7. Date of test
 - 8. Identification of product and Specification Section
 - 9. Location of sample or test in the Project

10. Type of inspection or test
 11. Results of tests and compliance with Construction Documents
 12. Interpretation of test results that indicate unsatisfactory conditions
- F. Submit certificates of testing, inspection or approval that are required by laws, ordinances, rules, regulations, orders or approval of public authorities. Submit same number of copies as required for tests and inspections.

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and provide access to Work or to Manufacturer's operations.
- B. Deliver to laboratory adequate quantities of representative samples of materials proposed for use and which require testing.
- C. Provide to laboratory preliminary design mix proposed to be used for concrete, and other materials mixes which require control by testing laboratory.
- D. Notify laboratory and PA sufficiently in advance of operations (minimum of 48 hours) to allow for laboratory assignment of personnel and scheduling of tests.
- E. Furnish incidental labor and facilities:
 1. To provide access to Work to be tested
 2. To obtain and handle samples at Project Site or at source of product to be tested.
 3. To facilitate inspections and tests, including scaffolding, or hoisting; required to inspect, and test structural elements.
 4. For storage and curing of test samples
- F. For TDCJ's Quality Assurance inspection and testing, furnish same incidental labor and facilities specified in this Article for Contractor's Quality Control Testing.
- G. Provide adequate facilities for safe storage and proper curing of concrete test samples on project site for the first 24 hours and also for subsequent field curing in accordance with ASTM C31.
- H. Make arrangements with laboratory and pay for additional samples and tests required for Contractor's convenience, including additional compressive strength tests required to confirm strength requirements for early form recovery.
- I. Make arrangements with laboratory and pay for services to perform additional inspections, sampling and testing required when initial tests indicate Work does not comply with Construction Documents.
- J. Coordinate and integrate inspection and testing services with Contractor's Quality Control Plan/Program, including:
 1. Compile and submit complete list of inspections and tests required by the Construction Documents. List shall include test name, frequency, specification reference, and estimate of quantities.

2. Record results of inspections and tests conducted at site on appropriate Quality Control Reports.
3. Record results of off-site inspections and tests on appropriate Quality Control Reports.

1.6 TDCJ'S QUALITY ASSURANCE INSPECTION AND TESTING

- A. The PA may, from time to time, perform additional Quality Assurance inspections and testing in accordance with the General & Special Conditions of the Contract.
 1. The TDCJ will employ and pay for services of an independent testing laboratory to perform any additional Quality Assurance inspections and testing.
- B. Quality Assurance inspections and testing conducted by the TDCJ's Quality Assurance Laboratory shall not relieve the Contractor from performing inspections and tests required by the Construction Documents or regulatory agencies.
- C. The TDCJ reserves the right to utilize the Contractor's on-site Quality Control Laboratory Facilities, if any, for incidental handling, curing or storage of Quality Assurance samples.

1.7 REFERENCES

- A. American Concrete Institute:
 1. ACI 301-84 - Specifications for Structural Concrete for Buildings.
 2. ACI 318-89 - Building Code Requirements for Reinforced Concrete
- B. American Institute of Steel Construction:
 1. AISC-Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, June 1, 1989.
 2. AISC-Specification for Structural Joints, using ASTM A325 or A490 Bolts, November 13, 1985, approved by Research Council on Riveted and Bolted Structural Joints of the Design Professional Foundation.
- C. American Society of Testing Materials:
 1. ASTM C31 - Making and Curing Concrete Test Specimens in the Field
 2. ASTM C39 - Compressive Strength of Cylindrical Concrete Specimens
 3. ASTM C78 - Flexural Strength of Concrete
 4. ASTM C42 - Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 5. ASTM C91 - Masonry Cement
 6. ASTM C94 - Ready Mixed Concrete
 7. ASTM C109 - Compressive Strength of Hydraulic Cement Mortars
 8. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates
 9. ASTM C143 - Slump of Portland Cement Concrete.
 10. ASTM C172 - Sampling Fresh Concrete
 11. ASTM C231 - Test for Air Content of Freshly Mixed Concrete by the Pressure Method
 12. ASTM C780 - Preconstruction and Construction Evaluation of Mortars

13. ASTM C1019 - Sampling and Testing Grout
14. ASTM D75 - Sampling Aggregates
15. ASTM D4318 - Liquid Limit, Plastic Limit and Plasticity Index of Soils
16. ASTM D698 - Moisture-Density Relations of Soils
17. ASTM D1188 - Bulk Specific Gravity of Compacted Bituminous Mixtures
18. ASTM D1556 - Density of Soil in Place by Sand-Cone Method
19. ASTM D1557 - Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-16 Rammer and 18 inch Drop.
20. ASTM D2167 - Density of Soil in Place by Rubber-Balloon Method
21. ASTM D2172 - Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
22. ASTM D2216 - Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil - Aggregate Mixtures
23. ASTM D2922 - Density of Soil and Soil Aggregate in Place by Nuclear Method
24. ASTM E164 - Ultrasonic Contact Inspection of Weldments
25. ASTM E447 - Compressive Strength of Masonry Prisms

D. American Welding Society:

1. AWS D1.1 - Structural Welding Code, Steel, including latest revisions.

PART 2 – NOT APPLICABLE

PART 3 – EXECUTION

3.1 SOILS TESTING

- A. Laboratory Sampling and Testing: For each type of off-site borrow material and site excavated soil material proposed for use, analyze samples to provide engineering soil classification, gradation and quality description, and perform 2 representative tests for each 10,000 cubic yards of soil material as follows:
1. Tests for liquid limit, plastic limit and plasticity index of soils in accordance with ASTM D4318.
 2. Tests for moisture/density relations (optimum moisture and laboratory maximum density) of soil in accordance with ASTM D698 or D1557, as applicable.
 3. Laboratory moisture content test in accordance with ASTM D 2216 for each soil type to calibrate nuclear density gauge.
- B. In Place Moisture Density Tests:
1. Optimum Moisture-Density Relationship: If changes in soil occur which may affect optimum moisture content or laboratory maximum dry density, conduct one additional moisture-density relationship for each changed soil material in accordance with ASTM D698 or D1557.
 2. In-Place Compaction Tests: Perform in-place compaction test for moisture content, and dry density of materials-in-place, to determine that

subgrades, backfill and embankment fill materials have been compacted to specified density in accordance with ASTM D2167 or ASTM #2922. Perform at following frequencies:

- a. One test for each 10,000 square feet of area of each lift of subgrade fill or backfill placed under pavement or floor slabs, except that pavement test rate may be at minimum of 400 linear foot intervals along pavement center line. Stagger test locations in each lift from those in previous lift. Provide a minimum of 3 tests for each lift for each building pad or pavement area.
- b. One test for each 100 linear feet, or portion thereof, of each lift of trench backfill, with locations staggered between lifts.
- c. One test for each 100 linear feet, or portion thereof, of each lift of backfill placed against foundation walls or grade beams, with locations staggered between lifts.
- d. One test of each lift placed at any free-standing footing, pier, or similar support, with locations taken on a different side, in each case, from the lift below.
- e. One test for each 100 square feet, or portion thereof, of each lift of fill placed beneath isolated footings, with locations staggered between lifts.
- f. One test for each 100 linear feet, or portion thereof, of each lift of fill placed beneath strip footing, with locations staggered between lifts.
- g. One test for each 15,000 square feet of area of each lift of embankment fill placed on site. Stagger test locations in each lift from those in previous lift.

C. Testing Reports:

1. Laboratory Test Reports: Furnish a report for each test, describing variances from specified requirements, and state whether material meets specification requirements.
2. Field Test Reports: Furnish a report stating results for each test for each area. Identify soil type, location, lift and area. Reports may be combined on a daily basis, if so desired, provided that location of each test and applicable lift are clearly identified.

3.2 FLEXIBLE BASE

A. Sampling:

1. Base Material at Source: Prior to production and delivery of materials, take at least one initial sample in accordance with ASTM D 75. Collect each sample by taking three incremental samples at random from source material to make a composite sample of not less than 50 pounds. Repeat above sampling when source of material changes or when unacceptable deficiencies or variation from specified grading of materials are found in testing.
2. During construction: Take one random sample from each 1,000 tons of completed course material, but not less than one random sample per day's run. Take samples in accordance with ASTM D75.

B. Testing:

1. Base Material: Test each sample of base course material. Make graduation tests from each sample in accordance with ASTM C136.
2. Field Density Tests: Perform one test for each 500 square yards of each layer of base course in accordance with ASTM D1556 or D2922.
3. Laboratory Density Tests: Perform one representative test of base course material in accordance with ASTM D1557, Method D.
4. Thickness Tests: Measure thickness of base course at intervals such that there will be depth measurement for at least each 500 square yards of complete base course. Make depth measurements by test holes, at least 3 inches in diameter through base course. Report to Contractor immediately where base course deficiency is more than ½ inch.

3.3 TESTING SOIL STABILIZATION

A. Lime Mixture:

1. Determine optimum lime content and mixture for Contractor.
2. Report optimum lime content and required site mix to Project Administrator. Site mix recommendation shall include pounds of lime per sq. yd. Lime slurry quantity will be computed on basis of solids furnished by supplier.

B. Field Inspection:

1. Inspect lime stabilization procedures for proper mix of lime and proper application procedures.
2. Inspect cement stabilization procedures to determine type of cement used, amount of cement used and depth of treatment.

- C. Compaction Tests: Perform one in-place density test for each 10,000 sq. ft. of soil stabilized subgrade in accordance with ASTM D2922.

3.4 INSPECTING STRUCTURAL EXCAVATION AND FILLING

- A. Inspecting Structural Excavation: Provide continuous inspection of each concrete spread footing excavation to determine if proper bearing stratum is obtained and utilized, if excavations are properly clean and dry before concreting, and if footing excavation is within specified allowable dimensional tolerances.

B. Field Inspection:

1. Inspect exposed subgrade after excavation is complete to determine if subgrade is suitable to receive select fill.
2. Inspect select fill material prior to placement of each lift to determine if select fill meets specified requirements.

3. Provide continuous inspection of placement and compaction of select fill material for each lift for conformance to requirements of Construction Documents.

3.5 ASPHALTIC CONCRETE TESTS

- A. Make one laboratory density and stability test on each type of asphaltic concrete for each day's operation in accordance with SDHPT Bulletin C14.
- B. Make one extraction and gradation test on each type of asphaltic concrete for each day's operation in accordance with ASTM D2172.
- C. Make one field in-place density test on each type of asphaltic concrete for each day's operation in accordance with ASTM D1188.

3.6 CONCRETE MIX DESIGN

- A. Prepare and test proposed mix design for each scheduled class of concrete in accordance with procedures specified in Submittals - Section 01 33 00.
- B. Compressive strengths shall meet or exceed values specified for each class of concrete scheduled for each portion of the work. Requirements are based on 28-day compressive strength.
- C. After sufficient data becomes available during construction, mix proportions may be adjusted in accordance with ACI 301, Section 3.11, if approved by Design Professional.

3.7 INSPECTION AND CONTROL OF CONCRETE (if applicable)

- A. Inspect batch plant facilities for conformance to ASTM C94. Inspect initial weighing and batching of controlled concrete at batch plant at start of each day's placement.
- B. Verify that materials used are in accordance with requirements of Construction Documents. Visually inspect aggregate stockpiles to determine uniformity of grading, cleanliness and possible moisture variations. Confirm visual determinations by tests taken randomly, either daily or on lot basis.
- C. Check for adjustment in batch weights to compensate for variations in moisture content.
- D. Inspect plastic concrete at site to determine if concrete is thoroughly and properly mixed. Control consistency of mix to prevent segregation due to excessive water. Adjust amounts of mixing water to obtain uniform consistency of each batch.
- E. Verify unauthorized addition of water which will exceed maximum allowable water/cement ratio for each mix design.
- F. Monitor mixing time of concrete in trucks.
- G. Certify each delivery ticket indicating class of concrete delivered, and record amount of water added, time of mixing, time of discharge, slump and location of placement.

- H. Promptly report to PA details of reasons for rejection of any quantities of concrete. Report locations of concrete placements, quantities, date of placements and other pertinent facts concerning concrete represented by rejected specimens.

3.8 TESTING OF CONCRETE

A. Test Cylinders:

1. During progress of Work, mold, cure and test specimens of each different mix design or class of concrete placed in any one day.
2. For each 75 cubic yards of concrete placed, or part thereof over 10 cubic yards, make four compressive test cylinders during pour.
3. Mold and cure test cylinders in accordance with ASTM C31.
4. Test cylinders in accordance with ASTM C39: one at 7 days and two at 28 days.
5. Hold remaining cylinder for additional testing as directed by through
6. Make additional sets of four cylinders when obvious changes in mix are apparent.
7. Additional compressive test cylinders required for determination of early form removal shall be made at Contractor's option and expense.

B. Slump Tests:

1. Make slump tests for each 50 cubic yards of concrete placed, or for each set of cylinders in accordance with ASTM C143, whichever is greater.
2. Slump shall be measured to determine if conformance to limits specified have been achieved.

C. Strength:

1. Seven day compressive strength of concrete shall be a minimum of 65% of required 28 day compressive strength, unless otherwise specified or unless mix design tests indicate otherwise.
2. Strength level of concrete will be considered satisfactory if averages of all sets of 3 consecutive strength test results equal or exceed specified strength and no individual test result is below specified strength by more than 500 psi. Strength test shall consist of two specimens.
3. When strength of test cylinders falls below design strength, the Design Professional may require core tests, structural analysis or load tests as specified below.

- D. Air Content of Normal-Weight Concrete: Determine total air content of air entrained concrete for each compressive strength test in accordance with ASTM C231.
- E. Additional Testing for Concrete Paving: In addition to above specified testing, mold four beam specimens for each 150 cubic yards. Test beams in accordance with ASTM C78, two at 7 days and two at 28 days. (Third point loading).

3.9 TESTING DEFICIENT CONCRETE IN PLACE

- A. General: When strength of concrete has been determined to be potentially deficient based on test results, provide core tests, structural analysis or load test as directed by AP to determine actual strengths.
- B. Core Tests:
 - 1. Obtain and test core specimens of at least 3 inches in diameter in accordance with ASTM C42. Cores shall be air dried (temperature 60°F to 80°F, relative humidity less than 60 percent) for 7 days before test and shall be tested dry.
 - 2. At least three representative cores shall be taken from each member or area of concrete in place that is considered potentially deficient. The location of cores shall be determined by the PA so as least to impair strength of structure. If, before testing, one or more of the cores show evidence of having been damaged subsequent to or during removal from structure, it shall be replaced.
 - 3. Concrete in the area represented by a core test will be considered adequate if the average strength of the cores is equal to at least 85 percent of and if no single core is less than 75 percent of the specified design strength.
 - 4. Patch core holes as specified for patching in Section 01 73 10 – Cutting and Patching.
- C. Structural Analysis: If core holes are inconclusive or impractical to obtain, the TDCJ may perform additional structural analysis at the Contractor's expense to determine safety of structure.
- D. Load Test: If core holes and structural analysis do not confirm the safety of the structure, load tests may be required and their results evaluated in accordance with Chapter 20, "Strength Evaluation of Existing Structures" of ACI 318.
- E. Other Testing: Testing by impact hammer, sonoscope, or other nondestructive devices may be permitted by TDCJ to determine relative strengths at various locations in structure or for selecting areas to be cored. Such test shall not be used as a basis for acceptance or rejection of the structure's safety.
- F. Failed Tests: Concrete work judged inadequate by core tests, structural analysis or by results of a load test shall be replaced at Contractor's expense.

3.10 REINFORCING STEEL INSPECTION

- A. Perform visual inspection prior to concrete placement for size, type, and quality of materials.
- B. Observe and report on placement of reinforcement for conformance with Construction Documents and Shop Drawings, including size, and number of bars, vertical location, horizontal spacing, correctness of bends, splices, clearance between bars and forms, adequacy and security of supports and ties, and excessive congestion of reinforcing steel.
- C. Visually inspect placement of anchor bolts for correct size, location and spacing.
- D. Visually inspect embedded metal assemblies and deformed bar anchors for conformance with Construction Documents.
- E. Visually inspect mechanical couplers for conformance with Construction Documents and Manufacturer's recommendations.
- F. Immediately report conditions of non-conformance with Construction Documents and Shop Drawings to TDCJ PA for correction. If Contractor fails to correct reported conditions, submit written report of non-conforming work to PA and A/E.

3.11 TESTING REINFORCED MASONRY CONSTRUCTION

- A. Field Compressive Test for Mortar: Sample and test in accordance with ASTM C780.
- B. Field Compressive Test for Grout: Sample and test in accordance with ASTM C1019.
- C. Prism Tests:
 - 1. Fabrication: Fabricate from masonry units and mortar used at site. Fabricate under same condition as for structure, including bonding, joint thickness and workmanship.
 - 2. Dimensions – CMU: Unit width by 16 in. long and 16 in. high. Do not fill hollow core with grout.
 - 3. Storage: Store preconstruction prisms in air at minimum temperature of 65°F. Store site control prisms at site for 24 hours, thereafter in air at minimum temperature of 65 °F.
 - 4. Testing:
 - a. Test after 7 and 28 day aging.
 - b. Cap each prism with calcined gypsum or sulphur compound to provide bearing surfaces plane within 0.003 inches and perpendicular to axis prism.
 - c. Test in accordance with applicable provisions of ASTM E447.
 - d. Compute value of ultimate net compressive strength of CMU by dividing ultimate load by net area of masonry units used in constructing prisms.

5. Test Reports: Indicate age of prism, storage conditions, dimensions compressive strength of individual prisms and ultimate compressive strength. Compute coefficient of variation against other specimens in set and specimens tested to date.
- D. Preconstruction Testing:
1. Mortar: Three compressive strength tests, (six test cubes each). Test three at 7 days and three at 28 days.
 2. Grout: Three compressive strength tests, (four test cylinders each). Test two at 7 days and two at 28 days.
 3. Prisms: six CMU prisms. Test half at 7 days and remainder at 28 days.
- E. Job Site Quality Control Testing : Perform following tests during construction of reinforced concrete masonry construction:
1. Mortar: Six compressive test cubes for each day's production of mortar used in reinforced grouted masonry. Test 3 at 7 days and 3 at 28 days.
 2. Grout: Four compressive test cylinders for each day's production of grout. Test two at 7 days and two at 28 days.
 3. CMU Prisms: Provide three prisms for each 5000 sq. ft. of reinforced grouted concrete masonry wall constructed. Test one at 7 days and two at 28 days.
 - a. If average strength of a set of prisms does not meet specified compressive strength (f_m), masonry corresponding to test results shall be unacceptable.
 - b. Notify A/E and Contractor immediately of unacceptable tests.

3.12 INSPECTING STRUCTURAL STEEL

- A. Inspect structural steel during fabrication and during and after erection for conformance with Construction Documents and Shop Drawings.
- B. Shop inspection shall include:
1. Inspection of steel for straightness and alignment.
 2. Visual inspection of shop welding.
 3. Ultrasonic testing of full penetration welds.
 4. Inspection of galvanizing.
 5. Inspection of installation of shop welded shear studs.
 6. Inspection of surface preparation and shop painting.
- C. Field inspection shall include:

1. Proper erection of elements.
 2. Proper installation of bolts, including checking of calibration of impact wrenches used with high-strength bolts.
 3. Plumbness of structure and proper bracing.
 4. Proper field painting.
 5. Visual examination of field welding.
 6. Ultrasonic testing of penetration field welds.
 7. Installation of field welded shear studs.
 8. Inspection of shop fabricated members, upon their arrival at jobsite, for defects incurred during transit and handling.
 9. Measure and record camber of beams upon arrival and before erection for compliance with specified camber. Measure lying flat with web horizontal. Members outside specified camber tolerance shall be returned to shop for correction.
- D. Verification of welding procedures, welding operations, and welder and tacker certificates of qualification in accordance with AWS D1.1 and for metal deck welding in accordance with AWS D1.3.
- E. Inspect shop and field welds in accordance with AWS D1.1 and as follows:
1. Visually inspect welds for size and appearance.
 2. Inspect penetration welds by ultrasonic testing in accordance with ASTM E164.
- F. No burning or other field corrections of steel members are permitted without express permission of A/E obtained through the PA. Immediately report violations.
- G. Perform inspection of stud welding in accordance with Section 7.8 of AWS D1.1 and as follows:
1. A minimum of 2 shear studs shall be welded at start of each production period in order to determine proper generator, control unit and stud welder setting. Test studs visually examined to determine if they exhibit full 360° flash.
 2. In addition to visual examination, test shall consist of bending studs after they are allowed to cool, to an angle of approximately 30° from their original axes by either striking studs with a hammer or placing a pipe or other suitable hollow device over stud and manually or mechanically bending stud. At temperatures below 50°F (10°C), use continuous slow application of load to bend studs.

3. If on visual examination test studs do not exhibit 360° flash, or if on testing failure occurs in weld zone of either stud, correct procedures and weld two more studs to separate material or on production member and test as above. If either of second two studs fails, continue additional welding on separate plates until two consecutive studs are tested and found to be satisfactory before allowing additional production studs to be welded to member.
 4. Direction of bending for studs with less than a 360° flash shall be opposite to missing portion of flash.
 5. Bent stud shear connectors to be embedded in concrete that show no sign of failure shall be acceptable for use and left in bent position.
 6. When temperature is below 32°, stud welding is prohibited.
- H. Visually examine bolted connection joints to determine that bolts and washers are properly installed and have been tensioned.
- I. Perform inspection of high-strength bolted construction in accordance with AISC Specification for Structural Joints using ASTM A325 bolts.

3.13 TESTING NON-SHRINK GROUT (if applicable)

- A. Make one strength test for each ten base plates grouted and for each ten bags of grout used in joints between members.
- B. Each test shall consist of six cubes, three tested at 7 days, and three at 28 days, made and tested in accordance with ASTM C109, with the exception that grout shall be restrained from expansion by a top plate.

END OF SECTION 01 45 23
[Revision March 2015]

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

- A. Requirements for temporary utilities, support facilities, and security and protection facilities. Unless otherwise indicated all equipment, material, service, etc. is required to be provided by Contractor, shall remain property of Contractor, and included in Project Sum.
- B. Related Requirements:
 - 1. General Conditions and Special Conditions.
 - 2. Other Specification Sections as applicable.

1.2 DEFINITIONS

- A. Permanent Enclosure: As determined by the A/E, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

- A. General:
 - 1. TDCJ provided utilities are provided at no charge for use.
 - 2. Cost or use charges for temporary facilities not provided by TDCJ shall be included in Contract Sum.
 - 3. Allow other entities to use temporary services and facilities without cost, including, but not limited to TDCJ's construction forces, occupants of Project, testing agencies, A/E, and authorities having jurisdiction.
 - 4. For connection to TDCJ provided utilities, coordinate interruption of services for connections through the PA. Follow notification requirements of Construction Documents.
 - 5. Assume responsibility for operation, maintenance, and protection of each service connection and extension installed and utilized by Contractor. All utilities shall be maintained in a condition acceptable to TDCJ, irrespective of responsible party.
 - 6. Restore utilities and site to pre-project condition upon completion of project, unless other is approved in writing through the PA.

1.4 SUBMITTALS

- A. Site Plan:
 - 1. Show temporary buildings, sheds, storage containers, facilities, fencing, utility hookups, staging areas, and parking areas for construction personnel.
 - 2. Refer to Construction Drawings for location of lay-down area(s) and location of TDCJ provided utilities, if available.
 - 3. Submit to PA for approval prior to mobilization.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before TDCJ's acceptance regardless of previously assigned responsibilities.

PART 2 – PRODUCTS (if applicable)

2.1 TEMPORARY FENCING

A. Fixed Chain-Link Fencing:

1. Minimum 2-inch, 0.148-inch- thick (9-gauge), galvanized steel, chain-link fabric fencing; minimum 8 feet high;
2. Galvanized 16-gauge steel pipe posts;
3. Minimum 2-3/8-inch- OD line posts;
4. 2-7/8-inch- OD corner and pull posts;
5. 1-5/8-inch-OD top and bottom rails, with galvanized barbed-wire top strand.
6. Provide posts with length capable of 4-foot embedment depth into soil.
7. Post spacing: no greater than 6'-0" on center.
8. Provide 30-inch embedment anchoring pins for anchorage of horizontal bottom rails at no greater than 24-inches on center.
9. For fencing located on pavement, core pavement for passage of posts and pins.
10. Provide swing gates with provision for locking accessible from both sides of gate. Gates shall remain locked when not in use.

B. Portable Chain-Link Fencing:

1. Minimum 2-inch, 9-gauge, galvanized steel, chain-link fabric fencing;
2. Minimum 8 feet high;
3. Galvanized 16-gauge steel pipe posts;
4. minimum 2 3/8-inch- OD line posts;
5. 2 7/8-inch- OD corner and pull posts;
6. 1 5/8-inch- OD top and bottom rails.
7. Line post or panel spacing suited to conditions, including wind loads.
8. Provide concrete or galvanized steel bases for supporting posts.
9. Provide swing gates where needed for efficient use, with latches and provision for locking accessible from both sides of gate. Gates shall remain locked when not in use.

2.2 TEMPORARY BUILDINGS

- A. Field Offices, General: Need for Contractor provided Field Office shall be determined at Pre-Bid Meeting. Record of determination will be published in Addendum A-001 in Meeting Minutes. If Field Office is required by Addendum,

1. Provide prefabricated or mobile unit(s) sized and furnished for construction operations, including required project meetings, with serviceable finishes, lockable entrances, and foundations adequate for normal loading.
2. Provide heating and air conditioning with temperature controls to maintain an average uniform temperature of 68 to 72 °F.
3. Provide interior lighting for average illumination of 20 fc.

4. Locate Field Office in identified Lay-down area exterior to TDCJ's secured perimeter unless other is approved in writing through PA.
 5. Field Office shall be locked when not in use.
- B. Storage and Fabrication Sheds: Provide sheds or shipping containers sized, furnished, and equipped to accommodate delivered materials requiring physical protection and equipment for construction operations.
1. Storage and Fabrication Sheds shall be located in identified Lay-down areas and locked when not in use.
 2. Store combustible materials in a separate building/shed/container from other materials.

2.3 TEMPORARY UTILITIES

A. Sewer Service: Sewer service is not available for extension to Field Office or temporary sanitation facilities without payment of use charges. Use of existing TDCJ sanitary facilities will not be permitted. Maintenance includes daily cleaning and sufficient supply of hand soap and paper products as required.

B. WATER SERVICE

1. Water from TDCJ's existing water system is available for use for Field Office operations without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required. Provide protection of permanently installed elements from damage due to operation of temporary service.
2. Water from TDCJ's existing water system is available for use for construction operations without payment of use charges. If these services are required for construction operations, provide connections and extensions of services from local water service provider as required and provide protection of permanently installed elements from damage due to operation of temporary service. Include applicable installation, metering
3. Water for all uses shall be with an elevated stationary pipe and support a delivery hose that will supply an air gap.
4. Provide drinking water for construction force from a potable source at all times for as needed access both interior and exterior to secure perimeter.

C. Electric Power Service:

1. Electric power from TDCJ's existing system is available for use for Field Office without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required from local electric service provider for Field Office operations and provide protection of permanently installed elements from damage due to operation of temporary service.
2. Electric power from TDCJ's existing system is available for use for construction operations without payment of use charges. If these services are required for construction operations, provide connections and extensions of services as required from local electric service provider for construction operations and provide protection of permanently installed elements from damage due to operation of temporary service.

D. Telephone Service:

1. "Land line" telephone service from TDCJ's existing system for use for Field Office operations is not available for use without payment of use charges. If these services are required by Contractor for Field Office operations, provide connections and extensions of services as required from local telephone service provider for Field Office operations and provide protection of permanently installed elements from damage due to operation of temporary service. If land line telephone service is installed for Field Office operations,
 - i. Contractor to provide necessary telephonic equipment for use by Contractor personnel for project activities and will remain property of Contractor at conclusion of project.
 - ii. These items are to be provided for use by TDCJ personnel, testing agencies, Authority Having Jurisdiction (AHJ), etc. for project related activities at no additional charge to TDCJ.

2. Irrespective of installation of land line telephone service, provide two (2) cell phones with voicemail and "smart phone" service that includes web-based e-mail application OR two (2) cell phones with voicemail and two (2) laptops, notebooks, tablets or similar devices with web-based e-mail application.
 - i. These cell phones, and only these cell phones, will be permitted beyond security check points.
 1. Cell phones shall have keypads secured by usage of a numeric pin.
 2. Provide phone numbers, numeric pin, name of the service provider, and description of device to the PA and the Warden's office.
 3. Upon request, surrender device to PA or Warden for security screening. If suspect usage is noted (including inability to access device by the pin on record), device will be confiscated and possibly not returned
 - ii. Laptops and other devices will not be permitted beyond security check points unless expressly approved by the Warden.
 - iii. Warden's approval for all devices, including cell phones, is subject to be withdrawn at Warden's discretion.
 - iv. These items are to be provided for use by Contractor personnel for use for project activities. These items will remain property of Contractor at conclusion of project.

E. Lighting:

1. Provide temporary lighting with local switching that provides adequate illumination for safety, security, construction operations, observations, inspections, and traffic conditions.

F. Other Office Equipment:

1. Provide 2 each hand-held, short range, two-way radio transceivers in a frequency range that does not conflict with Unit communication devices. Provide Serial Numbers of transceivers to PA and Warden's office.
2. Provide means to print project related documents up to size 8 ½" x 11" received via e-mail or other electronic means to facilitate delivery of physical documents to Contractor's decision-making entity within 30 minutes of receipt.

3. Provide means to print project related documents up to size 24" x 36" received via e-mail or other electronic means to facilitate delivery of physical documents to Contractor's decision-making entity within 24 hours of receipt.
 4. Provide means to scan project related documents up to size 8 ½" x 11" to "flattened" .pdf format for attachment to e-mail within 30 minutes of receipt or other preparation of physical documents.
 5. Provide means to scan project related documents up to size 24" x 36" to "flattened" .pdf format for attachment to e-mail or other electronic file transfer processing within 24 hours of receipt or other preparation of physical documents.
 6. Provide means to prepare, print, scan, copy, and file project related documents on project site for access during project related activities, both formal and informal.
 7. These items are to be provided for use by Contractor personnel for use for project activities. These items will remain property of Contractor at conclusion of project.
- G. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations.
1. Use of TDCJ waste-collection containers shall not be permitted.
 2. Comply with Section 01 70 00 – Execution Requirements for progress cleaning requirements.
 3. Include waste-collection service charges in Contract Sum.
- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses.
1. Comply with NFPA 241.
 2. Supervise welding operations, combustion-type temporary heating units, and sources of fire ignition as required.
 3. Coordinate an overall fire-prevention and -protection program with Unit Risk Manager. Fire prevention and protection related to construction activities is responsibility of Contractor.
 4. Hoses and other devices installed for fire-protection purposes shall have signage posted indicating intended use and prohibiting removal or any other use.

2.4 TEMPORARY CONSTRUCTION

- A. Materials utilized for temporary construction shall meet applicable specifications in Construction Documents for permanent construction unless otherwise approved in writing through PA. Materials shall be provided by Contractor.
- B. All materials shall meet applicable standards and shall be materials customarily used for intended purpose.
- C. Temporary construction shall remain in place until no longer required for progress of work and removal is approved in writing by the PA.
- D. Areas affected by placement of temporary construction shall be returned to original conditions, matching content, material, and finishes to include

replacement of lost or damaged landscape unless otherwise approved in writing, in advance, through the PA.

2.5 TEMPORARY EQUIPMENT

- A. Equipment required for temporary support of TDCJ occupancy, to support Construction activities, and for safety of project occupants shall be provided by Contractor.
- B. Periodic Maintenance, for equipment provided for A. immediately above shall be responsibility of Contractor, to include all tools and devices as may be required for metering, measuring, etc.
- C. Consumable material and products required for temporary equipment maintenance and operation shall be provided on project site by Contractor.
 - 1. Storage and dispensing of consumable material and products is responsibility of Contractor.
 - 2. Storage and dispensing of consumable material and products shall be per security requirements.
 - 3. Storage and dispensing means shall be per manufacturer recommendations, per regulatory requirements, and as approved by PA. Coordination of fuel dispensation shall be through TDCJ Maintenance and shall require approval from Warden or Warden's designee.
 - 4. Remaining consumable material and products shall be provided to TDCJ.
- D. Equipment temporarily installed to support TDCJ occupancy for extended outages of permanent services shall meet applicable specifications in Construction Documents for permanent construction, except where a specific code permits an alternate, unless otherwise approved in writing through the PA. In the absence of appropriate specifications and/or specific code permitted alternate, obtain approval through PA for requested temporary equipment installation.
- E. Equipment installed to support Construction requirements and/or activities including but, not limited to, ventilation, heating, cooling, humidity control, and lighting shall meet applicable specifications in Construction Documents for permanent construction, except where a specific code permits an alternate, unless otherwise approved in writing through the PA. In the absence of appropriate specifications and/or specific code permitted alternate, obtain approval through PA for requested temporary equipment installation.
- F. Temporary equipment and consumable products used for operation of temporary equipment shall meet applicable codes and standards and be approved by AHJ for intended use and purpose.
- G. For C., D. and E., above use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
- H. Permanent equipment and surfaces, utilities, construction, and project occupants shall be protected from effects of construction activities and operation of temporary equipment (to include dust, noise, and fumes) by use of appropriate equipment selection, partitions, coverings, curtains, screens, insulation, blowers, purging equipment, ventilation, pans, surge suppression devices, or other means

as necessary to maintain ambient environmental conditions required and prevent dust, damage, harm, or subsequent hazard.

- I. Temporary equipment shall remain in operation until no longer required and removal is approved in writing through the PA. Temporary equipment and material shall remain property of Contractor.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

- A. Coordinate the location of facilities with the Unit Warden, thru the Project Administrator (PA), where they will serve the project adequately and result in minimum interference with performance of the Work while not adversely affecting the unit security. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 1. Arrange with utility company, PA, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 2. Comply with authorities having jurisdiction for type, number, location, size, capacity, operation, cleaning, maintenance, and other characteristics for temporary services and construction operations.
 - i. Comply with additional requirements that may be identified in individual specification sections.
 3. Securely cover all roof penetrations at end of each day.
 4. At Beneficial Occupancy, restore facilities to condition existing before initial use unless other is identified in Construction Documents or approved in writing through PA.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Arrange with TDCJ for temporary parking areas for construction personnel.

1. Restrict Contractors' personnel to assigned areas.
 2. When site space is not adequate, provide additional off-site parking.
- D. Temporary Roads and Paved Areas: If required by Project Documents or for means and methods of Construction, construct and maintain temporary roads and paved areas adequate for construction operations.
1. Coordinate elevations with permanent roads and paved areas.
 2. Prepare subgrade and install sub-base and base.
 3. For temporary roads that will remain un-paved during construction operations, provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
 4. For temporary roads that will remain as permanent:
 - i. Recondition base after temporary use, including removing contaminated material, re-grading, proof-rolling, compacting and testing.
 - ii. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Beneficial Occupancy. Repair hot-mix asphalt base-course pavement before installation of final course.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project site or adjacent properties, nor endanger permanent Work or temporary facilities.
 2. If required by project conditions, remove snow and ice as required.
- F. Cranes, Lifts, and Hoists: Provide facilities necessary for hoisting, setting, and/or erecting equipment, materials and/or personnel.
1. Cranes, Lifts, and Hoists utilized within secure perimeter shall be temporarily installed in a "fixed" manner or permitted to remain in a stationary location only upon approval of the Warden; otherwise, shall be removed to exterior lay-down yard at the conclusion of construction activities each day.
 - i. Exception: Large cranes that customarily remain in one location due to obvious extensive measures required for relocation will not be required to be removed to exterior lay-down yard.
 1. Notify PA of intent to use a large crane at Pre-Construction meeting.
 2. Schedule project activities to limit the time the crane will be required on site.
 3. Provide crane schedule to PA at Pre-Construction meeting or as approved by PA.
 2. Cranes, Lifts, and Hoists shall be key operated with the key removed when operator is more than 5 feet from operation position.
- G. Stairs:
1. If stairs are required where no stairs exist or are planned, provide temporary stairs per other applicable requirements.
 2. Use of existing stairs shall be permitted.

- i. Protect finishes as required.
 - ii. Clean and maintain daily.
 - iii. Restore to pre-construction conditions after use.
 - 3. Use of installed stairs shall be permitted.
 - i. Protect finishes as required.
 - ii. Clean and maintain daily.
 - iii. After use, restore conditions per installation requirements.
- H. Temporary Partitions: As indicated on plans or as required per 2.5.H of this section, provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
 - 1. Construct dustproof partitions from fire-retardant wood or metal studs with gypsum wall board with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 - 2. Construct dustproof partitions with 2 layers of 3-mil polyethylene sheet on each side. Cover floor with 2 layers of 3-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
 - i. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
 - 3. Insulate partitions to provide noise protection to occupied areas.
 - 4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 5. Weather strip openings.
 - 6. Provide walk-off mats at each entrance through temporary partition.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 01 10 00 – Summary.
- B. Temporary Erosion and Sediment Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways according to authorities having jurisdiction.
 - 1. Inspect, repair, and maintain erosion- and sedimentation-control measures until Beneficial Occupancy or until written approval from the A/E is provided through the PA.
- C. Storm Water Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located outside drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
 - 1. Provide barricades to prevent unauthorized entry to construction areas, to allow for TDCJ's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

- F. Covered Walkway: For walkways located within 10 feet of construction activities occurring at an elevation greater than 15 feet above elevation of walkway and will be utilized by pedestrian traffic other than project occupants, erect structurally adequate, protective, covered walkway.
 - 1. Coordinate with entrance, gates, other facilities, and obstructions.
 - 2. Comply with regulations of authorities having jurisdiction.
 - 3. Construct using scaffold or shoring framing.
 - 4. Provide wood-plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
 - 5. For covered walkways that will remain in-use for a period exceeding 60 days (inclusive of time periods that walkway covering may be relocated to another area of the project), paint with weather resistant white paint.
 - 6. Clean and repair daily to maintain safety and functionality.

- G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

- H. Temporary Fencing: Erect temporary Fixed Chain-Link Fencing and Portable Chain-Link Fencing for protection of construction and stored materials and equipment, and where indicated on plans.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Limit availability of temporary facilities to essential and intended uses.

- B. Maintenance: Maintain facilities in good operating condition until removal to include protection from weather.

- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Beneficial Occupancy. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor.

2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances.
3. At Beneficial Occupancy, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 – Closeout Procedures.

END OF SECTION 01 50 00
[Revision August 2013]

SECTION 01 64 00 – OWNER-FURNISHED PRODUCTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Ordering, receiving, storing, handling, assembling (as required) of Owner- (TDCJ-TCI)-furnished products as indicated.
- B. Providing supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for installing Owner- (TDCJ-TCI)-furnished products

1.2 RELATED REQUIREMENTS

- A. General and Special Conditions
- B. Other Specification Sections as applicable

1.3 SUBMITTALS

- A. A schedule of Owner- (TDCJ-TCI)-furnished products/material and TCI Shop/Quote Drawings are included in the Project Manual following this Section. Contractor shall review the TCI Shop/Quote Drawings and at Pre-Construction Meeting shall provide quantity list and verification of dimensions of Owner- (TDCJ-TCI)-furnished products.
 - 1. Owner- (TDCJ-TCI)-furnished products are Contractor or Owner installed as indicated on Construction drawings.
 - 2. TCI is required to perform field verification of product dimensions prior to fabrication. Coordinate through Project Administrator.
 - 3. Upon request from Contractor, TDCJ shall conduct a coordination meeting at TDCJ Fabrication Facilities.

1.4 CONTRACTOR REQUIREMENTS

- A. At Pre-Construction Meeting:
 - 1. Submit Shop/Quote Drawings included in this section with verification of dimensions or an indication of modifications required for Contractor's construction plan with Contractor's Quality Control Manager's signature and date.
 - 2. Submit quantity validation to Project Administrator.
 - 3. Submit critical path (CPM) schedule showing scheduled delivery dates required for Owner- (TDCJ-TCI)-furnished products.
- B. TDCJ shall deliver materials to Contractor's on-site storage area. Contractor shall furnish equipment and labor for unloading and storing materials.
- C. Contractor shall unload, properly store and protect Owner- (TDCJ-TCI)-furnished products from time of delivery until installation and acceptance. Claims for re-priming or refinishing of Owner- (TDCJ-TCI)-furnished products shall be made within 15 days of receipt of products.

1.5 HANDLING

- A. Receive fabricated Owner- (TDCJ-TCI)-furnished products as specified above.
- B. Inspect Owner- (TDCJ-TCI)-furnished products for compliance with specifications.
- C. Report damaged or non-compliant products to Project Administrator within 15 days of delivery.
- D. Assist Project Administrator in return of damaged items to fabrication plant for repair or remanufacture (packaging and loading).

PART 2 - PRODUCTS

2.1 TDCJ FURNISHED PRODUCTS

- A. Refer to the Construction Drawings for locations of Owner- (TDCJ-TCI)-Furnished/Contractor Installed Equipment/Material and schedule of Owner- (TDCJ-TCI)-Furnished/Contractor Installed Items.

2.2 CONTRACTOR ITEMS

- A. Provide required hardware and fasteners for items not shown included on attached Owner- (TDCJ-TCI)-furnished products list or drawings.
 - 1. Provide embeds required for Owner- (TDCJ-TCI)-furnished products.
 - 2. Provide anchoring devices required for attaching Owner- (TDCJ-TCI)-furnished products as specified in Construction Drawings.
 - 3. Provide other accessories, hardware, and fasteners, required for a complete installation.
- B. Perform utility work, wiring, and connections as required per other specification sections as required.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Refer to respective Specification sections and Drawings for installation requirements.
- B. Perform field assembly required.
- C. If applicable, perform field painting on metal items with exception of stainless steel. Owner- (TDCJ-TCI)-furnished products shall be shop primed by TDCJ. Field paint shop primed Owner- (TDCJ-TCI)-furnished products with a top of the line heavy duty industrial exterior high gloss paint system approved by the TDCJ PA.
- D. Clean products free of dirt, grease or other foreign matter and leave ready for use.

END OF SECTION 01 64 00

[Revision March 2015]

SECTION 01 70 00 – EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1. SUMMARY

- A. This section includes general procedural requirements governing execution of the Work including but not limited to, the following
 - 1. Examination.
 - 2. Preparation.
 - 3. Construction Layout.
 - 4. Installation.
 - 5. Progress cleaning.
- B. Related Requirements
 - 1. General Conditions and Special Conditions
 - 2. Other Specification Sections as applicable
- C. Identification of a requirement in this Section shall not be interpreted as necessary for this project unless specifically identified in other Specification Divisions or on Project Drawings.

1.2. QUALITY ASSURANCE

- A. Trade and Professional services: For all services required by 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 file on-site containing a copy of each required license and certification.
 - 3. Provide access to PA upon request.
 - 4. Provide copies to PA upon request.
 - 5. PA has authority to stop work requiring license or certification until such is provided and TDCJ shall not be responsible for resulting delays.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1. EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities and other elements indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other elements affecting the Work.

- B. Existing Utilities: The existence and location of underground and other utilities indicated as existing are not guaranteed. Before beginning site work, investigate and verify existence and location of underground utilities 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.
 - 1. If required by project conditions and/or requirements, engage a Subsurface Utility Engineering (SUE) company.
 - a. Irrespective of engagement of SUE, notification per 49 U.S.C. Section 6105 is required for exterior excavation work. Provide ticket number to PA.
 - b. Document findings on Record Drawings.
 - 2. If required by project conditions and/or requirements, utilize x-ray or ground penetrating radar to locate utilities in or under concrete slabs or in concrete decks or walls. Document findings on Record Drawings.
 - 3. If Contractor inadvertently damages a utility or other concealed element undetected by the SUE, x-ray or ground penetrating radar in an area examined by these means, repair shall not be direct responsibility of Contractor.
 - 4. If required for work progress, furnish location data for work related to Project that must be performed by public utilities serving Project Site.

- C. 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. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other sections, include the following.
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine walls, floors, roofs, foundations, soil compaction, etc. for suitable conditions where products and systems are to be installed.

4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with Work indicates acceptance of conditions.

3.2. PREPARATION

- A. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- B. Field Measurements: Verify dimensions of other construction by field measurement before fabrication or installation.
- C. Existing Utilities: Contractor shall adjust, move or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by new construction. Coordinate with authorities having jurisdiction.
- D. Review of Construction Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Construction Documents, submit a Request for Information (RFI) to A/E. Include a detailed description of problem encountered, together with recommendations for changing the Construction Documents (Reference Section 01 33 00 – Submittals). Use TDCJ form provided in Attachment 10 titled "State Documents and Forms".

3.3. CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the work, verify layout information shown on the Drawings, in relation to existing elements, the property survey and/or existing benchmarks, as applicable. If discrepancies are discovered, notify TDCJ's Project Administrator immediately and submit an RFI.
- B. Establish benchmarks and control points to set lines and levels as needed to locate each element of Project.
- C. Check location, level and plumb, of every major element as Work progresses.
- D. Notify A/E if deviations from required lines and levels exceed allowable tolerances.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Make the log available for reference by TDCJ's Project Administrator. 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.

3.4. INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
 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.
- B. Comply with manufacturers written instructions and recommendations for installing products in applications indicated.
 - C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Beneficial Occupancy.
 - D. Use products and installation materials that are not considered hazardous.
 - E. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

3.5. PROGRESS CLEANING

- A. Clean Project area where work is in progress as necessary to facilitate work progress, protect surfaces, and maintain safety requirements.
- B. Clean Project site and work areas daily. Secure all construction related debris, equipment, material, and tools at the conclusion of construction activities each day. Security requirements other than the removal of all such items to the exterior lay-down areas each day is subject to Warden's approval award.
 1. Specific security requirements will be determined at Pre-Construction meeting. For bidding purposes all debris, equipment, material and tools shall be required to be removed to exterior lay-down areas each day.
- C. Remove debris from concealed spaces before enclosing the space.
- D. Ensure that no part of construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during construction period.
 1. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
 2. 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.
 3. Provide Periodic Maintenance per manufacturer's recommendations until Beneficial Occupancy.

- E. Burying or burning waste materials on-site shall not be permitted.
- F. Washing waste materials down sewers or into waterways shall not be permitted. (Incidental soil and rock debris consistent with amounts as may be discharged during an average rain event under non-construction conditions is acceptable.)
 - 1. TDCJ reserves the right to not permit discharge of incidental soil and rock debris of any amount if site specific conditions preclude such.
- G. Comply with requirements of authorities having jurisdiction. Comply with requirements of NFPA 241 for removal of combustible waste material debris.
- H. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 °F.
- I. Containerize hazardous, dangerous, and unsanitary waste materials separately from each other and other waste.
 - 1. If hazardous, dangerous, or unsanitary waste will be produced by construction operations, clearly label hazardous, dangerous, and unsanitary waste containers.
 - a. Mark all containers as may be required by codes and standards and legally dispose
 - b. Provide waste management plan that includes types and quantities expected to be produced, on-site storage location(s), and means and schedule for disposal to PA and Pre-Construction meeting.
- J. For dumpsters with a volume capacity of 2 cubic yards or more, provide an AVIAN Heartbeat Detector™, or A/E approved equal, for each. (Shall remain property of Contractor.)

3.6. PROTECTION OF INSTALLED CONSTRUCTION

- A. 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. Reference 01 50 00 – Temporary Facilities and Controls for additional requirements.

3.7. CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damage substrates and finishes to include replacing defective parts, refinishing damaged surfaces, and adjusting operating equipment. Comply with requirements of 01 73 29 - Cutting and Patching.
 - 1. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair; to

include chipped, scratched, and broken glass or reflective surfaces.

- B. Repair components of installed equipment that do not operate properly. Remove and replace operating components that cannot be repaired.
- C. Clean, renovate, and restore permanent facilities, equipment, and structures used, damaged, altered, or removed during construction to their specified condition unless approved through the PA to leave in altered condition. Comply with final cleaning requirements specified in 01 77 00 Closeout Procedures.

END OF SECTION 01 70 00
[Revision March 2015]

SECTION 01 73 29 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Requirements
 - 1. General Conditions and Special Conditions.
 - 2. Other Specification Sections as applicable.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in the buildings appearance and other significant visual effects
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utility Services and Mechanical/Electrical Systems: List services / systems that cutting and patching procedures will disturb or affect. List services / systems that will be relocated and those that will be temporarily out of service. Indicate how long services / systems will be disrupted.
 - 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structural.
 - 7. A/E's Approval: Obtain approval of cutting and patching proposal before proceeding. Approval does not waive the right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- 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, in TDCJ's A/E opinion, would reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. 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.

PART 3 – EXECUTION

3.1 EXAMINATION

- 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 been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- 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 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. 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 for sawing and grinding, not hammering or chopping. 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.
- C. 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. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. 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.
 3. Exterior Building Enclosure: Patch components in a manner that restores enclosures to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar materials.

END OF SECTION
[Revision March 2015]

SECTION 01 77 00 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including but not limited to the, the following:
1. Beneficial Occupancy procedures.
 2. Final completion procedures.
 3. Operation and Maintenance manuals.
 4. Warranties.
 5. Final cleaning.
- B. Related requirements include:
1. General Conditions and Special Conditions
 2. Other Specification Sections as applicable

1.2 BENEFICIAL OCCUPANCY

- A. Preliminary Procedures: Before requesting inspection for determining date of Beneficial Occupancy, complete the following. List items below that are incomplete in request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 3. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 4. Deliver tools, spare parts, extra materials, and similar items to location designated by Project Administrator. Label with manufacturer's name and model number where applicable.
 5. Make final changeover of permanent locks and deliver keys to Project Administrator. Advise Project Administrator of changeover in security provision.
 6. Complete startup testing of systems.
 7. Submit test/adjust/balance records.
 8. Terminate and remove temporary facilities from Project site, along with mock-ups, construction tools, and similar elements.
 9. Advise Project Administrator of changeover in heat and other utilities.
 10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 11. Compete final cleaning requirements, including touchup painting.
 12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Beneficial Occupancy. On receipt of request, A/E will either proceed with inspection or notify Contractor of

unfulfilled requirements. A/E will prepare the Certificate of Beneficial Occupancy after inspection or will notify Contractor of items, either on Contractor's list and/or additional items identified by A/E that must be complete or corrected before certificate will be issued.

1. Reinspection: Request reinspection with the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit certified copy of A/E's Beneficial Occupancy inspection list of items to be completed or corrected (punch list), endorsed and dated by A/E. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of list: Include name and identification of each space and 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. Use TDCJ form provided in Attachment 10 titled "State Documents and Forms."

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Record A/E
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Page number.
4. Submit 5 copies of list of incomplete items. A/E will return one copy.

PART 2 – PRODUCTS

2.1 MATERIALS

- 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.

PART 3 – EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Beneficial Occupancy for entire Project or for a portion of Project.
 - a. 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.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. 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.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - j. 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.
 - k. Remove labels that are not permanent.
 - l. 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.
- m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar dropping, and other foreign substances.
 - n. Replace parts subject to unusual operating conditions.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - r. 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 fluorescent and mercury vapor fixtures to comply with requirements of new fixtures.
 - s. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 78 23 – OPERATION & MAINTENANCE DATA

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Compilation of product data and related information required for maintenance of products.
- B. Preparation of operation and maintenance data and instructions for systems and equipment.
- C. Procedures for storage, handling, and delivery of spare parts and maintenance materials.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 FORM OF O & M (Operating & Maintenance) SUBMITTALS

- A. Prepare data in the form of an instructional manual.
- B. Assemble data in durable 3-ring binders.
- C. Format:
 - 1. Size: 8-1/2 in. x 11 in.
 - 2. Drawings: Provide reinforced punched binder tab, bind in with text; fold larger drawings to size of text pages.
 - 3. Indexing: Provide tabbed fly-leaf for each separate product, or each piece of operating equipment.
 - 4. Identification: Each binder cover and spine printed with title "OPERATING AND MAINTENANCE INSTRUCTIONS" and project title.
 - 5. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers, custom printed.
- D. Contract Closeout Information:
 - 1. Spare Parts: To TDCJ with letter of transmittal.
 - 2. Maintenance Materials: To TDCJ with letter of transmittal.
 - 3. Extra Materials: To TDCJ with letter of transmittal.
 - 4. Copies of Transmittals: To A/E.

1.4 CONTENT OF O & M MANUALS

- A. Table of contents: Provide for each volume, arranged in a systematic order.
 - 1. Contractor, name of responsible principal, address and telephone number.
 - 2. A list of each product required to be included, indexed to content of volume.
 - 3. List, with each product, name, address and telephone number of subcontractor or installer and local source of supply for parts and replacement.
 - 4. Identify each product by product name and other identifying symbols as set forth in Construction Documents, not solely with Manufacturer's catalog number.
- B. 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.
- C. 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. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
 - 3. Do not use Project Record Documents as maintenance drawings.
- D. Written Text: Provide in 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.

1.5 SPARE PARTS AND MATERIALS-- PRODUCTS REQUIRED

- A. Provide to TDCJ quantities of spare parts and tools, maintenance materials and extra material as specified in individual specification sections.
- B. Spare Parts and Tools: Package in clearly identified boxes.
 - 1. Indicate Manufacturer's name, part name and stock number.
 - 2. Indicate piece of equipment for which part or tool is intended.
 - 3. Indicate name, address and phone number of closest supplier.
 - 4. Indicate specification number.
- C. Maintenance Materials: Package in clearly identified boxes.

1. Indicate trade name and stock number.
 2. Indicate for which item material is to be used.
 3. Indicate name, address and phone number of closest supplier.
- D. Extra Materials: Package in clearly identified containers, or install where indicated.
1. Provide products identical to those installed in Work. Include quantities in original purchase from Manufacturer to avoid variations in manufacture.
 2. Indicate trade name, stock number, size, color.
 3. Indicate where product is to be used.
 4. Indicate name, address and phone number of closest supplier.

1.6 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Content, for each unit of equipment and system, as appropriate:
1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Operating procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shutdown and emergency instructions.
 - c. Summer and winter operating instructions.
 - d. Special operating instructions.
 3. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and reassembly.
 - d. Alignment, adjusting and checking.
 4. Servicing and lubrication schedule.
 5. Manufacturer's printed operating and maintenance instructions.
 6. Description of sequence of operation by control Manufacturer.
 7. Original Manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 8. As-installed control diagrams by controls Manufacturer.
 9. Each contractor's coordination drawings including as-installed color coded piping diagrams.

10. Charts of valve tag numbers, with location and function of each valve.
 11. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
 12. Include testing and balancing reports.
 13. Other data as required under pertinent sections of specifications.
- B. Content, for each electric and electronic system, as appropriate:
1. Description of system and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Circuit directories of panel-boards.
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed color coded wiring diagrams.
 4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
 5. Maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and reassembly.
 - d. Adjustment and checking.
 6. Manufacturer's printed operating and maintenance instructions.
 7. List of original Manufacturer's spare parts, Manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Other data as required under pertinent sections of specifications.
- C. Additional requirements for operating and maintenance data: respective sections of Specifications.

1.7 MANUAL FOR 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.
- D. Additional Requirements: As specified in individual Specifications sections.

1.8 SUBMITTAL SCHEDULE

- A. Submit 2 copies of proposed format and outline of manuals at least 120 days prior to Pre-Final Inspection.
- B. Submit two copies of each completed data manual in final form 30 days prior to Pre-Final Inspection. Copy will be returned approved or with comments for revisions.
- C. Submit 4 copies of approved data manuals in final form within 10 days prior to Pre-Final Inspection.
- D. Have copies of manuals available for instruction of TDCJ personnel, if required by other Specification Sections.

1.9 DELIVERY OF SPARE PARTS OR MATERIALS

- A. Deliver to TDCJ at time of Beneficial Occupancy or Final Completion unless TDCJ requests earlier delivery.
- B. Deliver to location on site as directed by TDCJ.
- C. Obtain receipt for delivered materials.

PART 2 - (Not Applicable)

PART 3 - (Not Applicable)

END OF SECTION

SECTION 01 78 36 - WARRANTIES

PART 1 - GENERAL

1.1 GENERAL

- A. Compile specified warranties.
- B. Review to verify compliance with Construction Documents.
- C. Warranties shall be written in the name of TDCJ.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 WARRANTY DATES

- A. Unless otherwise stated in Construction Documents, warranties shall commence on the date of Final Acceptance or if requested by TDCJ, on date of Beneficial Occupancy for entire work or designated portion thereof.

1.4 SUBMITTAL REQUIREMENTS

- A. Assemble warranties and certificates executed by each of respective Manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: 2 each.
- C. Table of Contents: Neatly typed, using Table of Contents of Project Manual as format.
- D. Provide complete information for each item.
 - 1. Name and location of project.
 - 2. Name and address of Contractor.
 - 3. Product, equipment or system.
 - 4. Firm, with name of principal, address and telephone number.
 - 5. Scope.
 - 6. Date of beginning and duration of warranty.
 - 7. Provide information for TDCJ personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect validity of warranty.

1.5 FORM OF SUBMITTALS

- A. Assemble warranties and certificates in two separate 3-ring binders.
- B. Format:
 - 1. Size: 8-1/2 in. x 11 in., fold larger sheets to fit into binders.
 - 2. Indexing: Tabbed fly-leaf for each separate product or system.

3. Identification: Each binder cover and spine printed with title "WARRANTIES" and project title.

C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers, custom printed.

1.6 TIME OF SUBMITTALS

A. For equipment or component parts of equipment put into service during progress of construction: Submit documents within 10 days after inspection and acceptance.

B. Otherwise make submittals on date of Pre-Final Inspection, prior to final request for payment.

1.7 SUBMITTALS REQUIRED

A. Submit warranties as specified in respective sections of Specifications.

1.8 WARRANTY PROVISIONS - GENERAL

A. 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.

B. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

C. 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.

D. 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. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether TDCJ has benefited from use of the Work through a portion of its anticipated useful service life.

E. 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.

- F. 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.

PART 2 - (Not Applicable)

PART 3 - (Not Applicable)

END OF SECTION
[Revision March 2015]

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Record Submittals.

1.2 RELATED REQUIREMENTS

- A. General Conditions and Special Conditions.
- B. Other Specification Sections as applicable.

1.3 MAINTENANCE OF DOCUMENTS

- A. Maintain at site one physical record copy of following: Construction Drawings, Specifications, Addenda, reviewed Shop Drawings and Product Data, Samples, Change Orders and other Modifications to Contract, field test reports, supplemental instructions and certifications. Either at site, or at another location, maintain one electronic copy of Construction Drawings in native format.
- B. Store physical documents apart from other documents used for construction. Provide means and store documents in a manner to maintain good order and in a clean, dry, legible condition, protected from deterioration and loss.
- C. Do not use Record Documents for construction purposes.
- D. Make physical documents available at all times for inspection by the A/E and Project Administrator.
- E. Label each physical document, "PROJECT RECORD" in two-inch-high printed letters.

1.4 RECORDING

- A. Keep Record Documents current with construction progress. Post and update on weekly basis.
- B. Do not conceal any work until required information is recorded.
- C. Record information on Record Construction Drawings and Record Specifications; record information by personnel who have been trained as draftspersons using commonly accepted drafting conventions
 - 1. Construction and Shop Drawings:

- a. Maintain a clean, undamaged set of black line white-prints of Construction Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Construction Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- b. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work. Insure that each color used will reproduce successfully by means indicated herein.
- c. Mark new information not shown on Construction Drawings or Shop Drawings. Also legibly mark to record actual construction:
 - (1) Mark depths of various elements of foundation and drilled piers in relation to first floor datum.
- d. Note related Submittal numbers, Change Order numbers, RFI numbers, and ASI/ESI (Architectural Supplemental Instructions / Engineering Supplemental Instructions) numbers where applicable.

2. Specifications and Addenda:

- a. Maintain one complete copy of the Specifications, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.
- b. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
- c. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
- d. Note related record drawing information and Product Data. Legibly mark each section.
- e. Note related Submittal numbers, Change Order numbers, RFI numbers, and A/ESI numbers where applicable.

3. Record Product Data:

- a. Maintain one copy of each Product Data submittal.
- b. Mark these documents to show significant variations in the actual Work performed in comparison with information submitted.

- c. Include variations in products delivered to the site, and from the Manufacturer's installation instructions and recommendations.
 - d. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation.
 - e. Note related Submittal numbers, Change Order numbers, RFI numbers, and A/ESI numbers where applicable.
4. Record Sample Submitted:
- a. Refer to related Specification Section for instructions to maintain Samples during construction.
5. Miscellaneous Record Submittals:
- a. Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work.

1.5 SUBMITTALS

- A. At Final Inspection, deliver one copy of physical Record Documents (all documents other than Samples) and one copy of electronic drawings on CD to the A/E.
- B. Accompany submittal with transmittal letter in duplicate, containing: date, project title and number, Contractor's name and address, title and number of each Record Document and signature of Contractor or his authorized representative.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Construction Drawings and Shop Drawings for recording actual construction.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require the individual or entity who obtained record data, whether the individual or entity is the installer, subcontractor or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the mark-up before enclosing concealed installations.
 - 2. Content: Types of items requiring marking include, but are not limited to the following:
 - a. Dimensional changes to the Drawings.

- b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduit.
 - d. Revisions to electrical circuitry.
 - e. Actual equipment locations.
 - f. Locations of concealed internal utilities.
 - g. Changes made by Change Order, RFI, or A/ESI.
 - h. Changes made following A/E's written orders.
 - i. Details not on the original Construction Drawings.
 - j. Field records for variable and concealed conditions.
 - k. Record information on the Work shown only schematically.
 3. Mark the Construction Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If the Shop Drawings are marked, show a cross-reference on the Construction Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 5. Mark important additional information that was either shown schematically or omitted from the original drawings.
 6. Note Change Order numbers, RFI numbers, A/ESI numbers, and similar identification, where applicable.
 7. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets. Cover sheet shall identify the following:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD DRAWINGS"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor
 - f. Contractor's certification statement
- B. Record Electronic CAD Files: Maintain a full set of corrected Record Electronic CAD Files of the Construction Drawings.
1. A/E shall provide one set of AutoCAD files of Construction Drawings on CD at Pre-Construction meeting.
 - a. Format: AutoCAD Release 2007 (with .dwg extension) or later, operating in Microsoft Office operating system.
 2. Contractor shall incorporate changes and additional information from Record Prints.
 - a. Delete, redraw, and add details and notations where applicable.
 - b. Changes to be incorporated include, those identified in 2.1.A.2. a-k immediately above.
 - c. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in prominent location.

2.2 RECORD SPECIFICATIONS

- A. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the propriety name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
 4. Note related Change Orders, RFIs, A/ESIs, and Record Drawings where applicable.
 5. Bind loose documents with Specifications with Cover sheet indicating:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD SPECIFICATIONS"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor
 - f. Contractor's certification statement

2.3 RECORD PRODUCT DATA

- A. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in the Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 3. Include significant changes in the product delivered to the Project site and changes in manufacturer's written installation for installation.
 4. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
 5. Bind together with Product Data Submittal Log and a Cover sheet indicating:
 - a. Project Name
 - b. Date
 - c. Designation "PROJECT RECORD PRODUCT DATA"
 - d. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - e. Name of Contractor

f. Contractor's certification statement

2.3 RECORD SAMPLES

- A. In preparation for Final Inspection, coordinate with A/E and Project Administrator to determine Samples to be retained by TDCJ. Provide Samples to be retained by TDCJ to Project Administrator at Final Inspection. Remaining Samples shall remain property of Contractor.
- B. Project Administrator shall provide Samples to Unit Maintenance.

2.4 RECORD MISCELLANEOUS SUBMITTALS

- A. Assemble 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.
- B. Assemble in applicable sections with appropriately labeled divider page. Divider page for Change Orders, RFIs, and A/ESIs shall be followed by the applicable Log. If log was maintained as a single document for all submittals, identify location of log on Cover Page and on each Divider page.
- C. Bind with a Cover Page identifying:
 - 1. Project Name
 - 2. Date
 - 3. Designation "PROJECT RECORD SUBMITTALS"
 - 4. Name of A/E Firm (Texas Department of Criminal Justice, if design was accomplished by TDCJ staff.)
 - 5. Name of Contractor
 - 6. Contractor's certification statement

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of the Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples apart from the Construction Documents used for construction.

3.2 RECORD DRAWINGS

- A. At Final Inspection, provide 3 sets each of marked-up Record Prints, printed CAD of Record Prints, Record Specifications, Record Product Data, Record Submittals to A/E.
- B. A/E shall provide approval of record documents by A/E's certification statement.
 - 1. A/E's certification shall only indicate that the compiled information as submitted by the Contractor 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.

2. If A/E cannot provide certification statement due to inaccurate or incomplete Record Documents, the A/E shall return documents to Contractor for correction.
3. Final application for payment will not be processed until record documents are complete and approved by the A/E.

END OF SECTION
[Revision March 2015]

SECTION 06 10 55 – ROOFING CARPENTRY

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Roof curbs and cants; concealed wood blocking, with hardware and attachment accessories.
- B. Refer to schedule at end of Section.

1.2 REFERENCES

- A. American Lumber Standards Committee (ALSC): National Design Specification for Wood Construction.
- B. American Wood Preservers Bureau (AWPB): APA Design Construction Guide.
- C. Product Standard of NBS (PS):
 - 1. PS 1 – Construction and Industrial Plywood.
 - 2. PS 20 – American Softwood Lumber Standard.

1.3 QUALITY ASSURANCE

- A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).
- B. Preservative Treatment: Confirm to applicable requirements of AWWA.

1.4 REGULATORY REQUIREMENTS

- A. Conform to applicable building codes, latest edition, for treatment of wood.
- B. Each piece with visible product identification stamp showing treatment issued by an approved agency.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, accessories, and locations to a minimum scale of 1 1/2" to one foot.
- C. Manufacturer's Certifications: Submit certification that wood treatment is in accordance with applicable requirements and that formulator/treater warrants material for intended use (pressure treated, fire, etc.).

PART 2 – PRODUCTS

2.1 ROUGH CARPENTRY MATERIALS

- A. Lumber: PS 20; No. 1 grade in accordance with established Grading rules; maximum moisture content of 19%; of following species:
 - 1. Southern Yellow Pine.
 - 2. Coast Region Douglas Fir.
- B. Plywood: PS 1; select sheathing grade or APA rated 5/8" minimum thickness; CD-X or better.
- C. Nails, Spikes, and Staples: Galvanized; size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Medium carbon steel, hot dipped galvanized; sized to suit application.
- E. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or power activated type for anchorage to steel.

2.2 PRESERVATIVE WOOD TREATMENT

- A. Shop Preservative (Pressure Treatment Type): AWPA U1.
- B. Shop pressure treat and provide identification on preservative treated materials, including all wood blocking, cants and plywood.
- C. Dry all PTW after treatment to the following maximum moisture content:
 - 1. Plywood: 15%.
 - 2. Lumber: 19%.

2.3 SOURCE QUALITY CONTROL

- A. Factory mark each piece of lumber with type, grade, mill and Grading Agency.
- B. Nominal sizes are indicated. Provide actual sizes as required by PS 20.
- C. Provide dressed lumber, sized four sides.

PART 3 – EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that surfaces are ready to receive work and field measurements are as shown on Shop Drawings.
- B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this work.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

3.2 INSTALLATION

- A. Discard units or material with defects that might impair quality of work and units that are too small to use in fabricating work with minimum joints.

- B. Set Carpentry Work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- C. Securely attach Carpentry Work to substrate by anchoring and fastening as required by recognized standards. Use common wire nails, except as otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting or wood; pre-drill as required.
- D. Install components with fasteners suited to materials.
 - 1. Nailable Surfaces: Galvanized or galvanically compatible nails, sized as follows:
 - a. $\frac{3}{4}$ " and 1" materials: 8d nails.
 - b. 1 $\frac{1}{2}$ " or 2" materials: 16d nails.
 - 2. Hollow Masonry Walls: Toggle bolts.
 - 3. Solid masonry: Rawl Zamac pin drive or Architect/Engineer (A/E) approved equal.
 - 4. Steel Members: Bolts or power actuated Hilti pin or A/E approved Equal.
 - 5. Maximum Spacing: 12" on center, unless noted otherwise.
 - 6. Top of Hollow Masonry Wall: Set 12" minimum J-bolts in fully set bed of concrete; minimum 18" on center (minimum 3000 psi).
- E. Remove all bent or deformed nails from finished work and dispose of.

3.3 CLEANING

- A. Pick up spilled, unused nails and fasteners daily from the Site.

3.4 PROTECTION

- A. Protective Walkways – Traffic Area Protection: Install full sheets of $\frac{3}{4}$ " exterior grade plywood and minimum $\frac{1}{2}$ " wood fiber insulation to those areas of new roof surface to be trafficked by personal and wheeled vehicles.

3.5 SITE TREATMENT OF WOOD MATERIALS

- A. Treat site-sawn ends. Allow preservative to cure prior to erecting materials.

3.6 SCHEDULE

- A. Rough Carpentry Work:
 - 1. Miscellaneous blocking and canting for built-up roofing system and related flashings and sheet metal.
 - 2. Blocking and canting for roof mounted mechanical items.
 - 3. Wood plant and plywood deck repair.

END OF SECTION 06 10 55

SECTION 07 01 50.19 – PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following:

1. Remove roofing membranes, roof gravel, lightweight insulating concrete, roofing insulation, metal flashings, and unused accessories, curbs, vents, and any other unused system and penetrations, and fill holes in roof deck as required in drawings and specifications.
2. Remove materials and debris from Site.
3. Raise rooftop appurtenances and parapet curbs where required to achieve minimum recommended heights (8 inches min.) and clearances for new roof installation.
4. Protection of building and its contents.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.

B. Related Sections:

1. Division 6 - Division 6 - Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips.
2. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
3. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: for copings, flashing and counter flashing.
4. Division 7 - Section 07 72 00 Roof Accessories: for Roof curbs and roof hatches.
5. Division 22 - Section 22 05 00 Common Work Results for Plumbing: for procedures for modifying, repairing, or replacing roof mounted plumbing and replacement of roof mounted piping.
6. Division 23 - Section 23 05 00 Common Work Results for HVAC: for procedures for modifying mechanical equipment.
7. Division 26 - Section 26 05 00 Common Work Results for Electrical: for procedures for modifying, repairing, or replacing roof mounted electrical equipment and devices, and repair or replacement of roof mounted electrical items, fixtures and conduit.

1.3 SUBMITTALS

A. Demolition and Removal Procedures and Schedule: Outline all work tasks and schedule them, showing clearly when each area is to be performed. Coordinate with TDCJ Representative and Prison Unit personnel to avoid impact to TDCJ occupancy.

B. Project Record Documents: Indicate extent of work installed, actual locations of appurtenances and items that will be hidden from view at Completion of Work.

- C. Product Data: For each type of product indicated, submit product data and general recommendations from materials manufacturer for types of materials required. Submit manufacturer's instructions for use and installation of all materials including lightweight concrete patching material.
- D. Manufacturer Recommendations for temperature range for storage and application of materials and any special cold weather application requirements or limitations.

1.4 REGULATORY REQUIREMENTS

- A. The presence of asbestos containing materials is not expected. If the contractor encounters suspected material, contact the TDCJ Project Administrator and existing roofing material shall be removed using manual methods (axes, hatches, knives, spud bars, power slicers or plows, but not saws) as outlined in Title 40 Code of Federal Regulations Part 61, Subpart M, Appendix A entitled, "Interpretive Rule Governing Roof Removal Operations" (Section I Paragraph 1.C.1). Debris generated from such removal operations shall be disposed of as regular construction debris (Section III Paragraph 3.C.1.).
- B. Provide Certification of Inspection confirming approvals by all Authorities having jurisdiction.

1.5 PRE-INSTALLATION CONFERENCE

- A. TDCJ's Project Administrator (PA) will convene a Pre-Construction Meeting prior to commencing Work of this Section.

1.6 PROJECT CONDITIONS

- A. Observe Owner's limitations or restrictions for site use, security, and accessibility.
- B. Do not close or obstruct roadways or sidewalks without permits.
- C. Conduct operations with minimum interference to thoroughfares. Maintain required egress (exit way) and access at all times.
- D. Provide, erect, and maintain temporary barriers and security devices.
- E. Conduct demolition to minimize interference with adjacent roofing and siding, roof mounted equipment, and roof deck and structure to remain.
- F. Conduct demolition and removal operations and coordinate new roofing work to avoid or minimize material and equipment set-up, and movement of equipment and materials over new roofing during construction. Provide temporary protection of new roofing from damage where material and equipment set-up and movement of material and equipment over new roofing cannot be avoided.
- G. When roof exceeds one-story or fifteen feet in height, or when debris must be discharged adjacent to windows, pedestrian or vehicular traffic, or where other conditions dictate extra precautions, provide enclosed chute from rooftop to trash containers.
- H. Do not remove more existing material than can be replaced with new material or made watertight by the end of the workday.

- I. During removal operations, have sufficient and suitable materials on site to facilitate rapid installation of temporary protection in the event of unexpected rain. Do not remove existing materials when precipitation is eminent.

PART 2 - PRODUCTS

2.1 DECK AND SUPPORT MATERIALS

- A. Curbs and Support Members: Wood or metal curbs and support items as indicated and required by existing conditions.
- B. Miscellaneous Metals: Match existing Materials and Products.
- C. Plumbing, HVAC and Electrical equipment, items, and devices when applicable: Match existing where practical and conform to Products and Execution specified in Sections 22 05 00 Common Work Results for Plumbing, 23 05 00 Common Work Results for HVAC, and 26 05 00 Common Work Results for Electrical.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that areas to be demolished are clear of encumbrances.
- B. Prevent movement or settlement of adjacent structures and paving. Provide bracing and shoring.
- C. Protect existing landscaping materials, appurtenances, structures, paving, roofing, and siding, roof mounted equipment, roof deck and structures which are not to be demolished.
- D. Examine existing mechanical and electrical items to determine existing conditions and operability. Notify TDCJ Representative in writing of any inoperable items or unsafe conditions.
- E. Beginning Work indicates acceptance of existing conditions, including operability of mechanical and electrical items.

3.2 EXECUTION

- A. Remove indicated roofing and appurtenances in an orderly and careful manner. CAUTION: Provide necessary additional shoring, shielding, and support to ensure the safety of workers and building occupants.
- B. Evenly cut edges of existing materials that are to be expanded, replaced, or modified. Completely remove materials from areas to be replaced or repaired each day.

- C. Cease operations and notify TDCJ immediately if adjacent structures or materials appear to be endangered. Do not resume operations until corrective measures have been taken.
- D. Except when instructed otherwise, immediately remove demolished material from Site as work progresses.
- E. Remove materials to be re-installed or retained in a manner to prevent damage. Store and protect until re-installation.
- F. Remove and properly dispose of contaminated, vermin infested, or dangerous materials encountered.
- G. Do not burn or bury materials on the Site.
- H. Remove roofing materials, roofing insulation, flashing, and damaged nailers and nails.
- I. Ensure replacement gypsum form board is cleaned completely to remove all debris.
- J. Clean up debris on a daily basis. Leave Site in clean condition.
- K. Modifications to existing mechanical and electrical items:
 - 1. When required to achieve recommended clearances, minimum curb heights, or other modifications, disconnect, modify, and reconnect mechanical and electrical services using qualified and licensed personnel.
 - 2. Do not disrupt any service unless specifically approved by TDCJ PA and on-site personnel.
 - 3. Restore services and verify proper operational conditions to satisfaction of Owner's Representative.

3.3 REPLACEMENT OF EXISTING VENTILATORS

- A. Remove all existing non-mechanically operated vents and ventilators and replace with new products of identical design, function, and configuration, unless otherwise indicated.
- B. Install curbs for all ventilators with a deck opening of 12 inches or greater.

END OF SECTION 07 01 50.19

SECTION 07 52 00 – MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
1. Removal of the existing roof system, down to the existing concrete deck. Inspection of the existing concrete deck and repair of deck if required. Preparation of concrete deck, application of two layers of rigid roof insulation board, creation of a roof slope by the application of tapered insulation, installation of one layer of cover board and installation of a two-ply modified bituminous membrane roof fully adhered with a cold applied adhesive.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
1. Division 6 - Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips
 2. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 3. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: for copings, flashing and counter flashing.
 4. Division 7 - Section 07 72 00 Roof Accessories: for roof curbs and roof hatches.
 5. Division 7 – Section 07 92 00 Joint Sealants
 6. Division 22 - Section 22 05 00 Common Work Results for Plumbing: for procedures for modifying, repairing, or replacing roof mounted plumbing and replacement of roof mounted piping.
 7. Division 23 - Section 23 05 00 Common Work Results for HVAC: for procedures for modifying mechanical equipment.
 8. Division 26 - Section 26 05 00 Common Work Results for Electrical: for procedures for modifying, repairing, or replacing roof mounted electrical equipment and devices, and repair or replacement of roof mounted electrical items, fixtures and conduit.

1.3 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Roofing Systems Manufacturer: Any of the manufacturers whose systems are specified under "Acceptable Roofing System Manufacturers", and herein called "Manufacturer".

- C. Square: 100 square feet.

1.4 SYSTEM DESCRIPTION

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.
 - 1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
 - 2. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 4272.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by Roofing-System Manufacturer based on testing and field experience.
- C. Roofing System Design: Shall comply with the latest edition of the International Building Code, chapter 6 Wind Loads of the ASCE 7 and all applicable Texas Coastal Windstorm Requirements.
- D. Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
 - 1. Roof Area Field Uplift Pressure: 42.6 pounds per square foot
 - 2. Roof Area Perimeter Uplift Pressure: 67.9 pounds per square foot
 - 3. Roof Area Corners Uplift Pressure: 100.2 pounds per square foot
 - 4. Design Wind Speed: 130
 - 5. Exposure Category: C
 - 6. Occupancy Category: III
 - 7. Importance Factor 1.15
 - 8. Safety Factor: Two (2)
 - 9. Roof assembly shall meet the design intent and capabilities associated with FM 1-120 wind uplift rating.
 - 10. The roof system shall have a UL Class A fire rating for external flame spread on the roof surface.
 - 11. The Roofing Manufacturer shall provide a signed certificate certifying that the roofing system complies with all the specified requirements including wind uplift.
- E. Asbestos Containing Materials: Install only asbestos free materials. Asbestos containing materials inadvertently installed to be immediately removed in accordance with all applicable regulations.
- F. Energy Performance: Roofing system that will meets State of Texas Commercial Energy Codes; 2009 International Energy Conservation Code (IECC) or 2007 ASHRAE 90.1.

1. Minimum R-Value: 20.96 - entire roof assembly. This system shall consist of a minimum of two layers of 1.8 inch polyisocyanurate insulation overlaid with tapered polyisocyanurate and a high density gypsum coverboard. Roof insulation shall be adhered to the deck per requirements of the manufacturer and Project Documents.
 2. Initial Solar Reflectance: Not less than 0.70 when tested in accordance with ASTM E 903, E 1175 and E 1918.
 3. Thermal Emittance: Not less than 0.75 when tested according with ASTM E 408, E 835, and E 1371.
- G. Exterior Fire Test Exposure: ASTM E 108 or UL790, Class A for applications and roof slopes indicated, testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- H. Underwriters Laboratory Classification: Material and components of the roofing system to meet UL Class A requirements.

1.5 SUBMITTALS

- A. Product Data: Roofing-System Manufacturer's literature, including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and application instructions.
1. Provide for membrane and base flashing materials, and roofing cement, adhesives, primer, mastic sealant, and fasteners.
 2. Include temperature ranges for storage and application of materials, and special weather applications requirements or limitations.
- B. Shop Drawings: Include Manufacturer's reviewed and approved plans, elevations, sections, details, and attachments to other work; for details and fabrications not shown on drawings. These drawings shall be **approved details that are project and site specific**. Manufacturer's generic standard details will not be accepted.
1. Base flashings and membrane terminations. Draw to scale.
 2. Tapered insulation layout, including crickets, saddles, and tapered edge strips, including amount and direction of slopes.
 3. Dimensions and locations of all roof field, perimeter, and corners areas.
 4. Base sheet/Insulation fastening/attachment patterns for corner, perimeter, and field-of-roof locations.
 5. Proposed temporary, watertight, tie-off details for each substrate type.
 6. Interface with sheet metal components including, but not limited to:
 - a. Counterflashing.
 - b. Stack flashing assemblies.
 - c. Edge and fascia sections.
 - d. Interface with coping cap assemblies.
 - e. Interface with roofing accessories, including, but not limited to:
 - 1) Equipment curbs.
 - 2) Roof hatches.
 - 3) Expansion joints assemblies.

- C. Samples for verification: For the following 3-inch-by-4-inch product samples:
1. Membrane vented base sheet.
 2. Membrane base sheet.
 3. Granule-surfaced membrane cap sheet.
 4. Flashing base sheet.
 5. Flashing cap sheet.
 6. Insulation.
 7. Cover board.
 8. Six insulation fasteners of each type, length, and finish.
- D. Installer's Certificate:
1. Signed by roofing-system manufacturer, certifying that Roofing Installer complies with manufacturer's requirements to install specified, warranted, roofing system.
 2. Submit evidence that Installer's **existing company** has minimum of 5 years continuous experience in application of specified materials. Submit list of at least 5 completed projects of similar scope and size, including:
 - a. Project name.
 - b. Owner's name.
 - c. Owner's Representative name, address, and telephone number.
 - d. Description of work.
 - e. SBS-modified-bitumen materials used.
 - f. Project supervisor.
 - g. Total cost of roofing work and total cost of project.
 - h. Completion date.
- E. Manufacturer Certificate: Signed by Roofing-System Manufacturer, certifying that roofing system complies with specified requirements.
1. Written approval by Roofing-System Manufacturer for use and performance of membrane over specified board insulation, including that materials supplied for project comply with requirements of cited ASTM standards and Project Documents. Approval should also indicate materials are suitable for ASTM E 108, Class 1A roof and meet specified wind uplift classification.
 2. Submit evidence of meeting performance requirements including relevant FM Global assembly numbers.
 3. Certify that materials are free of asbestos.
- F. Maintenance Data: Roofing-System Manufacturer to include Product Maintenance Manuals.
- G. Following Completion of Work, submit Roofing-System Manufacturer's Inspection Report of completed roofing installation and completed warranty; submit Installer's completed Warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified Manufacturer with a minimum of ten (10) years documented experience that has UL listing and FMG approval for roofing systems identical to that used for this Project.

- B. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by membrane Roofing-System Manufacturer to install roofing-system products and that is eligible to receive Manufacturer's Roofing-System Warranty. Must have installations of specified materials in the local area in use for a minimum of five (5) years.
- C. **Source Limitations:** Obtain components including roofing insulation, fasteners, membrane sheet materials, adhesives, all miscellaneous roofing accessories for membrane roofing system *from same Manufacturer as membrane roofing or approved by Membrane Roofing Manufacturer.*
- D. Pre-Roofing Conference: Conduct conference at Project site to review requirements for roofing system including:
 - 1. The Roofing Contractor shall schedule a Conference after Notice of Award.
 - 2. **Required Attendance:** TDCJ Regional Maintenance or designated representative, TDCJ PA, Roofing Contractor, Roofing Contractor's Site Foreman (full-time working foreman), Roofing-System Manufacturer's Technical Representative, A/E shall attend.
 - 3. Review construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review site use, access, staging, and set-up location limitations.
 - 5. Review installation procedures, storage and protection of materials prior to installation, surface preparation and roof deck condition and pre-treatment.
 - 6. Review structural loading limitations of roof deck during and after roofing.
 - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 8. Review governing regulations and requirements for insurance and certificates, if applicable.
 - 9. Review temporary protection and repairs of roofing system.
 - 10. Testing and inspection procedure requirements.
 - 11. Documentation required for Manufacturer's Warranty.
 - 12. Quality Control and Quality Assurance Plans.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Site in original containers with seals unbroken and labeled with Roofing-System Manufacturer's name, product brand name and type, lot number, date manufactured, approval or listing agency markings, and directions for storing and mixing with other components. Material storage procedures will be constantly monitored and strictly enforced.
- B. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, installation. Reject and remove from Site new materials which exhibit evidence of moisture during application or which have been exposed to moisture.

- C. Store materials in original, undamaged containers in clean, dry, protected location on raised platforms with weather-protective coverings, with temperature range required by Roofing-System Manufacturer. Use breathable tarps for protection of moisture-sensitive roofing materials. Protect stored materials from direct sunlight. ***Roofing-System Manufacturer's standard packing and covering is not considered adequate weather protection.***
- D. Limit stored material on structures to safe loading of structure at time materials are stored, and to avoid permanent deflection of deck.
- E. Handle materials to avoid damage and store in designated area that has been approved by Warden.
- F. Do not store materials at locations where new roofing materials have been installed.
- G. Store rolled asphalt-based materials on ends only, unless otherwise required by Roofing-System Manufacturer's written instructions. Discard rolls that have been flattened, creased, or otherwise damaged.
- H. Conspicuously mark wet or damaged materials and promptly remove from Site.
- I. Remove and replace materials that cannot be applied within stated shelf life.

1.8 PROJECT CONDITIONS

- A. Safety:
 1. Take all necessary precautions regarding worker health and safety when using solvents, adhesives, and other asphalt products.
 2. Store flammable liquid and materials away from open sparks, flames, and extreme heat.
 3. Take necessary precautions when using solvents and adhesives near fresh air intakes.
 4. Comply with all OSHA requirements for construction.
- B. Daily site cleanup shall be performed to minimize debris and hazardous congestion.
- C. Weather limitations: Proceed with installation only when existing and forecasted weather conditions, e.g., extreme temperature, high winds, high humidity and moisture, permit roofing system to be installed according to Manufacturer's written instructions and Warranty requirements.
- D. Verify existing dimensions and details prior to installation of materials. Notify A/E of conditions found to be different than those indicated in Contract Documents. A/E will review situation and inform Contractor and Installer of changes.
- E. Comply with Owner's limitations and restrictions for site use and accessibility.

- F. Install materials in strict accordance with safety requirements required by Roofing-System Manufacturer, Material Safety Data Sheets, and Local, State, and Federal rules and regulations.
- G. Protection:
 - 1. Schedule installation sequence to limit access and utilization of the newly installed membrane for material storage, construction staging, mechanical and/or excessive foot traffic.
 - 2. Protect roofing membrane, building surfaces, paving, and landscaping from traffic and roofing equipment. Provide temporary walkways constructed of plywood and set on protective material in traffic and construction areas.
 - 3. Restore or replace all work or materials damaged by the roofing operation.
 - 4. Remove protection materials upon Completion of Work.
 - 5. Adverse weather could have a detrimental effect on adhesives, general production efforts or the quality of the finished installation. Contact Manufacturer for recommendations and acceptable tolerances.
- H. Daily Seal: Ensure that moisture does not penetrate beneath any completed sections of the roof by sealing temporary roof terminations at the end of each work day and prior to the arrival of inclement weather. Inspect existing components for moisture intrusion along the temporary terminations at temporary cut-offs, tie-ins, and night seals after opening the seal on the next workday. Remove any wet, damp, or moisture-damaged materials.
- I. All construction debris shall be removed from the construction site and legally disposed of offsite daily.

1.9 WARRANTIES

- A. Manufacturer's Warranty.
 - 1. Written Warranty, without monetary limitation, signed by Roofing-System Manufacturer, including:
 - a. Repair or replace components of roofing-system that do not comply with requirements; that do not remain watertight; that fail in adhesion, cohesion, or general durability; or that deteriorate in manner not clearly specified by submitted Roofing-System Manufacturer's Data as inherent quality of material for application indicated.
 - b. Manufacturer Warranty includes roofing membrane, base flashings, roofing accessories, roof insulation, fasteners, cover board, substrate boards, and other components of the roofing system.
 - c. Failures includes roof leaks, and defects that do not result in roof leaks such as blisters, wrinkles, and excessive granule loss.
 - 2. Warranty Period: Fifteen (15) years from date of Beneficial Occupancy.
- B. Applicator Warranty
 - 1. Completed Applicator Warranty, signed by Applicator

- a. Repair or replace components of roofing system that do not comply with requirements; that do not remain watertight; that fail in adhesion, cohesion, or general durability; or that deteriorate in manner not clearly specified by submitted Roofing-System Manufacturer's data as inherent quality of material for application indicated. Warranty includes defects such as blisters, ridging, and excessive surfacing loss.
 - b. Removal and replacement of base sheets, insulation, cover boards, and other components of roofing system. Warranty includes replacing materials as necessary.
 - c. Labor and materials to perform warranty work.
2. Warranty Period: Three (3) years from date of Beneficial Occupancy.

1.10 COORDINATION

- A. Prior to installation of materials, a pre-roofing conference should be held with the roofing contractor, and TDCJ's Project Administrator (PA) to discuss the specified roofing system, coordinate its proper application, and the expectations of all parties involved. The authorized Roofing Contractor and the TDCJ's PA shall notify all parties a minimum of 14 days prior to the meeting.
- B. Plan and coordinate the installation of the roofing system with other trades in such a manner to avoid membrane damage, keeping the complete installation weather tight and in accordance with all approved details and Warranty requirements.
- C. Manufacturer shall be available to make recommendations necessary to ensure compliance with project Specifications and Specification alternatives due to unforeseen job conditions.

PART 2 – PRODUCTS

2.1 MODIFIED-BITUMEN MEMBRANE ROOFING SYSTEM

- A. General
 - 1. Roofing-System Manufacturer with at least 10-years documented experience and FM Global approval for roofing system identical to that specified for this Project
 - 2. FM Global Listing: Provide roofing membrane, base flashing, and component materials that comply with requirements in FM Global Approval Guide Standards 4450 and 4470 as part of roofing system and that are listed in FM Global Guide for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.
 - a. Fire/Windstorm Classification: ASTM E 108, Class 1A-120 for application and roof slopes indicated, based on testing
 - 3. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by Roofing-System Manufacturer based on testing and field experience.

4. Asbestos-Containing Materials: Install only asbestos-free materials. Immediately remove asbestos-containing materials inadvertently installed, in accordance with applicable regulations.
5. Source Limitations: Obtain components for roofing system from or approved by the Roofing-System Manufacturer.

B. SBS-Modified-Bitumen Membrane Roof Assemblies

1. Derbigum Americas, Inc.
 - a. Bottom Ply: Derbibase Ultra
 - b. Cap sheet: Derbibrite
2. Siplast, Inc
 - a. Bottom Ply: Paradiene 20 HV set in cold process adhesive.
 - b. Cap Sheet: Paradiene 30 CR FR set in cold process adhesive.
3. Substitutions: Under provisions of Section 01 25 00.

C. Base Flashing Systems

1. Performance Roof Systems Inc.
 - a. Backer Sheet: Derbibase Ultra
 - b. Flashing Sheet: Derbibrite
 - c. PMMA Liquid Membrane Flashing - PMMA Flashing System
2. Siplast, Inc.
 - a. Backer Sheet: Paradiene 20 HV
 - b. Flashing Sheet: Paradiene 30 CR FR
 - c. PMMA Liquid Membrane Flashing - Parapro
3. Substitutions: Under provisions of Section 01 25 00.
4. Flashing sheet to be coated with granules or integrated white acrylic surfacing . Color of roofing membrane to match cap sheet color.
5. Glass-Fiber Fabric: ASTM D 1668, Type I, woven glass-fiber cloth treated with asphalt.

D. Penetration Flashing Systems

1. Performance Roof Systems Inc. - PMMA Flashing System
2. Siplast, Inc.: Parapro Flashing
3. Substitutions: Under provisions of Section 01 25 00.

2.2 OTHER ROOFING-SYSTEM MATERIAL

A. Insulation

1. General: Provide preformed insulation boards that comply with requirements and referenced standards, selected from insulation Manufacturer's standard sizes and of thicknesses indicated on Drawings.
2. Polyisocyanurate Boards: Material shall comply with the requirements of ASTM D1621 for a minimum compressive strength of 20 psi, and meet flame spread requirements of ASTM E84. ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces. Minimum LTTR 5.6 per inch. Acceptable products and manufacturers as recommended by the Roofing Membrane Manufacturer for a System Warranty and as approved by A/E.

3. Tapered Insulation: Tapered polyisocyanurate boards will have a minimum thickness of 1/2" and a minimum slope of 1/4" per foot. Drainage crickets and saddles will have a minimum thickness of 1/2" and a minimum slope of 1/2" per foot. Tapered and Flat polyisocyanurate boards will be surfaced with either fiber reinforced or fiberglass facer sheets. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated. Acceptable products and manufacturers as recommended by the Roofing Membrane Manufacturer for a System Warranty and as approved by A/E
 4. Insulation Accessories
 - a. General: Insulation accessories recommended by Insulation Manufacturer for intended use and compatible with membrane roofing.
 - b. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.
 - c. Tapered Edge and Cant Strips: ASTM C 728, perlite insulation board.
- B. Cover Boards: ASTM C 1177; glass-mat, water-resistant, gypsum substrate, 1/2 inch thick. Dens-Deck manufactured by Georgia-Pacific Corporation, or A/E approved equal.
- C. Walkways
1. Walkway Pads: Same cap sheet product as used in the field area of the roof and as follows: Color: To contrast with roof color.
 - a. Size: As standard with manufacturer.

2.3 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by Roofing-System Manufacturer for intended use and compatible with roofing membrane.
- B. Flashing Cement: ASTM D 4586, asbestos free, of consistency required by roofing-system manufacturer for application. Use for sealing laps in membrane or base flashing, surface or stripping flashing at equipment penetrations and drains, or repairs to membrane or flashing.
- C. Mastic Sealant: Polyisobutylene, plain or modified bitumen, non-hardening, non-migrating, non-skinning, and non-drying.
- D. Termination Bars: Roofing-System Manufacturer's standard; Type-304-stainless-steel or aluminum bars, approximately 1-inch wide by 1/8-inch thick; with predrilled holes 8 inches on center.
- E. Fasteners, General: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM GLOBAL 4470 and acceptable to Roofing-System Manufacturer.

1. Designed for fastening roofing membrane components to substrate and tested by Roofing-System Manufacturer for required pullout strength.
- F. Fasteners for Base Flashings
1. Wood and Plywood Substrates: Coated and threaded wood screw of sufficient length to provide 1-inch-minimum embedment or pass through bottom side of wood or plywood.
 2. Masonry Substrate: Stainless steel with hex washer head
 - a. 410 Stainless Steel Tapcon, manufactured by ITW Buildex or A/E approved equal.
 - b. Type 304 Stainless Steel Tapper, 1/4-inch diameter with hex washer head, manufactured by Rawl or A/E approved equal.
 - c. 1-3/4-inch-minimum length, or as noted on details.
 3. Metal substrate: No. 12 x 1 1/2 inch, 410 stainless steel, self-drilling screws with 1-inch, stainless steel washers.
- G. Adhesive: Manufacturer's standard adhesive formulated to adhere roof insulation to concrete substrate and subsequent layers of insulation and coverboard to each other.
- H. Roofing Granules: **Where applicable** use ceramic-coated roofing granules provided by Roofing-System Manufacturer, color to match roofing membrane for touchup and repairs.
- I. Miscellaneous Accessories: Provide miscellaneous accessories recommended by Roofing-System Manufacturer.

PART 3 – EXECUTION

3.1 SUBSTRATE EXAMINATION

- A. Examine substrates and conditions, with Installer and Roofing-System Manufacturer's Representative for compliance with requirements and for other conditions affecting performance of roofing system.
1. Ensure that Work done by other trades is complete and ready to receive roofing system, including:
 - a. Roof openings and penetrations are in place and set and braced, and any roof drains (if applicable) are securely clamped in place.
 - b. Wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and nailers match thicknesses of insulation.
 2. Notify Architect/Engineer in writing of conditions which may adversely affect roofing-system installation or performance. Do not proceed with roofing-system installation until these conditions have been corrected and reviewed by Architect/Engineer

3.2 COORDINATION

- A. Coordinate Work to ensure that new insulation and roofing materials and building interior are kept continuously dry and that continuous, watertight, new roofing system is provided.
Coordinate:
 - 1. With TDCJ's PA.
 - 2. With other trades to avoid or minimize work on, or in immediate vicinity of, installation in progress and completed new roofing.
 - 3. To avoid or minimize adverse effects on completed new roofing.
- B. Ensure that drains are operational (if applicable) at end of each workday or if precipitation is forecast.

3.3 SUBSTRATE PREPARATION (Re-Roofing)

- A. Summary:
 - 1. Removal of Existing Roof System:
 - a. Remove all existing roofing material(s), membranes, light weight insulating concrete, insulation, flashing, metal and wood blocking and legally dispose off-site.
 - b. Remove only enough roofing to accommodate the day's work and ensure the exposed area can be made 100% watertight at the end of the day or first sign of inclement weather.
 - 2. Requirements: Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
- B. Mask adjoining surfaces not receiving roofing system to prevent spillage or migration affecting other construction.
- C. Close penetrations to prevent materials from entering and clogging drains and conductors, and from spilling or migrating onto adjacent surfaces.
- D. Installer and Roofing-System Manufacturer's Representative shall examine substrate to ensure that it is properly prepared and ready to receive roofing system. Roofing-System Manufacturer's Representative shall report in writing to Installer and Architect/Engineer conditions which will adversely affect roofing-system installation or performance. Do not proceed with roofing-system installation until these conditions have been corrected and reviewed by Architect/Engineer.
- E. Proceed with installation only after unsatisfactory conditions have been corrected. Commencing installation constitutes acceptance of work surfaces and conditions.

3.4 ROOFING-SYSTEM INSTALLATION, GENERAL

- A. Install roofing membrane and base flashings according to Roofing-System Manufacturer's written instructions and applicable recommendations of NRCA/ARMA quality Control Guidelines for Application of Polymer Modified Bitumen Roofing.

- B. Install materials in strict accordance with safety requirements required by Roofing-System Manufacturer, Material Safety Data Sheets, and Local, State, and Federal rules and regulations.
 - 1. Follow safety procedures of OSHA and other applicable governing agencies. Assume responsibility for work area safety at all times.
 - 2. Provide fully-charged fire extinguishers, appropriately sized and rated, and water within 50 feet of open flame.
 - 3. No torches allow on project at anytime.
- C. Maintain adequate ventilation during installation of roofing materials. Notify TDCJ's PA at least 1 week in advance of work with materials with noxious vapors. Review application schedule and venting precautions with TDCJ's PA prior to beginning application.
- D. Substrate-Joint Penetrations: Prevent roofing cold application adhesive from entering building or damaging roofing-system components or adjacent building construction.
- E. Coordinate installing roofing-system components so insulation and roofing membrane sheets are not exposed to precipitation, or left exposed at end of workday or when rain is forecast.
- F. Provide tie-offs at end of each day's work to cover exposed roofing-system membrane sheets and insulation with course of coated felt set in cold application adhesive with joints and edges sealed.
- G. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
- H. Remove and discard temporary seals before beginning work on adjoining roofing.
- I. Prohibit foot traffic and equipment movement over roofing system until adhesive has cured. Minimize foot traffic and equipment movement over base ply prior to installation of membrane top ply/cap sheet.
- J. Cooperate with A/E in performing inspections and testing of roofing system.

3.5 ROOF INSULATION, AND COVER BOARD INSTALLATION

- A. Concrete Substrate: Prime surface to receive roofing with asphalt primer at rate of $\frac{3}{4}$ gallon per square, and allow primer to dry.
- B. Insulation Installation:
 - 1. Comply with Roofing-System Manufacturer's written instructions for installing insulation.
 - 2. Coordinate installation so insulation is not exposed to precipitation or left exposed at end of workday.
 - 3. Install tapered insulation to conform to slopes indicated.
 - 4. Install insulation with long joints in continuous, straight line; with end joints staggered between rows; and abutting edges and ends between boards.

- a. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
 - b. Fill gaps exceeding 1/4 inch with insulation
 - 5. Where overall insulation thickness is 2 inches or greater, install 2 or more layers with joints of each succeeding layer staggered.
 - 6. Trim surface of insulation where necessary at roof drains (if applicable) so finished surface is flush with top of drain-bowl flange and does not restrict flow of water.
 - 7. Install and secure preformed, 45-degree insulation cant strips at junctures with vertical surfaces or angle changes greater than 45 degrees.
 - 8. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
 - 9. Set each layer of insulation in adhesive using Manufacturers approved sprayer, roller, or notched squeegee.
- C. Coverboard Insulation: Install coverboards over insulation with long joints in continuous, straight lines, and with end joints staggered between rows. Stagger joints from joints in insulation below at least of 6 inches in each direction. Loosely butt coverboards together. Set in approved adhesive.

3.6 WALKWAY INSTALLATION

- A. Walkway Pads: Cap sheet product as used in the field area of the roof and as follows: Color: To contrast roof color of cap sheet.
 - 1. Fully adhere walkway sheets in same cold applied adhesive in accordance with recommendations of the roofing-system manufacturers.
- B. Use only full-size units, except partial units at corners if necessary to provide neat, finished appearance.
- C. Provide 2 inches minimum between adjacent units. Extend walkway 6 inches minimum beyond edges of equipment or supports.
- D. Sweep loose surfacing material and debris from walkway locations before applying walk surface.

3.7 BASE FLASHING AND STRIPPING INSTALLATION

- A. General: Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrate according to Roofing-System Manufacturer's written instructions.
 - 1. Accurately align base flashing sheets without stretching, and maintain uniform side and end laps required by Roofing-System Manufacturer for selvage and non-selvage laps.
 - a. Start wall and curb base flashing at low point of roof deck and shingle with slope of deck.
 - b. Extend base flashing plies to top of curbs, to within 1 inch of counterflashing reglets, at least 8 inches above finished surface of roofing system, and 4 inches onto field of roofing membrane. At locations where height of wall exceeds height acceptable to

Roofing-System Manufacturer, comply with recommendations of Roofing-System Manufacturer for flashing high walls. Recommendations include flashing in two stages: bottom half to recommended maximum height preceded by top half over remainder of wall.

- c. Bond and seal laps, leaving no voids. Repair wrinkles and voids in laps and lapped seams. Prepare and prime non-selvage laps as recommended by Roofing-System Manufacturer.
 2. Install at least one ply of base flashing membrane same day that roofing membrane is installed to provide temporary watertight seal.
- B. Flashing Sheet Application: Adhere flashing sheet to substrate in solid coating of flashing cement. Press sheet firmly into place to ensure continuous adhesion to substrate with no voids, wrinkles, or un-adhered base flashing.
1. Cut sheets off end of roll and install vertically, working to selvage edge.
 2. For sheets without selvage edges or where selvage edge cannot be provided, limit length of sheets to 5' maximum. Prepare and prime non-selvage edges as recommended by roofing-system manufacturer.
 3. Stagger end lap seams in top ply at least 6" from lap seams in bottom plies.
 4. Extend base flashing up walls or parapets a minimum of 8" above roofing membrane and 4" onto field of roofing membrane.
- C. Mechanically fasten upper edge of base flashing securely at terminations and perimeter of roofing, using termination bars and fasteners spaced 8 inches on center and within 2 inches of end termination in base flashing.
- D. Install sheet metal flashing or counter flashing at top termination of base flashing, per Section 07 62 00.
- E. Equipment Penetrations. Flash per Drawing details or per Roofing-System Manufacturer's recommendations.
1. Prime flange of sheet-metal flashing, allow to dry, and set in modified-bitumen mastic.
 2. Apply sealant at base flashing termination on sheet metal flashing.
- G. At Perimeters
1. Prime both sides of metal edging, gravel stop, and gutter flanges, and allow to dry.
 2. Set in modified mastic over membrane as recommended by roofing-system manufacturer.
 3. Mechanically fasten flanges 3 inches on center, staggered, and strip over with additional layer of base flashing, as recommended by roofing-system manufacturer.
 4. Apply sealant along edge of base flashing at base of raised gravel stop dam to fill gap between base flashing and dam.
- H. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to Roofing-System Manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

- A. Roof cement shall not be incorporated into the roof membrane or flashing system.
- B. A/E will inspect roofing system at various stages of construction and at completion.
- C. If indicated by inspections, test cuts may be made to evaluate observed problems with roofing system.
 - 1. Approximate quantities of components within roofing membrane will be determined according to ASTM D 3617.
 - 2. Test specimens will be examined for interply voids according to ASTM D 3617 and to comply with criteria established in Appendix 3 of NRCA/ARMA Quality Control Guidelines for Application of Polymer Modified Bitumen Roofing.
 - 3. Repair areas where test cuts were performed according to Roofing-System Manufacturer's written instructions.
- D. Final Roof Inspection: Arrange for Roofing-System Manufacturer's technical personnel to inspect roofing installation on completion.
 - 1. Notify TDCJ PA 48 hours in advance of date and time of inspection so PA can be present for inspection with Roofing-System Manufacturer's technical personnel.
- E. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 CLEANING AND PROTECTING

- A. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by Manufacturer.
- B. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to TDCJ PA.
- C. Repair or remove and replace roofing system that does not comply with requirements, to condition free of damage and deterioration prior to final acceptance and according to Warranty requirements.

3.10 TEMPORARY SEALS

- A. At the end of each working day or at the sign of rain, install temporary, 100% watertight seal(s) where the completed new roofing adjoins the uncovered deck or existing roof surface.

- B. The authorized Roofing Contractor shall create and maintain the temporary seal in such a manner to prevent water from traveling beneath the new and/or existing roof system.
- C. The use of plastic roofing cement is permissible when sealing to an existing built up roof.
- D. If water is allowed to enter beneath the newly completed roofing, the affected area(s) shall be removed and replaced at no additional expense to the building owner.
- E. Prior to the commencement of work, cut out and remove all contaminated membrane, insulation, roof cement or sealant, and properly dispose off site.

3.11 COMPLETION

- A. Remove any and all debris, excess materials and scrap of any kind from the roof and surrounding premises prior to demobilization.
- B. Inspect all field welds, detailing and terminations to ensure a 100% watertight installation.

3.12 WARRANTY INSPECTION

- A. Upon completion of the project, the authorized Roofing Contractor shall complete and submit the Project Completion Notice to Manufacturer.
- B. Upon receipt of the Notice of Completion, a Manufacturer's Representative will schedule an inspection with a representative of the authorized Roofing Contractor to thoroughly review the installation and verify compliance with the Manufacturer's requirements.
- C. Any corrections or modifications necessary for compliance with the Specifications and acceptance for Warranty (Punch List) will be noted on the Final Inspection for Warranty Form.
- D. Upon completion of all Punch List items and Final Acceptance of the installation, a warranty as authorized by the approved Manufacturer Notice of Award and Warranty Request Form will be issued.

3.13 APPLICATOR WARRANTY

- A. In accordance with Applicator Warranty in Section 01 78 36.

END OF SECTION 07 52 00

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Shop or field formed sheet metal work for moisture protection.
- B. Formed wall flashing and trim.
- C. Formed low-slope roof flashing and trim.
- D. Related accessories.

1.2 RELATED SECTIONS

- A. Section 06 10 55 Roofing Carpentry: for wood nailers, curbs and cant strips.
- B. Section 07 92 00 - Joint Sealants.
- C. Section 07 72 00 - Roof Accessories – For set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.

1.3 REFERENCES

- A. American Society For Testing and Material (ASTM) standards as referenced herein.
- B. SMACNA - Architectural Sheet Metal Manual, Fifth Edition, 1993.
- C. American Iron & Steel Institute (AISI) "Stainless Steel Data Manual".
- D. NRCA - National Roofing Contractors Association, Fifth Edition, 2001.
- E. FS FF-S-325 - Shield Expansion; Nail, Expansion; and Nail, Drive-Screw.
- F. FS TT-C-494A - Coating Compound, Bituminous, Solvent Type, Acid Resistant.
- G. FS TT-S-00230C(2) - Sealing Compound, Elastomeric Type, Single Component (For Caulking, Sealing and Glazing in Buildings and Other Structures).

1.4 SUBMITTALS

- A. Procedures for Submittals: Section 01 33 00.
- B. Shop Drawings: Indicate joints, types and locations of fasteners, shapes, sizes, expansion joints, special conditions, and installation details.
- C. Samples: Two 6 inch square samples of each sheet metal material or 1'-0" length in type and finish specified.

1.5 WARRANTY

- A. Provide a joint written warranty of Fabricator and Contractor, on a single document, against leaks and defects in materials and workmanship for 10 years after date of Beneficial Occupancy.

PART 2 - PRODUCTS

2.1 SHEET METAL MATERIAL

- A. Prefinished galvanized steel – Kynar coated or A/E approved equal, min. 24 ga. galvanized steel for use at roof edge, coping, counter flashing, gutters, leader heads and down spouts.
- B. Galvanized steel – Minimum 22 ga. For use at continuous cleat beneath edge metal and coping.

2.2 FASTENERS

- A. Nails: Galvanized steel wire, flat head, barbed, with soft neoprene washers where exposed.
- B. Screws: Self tapping sheet metal type; material and finish compatible with metal being fastened.
- C. Rivets: Material and finish compatible with metal being fastened, type and size as recommended by sheet metal Manufacturer **with PA's approval only**.
- D. Fasteners for Concrete: Round-head stainless steel screw and neoprene washer with lead expansion anchor, FS FF-S-325, Group IV, Type 2.

2.3 RELATED MATERIAL

- A. Sealant: Polyurethane, FS TT-S-00230c, Type II, Class A.
- B. Bituminous Plastic Cement: ASTM D 4586, Type I; asbestos free.
- C. Asphaltic Coating Compound: FS TT-C-494A, Type II.
- D. Underlayment: ASTM D 226, Type II (No. 30 pound), asphalt saturated organic felt, unperforated.
- E. Slip Sheet: Rosin-sized building paper, 3 pounds/100 square feet.

2.4 FABRICATION - GENERAL

- A. Fabricate work in accordance with SMACNA Architectural Sheet Metal Manual and reviewed Shop Drawings.

- B. Form sheet metal on bending brake.
- C. Shape, trim and hand seam metal on bench insofar as practicable.
- D. Make angle bends and folds for interlocking metal with full regard for expansion and contraction to avoid buckling or fullness in metal after installation.
- E. Fabricate cleats and starter strips of same material as sheet metal.
- F. Form materials with straight lines, sharp angles and smooth curves.
- G. Fold back edges on concealed side of exposed edge to form hem.
- H. Weld or solder all joints on parts that are to be permanently and rigidly assembled.
- I. Provide expansion joints in sheet metal exceeding 15 feet in length. Place expansion joints at 10 feet O.C. maximum, and 3 feet from corners and intersections. Make joints minimum width consistent with type of material.

2.5 FABRICATED ITEMS

- A. Flashings and Counter flashings: Formed in minimum 10 foot lengths, 2 piece system with metal flashing receiver at masonry walls, in accordance with NRCA.
- B. Pipe Penetration Flashing: in accordance with NRCA.

2.6 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Downspouts: Fabricate rectangular downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
 - 1. Fabricate downspouts from the following material:
 - a. Pre-finished Steel: 24 gauge.
- B. Parapet Scuppers: Fabricate scuppers of dimensions required with closure flange trim to exterior, 4-inch-wide wall flanges to interior, and base extending 4 inches beyond cant or tapered strip into field of roof. Fasten gravel guard angles to base of scupper.
 - 1. Fabricate parapet scuppers from the following material:
 - a. Pre-finished Steel: 24 gauge.
- C. Conductor Heads: Fabricate conductor heads with flanged back and stiffened top edge and of dimensions and shape indicated complete with outlet tubes as detailed on contract documents.
 - 1. Fabricate conductor heads from the following material:

- a. Pre-finished Steel: 24 gauge.

2.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings: Fabricate in minimum 96-inch long, but not exceeding 10-foot long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.
 - 1 Fabricate copings from the following material: Pre-finished galv. steel: 24 gauge.
- B. Base Flashing: Fabricate from the following material: Pre-finished galv. steel: 24 gauge.
- C. Counterflashing: Fabricate from the following material: Pre-finished galv. steel: 24 gauge.
- D. Roof-Penetration Flashing: Fabricate from the following material: Stainless Steel: 24 gauge.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate, areas, and conditions, with installer present to verify that substrates are smooth and clean to extent needed for sheet metal work.
- B. Verify that expansion joints, nails, cants, and blocking to receive sheet metal are installed and free of concrete and soil.
- C. Prepare a written report, endorsed by the installer and PA, listing conditions detrimental to performance of the Work
- D. Do not start sheet metal work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General:
 - 1. Install work watertight, without waves, warps, buckles, fastening stresses or distortion, allowing for expansion and contraction.
 - 2. Install fabricated sheet metal items in accordance with SMACNA Architectural Sheet Metal Manual or NRCA standard details.
 - 3. Coat contact surfaces of dissimilar metals with asphalt coating or zinc chromate paint as recommended by SMACNA. Do not use materials incompatible with single ply membrane sheet roofing. Coat back side of uncoated aluminum and stainless-steel sheet metal flashing and trim with

bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.

4. Install cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners. Starter strips before starting installation of sheet metal.
5. Secure flashings with concealed fasteners.
6. Fit flashings tight, with square corners and surfaces true and in straight lines and planes.
7. Seam and seal joints
8. Install sealant tape where indicated.
9. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
10. Torch cutting of sheet metal flashing and trim is not permitted.
11. Do not use graphite pencils to mark metal surfaces.

B. Flashings and Counterflashing:

1. Where nailing is required, nail at 6 inches O.C.
2. Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with sealant. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.

C. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

D. Parapet Scuppers: Install scuppers where indicated through parapet. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.

E. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1 inch below scupper discharge.

F. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49.

G. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:

1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
2. Seal with sealant recommended by Manufacturer and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

H. Pipe, Conduits or Post Counterflashing: Fully solder connections and seams. Install counterflashing umbrella with close-fitting collar with top edge flared for

elastomeric sealant, extending a minimum of 4 inches over base flashing. Install stainless-steel draw band and tighten.

- I. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
- J. Soldered Joints; Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1 1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.

3.3 CLEANING

- A. Remove flux and residual acid immediately by neutralizing with baking soda and washing with clean water. Leave work clean and free of stains, scrap, and debris. Clean off excess solder.
- B. Clean off excess sealant.
- C. Remove temporary protective covering and strippable films as sheet metal flashing and trim are installed unless indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

END OF SECTION 07 62 00

SECTION 07 72 00 – ROOF ACCESSORIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Equipment supports and curbs.
- B. Related Sections include the following:
 - 1. Section 06 10 55 Roofing Carpentry: for wood cants and wood nailers.
 - 2. Section 07 52 00 Modified Bituminous Membrane Roofing.
 - 3. Section 07 62 00 Sheet Metal Flashing and Trim: for shop and field fabricated metal flashing and counterflashing, and miscellaneous sheet metal trim and accessories.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. A 123/A 123M: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 2. A 153 – Zinc Coating (Hot-Dip) Steel and Iron Hardware.
 - 3. A 653/A 653MB – Steel Sheet, Zinc Coated, (Galvanized) on Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, Structural (Physical) Quality Property.
 - 4. A 755/A 755M: Steel Sheet, Metallic Coated by the Hot-Dip process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 5. A 780-01: Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
 - 6. A 924 – Steel Sheet, Zinc Coated, (galvanized) by the Hot-Dip Process.
 - 7. C 208: Cellulosic Fiber Insulating Board.
 - 8. C 920: Elastomeric Joint Sealants.
 - 9. D 226: Asphalt-Saturated Organic Felts used in Roofing and Waterproofing.
 - 10. D 4397: Specification for Polyethylene Sheeting for Construction, Industrial and Agricultural Applications.
 - 11. D 4586: Asphalt Roof Cement, Asbestos-Free.
 - 12. D 4802: Poly (Methyl Methacrylate) Acrylic Plastic Sheet.
- B. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- C. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.

D. Underwriters' Laboratories (UL): Fire Hazard Classifications.

1.4 SYSTEM DESCRIPTION

A. Manufactured Curbs: Engineered, prefabricated structural box curb assembly designed for installation onto roof deck or structural framing, capable of supporting weight of roof-mounted equipment without deformation. Include integral base plate, treated wood nailer and insulation.

B. Manufactured roller supports for piping.

1.5 DESIGN REQUIREMENTS

A. Fabricate and install Roof Accessories to comply with NRCA recommendation that top of curb to top of roofing membrane be a minimum of 8 inches.

1.6 SUBMITTALS

A. Product List: Submit list of proposed Products and Manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.

B. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

C. Shop Drawings: Show fabrication and installation details for roof accessories. Show layouts of roof accessories including plans and elevations. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other work.

D. Manufacturer's Installation Instructions: Include installation sequence, special instructions and precautions, and Material Safety Data Sheets (MSDS).

E. Certification: Provide current letter(s) on Company's letterhead, signed by an authorized employee or corporate officer attesting to all following items:

1. Qualifications: Certify and document items in Article on Qualifications.
2. Products: Certify that selected products meet or exceed specified requirements:
 - a. Quality Assurance/Control Data: Provide Design Data, Test Reports, Certificates, Manufacturer's Installation Instructions, and Manufacturer's Field Reports.
 - b. Test Reports: Certified test reports or labeling agency file numbers indicating compliance with specified performance characteristics and physical properties.
 - c. Manufacturer's Certification: Each product meets or exceeds specified requirements.

F. Warranty: Special Warranty specified in this Section.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in installing the work of this Section with minimum three years documented experience and approved by the manufacturer.
- C. Supervisor/Foreman: Individual that is a direct employee of Installer's Company experienced in using selected Manufacturer's Products.

1.8 QUALITY ASSURANCE

- A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
- B. Perform Work in accordance with MSS SP-59.
- C. Maintain one copy of each document accessible to Site.

1.9 PRE-INSTALLATION CONFERENCE

- A. TDCJ's Project Administrator (PA) will convene a Pre-Installation Meeting prior to commencing Work of this Section.
- B. Require attendance of parties directly affecting Work of this Section.
- C. Review conditions of installation, installation procedures, and coordination with related work.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. NOT USED
- B. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.
- C. Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
 - 1. Protect from damage from sunlight, weather, excessive temperatures and construction operations.

1.11 PROJECT/SITE CONDITIONS

- A. Regulatory Requirements:
 - 1. Conform to International Building Code for fire and wind loading requirements.

2. Provide verification of inspection confirming approval of by authority having jurisdiction.
- B. Environmental Requirements:
1. Do not install roof accessories when chances for inclement weather exist, or might occur before installation can be completed and accessories made weatherproof.
 2. Maintain waterproof integrity of building during and after installation of roof accessories.
- C. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

1.12 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leak-proof, weather-tight, secure, and non-corrosive installation.
1. With TDCJ's Architect/Engineer (A/E) approval, adjust location of roof accessories that would interrupt roof drainage routes.
- B. Sequence Work to allow installation of roof accessories that are mounted directly on roof deck during installation of new roofing system. Do not cut into new roofing system to retrofit roofing accessories unless specifically permitted by A/E.
- C. Coordinate with installation of mechanical and electrical equipment, hardware, and assemblies to ensure roof accessories are properly located and in place to receive equipment installed by Others.

1.13 WARRANTY

- A. Warranty: Cover damage to roof accessories and substrates resulting from failure of roof accessories to perform as intended, including resist penetration of water. Include replacement of defective materials and labor:
1. Manufactured Curbs and Equipment Supports: Provide Warranty on curbs against structural failure.
 2. Warranty Period:
 - a. Five years from date of Beneficial Occupancy.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, Manufacturers offering Products that may be incorporated into the Work include, but are not limited to, Manufacturer's listed in other Part 2 articles.
- B. Manufacturers: Subject to compliance with requirements, provide Products by one of the Manufacturer's listed in other Part 2 articles.

2.2 METAL MATERIALS

- A. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coated.
- B. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, AZ50 coated.

2.3 MISCELLANEOUS MATERIALS

- A. Cellulosic-Fiber Board Insulation: ASTM C 208, Type II, Grade 1, 1-inch thick.
- B. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for above-ground use, complying with AWPA U1; not less than 1 ½ inches thick.
- C. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type non-corrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- D. Polyethylene Sheet: 6-mil- thick, polyethylene sheet complying with ASTM D 4397.
- E. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, non-perforated.
 - 1. Slip Sheet: Rosin-sized paper, minimum 3 lb/100 sq. ft.
- F. Fasteners: Same metal as metals being fastened, or non-magnetic stainless steel or other non-corrosive metal as recommended by roof accessory manufacturer. Match finish of exposed fasteners with finish of material being fastened. Provide non-removable fastener heads to exterior exposed fasteners.
- G. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- H. Elastomeric Sealant: ASTM C 920, polyurethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- I. Roofing Cement: ASTM D 4586, non-asbestos, fibrated asphalt cement designed for trowel application or other adhesive compatible with roofing system.

2.4 EQUIPMENT SUPPORTS

- A. Equipment Supports: Provide metal equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate with welded or sealed mechanical corner joints, with integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
 - 1. Available Manufacturers:
 - a. Custom Curb, Inc.
 - b. LM Curbs.

- c. Pate Company (The).
 - d. Thaler Metal Industries Ltd.
 - e. ThyCurb; Div. of Thybar Corp.
 - f. Or A / E approved equal.
2. Load Requirements: As required to support equipment.
 3. Material: Galvanized or aluminum-zinc alloy-coated steel sheet, 0.052-inch thick.
 4. Factory-install continuous wood nailers 3 ½ inches wide at tops of equipment supports.
 5. Metal Counterflashing: Manufacturer's standard removable counterflashing, fabricated of same metal and finish as equipment support.
 6. Fabricate units to minimum height of 12 inches, unless otherwise indicated.
 7. Sloping Roofs: Where *slope of roof deck exceeds 1:48*, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of Work.
 1. Verify that substrate is sound, dry, smooth and clean, sloped for drainage, and securely anchored and is ready to receive roof accessories.
 2. Verify dimensions of roof openings for roof accessories.
 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect adjacent surfaces, including Roofing-System from damage during installation of roofing accessories.
- B. Clean surfaces of roof to receive pipe support bases. Remove dirt, dust, oils, and other foreign materials from all roofs. Prime existing substrate or membrane with primer that is compatible with and acceptable to Roofing-System Manufacturer.

3.3 INSTALLATION

- A. General: Install roof accessories according to Manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Coordinate installation with adjacent Work such as roofing, sheet metal, and other work to ensure creation of a complete weatherproof assembly. Anchor work securely to supporting structure, but allow for differential and thermal movement.

- C. Install roof accessories to fit substrates and to result in watertight performance.
- D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 - 1. Coat concealed side of roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing exposed-to-view components of roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene underlayment.
 - 3. Bed flanges in thick coat of asphalt roofing cement where required by roof accessory manufacturers for waterproof performance.
- E. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
- F. Equipment Support Installation:
 - 1. Set equipment support so top surface of equipment support is level.
- G. Roof Mounted Pipe / Equipment Support Installation:
 - 1. Locate bases and support framing as indicated on Shop Drawings or as required for existing conditions. Completely support all piping, conduit, ducts, and equipment, whether indicated or not.
 - a. Do not use wood or wire to support items.
 - b. Maximum Deflection: 1/240th of span.
 - c. Maximum Load on Membrane: Two and one-half (2 ½) pounds per square inch.
 - 2. Set bases with adhesive in accordance with Manufacturer's installation instructions and as acceptable to Roofing-System Manufacturer. Accurately locate and align bases. Where applicable, replace gravel around bases.
 - 3. Install framing system at spacing's to support weight of piping and conduit, but in no case exceeding 10 feet on center.
 - 4. Set framing posts into bases and assemble framing structure as indicated.
 - 5. Use galvanized fasteners for galvanized framing and stainless steel fasteners for stainless steel framing.
- H. Seal joints with elastomeric sealant as required by Manufacturer of roof accessories.

3.4 FIELD QUALITY CONTROL

- A. Site inspection shall be performed under provisions of Division 1 Section 01 45 00 "Quality Control".
- B. Provide Manufacturer's field services under provisions of Division 1 Section 01 45 00 "Quality Control".

- C. Request Site attendance of Roof Accessory Manufacturer during installation of the Work if required to confirm compliance with instructions or for special or unusual conditions.

3.5 TOUCH UP

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.6 CLEANING

- A. Clean exposed surfaces according to Manufacturer's written instructions.
 - 1. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products.
 - 2. Clean metal and glazing using non-abrasive materials and methods. Remove and replace work that cannot be successfully cleaned.
 - 3. Remove adhesive from supports, pipes and bases, and leave work in clean condition.
- B. Remove all construction debris, packaging, unused fasteners, adhesives, and other installation materials from Project Site and dispose of legally.
- C. Re-clean as necessary to prevent damage. Protect completed Work from damage and deterioration and inspect immediately before Final Acceptance of Project.

3.7 PROTECTION

- A. Protect finished installation.
- B. Do not permit traffic over unprotected roof surfaces.

END OF SECTION 07 72 00

SECTION 07 92 00 – JOINT SEALANTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract.

1.2 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
 - 1. Clean and prepare joint surfaces.
 - 2. Joint sealants and backer materials for all applications, including those specified by reference to this Section.
- B. Related Sections:
 - 1. Section 07 52 00 – Modified Bituminous Membrane Roofing: for application and locations for sealants used in conjunction with roofing.
 - 2. Section 07 62 00 - Sheet Metal Flashing and Trim: for sealants used in conjunction with metal flashing for roofing.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C 920 – Elastomeric Joint Sealants.
 - 2. D 1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.

1.4 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.5 SUBMITTALS

- A. Product List: Submit list of proposed Products and Manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: Provide data for each selected product indicating sealant chemical characteristics, performance criteria, preparation, limitations, colors available, and Material Safety Data Sheets (MSDS).
- C. Samples for Initial Selection: Manufacturer's color charges consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Manufacturer's Installation Instructions: Include substrate preparation requirements, special precautions and installation temperature range.
- E. Warranties: Special Warranties specified in this Section.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- B. Pre-Installation Conference: Contractors shall Conduct Conference at the Project Site.

1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. When contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.8 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within Specified Warranty period.
 - 1. Warranty Period: Two years (2) from date of Beneficial Occupancy.
- B. Special Warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding Design Specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 – PRODUCTS

2.1 MATERIALS – GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by TDCJ Design Professional (DP) from manufacturer's full range.

2.2 URETHANE JOINT SEALANTS

- A. Single-Component, Non-sag, Urethane Joint Sealant – ES-1: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.
- B. Single-Component, Pourable, Traffic-Grade, Urethane Joint Sealant – ES-2: ASTM C 920, Type S, Grade P, Class 25, for Use T.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.
- C. Multi-component, Non-sag, Urethane Joint Sealant – ES-3: ASTM C 920, Type M, Grade NS, Class 25, for Use NT.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Sealants should be in accordance with provisions as specified in Section 07 52 00 and recommended by Roofing-System Manufacturer for intended use and compatible with their roofing membrane system.

2.3 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of materials and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant Manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or

other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
- B. Joint Priming: Prime joint substrates, where recommended by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by Sealant Manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint configuration per Figure 8A in ASTM C 1193, unless otherwise indicated.
 - 4. Provide flush joint configuration where indicated per Figure 8B in ASTM C 1193.

3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by Manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Beneficial Occupancy. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application JS-1: Joints in flashing and sheet metal components.
 - 1. Joint Sealant: Single-component non-sag urethane sealant ES-1.
 - 2. Joint-Sealant Color: As selected by A/E from Manufacturer's full range to match sheet metal color.

- B. Joint-Sealant Application JS-2: Pitch Plan Filler.
 - 1. Joint Sealant: Single-component non-sag urethane sealant ES-2.
 - 2. Joint-Sealant Color: Black

- C. Joint-Sealant Application JS-3: Exterior joints in vertical surfaces.
 - 1. Joint Locations:
 - a. Existing joints in walls between lower and upper roof levels scheduled for roof replacement.
 - b. Other joints as indicated.
 - 2. Urethane Joint Sealant: Multi-component, non-sag, Class 25.

END OF SECTION 07 92 00

SECTION 22 05 00 COMMON WORK RESULTS FOR PLUMBING

PART 1 – GENERAL

1.1 SUMMARY

- A. **Section is provided as reference and guidance for Common Work Results for Plumbing that may be encountered in roofing projects. The Clemens Unit Admin. Bldg. Reroofing Project will involve minimal Plumbing work other than existing soil/exhaust vents. Verification of all work to be done is the responsibility of the contractor.**
- B. Section includes:
 - 1. Common Work Results for Plumbing specifically applicable to Division 22 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing plumbing and piping for roof drains, soil pipes, and vents; and equipment piping, drain lines, service lines, and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
- D. Provide layout of affected piping, including:

1. Riser diagrams.
2. Hanger diagrams indicating proposed attachment and locations.
3. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1.5 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.6 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals

1.7 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Plumbing: Conform to applicable Plumbing and Mechanical Codes.
- D. Obtain permits, and request inspections from authority having jurisdiction.

1.8 FIELD CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before processing.
- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.

- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.10 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced plumbing, piping, connections, and equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Plumbing and piping shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Piping Materials
 1. Cast-Iron Soil Pipe and Fittings: ASTM A 74, Class SV.
 2. Push-on Gaskets for Cast iron Soil Pig: ASTM C 564.
 3. Caulked Joints for CI Soil Pipe: FS HH- P-117, Type II.
 4. No Hub Joints: ASTM D 3183.
 5. Copper Tubing: ASTM B 75.
 6. Wrought Copper Solder Fittings: ANSI B 16.22.
 7. Steel Pipe: ASTM A 53B.
 8. Malleable Iron Threaded Fittings: ANSI B 16.3.
 9. Cast-Iron Threaded Fittings: FS WW-P-501 E.
 10. Flange Bolt Sets: ASME Pressure Piping.
 11. PVC Piping and Fittings: Schedule 40.
 12. Unions in Copper or Brass Lines: 125 pound all brass, screwed pattern, ground joint, equal to Chase, Crane or Mueller.
 13. Mechanical Couplings: Victaulic Style 77 or Architect/Engineer approved equal.

14. Piping Insulation and Cover: Closed cell insulation, minimum 2-inches thick.
 - a. Exterior Exposure: Minimum 26 gage aluminum jacket protective cover, with lock bands.
 - b. Interior: Match existing.
- C. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of "General and Special Conditions of the Contract."

2.3 TESTS

- A. Provide testing of all relocated or modified systems and equipment.
- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify PA 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to PA with Project Record Documents.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.5 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements"
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 22 05 00

SECTION 23 05 00 COMMON WORK RESULTS FOR HVAC

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section is provided as reference and guidance for Common Work Results for HVAC that may be encountered in roofing projects. The Clemens Unit Admin. Bldg. Reroofing Project will involve minimal HVAC work other than exhaust vents, roof mounted exhaust fans and removal of abandoned equipment curbs. Verification of all work to be done is the responsibility of the contractor.
- B. Section includes:
 - 1. Common Work Results for HVAC specifically applicable to Division 23 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing equipment, curbs, and service lines and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Provide layout of affected ductwork and piping, including:
 - a. Riser diagrams.
 - b. Hanger diagrams indicating proposed attachment and locations

- c. Ductwork jointing and all special sheetmetal and insulating conditions.
- 2. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
- 3. Wiring Diagrams: For power, signal, and control wiring.

1.5 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.6 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals

1.7 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to applicable Mechanical Code and other applicable regulations for all work performed under this Division.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application

1.8 FIELD CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before processing.

- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.10 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced HVAC equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Ductwork shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Ductwork Materials
 1. Metallic-Coated Steel: ASTM A 446, Grade A, G90, 24-gage minimum core steel, or as required for conditions.
 2. Duct Lining: Mat faced duct liner; neoprene coated one side; minimum 1-inch thick; Linacoustic manufacturer by Manville or Architect/Engineer approved equal.
 - a. Average Thermal Conductivity: Maximum 0.26 BTU in/sq.ft/degree F at mean temperature of 75 F.
 3. Interior and Exterior Duct Joints Sealer: Kingco Seal-Rite 18-120, Blue Glue, and Hardcast or Architect/Engineer approved equal.
- C. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of "General and Special Conditions of the Contract."

2.3 FABRICATION

- A. Provide ductwork extensions or modifications where required due to movement or raising of mechanical equipment, in accordance with recognized industry standards and the following:
 - 1. Low Pressure Ducts: SMACNA HVAC Duct Construction Standards, Latest Edition.
 - 2. Pressure Class: 1-inch w.g., unless otherwise indicated.
 - 3. Elbows: Match existing or square, with factory-fabricated turning vanes.
 - 4. Changes in Direction: Rounded elbows with centerline radius equal to 1-1/2 times duct width, in plane of bend.
 - 5. Transitions in Size or Shape: Gradual slopes on all sides.
 - a. Increases in Dimensions in the Direction of Air Flow: Maximum slope of 1:7 on any side.
 - b. Decreases in Dimensions in the Direction of Air Flow: Maximum slope of 1:4.
 - 6. Ducts in Excess of 36-inches: Use SMACNA "J" and "F" connections.
- B. Install duct liner in accordance with manufacturer's instructions using weld pins or Tuffbond adhesive and adhesive type metal clips.
 - 1. Do not reduce airflow area of existing ductwork.
- C. Seal all joints water and air tight.

2.4 TESTS

- A. Provide testing of all relocated or modified systems and equipment.
- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify PA 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to PA with Project Record Documents.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.5 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements.
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 23 05 00

SECTION 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section is provided as reference and guidance for Common Work Results for Electrical that may be encountered in roofing projects. The Clemens Unit Admin Bldg. Reroofing Project may involve minimal, if any, electrical work encountered other than power to a roof mounted exhaust fan and demolition of abandoned electrical circuits; the dormitory has no lightning protection system to be restored. Verification of all work to be done is the responsibility of the contractor.
- B. Section includes:
 - 1. Common Work Results for Electrical specifically applicable to Division 23 Work, in addition to Division 01 - General Requirements.
 - 2. Lifting, moving, re-installation, and minor modifications to existing equipment, and service lines and connections.
 - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.

1.2 RELATED DOCUMENTS

- A. Drawings, General and Special Conditions of the Contract and Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Division 7 - Section 07 52 00 – Modified Bituminous Membrane Roofing
 - 2. Division 7 - Section 07 62 00 Sheet Metal Flashing and Trim: Copings, flashing and counterflashing.
 - 3. Division 7 - Section 07 72 00 Roof Accessories: Roof curbs and roof hatches.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code..

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 — Products or otherwise required by the Work.
- B. Product Data: For each type of product required.

- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Wiring Diagrams: For power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- B. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals.
- C. Project Record Documents: Accurately record exact location of roof penetrations and any items installed but not visible after installation of roofing system or other Products.
 - 1. Submit copies of as-built shop drawings with LPI Form LPI-1-R91 to finalize LPI Certified System Application.

1.8 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to NFPA 70 and applicable Building Code for all electrical work.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application

1.9 FIELD CONDITIONS

- A. Repair electrical conduit and devices as required by roofing replacement Work in existing locations and as directed or as required unless prevented by Project conditions.
- B. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- C. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding.
- D. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- E. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.
- F. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

1.10 COORDINATION

- A. Coordinate disconnections to minimize disruptions to TDCJ's occupancy.
- B. Coordinate with other Trades and PA to ensure electrical installation does not inhibit other Work.
- C. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by PA.

1.11 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced electrical equipment and appliances shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Electrical components shall remain watertight.

2.2 MATERIALS

- A. Primary Products: Those required for original installation.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify PA in writing of any deficiencies prior to Work.
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Construction Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

3.4 ELECTRICAL WIRING AND SYSTEMS REPAIR

- A. Verify need and extent of all repairs with PA. Coordinate shut down and start-up requirements for each systems and each occurrence.

- B. Replace all existing electrical conduit on all parapet walls and where indicated, including flexible connections to light fixtures and appurtenances to which conduit is connected.
- C. Remove conduit and associated materials from damaged point to nearest pull box or other connection point in both directions, unless instructed otherwise by PA.
- D. Replace with new conduit and wiring of same diameter and gage as original.
- E. Use screwed or welded connections to match existing conditions.
- F. After repairs are completed, but prior to covering or concealing repaired elements, test repairs at full load or power, under observation by PA.
- G. Seal all connections watertight, including those between new and existing materials

3.5 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
 - 1. Pressure test refrigerant piping prior to covering and recharging.
 - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.6 CLEANING

- A. Clean work under provisions of Section 01 70 00 "Execution Requirements.
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 26 05 00