

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-16-18-C144	2. SOLICITATION NO. 696-FD-16-B013	3. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	4. DATE ISSUED 3/7/2016	5. PROJECT NUMBER 054633	6. TRACKING NO. 05402015
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			
Document Type: 9 Statutory Cite: 2166.003 (b)		ESTIMATED BUDGET: \$6,800,000.00			

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):

Repair/Replace Roofs-Multiple Buildings – Polunsky Unit
3872 FM 350 South
Livingston, Texas 77351

As designed by:
Amtech Building Sciences, Inc.
Dan DeMeyer, Architect

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 600 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.)

YES NO

12B. CALENDAR DAYS

14

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 April 21, 2016. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.
- B. An offer guarantee is, is not required.
- C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.
- D. Offers providing less than 100 calendar days for acceptance after the date offers are due will not be considered and will be rejected.

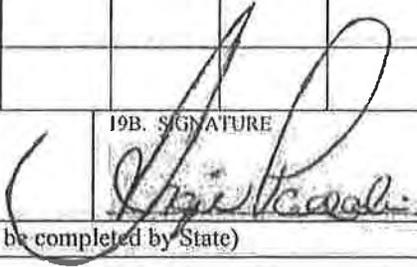
OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code) Texas Lique Tech Services, Inc. 1819 Milby Street Houston, TX 77003	15A. Telephone No. (Include Area Code) (713) 225-5325	16. EMAIL ADDRESS charles@liquatech.com
	15B. Fax No.: (713) 225-2755	

AMOUNTS → SEE BID SCHEDULE

17. The offeror agrees to furnish any required performance and payment bonds.
18. ACKNOWLEDGMENT OF ADDENDA / AMENDMENT
(The offeror acknowledges receipt to the solicitation – give number and date of each)

ADDENDA/ AMENDMENT NO.	A001	A002								
DATE	3/21/16	4/18/16								

19A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) Angie Palladini, Owner-President	19B. SIGNATURE 	19C. OFFER DATE 4/27/16
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AWARD (To be completed by State)

20. ITEMS ACCEPTED:

01 Repair/Replace Roofs-Multiple Buildings at the Polunsky Unit located at 3872 FM 350 South, Livingston, Texas as shown by the construction plans prepared by Amtech Building Sciences, Inc.

21. AMOUNT \$ 6,107,431.00	22. AMOUNT IN WRITING Six million, one hundred seven thousand, four hundred thirty-one dollars and zero cents
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

STATE WILL COMPLETE ITEM 25 OR 26 AS APPLICABLE

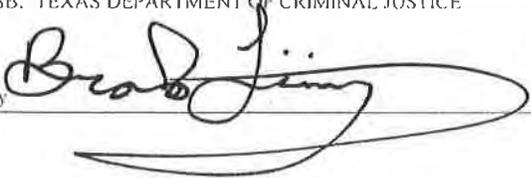
<input type="checkbox"/> 25. NEGOTIATED AGREEMENT Contractor is required to sign this document and return _____ copies to issuing office. Contractor agrees to furnish and deliver all items or perform all requirements identified on this form and any continuation sheets for the consideration stated in 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-16-B013 and Solicitation Addenda; (b). all documents included in your Offer; and (c). this Solicitation, Offer and Award Document.	
27A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)		28A. NAME AND TITLE	
		Brad Livingston Executive Director	
27B. SIGNATURE	27C. DATE	28B. TEXAS DEPARTMENT OF CRIMINAL JUSTICE	28C. AWARD DATE
		By 	6/28/16

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SECTION B

THE SCHEDULE
BID SCHEDULE

ITEM NO.	DESCRIPTION	QUANTITY	PRICE
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01	Base Bid		
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Repair/Replace Roofs-Multiple Buildings, at the Polunsky Unit located at 3872 FM 350 South, Livingston, Texas as shown by the construction plans as prepared by Amtech Building Sciences, Inc.

		Lump Sum	<u>\$ 6,107,431.00</u>
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The Base Bid is separated as follows:

(1) Materials incorporated into the realty (Cannot be less than the price Contractor paid for materials)	<u>\$ 2,528,638.00</u>
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(2) Labor	<u>\$ 2,541,396.00</u>
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(3) Overhead and Profit (includes the cost of the Payment and Performance Bonds)	<u>\$ 1,037,397.00</u>
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TOTAL	<u>\$ 6,107,431.00</u>
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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; and
3. Compliance with Section K. Representations, Certifications and Other Statements of Bidders, paragraph 1, Historically Underutilized Business (HUB) Representation and Section I, General Conditions, Article II., Laws Governing Construction, paragraph 2.5 Historically Underutilized Business (HUB).
4. Compliance with Section K. Representations, Certifications and Other Statements of Bidders, paragraph 11, Disclosure of Interested Parties.

SECTION E

INSPECTION AND ACCEPTANCE

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

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

SECTION F

DELIVERIES OR PERFORMANCE

1.1 CONTRACT TIME

The performance period for this Contract shall be **six hundred (600)** 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 **six hundred five (\$605.00)** for each available calendar day of delay.
- (b) If the Owner terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned by the Owner in completing the Work.
- (c) If the Owner does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the Work is completed or accepted.
- (d) In the event that the Contractor fails to complete the Work within the time specified in the Contract and/or the Owner is assessing liquidated damages, the Contractor is bound to faithfully perform all contractual requirements until such time as the Work is satisfactorily completed or accepted by the Owner.

SECTION G

CONTRACT ADMINISTRATION DATA

1. POINT OF CONTACT

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

2. PAYMENTS

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

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

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

SECTION H

SPECIAL CONDITIONS

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

1. CONTRACT DRAWINGS AND SPECIFICATIONS

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

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

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

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

C. Criminal History Eligibility Criteria

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

1. The individual shall have completed any sentence for criminal offense, including community supervision, and have not been incarcerated in a correctional facility for the previous two-year period.
2. The individual shall not have been convicted of any of the offenses listed below (to include soliciting, attempting, conspiring, or aiding others to engage, solicit, attempt or conspire to commit any of the listed offenses), or have been incarcerated in or sentenced to an adult correctional facility for any felony offense during which violence was used in the commission of the offense.
3. Homicide - (capital murder; murder; manslaughter; or any other homicide offense);

4. Kidnapping - (aggravated kidnapping; kidnapping; unlawful restraint or any other kidnapping offense);
5. Sexual Offense - (rape; sexual assault; sexual abuse; aggravated rape; aggravated sexual abuse; or any other sexual assault offense including indecency with a child);
6. Robbery - (robbery; aggravated robbery; or any other robbery offense);
7. Assault - (assault; aggravated assault; injury to a child; injury to an elderly person; or any other assault offense); or
8. Offense Involving Use or Exhibition of a Deadly Weapon (includes during the commission of the offense or during immediate flight therefrom and where an affirmative finding on use of a deadly weapon was made by the trial court or jury).

D. Criminal History Background Check

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

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

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

1. A Contract Construction Worker must not have any pending charges for any criminal offense or have an outstanding warrant.
2. Former TDCJ employees who have separated employment under certain conditions may not be allowed on the unit/facility.
3. Immediate family members (parent, brother, sister, spouse, child, grandparent, aunt, uncle, nephew, niece) of an offender may not be allowed on the unit/facility.
4. Contract Construction Workers shall not be allowed to work on a unit/facility to which they have been assigned to as a former TDCJ offender.
5. The Warden, at the Warden's sole discretion, may deny a contract construction worker access to a unit/facility if the Warden believes the contract construction worker may jeopardize the safe and orderly operation of the unit/facility, pose a danger to offenders or employees, or place an undue logistical burden on staff.

3. SPECIAL SECURITY MEASURES

- A. The Contractor shall provide the Facilities Division Project Administrator a list of all Contract Construction Workers who will be working on the unit. The Contractor shall daily update/revise the list as Contract Construction Workers are added or terminated and provide the Facilities Division Project Administrator with the current list in effect. The list shall be in alphabetical order by employee's last name and shall include employee's driver's license number, social security number and company name. In addition, as new contract construction workers are added to the workforce, the Contractor shall provide the Facilities Division Project Administrator with a completed Non-Employee Background Questionnaire (included herein as Attachment No. 9) in advance of said employees being admitted to the worksite, for the background check to be conducted. Each Contract Construction Worker shall read and sign a copy of the Standards of Conduct for Civilian Construction Contractor's Employees (included herein as Attachment No. 1) acknowledging and agreeing to abide by these standards.
- B. All Contract Construction Workers shall have read TDCJ's PD-22, "General Rules of Conduct and Disciplinary Action Guidelines for Employees", and PD-29, "Sexual Misconduct with Offenders", which are located on the Texas Department of Criminal Justice website at <http://www.tdcj.state.tx.us/vacancy/hr-policy/index.htm>, prior to commencing Work. Failure to adhere to these rules will result in contract employee's expulsion from the unit.
- C. The Contractor shall provide a legible photocopy of one of the acceptable primary identification documents as stipulated by the Texas Department of Public Safety, which includes driver's license, State ID card, Federal ID card or a passport in conjunction with a photocopy of their Social Security Card for all Contract Construction Workers who will be working on the unit.
- D. All Contract Construction Workers will report to the job site at the scheduled shift time and proceed into the facility as a group. At the end of the workday they will all leave in a similar group. Only work crew supervisors will be allowed to leave the unit's fenced compound under escort to procure additional tools or specialized tools. All Contract Construction Workers may eat their lunch in the work area or exit the unit in a group for lunch. Contract Construction Workers may not eat in the unit's cafeteria.
- E. The Contractor will coordinate with the Unit Warden or designee the collection point for Contract Construction Workers to enter the fenced compound and measures to be taken to receive required security escort of Contract Construction Workers to construction site if through the unit compound.
- F. Tools, generators, ladders, acetylene cutters, vehicular equipment or heavy equipment shall not be stored in the unit fenced compound.
- G. Contractor shall implement measures to disable vehicular or heavy equipment (e.g., vehicles, graders, cherry pickers, etc.) when they are left unattended.
- H. Contractor and Contract Construction Workers shall ensure a clear area be maintained a minimum of eight (8) feet from all fences. This area shall be clear of all debris, weeds and other construction material. All work sites will be cleared of construction debris at the end of each day. All debris is to be immediately removed to a secure area or to a designated area for disposal.
- I. All vehicles will be searched upon entering and/or exiting the unit's fenced compound.

- J. The Texas Department of Criminal Justice reserves the right to adopt any special rules as may be necessary to preserve the security of the institution should they become necessary. Coordination between the Unit Warden and Contractor shall be made as those situations arise.
- K. All Contract Construction Workers appointed by Contractor who visit any TDCJ unit will be required to comply with that unit's security regulations.

4. EQUIPMENT/SYSTEM DEMONSTRATIONS

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

5. RELATIONSHIP OF PARTIES

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

6. CONFIDENTIALITY

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

7. WAIVER

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

8. SEVERABILITY

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

9. CONTRACT MODIFICATION

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

10. BID DEPOSIT (5% of Total Bid)

The Contractor further agrees that the Bid Deposit accompanying this Bid, payable to the Texas Department of Criminal Justice, and its amount is the measure of damages which the Owner will sustain by the failure of the undersigned to execute and deliver the Contract, Performance Bond and Payment Bond, insurance certificates and that if the undersigned defaults in executing the Agreement and/or in

furnishing the aforementioned documents within fourteen (14) consecutive calendar days from Contract award, then the Bid Deposit shall become subject to forfeiture to the Owner. Bid Deposit is not required for bids totaling less than \$25,000.00. Acceptable forms of bid deposits are limited to: irrevocable letter of credit issued by a financial institution subject to the laws of Texas; a surety or blanket bond from a company chartered or authorized to do business in Texas and United States Treasury listed; a United States Treasury Bond; or certificate of deposit.

11. STANDARD WORK WEEK

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

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

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

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

12. NOTICE TO PROCEED

It is the Owner's intent to issue a Notice to Proceed (NTP) at the pre-construction conference 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.

SECTION H

- 13.2 Activities shall be identified by buildings and activity durations shall be in units of whole workdays. Less than two percent (2%) of all non-procurement activities' original durations shall be greater than thirty (30) Days.
- 13.3 Within fourteen (14) Days after the start of the Contract Time, the Contractor shall submit the CPM Schedule.
- 13.4 The Project Schedule shall be updated on a monthly basis throughout the duration of the Work and until Contract completion.
- 13.5 Average calendar days lost monthly due to Anticipated Adverse Weather Days:

Jan	Feb	Mar	April	May	Jun	July	Aug	Sept	Oct	Nov	Dec
10	9	9	8	8	9	9	8	8	7	8	10

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. Excessively high or low temperatures alone will not be considered adverse weather days.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1.1.20 PRE-CONSUMER MATERIALS: Materials or by-products that have not reached a business entity or consumer for an intended end use including industrial scrap material and overstock, or obsolete inventories from distributors, wholesalers and other companies. The term does not include materials and by-

products generated from, and commonly reused within, an original manufacturing process or separate operation within the same or a parent company.

1.1.21 PRELIMINARY PAY WORKSHEET: The Preliminary Pay Worksheet is a review document that reflects work performed and the established schedule of values. The Preliminary Pay Worksheet is submitted by the Contractor to the Owner prior to a request for progress payment.

1.1.22 PROJECT: The term "Project" shall comprise the total construction of which the Work performed under the contract documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.23 PROJECT MANUAL: The Project Manual is the volume(s) usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

1.1.24 PROVIDE: "Provide" means furnish and install.

1.1.25 RECYCLED MATERIAL CONTENT: The portion of a product made with Recycled Materials consisting of Pre-Consumer Materials (waste), Post-Consumer Materials (waste), or both.

1.1.26 RECYCLED MATERIALS: Materials, goods or products that contain recyclable materials, industrial waste, or hazardous waste that may be used in place of raw or virgin materials in manufacturing a new product.

1.1.27 RECYCLED PRODUCT: A product that meets the requirements for recycled material content as prescribed by the rules established by the Texas Commission on Environmental Quality in consultation with the Comptroller of Public Accounts (CPA). The product must be clearly identified as recycled by packaging, markings, literature, etc.

1.1.28 SAMPLES: Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to assist in the establishment of standards by which the Work will be judged.

1.1.29 SHOP DRAWINGS: Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the Work.

1.1.30 SPECIAL CONDITIONS: Special Conditions shall relate to a particular Project but shall not weaken the character or intent of the General Conditions. Special Conditions will supplement specific paragraphs of the General Conditions as specified in the Special Conditions.

1.1.31 SPECIFICATIONS: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.32 SUBCONTRACTOR: A person or organization who contracts under, or for the performance of part or the entire Contract between the Owner and the Contractor. The subcontract may be direct with the Contractor or with another subcontractor.

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

1.2 EXECUTION AND CORRELATION

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

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

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

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

1.3 INTERPRETATION

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE II. LAWS GOVERNING CONSTRUCTION

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

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

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

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

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

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

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

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

2.2.1.4 COMPLAINTS OF VIOLATIONS

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

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

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

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

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

2.3 STATE SALES AND USE TAXES: The Owner qualifies for exemption from State and Local Sales and Use Taxes pursuant to the provisions of the Texas Tax Code (Title 2, Chapter 151, Subsection 151.311). Tangible personal property incorporated into the Owner's realty is exempt pursuant to Subsection 151.311 of the Texas Tax Code and the terms of a separated contract. The Contractor shall comply with applicable provisions of Chapter 34, Rules 3.291 and 3.357 of the Texas Administrative Code, or other procedures as may be prescribed by the Comptroller of Public Accounts.

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

2.5 HISTORICALLY UNDERUTILIZED BUSINESS (HUB)

2.5.1 The Contractor shall be required to make a good faith effort to award necessary subcontracts to HUBs in accordance with Texas Government Code, Section 2161.181-182, 2161.252(b), and Texas Administrative Code (TAC), Title 34, Part 1, Chapter 20, Subchapter B, Rule 20.11. Pursuant to the

Comptroller of Public Accounts HUB Rules, TAC, Title 34 Part 1, Chapter 20, Subchapter B, Rules 20.13 and 20.14, the Contractor shall submit a HUB Subcontracting Plan (HSP) as part of the bid submission, as well as make a good faith effort to implement the HSP. The Contractor shall seek written approval from the Department prior to making any modifications to its HSP.

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

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

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

2.6 CLEAN WATER ACT AND THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

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

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

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

ARTICLE III. CONTRACT DOCUMENTS AND BONDS

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

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

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

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

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

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

3.5 PERFORMANCE AND PAYMENT BONDS: Performance and Payment Bonds are not required on contracts of \$25,000.00 or less unless otherwise stipulated. The Contractor shall provide, at its own expense, within fourteen (14) Days after award execution, in accordance with the provisions of Government Code, Title 10, Section 2253.021, the following bonds to the Owner: (1) Performance Bond for the sole protection of the State of Texas, which shall be in the amount of the Contract and conditioned on the faithful performance of the work in accordance with the Contract; and (2) Payment Bond for the sole protection of those supplying labor, materials, and/or equipment, which shall be in the amount of the Contract. Subcontractors are not required by the Owner to execute performance or payment bonds.

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

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

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

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

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

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

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

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

3.6.3 In case of discrepancy in the figures, in the Drawings, in the Schedules, or in the Specifications, the matter shall be promptly submitted in writing to the A/E who will promptly make a determination in writing after review with the Owner. Any action taken by the Contractor without such a determination shall be at its own risk and expense.

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

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

ARTICLE IV. CONTRACT ADMINISTRATION

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

- 4.1.1 The Owner reserves the right on appropriate occasions to issue instructions through other designated representatives.
- 4.1.2 All communications concerning the construction of the Work shall be furnished to the Owner, the A/E, and the Contractor by the party concerned. The administration of the Contract in regard to matters related to taxes, laws, and wage rates, Contract Documents, separate contracts, changes in the Work, payments, claims, acceptance, warranty and guarantee, federally funded projects, insurance, bonds and like matters is described in appropriate articles of these conditions or the Special Conditions appended hereto.
- 4.1.3 All instructions affecting Contract Sum, Contract Time or Contract interpretation shall be confirmed expeditiously in writing with copies furnished to the Owner, the A/E and the Contractor by the party issuing the instruction. No instruction affecting the A/E's design liability shall be issued without its prior written consent.
- 4.1.4 All oral communications affecting Contract Time, Contract Sum and Contract interpretation will be confirmed in writing. No oral communication, by itself, can authorize a change in the Work, the Contract Sum, the Contract Time, or waive compliance with the plans and specifications.
- 4.2 **ARCHITECT/ENGINEER'S ADMINISTRATION:** The A/E shall be a representative of the Owner during construction until final payment to the Contractor is due. The A/E will advise and consult with the Owner. The A/E has the authority to act on behalf of the Owner to the extent provided in the Contract Documents, unless otherwise modified by written instrument, which will be shown to the Contractor.
- 4.2.1 The A/E shall attend and participate in the Pre-Construction Conference, which will be held at a date, time and place established by the Owner and A/E.
- 4.2.2 In accordance with the contract between the A/E and Owner, the A/E shall visit the construction site at intervals appropriate to the stage of construction to reasonably determine that the Work is proceeding in accordance with the Contract Documents. The A/E shall provide a continuity of observations covering all phases of the Work but it shall not be exhaustive or continuous.
- 4.2.3 The A/E shall attend and participate in Project Review Meetings which will be held monthly on a regularly scheduled basis during construction, unless more frequent meetings are necessitated under certain circumstances, at the time and place (probably project site) established by the Owner. As a part of the Project Review Meeting the A/E will review the Contractor's payment request.
- 4.2.4 The A/E shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors or any other persons performing any of the Work, or for the failure of any of them to carry out the Work in accordance with the Contract Documents.
- 4.2.5 The A/E shall assist the Owner in determining the amounts owing to the Contractor based on observations at the site and on evaluations of the Contractor's Application for Payment and shall assist the Owner in reviewing and approving Certificates of Payment. However, the A/E's assistance does not include the preparation of Certificates of Payment.
- 4.2.6 The A/E shall render design interpretations necessary for the proper execution or progress of the Work with reasonable promptness on request of either the Owner or the Contractor and shall render written interpretations within a reasonable time, on all claims, disputes and other matters in question relating to the design interpretation of the Contract Documents. Interpretations of the A/E shall be consistent with the intent

of and reasonably inferable from the Contract Documents and shall be in written or graphic form. The A/E's interpretations shall be final if consistent with the intent of the Contract Documents.

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

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

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

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

4.3 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK: The Contractor shall not employ any Subcontractor to whom the A/E or the Owner may have a reasonable objection. The Contractor will not be required to employ any Subcontractor against whom he/she has a reasonable objection.

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

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

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

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

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

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

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

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

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

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

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

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

4.5.4 The Owner reserves the right to make essential installations, which are pertinent to the immediate use of the Work or Project with the concurrence of the Contractor. Within this right the Owner may let other

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

4.6 CONTRACT TERMINATION:

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

4.6.2 Termination by Owner. If the Contractor persistently or repeatedly refuses or fails to supply enough properly skilled workmen or proper materials or fails to make prompt payment when due to Subcontractors, laborers, or material men for materials and labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, or fails to so prosecute the Work or any portion thereof as to ensure its completion, within the Contract Time, or any extension thereof, specified in this Contract, then the Owner may, without prejudice to any right or remedy and after giving the Contractor and its Surety, if any, ten (10) Days written notice, terminate the Contract. In such event the procedure outlined in the performance bond, if any, for completion of the Work will be followed and the Owner may take possession of the site and utilize in completing the Work such materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and necessary therefore. Should the surety fail to respond within fifteen (15) Days following such notice and fail to pursue completion of the Work with diligence acceptable to the Owner, the Owner may arrange for completion of the Work and deduct the cost thereof from the unpaid Contract Sum remaining, including the cost of additional services made necessary by such default or neglect, in which event no further payment shall then be made by the Owner until all costs of completing the Work shall have been paid. If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the A/E's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor or its surety shall pay the difference to the Owner. This obligation for payment shall survive the termination of the Contract. Whether or not the Contract is terminated, the Contractor and its Surety shall be liable for any damage to the Owner resulting from the Contractor's refusal or failure to complete the Work within the specified time.

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE V. CONTRACT RESPONSIBILITIES

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

5.1.1 All formal communications shall be through the Owner.

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

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

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

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

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

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

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

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

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

5.3.3 The Contractor is solely responsible for successful completion of the Project in accordance with the Plans and Specifications. The Contractor expressly acknowledges that the Owner has no duty to discover Work that fails to conform to the Plans and Specifications and/or to point out such non-conforming Work to

the Contractor. The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

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

5.3.5 CONTRACTOR INSPECTION OF WORK:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.6 **CONDITIONS AT SITE OR BUILDING**

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

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

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

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

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

5.7 INSURANCE

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

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

5.7.2.1 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 sepi 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, in the Owner's sole opinion, such changes cause an increase or decrease in the Contractor's costs of, or time required for, performance of the Contract, an equitable adjustment may be made and confirmed in writing in a Change Order, in accordance with section 6.6 below.

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

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

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

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

it being agreed hereby that such sum, together with any extension of time contained in said Change Order, shall constitute full compensation to Contractor for all costs, expenses and damages to Contractor, whether direct, consequential or otherwise in any wise incident to, arising out of, or resulting directly or indirectly from the Work performed by Contractor under such Change Order.

6.1.4 RESERVED

6.1.5 RESERVED

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

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

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

6.2 RESERVED

6.3 REQUESTS FOR EQUITABLE ADJUSTMENT:

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

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

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

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

6.6 ADMINISTRATIVE PROCEDURES FOR CHANGE ORDER:

6.6.1 Lump Sum Proposal

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

6.6.1.2 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 hereinafter 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.

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

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

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

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

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

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

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

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

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

- a. Activity number and description;
- b. Percentage of value of Work in place against total value;
- c. Cost of each activity separated into Labor and Materials;
- d. Value of Work in place since last report;
- e. Value of Work in place to date; and
- f. Value of uncompleted Work.

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

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

8.3.4 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.

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. If Contractor does not submit a complete and correct request for extension of time within 20 days of the occurrence of the delay or at the time of the next Project Schedule Update if sooner, it is mutually agreed that the Contractor waives the right to subsequently request an extension of time based on such occurrence of delay.

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

8.4.2.1 EXCUSABLE DELAYS

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

8.4.2.2 PROOF OF ENTITLEMENT

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

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

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

8.4.2.3 RELIEF FOR DELAY

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

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

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

8.4.2.4 FORCE MAJEURE

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

8.4.3 TIME EXTENSIONS FOR ADVERSE WEATHER

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

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

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

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

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

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

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

8.4.4.1 The Contractor shall, within five (5) working days after being so informed, notify the Owner of the specific measures taken and planned to increase the rate of progress together with an estimate as to when scheduled progress will be regained. Should the plan of action be deemed inadequate by the Owner, the Contractor will take additional steps or make adjustments as necessary to its plan of action until it meets with Owner's approval. The increased rate of Work placement will continue until scheduled progress is recovered. If the cause of delay is not identified in paragraph 8.4.1.1 as an Excusable delay then the Contractor shall not be entitled to additional compensation for the effort it applies to the Work under the terms of paragraphs 8.3.6 and 8.3.7.

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

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

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

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

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

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

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

ARTICLE IX. BENEFICIAL OCCUPANCY

9.1 BENEFICIAL OCCUPANCY: If and only if the Owner should wish to use or occupy the Work, or portion thereof, prior to final completion the Owner shall request in writing that the Contractor determine if the Work, or portion thereof, so identified by the Owner is sufficiently complete to allow the Owner to occupy. Should the Contractor determine that the Work, or a designated portion thereof, acceptable to the Owner, is sufficiently complete, the Contractor shall prepare for submission to the A/E a comprehensive list of items remaining to be completed or corrected. Upon receipt of the Contractor's list and prior to the agreed date of Beneficial Occupancy, a joint inspection tour by the Contractor, Owner, and A/E, or their duly appointed representatives, shall be made. The A/E will furnish to the Contractor a list of items of Work to be completed and deficiencies to be corrected and the Contractor shall complete such remaining Work within the remaining Contract time or within the time frame stated on the Certificate of Beneficial Occupancy. Failure to achieve Final Completion within the Contract Time or time frame stated on the Certificate of Beneficial Occupancy will cause damage to the Owner and may subject the Contractor to Liquidated Damages as stated in Section F, Article 2 of the Contract.

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

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

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

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

ARTICLE X. CONTRACT FINAL ACCEPTANCE AND PAYMENT

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

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

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

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

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

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

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

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

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

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

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

ARTICLE XI. CONTRACT WARRANTY AND GUARANTEE

11.1 WARRANTY OF CONSTRUCTION

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

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

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

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

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

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

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

4. Operating instructions.
5. Maintenance instructions.

ARTICLE XII. PRESERVATION OF SITE ASSETS

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

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

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

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

ARTICLE XIII. OPERATION AND STORAGE AREAS

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

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

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

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

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

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

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

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

14.2 RIGHTS AND REMEDIES

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

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

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

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

14.5 INDEPENDENT CONTRACTOR

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

14.6 INDEMNIFICATION OF THE OWNER

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

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

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

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

14.7 NON-AVAILABILITY/LOSS OF FUNDING

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

14.8 NOTICE

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

Texas Ligua Tech Services, Inc. Attn: Angie Palladini

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 (Outside Five Foot Perimeter of Building)	3
5	Prevailing Wage Schedule (Building to Five Feet Beyond Building Line)	4
6	Substitution Request (Bidding Phase)	
7	Substitution Request	2
8	Contractor Qualifications (TDCJ Master File)	
9	Non-Employee Background Questionnaire	3
10	State Documents and Forms	36
11	Specifications	
12	Drawings	
13	Vendor Maintenance Direct Deposit and Substitute W-9 Form	2
14	Release of Claims	1

EXHIBITS:

1	HUB Subcontracting Plan (HSP)	30
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SECTION K

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF BIDDERS

1. HISTORICALLY UNDERUTILIZED BUSINESS (HUB) REPRESENTATION

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

1.1 REPRESENTATION

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

2. CHILD SUPPORT REPRESENTATION

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

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

Check ONE:

Bidder IS NOT subject to Section 231.006 [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.

_____	_____
(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.

Position with Bidder: _____

Date of Employment with Bidder: _____

15. LIMITATION ON EMPLOYMENT OF FORMER STATE OFFICERS

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

16. REMITTANCE ADDRESS

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

SAME

17. SUSPENSION, DEBARMENT, AND TERRORISM

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

18. FRAUD, WASTE OR ABUSE

In accordance with Texas Government Code, Chapter 321, the State Auditor's Office (SAO) is authorized to investigate specific acts or allegations of impropriety, malfeasance or nonfeasance in the obligation, expenditure, receipt or use of state funds. If there is a reasonable cause to believe that fraud, waste or abuse has occurred at this agency, it can be reported to the SAO by calling 1-800-892-8348 or at the SAO's website at www.sao.state.tx.us. It can also be reported to the TDCJ Office of the Inspector General at 1-866-372-8329, the TDCJ Internal Audit Division at 1-512-406-5935, or Crime Stoppers at 1-800-832-8477.

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

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

receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.

20. NO LITIGATION

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

21. IMMIGRATION

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

22. ADVERTISING OF AWARD

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

23. CONDITIONS PRECEDENT TO AWARD

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

BIDDER

Name Texas Ligustech Sols Trx.

By Andie Paladino

Signature Andie Paladino

Title President

Date 4/27/10

SECTION L

INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

1. AMENDING AND MODIFYING BIDS/PUBLIC DISCLOSURE OF BIDS

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

2. REJECTION OF BIDS

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

injustice on other Bidders. A condition goes to the substance of a bid where it affects price, quantity, quality, or delivery of the items offered.

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

3. NOTICE TO BIDDERS OF REJECTION OF ALL BIDS.

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

4. MINOR INFORMALITIES OR IRREGULARITIES IN BIDS.

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

- A. Return the number of copies of signed bids required by the invitation;
- B. Furnish required information concerning the number of its employees;
- C. Sign its bid, but only if:
 - 1. The unsigned bid is accompanied by other material indication the Bidder's intention to be bound by the unsigned bid (such as the submission of a bid guarantee or a letter signed by the Bidder, with the bid, referring to and clearly identifying the bid itself); or

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

5. NON-RESIDENT BIDDERS

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

6. DISCREPANCIES AND AMBIGUITIES

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

7. SUBSTITUTIONS

- A. Bidder requesting substitutions shall **submit written request to the Contract Administrator no later than 5:00 PM, fourteen (14) Days prior to the time set for receipt of bids.**

- B. Approvals of substitutions will be made by Addendum then distributed to each entity holding Bid Documents.

8. BID ACCEPTANCE

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

9. QUALIFICATIONS

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

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

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

10. DOCUMENT AVAILABILITY

- A. Bid Documents can be purchased from the Design Firm, Amtech Building Sciences, Inc. 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, Repair/Replace Roofs-Multiple Buildings – Polunsky Unit. Do Not Open Until 2:00 p.m., April 21, 2016**".
- C. Sealed bids may be mailed or hand delivered to the Texas Department of Criminal Justice at the following address:

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

(BIDS MUST BE RECEIVED BY 2:00 P.M. ON Thursday, April 21, 2016 AT THE DESIGNATED ADDRESS TO BE CONSIDERED RESPONSIVE)

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

12. PREPARATION OF BID

As a reminder please ensure that you have:

- A. Furnished your Dunn and Bradstreet Number (DUNS#), Tax Identification Number (TAX ID #) and Charter Number (Charter #) in the spaces provided on page 1 of the Solicitation, Offer, and Award form.
- B. Completed blocks 10, 14, 15, 16, 18, 19A, 19B, and 19C on pages one (1) and two (2) of the Solicitation, Offer, and Award form.
- C. 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.
5. Bidders must attend the mandatory Pre-Bid Conference and site visit.

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)

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

Plumber.....	\$ 31.30	9.49
<hr/>		
SUTX2009-061 04/20/2009		
	Rates	Fringes
BRICKLAYER.....	\$ 18.00	0.00
CARPENTER, Includes Acoustical Ceiling Installation, Batt Insulation, and Metal Stud Installation (Excludes Drywall Hanging, and Form Work).....	\$ 15.13	2.63
CEMENT MASON/CONCRETE FINISHER...	\$ 12.09	0.00
DRYWALL HANGER.....	\$ 13.89	1.00
ELECTRICIAN.....	\$ 18.06	4.87
LABORER: Common or General.....	\$ 9.24	0.00
LABORER: Landscape & Irrigation.....	\$ 8.50	0.22
LABORER: Mason Tender - Brick...	\$ 12.02	0.00
LABORER: Mortar Mixer.....	\$ 12.00	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.67	0.47
OPERATOR: Bulldozer.....	\$ 13.00	0.35
OPERATOR: Crane.....	\$ 21.33	0.00
OPERATOR: Forklift.....	\$ 14.58	0.00
OPERATOR: Loader (Front End)....	\$ 10.54	0.00
PAINTER: Brush, Roller and Spray, Includes Parking Lot Striping.....	\$ 11.75	0.00
ROOFER.....	\$ 13.64	1.80
SHEET METAL WORKER.....	\$ 17.00	0.00
TILE SETTER.....	\$ 15.00	0.00
TRUCK DRIVER.....	\$ 10.68	0.34

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

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

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

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

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

Wage and Hour Administrator

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

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

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

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

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

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END OF GENERAL DECISION

ATTACHMENT NO. 6

**SUBSTITUTION REQUEST
BIDDING PHASE**

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 related to any TDCJ offender? Yes No Unknown
14b. Are you now or have you ever been involved in a spousal relationship with a TDCJ offender? Yes No
14c. Do you have a current business partnership or gang association with a current TDCJ offender? Yes No
14d. Are you on a current TDCJ offender's visitation list? Yes No
14e. Have you corresponded in the last year with a current TDCJ offender? Yes No

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

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

(Continued on Page 2)

IMPORTANT

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

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

Date	Felony or Misdemeanor	Offense	Offense Class	City & State	Punishment

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

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

(Continued on Page 3)

FALSIFICATION POLICY

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

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

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

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

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

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

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

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

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

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

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

Signature: _____

Date: _____

ATTACHMENT NO. 10

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

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

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

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

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

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

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

Agency No. 696	Remit Voucher to: TDCJ-Facilities Division-Finance #2 Financial Plaza Suite # 400 Huntsville, TX 77340			Voucher No.	
				Voucher Amount	
				\$	
Contract No.	Contract Date	SA No. or JOE No.	Period Covered for this Voucher		
			From:	To:	
Project Location		Project Description			
TDCJ Project No.	TDCJ Tracking No.				
Pay To: (Name, Address, City, State, Zip)					
SERVICE AUTH/JOB ORDER/CONTRACT AMOUNT					\$
ADDITIONS					\$
TOTAL					\$
DEDUCTIONS					\$
TOTAL NET AMOUNT					\$
TOTAL AMOUNT EARNED TO DATE					\$
TOTAL RETAINED TO DATE					\$
TOTAL EARNED LESS RETAINED AMOUNT					\$
TOTAL PREVIOUSLY APPROVED					\$
AMOUNT DUE THIS ESTIMATE					\$
ARCHITECT/ENGINEER CERTIFICATION			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 _____	Date _____
Name _____	Title _____	Date _____	Name _____	Title _____	Date _____

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

Distribution to:
OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

REQUEST FOR INFORMATION

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

DESCRIPTION OF REQUEST FOR INFORMATION

SUBJECT: _____

SPECIFICATIONS: _____

DRAWING(S): _____

SIGNED: _____

REPLY

SIGNATURE: _____

TITLE _____ DATE: _____

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

TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

Distribution to:

OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

PROJECT: _____
(name & address)

CHANGE PROPOSAL NO: _____

OWNER: Texas Department of Criminal Justice
Facilities Division

DATE: _____

TO: _____
(contractor)

ARCHITECT'S PROJECT NO.: _____

CONTRACT FOR: _____

NOTICE TO PROCEED DATE: _____

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

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

Description: (Written description of the work)

Attachments: (List attached documents that support description)

Owner: Texas Department of Criminal Justice - Facilities Division

By: _____ Signature
Date

Architect/Engineer:

By: _____ Signature
Date

10.A.4

TEXAS DEPARTMENT OF CRIMINAL JUSTICE
FACILITIES DIVISION

PENDING CHANGE REQUEST COST ANALYSIS

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

Work to be performed by: _____ PCR: _____

General Contractor Subcontractor TDCJ-FD JOB NO: _____

CONTRACTOR: _____

If Subcontractor, give company name: _____

Time Extension (if any): _____

Description of Change: _____

ADDITIONS AND/OR [CREDITS]

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

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

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

Line III Enter total Column E (Storage) _____

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

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

SIGNATURE _____ DATE _____
Contractor/Subcontractor

SIGNATURE _____ DATE _____
TDCJ-PA

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

PENDING CHANGE REQUEST COST ANALYSIS
SUMMARY SHEET

To be completed by General Contractor

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

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

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

SIGNATURE: _____ DATE: _____
 Contractor

SIGNATURE: _____ DATE: _____
 TDCJ-PA

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

CHANGE ORDER

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

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

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

Description of Work: (NO MORE THAN 4 LINES) _____

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

For the above changes, the sum of: _____

will be applied to the contract price as follows:

ORIGINAL CONTRACT SUM	\$	
PREVIOUS ADDITIONS:	\$	
PREVIOUS DEDUCTIONS:	\$	
NET BALANCE:	\$	
<input type="checkbox"/> ADDITION OR <input type="checkbox"/> SUBTRACTION	\$	
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.11

RESERVED

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

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

CONTRACTOR'S APPLICATION FOR PAYMENT

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

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

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

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

CONTRACTOR:

By: _____ Date: _____

State of: _____ County of: _____

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

Notary Public:

My Commission expires: _____

CERTIFICATE FOR PAYMENT

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

AMOUNT CERTIFIED

\$0.00

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

By: _____ Date: _____

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

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

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

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

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

Site Conditions: _____

A) Major Work Activities:

Work Started: _____

In Progress: _____

Completed: _____

Materials Received: _____

B) Q C Inspections and Tests:

C) Manpower and Equipment

Contr. / Sub.	CRAFT	SUPV	JRNY	APPR	EQUIPMENT

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

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

E) Summary Remarks:

10.A.15
Quality Control Deficiency Notice

Page 1 of _____

Project Name/ Location: _____ Def. No. _____

To: Contractor/ Subcontractor: _____

ATTENTION: _____ Contract Day No: _____

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

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

By: _____ Date _____
Quality Control Manager

CORRECTIVE ACTION PROPOSAL

Drawings attached: _____

Approved/ Disapproved _____ Date _____
A/ E

Approved/ Disapproved _____ Date _____
TDCJ - PE

Approval/Disapproval _____ Date _____
TDCJ-PA

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

FOLLOW - UP

Deficiency Cleared: _____ By: _____ Date _____
Quality Control Manager

10.A.17

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

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

Proposal

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

Drawings attached: _____

Proposal Date: _____ Proposal By: _____
Quality Control Manager

Acceptance

Approved/ Disapproved: _____
A/ E Date

Approved/Disapproved: _____
TDCJ-PE Date

Approved/ Disapproved: _____
TDCJ - PA Date

Performance

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

Disposition

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

TDCJ Project Administrator _____

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	Emn.	Jrny.	Appr.	Work Area	Remarks

VISITORS			
Time	Company	Visitor Name	Remarks

Remedial Action Request

Page 1 of _____

Project Name _____ RAR. No. _____

Location: _____

ATTENTION: _____ Contract Day No: _____
Quality Control Manager

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

ATTACHMENT NO. 11

Specifications

Furnished with the Invitation for Bids.

ATTACHMENT NO. 12

Drawings

Furnished with the Invitation for Bids.

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

PO Box 4018 Huntsville, TX 77342-4018

VENDOR MAINTENANCE DIRECT DEPOSIT AND SUBSTITUTE W-9 FORM

Agency Use Only

- CPA AP DDS
 New Set-up New Mail Code
 Other:

Box 1 Legal Name (as shown on your tax return):

Box 2 DBA:

Box 3 Tax Information Mailing Address: **Box 4** Payment Address (If different from Tax Address):

City: State: Zip: City: State: Zip:

Phone: Fax: Email:

Box 5 Taxpayer Identification Number: Social Security Number (SSN)
 Employer Identification Number (EIN)
Note: Enter the same number used when filing your tax return

Box 6 Federal Tax Classification: Texas Corporation Limited Partnership Sole Owner
 Out-of-State Corporation General Partnership Individual Recipient
 Foreign Corporation Professional Association Government Entity
 Limited Liability Company Financial Institution TX State Agcy/University
 Other (Please Explain):

Box 7 State Charter Information: State of Jurisdiction: File or Charter Number:

Box 8 Sole Ownership Info: Sole Owner Name and SSN:

Box 9 Partnership Information: Partner 1 Name and SSN/EIN:
Partner 2 Name and SSN/EIN:

Box 10 Profit Status: Profit Non-Profit

Box 11 Backup Withholding: Exempt from Backup Withholding
* Please see IRS Website

Box 12 Certification: Under penalties of perjury, I certify that:
1) I have provided my correct taxpayer identification number and that
2) I am not subject to backup withholding as specified on the instruction page for this form and that
3) I am a US citizen or other US person.
Signature:
Print Preparer's Name:
Phone Number: Date:

Box 13 DIRECT DEPOSIT INFORMATION

Direct Deposit Setup Direct Deposit Change Direct Deposit Cancel I Decline Direct Deposit at this time

Financial Institution Name: Type: Checking Savings

Routing Transit Number: Account Number:

Will these payments be forwarded to a financial institution outside the United States? Yes No

I authorize the Texas Comptroller of Public Accounts to deposit my payments from the State of Texas to my financial institution electronically. I understand that the Texas Comptroller of Public Accounts will reverse any payments made to my account in error.

I further understand that the Texas Comptroller of Public Accounts will comply at all times with the National Automated Clearing House Association's rules. For further information on these rules, please contact your financial institution.

Authorized Signature Required:

Printed Name Required: Date:

**TDCJ ALL INCLUSIVE VENDOR FORM
INSTRUCTIONS**

Box	Required Information
1	Legal Name: Legal business name filed with the IRS. For Sole Ownership or Individual Recipient, excluding LLC, enter name of owner.
2	DBA: Name you are "Doing Business As" if different from legal business name.
3	Tax Information Mailing Address: Address where IRS tax information is sent. (i.e. W9, 1099, etc.)
4	Payment Address: Remit Address for payments if different from address in box 3.
5	<p>Taxpayer Identification: Select the appropriate check box for the taxpayer identification number you are entering. Enter only one number.</p> <p>Social Security: enter your social security number only if you are doing business under your social security number and you report taxes to the IRS using a "DBA" or you are a Sole Proprietor.</p> <p align="center">OR</p> <p>Federal Tax Identification Number: enter the Federal Employee Identification Number (FEIN) assigned to your business by the IRS if this is the number you use to report taxes to the IRS.</p>
6	Federal Tax Classification: Select only one that describes the ownership type of business.
7	State Charter Information: The state where corporation or partnership status is filed and the file or charter number of corporation or partnership in that state.
8	Sole Ownership Info: Name and Social Security Number of Sole Owner (excluding LLC) if using an Employer Identification Number (EIN).
9	Partnership Information: Name and Social Security Number or EIN of all partners involved in the general partnership. Please attach additional sheet if needed.
10	Profit Status: Select only one that describes the profit status of the business.
11	Exemption from Backup Withholding: check this box if the business is exempt from Backup Withholding. For further information on Backup Withholding, see the following IRS Web site: http://www.irs.gov/pub/irs-pdf/fw9.pdf?portlet=3
12	Certification: You must cross out item 2 if you have been notified by the IRS that you are currently subject to Backup Withholding because you have failed to report all interest and dividends on your tax return. THIS BOX MUST BE SIGNED AND DATED. For more information go to IRS website at: http://www.irs.gov/pub/irs-pdf/fw9.pdf?portlet=3
13	Please check the box that is appropriate for this Direct Deposit Request. Enter name of Financial Institution. Check appropriate box for type of account. Enter the Routing Transit number (9 digits) for the Financial Institution listed. Enter bank account number. Please read the next three statements and check the appropriate box. THIS BOX MUST BE SIGNED AND DATED. Please enter the contact information of person completing this form.

Submit Completed form to:
Texas Department of Criminal Justice - Accounts Payable
PO Box 4018
Huntsville, TX 77342-4018
 Email: tdcj.ap-invsvs@tdcj.texas.gov
 Phone Number: 936/437-6350 or 936/437-8476 Fax Number: 936/437-6290

**ATTACHMENT 14
RELEASE OF CLAIMS**

CONTRACT NUMBER: _____

KNOW ALL MEN BY PRESENTS: In consideration of the premise and sum of \$ _____ (\$ _____) of which \$ _____ (\$ _____) has been paid, and a balance due of \$ _____ (\$ _____) is to be paid by the Texas Department of Criminal Justice (TDCJ) under the above noted Contract, the undersigned Contractor does release and discharge TDCJ, its officers, agents and employees, of and from all liabilities, obligations and claims whatsoever in law and equity arising out of or by virtue of said Contract, except specified claims in stated amounts, or in estimated amounts when the amounts are not susceptible of exact statement by the Contractor, as follows:

IN WITNESS WHEREOF, this release has been executed this _____ day of _____, _____.

(Contractor)

BY _____

TITLE _____

CERTIFICATE

I, _____, certify that I am the _____ secretary of the Corporation named as Contractor in the foregoing release; that _____ who signed said release on behalf of the Contractor was then _____ of said Corporation; that said release was duly signed for and on behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

(Corporate Seal) _____

EXHIBIT



HUB Subcontracting Plan (HSP)

In accordance with Texas Gov't Code §2161.252, the contracting agency has determined that subcontracting opportunities are probable under this contract. Therefore, all respondents, including State of Texas certified Historically Underutilized Businesses (HUBs) must complete and submit this State of Texas HUB Subcontracting Plan (HSP) with their response to the bid requisition (solicitation).

NOTE: Responses that do not include a completed HSP shall be rejected pursuant to Texas Gov't Code §2161.252(b).

The HUB Program promotes equal business opportunities for economically disadvantaged persons to contract with the State of Texas in accordance with the goals specified in the 2009 State of Texas Disparity Study. The statewide HUB goals defined in 34 Texas Administrative Code (TAC) §20.13 are:

- 11.2 percent for heavy construction other than building contracts,
- 21.1 percent for all building construction, including general contractors and operative builders' contracts,
- 32.9 percent for all special trade construction contracts,
- 23.7 percent for professional services contracts,
- 26.0 percent for all other services contracts, and
- 21.1 percent for commodities contracts.

- - Agency Special Instructions/Additional Requirements - -

In accordance with 34 TAC §20.14(d)(1)(D)(iii), a respondent (prime contractor) may demonstrate good faith effort to utilize Texas certified HUBs for its subcontracting opportunities if the total value of the respondent's subcontracts with Texas certified HUBs meets or exceeds the statewide HUB goal or the agency specific HUB goal, whichever is higher. When a respondent uses this method to demonstrate good faith effort, the respondent must identify the HUBs with which it will subcontract. If using existing contracts with Texas certified HUBs to satisfy this requirement, only the aggregate percentage of the contracts expected to be subcontracted to HUBs with which the respondent **does not** have a **continuous contract*** in place for **more than five (5) years** shall qualify for meeting the HUB goal. This limitation is designed to encourage vendor rotation as recommended by the 2009 Texas Disparity Study.

The TDCJ HUB goals are defined as:

- 17.5 percent for heavy construction other than building contracts. This goal is higher than the statewide goal and therefore must be the utilized goal for this category,
- 36.9 percent for all building construction, including general contractors and operative builders contracts. This goal is higher than the statewide goal and therefore must be the utilized goal for this category,
- 32.7 percent for all special trade construction contracts,
- 23.6 percent for professional services contracts,
- 24.6 percent for all other services contracts, and
- 21 percent for commodities contracts.

The TDCJ has determined that the HUB Category for this contract falls under the **Building Construction Contracts Category.**

The HUB Goal for this category is therefore identified as **36.9 %**.

For assistance in completing the HSP contact:
Sharon Schultz @ 936-437-7026
sharon.schultz@tdcj.texas.gov

SECTION-1: RESPONDENT AND REQUISITION INFORMATION

a. Respondent (Company) Name: Texas Liqua Tech Svs Inc. State of Texas VID #: 17603936687
 Point of Contact: Charles Small Phone #: 713 225 5325
 E-mail Address: charles@liquatech.com Fax #: 713 225 2755

b. Is your company a State of Texas certified HUB? - Yes - No

c. Requisition #: 696-FD-16-B013 Bid Open Date: 04/28/2016
(mm/dd/yyyy)

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

Requisition #: 696-FD-16-B013

SECTION-2: RESPONDENT'S SUBCONTRACTING INTENTIONS

After dividing the contract work into reasonable lots or portions to the extent consistent with prudent industry practices, and taking into consideration the scope of work to be performed under the proposed contract, including all potential subcontracting opportunities, the respondent must determine what portions of work, **including contracted staffing, goods, services, transportation and delivery will be subcontracted**. Note: In accordance with 34 TAC §20.11, a "Subcontractor" means a person who contracts with a prime contractor to work, to supply commodities, or to contribute toward completing work for a governmental entity.

a. Check the appropriate box (Yes or No) that identifies your subcontracting intentions:

- *Yes*, I will be subcontracting portions of the contract. (If *Yes*, complete Item b of this SECTION and continue to Item c of this SECTION.)
- *No*, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources, including employees, goods, services, transportation and delivery. (If *No*, continue to SECTION 3 and SECTION 4.)

b. List all the portions of work (subcontracting opportunities) you will subcontract. Also, based on the total value of the contract, identify the percentages of the contract you expect to award to Texas certified HUBs, and the percentage of the contract you expect to award to vendors that are not a Texas certified HUB (i.e., Non-HUB).

Item #	Subcontracting Opportunity Description	HUBs		Non-HUBs
		Percentage of the contract expected to be subcontracted to HUBs with which you do <u>not</u> 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 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	Portacan/Trash Hauling	0 %	0 %	3 %
2	Portable Field Office	0 %	0 %	1 %
3	Hoisting Equipment	0 %	0 %	1 %
4	Roofing/Sheet Metal/Wood Materials	0 %	0 %	33 %
5	Sealant Materials	0 %	0 %	1 %
6	Material Hauling	0 %	0 %	1 %
7	Construction Scheduling	0 %	0 %	1 %
8	Fixed Metal Ladders	0 %	0 %	1 %
9	Electrical	0 %	0 %	1 %
10	Mechanical	0 %	0 %	4 %
11	Plumbing	0 %	0 %	1 %
12	Fencing	0 %	0 %	1 %
13	Testing Laboratory Services	0 %	0 %	1 %
14		0 %	0 %	0 %
15		%	%	%
Aggregate percentages of the contract expected to be subcontracted:		0 %	0 %	50 %

(Note: If you have more than fifteen subcontracting opportunities, a continuation sheet is available online at <http://window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/>.)

c. Check the appropriate box (Yes or No) that indicates whether you will be using **only** Texas certified HUBs to perform **all** of the subcontracting opportunities you listed in SECTION 2, Item b.

- *Yes* (If *Yes*, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for **each** of the subcontracting opportunities you listed.)
- *No* (If *No*, continue to Item d, of this SECTION.)

d. Check the appropriate box (Yes or No) that indicates whether the aggregate expected percentage of the contract you will subcontract **with Texas certified HUBs** with which you **do not** have a **continuous contract*** in place with for **more than five (5) years**, **meets or exceeds** the HUB goal the contracting agency identified on page 1 in the "Agency Special Instructions/Additional Requirements."

- *Yes* (If *Yes*, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for **each** of the subcontracting opportunities you listed.)
- *No* (If *No*, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed.)

***Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service, to include transportation and delivery under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into "new" contracts.

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

Requisition #: 696-FD-16-B013

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

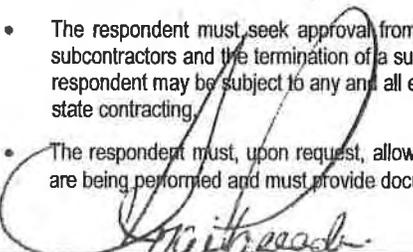
If you responded "No" to SECTION 2, Item a, in the space provided below **explain how** your company will perform the entire contract with its own employees, supplies, materials and/or equipment, to include transportation and delivery.

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/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

Angie Palladini

Printed Name

President

Title

04/28/2016

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. 03/15

Enter your company's name here: <u>Texas Ligua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 1 Description: Portacan/Trash Hauling

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items a, b, c and d, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs at least seven (7) working days to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.
- b. List the **three (3) Texas certified HUBs** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the company's Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Apache Disposal Inc	1742784105500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Peninsula Sanitation Services Inc	1710924538500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Waste Disposal Service	1752897756800	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

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

Requisition #: 696-FD-16-B013

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: 1 Description: Portacan/Trash Hauling

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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Pro Waste	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 200,000.00	3%
	<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.

HSP Good Faith Effort - Method B (Attachment B)

Rev 09/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 2 Description: Portable Field Office

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a.** Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcblsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID (Do not enter Social Security Number.)	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
Wyatt Resources Inc	1760437621400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
White Construction Co	1752659366400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Custom Welding & Metal Fabrication	1263718575700	04/06/2016	<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-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev 09/15

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

Requisition #: 696-FD-16-B013

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: 2 Description: Portable Field Office

- 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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmlsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Mobile Mini	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 8,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev 09/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 3 Description: Hoisting Equipment

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a.** Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.
- b.** List the **three (3) Texas certified HUBs** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the company's Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Sierra Machinery Inc	1742160500100	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Wood Consulting Services LLC	1331179973100	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Alliance Riggers & Constructors	1742812066500	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev 05/17

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

Requisition #: 696-FD-16-B013

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: Hoisting Equipment

- 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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
NES Rentals	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 81,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

Enter your company's name here: Texas Liqua Tech Svcs Inc Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 4 Description: Roofing/Sheet Metal/Wood 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, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a.** Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.
- b.** List the **three (3) Texas certified HUBs** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the company's Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Commercial Exterior Technologies	1271145504300	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
360 Roofing LLC	1455288451300	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Alissa & Company	1200517772500	04/06/2016	<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/mywb-links-1/>.

- d.** List **two (2) trade organizations or development centers** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 5 Description: Sealant 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, continue to SECTION B-4.)

- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcomblsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
General Contractor Services Inc	1760382055000	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Byrdson Services LLC	1562671960100	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Skyline Technologies LLC	1800244284800	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev. 09/15

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

Requisition #: 696-FD-16-B013

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: 5 Description: Sealant Materials

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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Silicone Specialties Inc (SSI)	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 9,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

Enter your company's name here: <u>Texas Liqua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 6 Description: Material Hauling

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmblsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
McRay Crane & Rigging Inc	1760147056400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Marentco Inc	1742530747100	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Consolidated Entities LLC	1043814808100	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 7 Description: Construction Scheduling

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)

- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID (Do not enter Social Security Numbers.)	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
Adaptive & Efficient Design Services LL	1461091684400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Adling Associates PLLC	1261649279400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Absolute Facility Solutions LLC	1475175022600	04/06/2016	<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/tmwb-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-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev. 09/15

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

Requisition #: 696-FD-16-B013

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: 7 Description: Construction Scheduling

- 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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Trey Darnell	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 3,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/16

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "**No**" to **SECTION 2, Items c and d** of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in **SECTION 2, Item b** of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-attach-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: 8 Description: Fixed Metal Ladders

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in **SECTION B-1**, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbldsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
LJA Metals	1460942336400	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Industrial Solutions	1134315136800	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
D&SS Construction Inc	1742523918700	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev 08/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbconf-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: 9 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, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscblsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Fred Acuna Electrical Services LLC	1204138934200	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Volter Electrical Construction Corp	1460982652500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Magnum Electrical Contractors Inc	1742655028500	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev. 09/15

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

Requisition #: 696-FD-16-B013

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: 9 Description: Electrical

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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscblsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Mid-West Electric	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 250,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

Enter your company's name here: <u>Texas Liqua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbconl-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: 10 Description: Mechanical

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items a, b, c and d, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbllsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Fred Acuna Electrical Services LLC	1204138934200	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Volter Electrical Construction Corp	1460982652500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Magnum Electrical Contractors Inc	1742655028500	04/06/2016	<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 <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/16

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 11 Description: Plumbing

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)

- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs at least seven (7) working days to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbldsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Hunt's Plumbing	1273291253500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Hernandez-Monreal Plumbing LP	1300290434300	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
AAA Select Plumbing LLC	1742655028500	04/06/2016	<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/mwlb-links-1>.

- d. List **two (2) trade organizations or development centers** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev. 09/15

Enter your company's name here: <u>Texas Liqua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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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: 11 Description: Plumbing

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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
Gowan Inc	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 25,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev. 09/15

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

Requisition #: 696-FD-16-B013

IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prg/hub/hub-forms/hub-sbcont-plan-ofe-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: 12 Description: Fencing

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)

- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prg/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmlbsearch/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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Number.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Action Fence Co	1742263218600	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Los Altos Fence & Supply Co	1262184344500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Universal Fence Co Inc	1204550225400	04/06/2016	<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/prg/hub/mwb-links-1/>.

d. List **two (2) trade organizations or development centers** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No

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

Rev 09/15

Enter your company's name here: <u>Texas Liqua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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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: 12 Description: Fencing

- 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 Texas Vendor Identification (VID) Number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/passcmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
National Construction Rentals	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No		\$ 6,000.00	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.

HSP Good Faith Effort - Method B (Attachment B)

Rev 09/15

Enter your company's name here: <u>Texas Liqua Tech Svcs Inc</u>	Requisition #: <u>696-FD-16-B013</u>
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IMPORTANT: If you responded "No" to SECTION 2, Items c and d of the completed HSP form, you must submit a completed "HSP Good Faith Effort Method B (Attachment B)" for each of the subcontracting opportunities you listed in SECTION 2, Item b of the completed HSP form. You may photo-copy this page or download the form at <http://window.state.tx.us/procurement/prog/hub/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf>.

SECTION B-1: SUBCONTRACTING OPPORTUNITY

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing the attachment.

Item Number: 13 Description: Testing Laboratory Services

SECTION B 2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- Yes (If Yes, continue to SECTION B-4.)
- No / Not Applicable (If No or Not Applicable, continue to SECTION B-3 and SECTION B-4.)

SECTION B 3: NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you **MUST** comply with items **a, b, c and d**, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person. When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>.

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Also, be mindful that a working day is considered a normal business day of a state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive officer. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs **at least seven (7) working days** to respond to the notice prior to you submitting your bid response to the contracting agency. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) - Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.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 Texas Vendor Identification (VID) Number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID <small>(Do not enter Social Security Numbers.)</small>	Date Notice Sent <small>(mm/dd/yyyy)</small>	Did the HUB Respond?
Armstrong Forensic Laboratory Inc	1751759877100	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Alamo Analytical Laboratories LTD	1201537203500	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Advanced Analysis Inc	1450466629900	04/06/2016	<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/rwb-links-1/>.

- d. List **two (2) trade organizations or development centers** you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent <small>(mm/dd/yyyy)</small>	Was the Notice Accepted?
National Assoc. of Minority Contractors Inc-Houston	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No
Womens Business Enterprise Alliance (WBEA)	04/06/2016	<input type="checkbox"/> - Yes <input checked="" type="checkbox"/> - No



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-16-18-C144 Date of Award: _____ (mm/dd/yyyy) 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 #: 1760393668700

Point of Contact: Judy Green, Administrative Manager Phone #: (713) 225-5325
charles@liquatech.com
judy@liquatech.com

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/lpasscmlsearch/index.jsp>

Subcontractor's Name	*Texas certified HUB? <small>(Yes or No)</small>	Subcontractor's VID 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>
Pro Waste	No		\$ 200,000.00	\$	\$	
Mobile Mini	No		\$ 8,000.00	\$	\$	
NES Rentals	No		\$ 81,000.00	\$	\$	
West End Lumber	No		\$2,003,000.00	\$	\$	
Silicone Specialties Inc (SSI)	No		\$ 9,000.00	\$	\$	
Trey Damell	No		\$ 3,000.00	\$	\$	
AB Ladder Co	No		\$ 5,000.00	\$	\$	
Mid-West Electric	No		\$ 250,000.00	\$	\$	
Gowan Inc	No		\$ 50,000.00	\$	\$	
National Construction Rentals	No		\$ 6,000.00	\$	\$	
QC Laboratories Inc	No		\$ 3,000.00	\$	\$	
			\$	\$	\$	
TOTALS:			\$2,618,000.00	\$	\$	

Signature: _____ Title: _____ Date: _____

PROJECT MANUAL

REPAIR / REPLACE ROOFS -

MULTIPLE BLDGS.

POLUNSKY UNIT

LIVINGSTON, TEXAS

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

MWR # 05402015

October 9, 2014



1710 S. Dairy Ashford, Suite 103
Houston, TX 77077
Phone: 713-266-4829 FAX 713-266-4977

www.amtechbuildingsciences.com



SET No. _____

DOCUMENT 00 0010 - TABLE OF CONTENTS

NUMBER TITLE

INTRODUCTORY INFORMATION

00 0001 PROJECT TITLE PAGE
00 0010 TABLE OF CONTENTS

CONSTRUCTION PRODUCTS AND ACTIVITIES

DIVISION 01 - GENERAL REQUIREMENTS

01 1000 SUMMARY
01 3200 CONSTRUCTION PROGRESS DOCUMENTATION
01 3233 PHOTOGRAPHIC DOCUMENTATION
01 4000 QUALITY REQUIREMENTS
01 4100 TESTING LABORATORY SERVICES (OWNER PROVIDED DOCUMENT)
01 4200 REFERENCES
01 4400 CONTRACTOR'S QUALITY CONTROL (OWNER PROVIDED DOCUMENT)
01 5000 TEMPORARY FACILITIES AND CONTROLS
01 6000 PRODUCT REQUIREMENTS
01 7300 EXECUTION
01 7329 CUTTING AND PATCHING
01 7700 CLOSEOUT PROCEDURES
01 7839 PROJECT RECORD DOCUMENTS
01 7850 APPLICATOR WARRANTY

DIVISION 05 - METALS

05 5000 METAL FABRICATION
05 5110 FIXED METAL LADDERS

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

06 1055 ROOFING CARPENTRY

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 0150.19 ROOF REPLACEMENT PREPARATION
07 5400 THERMOPLASTIC MEMBRANE ROOFING
07 6200 SHEET METAL FLASHING AND TRIM
07 7200 ROOF ACCESSORIES
07 9200 SEALANTS



October 9, 2014

DOCUMENT 00 0010 - TABLE OF CONTENTS

NUMBER TITLE

DIVISION 22 - PLUMBING

22 0500 COMMON WORK RESULTS FOR PLUMBING

DIVISION 23 - HEATING VENTILATING AND AIR CONDITIONING

23 0500 COMMON WORK RESULTS FOR HVAC

DIVISION 26 - ELECTRICAL

26 0500 COMMON WORK RESULTS FOR ELECTRICAL

LIST OF DRAWINGS

<u>DRAWING NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
R-0	COVER SHEET	OCTOBER 9, 2014
R-01	SITE PLAN	OCTOBER 9, 2014
R-1	OVERALL ROOF PLAN	OCTOBER 9, 2014
R-2	ROOF PLAN - BUILDING 1 & 2	OCTOBER 9, 2014
R-3	ROOF PLAN - BUILDING 3	OCTOBER 9, 2014
R-4	ROOF PLAN - BUILDING 4	OCTOBER 9, 2014
R-5	ROOF PLAN - BUILDING 5	OCTOBER 9, 2014
R-6	ROOF PLAN - BUILDING 6	OCTOBER 9, 2014
R-7	ROOF PLAN - BUILDING 7	OCTOBER 9, 2014
R-8	ROOF PLAN - BUILDING 8	OCTOBER 9, 2014
R-9	ROOF PLAN - BUILDINGS 9, 10 & 11	OCTOBER 9, 2014
R-10	ROOF PLAN - BUILDING 12	OCTOBER 9, 2014
R-11	ROOF PLAN - BUILDINGS 13, 14, 14A, 15, 16 AND PICKETS A, B, AND C	OCTOBER 9, 2014
R-12	ROOF DETAILS	OCTOBER 9, 2014
R-13	ROOF DETAILS	OCTOBER 9, 2014
R-14	ROOF DETAILS	OCTOBER 9, 2014

END OF TABLE OF CONTENTS

SECTION 01 1000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Work covered by the Contract Documents.
2. Type of the Contract.
3. Work under other contracts.
4. Use of premises.
5. TDCJ's occupancy requirements.
6. Work restrictions.
7. Specification formats and conventions.

B. Related Requirements:

1. Notice and Information for Bidders: Instructions for bid submittal; Notification of Pre-Bid Conference; Locations for Drawings and Specifications Review; Bidding Procedures; and Award of Contract and Notice to Proceed Information.
2. Bid Forms: Breakdown of Contract Price; Addenda acknowledgment; Required Bid Documents and Due Times and Dates.
3. Section 01 5000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of TDCJ's facilities.

1.3 WORK COVERED BY CONSTRUCTION DOCUMENTS

1. Project Identification: Repair / Replace Roofs – Multiple Bldgs.
Polunsky Unit
MWR# 05402015
2. Project Location: 3872 FM 350 South, Livingston, TX 77351.

B. Owner: **Texas Department of Criminal Justice (TDCJ).**

1. Owner's Representative: TDCJ Project Administrator (PA) to be determined.

C. Architect/Engineer: **Amtech Building Sciences, Inc.**, 1710 S. Dairy Ashford, Suite 103, Houston, Texas 77077.

1. Architect/Engineer's Representative: Robert Alford, RRC.

D. Work consists of:

1. Remove existing roof system, insulation, flashings, and roof accessories. Provide new insulation to meet current Texas Energy Conservation Code requirements and to increase roof slope to enhance drainage; and a new 80 mil PVC membrane roofing, fully adhered, with a 20-year material manufacturer's system warranty. Provide sheet metal flashings and trim, roof accessories, and other components.
2. Quantity: Approximately 610,244 square feet.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single, lump-sum prime contract

1.5 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.6 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by TDCJ's occupancy and right to perform work or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
1. Limits: Confine constructions operations to building areas where work is indicated and immediately surrounding site areas, as agreed upon by TDCJ.
 2. Owner Occupancy: TDCJ intends to occupy building areas where work is indicated. Allow for TDCJ access to entire Project site.
 3. Driveways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to TDCJ, TDCJ's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Use of Existing Buildings: Maintain existing buildings in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect buildings and its occupants during construction period.

1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing buildings during entire construction period. Cooperate with TDCJ and /or PA during construction operations to minimize conflicts and facilitate TDCJ usage. Perform the Work so as not to interfere with TDCJ's day-to-day operations. Maintain existing exits, unless otherwise indicated.
1. 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 from PA and authorities having jurisdiction.
 2. Provide not less than 72 hours' notice to PA of activities that will affect TDCJ's operations.

1.8 WORK RESTRICTIONS

- A. Phase Construction: Phase construction is not permitted. Each building must be complete before working on another building.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by TDCJ or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect/Engineer and PA not less than four days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Warden's written permission.
- C. Tobacco-Free Site: Tobacco products are not permitted anywhere on Property.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.
1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Construction Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Construction Documents.
 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Construction Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Construction Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 1000

SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including:
 - 1. Contractor's Construction Schedule.
 - 2. Daily construction reports.
 - 3. Field condition reports.
 - 4. Special reports.
- B. Related Requirements:
 - 1. Section 01 3233 "Photographic Documentation" for submitting construction photographs.
 - 2. Section 01 4000 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Event: The starting to ending point of an activity.
- D. Major Area: A story of construction, a separate building, or a similar significant construction element.
- E. Milestone: A key or critical point in time for reference or measurement.
- F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. Contractor's Construction Schedule: Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- B. Daily Construction Reports: Submit three copies at weekly intervals.
- C. Field Condition Reports: Submit three copies at time of discovery of differing conditions.
- D. Special Reports: Submit three copies at time of unusual event.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each building or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 5 days, unless specifically allowed by Architect/Engineer.
 - 2. Beneficial Occupancy: Indicate completion in advance of date established for Beneficial Occupancy, and allow time for Architect/Engineer's administrative procedures necessary for certification of Beneficial Occupancy.
- C. Constraints: Include constraints and work restrictions indicated in the Construction Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Use of premises restrictions.
 - e. Seasonal variations.
 - f. Environmental control.
- D. Milestones: Include milestones indicated in the Construction Documents in schedule, including, but not limited to, the Notice to Proceed, Beneficial Occupancy, and Final Completion.
- E. Change Orders: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragments to demonstrate the effect of the proposed change on the overall project schedule.

2.2 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.

5. Material deliveries.
 6. High and low temperatures and general weather conditions.
 7. Accidents.
 8. Meetings and significant decisions.
 9. Unusual events (refer to special reports).
 10. Stoppages, delays, shortages, and losses.
 11. Emergency procedures.
 12. Orders and requests of authorities having jurisdiction.
 13. Change Orders received and implemented.
 14. Services connected and disconnected.
 15. Beneficial Occupancy authorized.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Construction Documents, prepare and submit a detailed report. Submit with a request for interpretation on TDCJ form. Include a detailed description of the differing conditions, together with recommendations for changing the Construction Documents.

2.3 SPECIAL REPORTS

- A. General: Submit special reports directly to PA within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise PA in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule with Application for Payment.
- B. Distribution: Distribute copies of approved schedule to Architect/Engineer, PA, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 3200

SECTION 01 3233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for:
 - 1. Preconstruction photographs.
 - 2. Periodic construction photographs.
- B. Related Requirements:
 - 1. Section 01 7700 "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.

1.3 SUBMITTALS

- A. Key Plan: Submit key plan of Project site and buildings with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same label information as corresponding set of photographs.
- B. Construction Photographs: Submit two prints of each photographic view within seven days of taking photographs.
 - 1. Format: 8-by-10-inch smooth-surface matte prints on single-weight commercial-grade photographic paper, enclosed back to back in clear plastic sleeves that are punched for standard 3-ring binder.
 - 2. Identification: On back of each print, provide an applied label or rubber-stamped impression with the following information:
 - a. Name of Project.
 - b. Name of Architect/Engineer.
 - c. Name of Contractor.
 - d. Date photograph was taken if not date stamped by camera.
 - e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - f. Unique sequential identifier.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

Maintain key plan with each set of construction photographs that identifies each photographic location.

- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
1. Date and Time: Include date and time in filename for each image.
 2. Field Office Images: Maintain one set of images on CD-ROM in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect/Engineer.
- C. Preconstruction Photographs: Before starting construction, take, digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect/Engineer.
1. Take photographs to show existing conditions adjacent to property before starting the Work.
 2. Take photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- D. Periodic Construction Photographs: Take digital photographs weekly, with timing each month adjusted to coincide with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
- E. Additional Photographs: Architect/Engineer may issue requests for additional photographs, in addition to periodic photographs specified.
1. Three days' notice will be given, where feasible.
 2. In emergency situations, take additional photographs within 24 hours of request.
 3. Circumstances that could require additional photographs include, but are not limited to, the following:
 - a. Special events planned at Project site.
 - b. Immediate follow-up when on-site events result in construction damage or losses.
 - c. Completion of a major phase or component of the Work.
 - d. Extra record photographs at time of final acceptance.
 - e. PA's request for special publicity photographs.

END OF SECTION 01 3233

SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Construction Document requirements.
 - 1. Specific quality assurance and control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality assurance and control procedures that facilitate compliance with the Construction Document requirements.
 - 3. Requirements for Contractor to provide quality assurance and control services required by Architect/Engineer, PA, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
 - 1. Section 01 3200 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Section 01 7329 "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.

1.3 DEFINITIONS

- A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect/Engineer.
- C. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- D. Source Quality Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- E. Field Quality Control Testing: Tests and inspections that are performed on site for installation of the Work and for completed Work.
- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

- G. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- H. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect/Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect/Engineer for a decision before proceeding.

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Construction Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For TDCJ's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. Factory Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.7 QUALITY CONTROL

- A. Contractor Responsibilities: When specified in individual sections, restrict execution of specified Work to Applicators and Personnel meeting indicated qualifications.
 - 1. Install all roofing materials using personnel directly employed by Roofing Contractor with NDLC certification from roofing material manufacturer no Sub-Contracting permitted.
 - 2. Assign a qualified, full time, non-working supervisor to be on Project site at all times during installation of Work. This supervisor to have good communication skills and be able to communicate with PA's staff and Applicator's workers.
 - 3. Designate a responsible Project Administrator or Superintendent to inspect all installed Work, particularly tie-ins and temporary flashings, at end of each working day and as otherwise required to ensure water-tightness. Inspection to be verified by signature on a Form signifying installation is in accordance with specified requirements.
- B. Tests and inspections not explicitly assigned to TDCJ are Contractor's responsibility. Unless otherwise indicated, provide quality control services specified and those

- required by authorities having jurisdiction. Perform quality control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality control services.
 - a. Contractor shall not employ same entity engaged by TDCJ, unless agreed to in writing by TDCJ.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality control service.
 4. Testing and inspecting requested by Contractor and not required by the Construction Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory authorized service representative to inspect field assembled components and equipment installation, including service connections.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Construction Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect/Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect/Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality control service through Contractor.
 5. Do not release, revoke, alter, or increase the Construction Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- G. Coordination: Coordinate sequence of activities to accommodate required quality assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect/Engineer.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect/Engineer's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 2. Comply with the Construction Document requirements for Division 01 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality control services.

END OF SECTION 01 4000

SECTION 01 4100 - TESTING LABORATORY SERVICES

(DOCUMENT PROVIDED BY OWNER)

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.

1.2 RELATED REQUIREMENTS:

- A. Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities: Conditions of the Contract, Article 5.10.
- B. Inspections and testing required by Construction Documents: Respective sections of Specifications.
- C. Certification of products: respective sections of Specifications.
- D. Quality Requirements - Section 01 4000.
- E. Contractor's Quality Control - Section 01 4400.

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 Architect/Engineer and approved in writing by A/E.
- E. Under the direction of a Registered Engineer 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 (A2LA) accreditation 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 full time 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 Engineer 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 PA, Architect/Engineer 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, Architect/Engineer 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; 1 copy to Architect/Engineer, Three to the PA or his representatives as directed, 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.

G. Combining tests from various buildings or differing areas into a single report shall be prohibited. Each test report shall be limited to a single building or area.

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 a 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 OWNER'S QUALITY ASSURANCE INSPECTION AND TESTING:

- A. The TDCJ may, from time to time, perform additional Quality Assurance inspections and testing in accordance with the General Conditions.
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 211 - Recommended practice for selecting proportions for normal and heavy weight concrete.
2. ACI 214 - Recommended practice for evaluation of strength test results of concrete.
3. ACI 301-84 - Specifications for Structural Concrete for Buildings.
4. 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 Engineering Foundation.

C. American Society of Testing Materials:

1. ASTM A6 - Specifications for general requirements for rolled steel plates, shapes, sheet piling and bars for structural use.
2. ASTM A325 - Specifications for structural bolts, steel heat treated, minimum tensile strength.
3. ASTM A490 - Specification for heat treated, steel structural bolts, 150 KSI (1035 MPa) tensile strength.
4. ASTM A568 - Specification for steel, carbon, hot rolled sheet a 20 strip commercial quality.
5. ASTM C31 - Making and Curing Concrete Test Specimens in the Field.
6. ASTM C39 - Compressive Strength of Cylindrical Concrete Specimens.
7. ASTM C78 - Flexural Strength of Concrete.
8. ASTM C42 - Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
9. ASTM C91 - Masonry Cement.
10. ASTM C94 - Ready Mixed Concrete.
11. ASTM C109 - Compressive Strength of Hydraulic Cement Mortars.
12. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates.
13. ASTM C143 - Slump of Portland Cement Concrete.
14. ASTM C172 - Sampling Fresh Concrete.
15. ASTM C192 - Test method of making and curing concrete test specimens in the laboratory.
16. ASTM C231 - Test for Air Content of Freshly Mixed Concrete by the Pressure Method.
17. ASTM C260 - Specifications for air-entraining admixtures for concrete.
18. ASTM C494 - Specification for chemical admixtures for concrete.
19. ASTM C780 - Preconstruction and Construction Evaluation of Mortars.
20. ASTM C1019 - Sampling and Testing Grout.
21. ASTM D75 - Sampling Aggregates.
22. ASTM D4318 - Liquid Limit, Plastic Limit and Plasticity Index of Soils.
23. ASTM D698 - Moisture-Density Relations of Soils.
24. ASTM D1188 - Bulk Specific Gravity of Compacted Bituminous Mixtures.
25. ASTM D1556 - Density of Soil in Place by Sand-Cone Method.

26. ASTM D1557 - Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-16 Rammer and 18 in. Drop.
27. ASTM D2167 - Density of Soil in Place by Rubber-Balloon Method.
28. ASTM D2172 - Quantitative Extraction of Bitumen from Bituminous Paving Mixtures.
29. ASTM D2216 - Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil - Aggregate Mixtures.
30. ASTM D2922 - Density of Soil and Soil Aggregate in Place by Nuclear Method.
31. ASTM E164 - Ultrasonic Contact Inspection of Weldments.
32. ASTM E29 - Practice for use in the evaluation of testing and inspection agencies as used in construction.
33. ASTM E447 - Compressive Strength of Masonry Prisms.
34. ASTM E543 - Practice for determining the qualification of non destructive testing agencies.
35. ASTM - E605 - Thickness and density of sprayed fire-resistive material applied to structural members.
36. ASTM E736 - Cohesion/Adhesive of sprayed fire - resisting material applied to structural members.

D. American Welding Society:

1. AWS D1.1 - Structural Welding Code, Steel, including latest revisions.
2. AWS D1.3 - Structural welds and code sheet steel.
3. AWS QC-1 Standard for AWS certifications of welding inspectors.

2 - NOT APPLICABLE

3 - EXECUTION

3.1 SOILS TESTING: (NOT USED)

3.2 FLEXIBLE BASE: (NOT USED)

3.3 TESTING SOIL STABILIZATION: (NOT USED)

3.4 INSPECTING STRUCTURAL EXCAVATION AND FILLING: (NOT USED)

3.5 INSPECTING DRILLED PIERS: (NOT USED)

3.6 ASPHALTIC CONCRETE TESTS: (NOT USED)

3.7 CONCRETE MIX DESIGN: (NOT USED)

3.8 CONCRETE MIX DESIGN: (NOT USED)

- 3.9 INSPECTION AND CONTROL OF CONCRETE: (NOT USED)
- 3.10 TESTING OF CONCRETE: (NOT USED)
- 3.11 TESTING DEFICIENT CONCRETE IN PLACE: (NOT USED)
- 3.12 TESTING REINFORCED MASONRY CONSTRUCTION: (NOT USED)
- 3.13 TESTING NON-SHRINK GROUT:
- A. Make one strength test for each 10 base plates grouted and for each 10 bags of grout used in joints between members.
 - B. Each test shall consist of 6 cubes, 3 tested at 7 days, and 3 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.
- 3.14 INSPECTING AND TESTING TILT-UP PRECAST CONCRETE: (NOT USED)
- 3.15 CONCRETE SLAB SURFACES: (NOT USED)
- 3.16 INSPECTING PRECAST CONCRETE: (NOT USED)
- 3.17 REINFORCING STEEL INSPECTION: (NOT USED)
- 3.18 INSPECTING EXPANSION BOLT INSTALLATION: (NOT USED)
- 3.19 INSPECTING OPEN WEB STEEL JOISTS AND JOIST GIRDERS:
- A. Inspect joists at jobsite for conformance with specified fabrication requirements. Check welded connections between web and chord, splices, and straightness of members.
 - B. Inspect field installation of joists. Inspect connections to supporting members, chord extensions, number of rows of bridging, and bridging connections for conformance with Construction Documents and referenced standards.
 - C. Verify welder qualification certificates for both shop and field welding operators.
- 3.20 INSPECTING STEEL FLOOR DECK: (NOT USED)
- 3.21 INSPECTING STEEL ROOF DECK:

A. Field inspect steel roof deck installation as follows:

1. Verify types, gauges, and finishes for conformance with Construction Documents and Shop Drawings.
2. Inspect for proper erection of steel roof deck, including fastenings at supports and side laps, reinforcing of holes, and miscellaneous deck supports
3. Visually inspect of at least 25 percent of welds.

B. Verify certification of welders.

3.22 TESTING SPRAYED FIREPROOFING: (NOT USED)

3.23 INSPECTING PRE-ENGINEERED METAL BUILDINGS: (NOT USED)

3.24 INSPECTING STRUCTURAL STEEL: (NOT USED)

3.25 STRUCTURAL STEEL (NOT USED)

SECTION 01 4200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Schedule of references.
 - 2. Definitions of terms commonly used in Construction Documents.
 - 3. Applicability of Industry Standards and abbreviations and acronyms for Standards and Regulations.
 - 4. Abbreviations and acronyms for Industry Organizations, Code Agencies, Federal and State Governmental Agencies.
- B. Related Requirements:
 - 1. Section 01 4000 "Quality Requirements" for procedures for applying standards.

1.3 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect/Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect/Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect/Engineer. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Construction Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Construction Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Construction Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Construction Documents to the extent referenced. Such standards are made a part of the Construction Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Construction Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Construction Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.5 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Construction Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
 - 1. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
 - 2. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
 - 3. AI - Asphalt Institute; www.asphaltinstitute.org.
 - 4. AIA - American Institute of Architects (The); www.aia.org.
 - 5. AISC - American Institute of Steel Construction; www.aisc.org.
 - 6. AISI - American Iron and Steel Institute; www.steel.org.
 - 7. ANSI - American National Standards Institute; www.ansi.org.
 - 8. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
 - 9. ASCE - American Society of Civil Engineers; www.asce.org.
 - 10. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
 - 11. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
 - 12. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
 - 13. ASTM - ASTM International; (American Society for Testing and Materials International); www.astm.org.
 - 14. AWI - Architectural Woodwork Institute; www.awinet.org.
 - 15. AWPA - American Wood Protection Association; (Formerly: American Wood-Preservers' Association); www.awpa.com.
 - 16. AWS - American Welding Society; www.aws.org.
 - 17. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
 - 18. BIA - Brick Industry Association (The); www.gobrick.com.
 - 19. CDA - Copper Development Association; www.copper.org.
 - 20. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
 - 21. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.

22. CRRC - Cool Roof Rating Council; www.coolroofs.org.
23. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
24. CSI - Construction Specifications Institute (The); www.csinet.org.
25. EIMA - EIFS Industry Members Association; www.eima.com.
26. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
27. FM Approvals - FM Approvals LLC; www.fmglobal.com.
28. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
29. FSA - Fluid Sealing Association; www.fluidsealing.com.
30. GA - Gypsum Association; www.gypsum.org.
31. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
32. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
33. ICC - International Code Council; www.iccsafe.org.
34. ISO - International Organization for Standardization; www.iso.org.
35. LPI - Lightning Protection Institute; www.lightning.org.
36. MBMA - Metal Building Manufacturers Association; www.mbma.com.
37. MCA - Metal Construction Association; www.metalconstruction.org.
38. MPI - Master Painters Institute; www.paintinfo.com.
39. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
40. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
41. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
42. NCMA - National Concrete Masonry Association; www.ncma.org.
43. NECA - National Electrical Contractors Association; www.necanet.org.
44. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
45. NEMA - National Electrical Manufacturers Association; www.nema.org.
46. NFPA - NFPA; (National Fire Protection Association); www.nfpa.org.
47. NFPA - NFPA International; (See NFPA).
48. NHLA - National Hardwood Lumber Association; www.nhla.com.
49. NLGA - National Lumber Grades Authority; www.nlga.org.
50. NRCA - National Roofing Contractors Association; www.nrca.net.
51. NSPE - National Society of Professional Engineers; www.nspe.org.
52. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
53. SDI - Steel Deck Institute; www.sdi.org.
54. SDI - Steel Door Institute; www.steeldoor.org.
55. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
56. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
57. SPIB - Southern Pine Inspection Bureau; www.spib.org.
58. SPRI - Single Ply Roofing Industry; www.spri.org.
59. SRCC - Solar Rating and Certification Corporation; www.solar-rating.org.
60. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
61. UL - Underwriters Laboratories Inc.; www.ul.com.
62. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
63. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
64. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
65. WPA - Western Wood Products Association; www.wwpa.org.

- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
1. ICC - International Code Council; www.iccsafe.org.
 2. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.
- D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up-to-date as of the date of the Contract Documents
1. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
 2. DOE - Department of Energy; www.energy.gov.
 3. EPA - Environmental Protection Agency; www.epa.gov.
 4. FG - Federal Government Publications; www.gpo.gov.
 5. GSA - General Services Administration; www.gsa.gov.
 6. OSHA - Occupational Safety & Health Administration; www.osha.gov.
 7. USPS - United States Postal Service; www.usps.com.
- E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
 2. FED-STD - Federal Standard; (See FS).
 3. FS - Federal Specification; Available from Department of Defense Single Stock Point; <http://dodssp.daps.dla.mil>.
 - a. Available from Defense Standardization Program; www.dsp.dla.mil.
 - b. Available from General Services Administration; www.gsa.gov.
 - c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.
- F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. DSHS - Texas Department of State Health Services; www.dshs.sata.tx.us.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 4200

SECTION 01 4400 - CONTRACTOR'S QUALITY CONTROL
(DOCUMENT PROVIDED BY OWNER)

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 QUALITY CONTROL PLAN/PROGRAM

- A. General: The Contractor shall furnish for review by the PA at The Preconstruction 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 Manager shall implement the three phase control system for all aspects of the work specified.
 2. The name qualifications (in resume format), duties, responsibilities, and authorities of the person assigned the QC Manager.
 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. A Copy of this letter 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.
 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, A/E and 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. The PA 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 the PA.

1.3 COORDINATION MEETING:

- A. After the Preconstruction Conference, before start of construction, and prior to acceptance by the PA of the Quality Control Plan, 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, the PA's Quality Assurance Inspector, TDCJ Project Administrator and site staff, the A/E Site Representative, the Contractor's Quality Control Material Testing Lab, and the PA's Quality Assurance Material Testing Lab. 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 PA's Quality Assurance. Minutes of the meeting shall be prepared by the PA and signed by both the Contractor and the PA. 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.

1.4 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. 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 not be removed without the PA's written consent.

B. QC Organizational Staffing:

1. The Contractor shall provide and maintain a QC Manager who 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 PA acceptance before replacing the QC Manager. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement. The PA reserves the right to have replaced, the Quality Control Manager who is in the opinion of the PA not accomplishing his assigned duties.

C. QC Staff Qualifications: Following are the minimum requirements for the QC Manager. These minimum requirements will not necessarily assure an adequate staff to meet the QC requirements at all times during construction. When necessary for a proper QC organization, the Contractor shall add additional staff at no cost to the 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 the PA.

1. QC Manager: 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.

1.5 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. The Quality Controls shall include three-point inspection plan as described in 5.3.5.3 of the Special Conditions. 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, and appropriate representatives of the 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. Contractors 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.

The TDCJ Project Administrator 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.

2. 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, appropriate Owner's Representative(s) will meet with the Contractor's Superintendent, Quality Control Manager and applicable Subcontractor's Superintendent and their Quality Control Representatives, and Contractor's 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.

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.

The TDCJ Project Administrator shall be notified a minimum of 72 hours prior to the beginning of any initial inspection. The Contractor's 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.

- 3. 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.
- 4. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the PA 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.
- 5. 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 PA and A/E at least 72 hours advance notice. The Project Administrator 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 Project Administrator and the A/E will conduct the Final Acceptance inspection.
- 6. 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 A/E and the Inspector Team, by the A/E in accordance with the General Conditions.

7. 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 by the A/E that the work is ready for Final Inspection and Acceptance, the PA will within ten calendar days make Final Inspection.

1.6 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 will utilize the services of the 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 A/E and TDCJ 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. 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 Project Administrator attached to the Quality Control Summary Report, and an updated copy of the Log shall be forwarded to the TDCJ Project Administrator 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 TDCJ Project Administrator. 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 non-conformance 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 TDCJ on site staff 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 TDCJ Project Administrator 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 A/E review of the Contractor's Proposal, TDCJ reinspection and/or verification of approved corrective rework and a space for the TDCJ Project Administrators disposition of the nonconformance matter.
 - E. Corrective Action: Correction of Deficient or Nonconforming Work will be monitored by the TDCJ. 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 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 TDCJ.

1.7 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 a TDCJ 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 Contract requirements shall be identified, issued 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 and the 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 PA.

1.8 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; 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.

1.9 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. Inspections shall observe:
 - a. 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-stormwater 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.
- C. 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.

1.10 SAMPLE FORMS:

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

<u>Form Number</u>	<u>Form Name</u>
15.04A1	QC Summary Report
15.06A1	QC Deficiency Notice
15.07A1	QC Deficiency Log
15.08A2	QA Remedial Action Request
15.09A1	QA Remedial Action Request Log
15.10A1	QA Notice of Non-Compliance
15.11A1	QC Corrective Action for Items of Non-Conformance
15.12A1	QA Notice of Non-Conformance Log
15.13A1	QC Preparatory Inspection Checklist (Page 1)
15.13A2	QC Preparatory Inspection Checklist (Page 2)
15.13A3	QC Preparatory Inspection Checklist (Page 3)
15.13A4	QC Preparatory Inspection Checklist (Page 4)
15.14A1	QC Initial Inspection Checklist (Page 1)
15.14A2	QC Initial Inspection Checklist (Page 2)
15.15A1	QC Formal Notification of Preparatory/Initial Inspection
15.16A1	QC Formal Notification of Testing

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 01 1000 "Summary" for limitations on utility interruptions and other work restrictions.
 - 2. Section 01 7300 "Execution" for progress cleaning requirements.

1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect/Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service: Contractor is to provide portable generator for electrical power.

1.4 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 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 PA's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD

line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top rails. Fence posts are to extend into ground. Plates are not acceptable.

- B. Portable Chain-Link Fencing: Minimum 2-inch, 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Fence posts are to extend into ground. Plates are not acceptable.
- C. Lumber and Plywood: Comply with requirements in Section 06 1055 "Roofing Carpentry."

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 25 individuals. Provide electrical power service and 120-V ac duplex receptacles, with not less than 1 receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack board.
 - 3. Cooled drinking water and private toilet.
 - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 - 5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
 - 6. Lockable file cabinet for TDCJ use.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. 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 portable service.
 - 1. Contractor to provide portable generators for electrical power.

- B. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Beneficial Occupancy, restore these facilities to condition existing before initial use.
 - 1. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Electric Power Service: Use of Owner's existing electric power service not allowed.
- E. Telephone Service: Provide temporary or cellular telephone service accessible for use by all construction personnel. Install one telephone line(s) for each field office. Only one cell phone will be allowed within the Unit. Warden has to approve a cell phone if carried into the Unit.
 - 1. At each telephone, provide a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect/Engineer's office.
 - e. A/Es' offices.
 - f. PA's office.
 - g. Principal subcontractors' field and home offices.

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.
 - 2. Maintain support facilities until near Beneficial Occupancy. Remove before Beneficial Occupancy. Personnel remaining after Beneficial Occupancy will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Parking: Arrange with PA 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.
- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Section 01 7300 "Execution" for progress cleaning requirements.
- D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- E. Barricades: Provide structurally adequate barricades to prevent inmates from unintentionally accessing construction areas.

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 1000 "Summary."

- B. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
 - C. Equipment Enclosure Fence: Before construction operations begin, furnish and install enclosure fence around operating equipment in a manner that will prevent people and animals from easily entering area except by entrance gates.
 - 1. Extent of Fence: As required to enclose operating equipment and staging areas. The extent of fence shall be as indicated on drawings.
 - D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
 - E. 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.
- 3.5 OPERATION, TERMINATION, AND REMOVAL
- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
 - B. Maintenance: Maintain facilities in good operating condition until removal.
 - C. Termination and Removal: After Beneficial Occupancy and when authorized by the TDCJ PA remove each temporary facility when need for its service has ended and when it has been replaced by authorized use of a permanent facility. 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. Owner reserves right to take possession of Project identification signs.
 - 2. At Beneficial Occupancy, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 7700 "Closeout Procedures."

END OF SECTION 01 5000

SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Requirements:
 1. Owner Document "Section L" for Product options and substitution procedures during Bidding.
 2. Section 01 4200 "References" for applicable industry standards for products specified.
 3. Section 01 7700 "Closeout Procedures" for submitting warranties for Contract closeout.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Construction Documents.
 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product or A/E approved equal.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Construction Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Product List: Submit a list in tabular form, showing Contractor's selections from specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.

1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Construction Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 3. Completed List: Within 10 days after date of Notice to Proceed, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 4. Architect/Engineer's Action: Architect/Engineer will respond in writing to Contractor within 5 days of receipt of completed product list. Architect/Engineer's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect/Engineer's response, or lack of response, does not constitute a waiver of requirement to comply with the Construction Documents.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: TDCJ form.
 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by TDCJ and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of Architect/Engineers and Owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

- j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Construction Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 - m. No substitutions after bid.
3. Architect/Engineer's Action: If necessary, Architect/Engineer will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect/Engineer will notify Contractor of acceptance or rejection of proposed substitution within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Signed TDCJ Form.
- C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- 1. Architect/Engineer's Action: If necessary, Architect/Engineer will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect/Engineer will notify Contractor of approval or rejection of proposed comparable product request within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: Signed TDCJ Form
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in TDCJ's Section "L". Show compliance with requirements.
- 1.5 QUALITY ASSURANCE
- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect/Engineer will determine which products shall be used.
- 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Construction Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. For exterior storage of fabricated Products, place on sloped supports, above ground.
9. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.
10. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Construction Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Construction Documents.
1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to TDCJ.
 2. Special Warranty: Written warranty required by or incorporated into the Construction Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for TDCJ.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 3. Refer to Divisions 04 through 26 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 7700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Construction Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Construction Documents.
 4. Where products are accompanied by the term "as selected," Architect/Engineer will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect/Engineer's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 4. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 5. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
 6. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect/Engineer will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect/Engineer will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 6000

SECTION 01 7300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes general procedural requirements governing execution of the Work including, but not limited to:
 - 1. General installation of products.
 - 2. Progress cleaning.
 - 3. Protection of installed construction.
 - 4. Correction of the Work.
- B. Related Requirements:
 - 1. Section 01 7329 "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
 - 2. 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 Installer or Applicator present where indicated, 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 and roofs for suitable conditions where products and systems are to be installed.
4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to PA that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Construction Documents and Field Conditions: Immediately on discovery of the need for clarification of the Construction Documents, submit a Request for Information (Attachment 10.A2) to Architect/Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Construction Documents.

3.3 INSTALLATION

- A. General: 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 manufacturer's 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. 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.
- E. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect/Engineer.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Beneficial Occupancy.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Beneficial Occupancy.

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
 - J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- 3.5 PROTECTION OF INSTALLED CONSTRUCTION
- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Beneficial Occupancy.
 - B. Comply with manufacturer's written instructions for temperature and relative humidity.
- 3.6 CORRECTION OF THE WORK
- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
 - B. Restore permanent facilities used during construction to their specified condition.
 - C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
 - D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
 - E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 7300

SECTION 01 7329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes procedural requirements for cutting and patching.

1.3 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.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 5 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 building's appearance and other significant visual elements.
 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 original structure.
 7. Architect/engineer's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive 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. Operational 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.
 1. Fire-suppression systems.
 2. Mechanical systems piping and ducts.
 3. Control systems.

4. Communication systems.
 5. 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. Exterior curtain-wall construction.
 2. Equipment supports.
 3. Piping, ductwork, vessels, and equipment.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect/engineer's opinion, 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 materials 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 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 minimize 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 recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and 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 the exposed or finished side into concealed surfaces.
 3. Masonry: Cut using a cutting machine, such as an abrasive saw or a 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. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure 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 01 7329

SECTION 01 7700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to:
1. Inspection procedures.
 2. Warranties.
 3. Final cleaning.
- B. Related Requirements:
1. Section 01 3233 "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
 2. Section 01 7300 "Execution" for progress cleaning of Project site.
 3. Section 01 7839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 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. Obtain and submit releases permitting TDCJ unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 4. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 5. Deliver tools, spare parts, extra materials, and similar items to location designated by PA. Label with manufacturer's name and model number where applicable.
 6. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 7. Complete final cleaning requirements, including touchup painting.
 8. 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, Architect/Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect/Engineer will prepare the Certificate of Beneficial Occupancy after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect/Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when 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.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to "General & Special Conditions of the Contract."
 2. Submit certified copy of Architect/Engineer's Beneficial Occupancy inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect/Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect/Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect/Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies 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.
1. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect/Engineer.
 - d. Name of Contractor.
 - e. Page number.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect/Engineer for designated portions of the Work where commencement of warranties other than date of Beneficial Occupancy is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Include Warranties in "PROJECT CLOSEOUT DOCUMENTS" binder.

4. Identify each binder on the front and spine with the typed or printed title "PROJECT CLOSEOUT DOCUMENTS," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

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.

2.2 CLOSEOUT DOCUMENTS

- A. Prepare all data in the form of an informational manual.
- B. Submittal Time: Submit Closeout Documents for all portions of the Work with Final Completion documentation.
- C. Organize Closeout Documents into an orderly sequence based on the table of contents of the Project Manual.
1. Binders: Bind documents in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Dividers: Provide heavy paper dividers with plastic-covered tabs for each separate Part. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Covers: Identify each binder with typed or printed titles, "PROJECT CLOSEOUT DOCUMENTS", list title of Project; identify subject matter of contents.
 4. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified.
 5. Arrangement: Internally subdivide binder contents into logically organized parts as described below.
 - a. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - b. Part 2: Items Required by General and Special Conditions including:
 - 1) Certificate of Beneficial Occupancy.
 - 2) Contractor's Affidavit of Payment of Debts and Claims Contractor's Affidavit of Release of Liens.
 - 3) Release of Lien from all Subcontractors.
 - 4) Release of Lien from all Suppliers.
 - 5) Certificate of Liability Insurance (ACORD 25-S 1/95).
 - 6) Consent of Surety.
 - c. Part 3: Project documents and certificates, including the following:
 - 1) Declaration, Certificates and other submittals listed above.
 - 2) Original and photocopies of Contractor's and Manufacturers' warranties.
 - 3) Shop drawings and product data.
 - d. Part 4 (if required): Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify

names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:

- 1) Significant design criteria.
 - 2) List of equipment.
 - 3) Parts list for each component.
 - 4) Operating instructions.
 - 5) Maintenance instructions for equipment and systems.
 - 6) Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
6. Text: Manufacturer's printed data or typewritten data on 20-pound white paper.
 7. Drawings: Provide with reinforced punched binder tab. Bind in with text; folded to size of text.
- D. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of manual assembly. Architect/Engineer will review draft and return one copy with comments.

2.3 OPERATION AND MAINTENANCE DATA

- A. Prepare data in the form of an instructional manual. Include in "PROJECT CLOSEOUT DOCUMENTS" binder if possible.
- B. Submit two copies of completed volumes in final form 10 days prior to final inspection. This copy will be returned after final inspection, with PA comments. Revise content of documents as required prior to final submittal.
- C. Submit three final volumes revised, within ten days after final inspection.

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 debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - f. Remove labels that are not permanent.

SECTION 01 7839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 01 7700 "Closeout Procedures" for general closeout procedures.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up Record Prints.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

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.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is 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 markup before enclosing concealed installations.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Revisions to electrical circuitry.
 - e. Actual equipment locations.
 - f. Locations of concealed internal utilities.

- g. Changes made by Change Order.
 - h. Changes made following Architect/Engineer'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 that is shown only schematically.
3. Mark the Construction Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show 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 same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Change Order numbers and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect/Engineer.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: 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 proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

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 Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Construction Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect/Engineer's reference during normal working hours.

END OF SECTION 01 7839

SECTION 01 7850 - APPLICATOR WARRANTY

(REPAIR/ REPLACE ROOFS – MULTIPLE BLDGS. – POLUNSKY UNIT MWR 05402015)

WHEREAS

[PRINT OR TYPE FULL NAME OF PROPRIETORSHIP, PARTNERSHIP, CORPORATION, OR JOINT VENTURE]

OF (ADDRESS):

HEREIN CALLED THE "CONTRACTOR", HAS PERFORMED ROOFING AND ASSOCIATED WORK ON THE FOLLOWING PROJECT.

OWNER: TEXAS DEPARTMENT OF CRIMINAL JUSTICE

ADDRESS: TWO FINANCIAL PLAZA, SUITE 525, HUNTSVILLE, TX 77340

BUILDING NAME AND AREAS: REPLACE ROOFS – MULTIPLE BLDGS. – POLUNSKY UNIT MWR 05402015

BUILDING ADDRESS: 3872 FM 350 SOUTH, LIVINGSTON, TX 77351

AREA (S) OF WORK: _____ DATE OF ACCEPTANCE: _____

WARRANTY PERIOD: TWO (2) YEARS DATE OF EXPIRATION: _____

AND WHEREAS THE CONTRACTOR HAS CONTRACTED WITH TDCJ TO WARRANT SAID WORK AGAINST LEAKS AND FAULTY OR DEFECTIVE MATERIALS AND WORKMANSHIP FOR DESIGNATED WARRANTY PERIOD.

NOW THEREFORE THE CONTRACTOR HEREBY WARRANTS, SUBJECT TO TERMS AND CONDITIONS HEREIN SET FORTH, THAT DURING WARRANTY PERIOD HE WILL AT HIS OWN COST AND EXPENSE, MAKE OR CAUSE TO BE MADE SUCH REPAIRS TO OR REPLACEMENTS OF SAID WORK AS ARE NECESSARY TO CORRECT FAULTY AND DEFECTIVE WORK, AND AS ARE NECESSARY TO MAINTAIN SAID WORK IN WATERTIGHT CONDITION.

THIS WARRANTY IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. SPECIFICALLY EXCLUDED FROM THIS WARRANTY ARE DAMAGES TO WORK AND OTHER PARTS OF THE BUILDING, AND TO BUILDING CONTENTS, CAUSED BY: (A) LIGHTNING, WINDSTORM IN EXCESS OF 90 MILES PER HOUR WINDSPEED, HAILSTORM, AND OTHER UNUSUAL PHENOMENA OF THE ELEMENTS; (B) FIRE; (C) FAILURE OF ROOFING SYSTEM SUBSTRATE INCLUDING CRACKING, SETTLEMENT, EXCESSIVE DEFLECTION, DETERIORATION, AND DECOMPOSITION; (D) FAULTY CONSTRUCTION OF VENTS, EQUIPMENT SUPPORTS, AND OTHER PENETRATIONS OF THE WORK; (E) REPEATED VAPOR CONDENSATION ON BOTTOM OF ROOFING; AND (F) ACTIVITY ON ROOFING BY OTHER PERSONS INCLUDING CONSTRUCTION CONTRACTORS AND MAINTENANCE PERSONNEL, WHETHER AUTHORIZED OR UNAUTHORIZED BY TDCJ. WHEN WORK HAS BEEN DAMAGED BY ANY OF THE FOREGOING CAUSES, WARRANTY SHALL BE NULL AND VOID UNTIL SUCH DAMAGE HAS BEEN REPAIRED BY THE CONTRACTOR, AND UNTIL COST AND EXPENSE THEREOF HAS BEEN PAID BY THE TDCJ OR BY ANOTHER RESPONSIBLE PARTY SO DESIGNATED.
2. THE CONTRACTOR IS RESPONSIBLE FOR WORK COVERED BY THIS WARRANTY, BUT IS NOT LIABLE FOR CONSEQUENTIAL DAMAGES TO BUILDING OR BUILDING CONTENTS RESULTING FROM LEAKS OR FAULTS OR DEFECTS OF WORK.

3. DURING WARRANTY PERIOD, IF THE TDCJ ALLOWS ALTERATIONS OF WORK BY ANYONE OTHER THAN THE CONTRACTOR, INCLUDING CUTTING, PATCHING AND MAINTENANCE IN CONNECTION WITH PENETRATIONS, ATTACHMENT OF OTHER WORK, AND POSITIONING OF ANYTHING ON ROOF, THIS WARRANTY SHALL BECOME NULL AND VOID UPON DATE OF SAID ALTERATIONS, BUT ONLY TO EXTENT SAID ALTERATIONS AFFECT WORK COVERED BY THIS WARRANTY. IF THE TDCJ ENGAGES THE CONTRACTOR TO PERFORM SAID ALTERATIONS, WARRANTY SHALL NOT BECOME NULL AND VOID, UNLESS THE CONTRACTOR, PRIOR TO PROCEEDING WITH SAID WORK, SHALL HAVE NOTIFIED THE TDCJ IN WRITING THAT SAID ALTERATIONS WOULD LIKELY DAMAGE OR DETERIORATE THE WORK, THEREBY REASONABLY JUSTIFYING A LIMITATION OR TERMINATION OF THIS WARRANTY.
4. DURING WARRANTY PERIOD, IF ORIGINAL USE OF ROOF IS CHANGED AND IT BECOMES USED FOR, BUT WAS NOT ORIGINALLY SPECIFIED FOR, A PROMENADE, WORK DECK, SPRAY COOLED SURFACE, FLOODED BASIN, OR OTHER USE OR SERVICE MORE SEVERE THAN ORIGINALLY SPECIFIED, THIS WARRANTY SHALL BECOME NULL AND VOID UPON DATE OF SAID CHANGE, BUT ONLY TO EXTENT SAID CHANGES AFFECT WORK COVERED BY THIS WARRANTY.
5. THE TDCJ SHALL PROMPTLY NOTIFY THE CONTRACTOR OF OBSERVED, KNOWN, OR SUSPECTED LEAKS, DEFECT OR DETERIORATION, AND SHALL AFFORD REASONABLE OPPORTUNITY FOR THE CONTRACTOR TO INSPECT THE WORK, AND TO EXAMINE EVIDENCE OF SUCH LEAKS, DEFECTS OR DETERIORATION.
6. THIS WARRANTY IS RECOGNIZED TO BE THE ONLY WARRANTY OF THE CONTRACTOR ON SAID WORK, AND SHALL NOT OPERATE TO RESTRICT OR CUT OFF THE TDCJ FROM OTHER REMEDIES AND RESOURCES LAWFULLY AVAILABLE TO HIM IN CASES OF ROOFING FAILURE. SPECIFICALLY, THIS WARRANTY SHALL NOT OPERATE TO RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMANCE OF ORIGINAL WORK.

IN WITNESS THEREOF, THIS INSTRUMENT HAS BEEN DULY EXECUTED THIS ____ DAY OF _____, ____.

SIGNATURES:

CONTRACTOR:

 [PRINT OR TYPE FULL NAME OF PROPRIETORSHIP, PARTNERSHIP, CORPORATION, OR JOINT VENTURE*]

ORGANIZATION:
 [CHECK ONE]

PROPRIETORSHIP PARTNERSHIP CORPORATION JOINT VENTURE
 * IF JOINT VENTURE, ADD ADDITIONAL BID FORM SIGNATURE SHEETS FOR EACH JOINT VENTURE MEMBER.

BY:

 [SIGNATURE]

 [DATE]

NAME:

 [PRINT OR TYPE NAME]

 [TITLE]

ADDRESS:

 [MAILING]

 [STREET, IF DIFFERENT THAN MAILING]

TELEPHONE:

 [PRINT OR TYPE TELEPHONE NUMBER]

 [PRINT OR TYPE FAX NUMBER]

STATE OF INCORPORATION: (IF APPLICABLE) _____

END OF APPLICATOR WARRANTY

SECTION 05 5000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Shop fabricated ferrous metal items.
2. Galvanizing.
3. Prime painting.

- B. Related Sections:

1. Section 07 0150.19 "Roof Replacement Preparation" for deck repair and replacement

1.3 REFERENCES

- A. American Society for Testing and Materials:

1. ASTM A 36 - Structural Steel.
2. ASTM A 53 - Hot-Dipped, Zinc-Coated Welded and Seamless Steel Pipe.
3. ASTM A 307 - Low-Carbon Steel Externally and Internally Threaded Fasteners.
4. ASTM A 386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.
5. ASTM A 500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
6. ASTM A 501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.

- B. American Welding Society, Inc.:

1. AWS D 1.1 - Structural Welding Code.
2. AWS D 2.0 - Standard Welding Symbols.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories proposed for repair work.
- B. Indicate welded connections using standard AWS A 2.0 welding symbols. Indicate net weld lengths.
- C. Prepare Shop Drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State where the work will be installed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel Sections: ASTM A 36.
- B. Steel Tubing: ASTM A 500, Grade B or ASTM A 501.

- B. Allow for erection loads and provide temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Perform field welding in accordance with AWS D 1.1.
- D. Obtain Design Professional Structural Engineer approval, provided to TDCJ, Architect / Engineer and PA, prior to site cutting.
- E. After installation and welding, prime welds, abrasions, burned areas, and surfaces not shop primed or galvanized with original primer.

END OF SECTION 05 5000

SECTION 05 5110 - FIXED METAL LADDERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
1. Fixed aluminum wall ladders.
- B. Related Sections:
1. Section 07 5400 "Thermoplastic Membrane Roofing" for roofing accessories.

1.3 REFERENCES

- A. American Society for Testing and Materials:
1. ANSI A14.3 - American National Standard for Ladders -- Fixed -- Safety Requirements; 1992.
 2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2001.
 3. ASTM B 210 - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes; 2002.
 4. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2000.
 5. ASTM B 308 - Standard Specification for Aluminum - Alloy T6061-T6 Standard Structural; 2002.
 6. OSHA 29 CFR Standard 1910.27 - Fixed ladders; Occupational Safety and Health Standards; current edition.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories proposed for repair work.
- B. Prepare Shop Drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State where the work will be installed.
- C. Product Data: Manufacturer's data sheet on each product to be used, including:
1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in the engineering and manufacturing of metal ladders, not less than 20 years of experience.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of the ladders system that fail in materials or workmanship within specified warranty period.
1. Warranty Period: 5 years from date of Beneficial Occupancy.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: Subject to compliance with requirements, provided by one of the following:
1. AB Ladder Company, Houston, Texas.
 2. C&S Metal Fabricating, Inc., Houston, Texas.
 3. P W Platforms, Houston, Texas.

2.2 MATERIALS

- A. Extruded Aluminum Profiles: ASTM B 221/B 221M, ASTM B 210, ASTM B 308/B 308M, Alloy 6061-T6; standard mill finish.
- B. Aluminum Sheet and Plate: ASTM B 209/B 209M, Alloy 6061-T6; standard mill finish.
- C. Fasteners: Aluminum solid aircraft rivets rated at 300 lbs (1335 N) shear strength.
- D. Cast fittings, connectors and rung ends: Cast Aluminum alloy 356

2.3 MATERIALS

- A. Ladders – General: Comply with ANSI A14.3 and OSHA regulations.
- B. Fixed Wall Ladders: Extruded aluminum; serrated rungs 1-1/8 inches (29 mm) in diameter, connected to 2-7/8 inch (73 mm) side rail channels with cast aluminum rung connectors, each secured to rails by means of four solid aircraft rivets.
1. Walk-Through and Parapet Railings: Aluminum extrusions: extend not less than 42 inches (1,067 mm) above landing, 24 inches (610 mm) between side rails at step through.

2.4 FABRICATION

- A. Verify dimensions on site prior to shop fabrication.
- B. Fabricate items with joints tightly fitted and secured.
- C. Fit and shop assemble in largest practical sections, for delivery to site.
- D. Continuously seal joined members by continuous welds.
- E. Grind exposed welds flush and smooth with adjacent finished surface. Ease exposed edges to small uniform radius.
- F. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component.
- G. Make exposed joints butt tight, flush, and hairline.
- H. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that field conditions are acceptable and are ready to receive Work.
- B. Make provisions for erection loads with temporary bracing. Keep Work in alignment.
- C. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate Sections.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved shop drawings, and in compliance with ANSI A 14.3 and OSHA 1910.27.
- B. Install items plumb and level, accurately fitted, free from distortion or defects.
- C. Allow for erection loads and provide temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

3.3 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair, or replace damaged products before Beneficial Occupancy.

END OF SECTION 05 5110

SECTION 06 1055 - ROOFING CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:
 1. Rooftop equipment bases and support curbs.
 2. Wood blocking, cants, and nailers.
- B. Refer to schedule at end of Section.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 2. NLGA: National Lumber Grades Authority.
 3. SPIB: The Southern Pine Inspection Bureau.
 4. WCLIB: West Coast Lumber Inspection Bureau.
 5. WWPA: Western Wood Products Association.

1.4 REFERENCES

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

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 process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, accessories, and locations to a minimum scale of 1-1/2 inch to one foot.

1.6 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 1. Power-driven fasteners.
 2. Powder-actuated fasteners.
 3. Expansion anchors.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Rooftop equipment bases and support curbs.
 - 4. Cants.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber of any of the following species:
 - 1. Mixed southern pine; SPIB.
 - 2. Spruce-pine-fir; NLGA.
 - 3. Hem-fir; WCLIB, or WWPA.
 - 4. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.3 PLYWOOD

- A. DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, minimum 3/4-inch thickness or to match existing.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153 or of Type 304 stainless steel.

2. Where lumber is pressure-preservative treated with ACQ (Alkaline Copper Quaternary) or other copper containing preservatives, provide fasteners of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
 - C. Power-Driven Fasteners: NES NER-272.
 - D. Wood Screws: ASME B18.6.1.
 - E. Lag Bolts: ASME B18.2.1.
 - F. Wood to Masonry Anchors: Remedial wall ties, Type 304 stainless steel; manufactured by: Helifix North America Corporation or A/E approved equal.
 - G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
 - H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
 2. Material (for fastening into ACQ treated lumber): Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

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. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.
- C. 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.

3.2 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Do not splice structural members between supports, unless otherwise indicated.
- C. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- D. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 1. NES NER-272 for power-driven fasteners.

2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- E. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.
- F. Install components with fasteners suited to materials.
1. Nailable Surfaces: Galvanized or galvanically compatible nails or stainless steel into ACQ treated lumber; sized as follows:
 - a. 3/4 and 1-inch materials: 8d nails.
 - b. 1-1/2 or 2-inch materials: 16d nails.
 2. Hollow Masonry Walls: Toggle bolts.
 3. Solid Masonry: Rawl Zamac pin drive or A/E approved equal.
 4. Steel Members: Bolts or Power actuated Hilti pin or A/E approved equal.
 5. Maximum Spacing: 12-inches on center, unless noted otherwise.
 6. Top of Hollow Masonry Wall: Set 12-inch minimum J-bolts in fully set bed of concrete; minimum 18-inches on center.
- G. Remove all bent or deformed nails from finished work and dispose of.

3.3 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.4 PROTECTION

- A. Protect miscellaneous rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protective Walkways - Traffic Area Protection: Install full sheets of 3/4-inch exterior grade plywood and minimum 1-inch EPS board insulation to those areas of new roof surface to be trafficked by personal and wheeled vehicles.
 1. Round corners of plywood sheets to prevent damage to roofing membrane.
 2. Ballast protection boards to prevent unplanned displacement.

3.5 CLEANING

- A. Pick up spilled and unused nails and fasteners daily.

3.6 SCHEDULE

- A. Roofing Carpentry Work:
 1. Miscellaneous blocking and canting for roofing system and related flashings and sheet metal.
 2. Blocking and canting for roof mounted mechanical items.

END OF SECTION 06 1055

SECTION 07 0150.19– ROOF REPLACEMENT PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Roof tear-off.
2. Base flashings removal.
3. Modify rooftop appurtenances where required to achieve minimum recommended heights and clearances for new roof installation.

B. Related Requirements:

1. Section 01 1000 "Summary" for use of the premises and phasing requirements.
2. Section 01 3200 "Construction Progress Documentation" for photographs taken before roof replacement preparation.
3. Section 0 3233 "Photographic Documentation" for photographs taken before roof replacement preparation.
4. Section 01 5000 "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for roof replacement preparation.
5. Section 22 0500 "Common Work Results for Plumbing" for plumbing and piping modifications, removal, and reinstallation.
6. Section 23 0500 "Common Work Results for HVAC" for HVAC equipment modifications, removal, and reinstallation.
7. Section 26 0500 "Common Work Results for Electrical" for electrical equipment disconnection and reconnection.

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Full Roof Tear-Off: Removal of existing roofing system from deck.
- C. Existing to Remain: Existing items of construction that are not indicated to be removed.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Substrate Board: Rigid board or panel products placed over the roof deck that serve as thermal barriers, provide a smooth substrate, or serve as a component of a fire-resistance-rated roofing system.
- F. Materials Ownership: Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain TDCJ's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 PREINSTALLATION MEETINGS

- A. Roof Replacement Conference: Conduct conference at Project site to comply with requirements in TDCJ's Document "IR". Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
1. Meet with PA; Architect/Engineer; TDCJ's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; deck Installer; roofing Installer including project administrator, superintendent, and foreman; and installers whose work interfaces with or affects roof replacement including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roof replacement preparation, including membrane roofing system manufacturer's written instructions.
 - a. Roof replacement preparation, including roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system components that are to remain.
 - c. Existing roof drains and roof drainage during each stage of roof replacement, and roof-drain plugging and plug removal.
 - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
 - e. Existing roof deck conditions requiring notification of Architect / Engineer.
 - f. Existing roof deck removal procedures and Owner notifications.
 - g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
 - h. Structural loading limitations of roof deck during reroofing.
 - i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect roof replacement.
 - j. HVAC shutdown and sealing of air intakes.
 - k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
 - l. Asbestos removal and discovery of asbestos-containing materials.
 - m. Governing regulations and requirements for insurance and certificates if applicable.
 - n. Existing conditions that may require notification of Architect / Engineer before proceeding.

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 indicated or required to perform the Work.
1. Provide data for each required product indicating characteristics, performance criteria, mixing and preparation requirements, limitations, and Material Safety Data Sheets (MSDS).

1.6 INFORMATIONAL 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 PA and other contractors to avoid impact to other work.
- B. Test Reports:
1. Fastener Pull Test Results: Provide complete testing results in an organized and understandable format, including:

- a. Roof plan indicating location and designation for each pullout test;
- b. Fastener type(s), installation method(s) used, and value result for each test performed;
- c. Type of tester (equipment) used and calibration certification by Independent Laboratory within previous 12 months.

C. Photographs:

- 1. Existing Conditions: Document existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by roof replacement operations. Submit before Work begins.
- 2. Roof Cores: Extract cores from each roof area and photograph each core. Label each core with following information:
 - a. Roof area location.
 - b. Composition of existing roof system, including types and thickness of all materials.
 - c. Indicate if moisture was detected.
 - d. Indicate condition of substrate (roof deck).

1.7 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Indicate extent of work installed, actual locations of appurtenances and items that will be hidden from view at completion of work.

1.8 FIELD CONDITIONS

- A. Existing Roofing System: EPDM membrane system, roof insulation and components and accessories between concrete and metal decks and roofing membrane.
- B. TDCJ will occupy portions of building immediately below roof replacement area. Conduct roof replacement so TDCJ's operations will not be disrupted. Provide PA with not less than 72 hours' notice of activities that may affect TDCJ's operations.
 - 1. Coordinate work activities daily with PA so PA can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or - detection equipment if needed, and evacuate occupants from below the work area.
 - 2. Before working over structurally impaired areas of deck, notify PA to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
- C. Protect buildings scheduled for roof replacement, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from roof replacement operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
- F. Limit construction loads on roof to 200 lb rooftop equipment wheel loads and 20 PSF for uniformly distributed loads.
- G. Weather Limitations: Proceed with roof replacement preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
 - 1. Remove only as much roofing in one day as can be made watertight in the same day.

- H. Hazardous Materials: It is not expected that hazardous materials such as asbestos-containing materials will be encountered in the Work.
1. Existing roofing material 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.).

PART 2 - PRODUCTS

2.1 TEMPORARY PROTECTION MATERIALS

- A. Expanded Polystyrene (EPS) Insulation: ASTM C 578.
- B. Plywood: DOC PS1, Grade CD Exposure 1.
- C. OSB: DOC PS2, Exposure 1.

2.2 INFILL MATERIALS

- A. Use infill materials matching existing roofing system materials unless otherwise indicated.
- B. Wood blocking, curbs, nailers, and plywood sheathing are specified in Section 06 1055 Roofing Carpentry."
- C. Deck Repair Materials:
 1. Steel Deck: Match existing deck in design, profile, gage and finish. Deck to nest into existing deck with trimmed edges.
 2. Concrete Deck: Match existing deck design, reinforcing, thickness, density, and finish.
 3. Minor Repairs and Void Infills: Cementitious patching compound, when approved by A/E.
- D. All Decks: Align top plane with existing deck.
- E. Curbs and Support Members: Wood or metal curbs and support items as indicated and required for existing conditions.
- F. Miscellaneous Metals: Conform to existing Products and installations.
- G. Plumbing and Mechanical Piping: Match existing where practical and complying with Section 22 0500 "Common Work Results for Plumbing".
- H. Mechanical Equipment: Match existing where practical and complying with Section 23 0500 "Common Work Results for HVAC".
- I. Electrical Fixtures and Equipment: Match existing where practical and complying with Section 26 0500 "Common Work Results for Electrical".

2.3 AUXILIARY ROOF REPLACEMENT MATERIALS

- A. General: Auxiliary roof replacement preparation materials recommended by roofing system manufacturer for intended use and compatible with components of existing and new membrane roofing system.
- B. Metal Flashing Sheet: Metal flashing sheet is specified in Section 07 6200 "Sheet Metal Flashing and Trim."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that areas to be demolished are clear of encumbrances.
- B. Examine existing mechanical and electrical items to determine conditions and operability.
- C. Verify existing roof drains and drain piping are clear of debris, open and functional, that piping is properly connected and sealed to drain bowls and all drain components are in serviceable condition.
- D. Notify PA 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 PREPARATION

- A. Shut off rooftop utilities and service piping before beginning the Work.
- 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. Protect existing membrane roofing system that is indicated not to be replaced.
 - 1. Loosely lay 1-inch- minimum thick, expanded polystyrene (EPS) insulation over the roofing membrane in areas indicated. Loosely lay minimum 3/4-inch plywood or OSB panels over EPS. Extend EPS past edges of plywood or OSB panels a minimum of 1 inch.
 - 2. Limit traffic and material storage to areas of existing roofing membrane that have been protected.
 - 3. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of roof replacement.
- E. Coordinate with PA to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with roof replacement work that could affect indoor air quality or activate smoke detectors in the ductwork.
- F. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- G. Maintain scuppers in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking scuppers and conductors.
 - 1. If scuppers are temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3.3 FASTENER PULL-OUT TESTING

- A. Retain independent testing and inspecting agency to conduct fastener pull-out tests according to SPRI FX-1, and submit test report to membrane manufacturer to determine fastener pattern required to resist uplift pressure at corners, perimeter, and field of roof as indicated Article on Performance Requirements.

1. Obtain Architect/Engineer's approval to proceed with membrane manufacturer's recommended fastening pattern. Architect/Engineer may furnish revised fastening pattern commensurate with pull-out test results.

3.4 ROOF CORE DOCUMENTATION

- A. Extract a core from each roof area in accordance with NRCA recommendations and good roofing practices. Prepare a log of core locations and photographs of each core with information indicated in "Informational Submittals" Article of this Section.

3.5 ROOF TEAR-OFF

- A. General: Notify PA each day of extent of roof tear-off proposed for that day.
- B. Full Roof Tear-Off: Remove existing roofing membrane and other membrane roofing system components down to the deck.
 1. Remove roof insulation and cover board.
 2. Remove fasteners from deck.
- C. Do NOT use power cutting tools on materials identified as ACRM.

3.6 DECK PREPARATION

- A. Inspect deck after tear-off of membrane roofing system.
- B. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263 at start of each day's work and at start of each roof area or plane. Do not proceed with roofing work if moisture condenses under the plastic sheet.
- C. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect/Engineer. Do not proceed with installation until directed by Architect/Engineer.
- D. If deck surface is not suitable for receiving new roofing, or if structural integrity of deck is suspect, immediately notify Architect/Engineer. Do not proceed with installation until directed by Architect/Engineer.

3.7 DECK AND SUPPORT REPLACEMENT AND REPAIR

- A. Replace damaged and deteriorated deck as required. Replacement deck to match existing
- B. Install new deck and accessories as required and directed by Architect/Engineer.
- C. Remove damaged and deteriorated deck by cutting in straight lines. Coordinate cuts with structural supports to ensure proper installation of replacement materials.
- D. Where necessary, grind away existing welds and protrusions. Provide smooth and even surface for new deck on existing structural framing.
- E. Install new deck repair materials with all edges properly supported on structural members or adjacent decking. Secure with approved fasteners, spaced as indicated or maximum 8-inches on center.

3.8 DECK INFILL FOR ABANDONED OPENINGS

- A. Prepare openings as indicated in previous Article on Deck and Support Replacement and Repair.
- B. Infill roof deck openings where abandoned equipment is removed and not replaced.

1. Install angles or "Z" clips on all sides of opening to receive new roof deck.
2. Provide fire-rated thermal barrier (gypsum board, Dens-Deck®, or A/E approved equal) on steel decking under polyisocyanurate insulation.

C. Steel Deck:

1. Type A: Where repair area exceeds two square feet and/or 12-inches on any side.
 - a. Remove deteriorated deck to 6-inches into non-deteriorated deck on all sides.
 - b. Prime existing deck at attachment points with rust bonding red oxide metal primer.
 - c. Install new 22-gage galvanized Steel deck of matching profile over infill area.
 - 1) Lap each end of new deck a minimum of 6-inches over existing deck.
 - 2) Lap each side of new deck a minimum of one deck flute over existing deck.
 - 3) Attach to existing deck with fasteners as recommended by deck manufacturer or as follows:
 - a) Ends: #5 TEK screws or A/E approved equal at maximum 6-inches on center or as directed.
 - b) Sides: Self-tapping sheet metal screws at maximum 6-inches on center or as directed.
2. Type B: Where repair area is less than 12-inches on any side.
 - a. Remove all rust by wire brushing and apply rust bonding red oxide metal primer.
 - b. Install new 18-gage galvanized sheet metal plate over infill area.
 - 1) Lap all sides of new plate a minimum of 12-inches over existing deck.
 - a) Attach to existing deck with fasteners as recommended by deck manufacturer or with self-tapping sheet metal screws at maximum 6-inches on center or as directed.

3.9 BASE FLASHINGS REMOVAL

- A. Remove existing base flashings. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage existing curbs, counterflashings, metal roofing panels, or other components or equipment that are to remain. Replace items damaged during removal with new Products of same design and quality.

3.10 EXISTING VENTILATORS REPLACEMENT

- A. Remove all existing non-mechanically operated vents, ventilators, and covers 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.

3.11 EXISTING MECHANICAL AND ELECTRICAL ITEMS MODIFICATIONS

- A. 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.
- B. Do not disrupt any services unless specifically approved by PA and on-site personnel.
- C. Restore services and verify proper operational conditions to satisfaction of PA

3.12 DISPOSAL

- A. Collect demolished materials and place in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

1. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 07 0150.19

SECTION 07 5400 - THERMOPLASTIC MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Qualifications, Standards and Materials for new roof assembly.
2. Cleaning existing roof deck surface.
3. Roof insulation.
4. Adhered thermoplastic (PVC or KEE) membrane roofing system.
5. Traffic pads.

B. Related Requirements:

1. Section 06 1055 "Roofing Carpentry" for wood nailers, curbs, and blocking.
2. Section 07 0150.19 "Roof Replacement Preparation" for deck repair and replacement.
3. Section 07 6200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
4. Section 07 7200 "Roof Accessories."
5. Section 22 0500 "Common Work Results for Plumbing" for procedures for modifying, repairing, or replacing roof mounted plumbing and replacement of roof mounted piping.
6. Section 23 0500 "Common Work Results for HVAC" for procedures for modifying mechanical equipment.
7. Section 26 0500 "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 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. C 1289 - Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
2. D 1079 - Terminology Relating to Roofing, Waterproofing, and Bituminous Materials.
3. D 1079 - Terminology Relating to Roofing, Waterproofing, and Bituminous Materials.

B. American Society of Civil Engineers (ASCE): ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.

D. Single Ply Roofing Institute (SPRI): Flexible Membrane Roofing: A Professional's Guide to Specifications, "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems."

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

1.4 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
1. Meet with PA, Architect / Engineer, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 5. Review demolition procedures and coordination with related work.
 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 affects roofing system.
 8. Review governing regulations and requirements for insurance and certificates if applicable.
 9. Review temporary protection requirements for roofing system during and after installation.
 10. Review roof observation and repair procedures after roofing installation.

1.6 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 indicated.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
1. Base flashings and membrane terminations.
 2. Tapered insulation, including slopes.
 3. Roof plan showing orientation of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
 4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- D. Samples for Verification: For the following products:
1. 12-by-12-inch square of sheet roofing, of color specified, including T-shaped side and end lap seam.
 2. 12-by-12-inch square of roof insulation.
 3. 12-by-12-inch square of walkway pads or rolls.
 4. 12-inch length of metal termination bars and copings.
 5. Six insulation fasteners of each type, length, and finish.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer to certify and document items in Article on Quality Assurance.
- B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article:
 - 1. Fastener patterns prescribed by manufacturer in Submittal will resist specified uplift pressures, including Safety Factor (times two), calculated according to ASCE/SEI 7.
 - 2. Roofing system components are physically and chemically compatible for installation as designed, and;
 - 3. All proposed materials, including those by other manufacturer, are acceptable to membrane manufacturer for use in system, and;
 - 4. Proposed system meets all criteria for issuance of required manufacturer's warranty.
 - 5. Specifically identify and define any deviations.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Product Test Reports: For components of roofing system, for tests performed by manufacturer and witnessed by a qualified testing agency.
- E. Research/Evaluation Reports: For components of roofing system, from ICC-ES.
- F. Manufacturer's Installation Instructions: Include installation sequence and special instructions.
- G. Material Safety Data Sheets (MSDS): Maintain copies on Project site.
- H. Sample Warranties: For manufacturer's special warranties.
- I. Field quality-control reports:
 - 1. Daily Inspection Form: Check list document or form with signature line for Project Manager or Superintendent, signifying installation is in accordance with specified requirements, and tie-ins and temporary flashings are properly sealed at end of each working day and as otherwise required to ensure water-tightness.
 - 2. Manufacturer's Field Reports: Summarize findings of each inspection. Indicate any discrepancies from recommended installation methods, corrective action recommended to installer, and any non-compliant or unsatisfactory conditions.

1.8 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.
- B. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.
- C. Project Record Documents: Accurately record exact location of all roof membrane penetrations.
- D. Warranties: Executed copies of special warranties.

1.9 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for membrane roofing system identical to that used for this Project, with minimum five years documented experience, including:
1. Minimum three projects of comparable size, using specified system, installed in the State of Texas within that five-year period.
- B. Installer Qualifications: A qualified firm that has been continuously approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product for minimum of three years prior to Bid Date, and that is eligible to receive manufacturer's special warranty; with minimum five years documented experience, including:
1. Minimum five years documented experience,
 2. Minimum three projects of comparable size and specified systems during that time.
- C. Workers:
1. Project Manager and Superintendent: Minimum five years roofing experience and employed by Contractor for a minimum one year prior to Bid Date.
 2. Non-Working Supervisor: Able to communicate effectively with Owner and Applicator's workers and employed by Contractor for a minimum one year prior to Bid Date. Present on job site at all times Work is in progress.
 3. Tradesmen: Minimum 50-percent of installation crew to have been employed by Contractor for a minimum six months prior to Bid Date.
 4. All to be factory trained and approved by selected membrane manufacturer.
- D. Perform Work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.
- E. Maintain one copy of each document accessible to site.
- F. Install all roofing materials using personnel directly employed by Applicator (Roofing Contractor) with NDL certification from roofing material manufacturer.
- G. Assign a qualified, full time, non-working supervisor to be on Project site at all times during installation of Work.
- H. Designate a responsible Project Manager or Superintendent to inspect all installed Work, particularly tie-ins and temporary flashings, at end of each working day and as otherwise required to ensure water-tightness.
1. Verify Inspection by signature on approved Daily Inspection Form signifying installation is in accordance with specified requirements.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
1. Inspect for damage. Remove from site and replace any damaged materials.
 2. Store products in weather protected environment, clear of ground and moisture.
 3. Stand and store roll materials on end.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.
 1. Do not store more materials on roof than can be installed within two days, unless specifically approved otherwise.
 2. Maximum Allowable Loading on Roof: 20 pounds per square foot.

1.11 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
 1. Do not apply roofing membrane during inclement weather or when threat of inclement weather exists.
 2. Do not apply roofing membrane to damp or frozen deck surface.
- B. Observe actual and predicted temperatures, relative humidity, wind, wind chill and other weather conditions. Apply roofing system only when all conditions are within ranges acceptable to membrane manufacturer.
- C. Do not permit contaminants such as grease, fats and oils to come in direct contact with roofing membrane.

1.12 COORDINATION

- A. Coordinate with demolition work and with work of other trades to ensure sufficient materials and manpower are available to completely replace and make watertight all roofing removed each day.
- B. Limit tear off of existing roof system, and application of insulation, to amount that can be completely covered with new roof system by end of day.
- C. Coordinate installation of associated metal flashings, and roof-related items as work of this Section proceeds. Seal all sheet metal flanges in contact with membrane the day it is installed.
- D. Schedule and execute Work to prevent leaks and excessive traffic on completed roof sections. Provide protection for interior of building and to ensure water does not flow beneath any completed membrane system sections.
- E. Schedule work to avoid storage on and traffic over finished work.

1.13 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.

1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, walkway products, and other components of membrane roofing system.
 2. Warranty Period: 20 years from date of Final Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
1. Warranty Period: Two years from date of Final Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain components including roof insulation, cover boards, fasteners, adhesives, and accessory items for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- 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 membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: 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.

	<u>BUILDINGS:</u>	<u>PICKETS</u>
	1, 3A, 3B, 3C, 3E, 4A, 4B, 4C, 4E, 5, 6, 7A, 7B, 7C, 7E, 8A, 8B, 8C, 8E, 10, 11A, 11B, 12A-F, 13, 14, 14A, 15 & 16.	
1. <u>Corner Uplift Pressure</u> :	73.1 lbf/sq. ft.	84.6 lbf/sq. ft.
2. <u>Perimeter Uplift Pressure</u> :	48.6 lbf/sq. ft.	56.3 lbf/sq. ft.
3. <u>Field-of-Roof Uplift Pressure</u> :	29.0 lbf/sq. ft.	33.5 lbf/sq. ft.
	<u>BUILDINGS:</u> 2, 3D, 4D, 7D, 8D, 9	
4. <u>Corner Uplift Pressure</u> :	68.3 lbf/sq. ft.	
5. <u>Perimeter Uplift Pressure</u> :	46.2 lbf/sq. ft.	
6. <u>Field-of-Roof Uplift Pressure</u> :	26.6 lbf/sq. ft.	

BUILDINGS:
3F, 4F, 7F, & 8F

- 7. Corner Uplift Pressure: 70 lbf/sq. ft.
- 8. Perimeter Uplift Pressure: 45 lbf/sq. ft.
- 9. Field-of-Roof Uplift Pressure: 25 lbf/sq. ft.

ALL BUILDINGS

- 10. Design Wind Speed: 90
- 11. Exposure Category: "C"
- 12. Importance Factor: 1.15.
- 13. Safety Factor: Two (2).

- D. Energy Performance: Roofing system that will meet State of Texas Commercial Energy Codes; 2009 International Energy Conservation Code (IECC) or 2007 ASHRAE 90.1.
 - 1. Minimum R-Value: 20 - entire roof assembly.
 - 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.
- E. 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.

2.3 PVC ROOFING

- A. PVC Sheet: ASTM D 4434, Type III, fabric reinforced.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carlisle SynTec, Incorporated.
 - b. GAF Materials Corporation.
 - c. Johns Manville
 - d. Sika-Sarnafil Inc.
 - e. Or A/E approved equal.
 - 2. Thickness: 80 mils, nominal.
 - 3. Exposed Face Color: White.

2.4 KEE ROOFING

- A. KEE Sheet: ASTM D 6754, fabric reinforced.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - a. Seaman Corporation.
 - b. Carlisle SynTec, Incorporated.
 - c. Or Architect/Engineer approved equal.
 - 2. Thickness: 60 mils, nominal.
 - 3. Exposed Face Color: White.

2.5 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
 - 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

- B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as Thermoplastic sheet membrane.
- C. Bonding Adhesive: Manufacturer's standard.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM Approvals 4470; designed for listed purpose; tested by manufacturer for required pullout strength; and acceptable to membrane system manufacturer.
 - 1. Corrosion Resistant Coating: Pass minimum 30 Kesternich cycles.
 - 2. Flashings Fasteners:
 - a. Masonry: Specially heat treated, stress relieved, 1-1/4-inch length; Masonry Nail, manufactured by Simplex Nails, Inc. or A/E approved equal.
 - b. Wood Blocking: High carbon, zinc coated steel; annular threaded 1-inch shank nails; with minimum 1-inch x 30 gage metal disk; Roofing Nail, manufactured by Simplex Nails, Inc. or A/E approved equal
 - c. Concrete: Power actuated fasteners, suitable for application.
 - d. Steel Framing: Appropriate for purpose intended, size as required to suit application and achieve positive anchorage to substrate material.
 - 3. Mechanical Fasteners for Metal Fabrications (Support Framing): Appropriate for purpose intended, size as required to suit application and achieve positive anchorage to substrate material.
- F. Membrane Termination Sealant: Compatible with membrane and materials to which membrane to be bonded, approved by membrane manufacturer.
- G. Water Cut-Off Mastic: Compatible with materials with which it is used and approved by membrane manufacturer.
- H. Night Seal: Compatible with materials on which it is used and approved by membrane manufacturer.
- I. Pitch Pocket Sealant: Single component, self-leveling silicone sealant approved by membrane manufacturer.
- J. Expansion Joint Filler:
 - 1. Flexible Vapor Retarder: Minimum 60 mil thick vinyl sheet, or approved equal.
 - 2. Compressible Insulation: Fiberglass batt insulation, or approved equal.
- K. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, cover strips, and other accessories.

2.6 VAPOR RETARDER

- A. Self-Adhering-Sheet Vapor Retarder (Air Barrier): ASTM D 1970, polyethylene film laminated to layer of rubberized asphalt adhesive, minimum 40-mil- total thickness; maximum permeance rating of 0.1 perm; cold applied, with slip-resisting surface and release paper backing. Provide primer when recommended by vapor-retarder manufacturer. Provide as required by Membrane Manufacturer.

2.7 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved by PVC or KEE membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 3, glass-fiber mat facer on both major surfaces.
 - 1. Maximum Board Size: 48 x 48-inch
 - 2. Minimum Board Thickness: 1-inch.
 - 3. Compressive Strength: 25 pounds per square inch minimum.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/8- or 1/4-inch per 12 inches unless otherwise indicated.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.
 - 1. Cricket and Saddle Taper: 1/4 or 1/2-inch or per foot minimum, or as required to counter existing roof slope plus 1/2-per foot slope toward drains.
 - 2. Edge Strips: Tapered as indicated, or as required by installation conditions.

2.8 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer; Roofgrip with Climaseal® coating, manufactured by Buildex or A/E approved equal
 - 1. Corrosion Resistant Coating: Pass minimum 30 Kesternich cycles.
 - 2. Length: As required for thickness of material to penetrate substrate 1/2-inch minimum.
 - 3. Top Plate: Plastic or metal washer/disc type, sized to meet requirements to resist wind up-lift pressures specified in "Performance Requirements" Article of this Section.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
 - 1. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.

OR

 - 2. Full-spread spray-applied, low-rise, two-component urethane adhesive.
- D. Cover Board: ASTM C 1177, glass-mat, water-resistant gypsum substrate, 1/2 inch thick, factory primed.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Georgia-Pacific Corporation; Dens Deck Prime.
 - b. Or A/E approved equal.
 - 2. Size: 48 inches by 48 inches.

OR
- E. Cover Board: ASTM C 1177, glass-matt, water-resistant gypsum substrate, 1/2-inch thick.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. USG Corporation; Securock Glass-Mat Roof Board.

- b. Or A/E approved equal.
2. Size: 48 inches by 48 inches.

2.9 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16-inch thick, and acceptable to membrane roofing system manufacturer.
 1. Pad Size: 12 x 24-inches
 2. Color: Gray.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work and that deck is supported and secured.
- B. Verify the deck is clean and smooth, free of depressions, waves, or projections, properly sloped to drains or eaves.
- C. Verify that deck surfaces are dry and free of snow or ice. Verify flutes of metal deck are clean and dry. Confirm deck dryness by moisture meter; maximum allowable: 12-percent.
- D. Verify that roof openings, curbs, pipes, sleeves, ducts, and vents through the roof are solidly set and wood nailing strips are in place.
- E. Beginning of installation means installer accepts existing surfaces.

3.2 PREPARATION

- A. Protect building surfaces against damage from roofing work.
- B. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- C. Prevent materials from entering and clogging scuppers and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
 1. Verify that existing scuppers are not plugged or partially blocked.
- D. Clean areas to be covered with Thermoplastic membrane roofing of all debris and deleterious materials including, wet insulation, damaged decking, gravel, grease, and bird droppings according to membrane manufacturer's recommendations.
- E. Clean surfaces of roof and maintain free from all deleterious material during roofing operations.
- F. Remove all unused accessories. Verify requirements with PA.
- G. Repair or replace damaged or deteriorated deck in accordance with Section 07 0150.19 "Roof Replacement Preparation".
 1. Concrete Deck: Verify flatness and conditions. Where height differential is greater than 1/4-inch, smooth out transition with non-shrink grout or latex fill.
 2. Metal Deck: Verify flatness and integrity of existing decking.

3.3 INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. Cooperate with testing and inspecting agencies engaged or required to perform services for installing built-up roofing system.
- D. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
- E. Unroll roofing membrane and allow to relax before installing.
- F. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- G. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- H. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- I. Substrate-Joint Penetrations: Prevent adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

3.4 VAPOR-RETARDER INSTALLATION

- A. Self-Adhering-Sheet Vapor Retarder (Air Barrier): Prime substrate if required by manufacturer. Install self-adhering-sheet vapor retarder over area to receive vapor retarder, side and end lapping each sheet a minimum of 3-1/2 inches and 6 inches, respectively. Seal laps by rolling.

3.5 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
 - 1. Lay tapered boards for a distance of 24-inches back from scuppers for positive drainage.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is **2 inches** or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- E. Trim surface of insulation where necessary at scuppers so completed surface is flush and does not restrict flow of water.

- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- G. Apply no more insulation and cover boards than can be sealed with membrane in same day.
- H. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
 - 1. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - OR
 - 2. Set each layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.
- I. Mechanically Fastened and Adhered Insulation: Install each layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - 1. Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof.
 - 2. Set each subsequent layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - OR
 - 3. Set each subsequent layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.
- J. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together.
 - 1. Set cover boards in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

3.6 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere roofing over area to receive roofing according to roofing system manufacturer's written instructions.
 - 1. Install sheet according to ASTM D 5036.
- B. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- C. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
 - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- F. Inspect flashing seams and repair unsealed locations, voids, and fishmouths.
- G. Coordinate installation of scuppers, sumps, and related flashings.
- H. Scuppers: Install prefabricated, custom roof scuppers as indicated. Terminate outside lining with termination bar and heat weld inside skirt to membrane. Apply sealant to underside of lining and top of termination bar.
- I. Expansion Joints: Install prefabricated custom expansion joints as indicated. Seal to deck membrane and vertical surface as required for flashings.

3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.
 - 1. Locations: Where indicated and at each rooftop unit (RTU) with operable components, at base and top of each roof ladder, and at each roof hatch.
 - 2. Install a minimum of two pads adjacent to each RTU access panel; roof ladder, and on three sides of each roof hatch; or match width of access panel, ladder, or hatch plus 12-inches each side. Set joints 6 inches apart.

3.9 FIELD QUALITY CONTROL

- A. Do not perform demolition during roofing operations.
- B. Correct identified defects or irregularities. Cut out and repair membrane defects before end of each day.
- C. Testing Agency: Owner may engage a qualified testing agency to perform tests and inspections and to prepare test reports.
- D. Upon Beneficial Occupancy, Owner may have Work inspected using infrared scanning and other appropriate means to establish conditions of completed Project.
- E. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect/Engineer.
 - 1. Notify Architect/Engineer and PA 48 hours in advance of date and time of inspection.
- F. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

- G. Perform additional testing and inspecting, at Contractor's expense, to determine if replaced or additional work complies with specified requirements.
- H. Roofing system will be considered defective if it does not pass tests and inspections.

3.10 MANUFACTURER'S FIELD SERVICES

- A. Provide manufacturer's field services under provisions of Section 01 4000 "Quality Requirements".
- B. Request site attendance of roofing materials manufacturers during installation of the work.
 - 1. Frequency: Minimum of two (2) visits to project site each month during critical stages of installation,
 - 2. Coordination: Schedule visits to coincide with visits by Architect/Engineer.
- C. Post Construction Inspection: Contractor and manufacturer's representative to inspect roofing installation 23 months after Final Completion and prior to expiration of Contractor's Warranty.

3.11 CLEANING

- A. In areas where finished surfaces are soiled by any other source of soiling caused by work of this Section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.12 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 01 5000 "Temporary Facilities and Controls."
- 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 Architect and Owner.
- C. Where traffic must continue over finished roof installation, protect surfaces.
 - 1. Minimum Protection: Cushion layer of insulation, minimum 1-inch thick, and one layer of plywood minimum 3/4-inch thick. Ballast plywood for site and personnel protection.
- D. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Beneficial Occupancy and according to warranty requirements.

3.13 FINAL TOUCH UP

- A. Upon completion of all roof systems, flashing, accessory work and sheet metal applications, apply two coats of approved aluminum roof coating to accessories not replaced and items as directed by Owner's Representative.

1. Paint existing pipes, drain strainers, metal vents, and other accessories with Type I aluminum roof coating.
2. Apply at recommended rate, or at a minimum rate of 3/4 to 1 gallon/square.

3.14 INSULATION SCHEDULE

A. Minimum Total Insulation Thickness:

1. Steel and Concrete Deck Areas: 2 layers of 2 inch insulation

END OF SECTION 07 5400

SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Formed roof drainage sheet metal fabrications.
2. Formed low-slope roof sheet metal fabrications.
3. Formed equipment support flashing.
4. Miscellaneous sheet metal accessories.
5. Precast concrete splash blocks.

B. Related Requirements:

1. Section 06 1055 "Roofing Carpentry" for wood nailers, curbs, and blocking.
2. Section 07 0150.19 "Roof Replacement Preparation" for removal procedures for existing materials.
3. Section 07 5400 "Thermoplastic Membrane Roofing" for installing sheet metal flashing and trim integral with membrane roofing.
4. Section 07 7200 "Roof Accessories" for set-on-type curbs, equipment supports, vents, and other manufactured roof accessory units.
5. Section 22 0500 "Common Work Results for Plumbing" for plumbing and piping modifications, removal, and reinstallation.
6. Section 23 0500 "Common Work Results for HVAC" for HVAC equipment modifications, removal, and reinstallation.
7. Section 26 0500 "Common Work Results for Electrical" for electrical equipment disconnection and reconnection.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. A 153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware
2. A 240 - Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
3. A 755 - Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
4. A 792 - Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
5. C 920 -Elastomeric Joint Sealants.

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. National Association of Architectural Metal Manufacturers (NAAMM): Metal Finishes Manual for Architectural and Metal Products.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
1. Meet with PA, Architect / Engineer, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, unit skylights, and roof-mounted equipment.
 2. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 3. Review special roof details, roof drainage, roof-penetration flashing, equipment curbs, and condition of other construction that affect sheet metal flashing and trim.
 4. Review requirements for insurance and certificates if applicable.
 5. Review sheet metal flashing observation and repair procedures after flashing installation.
 6. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 7. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

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 indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- C. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim. Include the following:
1. Plans, elevations, sections, and attachment details.
 2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
 3. Identification of material, thickness, weight, and finish for each item and location in Project.
 4. Details for forming, including profiles, shapes, seams, and dimensions.
 5. Details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
 6. Details of termination points and assemblies.
 7. Details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
 8. Details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counterflashings as applicable.
 9. Details of special conditions.
 10. Details of connections to adjoining work.
 11. Detail formed flashing and trim at a scale of not less than 3 inches per 12 inches.
- D. Samples for Initial Selection: For each type of sheet metal flashing, trim, and accessory indicated with factory-applied color finishes involving color selection.
- E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.

2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches long and in required profile. Include fasteners and other exposed accessories.
3. Accessories and Miscellaneous Materials: Full-size Sample.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified fabricator.
- B. Product Certificates: For each type of coping and roof edge flashing that is SPRI ES-1 tested.
- C. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- D. Warranty: Sample of special warranty.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.
- B. Warranty: Executed copies of special warranty.

1.8 QUALITY ASSURANCE

- A. General: Work of this Section to physically protect membrane roofing, base flashings, and expansion joints from damage that would permit water leakage to building interior.
- B. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance, with three years minimum experience.
 1. For copings and roof edge flashings that are SPRI ES-1 tested, shop shall be listed as able to fabricate required details as tested and approved.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- D. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

1.10 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.
- B. Coordinate with demolition work and with work of other trades to ensure sufficient materials and manpower are available to completely replace and make watertight all roofing removed each day.

- C. Limit removal of existing sheet metal components, to ensure new membrane installation can be made watertight by end of day.
- D. Coordinate installation of flanged metal components, including gravel guards, pitch pans, and accessories to ensure strip-in with hot bitumen (where applicable) on same day they are installed.
- E. Schedule work to avoid storage on, and traffic over finished work.

1.11 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Edge Design: Fabricate and install roof edge flashing that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist roof edge design pressure (P) calculated according to ANSI/SPRI-ES-1.
 - 1. Wind Speed: **90** mph.
 - 2. Horizontal Design Pressure:

	Pickets	All other buildings
36 psf	33 psf	
 - 3. Vertical Design Pressure:

	Pickets	All other buildings
58 psf	54 psf	
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- E. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755.
1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653, G90 coating designation; structural quality.
 2. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.
 3. Surface: Smooth, flat.
- C. Prepainted Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755.
1. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.
 2. Surface: Smooth, flat.
 3. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - b. Minimum Exposure Tests:
 - 1) Humidity Resistance: 2000 hours.
 - 2) Salt-Spray Resistance: 2000 hours.
 4. Color: As selected by Architect from manufacturer's full range.
 5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.
- D. Stainless-Steel Sheet: ASTM A 240 or ASTM A 666, Type 304, dead soft, fully annealed.
1. Finish: 2D (dull, cold rolled).
 2. Surface: Smooth, flat.
- E. Thermoplastic-Coated Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted with 20-mil unsupported heat-weldable membrane laminated on one side; acceptable to selected membrane manufacturer; color as selected by Architect from manufacturer's standard selections.
1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653, G90 coating designation; structural quality.
 2. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.

2.3 UNDERLAYMENT MATERIALS

- A. Polyethylene Sheet: 6-mil- thick polyethylene sheet complying with ASTM D 4397.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.

- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
 - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
 2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
 3. Fasteners for Metallic-Coated and Prepainted Metallic-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A 153 or ASTM F 2329 or Series 300 stainless steel.
 4. Rust-resistant and compatible with materials to be joined.
 5. Length: As required for thickness of material to penetrate substrate 1/2-inch minimum.
- C. Mechanical Fasteners for Sheet Metal to Substrate Anchorage:
1. Masonry: One-step, screw-type drive anchor (nailin); heat-treated, stress relieved, stainless steel pin; zinc jacketed; sized for intended application; minimum 1-1/4-inch length x 1/4-inch diameter; Hammer-Screw[®] manufactured by Powers Fasteners, Inc. or A/E approved equal
 2. Wood Blocking: Hexagonal head screws, stainless steel, with neoprene rubber washers; jacket color to match pre-painted sheet metal.
 3. Concrete: Same as masonry, or other power actuated fasteners, suitable for application.
- D. Roofing Nails: Stainless steel (for fastening into ACQ treated lumber), hot-dipped galvanized or non-ferrous type for fastening into non-treated lumber); with annular rings, size as required to suit application; minimum 11-gage with 3/8-inch diameter head.
- E. Mechanical Fasteners for Sheet Metal to Metal Fabrications (Support Framing) Anchorage: Appropriate for purpose intended, size as required to suit application and achieve positive anchorage to substrate material.
- F. Solder:
1. For Stainless Steel: ASTM B 32, Grade Sn60, with an acid flux of type recommended by stainless-steel sheet manufacturer.
 2. For Metallic-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- G. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
- H. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; low modulus, as specified in Division 07 Section "Sealants (for Roofing)"; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- I. Splash Blocks: Precast concrete of size and profile indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment; suitable for downspouts discharging at grade level or onto roof surface.

2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 2. Obtain field measurements for accurate fit before shop fabrication.
 3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with elastomeric sealant concealed within joints.
1. Form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with butyl sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
 3. Fabricate all components with allowance for expansion at joints. Provide enlarged or oval holes at all piercing fasteners.
 4. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- D. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.
- E. Form all sheet metal components (except corners) in longest practical length up to 10-foot maximum; true to shape, square, accurate in size, and free from distortion or defects detrimental to appearance or performance.
- F. Fabricate corners on all sheet metal components (gravel guards, copings, cap flashings, etc.) to form one piece with minimum 18-inch and maximum 36-inch long legs.
- G. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- H. Soldered Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- I. Unsoldered Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- J. Hem exposed edges of metal 1/2-inch; miter and seam corners.
- K. Fabricate vertical faces with bottom edge formed outward 3/4-inch at 30 degrees and hemmed to form drip.
1. Where vertical height exceeds 8-inches, fabricate with stiffing grooves in accordance with SMACNA, unless specifically approved otherwise.

- L. Form all sheet metal material to provide watertight joints:
 - 1. Unprotected Horizontal Surfaces (expansion joint covers, etc.): Standing seam or drive cleat joints.
 - 2. Wall Copings:
 - a. Where wall thickness is less than 8-inches: Cover and backer plates may be used.
 - b. Where wall thickness is 8-inches or more: Standing seam or drive cleat joints.
 - 3. Vertical Surfaces (copings, cap flashings, gravel guards, etc.): Flat lock or cover and backer plate seams.
 - M. Miter all sheet metal corners and solder, weld, or fasten and seal all joints watertight:
 - 1. Metallic-Coated Steel Sheet: Solder joints watertight.
 - 2. Stainless Steel: Solder joints watertight.
 - 3. After soldering, remove flux. Wipe and wash solder joints clean.
 - 4. Prepainted Metallic-Coated Steel Sheet: Apply minimum 1/4-inch bead of sealant between connecting metal flanges and drill and fasten with rivets at 2-inches o.c.
 - 5. Thermoplastic-Coated Metallic-Coated Steel Sheet: Cover joints with 2-inch wide aluminum tape and heat weld 4-inch wide Thermoplastic Membrane over aluminum tape. Cover membrane with a 6-inch wide Thermoplastic-coated metallic-coated steel cover plate.
 - 6. Install sealant so it will not be visible on outside of joints.
 - N. Fabricate elements complete with required connection pieces.
 - O. Fabricate all components with horizontal (flat) surfaces with built-in slope for drainage toward roof unless indicated otherwise.
 - P. Do not use graphite pencils to mark metal surfaces.
- 2.6 ROOF DRAINAGE SHEET METAL FABRICATIONS
- A. Hanging Gutters: Fabricate to cross section indicated, complete with end pieces, outlet tubes, and other accessories as required. Fabricate in minimum 96-inch- long sections. Furnish flat-stock gutter spacers and gutter brackets fabricated from same metal as gutters, of size recommended by SMACNA but not less than twice the gutter thickness. Fabricate expansion joints, expansion-joint covers, and gutter accessories from same metal as gutters.
 - 1. Gutter Style: SMACNA designation A.
 - a. Size: Designed to meet roof drainage area, rainfall intensity criteria, and downspout size and spacing.
 - b. Supports: Minimum 1/8-inch x 1-inch Brackets and 0.1046 inch (12 gage) spacers at maximum 36-inches oc, staggered.
 - c. Join sections with riveted and sealed or soldered joints.
 - 2. Expansion Joints: Lap type.
 - a. Spacing: Minimum twenty (20) feet, maximum fifty (50) feet between expansion joints.
 - 3. Accessories: Wire ball downspout strainer.
 - 4. Gutters with Girth up to 15-Inches: Fabricate from the following materials:
 - a. Prepainted Metallic-Coated Steel: 0.022 inch (24-gage) thick.
 - 5. Gutters with Girth 16- to 20-Inches: Fabricate from the following materials:
 - a. Prepainted Metallic-Coated Steel: 0.028 inch (22-gage) thick.
 - B. Downspouts: Fabricate rectangular downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
 - 1. Fabricated Hanger Style: SMACNA figure designation 1-35A.

2.9 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Exposed to View Metallic-Coated Steel Components: Paint to match prepainted metallic-coated steel prior to installation:
 - 1. Clean: Comply with SSPC-1 - Solvent Wipe.
 - 2. Primer: Apply specified or finish paint manufacturer's recommended primer in accordance with manufacturer's instructions.
 - 3. Finish Coat: Apply powder coating or approved urethane enamel in accordance with manufacturer's instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 3. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
 - 4. Verify membrane termination and base flashings are in place, sealed, and secure.
- B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

- A. General: Install underlayment as recommended by SMACNA and as indicated on Drawings.
- B. Polyethylene Sheet: Install polyethylene sheet with adhesive for anchorage to minimize use of mechanical fasteners under sheet metal flashing and trim. Apply in shingle fashion to shed water, with lapped and taped joints of not less than 2 inches.

3.3 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Field measure site conditions prior to fabricating work.

2. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 3. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 4. Provide continuous cleats fastened not more than 12-inches on center. Anchor cleats with a minimum two fasteners.
 5. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 6. Install sealant tape where indicated.
 7. Torch cutting of sheet metal flashing and trim is not permitted.
 8. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by cited sheet metal standard.
1. Coat concealed side of stainless-steel sheet metal flashing and trim with approved water cut-off mastic where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 - a. Minimum Dry Film Thickness: 15-mils.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course polyethylene sheet.
 3. Bed flanges in thick coat of approved water cut-off mastic where required for waterproof performance.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10-feet. With no joints within 18-inches of corners or intersections.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Fastener: Use fasteners of sizes that will penetrate wood blocking not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws; and other substrates not less than recommended by fastener manufacturer to achieve maximum pull-out resistance:
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1-inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
 2. Prepare joints and apply sealants to comply with requirements in Section 07 9200 "Roofing Sealants."

- G. 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 except reduce pre-tinning where pre-tinned surface would show in completed Work.
1. Do not solder pre-painted metallic-coated steel sheet.
 2. Do not use torches for soldering.
 3. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
 4. Stainless Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.
- H. Rivets: Rivet joints where indicated and where necessary for strength.
- I. Protect all membrane penetrations as indicated and as recommended in SMACNA and NRCA manuals.

3.4 ROOF DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.
- B. Hanging Gutters: Join sections with joints sealed with elastomeric sealant. Provide for thermal expansion. Attach gutters at eave or fascia to firmly anchor them in position. Provide end closures and seal watertight with sealant.
1. Fasten gutter spacers to front and back of gutter.
 2. Anchor back of gutter that extends onto roof deck with cleats spaced not more than 24-inches apart.
 3. Anchor gutter with gutter brackets and straps spaced not more than 36 inches apart to roof deck, unless otherwise indicated, and loosely lock to front gutter bead. Stagger brackets from straps.
 4. Install gutter with expansion joints at locations indicated, but not exceeding, 50 feet apart. Install expansion-joint caps.
- C. Downspouts: Join sections with 1-1/2-inch telescoping joints.
1. Provide hangers with fasteners designed to hold downspouts securely to walls. Locate hangers at top and bottom and at approximately 96 inches o.c. in between.
 2. Provide elbows at base of downspout to direct water away from building.
- D. Splash Blocks: Install where downspouts discharge on low-slope roofs or onto grade.
1. Roof Discharge: Set on traffic pads compatible with roofing membrane.
 2. Grade Discharge: Set on a bed of compacted fill.
- E. Parapet Scuppers: Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
1. Anchor scupper closure trim flange to exterior wall and seal with elastomeric sealant to scupper.
 2. Loosely lock front edge of scupper with conductor head.
- F. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1-inch below scupper discharge.

3.5 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." Provide concealed

fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install starter and edge strips, and cleats before starting installation.
 2. Strip in all sheet metal flanges the same day they are installed.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces specified in "Performance Requirements" Article unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at 12-inch centers.
1. Backer Plates: Secure with fasteners suitable for substrate, 6-inches o.c. each face.
 2. Interlock bottom edge of roof edge flashing with continuous cleats anchored to substrate at 12-inch centers.
 3. Apply 1/4-inch bead of sealant between each layer of metal at each edge.
 4. Cover Plates: Hook front or exposed face of cover plate over drip edge.
 5. Do not use mastic between sheet metal components.
- C. Copings: Anchor to resist uplift and outward forces specified in "Performance Requirements" Article unless otherwise indicated.
1. Interlock exterior bottom edge of coping with continuous cleat anchored to substrate at 12-inch centers.
 2. Anchor interior leg of coping with washers and screw fasteners through slotted holes at 12-inch centers.
- D. Pipe or Post Counterflashing: 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.
- E. Counterflashing: 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 elastomeric sealant. Secure in a waterproof manner by means of interlocking folded seam or blind rivets and sealant unless otherwise indicated.
1. Install surface mounted reglets true to lines and levels.
 - a. Seal top of reglets with sealant.
 - b. Secure in place with neoprene head screws at maximum 12-inches on center.
- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
1. Provide prefabricated thermoplastic flashings wherever possible.
 2. Seal with elastomeric sealant and clamp flashing to pipes penetrating roof.
- G. Protect all membrane penetrations as indicated and as recommended in SMACNA and NRCA manuals.

3.6 MISCELLANEOUS FLASHING INSTALLATION

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

3.7 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.8 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

3.9 SCHEDULE - MATERIALS

- A. Exposed to View Components:
 - 1. Gravel Guards, Through Wall Scuppers, Etc.: Thermoplastic-coated metallic-coated steel sheet. Face Plate, prepainted metallic-coated steel sheet.
 - 2. One-Piece Flashing and Expansion Joint Terminations: Metallic-coated steel sheet, powder-coated to match adjacent prepainted metallic-coated steel sheet components.
 - 3. All Other Components: Prepainted metallic-coated steel sheet.
 - 4. Wrap heavy gage materials with prepainted metallic-coated steel sheet or powder-coat to match.
- B. Through-Wall Flashings: Stainless steel sheet.
- C. Concealed from View Components, (Counterflashings, Expansion Joint Covers, Etc.): Metallic-coated steel sheet.
- D. Rain Hoods and Umbrellas: Metallic coated steel sheet.

END OF SECTION 07 6200

SECTION 07 7200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Equipment supports.
2. Pipe Supports/Hangers.
3. Molded Equipment Pads.

B. Related Requirements:

1. Section 06 1055 "Roofing Carpentry" for wood cants, and wood nailers.
2. Section 07 5400 (Thermoplastic Membrane Roofing" for roofing accessories.
3. Section 07 6200 "Sheet Metal Flashing and Trim" for shop- and field-fabricated metal flashing and counterflashing, roof expansion-joint covers, and miscellaneous sheet metal trim and accessories.
4. Section 22 0500 "Common Work Results for Plumbing" for plumbing and piping modifications, removal, and reinstallation.
5. Section 23 0500 "Common Work Results for HVAC" for HVAC equipment modifications, removal, and reinstallation.
6. Section 26 0500 "Common Work Results for Electrical" for electrical equipment disconnection and reconnection.

1.3 REFERENCES

- A. Aluminum Association (AA): Specifications for Aluminum Structures.

- B. American Society for Testing and Materials (ASTM):

1. A 53: Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
2. A 123: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
3. A 240: Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
4. A 500: Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
5. A 653: Steel Sheet, Zinc Coated, (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip process, Structural (Physical) Quality Property.
6. A 666: Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
7. A 780: Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
8. C 920: Elastomeric Joint Sealants
9. C 1311: Solvent Release Sealants
10. D 4397: Polyethylene Sheeting for Construction, Industrial and Agricultural Applications

- C. Manufacturer's Standardization Society of the Valve and Fittings Industry, Inc. (MSS):

1. SP-58 Pipe Hangers and Supports, Materials, Design and Manufacture.
2. SP-59 Pipe Hangers and Supports, Selection and Application.

- D. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.

- E. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.
- F. 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. Pipe Supports: Support all roof mounted piping with engineered, prefabricated, portable system designed for installation on roof without roof penetrations, flashings, or damage to roofing materials. Include bases, structural steel frames, and adjustable height pipe hangers or supports suitable for existing and proposed piping and conduits.

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 PRE-INSTALLATION MEETING

- A. Preinstallation Conference: Conduct conference at Project Site.
 - 1. Convene two weeks prior to commencing work of this Section.
 - 2. Require attendance of parties directly affecting work of this Section.
 - 3. Review conditions of installation, installation procedures, and coordination with related work.

1.7 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 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.

1.8 INFORMATIONAL SUBMITTALS

- A. Samples: For each type of exposed factory-applied finish required and for each type of roof accessory indicated, prepared on Samples of size to adequately show color.
- B. Manufacturer's Installation Instructions: Include installation sequence, special instructions and precautions, and Material Safety Data Sheets (MSDS).
- C. 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 Quality Assurance, and;
 - 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.

1.9 CLOSEOUT SUBMITTALS

- A. 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.
- B. Operation and Maintenance Data:
 - 1. Include complete instructions for normal maintenance and local contacts for service and spare parts.
 - 2. Include cleaning and stain removal methods and recommended cleaning materials, polishes, and waxes.
- C. Warranty: Special warranty specified in this Section.

1.10 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in the manufacturer 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 Applicator Company experienced in using selected manufacturer's Products.
- D. 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.
- E. Perform work in accordance with MSS SP-59.
- F. Maintain one copy of each document accessible to site.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.
- B. 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.

1.12 FIELD CONDITIONS

- A. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.
- B. Regulatory Requirements:
 - 1. Conform to applicable code for fire and wind loading requirements.

- C. 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.
- D. Existing Conditions: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings.
 - 1. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
 - 2. Allow for field tolerances if taking field measurements before fabrication is not possible.

1.13 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
 - 1. With Architect/Engineer's approval, adjust location of roof accessories that would interrupt roof drainage routes or roof expansion joints.
- 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 Owner.
- 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.

1.14 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. Equipment Supports: Provide warranty on curbs against structural failure.
 - 2. Pipe Support System: Provide warranty covering pipe bases against deterioration for same time period as roofing warranty.
 - 3. Warranty Period:
 - a. Pipe Support System: Same duration as Roofing System Warranty.
 - b. Other Items: 5 years from date of Beneficial Occupancy.
- B. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Beneficial Occupancy.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers listed in other Part 2 articles.

2.2 METAL MATERIALS

- A. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755.
 - 1. Galvanized Steel Sheet: ASTM A 653, G90 coated.
 - 2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792, AZ50 coated.
- B. Stainless-Steel Shapes or Sheet: ASTM A 240 or ASTM A 666, Type 304 or Type 316, No. 2D finish.
- C. Steel Shapes: ASTM A 36, hot-dip galvanized to comply with ASTM A 123, unless otherwise indicated.
- D. Steel Tube: ASTM A 500, round tube, baked-enamel finished.
- E. Galvanized Steel Tube: ASTM A 500, round tube, hot-dip galvanized to comply with ASTM A 123.
- F. Galvanized Steel Pipe: ASTM A 53.

2.3 MISCELLANEOUS MATERIALS

- A. Polyisocyanurate Board Insulation: ASTM C 1289, not less than 1 inch thick.
- B. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, complying with AWPA C2; not less than 1-1/2 inches thick.
- C. Polyethylene Sheet: 6-mil- thick, polyethylene sheet complying with ASTM D 4397.
- D. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by roof accessory manufacturer. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners.
- E. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- F. 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.
- G. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized and heavy bodied for hooked-type expansion joints with limited movement.

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 and integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
 - 1. Manufacturers:
 - a. Custom Curb, Inc.
 - b. LM Curbs.

- c. Pate Company (The).
 - d. Thaler Metal Industries Ltd.
 - e. ThyCurb; Div. of Thybar Corporation.
 - f. Or A/E approved equal.
2. Load Requirements: As required to support equipment weight.
 3. Material: Metallic-coated steel sheet, 0.052 inch thick.
 4. Factory-install continuous wood nailers 3-1/2 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.

2.5 ROOF MOUNTED PIPE / EQUIPMENT SUPPORTS

- A. Pipe Support System and Hangers: Adjustable height, with bases, traffic pads, and manufacturer's recommended hardware for mounting on roof membrane, suitable for quantity of pipe runs and sizes, with EPDM end caps.
1. Hot-dip galvanize completed assemblies.
 2. Fabricate to MSS SP-58 and MSS SP-69.
 3. Pipe Size 2-1/2-inch and Smaller: Single roller supports for piping subject to expansion and contraction; with 3-sided channels and pipe clamps.
 4. Pipe Size 3-inch and Larger: Rollers, clevis hangers or band hangers, to allow for expansion and contraction without movement of the bases
 5. Manufacturers:
 - a. Mapa Products
 - b. Miro Industries, Inc.
 - c. Portable Pipe Hangers, Inc.
 - d. Or A/E approved equal.
 6. Steel Framing: 12 gage minimum cold-rolled, hot dipped galvanized steel perforated channel sections equal to Uni-strut, Portable Pipe Hangers, or A/E approved equal.
 7. Bases: Black, injection molded, moisture resistant, chemical resistant, non-flammable high density polypropylene plastic, or manufacturer's standard approved.
 8. Accessory Hardware: Hot dipped galvanized, clamps, bolts nuts and washers as required for a complete system.
 9. Traffic Pad: Recycled elastomers vulcanized into pads, 3/8-inches thick; TufPad® manufactured by Rubber Products, Inc. or A/E approved equal.
 - a. Size: Not less than four (4") inches larger in both directions pedestal base.
 10. Support Height: As indicated or required for existing items to be supported.
- B. Mechanical Units and Duct Supports: Same manufacturer as pipe supports, and suitable for item to be supported, including manufacturer's standard hardware for mounting to structure or structural roof deck.

2.6 MOLDED EQUIPMENT PADS

- A. Molded Equipment Pads: Injection molded from high performance polyolefin; resistant to impact, ultraviolet degradation, weathering, cracking, flaking or warping; with textured finish.
1. Available Manufacturers:
 - a. NDS or A/E approved equal.
 2. Pad Size: Minimum 6-inches larger than equipment to be supported on all sides.
 3. Thickness: Minimum 2 inches, or as recommended by pad manufacturer for weight and size of equipment.

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, 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 loose gravel, dirt, dust, oils, and other foreign materials from all roofs. Prime existing substrate or membrane with primer that is compatible with and acceptable roofing membrane 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 coating acceptable to roofing membrane manufacturer or by other permanent separation as recommended by manufacturer.
 - 1. Coat concealed side of stainless-steel roof accessories with approved 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 approved water stop 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. Locate curbs and support framing where indicated or instructed by PA.
 - 2. 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 (2.5) pounds per square inch.
 - 2. Set bases with adhesive in accordance with manufacturer's installation instructions and as acceptable to membrane manufacturer. Accurately locate and align bases.
 - 3. Install framing system at spacings 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.
- I. Molded Equipment Pad Installation:
- 1. Verify location of roof-mounted equipment to receive molded equipment pads.
 - 2. Verify proper orientation of equipment to be supported on molded equipment pads and adjust pad orientation as required prior to placement of equipment onto molded equipment pads.
- 3.4 FIELD QUALITY CONTROL
- A. Site inspection will be performed under provisions of Section 01 4000 "Quality Requirements".
 - B. Request site attendance of Roof Accessory manufacturers 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. Reclean 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 under provisions of Section 01 5000 "Temporary Facilities and Controls".
 - B. Do not permit traffic over unprotected roof surfaces.

END OF SECTION 07 7200

SECTION 07 9200 - SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Urethane joint sealants.
- B. Related Requirements:
 - 1. Section 07 5400 "Thermoplastic Membrane Roofing" for application and locations for sealants used in conjunction with roofing.
 - 2. Division Section 07 6200 "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. C 1193 - Standard Guide for Use of Joint Sealants
 - 3. C 1330 - Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants
 - 4. D 1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

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 selected joint-sealant product, indicating sealant chemical characteristics, performance criteria, preparation, limitations, and colors available.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch wide joints formed between two 6-inch long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- E. Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.

- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- D. Manufacturer's Installation Instructions: Include substrate preparation requirements, special precautions and installation temperature range and Material Safety Data Sheets (MSDS).

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

1.8 FIELD 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 or are below 40 deg F.
 2. When joint substrates are wet.
 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.2 JOINT SEALANTS, 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 joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect/Engineer from manufacturer's full range.

2.3 URETHANE JOINT SEALANTS

- A. Single-Component, Nonsag, 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 one of the following:
 - a. BASF Building Systems; Sonolastic Ultra.
 - b. Pecora Corporation; Dynatrol I-XL.
 - c. Sika Corporation, Construction Products Division; Sikaflex - 1a.
 - d. Tremco Incorporated; Vulkem 116.
 - e. Or A/E approved equal.

- 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 one of the following:
 - a. BASF Building Systems; Sonolastic SL 1.
 - b. Pecora Corporation; Urexpan NR-201.
 - c. Sika Corporation. Construction Products Division; Sikaflex - 1CSL.
 - d. Tremco Incorporated; Vulkem 45.
 - e. Or A/E approved equal.

2.4 JOINT SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and 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. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction 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: Nonstaining, 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, 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 joint substrate 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 or as indicated by 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 or primer 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 kind 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 Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs 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 profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
 4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.
- 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 nonsag urethane sealant ES-1.
 2. Joint-Sealant Color: As selected by Architect/Engineer from manufacturer's full range to match sheet metal color.
 - B. Joint-Sealant Application JS-2: Pitch Pan Filler.
 1. Joint Sealant: Single-component nonsag urethane sealant ES-2.
 2. Joint-Sealant Color: Black.

END OF SECTION 07 9200

SECTION 22 0500 – COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. 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.

B. Related Requirements:

1. Section 07 5400 "Thermoplastic Membrane Roofing" for installing sheet metal flashing and trim integral with membrane roofing.
2. Division Section 07 7200 "Roof Accessories" for equipment support curbs and pipe support devices.

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 Mechanical Code.
- 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 Pipe: 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-501E.
 - 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 under provisions of Section 01 4000 "Quality Requirements."
- 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 under provisions of Section 01 7700 "Closeout Procedures."

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 7300 "Execution."
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 22 0500

SECTION 23 0500 – COMMON WORK RESULTS FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. 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.

B. Related Requirements:

1. Section 07 5400 "Thermoplastic Membrane Roofing" for installing sheet metal flashing and trim integral with membrane roofing.
2. Section 07 7200 "Roof Accessories" for equipment support curbs and pipe support devices

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 installation 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 specified uplift 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 and airtight.

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 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 under provisions of Section 01 4000 "Quality Requirements."
- 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 under provisions of Division 01 Section "Closeout Procedures."

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 Division 01 Section "Execution."
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Division.

END OF SECTION 23 0500

SECTION 26 0500 – COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 1. Common Work Results for Electrical specifically applicable to Division 26 Work, in addition to Division 01 "General Requirements."
 2. Lifting, moving, re-installation, repairs, and minor modifications to existing equipment, and service lines and connections.
 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.
- B. Related Requirements:
 1. Section 07 5400 "Thermoplastic Membrane Roofing" for installing sheet metal flashing and trim integral with membrane roofing.
 2. Division Section 07 7200 "Roof Accessories" for equipment support curbs and pipe support devices.

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 durations 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. Lightning Protection System Certification: Secure LPI System Certification and UL Master Label and deliver to Owner's Representative upon completion of installation.
- D. 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. Lightning Protection System Installer: Company specializing in installing lightning protection systems with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. All work to be performed under supervision of a LPI Certified Master Installer.
- D. Conform to NFPA 70 and applicable Building Code for all electrical work.
- E. Obtain permits, and request inspections from authority having jurisdiction.
- F. 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 required 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.

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.
- B. Lightning Protection Devices: Those required to match existing installation or to meet applicable Electrical Codes and as defined by LPI and Industry Standards, including:
 1. Air Terminals: Inconspicuous slender rods.
 2. Conductors: Cables (meeting current code) to interconnect air terminals and other system components.
 3. Ground Terminations: Metal rods driven into earth.
 4. Surge Arrestors and Suppressors: Devices installed in conjunction with a lightning protection system to protect electrical wiring and electronic systems and equipment.

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 terminations 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 water tight to adjacent elements and around penetrating elements.

3.4 ELECTRICAL WIRING AND SYSTEMS REPAIRS

- 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 ROOF-MOUNTED LIGHTNING PROTECTION SYSTEM RESTORATION

- A. Remove and reinstall existing lightning protection system and devices under direct supervision of a LPI Certified Master Installer or certified manufacturer's representative.
- B. Coordinate with other trades to insure a correct, neat, and unobtrusive installation. Install all equipment in a neat workmanlike manner in most inconspicuous manner possible.
- C. Protect existing through-roof riser assemblies and/or downlead cables during roof tear-off and extend or modify as required to suit new roofing system.
- D. Replace all broken or missing downleads and/or through-roof riser assemblies to applicable codes.
- E. Do not bring cables directly through roof. Provide solid rods or conduit for all through roof connectors and penetrate through approved pitch pocket or cable penetration detail.
- F. Ensure a sound bond to main water service and interconnection with other building ground systems, including both telephone and electrical.
- G. Provide or coordinate installation of arresters on power and telephone service by Utility Provider or Electrical Contractor.

- H. Coordinate all flashing and sealing of lightning protection system roof penetrations to ensure proper installation by roofing contractor in accordance with roofing system manufacturer's requirements.

3.6 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
- 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.

3.7 CLEANING

- A. Clean work under provisions of Section 01 7300 "Execution."
- B. Clean TDCJ occupied areas when soiled by Work or operations of this Section.

END OF SECTION 26 0500