

PURCHASING DEPARTMENT 200 TECHNOLOGY WAY SUITE 1151 COLLEGE STATION, TEXAS 77845-3424

INVITATION FOR BID

IFB NUMBER IFB-21-02

Project Number 818022

Hudson Storage Building

BID MUST BE RECEIVED BEFORE: 2:00 P.M. CENTRAL STANDARD TIME (CST) Tuesday, October 13th, 2020

> MAIL, HAND DELIVER, AND /OR FAX (979-458-7387) BID TO:

Texas A&M Forest Service Purchasing Department 200 Technology Way, Suite 1151 College Station, TX 77845-3424

Show IFB Number, Opening Date, and Time on Return Envelope

NOTE: BID must be time stamped at the <u>Texas A&M Forest Service Purchasing Department</u> before the hour and date specified for receipt of bid.

Sealed bids will be received until the date and time established for receipt.

REFER ALL INQUIRIES TO:

Alan Degelman CTPM Texas A&M Forest Service Purchasing Department Phone: 979-458-7380 E-mail: adegelman@tfs.tamu.edu

SPECIFICATIONS

MINI STORAGE BUILDING

TEXAS A&M FOREST SERVICE

HUDSON, TEXAS

TEXAS A&M UNIVERSITY SYSTEM

15/2020

PROJECT NO. 818022

September 2020

NOTICE OF PROJECT

Mini Storage Building Texas A&M Forest Service Hudson, Texas Texas A&M University System September 2020 Project No. 818022

SCOPE OF WORK

Base Bid

Furnish all labor, materials, equipment and services necessary for: Construction of an **88'W x 52'L x 12'H** pre-engineered metal storage building structure with a 2:12 gable roof, 30 - 8'W x 7'H rollup doors, 4 - 4'W x 7'H pass doors, gutters/downspouts, on concrete slab foundation, with 25' concrete skirt and 2 entrances, 2 - 5 ton A/C only units and electrical, as indicated on the plans and/or described herein.

Alternate 1

Furnish all labor, materials, equipment to install **lighting** and **electrical** to each of the 30 storage units, as noted on plans.

OPENING DATE

This project will open at 2:00 p.m. (CST) on Tuesday, October 13th, 2020 and will be read aloud at 200 Technology Way, College Station, TX 77845 in conference room #1120. Any bids received after that date and time cannot be accepted.

Sealed bids may be mailed, hand delivered or faxed to:

Texas A&M Forest Service Purchasing Department 200 Technology Way, Suite 1151 College Station, TX 77845 Fax – 979-458-7387

Refer all inquiries to Alan Degelman, CTPM, Purchasing Department Head at adegelman@tfs.tamu.edu

INSTRUCTIONS TO BIDDERS

PROJECT SITE

The project site is located at Texas A&M Forest Service, 155 Texas Forest Service Loop Hudson, Texas 75904.

MANDATORY EXAMINATION OF SITE

A Pre-Bid conference will be held at 11:00 AM Tuesday, September 30, 2020 on site.

All contractors must sign in at front office.

Contact for site investigation is Kevin Runnels (Owner's Representative) at 936-546-8010 cell.

A mandatory site inspection, is required prior to bidding. Each contractor shall be required to visit the site and examine the condition of the site.

The Contractor shall sign in with the Owner's Representative and provide the following
information in writing:Company Name
AddressPhone Number / E-mail / Fax
Person's Name
Date/Time

Failure to comply with this section will be grounds for rejection of bid.

No information noted in the specifications shall relieve the Contractor of the responsibility of visiting the site and making such investigations and measurements as he/she may require.

DISCREPANCIES AND INTERPRETATIONS

Areas/distances noted are approximations only meant to give an idea of magnitude of the project and are not intended to represent the actual areas/distances which are to be determined by the Contractor.

BID BOND / PROPOSAL GUARANTY

Not Required.

QUALIFICATIONS OF BIDDER

The Owner may make such investigations as necessary to determine the ability of the Bidder to perform the Work, and if requested the Bidder shall furnish any requested information and data including an audited financial statement within 5 days of the Bid Opening. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of such Bidder fails to satisfy the Owner that this Bidder is properly qualified to complete the Work.

Delivery of the Bid/Proposal prior to the advertised time set for the receipt of the Proposal is the responsibility of the bidder.

CONTRACT AWARD

The Owner agrees if the Contract is awarded, it will be awarded to the lowest responsible bidder and the award will be made within sixty (60) days of the bid opening date, unless otherwise stated in the Proposal.

Immediately following action by the awarding authority, the successful bidder will be notified of the award.

The Owner reserves the right to accept or reject any or all alternates or to accept any combination of alternates considered advantageous

PERFORMANCE and PAYMENT BONDS

Performance and Payment Bonds are not required on contracts of \$25,000 or less. Chapter 2253, Texas Government Code, T.C.S., requires that **if the Contract Sum exceeds \$25,000**, **the awarded Contractor shall provide an executed Payment Bond and if the Contract Sum exceeds \$100,000**, **the awarded Contractor shall also provide an executed Performance Bond**.

- 1. Each bond shall be executed and contain an embossed seal by a Surety(ies) on forms approved by the Attorney General of Texas. If any Surety upon any bond furnished in connection with the Contract becomes insolvent, or otherwise not authorized to do business in the State, the Contractor shall promptly furnish equivalent security to protect the interests of the State and of persons supplying labor, materials and/or equipment in the performance of the Work.
- 2. Each bond shall have attached a valid Power-of-Attorney issued by the Surety, signed and sealed with the corporate embossed seal, authorizing the agent who signs the bond to commit the Surety to the terms of the bond, and stating the limit on the face of the Powerof-Attorney, if any, in the total amount for which the agent is empowered to issue a single bond.
- 3. The Owner may consider Performance and Payment Bonds only from a Surety authorized to do business in Texas.

The cost of any such bonding <u>must be included in the Base Bid amount</u>. No additional charges will be allowed for bonding. **Bonds must be executed on standard TAMUS forms.**

PURCHASE ORDER

Texas A&M AgriLife Research / Extension / Forest Service reserves the right to substitute the word "Purchase Order" for "Contract" in the documents whenever it feels that a signed Purchase Order will expedite the Project.

INSURANCE

The Contractor shall obtain and maintain, for the duration of this Agreement or longer, the minimum insurance coverage set forth below. With the exception of Professional Liability (E&O), all coverage shall be written on an occurrence basis. All coverage shall be underwritten by companies authorized to do business in the State of Texas or eligible surplus lines insurers operating in accordance with the Texas Insurance Code and have a financial strength rating of A- or better and a financial strength rating of VII or better as measured by A.M. Best Company or otherwise acceptable to Texas A&M AgriLife Research/Extension/Forest Service. By requiring such minimum insurance, the Owner shall not be deemed or construed to have assessed the risk that may be applicable to the Contractor under this Agreement. The Contractor shall assess its own risks and if it deems appropriate and/or prudent,

maintain higher limits and/or broader coverage. The Contractor is not relieved of any liability or other obligations assumed pursuant to this Agreement by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types. No policy will be canceled without unconditional written notice to Texas A&M AgriLife Research/Extension/Forest Service at least ten days before the effective date of the cancellation.

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Coverage		
A. <u>Worker's Compensation</u> Statutory Benefits (Coverage A) Employers Liability (Coverage B)	Statutory \$1,000,000 Each Accident \$1,000,000 Disease/Employee \$1,000,000 Disease/Policy Limit	

Workers' Compensation policy must include under Item 3.A. on the information page of the workers' compensation policy the state in which work is to be performed for Texas A&M AgriLife Research/Extension/Forest Service. Workers' compensation insurance is required, and no "alternative" forms of insurance will be permitted.

B. <u>Automobile Liability</u>

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Business Auto Liability Insurance covering all owned, non-owned or hired automobiles, with limits of not less than \$1,000,000 Single Limit of liability per accident for Bodily Injury and Property Damage;

If a separate Business Auto Liability policy is not available, coverage for hired and non-owned auto liability may be endorsed on the Commercial General Liability policy. Additional Endorsements

The Auto and Commercial General Liability Policies shall name the Texas A&M University System Board of Regents for and on behalf of The Texas A&M University System and Texas A&M AgriLife Research/Extension/Forest Service as additional insured's.

C.	Commercial General Liability	
	Each Occurrence Limit	\$1,000,000
	General Aggregate Limit	\$2,000,000
	Products / Completed Operations	\$1,000,000
	Personal / Advertising Injury	\$1,000,000
	Damage to rented Premises	\$300,000
	Medical Payments	\$5,000

The required commercial general liability policy will be issued on a form that insures the Contractor's or its subcontractors' liability for bodily injury (including death), property damage, personal and advertising injury assumed under the terms of this Agreement

D. The Contractor will deliver to Texas A&M AgriLife Research/Extension/Forest Service:

Evidence of insurance on a Texas Department of Insurance approved certificate form verifying the existence and actual limits of all insurance after the execution and delivery of this Agreement and prior to the performance of any services by the Contractor under this Agreement. Additional evidence of insurance will be provided on a Texas Department of Insurance approved certificate form verifying the continued existence of all required insurance no later than thirty (30) days after each annual insurance policy renewal.

<u>All insurance policies</u>, with the exception of worker's compensation, employer's liability and professional liability shall be endorsed and name The Board of Regents for and on behalf of The Texas A&M University System, The Texas A&M University System and Texas A&M AgriLife Research/Extension/Forest Service as Additional Insureds up to the actual liability limits of the policies maintained by the Contractor. Commercial General Liability and Business Auto Liability will be endorsed to provide primary and non-contributory coverage. The Commercial General Liability Additional Insured endorsement will include on-going and completed operations and will be submitted with the Certificates of Insurance.

<u>All insurance policies</u> shall be endorsed to provide a waiver of subrogation in favor of The Board of Regents of The Texas A&M University System, The Texas A&M University System and Texas A&M AgriLife Research/Extension/Forest Service. No policy may be canceled without unconditional written notice to Texas A&M AgriLife Research/Extension/Forest Service at least ten days before the effective date of the cancellation. <u>All insurance policies</u> shall be endorsed to require the insurance carrier providing coverage to send notice to Texas A&M AgriLife Research/Extension/Forest Service ten (10) days prior to the effective date of cancellation, material change, or non-renewal relating to any insurance policy required in this Section 11.

Any deductible or self-insured retention must be declared to and approved by Texas A&M AgriLife Research/Extension/Forest Service prior to the performance of any services by the Contractor under this Agreement. The Contractor is responsible to pay any deductible or self-insured retention for any loss. All deductibles and self-insured retentions will be shown on the Certificates of Insurance.

Certificates of Insurance and Additional Insured Endorsements as required by this Agreement shall be mailed or emailed to the following Texas A&M AgriLife Research/Extension/Forest Service contact:

Jimmy Dunn AgriLife Admin Services – Engineering TAMU 2147 College Station, Texas 77843-2147 <u>jd-dunn@tamu.edu</u>

The insurance coverage required by this Agreement shall be kept in force until all services have been fully performed and accepted by Texas A&M AgriLife Research/Extension/Forest Service in writing, except as may be noted.

The furnishing of the above listed insurance coverage, as may be modified herein, must be tendered prior to performance of the Contract. Failure to provide the insurance in a timely fashion may result in loss of the Contractor's bid surety and/or cancellation of the Contract.

The Owner shall be entitled, upon request and without expense, to receive copies of the policies and all endorsements as they apply to the limits set out in these specifications.

HISTORICALLY UNDERUTILIZED BUSINESSES (HUBS)

For proposals totaling \$100,000 (Base Bid plus all Alternates) or more, a completed HUB Subcontracting Plan (HSP) must be submitted with the bid. This means at the same time. For proposals totaling less than \$100,000 a HSP is not required

A Historically Underutilized Business (HUB) is defined by statue as: (a) a corporation formed for the purpose of making a profit in which at least 51% of all classes of the shares of stock or other equitable securities are owned by one or more persons who are socially disadvantaged because of their identification as members of certain groups, including Black Americans, Hispanic Americans, women, Asian Pacific Americans, and Native Americans, and have suffered effects of discriminatory practices or similar insidious circumstances over which they have no control; and, have a proportionate interest and demonstrate active participation in the control,

operation, and management of the corporation's affairs; (b) a sole proprietorship created for the purpose of making a profit that is 100% owned, operated, and controlled by a person described in (a); (c) a partnership formed for the purpose of making a profit in which at least 51% of the assets and interest in the partnership is owned by one or more persons who are described in (a) and have a proportionate interest and demonstrate active participation in the control, operation, and management of the partnership's affairs; (d) a joint venture in which each entity in the joint venture is a HUB; or, (e) a supplier contract between a HUB and a prime contractor under which the HUB is directly involved in the manufacture or distribution of the supplies or materials or otherwise warehouses and ships the supplies.

A goal-oriented system, established by the 73rd Legislature, encourages prime contractors to award subcontracts to and make material and supply purchases from HUBs. The goal of 30% is based on the total value of the Contract

It is the contractor's responsibility to demonstrate to the State that a "good faith effort" has been made to meet the 30% goal. Examples of "good faith effort" are soliciting proposals from the Texas Certified Historically Underutilized Business Directory, reduce the size of subcontract packages, corresponding with HUB associations and advertising in HUB publications.

HUB SUBCONTRACTING PLAN (HSP)

HSP instructions and documents are included in specifications. Be aware, **at least (7) working days must be allowed** for HUBs to respond to notice prior to you submitting a bid.

For questions and/or assistance regarding the HSP, bidders are encouraged to <u>contact Alan Degelman</u> (979) 458-7381, <u>adegelman@tfs.tamu.edu for assistance</u>. Bidders should not assume they know what constitutes an acceptable HUB Subcontracting Plan. <u>Be advised to make this contact sooner rather than later to discuss the required elements and allow required time for HUB notice and response.FINAL ACCEPTANCE AND PAYMENT</u>

Progress Payments: Invoices may be submitted at monthly intervals for progress payment of labor and material on site to date. Retainage of 5% may be withheld till final.

Notification: When the work is completed, the Contractor shall notify the engineer that the work will be ready for Pre-final Inspection on a definite date. Upon verification by the engineer that the deficiencies found during pre-final inspection have been corrected and the Work is ready for final inspection and acceptance, the engineer will within 10 days make a final inspection, and when the work is found acceptable under the Contract documents, without exceptions, and the contract is fully preformed, the Owner will make final payment to the Contractor. (Re. 1.04. E.)

Final Payment Documentation: neither the final payment nor the remaining retained percentages shall become due until the Contractor submits to the Engineer (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 Article 601f, T.C.S., (2) consent of surety, if any, to final payment and (3) if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, release and waivers of claims arising out of the Contract, to the extent and in such form as may be designated by the Owner.

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 Beneficial Occupancy; (2) failure of the work to comply with the requirement of the contract documents; (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.

Commodity codes identified include but are not limited to the following:

150-15	Concrete
150-55	Doors, overhead
570-76	Rebar
909-25	Building construction, prefabricated
909-76	Construction site work
914-27	Construction services, carpentry, new
914-30	Construction services, concrete, new
914-38	Construction services, electrical, new
975-24	Construction equipment rentals

GENERAL REQUIREMENTS

WORK AREA AND ACCESS

All work, materials storage, staging, and parking shall be confined within the area(s) designated by the Owner's Representative.

Access to site shall be coordinated directly with the Owner's Representative. No construction traffic will be allowed over field/pasture roads or other non-designated areas.

RULES AND REGULATIONS

Work shall be performed in accordance with rules and regulations of the state of Texas, the latest edition of the International Building Code, National Electrical Code, International Plumbing Code, National Fire Protection Association Fuel Gas Code (NFPA54), Minimum Safety Standards for Natural Gas, Texas Accessibility Standard/ADA.

Give precedence to drawings and specifications when they require higher standards than those required by rules, regulations, and/or codes. Otherwise rules, regulations, and codes govern.

This project is not subject to local/municipal codes and/or permitting as it is being constructed on property belonging to the state of Texas.

USE OF FACILITIES

The Contractor shall insure that Owner's personnel and equipment will not be endangered during construction and will be allowed continued normal operation within the buildings and grounds.

TOOLS, EQUIPMENT, AND VEHICLES

The contractor shall furnish all tools (hand, power, pneumatic, etc.), equipment, and vehicles for the construction of this project. All facilities, tractors, welders, forklifts, etc. of Texas A&M University are off-limits.

SANITARY FACILITIES

The Contractor shall be responsible for providing adequate portable facilities.

CONSTRUCTION UTILITIES

Electrical Service: Electrical power will be available from warehouse across road from construction site. The Contractor shall be responsible to verify that adequate power is available for work operations. Tiein and use shall be coordinated with Owner's Representative. The Contractor must furnish necessary labor, extension cords, temporary panels, lighting, equipment, etc. for his/her own use.

Water Service: The Owner will furnish limited water for construction purposes free of charge. Point of connection and use shall be coordinated with Owner's Representative. The Contractor must furnish all pipes, hoses, fittings, devices and accessories required for his/her operations.

DELIVERIES

The Contractor shall have personnel at the site necessary to accept delivery and accomplish unloading/handling of materials and equipment. The Owner will not be responsible for accepting and/or unloading of materials and equipment associated with this project.

STORAGE AND PROTECTION

The Contractor shall properly store materials and equipment at the jobsite within an area designated by the Owner's Representative. Protect same from the elements when in open storage. The Contractor shall be responsibility for keeping the assigned area free from fire hazards relating from improper storage procedures.

The Owner accepts no responsibility for the security of the stored materials.

Properly protect equipment, insulation, and other materials during construction. Handle equipment, materials, and devices carefully to prevent damage.

Material or equipment improperly handled or damaged from rough usage or improper storage shall be removed and replaced with new units when so directed by the Engineer.

CLARIFICATION

In case of doubt, do not proceed with work without first obtaining from the Engineer additional information or detail drawings as may be necessary for proper execution of work. Report discrepancies found in drawings and specifications without delay.

SUBSTITUTION OF MATERIALS

Where any article or thing is specified by proprietary name, trade name, name of manufacturer or catalog number with or without the addition of such expressions as "or equal" or "approved equal," it is to be understood that the article named or the equal thereof is intended, subject to the approval of the Engineer as to the equality thereof, and it is distinctly understood (1) that the Engineer shall use his judgement in determining whether or not any article or thing proposed to be substituted is the equal of any article or thing as specified; (2) that the decision of the Engineer on such questions of equality shall be final; and (3) that in the event of any adverse decision by the Engineer, no claim of any sort shall be made or allowed against the Owner.

CUTTING AND PATCHING

Required cutting and patching shall be done by the Contractor and/or responsibility Subcontractor as necessary to accomplish the work described. Insure that all related penetrations, both old and new, are accomplished in a workmanlike manner and sealed as necessary for weather tight conditions upon completion of work.

DAMAGES

Care shall be exercised to prevent damages to existing facilities, trees, lawns, site improvements, site utilities, equipment, etc. Any such damages occurring shall be promptly corrected as directed by the Engineer. No claims for corrected work due to damages resulting from the Contractor or his Subcontractor shall be considered for payment.

WASTE DISPOSAL AND CLEANING

All materials removed/replaced shall become property of the Contractor unless otherwise agreed with the Owner's Representative.

Debris shall be contained in a container, truck, or restricted refuse area as coordinated with the Engineer and Owner's Representative.

The Contractor shall be responsibility for keeping the jobsite picked up clean and uncluttered during the course of construction. This includes timely removal and proper legal disposal off-site of all waste and debris associated with his/her job.

The Contractor shall provide safe and reliable transportation of debris, so that no material is allowed to fall onto public property or any other property other than the destination to which the removed materials are being transported.

Prior to final inspection and acceptance, perform final cleaning and removal of all waste, debris, and/or surplus materials resulting from this work.

SUBMITTALS

Submittals for approval will be required for all shop drawings any proposed substitutions of materials. **Three copies required for Engineer's use.**

Materials submittals shall include copies of manufacturer's catalog descriptions, performance characteristics, data sheets and/or other information relative to a complete description of the items.

RECORD DRAWINGS

The Contractor shall maintain on site a copy of drawings to record information concurrently with construction progress. This record set shall be stored in the Contractor's field office apart from the construction set. Record drawings shall be available for the Owner and shall contain the following information:

- 1. Location of utilities and appurtenances concealed in construction
- 2. Location of internal utilities and appurtenances concealed in construction.
- 3. Indicate all field changes approved by the Engineer and all approved change orders.

INSPECTIONS

The Engineer shall be given at least 72 hours notice prior to each inspection milestone noted below:

Pre-final Inspection - When all work is complete, a general inspection will be conducted. A written punch-list of all deficiencies found to date will then be issued to the Contractor for correction.

The Engineer shall be given at least 7 days notice prior to:

Final Inspection - Upon verification by the Owner's Representative that all known deficiencies have been corrected, a final inspection will be conducted within 10 days.

GUARANTEE

The Contractor shall guarantee that the work performed under this contract is free from faulty materials and workmanship and will remain so for a period of one year from the date of substantial completion or acceptance by the Owner. Final payment on the contract by the Owner shall not relieve the Contractor of this responsibility.

Upon completion and prior to final payment, the Contractor shall furnish two complete copies of the following, all in clear vinyl jackets and assembled within 3-ring binder type covers:

Written certification, signed by the Contractor, attesting to the fact that the completed facility complies with the requirements of the drawings and specifications and is warranted for a period of one year as outlined above.

Until receipt of these guarantees, final inspection will not be conducted nor final payment released.

Specific requirements for additional warranties and guarantees to include parts, labor, and other costs are noted in various sections of the technical specifications. Extended warranties / guarantees are required for, but not limited to the following:

Lock Sets	3 years
Door Closers	3 years
Pass, roll-up, sectional doors	2 years
Copies of manufactures' warranties	for all equipment and fixtures.

Manufacturers' operation manuals, instructions and information for all equipment.

Contractor and subcontractor contact information for service.

SITE WORK 210 - EXCAVATION, FILLING AND GRADING

WORK INCLUDED

Perform all excavation, filling, grading and incidental work to construct the building in accordance with specifications and plans.

EXAMINATION OF SITE

No information shown on the drawings shall relieve the Contractor of the responsibility of visiting the site and making such investigations as he may require.

CLEARING AND EXCAVATION

Thoroughly strip/remove all grass, roots and organic matter in areas where concrete is to be placed.

Bottom of beams, footings and piers shall be level and shall be cleaned of all loose dirt, clay or rock prior to setting of reinforcing steel and placing of concrete.

In the event that excavation for beams, footings and piers is carried to a greater depth than that scheduled, the additional depth shall be filled with concrete.

It shall be the responsibility of the Contractor to ensure that all unstable or otherwise objectionable material shall be removed from the subgrade and replaced with acceptable material.

DISPOSITION OF EXCESS MATERIAL

All excess material, including trash, roots, debris, etc., shall be spread or stock piled on or near site, as coordinated with the Owner.

FILL MATERIALS

Select earth fill shall be clean, sandy earth, free from roots, rubbish or other foreign matter. **Submit** sample for approval.

Fill material on top for leveling bed shall be select fill sand.

FILLING AND GRADING

Select fill shall be placed on the prepared subgrade to produce a pad of the final thickness and grades (after compaction) indicated on plans. The spreading operations shall be done in such a manner as to achieve a tight compacted, uniformly graded surface without pockets of loose materials.

Leveling bed under slabs shall be approximately 3" thick after grading. Wet down leveling bed under slab until thoroughly damp and recheck grades before placing vapor barrier and/or reinforcing.

COMPACTION

The Owner will be responsible for all testing, but the Contractor shall be required to coordinate sequence of operations to allow for testing in a timely manner.

Compaction shall be accomplished by mechanical means suitable for the type of material being compacted.

Fill shall be placed in horizontal layers not exceeding 8 inches in loose thickness.

Subgrade under building pad and concrete slabs shall be wetted/dried to a uniform moisture content between minus one and three percent (3%) above optimum moisture content and then compacted.

Proof-roll must be administered using a full dump truck and meet the approval of the Engineer before proceeding.

Each layer shall be compacted to not less than 95% density (Standard Proctor) as determined by ASTM D698.

FINISH GRADING

Finish grade shall be at minimum 1' above the highest existing grade at site

Upon completion of building construction, grade adjacent area as necessary to provide for drainage and prevent ponding water during periods of runoff.

255 - UTILITIES TRENCHING AND BACKFILLING

WORK INCLUDED

Perform all trenching, back filling, and incidental work to install underground electrical conduits to the building in accordance with the drawings and specifications.

PROTECTION OF EXISTING UTILITIES

It shall be the responsibility of the Contractor to verify the existence and location of all underground utilities along the route of work. The omission from or the inclusion of utility locations on the plans is not to be considered as the nonexistence of, or a definite location of, existing underground utilities.

The Contractor shall take the necessary precautions to protect existing utilities from damage due to his operations. Any damage to the utilities will be repaired immediately at the Contractor's expense.

EXCAVATION AND TRENCHING

Remove all earth, rock or other materials as necessary to install the conduit, lines, piping and appurtenances as detailed.

The sides of all trenches shall be cut as nearly vertical as possible.

Trenches shall be a minimum 6" wide, maximum 12" wide.

Minimum depth of cover and marking requirements for piping/conduit shall be as follows:

- Water	18" (N/A)
- Drain/Waste	As necessary to achieve slope (N/A)
- Electrical	30" w/ marker tape above
- Gas	36" w/ marker tape above and tracer wire (N/A)

BACKFILL MATERIALS

Back filling shall be done with good earth or sand select fill free of large rocks or other objectionable materials.

The same material as removed in excavation may be used for backfill if approved. However, **any backfill material must be approved by the Engineer** prior to placement.

DISPOSITION OF MATERIALS

The Contractor is responsible for providing adequate backfill material and the removal of any excess material.

<u>GRADING</u>

Prior to acceptance of the work, any settlement that has occurred shall be repaired and the level of the area restored too slightly above that of the adjacent undisturbed ground to compensate for future settlement.

DIVISION 3 - 300 - POURED-IN-PLACE CONCRETE

WORK INCLUDED

Furnish and install all poured-in-place concrete work as outlined in these specifications and on plans.

GENERAL

Supervision: Perform reinforced concrete work under direct supervision of Contractor's Superintendent. The Superintendent shall control under direction of the Engineer.

Place inserts, anchors, anchor bolts and similar devices required as indicated on approved shop drawings. Do not place concrete until shop drawings and devices are received, devices set accordingly and setting approved by the Engineer.

CODES AND REQUIREMENTS

Reinforced Concrete Work: Conform to current issues of ACI-318, CRSL-59, CRSL-63 and Referenced ASTM Specifications and Standards, latest revision.

In the event of discrepancies between the various codes and standards and these specifications, the most stringent shall govern.

NOTIFICATION

Notify the Engineer of the time schedule for any pouring operation at least 72 hours before the start of placing concrete so that he may inspect the proper placement of forms, reinforcing, embedded items, rough-ins and related conditions. Furnish adequate light and access to all parts of the work for inspection.

Notify Engineer when forms, fill, and reinforcing are sufficiently set to allow inspection. Do not place any concrete prior to receiving approval by the Engineer.

MATERIALS

Reinforcing Steel: Intermediate grade new billet steel conforming to ASTM-615, No. 4 bars and larger, yield strength of 60,000 psi, No. 3 bars and smaller, yield strength of 40,000 psi, free from flaws or mill defects, cleaned of all loose rust, scale, grease, paint or other foreign matter.

Kinks or bends not shown on approved shop drawings will be cause for rejections. Do not bend or straighten bars in a manner that will weaken or otherwise injure the material.

Furnish certified copy of mill tests on reinforcing steel if requested.

Spacers, Chairs, Bolsters, Supports, etc.: Fabricated of standard bright basic wire or plastic as approved.

All items placed on fill for slabs shall be furnished with sand plates similar in construction.

Tie Wire: 16-gauge annealed wire.

Form Board: DFPA form board plywood or SYP #2 lumber.

Vapor Barrier: 6 mil black polyethylene sheet.

Form Oil: A light clear oil which will not discolor or otherwise injuriously affect the concrete surface, delay or impair curing operations.

Cement: Portland Cement, Type 1, conforming to ASTM C-150, latest revision.

Fine Aggregate: Clean, sharp, washed natural sand, free from organic matter, conforming to ASTM C-33, latest revision.

Course Aggregate: Washed gravel graded from 1 1/2" to No. 2 sieve, ASTM C-33.

Water: Potable

Air-entraining Admixture: Use at rate recommended to achieve an air content of 3-4% in concrete at point of placement.

Curing/Sealing Compound: Chemicals used on exposed concrete shall be clear, non-discoloring and shall not darken or yellow with age. Insure compatibility with any adhesives, sealants and sealing compounds to be used. Shep Seal 1315 UV as manufactured by Sheplers or approved equal. **Submit for approval.**

Pour Grade Sealant: One or two-part urethane, self-leveling. Sonneborn type SL- or equal.

Bonding Agent: High solids copolymer emulsion, Shep-Weld Plus by Sheplers or equal.

FORMING/REINFORCING

Forms: Of good quality lumber free from loose and unsound knots, knot holes, twists, decay and other defects which would affect its strength or impair the finished surface of the concrete conforming to the shape, lines and dimensions of the members as called for on the plans. Substantially and sufficiently tight to prevent leakage of mortar and properly braced or tied together so as to maintain position and shape. Provide temporary openings for inspection and cleaning. Forms shall be set so that exterior face of concrete is formed to minimum 6'' below adjacent natural grade.

Wetting and Oiling Forms: Coat facing of forms with an approved oil, applied before reinforcing is set. Wet all surfaces of forms that will be in contact with concrete with water immediately before concrete is placed. In hot weather, treat both sides of forms to prevent warping and to secure tight joints.

Expansion Joints: In locations indicated, install specified wooden expansion joint filler in sizes required and extend dowels through forms minimum 12" for placement in slab. Maintain top edge of filler 1/2" below concrete surface for sealant joint by means of removable plastic strips.

Placement of Reinforcing Steel: Accurately form and place reinforcement in accordance with ACI 318, latest revision. Adequately support in position on metal chairs and spacers. Use ties or other positioning accessories to prevent movement in accordance with the ACI Building Code 318, latest revision.

Unless otherwise noted, bend all bars cold. Do not straighten or rebend bars without approval of the Engineer.

Keep splices to a minimum. Lap bars 30 bar diameters minimum, except as otherwise noted on the Foundation Drawings.

Tie reinforcing together at all intersections. Tie bars to stirrups at every intersection. Provide not less than two ties at all splices. Tie all steel sufficiently to provide proper spacing and to prevent dislocations during placement of concrete.

Clean steel of scale, heavy rust and any other coatings that will reduce bond. Reclean steel left projecting from concrete for subsequent bonding to remove cement or other contamination.

Support steel for slabs on fill with specified chairs and bolsters of proper height and size to support steel. Hang reinforcing of beams on grade at intervals to prevent deflection and provide ample bottom cover.

Setting Miscellaneous Items: Set required bolts, weld plates, angle nosings, anchors, dowels, sleeves, miscellaneous items, etc., occurring in connection with concrete work. Place to grade and secure in position before concrete mixture is placed. Building anchor bolts shall be bolted in place through wooden templates nailed to forms.

Protective Concrete Covering of Reinforcing Steel: As shown on the drawings. If not indicated on the drawings or if exceeded by requirements of ACI Building Code 318, conform to code.

Install vapor barrier under all concrete to be under roof.

Lap joints of vapor barrier and lace together with nails.

CONCRETE QUALITY, CONTROL AND TEST REQUIREMENTS

Testing Laboratory: **The Owner will employ a testing laboratory** to preform quality control testing. Testing Laboratory shall submit copies of test results both to the Engineer and the Contractor. The Contractor shall contact the testing laboratory directly to schedule testing.

Mix Design: Minimum ultimate **compressive strength at 28 days = 3,500 pounds per square inch**. Submit for approval.

Test Cylinders: Owner's testing laboratory shall take a minimum of one set of (three) test cylinders for each 50 cubic yards or fraction thereof during the time the foundation is being poured. Each set shall have one cylinder broken at 7 days and two at 28 days for compressive strength. Curing and tests shall be according to ASTM C-39, under the supervision of the testing laboratory with a copy of tests furnished to both the Engineer and Contractor.

Slump: Slump tests shall be made by the Owner's testing laboratory in accordance with ASTM C-143 at intervals similar to test cylinders and as requested by the Engineer. Allowable slump shall be 3-1/2" minimum to 4-1/2" maximum.

Contractor: Deliver to the Engineer, at the time of concrete delivery, one of the delivery invoices stating cement content per yard and volume of concrete.

CONCRETE MIXING, HANDLING AND PLACING

Ready-Mixed: Mixed at central plant or in mixing trucks. Mixed and delivered in accordance with ASTM Specifications for ready-mixed concrete (ASTM C-94). Deliver concrete with specified consistency and slump, and place immediately in final position.

Proportion: Proportion such that concrete will flow readily into corners, angles of forms and around reinforcement without excessive spading, puddling, segregation or collection of free water, will not produce harshness in working or honeycombing and will produce a smooth and sound surface throughout when forms are removed.

Handling: Convey concrete to place of disposition without separation of ingredients. Should separation inadvertently occur, re-mix concrete before placing. If concrete starts to set before placing, remove from site. Re-tempering will not be permitted.

Form Preparation: Remove debris and waste from forms. Wet wood forms thoroughly immediately prior to placing concrete.

Deposition Against Set Concrete: Roughen contact surfaces of set concrete, remove loose material and scrub surface with latex bonding agent immediately prior to depositing fresh concrete.

Vibration: Compact concrete with stinger type internal vibrator to remove air pockets and work concrete around reinforcement and embedded items and in all beams. Use vibrator with care to prevent separation of ingredients, displacement of forms, inserts, reinforcement and cast-in items. Vibrator shall not be used to move concrete.

Placement of Concrete: Place as nearly as practicable in final position. In general, place in horizontal layers of uniform thickness. Compact each layer uniformly before the next layer is placed. Do not allow concrete to drop freely more than 4 feet.

Stopping Work: When conditions are such that work must be stopped before completion of mass, leave concrete with clean, rough surface without cavities or loose stones.

Construction Joints: Allowable only as shown at expansion joints or on approval of the Engineer. Locate in planes of minimum shear as directed or indicated on the drawings.

Control Joints: Saw cut ¹/₂" deep as necessary to score the surface for crack control. Locate approximately 15' on center each way and/or as indicated on the drawings or otherwise approved.

Cold Joints: Deposit concrete so as to secure as nearly as possible a monolithic structure without joints except as detailed. Pour slabs and the beams which support them in one continuous operation.

Bulkheads: Construct solid and plumb with suitable keys for stopping concrete. Locate at right angles to planes of stress and at locations of minimum shear.

Slabs on Fill: Before placing concrete directly on fill, all water, sewer, drainage lines and other subsurface piping shall be completed, inspected and back filled. Sand fill shall be carefully compacted and at elevation required.

Inspection: Concrete shall not be placed until forms, reinforcing, piping and anchors intended to be placed within the concrete mass have been inspected and approved by the Engineer. Notify the Engineer at least 72 hours prior to anticipated date of pour. Do not place any concrete prior to receiving approval by the Engineer.

CONCRETE FINISH WORK

Monolithic Slabs: Screed concrete off to elevations, slopes and levels shown. Smooth with a "bull float." Sprinkling of raw cement on surface **will not be permitted**. When concrete is reasonably firm, finish as hereinafter specified.

Uniformity of Slab Surfaces. Any non-uniformity of slab surface will be cause for rejection. In this event, chip the surface 3/4 inch deep and apply a satisfactory finish topping at no expense to the Owner. Slab surface shall be level within 1/8 inch when measured along a 10-foot straight edge.

Labor: Insure that for conditions at the time, adequate experienced labor is on hand to place and finish concrete as specified.

Finish for interior surfaces shall be hard trowel finish. Exterior surfaces shall be rough broom across direction of travel.

Curing/Sealing: After concrete has hardened sufficiently, immediately apply the specified curing/sealing compound with a hand sprayer at rate recommended by the chemical manufacturer. Other means of curing may be used only with approval of the Engineer.

Control Joints: Saw scored control joints shall be installed to approximately 3/4" depth as indicated on the drawings or approved by the Engineer.

COLD WEATHER REQUIREMENTS

Obtain approval of the Engineer before placing concrete during freezing or near-freezing weather.

Provide adequate equipment for protecting concrete. Use no frozen materials such as materials containing ice. All materials and all reinforcement, forms, fillers and ground with which concrete is to come in contact shall be free of frost.

Placement of concrete will not be permitted when temperature is below 45 degrees F and falling or when freezing conditions may be expected with 24 hours.

REMOVAL OF FORMS

Remove forms in a manner that will prevent damage to surfaces and breaking of corners on concrete work.

Leave forms in place a minimum of 24 hours after placing concrete.

After concrete has hardened sufficiently, remove void strips at expansion joints and seal as detailed and specified.

PATCHING

Fill and finish all honeycombed surfaces with mortar composed of one-part cement, two parts sand and a small amount of latex bonding agent.

Remove unsound material from areas requiring patching, moisten and coat with bonding agent then pack solid with mortar. Trowel flush with finished surfaces and wet cure for three days.

Honeycombed or blemished surfaces exposed to view shall be patched in defective areas and rubbed over the entire surface of the member with carborundum stone as necessary to provide uniform appearance.

Furnish all labor, materials, and equipment required to install a complete CMU wall system 3' above finish floor as noted in the specifications and drawings.

SUBMITTAL REQUIREMENTS

Submit for approval a sample of all materials proposed to be furnished.

QUALITY ASSURANCE

The split faced concrete masonry manufacturer shall have a minimum of five years experience manufacturing and grinding ground face CMU at their current facility.

Single-Source Responsibility: Obtain split faced concrete masonry units from one source and by a single manufacturer for each color required.

All split faced concrete masonry units shall be factory-split. Units not split in the factory will not be acceptable.

Split faced concrete units shall specifically conform to paragraph 7.3.1 of ASTM C90 with regard to imperfections (chips and cracks).

DELIVERY, STORAGE, AND HANDLING

Split faced concrete masonry units shall be delivered to the jobsite banded on wood pallets with protective cardboard between layers of units.

Store split faced masonry units on elevated platforms, under waterproof cover, and in a dry location. If units become wet, do not install until they are in an air-dried condition.

Handle split faced concrete masonry units with extreme care to avoid chippage and breakage.

PROJECT CONDITIONS

Cold Weather Requirements: Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold weather construction requirements in ACI530.1/ASCE 6/TMS 602.

Hot Weather Requirements: When ambient temperature exceeds 100 deg F (38 deg C), or 90 deg F (32 deg C) with a wind velocity greater than 8 mph (13 km/h), do not spread mortar beds more than 48 inches (1200 mm) ahead of masonry. Set masonry units within one minute of spreading mortar.

MATERIALS

CMU shall be Split Faced Masonry Units as manufactured by Featherlite Building Products Corporation, similar to warehouse building across road or approved equal.

Split faced masonry units shall be made from natural and manufactured aggregates, cement, and color. The manufacturer shall exercise extreme care in the manufacturing process to minimize variations in size, shape, texture, and particle color.

All split faced units shall have a factory applied sacrificial coating of clear, unpigmented, VOC-compliant acrylic sealer.

Provide special shapes for lintels, corners, jambs, sash, control joints, headers, bonding, and other special conditions. Provide bullnose/square-edged units for outside corners.

All split faced units shall be manufactured with integral water repellent "Dry Block" as manufactured by W.R. Grace & Company.

Coping stone shall be used for transition between metal sheet panels and CMU.

Split faced units shall comply with ASTM 90 and as follows:

- Unit compressive strength: 1,900 psi
- Weight classification: light/medium weight
- Type: Type I, moisture-controlled units

- Size: Manufactured to the actual/nominal dimensions requested within tolerances specified in ASTM C90, except bed depth dimension on single face units shall be 1/16" less than ASTM C90 and double-face units shall be 1/8" less.

- Finish: Exposed faces of split faced units shall match color, pattern, and texture of submittal selection.

Clean split faced masonry using Custom Masonry Cleaner as manufactured by ProSoCo,Inc. or approved equal.

Mortar and Grout:

- Portland Cement : ASTM C 150 type I or II

- Hydrated Lime: ASTM C 207 type S

- Pigmented Mortar: Colored cement or cement-lime formulation as required to produce the color selected by the Owner.

- Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.

- Aggregate for Grout: ASTM C 404

- Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar. Submit samples for Owner's approval.

- All exterior ground face units shall be laid using mortar with integral water repellent admixture "Dry-Block Admixture" at the rate recommended by W.R. Grace & Company.

Split Faced Concrete Masonry Water Repellent Prime-A-Pell 200 as distributed by Featherlite Building Products Corporation.

Water : Potable

INSTALLATION

Cut masonry units with motor-driven saw, using diamond or abrasive blades. Install cut units with cut surfaces and, where possible, cut edges concealed.

Select ground face units from multiple pallets for blending.

Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following- For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb more than 1/4 inch in 20 feet, nor 1/2 inch maximum.

- For conspicuous horizontal lines, such as exposed lintels, sills, parapets, and reveals, do not vary from plumb more than 1/4 inch in 20 feet, nor 1/2 inch maximum.

Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement type joints, returns, and offsets. Avoid using less- thanhalf-size units, particularly at corners, jambs, and, where possible, at other locations.

Masonry wall ties shall be installed to insure proper masonry wall support in accordance with industry standards.

Bond Pattern for Exposed Masonry: Lay exposed masonry in a running bond pattern; do not use units with less than nominal 4 inch (100 mm) horizontal face dimensions at corners or jambs.

Built-in Work: As Construction progresses, build in items specified under this and other Sections of the Specifications. Fill in solidly with masonry around built-in items.

Lay hollow masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.

Lay solid brick-size masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

Mortar joints shall be tooled and not raked.

Cover wall each day after installation to keep open wall protected and dry.

CLEANING

Care should be taken to keep the walls as clean as possible during construction.

Keep split faced units clean daily using brushes, burlap, etc.

No high pressure spray (power wash) cleaning methods shall be used.

FIELD COAT APPLICATION

After final cleaning, wait until walls are dry and apply masonry water repellent protection **Prime-A-Pell 200.** as specified herein to all walls laid with split face concrete masonry units with one flood coat using an industrial pump sprayer.

Furnish and install pipe bollards as indicated on the drawings.

MATERIALS

Steel of sizes and dimensions shown or otherwise necessary.

Miscellaneous Steel Framing: Conform to the requirements to ASTM A-36, A-529, A-572, Grade 42 or A-570. Grade E, latest revision as applicable.

INSTALLATION

Per drawings and as coordinated with Engineer.

Furnish and install insulation **on exterior walls and under roof deck** in conjunction with framing/sheeting of the building.

MATERIALS

Building Insulation: Constructed of white PVC film with fiberglass scrim reinforcement and .0005" metallized polyester film on 3" glass fiber blanket insulation. Owens Corning or approved equal.

Roof Deck Insulation: Ceiling insulation shall **be one layer** 3" vinyl backed glass fiber blanket insulation and a second layer of 3" unfaced installation installed perpendicular over top.

Poultry Netting: Required on walls only up to girt nearest 7' A.F.F.

APPLICATION

Installation of insulation shall be done in strict accordance with the Manufacturer's recommendations.

Insulation shall be closed tightly at seams.

Insulation shall be pulled taut over the lathing members before attaching the roof panels. The vapor barrier shall face toward the interior of the building.

Tabs or tab shall be lapped in accordance with standard accepted practices to maintain a continuous vapor barrier.

Seal lap seams of roof sheeting. Caulk around bottom exterior edge of metal wall panels and around any penetrations through walls and/or roof.

MATERIALS

Tape Sealer: 100% solids butyl based elastomeric material, minimum 1/2" X 3/32".

Caulking: NP-1 polyurethane caulk as manufactured by Sonneborn.

APPLICATION

Clean all surfaces to contact sealants before application.

Apply tape sealer to all lap seams of roofing sheets, around all flashing and vents including areas with foam closure strips.

830 - DOORS and FRAMES

WORK INCLUDED

Furnish all labor, equipment, and materials necessary to install, 30 - 8' W x 7' H rollup doors, 2 - 4'W x 7'H hollow metal interior pass doors, and $2 - 4'W \times 7'H$ hollow metal exterior pass door with $\frac{1}{2}$ lite as indicated on the plans and/or described herein.

EXTERIOR PASS DOORS

Pass doors shall be a commercial steel door as manufactured by Ceco Corp. or approved equal.

The door and frame supplier shall furnish to the Engineer two (2) complete copies of the proposed doors and frames schedule and/or shop drawings.

Provide Steel Door and Frame complying with the Steel Door Institute recommended specifications for Standard Steel Doors and Frames ANSI/SDI 100 (Latest edition).

Door and frame shall be properly marked with door opening mark number to correspond with the schedule.

Deliver door in carton and palletized to provide protection during transit and job storage.

Store door and frame at the job site under cover. Place units on wood sills on the floor in a manner that will prevent rust and damage. Avoid the use of non-vented plastic or canvas shelters, which could create a humidity chamber. If the wrapper on the door becomes wet, remove the carton immediately. Provide a ¼ inch space between stacked doors to promote air circulation.

Locate hardware on door and frame in accordance with the manufacturer's standard location and Texas Accessibility Standard/ADA.

When steel frames are used with wood doors, the hardware preparation in the door is governed by the location on the frame. If the doors are factory mortised, the door supplier is responsible for coordinating hardware locations.

Hardware reinforcements shall be in accordance with the minimum standard gages as listed in SDI-100.

Door shall be mortised, reinforced and function holes provided at the factory in accordance with the hardware schedule and templates provided by the hardware supplier. Through bolt holes, attachment holes, or drilling and tapping for surface hardware, shall be done by others in the field.

Sheets shall be made of commercial quality hot dipped zinc coated steel that complies with ASTM A924 A60.

Vertical edges shall join the face sheets by a continuous weld extending the full height of the door. Welds are to be ground, filled to make them invisible and provide a smooth flush surface.

Hinge reinforcement to be not less than 7 gage (3/16") plate 1-1/4" X 9". Approved equal is a 12-gage continuous channel with formed holes drilled and tapped. The manufacturer is to provide test information with submittal that this type reinforcement is equal to a 3/16" or 7 gage plate reinforcement.

Reinforce tops and bottoms of all doors with a continuous steel channel not less than 16-gage, extending the full width of the door and welded to the face sheet. Where inverted, the top channel shall be flush with the top of the face sheets of the door. Plastic fillers are NOT acceptable.

Insulated doors are to be completely filled with a rigid polyurethane core chemically bonded to all interior surfaces with a minimum insulation value of R10.

Door to have 20 gage vertical steel stiffeners spanning the full thickness of the interior space between door faces. Stiffeners are spaced not more than 6" apart and attached by spot welds spaced not more than 5" on centers. Spaces between stiffeners are to be filled with fiberglass insulation (Min. density 0.8#/cubic ft.)

Shall be hot dipped zinc coated steel that complies with ASTM designations A924 A60.

All frames, except slip on drywall, shall be assembled so that the face miter seam is "closed and tight". Weld the face seam and the full web of the frame corner or intersection. Grind and dress the weld area smooth. Apply a zinc rich primer over the grinding area, and finish with a matching prime paint.

Frame shall be mortised, reinforced, drilled and tapped at the factory for template mortised hardware only, in accordance with approved hardware schedule and template provided by the hardware contractor. Where surface mounted hardware is to be applied, frames shall have reinforcing plates only; all drilling and tapping to be done in the field by others.

Frames shall be welded and have a steel spreader during shipping and handling. Spreader bars are for bracing only and are not be used to size the frame opening.

Door and frame shall be cleaned, and chemically treated to insure maximum finish paint adhesion. All surfaces of the door and frame exposed to view shall receive a factory applied coat of rust inhibiting primer. The finish to meet the requirements for acceptance stated in ANSI A224.1 "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces." The prime finish is not intended to be the final layer of protection from the elements. Field painting using a good grade of paint to be provided in accordance with the recommendations of the door and frame manufacturer. For specialty types of finished coatings, the paint supplier should also be consulted.

It is the responsibility of the General Contractor to make sure that all dimensions for existing opening or existing frames (strike height, hinge spacing, hinge back set, etc.) given to the steel door and frame manufacturer are accurate.

Door shall be fully weather-stripped w/ ADA approved threshold.

INTERIOR PASS DOOR

It is the responsibility of the General Contractor to assure that scratches or disfigurements caused in shipping or handling are properly cleaned and touched up with a rust inhibitive primer.

Prior to installation, all frames must be checked for rack, twist and out of square conditions. Place frames prior to enclosing walls and ceilings. Set frames accurately in position, plumbed and braced securely until permanent anchors are set. Remove shipping bar spreader and insert a wood spreader cut to the opening width, notched to clear the stops. Install door plumb and in true alignment in a prepared opening and fasten them to achieve the maximum operational effectiveness and appearance.

Proper door clearance must be maintained in accordance with SDI-110.

Where necessary, only metal hinge shims are acceptable to maintain clearances.

Attach frame to structure. Reinforce structure at strike and as necessary.

All exterior doors shall be fully weather-stripped.

ROLL-UP DOOR

Roll-up door shall be model 690 series as manufactured by DBCI, or approved equal.

Product Data: Submit manufacturer's product data and installation instructions; including both published data and any specific data prepared for this project.

Shop drawings: Submit shop drawings for approval prior to fabrication.

Sectional Door Assembly: Sectional steel door assembly with double rabbeted meeting rails to form weather tight joints and provide full width interlocking structural rigidity.

Curtain

- 26-gauge galvanized, Grade E hard steel
- 5/8" ribbed corrugation
- Max opening size 10' x 10'
- Siliconized polyester WeatherXL[™] paint over prime coat

Bottom Bar

- 6063 T6 aluminum extrusion
- 1 1/2" x 1 1/2" galvanized angles
- Replaceable bulb astragal

Axle-Drum Assembly

- 1 5/16" O.D. steel axle, 14-gauge
- Utilizes 9 1/2", 18-gauge drums
- Oil tempered e-coated torsion springs, available in two springs upon request from 7' to 10' wide
- Fully accessible springs for inspection and maintenance

Guide System

- 16-gauge galvanized steel guides and wind bar
- Pre-punched holes for anchors, slide latch, bracket attachment and head stop attachement
- Polyethylene guide strips provide easy, quiet operation

Hardware

- <u>Stainless steel standard latch</u>
- 12-gauge head stops have slotted mounting holes for proper attachment
- 14-gauge galvanized steel handles
- <u>12-gauge tension bracket made for additional strength</u>
- Shielded radial bearings for smooth operation
- Gear-driven tensioning bracket allows for smooth adjustment
- 12-gauge bearing bracket on right side

INSTALLATION - SECTIONAL & ROLLUP DOORS

Preparation: Take field dimensions and examine conditions of substrates, supports, and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

Installer: Installation shall be by an authorized representative of the manufacturer.

Install doors in accordance with manufacturer's recommendations.

Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.

Test doors for proper operation and adjust as necessary to provide proper operation without binding or distortion.

Touch up damaged coatings and finishes and clean exposed surfaces using non-abrasive materials and methods recommended by manufacturer.

Installer shall return after 1 year and re-adjust spring tension, as necessary.

870 - FINISH HARDWARE

WORK INCLUDED

Furnish and install all hardware for swing doors. See related work.

MATERIALS

All locksets shall be a medium duty commercial grade 2 as manufactured by Falcon (B Series) lever handle set and matching keyed dead bolt lock with thumb turn inside.

Deadbolt lock shall be required for each door

Finish shall be satin stainless steel.

Cylinders shall be interchangeable cores pinned in 6 chambers. The B series shall accept these standard 6 pin cylinders: Assa, Kaba, Lori, Medeco, Primus, and Schlage.

Hinges shall be heavy duty with brass or zinc finish.

Keying shall be set up as directed by the Owner's Representative.

Closures shall be Sargent 1100 Series or approved equal.

INSTALLATION

Doors shall open and close smoothly with no binding.

Closers shall be thru bolted.

Adjust closers on interior doors for maximum five (5) pounds opening pull and exterior doors for maximum seven (7) pounds opening pull, in accordance with the Texas Accessibility Standard.

Caulk under all thresholds for seal along both edges.

954 - LINEAR METAL CEILINGS

WORK INCLUDED

Work, in general, shall include furnishing and installing metal linear panels as indicated on the drawings and specified herein.

QUALITY ASSURANCE

Coordinate layout of metal linear panels with other work which penetrates or is supported by panels.

WARRANTY

Warrant the work specified herein for one (1) year against becoming unserviceable or causing an objectional appearance resulting from either defective or nonconforming materials and workmanship.

Defects shall include, but are not limited to, the following:

- 1. Scratches or dents to panels
- 2. Discoloration, darkening, or exposed metal parts.
- 3. Rusting or corrosion.

MATERIALS

Metal linear panels shall be white in color.

Deliver panel materials to the job site in original, unopened packages, bearing manufacturer's name and label.

All steel used for roll forming shall conform to ASTM A-366 or A-625 and cleaned in accordance with F.S. TTC-490.

Members shall support ceiling and lighting with maximum 1/360 deflection. Main runners shall comply with ASTM C-635. Intermediate duty, cross tees shall be capable of bearing 12.0 to 15.9 pounds per linear foot.

Main beams and cross tees shall be double thickness web.

Manufacturers offering suspension systems to comply with requirements include the following:

- a. Rockfon
- b. Armstrong Ceiling & Wall Solutions
- c. USG

INSTALLATION

The installer must examine the condition under which metal linear panel ceiling work is to be performed and notify the Contractor in writing of any unsatisfactory conditions.

Prior to start consult other trades and contractors involved to determine areas of potential interference. Do not start installation of suspension system until interferences have been resolved.

Construct necessary scaffolding, adequate and safe, in accordance with local laws and ordinances.

Install all panelswork in accordance with the Manufacturer's specifications and recommendations governed by expected maximum loads.

Securely support ceiling to prevent any movement.

Provide wall and angle moldings where ceilings meet walls, partitions and other vertical elements. Miter cut inside and outside corners.

Field cutting shall be done in a neat and inconspicuous manner.

Provide all necessary support to insure no sagging or warp of panels

CLEAN-UP AND PROTECTION

Clean surfaces of panels; comply with manufacturer's instructions. Remove and replace units and members which are damaged or cannot be cleaned.

Prior to the final inspection, examine, adjust and level all ceiling panels, making certain that all planes and lines are plumb, square and smooth.

980 - PAINTING

WORK INCLUDED

Furnish labor, materials and equipment necessary to prepare, prime and/or paint as follows:

Apply finish paint to all exposed steel framed openings, doors, bollards, and other exterior/exposed steel items not under roof.

Shop primed/painted metal building framing is excluded, **except members framing openings for doors and any other framed openings exposed to exterior shall receive finish coating.**

QUALITY ASSURANCE

Material designations indicated below are those of Sherwin-Williams Co. Equivalent first quality products of Benjamin Moore, PPG, Devoe and Glidden will be acceptable.

MATERIALS

Metal treatment (for rusted surfaces) shall be phosphate based rust/metal treatment. OSPHO or approved equal.

Primer shall be Pro Industrial Pro Cryl universal Primer as manufactured by S-W or approved equal.

Finish coating shall be DTM Acrylic Semi-Gloss as manufactured by S-W or approved equal.

Color for bollards shall be safety yellow. All other colors shall be as selected by the Owner.

PREPARATION OF SURFACES

Commencement of painting and finishing operations indicates approval and acceptance of surfaces to be covered. Any surfaces not in proper condition for painting shall be put in such condition before painting is begun.

Chip and brush all welds before treatment and prime painting.

Sand metal surfaces thoroughly between finish coats.

APPLICATION

All surfaces shall be clean and dust free and sanded smooth before the prime coat is applied.

Acceptable finishes shall be smooth, free of runs, laps, brush marks, dust, scratches, etc. and shall be fully covered with uniform color and texture. All coats shall be thoroughly dry before applying succeeding coats.

Clean all steel with toluene, paint thinner, xylene, or other approved cleaning agent to remove oil, grease, and other contaminates prior to OSPHO treatment and primer application.

Treat rusted steel with OSPHO after removing any loose rust, then apply red oxide primer.

Exposed Steel Components: Shall receive one coat of industrial primer or as necessary to cover.
Apply primer paint per industry standards and manufacturer's recommendations.

Metal Frames, Metal Swing Doors: Shop primed and shall receive two coats INDUSTRIAL ENAMEL.

PROTECTION

Floors, pre-finished metal panels, insulation, doors, equipment, adjacent surfaces, etc. must be protected during painting operation.

CLEANING

Clean any paint spots from concrete and other surfaces.

DIVISION 10 - 1014 - SIGNAGE AND GRAPHICS

WORK INCLUDED

Furnish and install tactile signage, room name and number, at each public entrance to each room or suite in the interior of the building as detailed on the plans and noted in this section.

ROOM and/or DOOR IDENTIFICATION

Signs shall be colored laminated plastic plates, 8" and 6"high x 6" min. width x 1/8" thick with approximately 1" high room numbers and letters as required on matt finish background of color selected to match walls.

Description

<u>6"h and 8"h x 6"w</u>

1/8" nonglare acrylic face plate that will have surface applied raised text, and raster Braille with D/F tape for mounting.

Characters, symbols, or pictographs on tactile signs shall be raised 1/32" minimum. Raised letters and numbers shall be sans serif upper case characters. Raised characters or symbols shall be at least 5/8" high, but no higher than a nominal 2".

Comply with all requirements for Tactile Signage as required by The Texas Accessibility Standards Manual, current edition, Texas Department of Licensing and Regulation, Architectural Barriers Section, Austin, Texas.

Size and text for each sign shall be as follows:

6"h x 6"w room identification

	Removeable Card 1
Rm 101	East TX Ops
Rm 102	FRP Admin
Rm 103	East TX Ops
Rm 104	FRP Admin
Rm 105	East TX Ops
Rm 106	Incident Response
Rm 107	Miti & Prev
Rm 108	Miti & Prev
Rm 109	Miti & Prev
Rm 110	Miti & Prev
Rm 111	Miti & Prev
Rm 112	Miti & Prev
Rm 113	Miti & Prev

	Removeable Card 1
Rm 114	Miti & Prev
Rm 115	Miti & Prev
Rm 116	Mechanical
Rm 117	Mechanical
Rm 118	Capacity Building
Rm 119	TBD
Rm 120	Capacity Building

Rm 121	TBD
Rm 122	Capacity Building
Rm 123	Capacity Building
Rm 124	Capacity Building
Rm 125	Capacity Building
Rm 126	Capacity Building
Rm 127	Capacity Building
Rm 128	FRP Admin
Rm 129	Capacity Building
Rm 130	FRP Admin
Rm 131	Forest Systems
Rm 132	Forest Analytics

INSTALLATION

Secure with adhesive and mount at 60" A.F.F. to the center on strike side of door 8" from door frame per TAS/ADA requirements.

Where more than one public entrance to a suite or room occurs, each such entrance shall receive tactile signage.

Confirm locations with Owner's Representative.

Signs shall be installed at locations in accordance with the Texas Accessibility Standard (TAS).

HANDICAP PARKING SIGNAGE

Install van accessible handicap sign at new parking space. See Elevations on plans

Handicap parking sign with "van accessible" placard as manufactured by Best Manufacturing Sign Systems, Montrose, CO. or approved equal. Sign to be .080 aluminum 12"x18" (1) #SS56 and (1) #SS57 with factory furnished U channel post for mounting.

Handicap sign shall be installed at the new handicap parking space.

The grooved handicap curb ramp shall have a light reflective value that significantly contrasts with that of

adjoining pedestrian routes.

1044 – FIRE EXTINGUISHER

WORK INCLUDED

Furnish and hang two fire extinguishers.

MATERIALS

Extinguisher shall be 10# ABC type, refillable with brass valve. Amerex B441, Badger B10M, Buckeye 10HI SB or approved equal.

KNOXBOX

Knox Box 3200 Series or approved equal.

INSTALLATION

Hang on structure wall near pass doors as noted on plan and coordinated with Engineer.

Hang knox box near front entry, as seen on plans at 60" a.f.f. or as determined by local Fire Marshall.

1300 - METAL BUILDING AND ACCESSORIES

WORK INCLUDED

Furnish all labor, materials, equipment and services necessary for:

Construction of a **88'W x 52'L x 12'H** pre-engineered metal storage building structure with a 2:12 gable roof, **30 - 8' W x 7' H** rollup doors, 4 - 4'W x 7'H pass doors, gutters/downspouts as indicated on the plans and/or described herein.

APPROVALS

The pre-engineered metal building manufacturer shall be Rhino, Nucor, Metallic, Mueller, RBS, MBCI, Star, Hillco, Whirlwind or approved equal.

BUILDING TYPE

Clear span building of the rigid-frame type having straight or tapered beams and rolled-shape, tube or flanged columns.

The building "length", "width", "eave height" and "bay spacing" shall all be as nominally detailed dimensions shown on the drawing.

DRAWINGS AND CERTIFICATION

The building manufacturer/contractor shall furnish complete drawings showing anchor bolt and plate settings, foundation details with dimensions required, sidewall, endwall and roof framing, bracing, sheeting, flashing and accessory installation details to clearly indicate the proper assembly of all building parts.

Prior to fabrication, a letter of certification will be required from the building manufacturer that states the said building shipped to the erection site meets the design codes specified. **The letter of certification shall carry a Texas Licensed Professional Engineer's Seal**.

DESIGN

All structural steel sections and welded plate members shall be designed in accordance with the latest edition of the AISC, "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings."

All light gauge cold-formed, structural members and exterior covering shall be designed in accordance with the latest edition of the AISC, "Specifications for the Design of Cold Formed Steel Structural Members."

All design loads shall comply with the local codes and the International Building Code for the applicable region and in no case be less than **20 psf roof live load**, and be capable of sustaining a **110 mph wind gust for 3 seconds**.

Combinations of loads considered in the design of all members of the structure shall comply with the latest addition of the Recommended Design Practices Manual of the MBMA.

The metal building manufacturer shall be responsible for the design of all supporting members and framing for all louvers, vents, windows, doorways, fans, heaters, etc.

STRUCTURAL FRAMING

Mill sections or welded up plate sections: Design in accordance with AISC "Specifications for the Design and Fabrication of Structural Steel for Building."

Cold formed steel structural members: Designed in accordance with AISC "Specifications for the Design of Cold Formed Steel Structural Members."

All Structural and Miscellaneous Steel Framing and Channel Frames: Conform to the requirements to ASTM A-36, A-529, A-572, Grade 42 or A-570. Grade E, latest revision as applicable.

All framing members shall be shop fabricated for bolted or welded assembly. Field cutting, drilling, bolting and welding operations shall be done in a workmanlike manner and subject to approval of the Engineer.

All bolts shall be A307 or A325 as necessary for design loads and connection details.

Foundation anchor bolts for columns shall be cast-in-place J-bolt anchors, furnished by or otherwise in accordance with requirements of the metal building manufacturer.

Thoroughly clean all structural parts at the shop and apply one full covering coat of primer. Wire brush and touch-up paint at locations of field welds after welding.

Apply paint in dry weather or under cover on surfaces free from dirt, dust, rust, moisture and frost.

Provide full covering paint coating thoroughly bonded to metal. A defective paint coating having runs, flaking, peeling areas or inadequate covering will be cause for rejection. Field coating of defective areas will be the responsibility of the structural steel contractor.

Normal field touch-up of paint areas damaged by erection and welding operations shall be accomplished under this section.

Priming Paint: Zinc chromate red oxide alkyd base, compatible with finish coatings if scheduled.

ROOF AND WALL COVERING

Roof and exterior wall coverings shall be 26-gauge precision roll formed ribbed panels of color coated galvanized steel with coverage width of 36" and maximum allowable spacing of major ribs at 12" center to center, typical "R" panel configuration.

Galvanized steel panels shall conform to ASTM Specifications A-446, Grade C, D or E, latest revision and having a tensile strength of at least 40,000 psi.

Zinc coating shall conform to ASTM Specifications A-525, G-90, latest revision.

Roof panels shall be and sealed to form a weather tight structure. **Ridge panels shall be die formed** to match the slope and profile of adjoining roof panels.

Before securing, all laps of roof/ridge panels (including roof flashings and trim) shall be sealed with a continuous ribbon of tape sealer, butyl rubber base or equal not less than 1/2" wide X 3/32" thick.

Roof panels shall be sealed with top quality closed cell foam rubber closures at eaves. Submit for approval prior to installation.

Wall panels shall be continuous from roof line to **approximately 1-1/2'' below column base for notched foundation installation**, unless wall light panels occur at the upper portion of the wall.

Bottom ends of wall panels shall be cut straight.

Structural system shall be plumb with properly spaced purlins and girts before wall panels are attached.

Wall panels shall be attached to a **base angle** bolted to the foundation.

Fasteners shall be manufacturer's standard fasteners designed and spaced to withstand design loads. Fasteners shall have a neoprene sealing washer and be galvanized, cadmium plated or stainless steel. In addition, wall fasteners shall be color coated to match panels.

All panels shall be attached together at lap joints with stitch screws spaced in accordance with manufacturer's recommendations.

Flashing, gutters and/or trim shall be furnished at the rake, corners, eaves, at framed openings and wherever necessary to provide weather tightness and a finished appearance.

Flashings and transitions shall be fabricated of metal similar in appearance and configuration to the roof or wall panels being flashed to. Flashings and transitions to the metal building shall be furnished by the metal building manufacturer unless approved otherwise.

Color of building **wall panels, trim, fasteners, screws and accessories shall be standard colors, similar to existing buildings** as selected by the **Owner**.

Color of roof panels shall be Green.

Unless otherwise specified, the exposed surface of all galvanized steel roof and wall panels, flashing, trim, gutters, downspouts, ventilators, louvers and other exterior galvanized steel surfaces shall be color coated.

Surface preparation shall equal or exceed Government Specification MIL-C-490A, Type 1, Grade 1.

Interior surfaces shall be coated with a shop applied 0.5 mil thickness polyester color coat.

Exterior surfaces shall be color coated with shop applied covering having sufficient physical characteristics to provide resistance to failure through cracking, checking, crazing, spotting or loss of adhesion.

All exterior color finishes shall have a **warranty period of at least 25 years**. Submit copy of manufacturer's warranty.

ACCESSORIES

Eave Gutters: Eave gutters shall be fabricated from 26 gauge (min.) galvanized steel. The outside face of the gutter shall be supported with galvanized straps per manufacturer's recommendations.

Downspouts: Downspouts shall be 26 gauge (min.) galvanized steel with painted finish, rectangular shaped. Downspouts shall have a 45-degree elbow at the bottom and shall be supported by attachment to the wall covering at 10' maximum spacing.

Provide framed, trimmed openings for all windows, doors, louvers, vent fans, penetrations, etc.

ERECTION

Erection of the building shall be done by an experienced crew, approved by the manufacturer and suitable to the Engineer.

Erection resulting in deformed and/or damaged components or judged to be sloppy, inadequate or unsafe shall be cause for rejection by the Engineer. Affected areas must be corrected/replaced immediately.

Wall panels shall be attached so as to form a weather tight structure_with joints typically lapped away from predominate line of sight, unless approved otherwise by the Engineer.

Insure that all roof and wall penetrations are properly made and sealed. Coordinate with other trades as necessary.

As a minimum, fastener spacings shall be as follows:

Wall panels -	Top and bottom @ two (2) per foot Intermediate @ one per foot Stitch screws @ 18'' o.c. max.				
Roof panels -	Eave, ridge and end laps @ two (2) per foot Intermediate @ one per foot Stitch screws @ 18'' o.c. max. & 4'' o.c. at ridge cap panels.				

Sweep roof and gutters clean of all drillings, left over screws, and other foreign materials.

Sweep slab and pick up outside.

1585 - HEATING, VENTILATING and AIR CONDITIONING

WORK INCLUDED

Furnish all labor, materials and equipment required for the installation of 2 - 5 ton split systems A/c only, including control wiring, ducting, and thermostats, as per drawings and specifications.

PERMITS, FEES AND INSPECTIONS

As stated in General Requirements, **this project is not subject to local/municipal codes and/or permitting** as it is being constructed on property belonging to the state of Texas.

QUALITY ASSURANCE

Installer and manufacturer shall each have demonstrated experience in installations of this type and furnish references with contact information upon request.

For convenience, certain items are scheduled using a specific manufacturer and model number. Similar items by other approved manufacturer will be considered for approval.

MATERIALS and EQUIPMENT

Equipment shall be manufactured by Carrier, Trane, Daiken or pre-approved equal.

Cooling capacity of new units shall be as scheduled.

Indoor and outdoor units shall be matched for min. EER performance of **20.0** for zoned mini-split systems and min. EER performance of **15.0** for split system heat pump units.

Units shall be furnished with:

- Louvered or as otherwise approved hail guards.
- Time delay relay (for dual compressor units).
- Anti-short cycle kit.
- Low ambient control.
- Filters shall be accessible for change. Units shall be installed complete with filters and the **Contractor shall supply enough additional filters for three (3) future filter changes.** Any new conventional split system air handlers shall include a filter rack capable of accepting 1" pleated filters.
- Oil traps.
- Smoke duct detectors w/ unit shut down as required by code.
- Thermostats shall be programmable, hard wired, wall mounted.
- Condensate pump if necessary.
- Exposed vapor lines shall be insulated with min. 1" wall insulation and wrapped with aluminum jacket as specified herein.
- Provide precast / cast-in-place concrete or raised fiberglass equipment pads for condensing units sized to the unit dimensions plus min. 6" each way and **height to place unit well above typical rain level.**
- Provide emergency drain pan with drain piping and/or emergency cut-off switch under new indoor split system units installed overhead.
- Provide plastic laminate labels with unit numbers to identify condensing units and coinciding indoor air handler units.

COORDINATION

Coordinate with electrical sub-contractor to insure adequate power, protection, and circuitry.

INSTALLATION

Installation shall conform to the latest editions of the Standard Mechanical Code and National Electrical Code.

Installing Contractor shall demonstrate minimum 5 years relevant experience installing commercial HVAC systems.

All equipment and filters shall be readily accessible for service.

Install new zoned heat pump indoor units to serve the various rooms/zones as seen on plans or as coordinated otherwise by the Engineer. **Submit proposed layout for approval prior to installation.**

Condensing units shall be installed at locations as coordinated with the Engineer. Submit sketch to confirm exact locations prior to installation.

Place outside condensing units at clearances from the building, each other, etc. in compliance with manufacturer's recommendations to allow airflow and service and/or a minimum of 30".

Support indoor split system units on neoprene rubber weatherstrip or vibration pads. Seal to supporting deck where necessary.

Route condensate drain piping to hub / floor drains and/or tie into other drain piping.

Provide ready means of access for clean out of P-traps.

Route indoor refrigerant lines neatly overhead and/or in walls, if possible and support. Route lines to outside condenser units neatly and through port/jack or in walls to minimize piping exposed to exterior.

Protect lines penetrating exterior walls with sleeves of 3/4" pipe insulation or equal. Penetrations through walls, decks, etc. between conditioned and unconditioned space shall be adequately sealed with caulk or mortar in order to prevent air infiltration.

Coordinate penetrations with rough carpentry work and building contractor

Exposed refrigerant lines shall be insulated with fitted fiberglass pipe insulation or Rubatex foam, min. 1" wall thickness. Additionally, insulation on lines exposed to the weather shall be **wrapped/jacketed neatly with aluminum covering** for protection.

Cover/hide line sets, conduit and control cable extending up exterior walls of building with 26-gauge pre-painted metal covers fabricated for the purpose and to fit. Include lines for multiple units under one metal cover when practical.

Provide galvanized sheet metal secondary drain pan with emergency cut off switch under suspended split system units.

Ducts shall be square ductboard, specified and sized by licensed mechanical engineer.

Low voltage control wiring shall be installed within conduit in walls per electrical requirements. Otherwise low voltage control cable may be run neatly exposed above ceiling.

Mount thermostats to electrical boxes in wall at scheduled heights to comply with TAS/ADA.

1610 - ELECTRICAL

WORK INCLUDED

Furnish and install complete power and lighting systems including underground service from warehouse building, panel board, breakers, conduit, wire, boxes, outlets, switches, covers, fixtures, lamps.

Power shall be extended from panel in warehouse building.

EXISTING CONDITIONS

200A breaker available in panel in warehouse building across road

3" conduit with pull string is existing from panel in warehouse building.

GENERAL REQUIREMENTS

All electrical work shall be installed with proper regard for and in harmony with other construction. Required cutting and patching shall be done by this Subcontractor as described hereinafter. Adjacent general construction shall not be weakened or damaged and should any question arise as to the placement of conduit, fixtures or other materials or equipment, the Engineer shall be referred to for instructions. The Subcontractor will be responsible for all damage caused by his work or through the neglect of his workmen.

Furnish all other trades with information relative to roughing, spacing and space requirements. Plan all work in advance to determine whether interferences occur and whether existing services are complementary.

Furnish and install any items required for a complete installation but not specifically shown on the plans at no additional expense to the Owner.

POWER SUPPLIER

Coordinate all supply and service entrance work with the local power supplier. It shall be the responsibility of the contractor to coordinate with the power supplier for information associated with connections and installation of secondary.

RULES AND REGULATIONS

Work shall be performed in accordance with requirements of the National Electrical Code, latest edition, published by the National Board of Fire Underwriters, as well as the rules and regulations of the local power supplier.

Give precedence to drawings and specifications when they require higher standards than those required by rules and regulations.

Rules and regulations govern in case of direct conflict between regulations and drawings and specifications.

SUPERVISION

Maintain on the job site at all times work is in progress a competent supervisor of electrical work.

PERMITS, FEES AND INSPECTIONS

The Contractor shall obtain required permits, pay any fees and arrange for any inspections required by the local power supplier.

PLANS AND SPECIFICATIONS

Layout: The general arrangement of the circuits and outlets, the location of main switches, panel boards, conduit, fixtures and other work shall be as indicated on the drawings.

Deviations: If deviations from the arrangements are necessary to meet conditions, make changes without additional expense to the Owner.

GROUNDING/BONDING

Securely ground all outlets, panel boxes, switch boxes, equipment and all other devices in strict accordance with requirements of the National Electrical Code.

Grounding conductors with a green colored insulated jacket shall be provided and installed in <u>all</u> raceways.

Grounding materials, devices and workmanship shall be as approved by the Engineer.

CONDUIT and FITTINGS

Rigid metal conduit shall be galvanized, rigid metallic conduit as manufactured by National Electric Company, Triangle Conduit Company or equal.

Rigid nonmetallic conduit (PVC) shall conform to the National Electrical Code requirements for nonmetallic conduit in dimension and wall thickness as manufactured by Carlon, R&G Sloane or any equal approved by the Engineer.

Metallic Tubing shall conform to National Electrical Code requirements for electric metallic tubing in dimension and wall thickness. Finish for steel tube shall be galvanized or sherradized inside and outside with lacquer or synthetic resin coating inside as manufactured by General Electric, Republic, Triangle or equal.

Electrical Nonmetallic Tubing (ENT) shall not be used (no exceptions).

All conduit shall be run in a neat and workmanlike manner with particular care being taken for convenience of arrangements and identification of circuits attached to the panel box.

Run all conduit concealed and parallel to framing members insofar as possible.

Attach conduit with approved clamps. The use of wire, nails or perforated hanger iron for securing conduit will not be permitted. No conduit shall be attached to the steel wall panels.

Conduit shall be properly sized for THW conductor fill even if THWN conductors are used. Conduit shall not be smaller than 3/4" diameter.

Ream all conduit after cutting.

Keep ends plugged watertight during construction.

Swab all damp conduit dry before pulling wires.

Use standard bends in conduit larger than 1". Conduit with crushed or deformed walls shall not be used.

Attach conduit fittings to panels, pull boxes, switch boxes, outlet boxes, etc. with locknuts and bushing inside.

WIRE AND CABLE

Feeders and branch circuit conductors shall be type THW or THWN Code grade copper, 600 volt. Insulation thickness shall not be less than 15 mils thick plus outer covering.

Ground/bond wires, as a minimum, shall be as detailed on the drawings and as specified in Grounding/Bonding section.

Wire shall be sized so that the drop in the potential to the farthest point on the circuit does not exceed 3%.

Interior wire no. 8 or larger shall be stranded and smaller wire shall be solid except where noted otherwise.

Low voltage control wire shall be solid copper conductor with thermo-plastic insulation.

Run all mains and feeders full length with no joints or splices. Joints in branch circuits may occur at pull boxes, outlet boxes, junction boxes and panels only.

One conductor in each circuit shall be identified by a distinctive color and the unified plan of color coding, Article 210 of the National Electric Code, shall be followed throughout the entire installation.

CIRCUITS

Arrange circuits for lighting, power and outlets as indicated on the drawings. On completion of this wiring distribution panel, a <u>typed</u> circuit description for each circuit with an additional copy for permanent file shall be delivered to the Owner.

Follow National Electric Code, Article 210 for color coding.

Circuits for outlets shall be configured so that no more than 2 quad outlet boxes (four duplex receptacles) are controlled by a single 20 amp circuit.

BOXES

Boxes shall be of sufficient size to allow easy handling of wire and shall be covered. **All boxes shall be accessible** as defined by the National Electrical Code.

The Engineer reserves the right to make slight changes in the location of the outlets for centering, for convenience or for improved function. Such changes are to be made without additional expense to the Owner, provided instructions for moving are issued before actual installation of raceway and outlets.

No boxes shall be attached solely to the steel wall panels.

SWITCHES

Wall Switches: Wall switches for lighting shall be single pole or three way, weatherproof type, **20 amp**, **125 volt AC**. Leviton, as scheduled, or equal.

Safety Switches: Safety switches shall be fused type and properly sized for the application. Install complete with fusing per equipment manufacturer's rating. GE Heavy Duty or approved equal.

All switches shall be mounted at 48" max. A.F.F. to comply with TAS/ADA or as otherwise noted. See drawings for general locations.

PLATES

Furnish and install metal face plates for receptacles or other outlets in the proper gangs adapted to each location.

OUTLET RECEPTACLES

All receptacles shall be NEMA heavy duty straight blade, specification grade, grounding types, highdielectric casing, **20 amp, 125 volts**. Leviton, as scheduled, or approved equal.

All receptacles shall typically be mounted approximately 48" A.F.F. or as otherwise shown on the plans. See drawings for general locations.

PANELS

Panelboard shall be a SquareD or approved equal, with bolt-in breakers.

All panelboards shall have copper buses, surface mounted, bottom feed.

Configuration, voltage, ratings, etc. as designated on the panel schedule.

Leave typed schedule of circuit identification on the panel with an additional copy for permanent file to be delivered to the Owner.

No panels shall be attached solely to the steel wall panels. Provide structural back up as necessary.

BREAKERS/OVER CURRENT PROTECTION

1 – 200A, 120V, 1 phase, MCB, 20 space panel with, bolt-in breakers is required. Square D or approved equal.

UNDERGROUND SERVICE

Extend power from disconnect on pole.

FIXTURES

Provide and properly hang fixtures for every light outlet shown.

Mounting height shall be as shown on the plans or as determined by the Engineer.

All fixtures shall be complete with lamps.

Verify the application for each fixture unit, and ascertain properties of adaptability before ordering. The schedule on the drawings establishes the character and pattern of each unit in the several applications. The catalog number is used to establish qualities, performances, finish, dependability and appearance and will be used as basis of comparison in the consideration of possible substitutions.

WORK INCLUDED

This project consists of furnishing all labor, materials, and equipment necessary for the installation of a complete, functional fire alarm system (System) in accordance to NFPA 101 as described under Mixed Occupancies and as specified herein. The System shall comply in all respects with pertinent codes, rules, regulations and laws of the Authority and local jurisdiction.

GENERAL REQUIREMENTS

All fire alarm/electrical work shall be installed with proper regard for and in harmony with other construction. Required cutting and patching shall be done by this Subcontractor as described hereinafter. Adjacent general construction shall not be weakened or damaged and should any question arise as to the placement of conduit, fixtures or other materials or equipment, the Engineer shall be referred to for instructions. The Subcontractor will be responsible for all damage caused by his work or through the neglect of his workmen.

Furnish all other trades with information relative to roughing, spacing and space requirements. Plan all work in advance to determine whether interferences occur and whether existing services are complementary.

Furnish and install any items required for a complete installation but not specifically shown on the plans at no additional expense to the Owner.

GUARANTEE

Re: Division 1.

RULES AND REGULATIONS

Work shall be performed in accordance with requirements of the latest edition National Electrical Code (NEC), published by the National Board of Fire Underwriters, National Fire Alarm Code (NFPA), Americans With Disability Act (ADA), as well as the rules and regulations of the State of Texas, including Texas Accessibility Standard (TAS).

Give precedence to specifications when they require higher standards than those required by rules and regulations.

Rules and regulations govern in case of direct conflict between regulations and specifications.

SUPERVISION

Maintain on the job site at all times work is in progress a licensed supervisor of electrical/fire alarm work.

PLANS

A floor plan in electronic format (.dwg) or paper can be provided to the Contractor for layout purpose and as-built documentation.

Layout: The general arrangement of fire alarm zones shall be accomplished by the Fire Alarm Contractor and Submitted to the Engineer for review.

Deviations: If deviations from the arrangements are necessary to meet conditions, make changes without additional expense to the Owner.

GROUNDING/BONDING

Securely ground Fire Alarm Control Panel FACP, equipment and associated equipment in strict accordance with requirements of the National Electrical Code.

<u>CONDUIT</u>

Re: Electrical.

COUPLINGS AND CONNECTORS

Re: Electrical.

WIRE /CABLE

Non-Power-Limited Fire Alarm (NPLFA) conductors shall be copper with a minimum size of 18 AWG on the signaling circuit. Insulation shall be suitable for 600 volts.

All audible and notification appliance circuits shall be 14 AWG minimum twisted pairs or twisted pairs shielded or per manufacturer's requirements.

Power-Limited Fire Alarm (PLFA) conductors shall not be smaller than 26 AWG and solid or stranded conductors.

Power-Limited and Non-Power-Limited Fire Alarm conductors shall not require to be concealed in conduit above ceiling space that is accessible, but are required where unable to conceal in walls or open areas (i.e. mechanical rooms). Cabling installed above drop ceilings shall not be laid on ceiling tiles, fasten cable to building structure at intervals not greater than 5 feet.

CIRCUITS

Non-Power-Limited Fire Alarm (NPLFA) output voltage shall not exceed 600 volts, nominal.

Power-Limited Fire Alarm circuits shall be supplied from transformers, power supplies, or listed equipment.

FIRE ALARM CONTROL PANEL (FACP)

The fire alarm control panel (FACP) shall be an intelligent/conventional multi-processor based system designed specifically for fire and releasing system applications. The control panel shall include required hardware, software, and system programming to provide a complete and operational system. System shall be Silent Knight as manufactured by Honeywell or approved equal.

The FACP shall provide electronic addressing of addressable devices.

The FACP zones shall be capable of being expandable.

The FACP shall be fully field programable through the display and does not require any proprietary tools or use of a computer.

The FACP shall also include relays for general alarm, trouble and power limiting notification circuits.

The FACP shall come with visual and audible alarm indicators capable of indicating zone alarm/trouble, system alarm and system trouble.

The FACP shall be equipped with a one person test feature, fail safe protection with a backup level of system operation.

Manual controls shall include the capability of acknowledging alarm, supervisory and trouble conditions; silencing notification circuits; resetting the system; and drill function.

The FACP shall be the latest manufacturer's model, UL listed, and meet the requirements of NFPA 72. **Submital Required**.

Location of the FACP shall be as shown on the plans and coordinated with the Engineer.

POWER SUPPLY

Each system power supply shall be a minimum of 6 amps @ 24 vdc.

Standby power supply shall be electric batteries with capacity to operate the system under maximum supervisory load for 24 hours.

Upon failure of normal (AC) power, the affected portion(s) of the system shall automatically switch over to secondary power without losing any alarm, trouble, or operator acknowledgment signals.

All standby batteries shall be continuously monitored by the system. Low battery and disconnection of battery power supply conditions shall immediately annunciate as a trouble signal, identifying the deficient batteries.

INITIATING DEVICES

An analog/addressable single action, single stage manual fire alarm initiating device shall be provide so as to indicate visually and at the FACP that the station has been activated. The cover or actuator shall remain in the alarm position until manually being reset.

Water flow switches for sprinkler systems shall be time adjustable complying with NFPA 72

Valve tamper switches shall comply with NFPA 72. A supervisory condition shall result from a tamper switch activation.

Initiating devices shall be compatible with and approved for use with the control panel and manufacturer's latest model. **Submittal Required.**

ALARM SIGNALING DEVICES

Horn/strobes shall be one device capable of universal mounting.

Horn/strobe devices shall meet the requirements of ADA and TAS Standards.

Smoke detectors shall be an addressable plug-in unit which mounts to a twist/in base and shall be UL listed.

Heat detectors shall be an addressable plug-in unit mounted to a twist/in base and shall be UL listed.

Duct detectors shall be installed for air handling units as required. (by HVAC Sub per Section 1585)

The smoke detector shall contain the ability to indicate by its LED multi-color indicator the following: 1) normal operation 2) trouble and 3) alarm conditions.

The detector shall allow for easy cleaning or replacement without effecting calibration.

Provide analog/addressable duct smoke detectors as required by local, state, and national codes or regulations.

Signaling devices shall be the manufacturer's latest model. Submittal Required.

ZONES

Zones shall be kept to a minimum but shall be zoned to keep identical initiating devices on independent zones.

TESTING AND DEMONSTRATION

The Contractor shall have all devices on the system installed and the system pre-tested prior to the scheduled acceptance test.

Each system shall be fully tested, certified and tagged in accordance with these specifications.

A demonstration shall be given to maintenance personnel on the operation of all FACPs, devices and all necessary procedures for maintaining the equipment. It shall be the contractor's responsibility to coordinate this time with on-site personnel thru the Owner's representative.

Appendix

PERFORMANCE BOND

STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS COUNTY OF BRAZOS

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 bind themselves, their heirs,
executors, admini	strators 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 (the "Contract"), which Contract is incorporated into this Performance Bond by this reference, with the State of Texas acting by and through the Board of Regents of The Texas A&M University System, as Obligee, dated for the

, Project No.

NOW, THEREFORE, if the Principal shall faithfully perform the Contract in accordance with the Contract Documents, including any warranties, and shall fully indemnify, and save harmless the State of Texas from all costs and damage that the State of Texas may suffer by reason of the Principal's default or failure to perform and shall fully reimburse and repay the State of Texas all outlay and expense that the State of Texas may incur in making good any such default or failure to perform, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

In the event the Principal is declared in default under the Contract, Surety will, within fifteen (15) days of the determination of such default, take over and assume responsibility for completion of such Contract and become entitled to the payment of the balance of the Contract Price, or the Surety shall make other arrangements satisfactory to the Obligee for the completion of the defaulted Work. Conditioned upon the Surety's faithful performance of its obligations, the Surety's liability shall not exceed the penalty of this Bond.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed under the Contract or to the Specifications accompanying the same shall in any manner affect its obligation on this Performance Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

The Surety agrees to pay to the State of Texas upon demand all loss and expenses, including attorney's fees and court costs, incurred by the State of Texas by reason of or on account of any breach of this obligation by the Surety.

This Bond is issued pursuant to the requirements of Section 2253.021, Texas Government Code, as amended.

IN WITNESS WHEREOF, the Principal and Surety have executed and sealed this instrument this day of ,200 .

, Principal

(PRINCIPAL'S SEAL if a corporation)

By: Name: Title:

, Surety

(SURETY'S SEAL)

Attorney-in-Fact

PAYMENT BOND

STATE OF TEXAS

That we.

COUNTY OF BRAZOS KNOW ALL MEN BY THESE PRESENTS

_____, as Principal, and

The conditions of this obligation are such that, whereas the Principal entered into a certain contract (the "Contract"), which Contract is incorporated into this Payment Bond by this reference, with the State of Texas acting by and through the Board of Regents of The Texas A&M University System, as Obligee, dated ______ for the ______ Project No.

NOW, THEREFORE, if the Principal shall promptly make payments to all claimants, as defined in Chapter 2253, Texas Government Code, 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, Texas Government Code.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed under the Contract shall in any wise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed under the Contract.

The Surety agrees to pay the State of Texas upon demand all loss and expense, including attorney's fees and court costs, incurred by the State of Texas by reason of or on account of any breach of this obligation by the Surety.

IN WITNESS WHEREOF, the Principal and Surety have duly signed and sealed this instrument this ______ day of ______, 200___.

, Principal

(PRINCIPAL'S SEAL) if a corporation)

By: ______ Name:______ Title:_____

_____, Surety

(SURETY'S SEAL)

By: _____ Name: _____

Attorney-in-Fact



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	Capacity Building Rm 125	Capacity Building Rm 127	Capacity Building Rm 129	Forest Systems Rm 131	Forest Analytics _{10'} Rm 132
	A	A	A	A	6'
	A	A	A	A	10'
/	Capacity Building Rm 124	Capacity Building Rm 126	FRP Admin Rm 128	FRP Admin Rm 130	
	Miti & Prev Rm 108	Incident Response Rm 106	FRP Admin Rm 104	FRP Admin Rm 102	10' FE
	→ → 10'	 10'	10'	13'	6'
	(A)	(A)	(A)	(A)	6'
	A	A	A	A	A
	Miti & Prev Rm 109	Miti & Prev Rm 107	East Tx Ops Rm 105	East Tx Ops Rm 103	East Tx O
	- 10'	- 10'			

C	OR SCHEDULE						
	SIZE	HARDWARE	REMARKS				
	8'-0" X 7'-0"	Door hasp	Exterior mounted lock				
	4'-0" X 7'-0"	Entry lockset Deadbolt	1/2 Lite, automatic closure, weather seal all around				
	4'-0" X 7'-0"	Entry lockset Deadbolt	Wall bumper				











HVAC LEGENE)
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		HVAC LEG			
SYMBOL	ITEM	TRADE NAME	Capacity	Notes	Service Area
A/C 1	Split System	Trane, Carrier, or approved equal	Carrier, or 5 ton W/ matching indoc ed equal filter rack		
A/C 2	Split System	Trane, Carrier, or approved equal	5 ton	W/ matching indoor air handler, furnace filter rack	
Ť	Thermostat Per Manufacturer		Digital, programmable, lockable	Mounted height 48" a.f.f., per code	
	Air Supply Register				







							SYMBOL	SYMBOL DEFINITION	MOUNT HEIGHT
	LIGHT FIX	FURE SCHEDULE					\$	Single Pole Switch, 20 amp	48" a.f.f.
	FIXTURE			LAMPS		FIXTURE			
SYM. MANUFACTURER	MODEL NO.	MOUNT	NO.	TYPE	VOLT	DESCRIPTION	\mathbf{S}_{3}	3-way Single Pole Switch, 20 amp	48" a.f.f.
A Metalux 4	4RCG-4-56D-L840-U	Recessed in ceiling		19W LED	120			Light Fixture	
B Metalux 4	4RCG-4-56D-L840-U	Mount to purlin		19W LED	120	Alternate 1			
© Lithonia E	ECRLEDM6	Surface mounted		2-1.8W LED	120	LED exit/em. unit combo- red	7 \	Dusk to Dawn Outside Fixture	Top of wall
D Lumark V	WPLLED-100-GL-UNV-PC	Surface mounted		82W LED		Exterior wall pack w photocell		Disconnect Switch	48" a.f.f.
							\square	Duplex Recept., 20 amp, 120v	
							200A	200A, 120V, 1-phase, 20 space Load Center Panel	





Attachment A

HUB SUBCONTRACTING PLAN

HUB Subcontracting Plan (HSP) QUICK CHECKLIST

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

If you will be awarding all of the subcontracting work you have to offer under the contract to only Texas certified HUB vendors, complete:

Section 1 - Respondent and Requisition Information

Section 2 a. - Yes, I will be subcontracting portions of the contract.

Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors. Section 2 c. - Yes

Section 4 - Affirmation

2

GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.

If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you do not have a <u>continuous contract</u>* in place for more than five (5) years <u>meets or exceeds</u> the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements", complete:

Section 1 - Respondent and Requisition Information

Section 2 a. - Yes, I will be subcontracting portions of the contract.

Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors.

Section 2 c. - No

Section 2 d. - Yes

Section 4 - Affirmation

GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.

If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors or only to Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you <u>do not</u> have a <u>continuous contract</u> in place for more than five (5) years <u>does not meet or exceed</u> the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements", complete:

Section 1 - Respondent and Requisition Information

Section 2 a. - Yes, I will be subcontracting portions of the contract.

Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors.

Section 2 c. - No

Section 2 d. - No

Section 4 - Affirmation

GFE Method B (Attachment B) - Complete an Attachment B for each of the subcontracting opportunities you listed in Section 2 b.

If you will not be subcontracting any portion of the contract and will be fulfilling the entire contract with your own resources (i.e., employees, supplies, materials and/or equipment), complete:

Section 1 - Respondent and Requisition Information

Section 2 a. - No, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources.

Section 3 - Self Performing Justification

Section 4 - Affirmation

*<u>Continuous Contract</u>: 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 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.



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) §20.284 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 §20.285(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 <u>does not</u> have a <u>continuous contract</u>* in place for <u>more than five (5) years</u> shall qualify for meeting the HUB goal. This limitation is designed to encourage vendor rotation as recommended by the 2009 Texas Disparity Study.

SECTION 1: RESPONDENT AND REQUISITION INFORMATION

a.	Respondent (Company) Name:	State of Texas VID #:
	Point of Contact:	Phone #:
	E-mail Address:	Fax #:
b.	ls your company a State of Texas certified HUB? 🔲 - Yes 🛛 🗌 - No	
c.	Requisition #:	Bid Open Date:

Enter your company's name here:

Requisition #:

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 and services will be subcontracted. Note: In accordance with 34 TAC §20.282, 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.)
- I vill not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources, including employees, goods and services. (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).

		HU	Non-HUBs	
Item #	Subcontracting Opportunity Description	Percentage of the contract expected to be subcontracted to HUBs with which you <u>do not</u> have a <u>continuous contract</u> * in place for <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		%	%	%
2		%	%	%
3		%	%	%
4		%	%	%
5		%	%	%
6		%	%	%
7		%	%	%
8		%	%	%
9		%	%	%
10		%	%	%
11		%	%	%
12		%	%	%
13		%	%	%
14		%	%	%
15		%	%	%
	Aggregate percentages of the contract expected to be subcontracted:	%	%	%

(Note: If you have more than fifteen subcontracting opportunities, a continuation sheet is available online at https://www.comptroller.texas.gov/purchasing/vendor/hub/forms.php).

- c- Check the appropriate box (Yes or No) that indicates whether you will be using <u>only</u> Texas certified HUBs to perform <u>all</u> 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 <u>do not</u> have a <u>continuous contract</u>* in place with for <u>more than five (5) years</u>, <u>meets or exceeds</u> 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.)

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

Requisition #:

SECTION 2: RESPONDENT'S SUBCONTRACTING INTENTIONS (CONTINUATION SHEET)

This page can be used as a continuation sheet to the HSP Form's page 2, Section 2, Item b. Continue listing 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).

		HUBs		Non-HUBs
Item #	Subcontracting Opportunity Description	Percentage of the contract expected to be subcontracted to HUBs with which you <u>do not</u> have a <u>continuous contract</u> ⁺ in place for <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.
16		%	%	%
17		%	%	%
18		%	%	%
19		%	%	%
20		%	%	%
21		%	%	%
22		%	%	%
23		%	%	%
24		%	%	%
25		%	%	%
26		%	%	%
27		%	%	%
28		%	%	%
29		%	%	%
30		%	%	%
31		%	%	%
32		%	%	%
33		%	%	%
34		%	%	%
35		%	%	%
36		%	%	%
37		%	%	%
38		%	%	%
39		%	%	%
40		%	%	%
41		%	%	%
42		%	%	%
43		%	%	%
	Aggregate percentages of the contract expected to be subcontracted:	%	%	%

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

Enter your company's name here:

Requisition #:

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

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 <u>no later than ten (10) working days after the contract is awarded</u>.
- 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 https://www.comptroller.texas.gov/purchasing/docs/hub-forms/ProgressAssessmentReportForm.xls).
- The respondent must seek approval from the contracting agency prior to making any modifications to its HSP, including the hiring of additional or different subcontractors and the termination of a subcontractor the respondent identified in its HSP. If the HSP is modified without the contracting agency's prior approval, respondent may be subject to any and all enforcement remedies available under the contract or otherwise available by law, up to and including debarment from all state contracting.
- The respondent must, upon request, allow the contracting agency to perform on-site reviews of the company's headquarters and/or work-site where services
 are being performed and must provide documentation regarding staffing and other resources.

Signature	Printed Name	Title	Date
Reminder:			(mm/dd/yyyy)

- 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.
Enter your company's name here:

Requisition #:

IMPORTANT: If you responded "*Yes*" to **SECTION 2**, **Items c** or **d** of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method A (Attachment A)" for <u>each</u> 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 <u>https://www.comptroller.texas.gov/purchasing/docs/hub-forms/hub-sbcont-plan-gfe-achm-a.pdf</u>

SECTION A-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: Description:

SECTION A-2: SUBCONTRACTOR SELECTION

List the subcontractor(s) you selected to perform the subcontracting opportunity you listed above in SECTION A-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/tpasscmblsearch/index.isp. HUB status code "**A**" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.	Approximate Dollar Amount	Expected Percentage of Contract
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%

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 <u>all</u> 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 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 is awarded.

Enter your company's name here:

Requisition #:

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 <u>each</u> 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 <u>https://www.comptroller.texas.gov/purchasing/docs/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf</u>.

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: Description:

SECTION B-2: MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in **SECTION B-1**, constitutes a good faith effort to subcontract with a Texas certified HUB towards that <u>specific</u> 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 <u>MUST</u> comply with items <u>a</u>, <u>b</u>, <u>c</u> and <u>d</u>, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs <u>and</u> 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 <u>https://www.comptroller.texas.gov/purchasing/docs/hub-forms/HUBSubcontractingOpportunityNotificationForm.pdf.</u>

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 <u>at least seven (7) working days</u> 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/tpasscmblsearch/index.jsp. HUB status code "A" signifies that the company is a Texas certified HUB.
- b. List the <u>three (3)</u> 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?
			- Yes - No
			- Yes - No
			- Yes - 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 https://www.comptroller.texas.gov/purchasing/vendor/hub/resources.php.
- 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?
		- Yes	- No
		- Yes	- No

Enter your company's name here:

Requisition #:

SECTION B-4: SUBCONTRACTOR SELECTION

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

a. Enter the item number and description of the subcontracting opportunity for which you are completing this Attachment B continuation page.

Item Number: Description:

b. List the subcontractor(s) you selected to perform the subcontracting opportunity you listed in SECTION B-1. Also identify whether they are a Texas certified HUB and their 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/tpasscmblsearch/index.jsp. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas certified HUB	Texas VID or federal EIN Do not enter Social Security Numbers. If you do not know their VID / EIN, leave their VID / EIN field blank.	Approximate Dollar Amount	Expected Percentage of Contract
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%
	- Yes - No		\$	%

c. If any of the subcontractors you have selected to perform the subcontracting opportunity you listed in SECTION B-1 is <u>not</u> a Texas certified HUB, provide <u>written</u> justification for your selection process (attach additional page if necessary):

REMINDER: As specified in SECTION 4 of the completed HSP form, <u>if you (respondent) are awarded any portion of the requisition</u>, you are required to provide notice as soon as practical to <u>all</u> 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 is awarded.



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

34 Texas Administrative Code, §20.285 requires all respondents (prime contractors) bidding on the contract to provide notice of each of their subcontracting opportunities to at least three (3) Texas certified HUBs (who work within the respective industry applicable to the subcontracting opportunity), and allow the HUBs at least seven (7) working days to respond to the notice prior to the respondent submitting its bid response to the contracting agency. In addition, at least seven (7) working days prior to submitting its bid response to the contracting opportunities to two (2) or more trade organizations or development centers (in Texas) that serves members of groups (i.e., Asian Pacific American, Black American, Hispanic American, Native American, Woman, Service Disabled Veteran) identified in Texas Administrative Code §20.282(19)(C).

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

SECTION A: PRIME CONTRACTOR'S INFORMATION		
Company Name:	State of Texas VID #:	
Point-of-Contact:	Phone #:	
E-mail Address:	Fax #:	
SECTION B: CONTRACTING STATE AGENCY AND REQUISITION	N INFORMATION	
Agency Name:		
Point-of-Contact:	Phone #:	
Requisition #:	Bid Open Date:	
		(mm/dd/yyyy)
SECTION C: SUBCONTRACTING OPPORTUNITY RESPONSE DU	IE DATE, DESCRIPTION, REQUIREMENTS AND RELATED	DINFORMATION
1. Potential Subcontractor's Bid Response Due Date:		
If you would like for our company to consider your compa	ny's bid for the subcontracting opportunity identified below in Ite	em 2,
we must receive your bid response no later than	on	
	Central Time Date (mm/dd/yyyy)	
to us submitting our bid response to the contracting agency, we must p organizations or development centers (in Texas) that serves members of American, Woman, Service Disabled Veteran) identified in Texas Administ (A working day is considered a normal business day of a state agency, no by its executive officer. The initial day the subcontracting opportunity notic is considered to be "day zero" and does not count as one of the seven (7)	provide notice of each of our subcontracting opportunities to tw of groups (i.e., Asian Pacific American, Black American, Hispan trative Code, §20.282(19)(C). In the including weekends, federal or state holidays, or days the agenc the sent/provided to the HUBs and to the trade organizations or of working days.)	ró (2) or more trade hic American, Native cy is declared closed development centers
2. Subcontracting Opportunity Scope of Work:		
3. Required Qualifications:		- Not Applicable
4. Bonding/Insurance Requirements:		- Not Applicable
5. Location to review plans/specifications:		- Not Applicable