

Request for Proposals ("RFP") Brenham Municipal Airport Terminal Building HVAC Replacement

RFP NO. 24-004

EVENT	DATE
1 st Publication Date	Thursday, April 4, 2024
2 nd Publication Date	Thursday, April 11, 2024
Pre-Bid Meeting (Optional) (2:00 p.m.)	Tuesday, April 16, 2024
RFP Question Deadline (5:00 p.m.)	Thursday, April 18, 2024
Proposal Submission Deadline (10:00 a.m.)	Wednesday, April 24, 2024
City Council Consideration/Award	May 2024

INTENT

The City of Brenham (hereinafter referred to as "City") is requesting proposals from qualified and capable HVAC vendor(s) to demolish and remove existing system and completely replace the existing system serving the restaurant located at the Brenham Municipal Airport Terminal Building. Any proposed respondent must have proper licensing at the time of submission of the response to this RFP.

All proposals must be submitted on the form provided by the City, and further must be properly executed in the space(s) provided.

*Non-mandatory Pre-bid meeting/ facility visit is scheduled to discuss the City's requirements under this RFP. While attendance is at the discretion of the Proposer, Proposers who do not attend will be deemed to have attended and to have received the information provided at that time. April 16, 2024 at 2:00 P.M., Brenham Municipal Airport, 3001 Aviation Way, Brenham, TX.

RECEIPT AND OPENING OF PROPOSALS

Proposers shall submit **one** (1) **original and two** (2) **copies** of the Proposal on the form provided by the City. The original Proposal must be clearly marked "**Proposal for RFP No. 24-004**" and include an original signature, in ink, in order to be accepted. Proposals must be received in the City Secretary's Office no later than 10:00 a.m. (CST) on Wednesday, April 24, 2024. It is the Proposer's sole responsibility to assure that the Proposal is delivered in a timely fashion. Proposals received after this time will be rejected and returned unopened. All bids will be opened and read aloud at the City of Brenham City Hall, 1st Floor Conference Room, 200 W. Vulcan Street, Brenham, Texas 77833. Any proposal received after 10:00 a.m. on Wednesday, April 24, 2024 shall not be considered.

To the extent allowed by applicable law, and subject to the ruling of any administrative agency or court having jurisdiction, the City intends that trade secrets and confidential information contained in the proposals and clearly identified as "Confidential" in **bolded font** will not be open for public inspection at any time, even after a contract has been awarded and executed, whether or not the proposer wins the contract.

Proposals should be prepared simply, providing straightforward, concise description of the Proposer's approach and capabilities necessary to satisfy the requirements of the RFP. Technical literature and elaborate promotional materials, if any, must be submitted separately. Emphasis in the proposal should be on completeness, clarity of content and adherence to the presentation structure required by the RFP. Proposers are encouraged to suggest creative and economical means to provide the services requested in the RFP.

Proposals shall be delivered using one of the following methods:

Hand-deliver to:	Mail to:	Ship to (FedEx, UPS, DHL, etc.):
200 W. Vulcan Street	P.O. Box 1059	200 W. Vulcan Street
Suite 203	Brenham, TX 77834-1059	Brenham, TX 77833
Brenham, TX 77833	ATTN: City Secretary	ATTN: City Secretary

The city does accept electronic bids via download into a secure electronic depository. Bids submitted by e-mail will not be accepted. If a bidder would like to submit electronically, they must notify the city no later than 10:00 a.m. Tuesday, April 23, 2024

Notifications for electronic submissions must be sent to Kyle Branham, Purchasing and Public Works Project Manager, P. O. Box 1059 (200 W. Vulcan St.), Brenham, Texas 77834, or e-mailed to kbranham@cityofbrenham.org. All e-mails must indicate "RFP No. 24-004—Electronic Submission Request" in the subject line. It is the sender's responsibility to verify receipt of email; read receipt is acceptable.

CHANGES, QUESTIONS, AND INQUIRIES

Any and all questions regarding this RFP must be submitted in writing and addressed to Kyle Branham, Purchasing and Public Works Project Manager, P. O. Box 1059 (200 W. Vulcan St), Brenham, Texas 77834, or e-mailed to kbranham@cityofbrenham.org. All e-mails must indicate "RFP No. 24-004" in the subject line. It is the sender's responsibility to verify receipt of email; read receipt is acceptable. The deadline for submittal of questions regarding this RFP is 5:00 p.m. (CST) on Thursday, April 18, 2024.

No person has the authority to verbally alter the terms of this RFP. Any changes to this RFP will be made in the form of an Addendum which will be made available online at www.cityofbrenham.org. It shall be the responsibility of interested bidders to check the website for addenda up to the proposal submission deadline. The complete RFP and all addendums will be posted on the City's website.

GENERAL TERMS

This RFP does not commit the City of Brenham to award a contract. No other party, including any proposer, is intended to be granted any rights hereunder. Proposals which, in the sole discretion of the City of Brenham, do not meet minimum qualification requirements will not be reviewed. This RFP and the process it describes are proprietary to the City of Brenham and are for the sole and exclusive benefit of the City of Brenham. Any response to this RFP will become the property of the City of Brenham and subject to the Public Information Act of Texas. The City of Brenham is not liable for any costs associated with the development, preparation, transmittal or presentation of any proposal or material submitted in response to this RFP.

The City of Brenham reserves the right to award contracts on the basis of proposals submitted or to negotiate with selected proposer for modification of the selected proposals (which may include alternate concepts), at the City of Brenham's option. By submission of a proposal, the selected proposer agrees to be legally bound if the City of Brenham accepts the proposal.

The City of Brenham reserves the right to make an award without further discussion of the proposals. The selected Proposer will be expected to enter into an Agreement with the City. The Agreement shall incorporate the City's standard contract terms and conditions, attached hereto as "EXHIBIT A" to this RFP.

PROPOSAL BOND REQUIREMENTS

Proposal amounts in excess of \$100,000, shall be required to submit a Proposal Guaranty in the amount of five percent (5%) of the total bid amount payable to the City of Brenham, from a surety company authorized to do business in Texas as a guarantee that the Proposer will enter into a contract and provide required insurance within ten (10) business days after receiving a Notice of Intent to Award, and will provide to City all submittals required by this contract within ten (10) business days from Notice of Intent to Award, and will provide to the City executed Performance, Maintenance and Payment bonds within ten (10) business days after City Council Award of Contract.

The bond shall be on the forms provided, each in the amount of 100% of the contract price from a Surety Company holding a permit in the State of Texas and approved by the Federal Government, and must bear the impressed seal of the surety company and the name of the Proposer, and be signed by the Proposer and an authorized representative of the surety company. Powers of attorney must be attached to the Proposal Guaranty.

A proposal that has been fully completed and signed by the person authorized to represent the company submitting the proposal. The proposal must use the same form or a photocopy of the form provided in the RFP document. Acknowledgment of the receipt of any and all addenda must be provided on the proposal.

If the Proposer is a corporation or other legal entity subject to the Texas franchise tax, a copy of its "Franchise Tax Certificate of Account Status" showing all franchise taxes are current (this item may be submitted to the City within three (3) business days of the proposal opening for the proposal to be considered).

CONTRACT TERMS AND CONDITIONS

1. GENERAL TERMS AND CONDITIONS

General Terms and Conditions for Invitations for Bid from the City of Brenham may be found in Exhibit "A" of this document. Should any contradiction be found to exist between those terms and conditions and the body of this RFP, the RFP will prevail.

2. **INDEMNITY**

The Contractor agrees to indemnify and hold harmless the City of Brenham and its officers, agents, and employees from any and all claims, causes of action, and damages of every kind, for injury to or death of any person and damages to property arising out of or in connection with the work done by the Contractor, and including acts or omissions of the City of Brenham, its officers, agents or employees in connection with said Contract.

3. H.B. 1295 COMPLIANCE

The Awarded Vendor for the contract shall comply with the requirements of Section 2252.908 of the Texas Government Code as adopted in 2015 as House Bill 1295. The law requires that a governmental entity may not enter in certain contracts with a business entity unless the business entity submits a Disclosure of Interested Parties to the governmental entity. The law applies only to a contract that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million.

Compliance with the law requires that the awarded Vendor utilize the Texas Ethics Commission website to enter the required information on Form 1295 and print a copy of the complete form. The form must be signed and submitted to the contracting government entity

The City of Brenham, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the completed Form 1295 within five (5) working days thereafter.

4. CHAPTER 220 COMPLIANCE

The Awarded Vendor for the contract shall comply with the requirements of Subtitle F, Title 10, Government Code Chapter 2270 and shall be required to provide conformation that the Vendor:

- 1. Does not boycott Israel currently; and
- 2. Will not boycott Israel during the term of the contract the above-named Company, business or individual with the City of Brenham, Texas.

 Pursuant to Section 2270.001, Texas Government Code:
- "Boycott Israel" means refusing to deal with, terminating business activities with, or
 otherwise taking any action that is intended to penalize, inflict economic harm on, or
 limit commercial relations specifically with Israel, or with a person or entity doing
 business in Israel or in an Israeli-controlled territory, but does not include an action
 made for ordinary business purposes; and
- 2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly- owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

The City of Brenham, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the required confirmation within five (5) working days thereafter. Confirmation shall, by reference, be included as a part of the contract.

4. INSURANCE

The awarded contractor shall obtain insurance as specified in Attachment "A" of this RFP and shall maintain coverage in full effect through the duration of the contract. Certificates of Insurance shall be provided to the City within five (5) working days of formal notice of award by the City.

SCOPE

Original scope of work included demolition, replacement, and upgrade of existing HVAC within the entire Airport Terminal Building located at 3001 Aviation Way. Plans have been modified to reflect an updated scope of work limited to the diner portion of the Airport Terminal building which is approximately 1,400 square feet. All portions of the plans crossed out with black hatching are not included in the scope of work. Scope of work shall include the following:

- Contractor shall perform demolition and removal of existing system according to Swoboda MEP. (Attachment A)
- Contractor shall furnish all parts, labor, and workmanship necessary to replace existing system with the system designed by Swoboda MEP in the attached plan set. (Attachment A)
- Contractor shall be responsible for the coordination of sub-contractors required to complete the scope of work as detailed in attached plan set by Swoboda MEP. (Attachment A)
- Contractor shall furnish all parts, labor, and workmanship necessary to install new ventilation hood according to Swoboda Engineering. (Attachment B)
- Existing acoustical ceiling tile and ceiling grid is intended to be re-used. Temporary cooling or heating is not required.

*Non-mandatory Pre-bid meeting/ facility visit is scheduled to discuss the City's requirements under this RFP. While attendance is at the discretion of the Proposer, Proposers who do not attend will be deemed to have attended and to have received the information provided at that time. April 16, 2024 at 2:00 P.M., Brenham Municipal Airport, 3001 Aviation Way, Brenham, TX.

PROPOSAL SUBMISSION AUTHORIZATION

- An authorized representative must sign bids, with the Proposer's address, telephone and email information provided. Unsigned proposals may not be considered.
- If the proposal is made by an individual, the name, mailing address and signature of the individual must be shown.
- If the proposal is made by a firm or partnership, the name and mailing address of the firm or partnership and the signature of at least one of the general partners must be shown.
- If the proposal is made by a corporation, the name and mailing address of the corporation and the signature and title of the person who signs on behalf of the corporation must be shown.
- The CITY reserves the right to request documentation showing the authority of the individual signing the proposal to execute contracts on behalf of anyone, or any corporation, other than himself/herself. Refusal to provide such information upon request may cause the proposal to be rejected as non-responsive.

The undersigned certifies that the information provided above is a true representation of its company's qualifications and agrees to comply with these assurances following award of the RFP and during the performance of the Lease Agreement, once executed.

Signature:		
Printed Name:		
Title:	Date:	

NON-COLLUSION CERTIFICATE

STATE OF	
COUNTY OF	
The undersigned, being duly sworn, deposes an partnership or corporation herein named, has no agreement, participated in any collusion, or of competition in the preparation and submission of in the award of a contract on the improvement determined by the contract of the improvement determined by the contract of the contract of the improvement determined by the contract of the con	t, either directly or indirectly, entered into any therwise taken any action in restraint of free a bid to the City of Brenham for consideration
RFP NO. 24-004 – Brenham Municipal Airpor	t HVAC Replacement
(Name of Firm)	<u></u>
By:(Authorized Signature)	<u></u>
Title:	<u> </u>
Sworn to before me this day of	, 2024.
Notary Public	
NOTADV SEAL.	



<u>Brenham Municipal Airport Terminal Building</u> <u>HVAC Replacement</u>

Bid Form

Bid No: 24-004

Bid Opening: 10:00 A.M. (CST), Wednesday, April 24, 2024

Submit to: Office of the City Secretary

Attention: Kyle Branham

City of Brenham

200 W. Vulcan St., Suite 203

Brenham, TX 77833

PO Box 1059

Brenham, Texas 77834-1059

Bid Documents: Sealed bids must be submitted on this form only. Bidders are required to submit one (1) original and one (1) copy. All bids submitted must be itemized with prices extended when practical. Bidder must return the entire original bid document with bid or offer.

Bid MUST be signed by an authorized representative of bidder. Original signature required.

Description located on MEP 1.0 plans	Section Price	Notes
Section 22.0 & 23.0; General Plumbing and Mechanical requirements	\$	Notes
Section 22.1; Plumbing, plumbing fixtures, and trim	\$	
Section; General Demolition	\$	
Section 23.1; Cooling, Heating, and Ventilation of Diner HVAC	\$	
Section 26.0; General Electrical		
Ventilation Hood Installation	\$	
TOTA	\$ L	
PRICE	\$	
*All bids submitted must be itemized with prices e	extended when practical.	
Exceptions and/or Comments: (additional sheets m	nay be added as needed):	

Name of Bidder:			_
	(Please print)		
Authorized Sign	ature:		
Address:			
Phone No:			
Email:			
	Acknowledger	ment of Addenda(s) (if any):	
Addendu	um No. 1	Addendum No. 3	
Addendı	ım No. 2	Addendum No. 4	

Exhibit "A"

TERMS AND CONDITIONS FOR PROPOSALS

Definitions:

In order to simplify the language throughout this request for proposals, the following definitions shall apply:

<u>CITY - OWNER</u> - Same as City of Brenham.

<u>CONTRACT</u> - An agreement between the City and a Vendor to furnish goods or services over a designated period of time during which repeated purchases may be made of the goods or services specified.

<u>VENDOR</u> – The successful Proposer(s) of this proposal request.

Instructions:

The following instructions apply to all proposals and become a part of terms and conditions of any bid submitted to the City of Brenham Purchasing Department, unless otherwise specified elsewhere in this bid request.

Form:

Proposals must be submitted on this form only. Proposers are required to submit one (1) original and one (1) copy. All proposals submitted must be itemized with prices extended when practical. PROPOSER MUST RETURN THE ENTIRE ORIGINAL BID DOCUMENT WITH BID OR PROPOSAL.

Bid Return:

Bid must be sealed, and to ensure proper recognition upon its arrival, list the Bid Number, Bid Description and the Bid Opening Date on the outside of your envelope.

Late Proposal:

Proposals must be received by the Purchasing Department prior to the time indicated on this form. Late proposals will not be opened and will be returned to the proposer only upon written request.

Acceptance:

The City of Brenham reserves the right to accept or reject any or all proposals, to waive any informalities and technicalities, to accept the offer considered most advantageous in order to obtain the best value for the City. Causes for rejection of a bid may include but are not limited to the proposer's current violation of any City ordinance, the proposer's current inability to satisfactorily perform the work or service, or the proposer's previous failure to timely perform its obligation under a contract with the City.

Proposers may be disqualified and rejection of proposals may be recommended for any of (but not limited to) the following causes:

- 1. Failure to use the proposal form furnished by the Owner;
- 2. Lack of signature by an authorized representative on the proposal form;
- 3. Failure to properly complete the proposal;
- 4. Evidence of collusion among proposers;
- 5. Omission of uncertified personal or company check as a proposal guarantee (if **Bid Bond required**); or
- 6. Unauthorized alteration of bid form.

Owner reserves the right to waive any informality or irregularity.

All proposers are hereby notified that the City of Brenham shall consider all factors it believes to be relevant in selecting the offer that provides the best value for the City including, but not limited to the purchase price, the proximity of the proposer as it relates to proposer's ability to perform the contract for the City, the delivery date, the reputation of the proposer and the proposer's goods or services, the quality of the proposer's goods or services, the extent to which the goods or services meet the City's needs, the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized business and non-profit organizations employing persons disabilities, the total long-term cost of the City to acquire the proposer's goods or services, the proposer's past performance under contracts with

the City, the proposer's compliance with City ordinances, and any relevant criteria specifically listed in this request for bid.

The City is committed to obtaining its goods, products and services at the lowest price possible which benefits all citizens of Brenham. Therefore, in order to accomplish objective/goal, it is not the intention of the City to exclude particular vendors or manufacturers nor to create restrictive situations in its request for bids and proposals. Any manufacturer's name, trade names, brand names, catalog numbers, technical data, etc. used in the specifications are there for the sole purpose of establishing and describing general performance, quality levels, type and dimensions and such references are not intended to be restrictive. Alternate proposals on similar or comparable products and/or services of any manufacturer or vendor equal to the products and/or services described in the specifications are invited and will be given careful consideration provided the alternate will accomplish the same task. The City shall be the sole judge on whether the alternate product and/or service is similar to, equal to and in compliance with that specified. The decision of the City shall be final.

Award of Contract:

The contract may be awarded to the proposer who provides goods or services at the best value for the City. The bid award may be based on, but not necessarily limited to, the following factors:

- a. the purchase price, including payment discount terms:
- b. the reputation of the proposer and of the proposer's goods or services;
- c. the quality of the proposer's goods or services;
- d. the extent to which the goods or services meet the City's needs;
- e. the proposer's past relationship with the City;
- f. the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized businesses and nonprofit organizations employing persons with disabilities;

- g. the total long-term cost of the City to acquire the proposer's goods or services;
- h. any relevant criteria specifically listed in this request for bid.

The City prefers to award the entire contract to a single proposer; although, the City reserves the right to award a primary contract and a secondary contract in an effort to secure a back-up contractor to be used in emergency situations in the event the primary contractor is unable to respond as needed.

Term of Contract:

This Contract shall become effective from date of acceptance and approval by the City of Brenham. It shall remain in force and effect with firm fixed bid prices for a period of one (1) year, beginning on the date of award of contract.

Extension of Contract:

Upon completion of the term of the original contract and mutual agreement of both parties, the contract may be extended for up to two (2) additional one (1) year terms (three (3) years total). The renewal will be under the same terms and conditions as the original contract. In the event a new contract cannot be executed at the anniversary date of the original term or any renewal term, the contract may be renewed month-to-month until a new contract is executed.

Assignment of Contract:

This contract cannot be transferred or assigned to another party without written consent of the City and may be subject to cancellation by the City if such consent is requested.

Contract Termination:

The City may terminate this Contract at any time upon thirty (30) calendar day's written notice. Upon the Vendor's receipt of such notice, the Vendor shall cease work immediately. The Vendor shall be compensated for the services satisfactorily performed prior to the termination date.

If, through any cause, the Vendor fails to fulfill its obligations under this contract, or if the Vendor violates any of the agreements of this Contract, the City has the right to terminate this Contract by giving the Vendor five (5) calendar days written notice. The Vendor will be compensated for the services satisfactorily performed before termination date. Termination of the contract for cause shall be deemed as sufficient evidence and cause to remove the Vendor's name from the proposer's list for receiving future proposals.

No term or provision of this Contract shall be construed to relieve the Vendor of liability to the City for damages sustained by the City because of any breach of contract by the Vendor. The City may withhold payments to the Vendor for the purpose of setoff until the exact amount of damages due the City from the Vendor is determined and paid.

Reimbursements:

There is no expressed or implied obligation for the City to reimburse responding firms for any expenses incurred in preparing proposals in response to this Request for Proposals and the City will not reimburse responding firms for these expenses, nor will the City of Brenham pay any subsequent costs associated with the provision of any additional information or presentation, or to procure a contract for these services.

Minority Owned Businesses:

Minority business enterprises will be afforded full opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex, or national origin in consideration for an award.

Error-Quantity:

Proposals must be submitted on units of quantity specified. In the event of errors in extended process, the unit price shall govern. Any suggested quantity to secure better prices is welcomed. When discrepancies occur between words and figures, the words shall govern.

Quantities:

Quantities indicated in the Bid are estimated based upon the best available information. The City reserves the right to increase or decrease the quantities by any amount deemed necessary to meet its needs without any adjustments in the unit bid prices.

Variations/Conflicts:

Any variation (deviation) from these specifications must be indicated on a separate form and be made part of the bid.

In the case of any conflict between these Terms and Conditions and the Contract between the City and the successful Proposer, the provisions of the Contract shall control.

F.O.B. – Damage

Proposals will not be considered unless proposals include F.O.B. delivered to Brenham, Texas. If shipping costs are not included in the unit bid price, proposer must give exact delivery cost, which is to be prepaid or added to the invoice. The City assumes no liability of goods delivered in a damaged or unacceptable condition.

Firm Prices:

Proposers must hold bid prices firm for 90 days after the bid opening date to allow the City sufficient time to award a contract. Once a Contract is awarded, the successful proposer must hold proposal prices firm for the duration of the Contract. Sealed competitive proposals may be negotiated, amended or changed after the proposal opening date.

Cooperative Agreements:

Successful proposer agrees to extend prices and terms to all governmental entities that have entered into, or will enter into, joint purchasing interlocal cooperation agreements with the City.

Authorized Signature:

Proposals must show full firm name and mailing address of proposer and be manually signed by an authorized representative of the proposer. Firm name and authorized signature should appear on each page of bid where spaces are provided. Submission of a signed bid will be interpreted to mean that proposer has hereby agreed to all terms and conditions set forth in all of the sheets which make up this invitation.

Withdrawal-Alteration Of Proposals:

Proposals cannot be altered after receiving time or opening time. No bid may be withdrawn after opening time without acceptable reason in writing and with the approval of the City Council.

Lump Sum Proposals:

Lump sum proposals will be considered only if unit prices are quoted also. However, the totals of such quoted unit prices and the lump sum proposals will not be considered if the price quoted also involves prices of commodities requested on an entirely separate bid request.

All-Or-None Proposals:

All-or-none proposals will be considered only if proposer quoted prices on all items requested. If a proposer desires the City to consider an all-or-none bid, it must be stated in the bid document. All-or-none proposals will not be considered if prices quoted involved prices of items and services requested on an entirely separate bid request.

Payment Of Invoices:

Invoices must be submitted by the successful proposer to the City of Brenham, Finance Department, P.O. Box 1059, Brenham, Texas 77835-1059. All invoices to be paid in full within thirty (30) days after satisfactory delivery and billing, whichever is the latter. The City will not be liable for payment of invoices received more than sixty (60) days after delivery of order, or completion of service.

Cash Discounts:

Proposers may quote additional cash discount terms. If no discount is shown, prices are to be assumed net. Discount period to be started from the date of completion of entire order or date of receipt of invoice, whichever occurs last regardless of date of invoice.

Taxes:

The City of Brenham is exempt from Federal Excise, State Sales and Transportation Taxes. TAX MUST NOT BE INCLUDED IN BID. The City upon request will execute Tax Exemption Certificates. The City of Brenham is statutorily exempt from State and Local Sales tax and a permit number is not required.

Delivery:

Proposals must show the number of consecutive calendar days required to deliver the materials, services or equipment under normal conditions. Failure to specify delivery time will be considered reason enough to cause the bid to be disregarded. Delivery time quoted will be given consideration in awarding proposals. If delivery is not made within ten (10) days after number of days specified on bid, entire order may be canceled and proposer's name removed from mailing list.

All deliveries are to be made to the Central Warehouse located at 315 West Second Street, unless otherwise specified in the Bid Request or Purchase Order. Deliveries will be accepted only during normal working hours on normal working days. Unless otherwise indicated, items received must be new and in first-class condition. Types of materials normally packaged for protection and convenience in storage shall be in the proper containers.

Liability:

Vendor shall be liable for all damages incurred while in performance of the work to be performed hereunder. Vendor assumes full responsibility for the work to be performed hereunder, and hereby releases, relinquishes, and discharges the City, its officers, agents, and employees, from all claims, demands, and causes of action of every kind and character including the cost of defense thereof, for any injury to, including death of, any person whether that person be a third person, vendor, or an employee of either parties hereto, and any loss of or damage to property, whether the same be that of either of the parties hereto or of third parties, caused by or alleged to be caused by,

arising out of or in connection with the issuance of this order to Vendor, whether or not said claims, demands and causes of action in whole or in part are covered by insurance. Certificate of Insurance may be required for but not limited to Commercial General Liability, Commercial Auto Liability, Workers Compensation, and Professional Liability Insurance.

Material Safety Data Sheets (MSDS):

MSDS's must be provided prior to or with receipt of order, and when revised. Containers must be properly labeled and identified in accordance with the OSHA Hazard Communications Standard. Improperly labeled containers will result in refusal of the shipment and possible change in vendors.

Patents, Franchises, etc.:

The successful proposer agrees to protect the City from any claim involving patent right infringements, copyrights or sales franchises.

No Proposals:

If proposer is unable to quote, the bid form should be returned to the purchasing agent before opening time, and reason given for not bidding if proposer desires to bid on future purchases.

Addenda:

In the event of a needed change in the published documents, it is understood that all the foregoing terms and conditions and all performance requirements will apply to any published addendum.

All published addenda shall be signed and included with your response package as acknowledgement of the addendum. Proposers are responsible for obtaining all published addenda from the City of Brenham Purchasing office. The City assumes no responsibility for the Proposers failure to obtain and/or properly submit any addendum. Failure to acknowledge and submit any addendum may be cause for the bid to be rejected. The City's decision to accept or

reject any particular bid due to a failure to acknowledge and submit addenda shall be final.

Fiscal Funding:

The City operates and is funded on a fiscal year basis; accordingly, the City reserves the right to terminate, without liability, any contract for which funding is not available. Renewal of a contract will be in accordance with Local Government Code 271.903 concerning non-appropriation of funds for multi-year contracts. The City reserves the right to rescind the contract at the end of each fiscal year if is determined that there are insufficient funds to extend the contract. The fiscal year for the City extends from October 1st of each calendar year to September 30th of the following calendar year.

H.B. 1295 Compliance:

The Vendor for the Contract shall comply with the requirements of Section 2252.908 of the Texas Government Code as adopted in 2015 as House Bill 1295. The law requires that a governmental entity may not enter in certain contracts with a business entity unless the business entity submits a Disclosure of Interested Parties to the governmental entity. The law applies only to a contract that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million.

Compliance with the law requires that the Vendor utilize the Texas Ethics Commission website to enter the required information on Form 1295 and print a copy of the complete form. The form must be signed, notarized and submitted to the contracting government entity

The City, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the completed Form 1295 within five (5) working days thereafter.

No Boycott of Israel:

By acceptance of this Contract, Vendor hereby certifies that it is not a company identified on the Texas Comptroller's list of companies known to have contacts with, or provide supplies or services to, a foreign organization designated as a Foreign Terrorist Organization by the U.S. Secretary of State. Vendor further certifies and verifies that neither vendor, nor any affiliate, subsidiary, or parent company of Vendor, if any, the "Vendor Companies"), boycotts Israel, and Vendor agrees that Vendor and Vendor Companies will not boycott Israel during the term of this Agreement. For purposes of this Agreement, the term "boycott" shall mean and include terminating business activities or otherwise taking any action that is intended to penalize, inflict economic hoard on, or limit commercial relations with Israel, or with a person or entity doing business in Israel or in an Israelicontrolled territory.

Engaged in Business with Iran, Sudan, or Foreign Terrorist Organization:

Pursuant to Texas Government Code Chapter 2252, Subchapter F, Vendor affirms that it is not identified on a list created by the Texas Comptroller of Public Accounts as a company known to have contracts with or provide supplies or services to a foreign terrorist organization.

Conflict of Interest:

By doing business or seeking to do business with the City, Vendor acknowledges that they have been notified of the requirements of Chapter 176 of the Texas Local Government Code and that they are solely responsible for compliance.

Applicable Law and Venue

This Contract shall be governed by the laws of the State of Texas. The parties agree that performance and all matters related thereto shall be in Washington County, Texas and venue for any lawsuit, claim or dispute arising out of the contract shall be in Washington County, Texas. Further, neither party will seek to remove such litigation to the federal court system by application of conflicts of laws or any other removal process.

Insurance

- 1. The Vendor shall procure and maintain at its sole cost and expense for the duration of the Contract insurance coverage for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, volunteers, employees or subcontractors. The Contractor's insurance coverage shall be primary insurance with respect to the City, its officials, employees volunteers. Any insurance or selfinsurance maintained by the City, its officials, employees or volunteers shall be considered in excess of the Contractor's insurance and shall not contribute to it. Further, the Contractor shall include the City as an additional insured under its policy. All coverage for subcontractors shall be subject to all of the requirements stated herein. Certificates of Insurance and endorsements shall be furnished to the City and approved by the City before work commences.
- 2. Standard Insurance Policies Required:
 - a) Commercial General Liability Policy
 - b) Automobile Liability Policy
 - c) Workers' Compensation Policy
- 3. General Requirements Applicable to All Policies:
 - a) General Liability and Automobile Liability insurance shall be written by a carrier with an A: VIII or better rating in accordance with the current Best Key Rating Guide.
 - b) Only Insurance Carriers licensed and admitted to do business in the State of Texas will be accepted.
 - c) Deductibles shall be listed on the Certificate of Insurance and are acceptable only on a per occurrence basis for property damage only.
 - d) "Claims Made" policies will not be accepted.
 - e) The City of Brenham, its officials, employees and volunteers, are to be added as "Additional Insured" to the General Liability policy. The coverage shall contain no special

- limitations on the scope of protection afforded to the City, its officials, employees or volunteers.
- f) A Waiver of Subrogation in favor of the City with respect to Workers' Compensation Insurance must be included.
- g) Each insurance policy shall be endorsed to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice has been given to the City.
- h) Upon request, certified copies of all insurance policies shall be furnished to the City.

4. Commercial General Liability

- a) Minimum Combined Single Limit of \$1,000,000.00 per occurrence for bodily injury and property damage.
- b) No coverage shall be deleted from the standard policy without notification of individual exclusions being attached for review and acceptance.

5. Automobile Liability

a) Minimum Combined Single limit of \$500,000.00 per occurrence for bodily injury and property damage.

6. Worker's Compensation

- a) Statutory
- 7. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent. And shall contain the following provisions and warranties:
 - a) The company is licensed and admitted to do business in the State of Texas.
 - b) The insurance policies provided by the insurance company are underwritten on forms that have been provided by the Texas Board of Insurance.
 - c) All endorsements and insurance coverage according to requirements and instructions contained herein.

- d) The form of the notice of cancellation, termination, or change in coverage provisions to the City of Brenham.
- e) Original endorsements affecting coverage required by this section shall be furnished with the certificates of insurance.

Workers' Compensation Provisions
(State law requires the following language in contracts on public works projects).

DEFINITIONS:

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

<u>Duration of the Project</u> – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the City.

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

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

The Contractor must provide a certificate of coverage to the City **prior** to being awarded the contract.

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

The Contractor shall obtain from each person providing services on a project, and provide to the City:

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

The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

The Contractor shall notify the City in writing by certified mail or personal delivery, within ten (10) calendar days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

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

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

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

By signing the contract, or providing, or causing to be provided a certificate of coverage, the Contractor is representing to the City that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the Commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor that entitles the City to declare the contract void if the contractor does not remedy the breach within ten (10) calendar days after receipt of notice of breach from the City.

GENERAL
THE WORK COVERED BY THIS SECTION INCLUDES THE FURNISHING OF EACH ITEM LISTED HEREIN AND OR SHOWN ON THE DRAWINGS; OF QUALITY OR SUBJECT TO QUALIFICATION NOTED HEREIN. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED ACCORDING TO CONDITION STATED, AND SHALL PROVIDE THEREFORE ALL NECESSARY LABOR, MATERIALS EQUIPMENT AND INCIDENTALS.

CONFORM TO ALL APPLICABLE CODES: 2018 INTERNATIONAL CODES; 2017 NEC (NFPA 70); 2012 TAS (TEXAS ACCESSIBILITY STANDARDS); 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND ALL AMENDMENTS TO THE ADOPTED CODES BY THE LOCAL AHJ (AUTHORITY HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS EXCEED THE REQUIREMENTS OF THE CODE, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.

OBTAIN AND PAY ALL COSTS FOR REQUIRED PERMITS AND INSPECTION FOR ALL WORK INCLUDED HEREIN.

ALL EQUIPMENT PROVIDED SHALL BE U.L. LISTED FOR THE USE INTENDED AND THE

THE SPECIFICATIONS AND SCHEDULES ON THE DRAWINGS ARE INTENDED TO DESCRIBE MATERIALS AND EQUIPMENT WHICH ARE TO BE "FURNISHED" BY THE CONTRACTOR. THE DRAWINGS ARE INTENDED TO SHOW WHERE SUCH MATERIALS AND EQUIPMENT ARE TO BE "INSTALLED"; THEREFORE, IT SHALL BE UNDERSTOOD THAT SUCH PRODUCTS ARE TO BE "FURNISHED AND INSTALLED" UNLESS IT IS SPECIFICALLY STATED OTHERWISE.

IN ALL CASES THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO COMPLIMENT EACH OTHER TO DEFINE COMPLETE WORKABLE SYSTEMS. THE SCALE OF THE DRAWINGS DOES NOT PERMIT THE SHOWING OF THE EXACT LOCATION OF ALL MATERIALS AND EQUIPMENT OR ALL OFFSETS OR FITTINGS WHICH MAY BE REQUIRED. QUESTIONS CONCERNING INTENT, AS IT MAY AFFECT THE CONTRACT PRICE, ARE TO BE RESOLVED IN WRITING PRIOR TO BIDDING. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE CONSIDERED BECAUSE OF THE CONTRACTOR'S FAILURE TO ANTICIPATE ALL WORK NECESSARY TO PROVIDE COMPLETE WORKABLE SYSTEMS.

WORK INDICATED IN THE SPECIFICATIONS BUT NOT SHOWN ON THE DRAWINGS, AND VICE VERSA, IS AS BINDING AS THOUGH INDICATED BY BOTH. WHERE THE SPECIFICATIONS AND DRAWINGS CONFLICT THE ENGINEER WILL DETERMINE WHICH IS TO BE PROVIDED.

UNLESS SPECIFICALLY NOTED ALL MATERIALS AND EQUIPMENT INSTALLED IN THIS

PROJECT SHALL BE NEW AND IN GOOD CONDITION.

ALL WORKMANSHIP SHALL BE DONE IN A PROFESSIONAL MANNER AND IN ACCORDANCE WITH THE BEST MODERN PRACTICE. WHENEVER THE CONTRACT DRAWINGS OR SPECIFICATIONS OMIT OR CAUSE A REASONABLE DOUBT ABOUT WHAT IS PERMISSIBLE, AND WHEN THEY FAIL TO STATE THE QUALITY OF WORK, THE INTERPRETATION TO BE FOLLOWED IS THAT WHICH REQUIRES THE BEST QUALITY WORK

ALL WORK UNDER THESE DIVISIONS HAS BEEN DESIGNED IN AN ATTEMPT TO AVOID CONFLICTS FOR SPACE DURING INSTALLATION. THE SCALE OF THE DRAWING DOES NOT PERMIT THE SHOWING OF THE EXACT LOCATION OF ALL MATERIALS AND EQUIPMENT OR ALL OFFSETS OR FITTINGS WHICH MAY BE REQUIRED. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR CONCERNED TO COORDINATE WITH ALL CRAFTS TO UTILIZE THE SPACE AVAILABLE IN THE MOST EFFICIENT MANNER

MAINTAIN AT THE JOB SITE A SET OF PRINTS USED FOR NO OTHER PURPOSE BUT TO RECORD, WITH COLORED PENCIL, "AS BUILT" CHANGES AND DIAGRAMS NOTING THOSE PORTIONS OF THE WORK IN WHICH THE ACTUAL INSTALLATION VARIES SIGNIFICANTLY FROM THE CONTRACT DRAWINGS. THESE "AS BUILT" DRAWINGS SHALL INCLUDE EXACT DIMENSIONED LOCATIONS OF ALL UNDERGROUND

AT THE CONCLUSION OF THE PROJECT, THE JOB RECORDED "AS BUILT" DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AS A CONDITION OF FINAL ACCEPTANCE.

SHOP DRAWINGS AND SUBMITTALS
SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. SUBMITTALS SHALL INCLUDE ALL ITEMS WITH A TABLE OF CONTENTS AS A SINGLE SUBMITTAL, (MECHANICAL, ELECTRICAL OR PLUMBING) PIECE MEAL AND OR PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. EACH COMPLETE PDF FILE SHALL CONTAIN A TABLE OF CONTENTS SHOWING THE ORDER IN WHICH ITEMS ARE ARRANGED. COMPLETE DESCRIPTIVE LITERATURE. AND SHOP DRAWINGS WHERE APPROPRIATE, SHALL BE SUBMITTED FOR APPROVAL.

AFTER REVIEW BY THE ENGINEER THE SUBMITTAL WILL BE RETURNED WITH A COVER LETTER STATING REVIEW COMMENTS AND APPROVAL. SUBMITTALS NOT COMPLYING WITH THE ABOVE REQUIREMENTS ARE SUBJECT TO BEING RETURNED WITHOUT ACTION.

THE NAMING OF A MANUFACTURER AND MODEL NUMBER, OR OTHER IDENTIFYING DESIGNATION, OF A PRODUCT HEREIN IS INTENDED TO ESTABLISH CONSTRUCTION, PHYSICAL SIZE, ELECTRICAL CHARACTERISTICS, CAPACITIES, AND/OR OTHER FEATURES AFFECTING THE UTILIZATION OF THE PRODUCT IN THIS PARTICULAR PROJECT, UNLESS OTHERWISE NOTED. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE CONSIDERED AND WILL BE ACCEPTED IF THEY ARE EQUAL IN ALL RESPECTS TO THE SPECIFIED PRODUCTS, AND THE CONTRACTOR HAS SUBMITTED A LETTER STATING THAT HE HAS INVESTIGATED THE SUBSTITUTION AND STATES IN WRITING THAT THE PROPOSED SUBSTITUTION IS EQUAL OR BETTER IN EVERY RESPECT TO THAT SHOWN ON THE PRINTS AND SPECIFICATIONS. THE DECISION AS TO THE EQUALITY SHALL REST WITH THE ENGINEER, AND SUCH DECISION SHALL BE FINAL. SHOULD THE PRODUCT OF AN ALTERNATE MANUFACTURER BE "APPROVED", THE CONTRACTOR PROPOSING SUCH PRODUCT SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS TO OTHER CONTRACTORS FOR CHANGES ON THEIR WORK NECESSITATED BY THE SUBSTITUTE. SUBSTITUTION PROPOSALS SHALL CONFORM TO THE REQUIREMENTS OF THE GENERAL AND SUPPLEMENTAL GENERAL CONDITIONS AND SPECIAL PROVISIONS.

ALL EXCAVATION FOR UNDERGROUND UTILITIES SHALL BE MADE TRUE TO GRADE SO THAT PIPING RESTS ON UNDISTURBED EARTH. F THE ABOVE IS NOT FEASIBLE, OR AT THE CONTRACTOR'S OPTION, EXCAVATION SHALL BE MADE A MINIMUM OF SIX INCHES BELOW THE REQUIRED GRADE TO PROVIDE A SAND BED FOR THE PIPING. BACKFILL OVER PIPING SHALL BE MADE WITH EARTH OR FILL SAND FREE OF DEBRIS AND SHALL BE TAMPED BY HAND OR MECHANICAL MEANS TO THE DENSITY OF THE ADJACENT UNDISTURBED EARTH. BACK FILL UNDER SLABS ON GRADE SHALL BE MADE IN ACCORDANCE WITH THE ARCHITECT'S SPECIFICATIONS OF SUCH AREAS, WHEN EXCAVATION IS TO BE MADE WHERE THE SURFACE MATERIAL IS CONCRETE, THE CONTRACTOR REQUIRING THE EXCAVATION SHALL LAYOUT THE LIMITS. CONTRACTOR REQUIRING THE EXCAVATION SHALL PERFORM ALL OTHER EXCAVATION AND BACKFILL IN ACCORDANCE WITH THE ABOVE.

ALL TRENCHING AND EXCAVATION SHALL BE DONE IN STRICT ACCORDANCE WITH CURRENT OSHA REQUIREMENTS AND ALL OTHER APPLICABLE SAFETY CODES AND STANDARDS.

GUARANTEE
BEFORE FINAL PAYMENT IS MADE; EACH CONTRACTOR OR SUB- CONTRACTOR PERFORMING WORK COVERED BY THESE DIVISIONS SHALL GUARANTEE. IN WRITING, THAT THE WORK PERFORMED IS FREE OF DEFECTIVE MATERIALS, EQUIPMENT AND FAULTY WORKMANSHIP AND SHALL REMAIN SO FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OF ACCEPTANCE BY THE OWNER. THE GUARANTEE SHALL COVER THE REPLACEMENT OF ANY DEFECTIVE MATERIALS OR EQUIPMENT AND CORRECTION OF ANY FAULTY WORKMANSHIP WITHOUT ADDITIONAL COST TO THE OWNER.

SECTION 22.1

<u>PLUMBING</u>

THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITION, AND APPLICABLE PORTIONS OF SECTION 22.0 OF THE

THE WORK COVERED BY THIS SECTION INCLUDES THE FURNISHING OF EACH ITEM LISTED HEREIN AND/OR SHOWN ON THE DRAWINGS; OF QUALITY OR SUBJECT TO QUALIFICATION NOTED HEREIN. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED ACCORDING TO CONDITIONS STATED, AND SHALL PROVIDE THEREFORE ALL NECESSARY LABOR, MATERIALS,

ALL WORK PERFORMED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL COMPLY WITH THE CURRENT APPROVED BUILDING CODE. UNLESS THE SPECIFICATIONS OR DRAWINGS INDICATE MORE RIGID REQUIREMENTS. IN WHICH CASE THE SPECIFICATIONS OR DRAWINGS SHALL GOVERN.

WORK COVERED UNDER THIS SECTION OF THE SPECIFICATIONS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, THE FURNISH AND INSTALL INTERIOR WATER, SANITARY SEWER AND VENT PIPING FROM FIXTURES IN THIS CONTRACT.

FURNISH AND INSTALL FLOOR DRAINS, FLOOR SINKS, HUB DRAINS AND CLEAN OUTS.

FURNISH AND INSTALL HOT AND COLD WATER COPPER PIPING THROUGHOUT.

FURNISH AND INSTALL LAVATORIES, WATER CLOSETS, AND ALL FITTINGS REQUIRED FOR EACH, TO MAKE THE FIXTURE COMPLETELY OPERATIONAL.

FLASHING FOR VENTS THROUGH ROOF.

FURNISH AND INSTALL INSULATION ON ALL WATER LINES WHERE REQUIRED

PIPE AND FITTINGS
THE PIPE AND FITTINGS INDICATED BELOW SHALL BE USED FOR THE INDICATED SYSTEMS. THE ACCEPTED STANDARD JOINING PROCEDURES SHALL BE USED FOR THE PARTICULAR MATERIALS INVOLVED. ALL PIPE SHALL BE REAMED, OR OTHERWISE CLEANED, AFTER CUTTING TO REMOVE BURRS AND TO RESTORE TO FULL BORE. WATER SERVICE HOT AND COLD

COPPER WATER TUBE, TYPE "L" RIGID, CONFORMING TO ASTM B88, WITH WROUGHT COPPER FITTINGS CONFORMING TO ANSI B16.22, AND 95.5 SOLDER JOINTS JOINED WITH HIGH TEMPERATURE SOLDER (SILFOS, SILBRAZ, PHOSCOPPER, ETC.) PEX TYPE A PIPING:

PEX PIPE AND FITTINGS

- PEX-A (ENGLE-METHOD CROSSLINKED POLYETHYLENE) PIPING: ASTM F 876/877
- PEX-A FITTINGS: ELBOWS, ADAPTERS, COUPLINGS, PLUGS, TEES AND MULTI-PORT TEES (1/2 INCH THROUGH 2 INCH NOMINAL PIPE SIZE): ASTM F1960 COLD-EXPANSION FITTING MANUFACTURED FROM THE FOLLOWING MATERIAL TYPES: 2.1. UNS NO. C69300 LEAD-FREE (LF) BRASS.
- 2.2. 20% GLASS-FILLED POLYSULFONE AS SPECIFIED IN ASTM D 6394.
- 2.3. UNREINFORCED POLYSULFONE (GROUP 01, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D 6394.
- 2.4. POLYPHENYLSULFONE (GROUP 03, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D 6394. 2.5. BLEND OF POLYPHENYLSULFONE (55-80%) AND UNREINFORCED POLYSULFONE (REM.) AS SPECIFIED IN ASTM D 6394.
- 2.6. REINFORCING COLD-EXPANSION RINGS SHALL BE MANUFACTURED FROM THE SAME SOURCE AS PEX-A PIPING MANUFACTURER AND MARKED "F1960".
- 2.7. PROVIDE FITTINGS FROM THE SAME MANUFACTURER OF THE PIPING THERE SHALL BE NO JOINTS ALLOWED UNDER SLABS.

CONDENSATE DRAIN LINES TYPE K SOFT COPPER TUBING (ASTM B-88) AND WROUGHT COPPER FITTINGS JOINED WITH HIGH TEMPERATURE SOLDER (SILFOS, SILBRAZ, PHOSCOPPER, ETC.) THERE SHALL BE NO JOINTS ALLOWED UNDER SLABS

SANITARY SEWER DRAIN WASTE AND VENT LINES BELOW GRADE, NOT EXPOSED OR EXPOSED IN AREAS NOT USED AS RETURN EITHER CAST IRON OR SEWER GRADE SCHEDULE 40 PVC PIPE (ASTM D-1785, D-2665) AND FITTINGS WITH SOLVENT WELD JOINTS.

SANITARY SEWER DRAIN WASTE AND VENT LINES ABOVE GRADE, EXPOSED IN AREAS USED AS RETURN AIR PLENUMS: NO-HUB OR HUB AND SPIGOT CAST IRON SOIL PIPE

NO-HUB CAST IRON SOIL PIPE AND FITTINGS SHALL CONFORM TO ASTM A 888 AND/OR STANDARD SPECIFICATIONS 301 OF THE CAST IRON SOIL PIPE INSTITUTE. NO-HUB JOINTS SHALL CONFORM TO SPECIFICATION 310 OF THE CAST IRON SOIL PIPE INSTITUTE AND/OR ASTM C 1277. JOINTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS

HUB AND SPIGOT PIPE, SERVICE WEIGHT (SV) CAST IRON SV CAST IRON PIPE AND FITTINGS SHALL CONFORM TO ASTM A 74. PIPING SHALL BE JOINED WITH NEOPRENE GASKETS WHICH CONFORM TO ASTM C 564.

NATURAL GAS PIPING SCHEDULE 40 STEEL PIPE WITH 150# SCREW FITTINGS

PIPING SHALL BE PLUMB, EXCEPT FOR WASTE AND VENT PIPING, WASTE AND VENT PIPING SHALL HAVE A MINIMUM OF 1/8" AND A MAXIMUM OF 1/4" PER FOOT FALL, EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS.

ALL PIPING SHALL BE RUN PARALLEL TO THE VERTICAL WALL LINE EXCEPT WHERE OFFSETS REQUIRE OTHERWISE TO AVOID OBSTRUCTIONS.

ALL PIPING IN WALLS AND CHASES SHALL BE SECURELY ANCHORED TO PREVENT UNDUE MOTION OF PIPE AND FIXTURE

PROVIDE WATER HAMMER ARRESTORS IN PIPING SYSTEM AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY CODE

A CHROME PLATED STOP VALVE SHALL BE INSTALLED IN THE WATER SUPPLY TO EACH ITEM OF PLUMBING EQUIPMENT.

SUITABLE ADAPTERS SHALL BE PROVIDED FOR INSTALLATION OF VALVES IN COPPER LINES.

HOSE BIBBS AND FAUCETS WITH HOSE CONNECTIONS SHALL BE PROVIDED WITH VACUUM BREAKERS.

ALL PIPES MUST BE ADEQUATELY SUPPORTED THROUGHOUT. HANGERS SHALL BE MALLEABLE SPLIT RING, EXCEPT HANGERS 1-1/2" AND LARGER MAY BE CLEVIS TYPE AT THE CONTRACTOR'S OPTION.

TRAPEZE HANGERS MAY BE USED TO SUPPORT TWO OR MORE PIPES AT THE SAME LOCATION; SUCH TRAPEZES SHALL BE ANGLE OR CHANNEL IRON OR METAL FRAMING EQUAL TO UNISTRUT OR ELEC. TRAPEZE HANGERS SHALL BE OF SUCH SIZE OR SERIES THAT THERE WILL BE NO VISIBLE DEFLECTION BETWEEN SUPPORTING RODS.

MAXIMUM HANGER SPACING SHALL BE AS FOLLOWS, WITH THE SMALLEST PIPE ON TRAPEZE HANGERS DETERMINING THE HANGER SPACING UNLESS INTERMEDIATE INDIVIDUAL HANGERS ARE USED ON THE SMALL PIPING TO SATISFY THE SPACING REQUIREMENTS.

THREADED STEEL PIPE 12' COPPER TUBING 1-1/2" AND LESS 6' COPPER TUBING GREATER THAN 1-1/2" 10'

PROVIDE A HANGER WITHIN 24" ON EITHER SIDE OF ANY ELBOW REGARDLESS OF MATERIAL TYPE OR SIZE.

ALL PEX PIPING SHALL BE SUPPORTED ACCORDING TO MANUFACTURER'S RECOMMENDATION AND USING PIPING MFG. SUPPORT SYSTEM COMPONENTS

CHROME PLATED ESCUTCHEONS SIZED TO FIT SNUGLY AROUND THE PIPE SHALL BE USED AT ALL EXPOSED LOCATIONS OF

PLASTIC PIPING

ACCESSIBLE CHASES. DOMESTIC WATER - DOMESTIC WATER PIPING SHALL BE HYDRO- STATICALLY TESTED AT 125 PSI AND PROVEN TIGHT BY

PIPES WHICH PENETRATE WALLS AND CEILINGS. THIS DOES NOT INCLUDE THOSE PENETRATIONS IN EQUIPMENT ROOM OR

EXHIBITING NO DISCERNIBLE PRESSURE LOSS INDICATED ON A 0-300 PSI PRESSURE GAUGE OVER A FOUR HOUR PERIOD. THE SOURCE OF THE PRESSURE SHALL BE ISOLATED FROM THE SYSTEM DURING THE TEST. ANY LEAKS SHALL BE CORRECTED BY TIGHTENING THE JOINT, REPLACING THE FITTING AND/OR REPLACING THE PIPE AS NECESSARY TO STOP THE LEAK. TEST SHALL BE REPEATED AFTER REPAIR(S) UNTIL SYSTEM IS PROVEN TIGHT.

SANITARY AND WASTE SYSTEMS - ALL PIPING SHOULD BE TESTED WITH NOT LESS THAN 10 FEET HYDROSTATIC HEAD AND MAINTAINED FOR A PERIOD OF TWO HOURS.

THE FOLLOWING PIPING SHALL BE INSULATED WITH PREFORMED 1" OWENS CORNING FIBERGLASS WITH WHITE VAPOR BARRIER: - ALL PVC DRAIN AND VENT LINES EXPOSED IN RETURN AIR PLENUMS - ANY PEX PIPING LOCATED WITHIN RETURN AIR PLENUM AREA ABOVE THE CEILING - ALL DOMESTIC HOT WATER PIPING

- ALL DOMESTIC WATER PIPING LOCATED WITHIN UNCONDITIONED WAREHOUSE OR WITHIN ANY EXTERIOR WALL ASSEMBLY

EXPOSED P-TRAPS, AND COLD AND HOT WATER SUPPLIES UNDER HANDICAP ACCESSIBLE LAVATORIES - PROVIDE FOAM INSULATING COVERS WITH EXTERNAL VINYL. RE-CLOSEABLE SEALING STRIPS, TAMPER PROOF LOCKING DEVICE, AND WEEP SEAM TO PREVENT LEAKAGE BUILD UP, AS MANUFACTURED BY PLUMBEREX SPECIALTY PRODUCTS OR EQUAL.

END OF SECTION

SECTION 22.1

PLUMBING FIXTURES AND TRIM

THE REQUIREMENTS OF SECTION 22.0 APPLY TO ALL WORK DESCRIBED IN THIS SECTION. INCLUDES PLUMBING FIXTURES AND TRIM AND FLOOR

SUBMITTALS SHALL INCLUDE MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR ALL PLUMBING FIXTURES. ALL WATER CLOSETS, LAVATORIES, URINALS, SHOWER HEADS, ETC., SHALL CONFORM TO THE CURRENT STATE OF TEXAS WATERSAVING PERFORMANCE STANDARDS.

EACH PLUMBING FIXTURE, FLUSH VALVE, TOILET SEAT, SUPPLIES, FAUCETS, ETC., WILL HAVE A MINIMUM OF ONE MANUFACTURERS LISTED. ANY SUBMITTALS BESIDES THOSE LISTED MUST BE EQUAL AND ARE SUBJECT TO APPROVAL FROM ARCHITECT/ENGINEER.

CHECK MILLWORK SHOP DRAWINGS. CONFIRM LOCATION AND SIZE OF

FIXTURES AND OPENINGS BEFORE ROUGH-IN AND INSTALLATION.

INSTALL FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. AT COMPLETION THOROUGHLY CLEAN PLUMBING FIXTURES

PROVIDE REDUCERS AND ESCUTCHEONS AS REQUIRED FOR COMPLETE INSTALLATION.

HOSE BIBBS AND FAUCETS WITH HOSE CONNECTIONS SHALL BE PROVIDED WITH VACUUM BREAKERS.

SOLIDLY ATTACH CLOSET AND LAVATORY CARRIERS TO FLOOR WITH ANCHOR BOLTS. EACH FOOT OR MOUNTING POINT SHALL BE BOLTED. INCLUDING ANCHORING LUGS ON BACK SIDE OF CLOSET CARRIERS

ALL CHINA FIXTURES AND ALL TOILET SEATS SHALL BE WHITE IN COLOR UNLESS OTHERWISE CALLED OUT ON DRAWINGS.

BY PLUMBEREX OR EQUAL.

ALL LAVATORIES WHICH ARE ADA ACCESSIBLE ARE TO BE FURNISHED

WITH P-TRAP COVERS AND VALVE/SUPPLY COVERS AS MANUFACTURED

MOUNT FIXTURES THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR: A. WATER CLOSET: (1) STANDARD: 15 INCHES TO TOP OF BOWL RIM

(2) ADA: 18 INCHES TO TOP OF SEAT B. URINAL: 17 INCHES TO TOP OF BOWL RIM C. LAVATORY: (1) STANDARD: 31 INCHES TO TOP OF BASIN RIM (2) ADA: 34 INCHES TO TOP OF BASIN RIM

D. DRINKING FOUNTAIN: (1) STANDARD: 40 INCHES TO TOP OF SPOUT OUTLET. (2) ADA: 36 INCHES TO TOP OF SPOUT OUTLET.

END OF SECTION

GENERAL DEMOLITION NOTES

- PRIOR TO BIDDING, THE CONTRACTORS SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, AND TO VERIFY LOCATION, SIZE AND QUANTITY OF ITEMS TO BE REMOVED. SUBMITTAL OF HIS BID SHALL SIGNIFY HIS WILLINGNESS TO COMPLY WITH THE DESIGN AND HIS ACCEPTANCE OF ON-SITE CONDITIONS AS
- 2. SALVAGE ITEMS AND MATERIALS (REMOVED AND/OR DEMOLISHED) SHALL REMAIN THE PROPERTY OF THE OWNER AND AS A PART OF THIS CONTRACT THE CONTRACTOR SHALL DELIVER THESE TO A DESTINATION AS DIRECTED BY THE OWNER.
- 3. EACH ITEM OF EQUIPMENT, PLUMBING, RECEPTACLES, LIGHT FIXTURES, MOTORS, ETC., SHOWN TO BE DEMOLISHED SHALL HAVE ITS' ASSOCIATED CIRCUITRY PIPING AND TRIM REMOVED BACK TO AN ACTIVE POINT FOR PLUMBING OR MECHANICAL AND BACK TO THE PROTECTIVE DEVICE IN THE PANEL, SWITCHBOARD, ETC., FOR ELECTRICAL EXCEPT AS OTHERWISE MENTIONED BY NOTES 4 AND 5
- 3.A. ASSOCIATED CIRCUITRY SHALL BE DEFINED TO INCLUDE ALL CONDUIT, CONDUCTORS, BOXES, WIRING DEVICES, COVER PLATES, LAMPS, FIXTURES, WIREWAYS, RACEWAYS, SWITCHES, STARTERS, ETC., WHICH ARE ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED
- 3.B. ASSOCIATED PLUMBING SHALL BE DEFINED TO INCLUDE ALL PIPING, VENTS, VALVES, ESCUTCHEONS, ETC, ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM TO BE REMOVED TIES INTO AN ACTIVE PIPE THE CONTRACTOR SHALL CAP THE EXISTING SERVICE AT THE POINT CLOSEST TO THE EXISTING PIPE TO REMAIN AND REMOVE ALL ABANDONED PIPING AND EQUIPMENT. WHERE A ROOF VENT IS SHOWN TO BE REMOVED THE PIPING IS TO BE REMOVED AND THE EXISTING VENT IS TO BE CAPPED SUCH THAT IT WILL BECOME AN
- INTEGRAL PART OF THE ROOFING SYSTEM. 3.C. ASSOCIATED MECHANICAL SHALL BE DEFINED TO INCLUDE ALL DUCT, EQUIPMENT, CONTROLS ETC. ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM IS AN INTEGRAL PART OF AN EXISTING SYSTEM THE EXISTING SYSTEM SHALL BE CAPPED AND OR REPAIRED AS REQUIRED TO ASSURE THE
- REMAINING EQUIPMENT SHALL BE OPERABLE. THE ELECTRICAL PROTECTIVE DEVICE SHALL REMAIN AS AN INTEGRAL PART OF THE EXISTING PANEL, SWITCHBOARD, ETC., AND SHALL BE LABELED AS A SPARE OR BE USED FOR NEW CIRCUITRY AS SHOWN.
- WHERE CONDUIT ASSOCIATED WITH AN ITEM SHOWN TO BE REMOVED IS IN AN INACCESSIBLE AREA, SUCH AS ENCASED IN CONCRETE, THIS INACCESSIBLE CONDUIT ONLY SHALL BE ABANDONED IN PLACE. ALL CONDUCTORS SHALL BE REMOVED THEN CONDUIT SHALL BE SEALED, CAPPED OR OTHERWISE TERMINATED IN A SAFE MANNER ACCEPTABLE TO THE OWNER, OR AS OTHERWISE STATED IN ITEM 3F.
- WHERE INACCESSIBLE CONDUIT OR PIPING ENDS OR MUST BE TERMINATED IN FINISHED SPACE, THE CONDUIT, PIPE, OR J-BOX SHALL BE REMOVED TO BELOW THE FINISHED SURFACE OF WALL, CEILING OR FLOOR, THEN VOID SHALL BE FILLED WITH NON-SHRINKING GROUT THEN RESURFACED AND REFINISHED TO MATCH SURROUNDING SURFACES.
- WHERE ONLY A PORTION OF A CIRCUITS LOAD IS SCHEDULED TO BE REMOVED, ONLY THAT PORTION ASSOCIATED WITH DEMOLISHED DEVICE SHALL BE REMOVED TO A POINT WHERE THE REMAINING LOAD IS ACTIVE AND IN A GOOD OPERATING CONDITION.
- 5. WHERE EXTENSION OF AN EXISTING CIRCUIT IS REQUIRED, CONDUIT AND WIRE SHALL BE RUN (CONCEALED WHERE POSSIBLE) FROM THE ITEMS EXISTING LOCATION TO ITS NEW LOCATION CONDUIT SHALL BE ROUTED SO AS NOT TO INTERFERE WITH THE USE, OR MAR THE AESTHETICS OF THE AREA. WHERE NECESSARY THE CONTRACTOR SHALL RELOCATE AND RECONNECT CIRCUITRY ASSOCIATED WITH THE RELOCATION OF THE ITEM.
- 6. WHERE AN ITEM OR EQUIPMENT IS SCHEDULED TO BE REMOVED AND RELOCATED, ITS ASSOCIATED CIRCUITRY SHALL ALSO BE REMOVED AS PER NOTE 3 ABOVE ALONG WITH ITS ASSOCIATED SWITCHGEAR AND DEVICES FTC. TO BE RELOCATED TO THE NEW LOCATION. PROVIDE CONNECTION OF SUCH RELOCATED ITEMS TO NEW OR EXTENDED CIRCUITRY AS SHOWN ON THE DRAWINGS.

SECTION 23.1

COOLING, HEATING, AND VENTILATION

<u>GENERAL</u> THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND APPLICABLE PORTIONS OF SECTION 23.0 OF THE SPECIFICATIONS ARE A PART OF THIS SECTION.

THE WORK COVERED BY THIS SECTION INCLUDES THE FURNISHING OF EACH ITEM LISTED HEREIN AND/OR SHOWN ON THE DRAWINGS: OF QUALITY OR SUBJECT TO QUALIFICATION NOTED HEREIN. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED ACCORDING TO CONDITIONS STATED, AND SHALL PROVIDE THEREFORE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS, NECESSARY TO PROVIDE A COMPLETE OPERATIONAL SYSTEM.

REFER TO GENERAL AND SPECIAL PROVISIONS. CONTRACTORS SHALL BE QUALIFIED TO INSTALL AND SERVICE THE EQUIPMENT WHICH WILL BE INSTALLED UNDER THIS CONTRACT.

WORK INCLUDED IN THIS SECTION:

EMERGENCY DRAINS.

- A. INSTALLATION OF HVAC UNITS. B. INSTALLATION OF REFRIGERANT PIPING.
- . INSTALLATION OF SHEET METAL DUCT WORK. INSTALLATION OF AIR CONDITIONING CONTROLS AND LOW
- VOLTAGE WIRING. E. INSTALLATION OF COPPER CONDENSATE DRAINS AND

WORK SPECIFIED UNDER OTHER SECTIONS: PLUMBING SECTION 22 ELECTRICAL SECTION 26

PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT AS SPECIFIED ON THE DRAWING PLANS OR MECHANICAL EQUIPMENT SCHEDULE

EQUAL UNIT MANUFACTURES MAY BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING

CEILING DIFFUSER MANUFACTURER AND SIZE SHALL BE AS

SPECIFIED ON THE DRAWINGS. RETURN AIR GRILLS MANUFACTURER AND SIZE SHALL BE AS

SPECIFIED ON THE DRAWINGS.

ALL DUCT WORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH RECOMMENDATIONS IN THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION'S LATEST EDITION OF "LOW VELOCITY DUCT CONSTRUCTIONS STANDARDS".

THE CONFIGURATION OF THE DUCTWORK INSTALLED SHALL CONFORM TO THAT SHOWN ON THE DRAWINGS. MODIFICATIONS WILL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.

SUPPLY AND RETURN DUCT SHALL BE EXTERNALLY INSULATED GALVANIZED STEEL DUCT WRAPPED WITH MINIMUM 2" ALL SERVICE DUCT WRAP WITH A MINIMUM R-VALUE OF R6 IN CONDITIONED SPACES AND R8 IN UN-INSULATED AREAS. ACCEPTABLE INSULATION MANUFACTURERS ARE OWENS-CORNING, JOHN MANSVILLE, KNAUF.

EXHAUST DUCTS SHALL BE GALVANIZED STEEL, UNLINED.

QUADRANTS. DUCT SEALANT - SEAL ALL JOINTS WITH HARDCAST INC. MASTIC OR EQUAL.

ALL BRANCHES SHALL BE PROVIDED WITH DAMPERS WITH LOCKING

ALL STRAP HANGERS FOR DUCT SHALL BE VERTICAL. NO DUCT WILL BE PERMITTED TO REST OR LAY ON CEILINGS, OR BE HUNG

WHERE DUCT WORK ADJOINS UNIT INSTALL FLEXIBLE

FIRE RETARDANT, WATERPROOF, AIR-TIGHT RESISTANT TO ACIDS AND GREASE. FLEXIBLE DUCT SHALL BE FOIL WRAPPED WITH 2" OF INSULATION WITH A MINIMUM R-VALUE OF R8. CONNECTIONS OF FLEX DUCT TO SHEET METAL DUCTS SHALL BE DONE USING ROUND INSERTS AND

NYLON TIE WRAP BANDS DESIGNED AND SOLD SPECIFICALLY FOR

THIS USE. TAPE OR TIE WIRE WILL NOT BE ACCEPTABLE.

CONNECTORS. CONNECTORS SHALL BE 30 OZ. CLOSELY WOVEN

UL APPROVED GLASS FABRIC, DOUBLE COATED WITH NEOPRENE,

DUCT ACCESSORIES ACCESS DOORS SHALL BE RIGID AND CLOSE-FITTING, FABRICATED OF GALV. STEEL WITH SEALING GASKETS AND QUICK FASTENING LOCKING DEVICES. FOR INSULATED DUCTWORK, INSTALL A MINIMUM 1 INCH THICK INSULATION WITH A SHEET METAL COVER. ACCESS DOORS IN EXTERNALLY INSULATED DUCTWORK SHALL

HAVE INTERNAL SHEET METAL LINING SO THAT NO INSULATION IS

EXPOSED TO THE AIR STREAM. BALANCING DAMPERS SHALL BE OPPOSED BLADE INTERLOCKING TYPE WITH MULTIPLE BLADES FOR DUCT HEIGHTS 12 INCHES AND LARGER SINGLE BLADE FOR DUCTS HEIGHTS UNDER 12 INCHES BLADES SHALL BE OF NOT LESS THAN 16 GAUGE GALV. STEEL, MAXIMUM 8 INCHES WIDE, MAXIMUM 48 INCHES LONG; SUPPORTED ON SHAFTS WITH SELF-LUBRICATING BEARINGS. THE FRAME SHALL BE MINIMUM 5 INCHES X 1 INCH X 16 GAUGE GALV. STEEL. SHOP FABRICATED DAMPERS ARE NOT ACCEPTABLE. PROVIDE LOCKING

BACKDRAFT DAMPERS SHALL BE OF THE MULTI-BLADE, PARALLEL ACTION GRAVITY TYPE WITH THE BLADES A MAXIMUM OF 6 INCHES WIDE AND HAVING FELT OR FLEXIBLE VINYL SEALING EDGES. THE BLADES SHALL BE LINKED TOGETHER IN A RATTLE-FREE MANNER PROVIDE DAMPERS WITH A DEVICE TO PERMIT ADJUSTMENT FOR VARYING DIFFERENTIAL STATIC PRESSURES.

HAND QUADRANT AND 2" STAND-OFF HAND QUADRANT BRACKET.

FLEXIBLE CONNECTIONS SHALL BE FABRICATED OF NEOPRENE COATED FLAMEPROOF FABRIC, CONFORMING TO UL STANDARD #241. TIGHTLY CRIMPED INTO THE METAL EDGING STRIP. ATTACH TO DUCTWORK AND EQUIPMENT BY SCREWS OR BOLTS AT 6 INCHES ON CENTER. PROVIDE FLEXIBLE CONNECTIONS AT ALL FANS, AIR HANDLING UNITS, AND ANY OTHER EQUIPMENT SUBJECT

BALANCING, TESTING AND ADJUSTING

THE AIR DISTRIBUTION SYSTEM SHALL BE BALANCED TO PROVIDE THE SUPPLY AIR TEMPERATURES AND QUANTITIES CALLED FOR ON THE DRAWINGS. EACH INDIVIDUAL SUPPLY OUTLET SHALL BE BALANCED WITHIN PLUS OR MINUS 10 PERCENT, BUT THE TOTAL AIR IN THE SYSTEM SHALL BE BALANCED WITHIN PLUS OR MINUS 5 PERCENT. BALANCING SHALL BE ACCOMPLISHED WITH ALL FAN COIL/FURNACE UNITS RUNNING, ALL RESTROOM EXHAUST FANS RUNNING AND ALL DOORS CLOSED.

THE CONTRACTOR WILL FURNISH THE OWNER ONE COMPLETE SET OF AIR BALANCE DATA.

END OF SECTION

SECTION 26.0

GENERAL ELECTRICAL

THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND APPLICABLE PORTIONS OF SECTION 22.0/23.0 OF THE SPECIFICATIONS ARE HEREBY MADE A PART OF THE SECTION.

PROVIDE ALL SUPERVISION, LABOR EQUIPMENT, TOOLS, TRANSPORTATION SERVICES AND MATERIALS REQUIRED FOR THE INSTALLATION OF COMPLETE AND OPERATING ELECTRICAL SYSTEMS IN AND FOR THE BUILDING. MAKE THE INSTALLATION IN ACCORDANCE WITH RECOGNIZED GOOD PRACTICE FOR THIS TYPE OF WORK. USE THE PROPER MATERIALS AND THE PROPER METHODS, WHETHER OR NOT THESE ARE DESCRIBED IN DETAIL HEREIN. ALL EMPLOYEES MUST BE SKILLED IN THE WORK TO WHICH THEY ARE ASSIGNED ALL MATERIALS MUST BE NEW AND UNDAMAGED AND OF GOOD QUALITY.

CONFORM TO ALL APPLICABLE CODES: 2018 INTERNATIONAL CODES; 2017 NEC (NFPA 70); 2012 TAS (TEXAS ACCESSIBILITY

STANDARDS); 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND ALL AMENDMENTS TO THE ADOPTED CODES BY THE LOCAL AHJ (AUTHORITY HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS EXCEED THE REQUIREMENTS OF THE CODE, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.

OBTAIN AND PAY ALL COSTS FOR REQUIRED PERMITS AND INSPECTION FOR ALL WORK INCLUDED HEREIN.

ALL EQUIPMENT PROVIDED SHALL BE U.L. LISTED FOR THE USE INTENDED AND THE METHOD OF INSTALLATION.

COORDINATE WORK OF THIS SECTION WITH THAT OF OTHER TRADES IN ORDER THAT THE VARIOUS COMPONENTS OF THE WORK WILL BE INSTALLED AT THE PROPER TIME, WILL FIT THE AVAILABLE SPACE AND WILL ALLOW PROPER SERVICE ACCESS TO ALL EQUIPMENT, NOT JUST THAT INSTALLED IN THIS SECTION.

ANY COMPONENTS OF THE ELECTRICAL SYSTEMS WHICH ARE INSTALLED WITHOUT REGARD TO THE ABOVE, MUST BE REMOVED AND RELOCATED AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER.

WHERE VARIOUS ITEMS OF EQUIPMENT AND MATERIALS ARE SPECIFIED AS SCHEDULED (SUCH AS BY CATALOG NUMBERS), THE PURPOSE IS TO DEFINE THE TYPE AND QUALITY, NOT TO SET FORTH THE EXACT TRIM REQUIRED. THE ELECTRICAL CONTRACTOR WILL VERIFY THE ACTUAL TRIM NEEDED WITH THE MATERIAL IT IS TO BE MOUNTED ON OR IN.

SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. SUBMITTALS SHALL INCLUDE ALL ITEMS WITH A TABLE OF CONTENTS AS A SINGLE SUBMITTAL, (MECHANICAL, ELECTRICAL OR PLUMBING) PIECE MEAL AND OR PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. EACH COMPLETE PDF FILE SHALL CONTAIN A TABLE OF CONTENTS SHOWING THE ORDER IN WHICH ITEMS ARE ARRANGED. COMPLETE DESCRIPTIVE LITERATURE, AND SHOP DRAWINGS WHERE APPROPRIATE, SHALL BE SUBMITTED FOR

AFTER REVIEW BY THE ENGINEER THE SUBMITTAL WILL BE RETURNED WITH A COVER LETTER STATING REVIEW COMMENTS AND APPROVAL. SUBMITTALS NOT COMPLYING WITH THE ABOVE REQUIREMENTS ARE SUBJECT TO BEING RETURNED WITHOUT

DRAWINGS INDICATE APPROXIMATE LOCATIONS OF THE VARIOUS ITEMS OF ELECTRICAL SYSTEMS. THESE ITEMS ARE SHOWN APPROXIMATELY TO SCALE AND ATTEMPT TO SHOW HOW THESE ITEMS SHOULD BE INTEGRATED. LOCATE ALL THE VARIOUS ITEMS BY ON-THE-JOB MEASUREMENTS, CONFORMANCE WITH ARCHITECTURAL REQUIREMENTS AND COOPERATION WITH OTHER TRADES AND THE OWNER IN LOCATING EQUIPMENT.

MAINTAIN AT THE JOB SITE A SET OF PRINTS USED FOR NO OTHER PURPOSE BUT TO RECORD, WITH COLORED PENCIL, "AS BUILT" CHANGES AND DIAGRAMS NOTING THOSE PORTIONS OF THE WORK IN WHICH THE ACTUAL INSTALLATION VARIES SIGNIFICANTLY FROM THE CONTRACT DRAWINGS. THESE "AS BUILT" DRAWINGS SHALL INCLUDE EXACT DIMENSIONED LOCATIONS OF ALL UNDERGROUND UTILITIES, REFERENCED TO PERMANENT ABOVEGROUND FEATURES OR STRUCTURES.

AT THE CONCLUSION OF THE PROJECT, THE JOB RECORDED "AS BUILT" DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AS A CONDITION OF FINAL ACCEPTANCE.

THE NAMING OF A MANUFACTURER AND MODEL NUMBER, OR OTHER IDENTIFYING DESIGNATION, OF A PRODUCT HEREIN IS INTENDED TO ESTABLISH CONSTRUCTION, PHYSICAL SIZE, ELECTRICAL CHARACTERISTICS, CAPACITIES, AND/OR OTHER FEATURES AFFECTING THE LITHIZATION OF THE PRODUCT IN THIS PARTICULAR PROJECT LINESS OTHERWISE NOTED. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE CONSIDERED AND WILL BE ACCEPTED IF THEY ARE EQUAL IN ALL RESPECTS TO THE SPECIFIED PRODUCTS, AND THE CONTRACTOR HAS SUBMITTED A LETTER STATING THAT HE HAS INVESTIGATED THE SUBSTITUTION AND STATES IN WRITING THAT THE PROPOSED SUBSTITUTION IS EQUAL OR BETTER IN EVERY RESPECT TO THAT SHOWN ON THE PRINTS AND SPECIFICATIONS. THE DECISION AS TO THE EQUALITY SHALL REST WITH THE ENGINEER, AND SUCH DECISION SHALL BE FINAL. SHOULD THE PRODUCT OF AN ALTERNATE MANUFACTURER BE "APPROVED", THE CONTRACTOR PROPOSING SUCH PRODUCT SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS TO OTHER CONTRACTORS FOR CHANGES ON THEIR WORK NECESSITATED BY THE SUBSTITUTE. SUBSTITUTION PROPOSALS SHALL CONFORM TO THE REQUIREMENTS OF THE GENERAL AND SUPPLEMENTAL GENERAL CONDITIONS AND SPECIAL PROVISIONS.

SWITCHBOARDS AND PANELBOARDS

THIS SPECIFICATION APPLIES TO PANEL BOARDS DESIGNATED ON THE PLANS. PANEL BOARD SHALL BE SQUARE D OR EQUAL MAIN RATINGS AND BRANCH CIRCUIT BREAKER RATINGS SHALL BE OF SIZE AND NUMBER REQUIRED. ALL CURRENT CARRYING PARTS OF THE BUS ASSEMBLY SHALL BE PLATED COPPER. TERMINALS FOR FEEDER CONDUCTORS TO MAINS AND BRANCH NEUTRAL SHALL BE UL LISTED AS SUITABLE FOR THE TYPE CONDUCTOR SPECIFIED. THE LOAD CENTER BUS ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. ALL PANELBOARDS SHALL HAVE GROUND BUS KITS INSTALLED. THE SIZE OF THE WIRING GUTTERS AND GAUGE STEEL SHALL BE IN ACCORDANCE WITH UL STANDARDS. FRONT SHALL INCLUDE DOOR AND LATCH AND BE PROVIDED WITH A DIRECTORY FOR CIRCUIT IDENTIFICATION.

BRANCH CIRCUIT BREAKERS SHALL BE SQUARE D OR EQUAL. ALL BREAKERS SHALL BE QUICK-BREAK MECHANISM TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BEAKER HANDLE TAKING A POSITION BETWEEN "ON" AND "OFF" WHEN THE

FURNISH AND INSTALL LIGHT FIXTURES AS SCHEDULED ON THE DRAWINGS. ALL BALLASTS FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC RATED FOR LESS THAN 10% THD. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FIXTURES WITH TRIM

BREAKER IS TRIPPED. ALL MULTI-POLE BREAKERS SHALL BE SINGLE OPERATING HANDLE, COMMON TRIP VARIETY.

WHICH WILL PROPERLY FIT THE TYPES OF CEILING OR WALL FINISHES ACTUALLY INSTALLED. MODEL NUMBER IN THE

FINAL CONNECTIONS TO EXTERIOR SPACE CONDITIONING EQUIPMENT - LIQUID-TIGHT FLEXIBLE METAL CONDUIT.

SAFETY SWITCHES SHALL BE HEAVY DUTY, FUSIBLE OR UNFUSED AS REQUIRED BY THE CODE.

SPECIFICATION OR ON THE DRAWINGS SHALL BE VERIFIED TO INSURE THE REQUIRED TRIM IS PROVIDED.

BELOW GROUND - RIGID NON-METALLIC CONDUIT (PVC). IN ADDITION TO CIRCUIT CONDUCTORS, PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH TABLE 250-122, NEC IN ALL NON-METALLIC RACEWAYS. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE SECURELY ATTACHED TO EACH ENCLOSURE TO WHICH THE RACEWAY IS CONNECTED.

ASSEMBLIES MAY BE USED FOR BRANCH CIRCUITS AFTER THE FIRST BOX CONNECTED TO THE PANEL. HOME RUNS BETWEEN THE

IN ALL AREAS WHERE ALLOWED BY CODE EMT AND OR UL LISTED MC CABLE ASSEMBLIES SHALL BE PERMISSIBLE. MC CABLE

FIRST BOX AND THE PANEL SHALL BE IN EMT OR OTHER APPROVED CONDUIT.

ALL WIRE USED ON THIS PROJECT SHALL BE 600 VOLT COPPER, TYPE THHN. NO WIRE SHALL BE SMALLER THAN #12, EXCEPT LOW VOLTAGE CONTROL WIRING. ALL WIRING SHALL BE SIZED AS PER NATIONAL ELECTRICAL CODE REQUIREMENTS AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SIZING AND BRING TO THE ATTENTION OF THE ENGINEER ANY CHANGES WHICH HE MAKES BEFORE INSTALLATION.

ALL OUTLET BOXES RECESSED IN CONSTRUCTION SHALL BE 14 GAUGE STEEL GALVANIZED AFTER FABRICATION WITH EXTENSION

"HANDY" OR "UTILITY " BOXES.

FIXTURES SHALL BE MINIMUM 4" SQUARE AND SHALL BE PROVIDED WITH PROPER RINGS FOR THE NUMBER OF DEVICES EXPOSED BOXES SHALL BE GALVANIZED STEEL CONFORMING TO THE SPECIFICATIONS FOR CONCEALED BOXES. THOSE

OCCURRING ON WALLS FOR USE WITH SWITCHES OR OUTLET SHALL BE OF THE ONE-PIECE TYPE. SINGLE GANG BOXES SHALL BE

RINGS. THEY SHALL BE OF THE TYPE AND DESIGN BEST SUITED FOR THE APPLICATION. RECESSED BOXES FOR LIGHTING

DIMENSIONS ARE TO CENTER OF DEVICE UNLESS NOTED DIFFERENTLY ON THE DRAWINGS) SWITCHES (MOUNTED AT 47" AFF) A. SINGLE POLE - HUBBELL NO. 1221-I

C. OCCUPANCY/VACANCY SWITCH SENSORS AS SPECIFIED AND NOTED ON DRAWINGS AND PLANS

D. OCCUPANCY/VACANCY SENSORS AND REQUIRED RELAYS AS SPECIFIED AND NOTED ON DRAWINGS AND PLANS RECEPTACLES (MOUNTED AT 18" AFF)

B. 3-WAY - HUBBLE NO. 1223-I

DEVICE PLATES SHALL BE BRUSHED STAINLESS

A. DUPLEX - (20 AMP) HUBBLE NO. 5362

END OF SECTION

SCALE IN INCHES

www.swoboda-engineering.com ENGINEERING
PH: (979) 774-3400
7010 COYOTE RUN
BRYAN, TX
FIRM NO. 213

X JANETTE SMITH 144891

HE SEAL APPEARING ON THI DOCUMENT WAS AUTHORIZED BY JANETTE SMITH, P.E. 144891, ON MARCH 9, 2023 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

0

$\mathbf{\alpha}$ 0 Δ

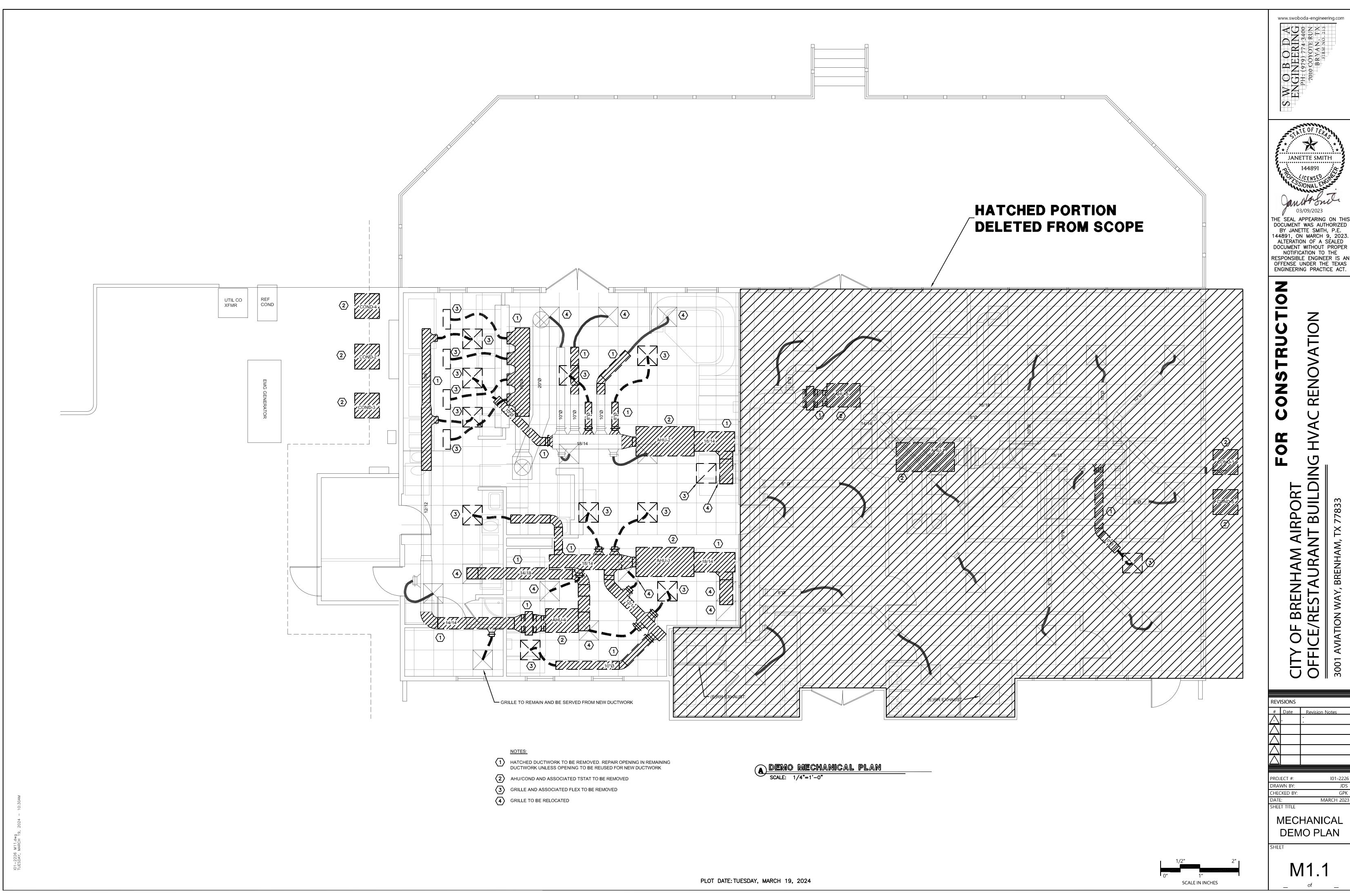
Δ α \mathbf{B}

REVISIONS PROJECT #: 101-2226

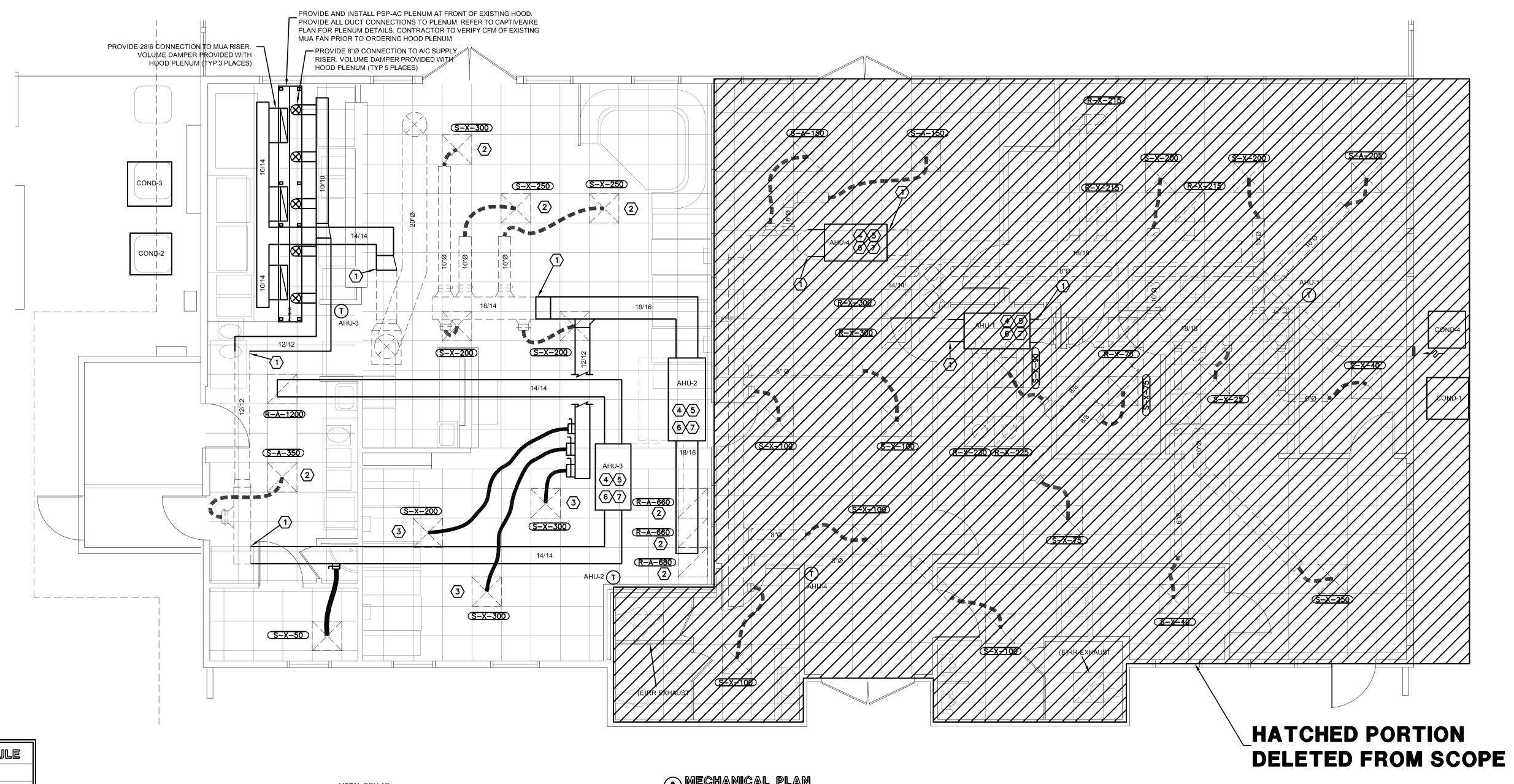
> CHECKED BY: MARCH 202 SPECIFICATIONS

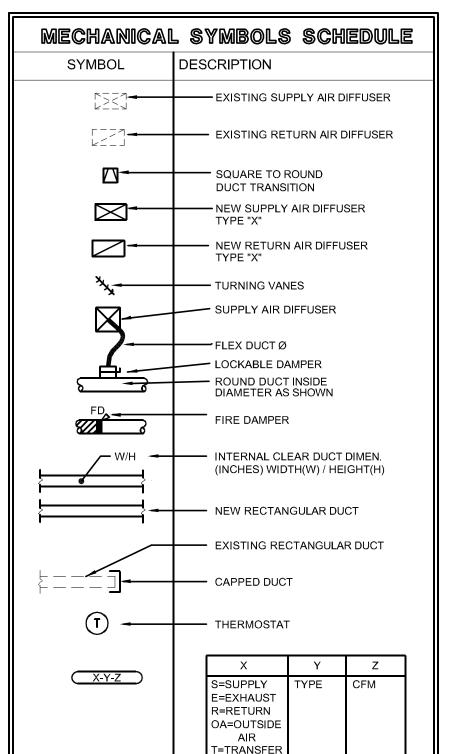
END OF SECTION

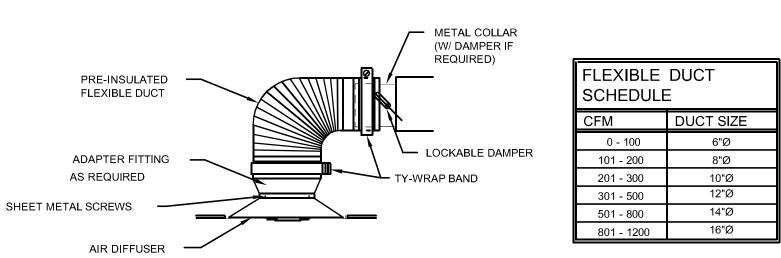
PLOT DATE: TUESDAY, MARCH 19, 2024



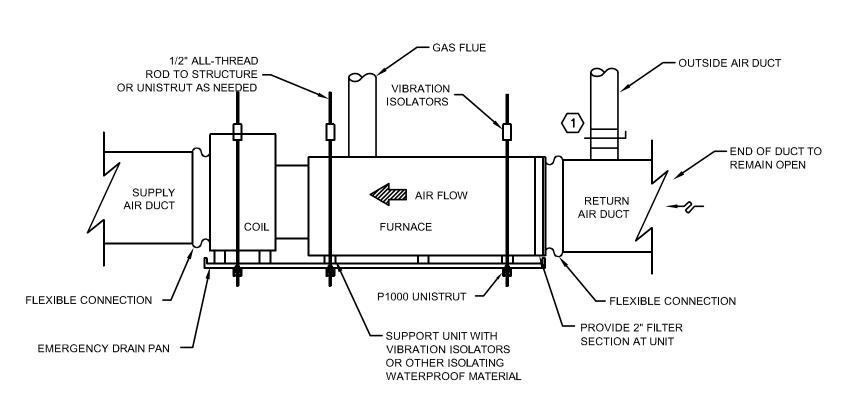
ATTACHMENT "A"







1 FLEX/DIFFUSER DETAIL SCALE: N.T.S.



2 Typical ahu installation

MECHANICAL PLAN

SCALE: 1/4"=1'-0"

	(3RILLE	SCHEDULE
TYPE	USE		DESCRIPTION
Х		EXISTING SU	JPPLY/RETURN DIFFUSER

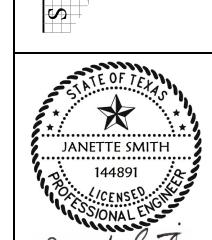
NOTES:

- (1) CONNECT NEW DUCT TO EXISTING THIS APPROXIMATE LOCATION
- RELOCATED GRILLE. MODIFY FLEX AS NEEDED TO SERVE GRILLE AT ADJUSTED LOCATION
- (3) RELOCATED GRILLE
- 4 AIR HANDLING UNIT TO BE SUSPENDED FROM STRUCTURE SIMILAR TO DETAIL 2 THIS SHEET. PROVIDE FLOAT SWITCH IN DRAIN PAN WIRED FOR AUTOMATIC SHUT DOWN OF UNIT UPON DETECTION OF WATER IN PAN
- 5 ROUTE CONDENSATE DRAIN PIPING FROM AHU TO (E) CONDENSATE DRAIN PIPING FROM DEMO-ED AHUS
- 6 CONNECT (E)OA DUCT TO NEW RETURN PLENUM AND PROVIDE LOCKABLE DAMPER AT CONNECTION SET TO ALLOW SCHEDULED CFM OF OA
- ROUTE CONCENTRIC VENT/FLUE PIPING UP THROUGH EXISTING ROOF PENETRATION. ANY NECESSARY MODIFICATIONS TO EXISTING ROOF JACK TO BE PROVIDED AND INSTALLED BY ROOFING CONTRACTOR

	M	ECHANICA	l equipme	nt s	CHED	ULE					
MFG./NO.	CFM	O.A. CFM	COOLING			V/PH	RLA	МОСР	SEER	AFUE	LP GAS LOAD
RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA	1200	AHU-1: 110 AHU-3: 0	33.8KBTUH	42.0	41.0	120/1	5.9	20		98%	17 CFH
RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA	2000	400	57.7 KBTUH	84.0	82.0	120/1	9.6	20		98%	34 CFH
RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA	800	90	23.6 KBTUH	42.0	41.0	120/1	5.9	20		98%	17 CFH
RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP			NOM. 3 TON			240/1	16.8	35	16.0		
RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP			NOM. 5 TON			240/1	33.6	70	15.5		
RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP			NOM. 2 TON			240/1	12.8	25	17.0		
				-							
	RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP	MFG./NO. RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP	MFG./NO. RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP	MFG./NO. CFM O.A. CFM COOLING RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA 800 90 23.6 KBTUH RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 5 TON RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP NOM. 2 TON	MFG./NO. CFM O.A. CFM COOLING HEATING INPUT RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH 42.0 RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH 84.0 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA 800 90 23.6 KBTUH 42.0 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON NOM. 5 TON NOM. 5 TON RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 2 TON NOM. 2 TON NOM. 2 TON	MFG./NO. CFM O.A. CFM COOLING HEATING (KBTUH) INPUT OUTPUT RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH 42.0 41.0 RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH 84.0 82.0 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA 800 90 23.6 KBTUH 42.0 41.0 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON NOM. 5 TON NOM. 5 TON RHEEM SINGLE STAGE CONDENSER NOM. 2 TON NOM. 2 TON NOM. 2 TON	MFG./NO. CFM O.A. CFM COOLING HEATING (KBTUH) INPUT OUTPUT INPUT OUTPUT INPUT OUTPUT V/PH V/PH RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ3617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH 42.0 41.0 120/1 RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH 84.0 82.0 120/1 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA 800 90 23.6 KBTUH 42.0 41.0 120/1 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON 240/1 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 5 TON 240/1 RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP NOM. 2 TON 240/1	MFG./NO. CFM O.A. CFM COOLING HEATING (KBTUH) NPUT OUTPUT NIPUT OUTPUT V/PH RLA RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RFCFZ3617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH 42.0 41.0 120/1 5.9 RHEEM GAS FURNACE MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH 84.0 82.0 120/1 9.6 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0403A17M4SCAP COIL MODEL # RFCFZ2417SEA 800 90 23.6 KBTUH 42.0 41.0 120/1 5.9 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON 240/1 16.8 RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 5 TON 240/1 33.6 RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP NOM. 2 TON 240/1 12.8	MFG./NO. CFM O.A. CFM COOLING HEATING (KBTUH) INPUT (MIPUT) V/PH RLA MOCP RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # RFC73617SEA 1200 AHU-1: 110 AHU-3: 0 33.8KBTUH 42.0 41.0 120/1 5.9 20 RHEEM GAS FURNACE MODEL # RF62V0853A17M4SCAP COIL MODEL # RFC26021SEA 2000 400 57.7 KBTUH 84.0 82.0 120/1 9.6 20 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0403A17M4SCAP COIL MODEL # RFC722417SEA 800 90 23.6 KBTUH 42.0 41.0 120/1 5.9 20 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ36AJ3CALHP NOM. 3 TON 240/1 16.8 35 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 5 TON 240/1 33.6 70 RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP NOM. 2 TON 240/1 12.8 25	MFG./NO. CFM O.A. CFM COOLING HEATING (KBTUH) (MPUT) V/PH RLA MOCP SEER RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0853A17M4SCAP COIL MODEL # RFCZ6021SEA 2000 400 57.7 KBTUH 84.0 82.0 120/1 9.6 20 RHEEM GAS FURNACE MODEL # R962V0403A17M4SCAP COIL MODEL # R962V0403A17M4SCAP COIL MODEL # RR962V0403A17M4SCAP COIL MODEL # RCFZ2417SEA 800 90 23.6 KBTUH 42.0 41.0 120/1 5.9 20 RHEEM TWO STAGE CONDENSER MODEL # RA16A236AJ3CALHP NOM. 3 TON 240/1 16.8 35 16.0 RHEEM TWO STAGE CONDENSER MODEL # RA16AZ60AJ3CALHP NOM. 5 TON 240/1 33.6 70 15.5 RHEEM SINGLE STAGE CONDENSER MODEL # RA16AZ24AJ3CALHP NOM. 2 TON NOM. 2 TON 240/1 12.8 25 17.0	MFG./NO. CFM O.A. CFM COOLING HEATING (K8TUH) V/PH RLA MOCP SEER AFUE

PROVIDE CONCENTRIC VENT KIT FOR EACH GAS FURNACE PROVIDE LP GAS CONVERSION KIT FOR EACH GAS FURNACE

SCALE IN INCHES



THE SEAL APPEARING ON THI DOCUMENT WAS AUTHORIZED BY JANETTE SMITH, P.E. 144891, ON MARCH 9, 2023 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

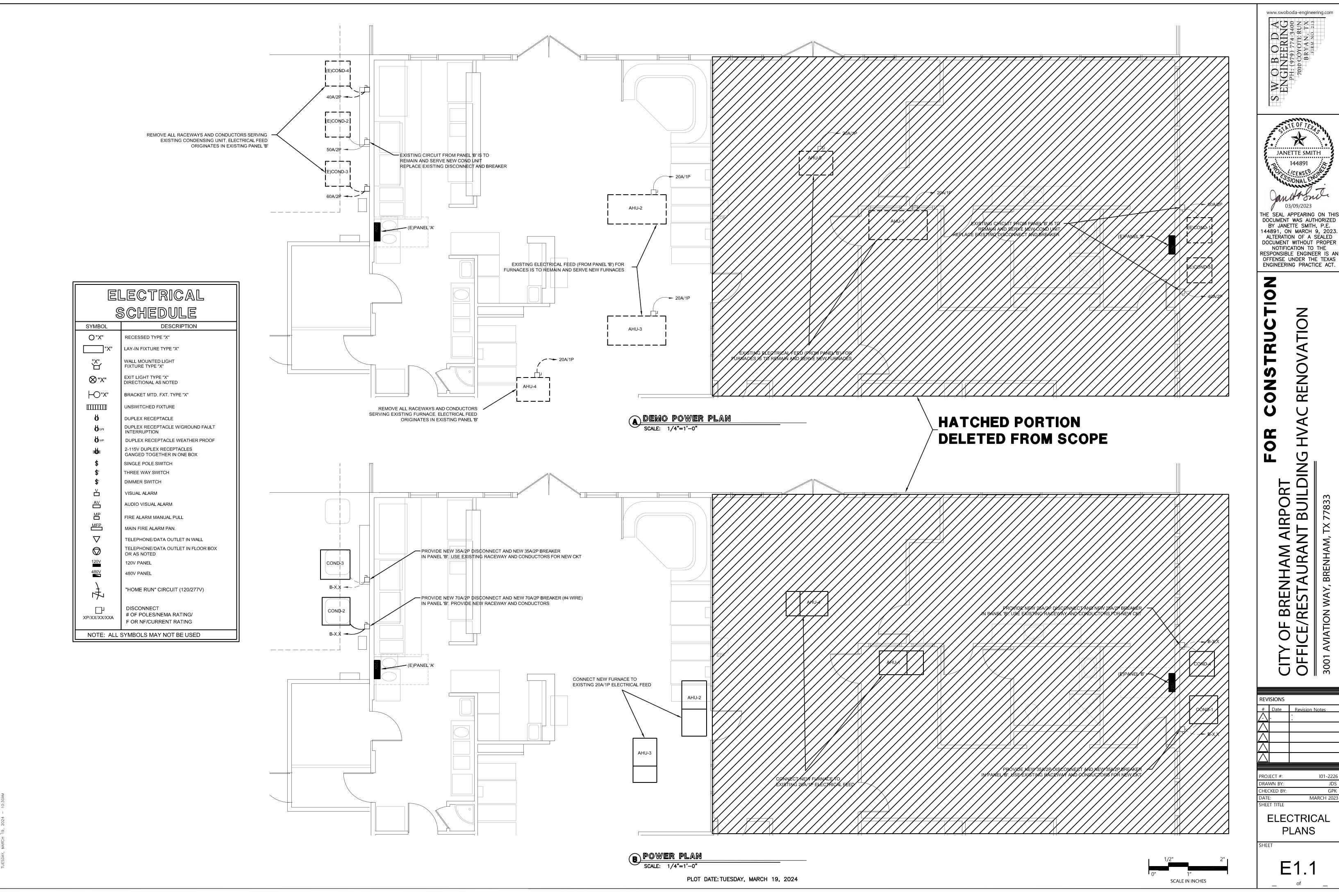
0 0 Δ 1 AIRPORT NNT BUILDIN F BRENHAM .:/RESTAURAN

REVISIONS PROJECT #:

WAY, BRENHAM,

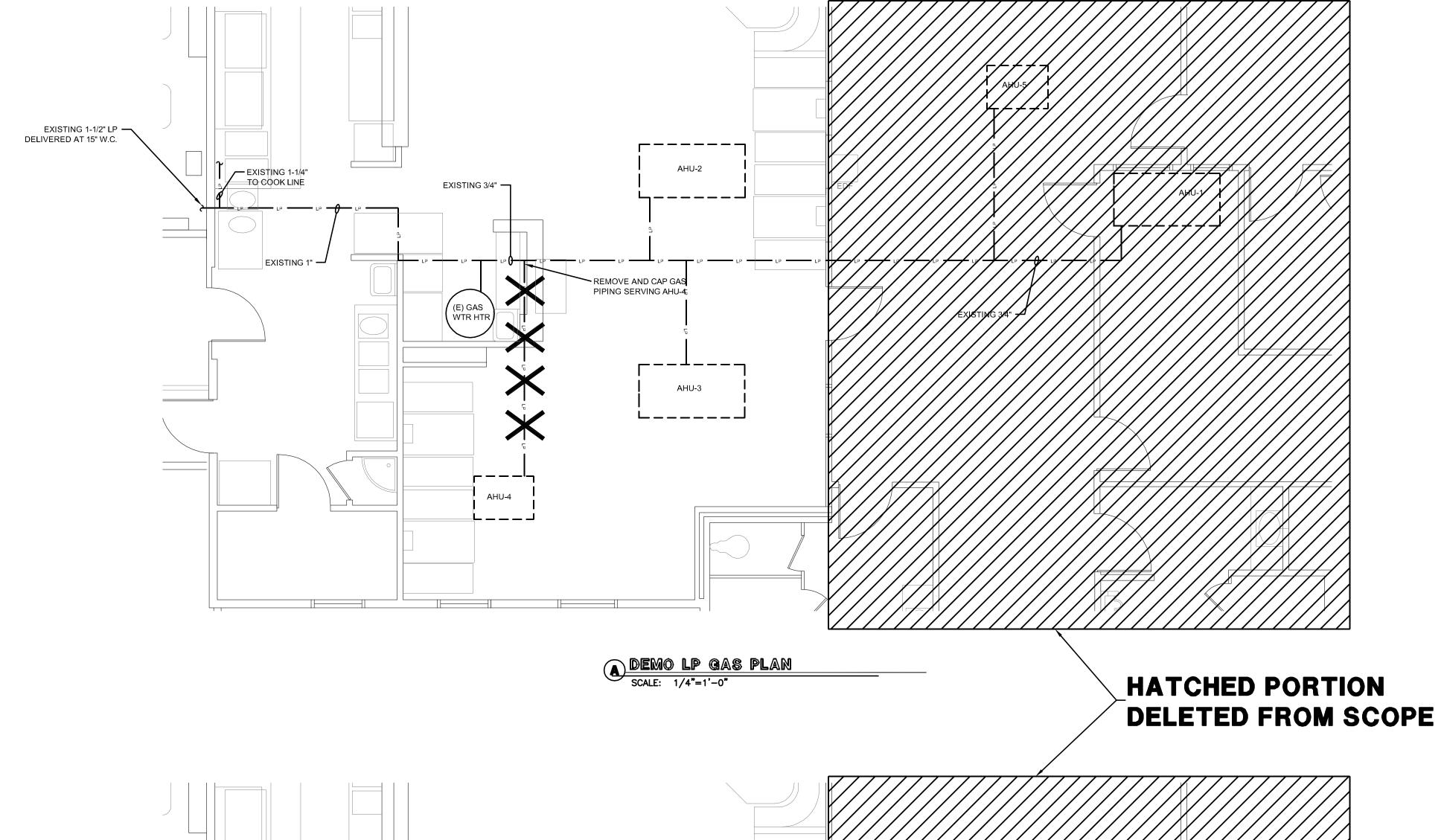
CHECKED BY: MARCH 2023

MECHANICAL PLAN

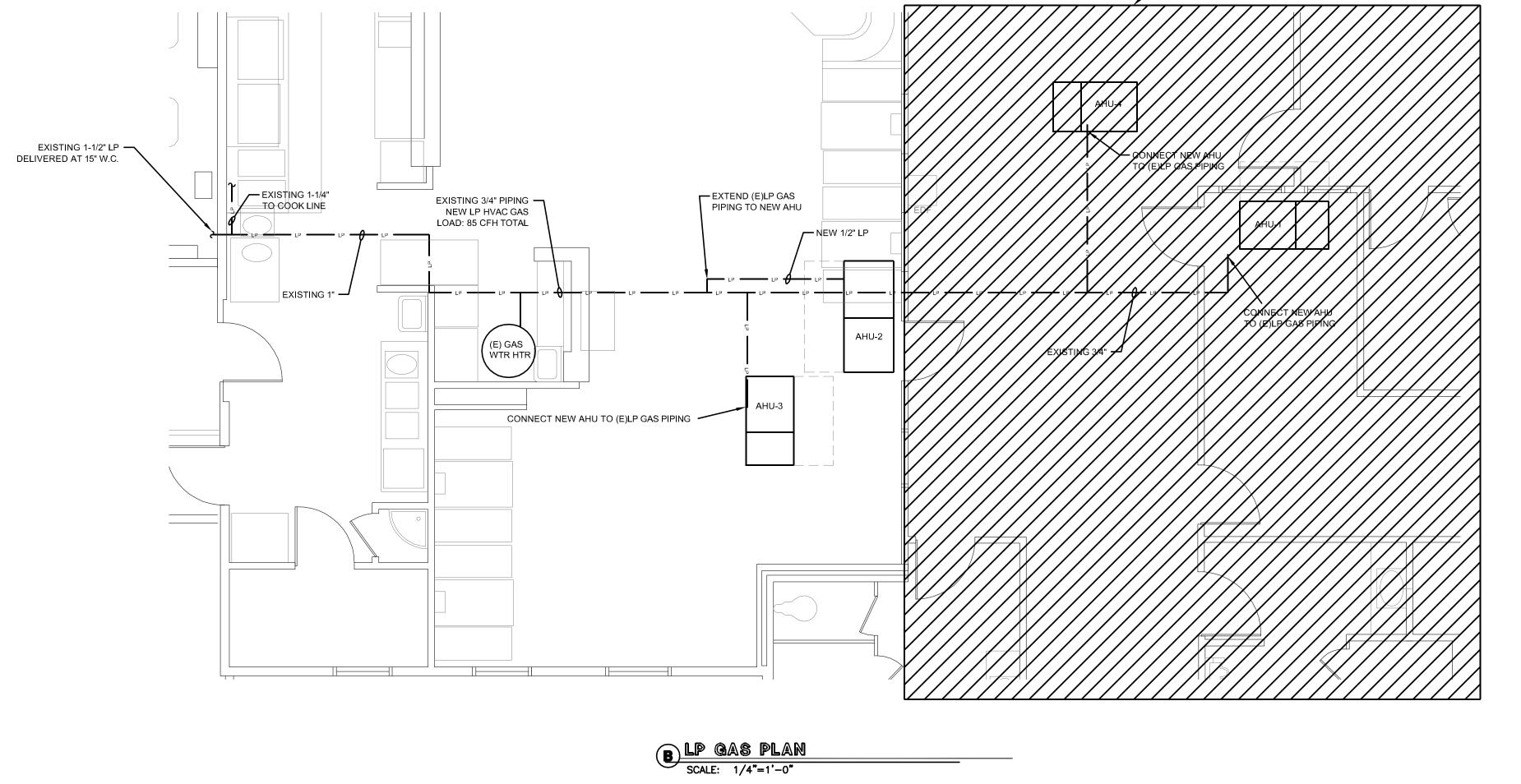




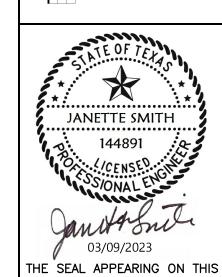
ATTACHMENT "A"



PLUMB	ing piping legend
SYMBOL	DESCRIPTION
	SANITARY SEWER (SS)
	— SANITARY SEWER (SS) BELOW GRADE
	SANITARY VENT (SV)
	DOMESTIC COLD WATER SUPPLY
	DOMESTIC HOT WATER SUPPLY
= ==-	DOMESTIC WATER BELOW FLOOR
A	COMPRESSED AIR
NG	— NATURAL GAS
	GATE VALVE
\ \	— BALL VALVE
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
VTR	VENT THROUGH ROOF
FD	FLOOR DRAIN
A.F.F.	ABV. FINISHED FLOOR
ATP	AUTOMATIC TRAP PRIMER
(N)	NEW EQUIPMENT OR LINES
(E)	EXISTING EQUIPMENT OR LINES
U.G.	UNDER GROUND
R.D.	ROOF DRAIN
NOTE: ALL SY	MBOLS MAY NOT BE USED



www.swoboda-engineering.com



03/09/2023

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JANETTE SMITH, P.E. 144891, ON MARCH 9, 2023. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

ALTERATION OF A DOCUMENT WITHOUT NOTIFICATION TO RESPONSIBLE ENGIN OFFENSE UNDER THE ENGINEERING PRACT

FOR CONSTRI OF BRENHAM AIRPORT E/RESTAURANT BUILDING HVAC RENOVAT

PROJECT #: 101-2226
DRAWN BY: JDS
CHECKED BY: GPK
DATE: MARCH 2023
SHEET TITLE

PLUMBING PLANS

P1.1

SCALE IN INCHES