



Collin County Purchasing

2021-099

**Construction, Collin County Sheriff's Office Fire Sprinkler
Modification**

Issue Date: 1/5/2021

Questions Deadline: 1/29/2021 12:00 PM (CT)

Response Deadline: 2/4/2021 02:00 PM (CT)

Collin County Purchasing

Contact Information

Contact: JD Griffin, CPPB Senior Buyer

Address: Purchasing

Admin. Building

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Collin County

Sheriff's Office Fire Sprinkler Modification

December 11, 2020



MD ENGINEERING

MD Engineering, LLP Texas

Registered Engineering Firm F-7489

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TABLE OF CONTENTS**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

00 11 16	ADVERTISEMENT
00 21 13	INSTRUCTION TO BIDDERS
00 41 00	BID FORM
00 43 13	BID BOND
00 43 25	PRODUCT SUBSTITUTION REQUEST FORM
00 45 47	CONFLICT OF INTEREST QUESTIONNAIRE
00 52 13	CONSTRUCTION AGREEMENT
00 54 25	W-9 FORM
00 61 11	PERFORMANCE BOND
00 61 13	PAYMENT BOND

DIVISION 21 – FIRE PROTECTION

21 13 13	AUTOMATIC FIRE SPRINKLER SYSTEM
----------	---------------------------------

DIVISION 28 – ELECTRICAL

28 31 00	AUTOMATIC FIRE ALARM SYSTEM
----------	-----------------------------

CALCULATIONS

COLLIN COUNTY SHERIFF'S OFFICE CALCULATIONS



DRAWINGS

FP001 – FIRE SPINKLER GENERAL NOTES

FA001 – FIRE ALARM GENERAL NOTES

FA101 – FIRE ALARM PARTIAL PLAN

SECTION 001116 - ADVERTISEMENT FOR BIDS

BY ORDER OF the Collin County Commissioners Court, Collin County, Texas, bids will be received electronically through Collin County eBid located at <https://collincountytx.ionwave.net>. Bidders are encouraged to submit bids electronically by utilizing Collin County eBid. However, you may submit a sealed hard copy paper bid to the Office of the Collin County Purchasing Agent. All bids, both electronic or hard copy paper form must be submitted as stated below:

SUBMIT HARD COPY PAPER BIDS TO:
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**Office of the Purchasing Agent
Collin County Administration Building
2300 Bloomdale Road, Suite 3160
McKinney, Texas 75071**

****NOTE:**

All Correspondence must include suite number to assist in proper delivery.**

SUBMIT NO LATER THAN:

2:00 P.M., Thursday, February 4, 2021

MARK ENVELOPE:

IFB 2021-099

Project: Construction, Collin County Sheriff's Office Fire Sprinkler Modification

<p><i>ALL BIDS MUST BE RECEIVED IN THE OFFICE OF THE PURCHASING AGENT BEFORE OPENING DATE AND TIME</i></p>
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SCOPE OF WORK INCLUDES all materials, labor, equipment and services to produce or be incorporated in such construction. Contract will be a general contract for expansion of the existing PFC-6075R Pre-Action Fire Alarm System with the installation of new smoke detection and manual pull station for the Collin County Sheriff's Office Sprinkler Modification at 4300 Community Avenue, McKinney, Texas, as indicated and described in the contract documents. Payment for the contract work shall be made pursuant to the terms of the Contract Documents.

The budget amount for this contract is \$20,000.

Collin County uses Collin County eBid for the notification and dissemination of all solicitations for commodities and services. The receipt of solicitations through any other company may result in your receipt of incomplete specifications and/or addendums which could ultimately render your bid non-compliant. Collin County accepts no responsibility for the receipt and/or notification of solicitations through any other company.

COLLIN COUNTY APPRECIATES your time and effort in preparing a bid. Hard copy paper bid must be in a separate sealed envelope, manually signed in ink by a person having the authority to bind the firm in a contract and marked clearly on the outside as outlined above. Please note that all bids must be received at the designated location by the deadline shown. Bids received after deadline shall be considered void and unacceptable. Collin County is not responsible for lateness of mail, carrier, etc. and time/date stamp clock in the Collin County Purchasing Department shall be the official

time of receipt. All bid forms provided in this Invitation for Bid must be completed prior to submission. Failure to complete the forms shall render your bid null and void. We would appreciate you indicating on your "NO BID" response any requirements of this bid request which may have influenced your decision to "NO BID".

BIDS WILL BE opened in the Office of the Purchasing Agent, 2300 Bloomdale Rd, Suite 3160, McKinney, TX 75071, at the date and time indicated above.

In a continued effort to operate safely and avoid person-to-person interaction to prevent the spread of COVID-19, Collin County Purchasing will temporarily only accept IFB, RFP, RFQ and Quote submittals electronically in Ionwave (eBid) or via parcel carrier until further notice. Please do not deliver your solicitation response in person. All bid openings will be completed on schedule and witnessed by Collin County Purchasing staff to ensure all procurement statutes, policies and state laws are followed.

A MANDATORY PRE-BID CONFERENCE will be held by Collin County at the Collin County Sheriff's Office Lobby, 4300 Community Ave., McKinney, TX 75071 on **Wednesday, January 20, 2021** in order for bidders to ask questions regarding the proposed work. All bidders desiring to bid the work should have a representative at the pre-bid conference; bidders that do not attend the pre-bid conference shall not be considered in the evaluation for award of a contract per Texas Local Government Code 262.0256. Attendance shall be mandatory at the pre-bid conference. It is the bidder's responsibility to review the site and documents to gain a full understanding of the requirements of the bid.

Due to the current COVID-19 social distancing recommendations, a limit of six (6) attendees will be allowed during each session in addition to three (3) County representatives. Each contractor attending shall be limited to two (2) participants. All participants will be required to provide and wear a face mask that covers the mouth and nose, have temperature checked and complete a Covid-19 screening questionnaire upon arrival. The first conference session will begin at 9:00 AM followed by sessions at 10:00 AM, 11:00 AM and 1:30 PM (as needed). Bidders interested in attending the pre-bid conference shall RSVP to purchasing@co.collin.tx.us with "**2021-099, Collin County Sheriff's Office Fire Sprinkler Modification**" in the subject line, no later than **Tuesday, January 19, 2021 at 12:00 PM.** RSVP response shall include company name, name of individuals that will be attending (maximum of 2) and the preferred session time. Attendees for each session will be scheduled in the order they are received.

No oral, telegraphic, telephonic or facsimile bids will be considered. IFB's, RFP's, RFQ's and RFI's may be submitted in electronic format via Collin County eBid at <https://collincountytx.ionwave.net>

BID SECURITY: All Bidders must submit, prior to the bid opening time, a Certified Check, Cashier's Check or acceptable Bid Bond payable without recourse to Collin County in the amount of not less than five percent (5%) of the total bid plus alternates as submitted.

1. Bid Bond, certified check or Cashier's Check may be mailed or delivered to the Office of the Collin County Purchasing Agent, Collin County Administration Building, 2300 Bloomdale Road, Ste 3160, McKinney, TX

- 75071 and shall be delivered in an envelope, marked plainly on the outside with the Bid Name and Number.
2. Bidders submitting a bid via Collin County eBid shall upload a Bid Bond at <https://collincountytx.ionwave.net>

Regardless of delivery method, all Bid Bonds shall be received prior to the bid opening time to be considered. **Failure to submit a copy of bid security prior to bid opening shall be cause for rejection of bid.**

The original Bid Bond shall be received in the Collin County Purchasing Department **no later than** close of business on the third working day after the bid opening. **Late receipt of original Bid Bond shall be cause for rejection of bid.**

BONDS: Contractor must furnish a performance bond and payment bond within ten (10) consecutive calendar days following award of contract. The bonds shall be issued by a corporate surety in accordance with all Texas Law, including but not limited to, Chapter 2253 of the Texas Government Code and Chapter 3503 of the Texas Insurance Code, for public works projects.

SECTION 002113 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL REQUIREMENTS

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. All definitions set forth in the General Conditions of the Contract for Construction or in other Contract Documents are applicable to these Bidding Documents.
- B. Bidding Documents include the Advertisement or Invitation for Bids, Instructions to Bidders, the bid form, other sample bidding and contract forms and the proposed Contract Documents including any Addenda issued prior to receipt of bids.
- C. Addenda are written or graphic instruments issued prior to the opening of the Bidding Documents, which modify or interpret the Bidding Documents, including Drawings and Specifications, by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed.
- D. MD Engineering, L.P., L.L.P. will be hereafter referred to in the Project Manual as “Engineer” and all correspondence shall be addressed to: Michael Smith, P.E., MD Engineering, 1255 W. 15th St., Ste. 300, Plano, TX 75075.
- E. “Bill Burke” will be hereinafter referred to in this Project Manual as “Project Manager”.
- F. “Collin County” will be hereafter referred to in this Project Manual as “Owner”.
- G. A Bid is a complete and properly signed submittal to do the Work for designated portion thereof for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- H. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
- I. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid in the corresponding change in the Work, as described in the Bidding Documents or in the proposed Contract Documents.
- J. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials or service as described in the Bidding Documents or in the proposed Contract Documents.
- K. A Bidder is a person or entity who submits a Bid.
- L. A Sub-Bidder is a person or entity who submits a bid to a Bidder for materials or labor for a portion of the work.
- M. A Contractor is a person or entity who is determined to be the lowest responsible and responsive bidder to whom Owner (on the basis of Owner’s evaluation as hereinafter provided) makes an award.

- N. The Bid Requirements and Other General Conditions, as provided under the Division of the North Central Texas Council of Governments Standard Specifications for Public Works Construction will be applicable to this project, unless noted otherwise in the Contract Documents

1.3 EXAMINATION OF DOCUMENTS AND SITE

- A. Each bidder, by making his/her Bid, represents that he/she has read and understands the Bidding Documents.
- B. Each Bidder, by making his/her Bid, represents that he/she has visited the site, performed investigations and verifications as he/she deems necessary, and familiarized himself/herself with the local conditions under which the Work is to be performed and will be responsible for any and all errors in his/her bid resulting from his/her failure to do so.
- C. The location and elevations of the various utilities and pipe work included within the scope of the work are offered as a general guide only, without guarantee as to accuracy. The Contractor shall verify and investigate to his/her own satisfaction the location and elevation of all utilities, pipe work, and the like and shall adequately inform himself/herself of their relation to the work before submitting a bid.
- D. Before submitting a bid each bidder will, at bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information (surface, subsurface, and underground facilities) at or contiguous to the site, or otherwise which may affect cost, progress, performance or furnishing of the work and which bidder deems necessary to determine its bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents. Bidder will rely solely on its own site investigation and assumes the risk of any site conditions not discovered that may result in additional costs and all errors in the bid.
- E. On request in advance, Owner will provide each bidder access to the site to conduct explorations and tests as each bidder deems necessary for submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.
- F. The lands upon which the work is to be performed, right-of way and easement for access thereto and other lands designated for use by Contractor in performing the work are identified in the Contract Documents.
- G. Each bidder by making his/her bid represents that his/her bid is based upon the materials, systems, and equipment required by the Bidding Documents without exception.

1.4 BIDDING DOCUMENTS

- A. Complete sets of Bidding Documents shall be used in preparing bids; neither County, nor Engineer assume any responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.
- B. County or the Engineer, in making copies of the Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

1.5 BIDDING PROCEDURES

- A. All bids shall be prepared on the forms provided by the Engineer and submitted in accordance with the Instruction to Bidders. The owner will furnish bidders with bid forms

which will provide for the following bid items. Bidders shall provide all requested information. Prices bid/proposed shall only be considered if they are provided in the appropriate space(s) on the Collin County bid form(s). For consideration, any additions or deductions to the bid/proposal prices offered must be shown under the exceptions section of the bid/proposal in the case of electronic submittal, ONLY in the case of a hard copy submittal will an additional attachment be allowed. Extraneous numbers, prices, comments, etc. or bidder/offeror generated documents appearing elsewhere on the bid or as an additional attachment shall be deemed to have no effect on the prices offered in the designated locations.

1. A single contract price for each bid item as detailed and described in these specifications.
 2. Acknowledgment of Addenda.
 3. Number of consecutive calendar days to complete project.
 4. Alternate bids.
 5. Unit prices.
- B. A bid (electronic or hard copy) is invalid if it has not been deposited at the designed location prior to the time and date for receipt of bids indicated in the Advertisement or Invitation For Bid, or prior to any extension thereof issued to the bidders. Bids received in County Purchasing Department after submission deadline shall be returned unopened and will be considered void and unacceptable. Owner is not responsible for lateness of mail, carrier, etc. and time/date stamp clock in County Purchasing Department shall be the official time of receipt.
- C. Unless otherwise provided in any supplement to these Instructions to Bidders, no bidder shall modify, withdraw or cancel his/her bid or any part thereof for ninety (90) consecutive calendar days after the time designated for the receipt of bids in the Advertisement or Invitation For Bid.
- D. Bids shall not contain any recapitulation of the Work to be done.
- E. The Bidder shall make no additional stipulations on the Bid Form nor limit or qualify his/her bid in any other manner. Bids so qualified will be subject to disqualification.
- F. Collin County is by statute exempt from the State Sales Tax and Federal Excise Tax; therefore, the prices submitted shall not include taxes.

1.6 DISCREPANCIES AND AMBIGUITIES

Any interpretations, corrections and/or changes to an Invitation For Bid and related Specifications or extensions to the opening/receipt date will be made by addenda to the respective document by the Collin County Purchasing Department. Questions and/or clarification requests must be submitted no later than seven (7) days prior to the opening/receipt date. Those received at a later date may not be addressed prior to the public opening. Sole authority to authorize addenda shall be vested in Collin County Purchasing Agent as entrusted by the Collin County Commissioners' Court. Addenda may be transmitted electronically via Collin County eBid, by facsimile, E-mail transmission or mailed via the US Postal Service.

- 1.6.1 Addenda will be transmitted to all that are known to have received a copy of the IFB and related Specifications. However, it shall be the sole responsibility of the Bidder to verify issuance/non-issuance of addenda and to check all avenues of document availability (i.e. Collin County eBid at <https://collincountytx.ionwave.net>; telephoning Purchasing

Department directly, etc.) prior to opening/receipt date and time to insure Bidder's receipt of any addenda issued. Bidder shall acknowledge receipt of all addenda.

1.7 SUBSTITUTIONS

- A. Each bidder represents that his/her bid is based upon the materials and equipment described in the Bidding Documents.
- B. No substitution will be considered unless written request has been submitted to the Engineer for approval at least seven (7) consecutive calendar days prior to the date for receipt of bids.
- C. If the Engineer and Owner approves a proposed substitution, such approval will be set forth in an Addendum.

1.8 QUALIFICATION OF BIDDERS

- A. Within seven (7) consecutive calendar days following bid opening, the apparent low bidder shall submit with a properly executed Contractor's Qualification Statement as evidence to establish bidder's financial responsibility, experience and possession of such equipment as may be needed to prosecute the work in an expeditious, safe and satisfactory manner. This Statement shall include:
 - 1. List of current projects.
 - 2. List of projects completed within the past five years.
 - 3. Experience of key individuals of the organization.
 - 4. Trade and Bank references.
 - 5. A recent financial statement to confirm that the bidder has suitable financial status to meet obligations incidental to performing the work. Audited financial statements are not mandatory. Unaudited financial statements will be accepted. If bidder's firm does, however, have audited statements, please include a copy with your bid.
 - 6. A statement of cost for each major item of Work included in the Bid.
 - 7. A designation of the Work to be performed by the Bidder with his/her own forces.
 - 8. A list of names of the Subcontractors or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for each portion of the Work. The Bidder will be required to establish to the satisfaction of the Engineer and Owner the reliability and responsibility of the proposed Subcontractors. Prior to the award of the Contract, the Engineer will notify the Bidder in writing if either the County or the Engineer, after due investigation, has reasonable and substantial objection to any person or organization on such lists. If Owner or Engineer has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the Bidder may, at his/her option, withdraw his/her Bid without forfeiture of Bid Security or provide an acceptable substitute. Subcontractors and other persons and organizations proposed by the Bidder and accepted by Owner and Engineer must be used on the Work for which they were proposed and accepted, and shall not be changed except with the written approval of Owner and the Engineer.
- B. Bidders may be disqualified and their bids not considered for any of the following specific reasons:
 - 1. Reason for believing collusion exists among bidders.
 - 2. The bidder being interested in any litigation against Owner.
 - 3. The bidder being in arrears on any existing contract or having defaulted on a previous contract.
 - 4. Lack of competency as revealed by the financial statement, experience and equipment, questionnaires, or qualification statement.

5. Uncompleted work which in the judgment of Owner will prevent or hinder the prompt completion of additional work if awarded.
- C. Minimum Standards For Responsible Prospective Bidders: A prospective Bidder must meet the following minimum requirements:
1. have adequate financial resources, or the ability to obtain such resources as required;
 2. be able to comply with the required or proposed delivery/ completion schedule;
 3. have a satisfactory record of performance;
 4. have a satisfactory record of integrity and ethics; and
 5. be otherwise qualified and eligible to receive an award.
- Collin County may request representation and other information sufficient to determine Bidder's ability to meet these minimum standards listed above.
- D. In determining to whom to award the contract, the Owner may consider;
1. the purchase price;
 2. the reputation of the bidder/contractor/vendor and of the bidder/contractor/vendor's goods or services;
 3. the quality of the bidder/contractor/vendor's goods or services;
 4. the extent to which the goods or services meet the Owner's needs;
 5. the bidder/contractor/vendor's past relationship with the Owner;
 6. the total long-term cost to the Owner to acquire the bidder/contractor/vendor's goods or services; and
 7. any other relevant factors specifically listed in the Instruction to Bidders..

1.9 PREPARATION OF BID

- A. Bidder shall submit his/her bid on the forms furnished by the Engineer. All blank spaces in forms shall be correctly filled in and the bidder shall state the prices, written in words and in figures. Where there is discrepancy between the price written in words and the price written in figures, the price written in words shall govern. If bid is submitted by an individual, his/her name must be signed by him/her or his/her duly authorized agency. If the bid is submitted by a firm, association or partnership, the name and address of each member must be given, and the bid must be signed by an official or duly authorized agent. Powers of attorney authorizing agents or others to sign bids must be properly certified and must be in writing and submitted with the bid.
- B. Bidder shall bear any/all costs associated with it's preparation of any bid, proposal or submittal.
- C. Public Information Act: Collin County is governed by the Texas Public Information Act, Chapter 552 of the Texas Government Code. All information submitted by prospective bidders during the bidding process is subject to release under the Act.

- D. The Bidder shall comply with Commissioners' Court Order No. 2004-167-03-11, County Logo Policy.

1.10 BID SECURITY

- A. Each bid must be accompanied by Bid Security (in accordance with instructions set forth in section 001116-Advertisement For Bids) made payable to Owner in an amount of five percent (5%) of the bidder's maximum bid price and in the form of a Cashier's Check or a Bid Bond, duly executed by bidder as principal and having as surety thereon, a corporate surety authorized and admitted to do business in the State of Texas and licensed to issue such bond, as a guarantee that the bidder will enter into a Contract and execute required Performance and Payment Bonds within ten (10) consecutive calendar days of Collin County Commissioners' Court award of Contract.
- B. The Bid Security of the contractor will be retained until such bidder has executed the Contract Agreement and furnished the required Contract Security, whereupon, the Bid Security will be returned. If the contractor fails to execute and deliver the Agreement and furnish the required Contract Security within ten (10) consecutive calendar days of Collin County Commissioners' Court award of Contract, Owner may annul the award of contract and the Bid Security of that bidder will be forfeited. The Bid Security of the other bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh (7th) consecutive calendar day after the effective date of the Agreement or the ninety-fifth (95th) consecutive calendar day after the bid opening, whereupon, the Bid Security furnished by such bidders will be returned. Bid Security with bids which are not competitive will be returned within seven (7) consecutive calendar days after the contract award.
- C. Should the bidder to whom the Contract is awarded refuse or neglect to execute and file the contract and bonds within ten (10) consecutive calendar days of Collin County Commissioners' Court award of Contract, Owner may annul award of Contract and the Bid Security filed with the bid shall become the property of Owner, not as a penalty, but as liquidated damages. Owner reserves the right to award canceled Contract to next responsible, lowest and best bidder as it deems to be in the best interest of the County.
- D. Owner will have the right to retain the bid security of all bidders until either:
1. the Contract has been executed and the bonds have been furnished, or
 2. the specified time has elapsed so that bids may be withdrawn, or
 3. all bids have been rejected.

1.11 PERFORMANCE BOND, LABOR & MATERIAL PAYMENT BOND

- A. The Contractor shall post with Owner, not later than ten (10) consecutive calendar days of Collin County Commissioners' Court award of Contract, a Performance Bond in the amount of one hundred percent (100%) of the total contract price in such form as is satisfactory to Owner, in compliance with Chapter 2253 of the Texas Government Code and all other applicable Texas Law, and on the form specified in the Contract Documents. This bond shall be executed by a corporate surety company duly authorized and admitted to do business in the State of Texas and licensed to issue such a bond in the State of Texas. The Contractor shall notify its corporate surety of any Contract changes.
- B. The Contractor shall post with Owner, not later than ten (10) consecutive calendar days of Collin County Commissioners' Court award of Contract, a Payment Bond in the amount of one hundred percent (100%) of the total contract price in such form as is satisfactory to Owner, in compliance with Chapter 2253 of the Texas Government Code and all other

applicable Texas Law, and on the form specified in the Contract Documents. This bond shall be executed by a corporate surety company duly authorized and admitted to do business in the State of Texas and licensed to issue such a bond in the State of Texas. The Contractor shall notify its corporate surety of any Contract changes.

- C. The Contractor must demonstrate to Owner that it can secure the required performance and payment bonds, issued by a corporate surety company authorized and admitted to do business in the State of Texas and licensed to issue such a bond in the State of Texas. Contractor must also demonstrate that the bond is not in excess of ten percent (10%) of the corporate surety company's capital and surplus. To the extent the amount of the bond exceeds ten percent (10%) of the corporate surety company's capital and surplus, such bond will not be accepted unless bidder provides written certification that the corporate surety company has reinsured the portion of the risk that exceeds ten percent (10%) of the corporate surety company's capital and surplus with one or more insurers who are duly authorized, accredited or trusted to do business in the State of Texas. The amount reinsured by any reinsurer must not exceed ten percent (10%) of the reinsurer's capital and surplus.
- D. The Contractor must file with the performance bond and payment bond, all documents and information necessary to establish that the agent signing the bond is authorized to write the bond in the amount requested, and if applicable, that reinsurance requirements, have been met, including limits and ratings or other evidence of company solvency.
- E. If the corporate surety company on any bond furnished by Contractor to Owner is declared bankrupt or becomes insolvent or such corporate surety company's right to do business in the State of Texas is revoked, the Contractor shall within five (5) consecutive calendar days thereafter substitute another bond and corporate surety company, both of which shall be acceptable to Owner.

1.12 FILING BID

- A. All Bids, proposals, or submittals submitted in hard copy paper form shall be submitted in a sealed envelope, plainly marked on the outside with the Invitation for Bid (IFB) number and name. A hard copy paper form bid, proposal, or submittal shall be manually signed in ink by a person having the authority to bind the firm in a contract. Submittals, bids or proposals shall be mailed or hand delivered to the Collin County Purchasing Department.
- B. No oral, telegraphic or telephonic submittals will be accepted. Bids, proposals, or submittals may be submitted in electronic format via Collin County eBid at <https://collincountytx.ionwave.net>.
- C. All Bids, submittals or proposals submitted electronically via Collin County eBid at <https://collincountytx.ionwave.net> shall remain locked until official date and time of opening as stated in the Special Terms and Conditions of the IFB.
- D. For hard copy paper form bids, proposals, or submittals, any alterations made prior to opening date and time must be initialed by the signer of the bid, proposal, or submittal, guaranteeing authenticity. Bids, proposals, or submittals cannot be altered or amended after submission deadline.
- E. No bid, proposal, or submittal will be considered unless it is filed with the Owner Purchasing Department within the time limit for receiving bids as stated in the Advertisement for Bids or IFB. Each hard copy paper bid shall be in a sealed envelope plainly marked with the word "BID", and the name and bid number of the project as designated in the Advertisement for Bids or IFB.

1.13 MODIFICATION AND WITHDRAWAL OF BID

- A. No bid, proposal, or submittal may be withdrawn or modified after the bid opening except where the award of the contract has been delayed beyond ninety (90) consecutive calendar days after date of bid opening or as per Texas Local Government Code, Title 8, Chapter 262, Subchapter C., Section 262.0305. Modifications after Award.

1.14 IRREGULAR BID

- A. It is understood that Collin County, Texas reserves the right to accept or reject any and/or all Bids, proposals, or submittals for any or all products and/or services covered in an Invitation For Bid (IFB) and to waive informalities or defects in submittals or to accept such submittals as it shall deem to be in the best interest of Collin County.

1.15 REJECTION OF BID

- A. The bidder acknowledges the right of Owner to reject any or all bids and to waive any informality or irregularity in any bid received. In addition, the bidder recognizes the right of Owner to reject a bid if the bidder failed to furnish any required Bid Security, or to submit the data required by the Bidding Documents, or if the bid is in any way incomplete or irregular.

1.16 METHOD OF AWARD

- A. In evaluating bids, Owner will consider whether or not the bids comply with the prescribed requirements, base prices, any alternates, unit pricing, completion time, bidder's qualifications, bidder's proposed subcontractors, suppliers, etc., and other data as may be requested in the Bid Documents.
- B. Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications and financial ability of bidder, proposed subcontractors, suppliers and other persons and organizations to perform and furnish the Work in accordance with the Bidding Documents to Owner's satisfaction within the prescribed time.
- C. If the contract is to be awarded, it will be awarded to the lowest and best responsible bidder whose evaluation, by Owner, indicates to be in the best interests of the project. If no alternates are selected by Owner, the Owner may award the contract to a responsible bidder who submits the lowest and best bid.
- D. Evaluation of Alternates - Any and/or all or none of the alternates may be considered in evaluation. Owner may award Contract on base bid plus any and/or all or none of the alternates.
- E. Owner anticipates award within ninety (90) consecutive calendar days after bid opening.
- F. The bid, when properly accepted by the County, shall constitute a Contract equally binding between the contractor and Owner. No different or additional terms will become part of this Contract with the exception of a written Change Order, signed by both parties.
- G. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing by Collin County Purchasing Agent.

1.17 EXECUTION OF CONTRACT

- A. The person or persons, partnership, company, firm, association or corporation to whom a contract is awarded shall within ten (10) consecutive calendar days after such award, sign the necessary contract agreements and submit the required bonds entering into the required

Contract with Owner. No contract shall be binding on Owner until it has been executed by Owner or his/her duly authorized representative, and delivered to the Contractor.

1.18 FAILURE TO EXECUTE CONTRACT

- A. The failure of the Bidder to execute the required bonds or to sign the required Contract within ten (10) consecutive calendar days after the Contract is awarded, shall be considered by Owner as abandonment of his/her Bid, and Owner may annul the award, at the Owner's sole discretion.

1.19 PURCHASE ORDER

- A. A purchase order(s) shall be generated by Owner to the contractor. The purchase order number **must** appear on all itemized invoices. Collin County will not be responsible for any orders placed or delivered without a valid purchase order number.

1.20 NOTICE TO PROCEED

- A. Upon the execution and delivery of Bonds, Executed Contract by Contractor, progress schedule, proof of insurance, and all other documents required prior to commencing work herein, Owner will issue a written Notice to Proceed to the Contractor requesting that he/she proceed with construction, and the Contractor shall commence work within ten (10) consecutive calendar days after the date of Notice to Proceed.

1.21 PAYMENT PROCEDURES

- A. Contractor shall submit Applications for Payment in accordance with the Contract, and payments shall be made in accordance with the Contract Documents.
- C. Final Payment: Upon final completion and acceptance of the work, Owner shall pay the remainder of the contract price as recommended by Engineer, in accordance with Texas Government Code, Title 10, Subtitle F., Chapter 2251. Contractor(s) is required to pay subcontractors within ten (10) days after the contractor has received payment from the County.
- D. The Contractor understands, acknowledges and agrees that if the Contractor subcontracts with a third party for services and/or material, the primary Contractor (awardee) accepts responsibility for full and prompt payment to the third party. Any dispute between the primary Contractor and the third party, including any payment dispute, will be promptly remedied by the Contractor. Failure to promptly render a remedy or to make prompt payment to the third party (subcontractor) may result in the withholding of funds from the primary Contractor by Collin County for any payments owed to the third party.

1.22 AFFIDAVIT OF BILLS PAID

- A. Prior to final acceptance of this project by Owner, the Contractor shall execute an affidavit that all bills for labor, materials, and incidentals incurred in the project construction have been paid in full, and that there are no claims pending.

1.23 EXEMPTION FROM STATE OF TEXAS AND LOCAL SALES TAX ON MATERIALS

- A. Owner qualifies for exemption from State and Local Sales Tax pursuant to the provisions of Chapter 151, Section 151.309 of the Texas Limited Sales, Excise and Use Tax Act. The

Contractor performing this Contract may purchase all materials, supplies, equipment consumed in the performance of this Contract by issuing to his/her suppliers an exemption certificate in lieu of the tax. .

1.24 CONFLICT OF INTEREST

- A. No public official shall have interest, direct or indirect, in this contract, in accordance with Texas Local Government Code Title 5, Subtitle C, Chapter 171.

1.25 ETHICS

- A. The bidder/contractor shall comply with Commissioners Court Order No. 96-680-10-28, Establishment of Guidelines & Restrictions Regarding The Acceptance of Gifts by County Officials & County employees.

1.26 BID COMPLIANCE

- A. Bid must comply with all federal, state, county and local laws concerning this type of project and the fulfillment of all ADA (Americans With Disabilities Act) requirements.
- B. Design, strength, quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practice.
- C. All products must be new and unused, unless otherwise specified, in first-class condition and of current manufacture.

1.27 DRUG FREE

- A. All bidders shall provide any and all notices as may be required under the Drug-Free Work Place Act of 1988, 41 U.S.C. 701, and Collin County Commissioners' Court Order No. 90-455-06-11, to its employees and all sub-contractors to insure that Owner maintains a drug-free work place. The use, possession or being under the influence of drugs and/or alcohol while working on this bid project or while on County property is prohibited and may result in removal of an individual from the project and/or immediate termination of contract. The County reserves the right to review drug testing records of any personnel involved in this bid project. The County may require, at contractor's expense, drug testing of contractor's personnel if no drug testing records exists or if such test results are older than six (6) months.
- B. Substances and cut-off levels are as follows:

<u>SUBSTANCE</u>	<u>MAXIMUM LEVEL</u>
Amphetamines	1000 NG/ML
Barbiturates	300 NG/ML
Benzodiazepines	300 NG/ML
Cocaine Metabolite	300 NG/ML
Opiates	300 NG/ML
Phencyclidine (PCP)	25 NG/ML
THC (Marijuana) Metabolite	100 NG/ML
Methadone, Urinary	300 NG/ML
Methaqualone, Urine	300 NG/ML
Propoxyphene	300 NG/ML

1.28 INDEMNIFICATION

- A. To the fullest extent permitted by law, Contractor shall defend, indemnify and save harmless Collin County and all its past, present and future officers, agents and employees and all

entities, their officers, agents and employees who are participating in this contract from all suits, claims, actions, damages (including personal injury and or property damages), or demands of any character, name and description, (including attorneys' fees, expenses and other defense costs of any nature) brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of Contractor's breach of the contract arising from an award, and/or any negligent act, error, omission or fault of the Contractor, or of any agent, employee, subcontractor or supplier of Contractor in the execution of, or performance under, any contract which may result from an award. Contractor shall pay in full any judgment with costs, including attorneys' fees and expenses which are rendered against Collin County and/or participating entities arising out of such breach, act, error, omission and/or fault.

1.29 CONSTRUCTION SCHEDULE

- A. The time for completion is set forth herein and will be included in the Contract. All work shall be completed within the consecutive calendar day count shown in the Contractor's bid. The calendar day count shall commence ten (10) consecutive calendar days after the date of the Notice to Proceed.
- B. Prior to the issuance of the Notice to Proceed by Owner, the Contractor shall submit a detailed progress and schedule chart to Owner for review. This chart will be used to assure completion of the job within the number of consecutive calendar days stated in bid documents.

1.30 DELAYS AND EXTENSIONS OF TIME

- A. If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Engineer, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Engineer determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine.
- B. If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that the weather conditions had an adverse effect on the scheduled construction.
- C. Contractor's sole remedy for any delays in the project, which are not the fault of the Contractor, shall be an equitable extension of time to perform the work, required by the Contract. In no event shall the Contractor be entitled to make a claim for delay, impact or acceleration damages against the Owner.

1.31 DAMAGES

- A. Should the contractor fail to complete the project within the specified completion schedule the sum of \$175.00 per calendar day will be deducted from the moneys due the contractor for the work. This sum shall not be considered as a penalty, but rather as reasonable liquidated damages, since it would be impracticable or extremely difficult to fix the actual damages. An extension of time may be allowed for delays beyond the control of the contractor at the discretion of Owner.

1.32 TERMINATION

This contract shall remain in effect until any of the following occurs:

- A. completion of project;
- B. acceptance of work ordered; or
- C. termination by either party pursuant to the terms of the Contract with a thirty (30) days written notice prior to cancellation that must state therein the reasons for such cancellation.
- D. Breach of the contract by the Contractor for failure
 - 1. to meet completion schedules, or
 - 2. otherwise perform in accordance with these specifications.

Breach of contract or default authorizes the County to purchase elsewhere and charge the full increase in cost and handling to the defaulting Contractor.

1.33 PATENTS - COPYRIGHTS

- A. The contractor agrees to protect Owner from any claims involving infringements of patents and/or copyrights. In no event shall Owner be liable to a contractor for any/all suits arising on the grounds of patent(s) or copyright(s) infringement.

1.34 VENUE; GOVERNING LAW

- A. This contract will be governed by the laws of the State of Texas. Should any portion of this contract be in conflict with the laws of the State of Texas, the State laws shall invalidate only that portion. The remaining portion of the contract shall remain in effect. This contract is performable in Collin County, Texas.

1.35 ASSIGNMENT

- A. The contractor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written approval from Collin County Commissioners' Court.

1.36 SILENCE OF SPECIFICATION

- A. The apparent silence of any part of the specification as to any detail or to the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of the specification shall be made on the basis of this statement.

1.37 PROVISION CONCERNING ESCALATOR CLAUSES

- A. Bid(s) containing any condition which provides for changes in the stated bid prices due to increase or decrease in the costs of materials, labor, or other items required for this project, will be rejected and returned to the bidder without being considered.

1.38 ESTIMATES OF QUANTITIES

- A. The quantities listed in the Bid Form will be considered as approximate and will be used for the comparison of bids. Payments will be made to the Contractor only for the actual quantities of work performed or materials furnished in accordance with the contract. The quantity of work to be done and the materials may be increased or decreased as provided for in the Contract Documents.

1.39 TREE PROTECTION OUTSIDE LIMITS OF WORK

- A. The Contractor will be required to obtain written authorization from Owner for the removal of any tree three inches (3") in diameter or greater for any area outside the limits of the street

right-of-way or slope easement. It is the intent of Owner to preserve as much as possible the natural condition of the floodplains.

1.40 EXCAVATION/TRENCH SAFETY

A. TRENCH SAFETY

The CONTRACTOR shall be responsible for complying with state laws and federal regulations relating to trench safety, including those which may be enacted during the performance under this contract. The CONTRACTOR shall be responsible for selecting an appropriate method of providing trench safety after due consideration of the job conditions, location of utilities, pavement conditions and other relevant factors. Slope-back methods which may result in unnecessary displacement of utilities and/or destruction of pavement may not be used without permission from the OWNER. The CONTRACTOR shall be responsible for providing to the OWNER an acceptable trench safety plan signed and sealed by a Professional Engineer qualified to do such work and registered in Texas. Devices used to provide trench safety such as trench shields and shoring systems will be likewise certified by professional Engineers registered in the State of Texas or by a professional Engineer registered in the state of manufacture of the shield.

B. PAYMENT FOR TRENCH SAFETY

Payment for trench safety shall be by the lineal feet of trench exceeding a depth of five (5) ft. Excavation for slope-back methods shall be subsidiary to the trench safety pay item including replacement and recompaction. Excess excavation for other trench safety methods is also subsidiary to the trench safety pay item. Costs relating to the preparation of the trench safety plan including geotechnical investigation, testing and report preparation fees are all subsidiary to the pay item for trench safety. Should trench safety measures be required during contract performance where no pay item has been provided, then the CONTRACTOR shall immediately notify the OWNER and, if directed to do so, provide trench safety under the provisions of the contract. Should the OWNER fail to authorize the work, then the CONTRACTOR shall proceed under the provisions of the Contract. Trench safety requirements are mandatory and may not be waived.

C. PAYMENT FOR SPECIAL SHORING

Payment for special shoring, if any, shall be based on the square feet of shoring used.

D. The Contractor must be made aware that on construction projects in which trench excavation will exceed a depth of five feet (5'), the uniform set of general conditions must require that the bid documents and the contract include detailed plans and specifications for adequate safety systems that meet Occupational Safety and Health Administration standards that will be in effect during the period of construction of the project. The Contractor shall provide a separate pay item for trench excavation safety in accordance with the Texas Health & Safety Code Chapter 756. The Contractor shall verify that these plans and specifications include a pay item for these same trench excavation safety systems, in accordance with Texas Government Code, Title 10, Section 2166.303, Uniform Trench Safety Conditions. The contractor shall insure that drainage from adjacent properties is not blocked by his/her

excavations. Measurement and payment for excavation/trench safety systems will not be made directly, but considered subsidiary to the work.

- E. The Contractor shall be responsible for obtaining and paying for all surveys and testing, including geotechnical surveys and testing, necessary to insure it can comply with all laws regarding adequate trench excavation safety.

1.41 CONSTRUCTION STAKING

- A. Engineer will provide the Contractor with primary horizontal and vertical control to consist of one construction baseline and two benchmarks.
- B. The Contractor shall take all necessary precautions to preserve any and/or all markings and staking. Payment for costs of restaking shall be the responsibility of the Contractor.

1.42 PERMITS

- A. Contractor shall be responsible for obtaining all necessary permits.

1.43 MATERIALS TESTING

- A. Owner will be responsible for all materials testing.

1.44 WAGE SCALE

- A. In accordance with Texas Government Code, Title 10, Section 2258, Prevailing Wage Rates, the general prevailing wage rate has been determined for this locality for the craft or type of workman needed to execute work of a similar character of the project listed herein. The Contractor shall pay the prevailing wage rate in this locality to all his/her employees and subcontractors performing work on this project, and in no event shall the Contractor pay less than the rate shown in the following schedule.

"General Decision Number: TX20200239 08/28/2020

Superseded General Decision Number: TX20190239

State: Texas

Construction Type: Building

County: Collin County in Texas.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage

determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	02/14/2020
2	08/28/2020

ASBE0021-011 06/01/2016

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 24.32	7.52

BOIL0074-003 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 28.00	22.35

CARP1421-002 04/01/2016

	Rates	Fringes
MILLWRIGHT.....	\$ 26.60	8.65

ELEV0021-006 01/01/2020

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 42.59	34.765

FOOTNOTES:

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

B. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Veterans Day.

* ENGI0178-005 06/01/2020

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane.....	\$ 32.85	13.10
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above.....	\$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under.....	\$ 32.35	13.10

IRON0263-005 06/01/2017

	Rates	Fringes
IRONWORKER (ORNAMENTAL AND STRUCTURAL).....		
	\$ 23.25	7.32

PLUM0100-005 11/01/2017

	Rates	Fringes
HVAC MECHANIC (HVAC Unit Installation Only).....		
	\$ 30.84	11.51
PIPEFITTER (Excludes HVAC Pipe Installation).....	\$ 30.84	11.51

SUTX2014-015 07/21/2014

	Rates	Fringes
BRICKLAYER.....	\$ 21.06	0.00
CARPENTER, Excludes Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 15.78	0.00
CAULKER.....	\$ 15.16	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.04	0.00
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 13.00	0.00
ELECTRICIAN (Alarm Installation Only).....	\$ 20.93	3.86

ELECTRICIAN (Communication Technician Only).....	\$ 15.35	1.39
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 17.04	1.39
ELECTRICIAN, Excludes Low Voltage Wiring and Installation of Alarms/Sound and Communication Systems.....	\$ 20.01	2.69
FORM WORKER.....	\$ 11.89	0.00
GLAZIER.....	\$ 16.46	3.94
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$ 10.04	2.31
INSTALLER - SIDING (METAL/ALUMINUM/VINYL).....	\$ 14.74	0.00
INSTALLER - SIGN.....	\$ 15.50	0.00
INSULATOR - BATT.....	\$ 13.00	0.00
IRONWORKER, REINFORCING.....	\$ 12.29	0.00
LABORER: Common or General.....	\$ 10.52	0.00
LABORER: Mason Tender - Brick...	\$ 10.54	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.93	0.00
LABORER: Pipelayer.....	\$ 13.00	0.35
LABORER: Plaster Tender.....	\$ 12.22	0.00
LABORER: Roof Tearoff.....	\$ 11.28	0.00
LABORER: Landscape and Irrigation.....	\$ 10.55	0.00
LATHER.....	\$ 16.00	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 12.83	0.00

OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93	0.00
OPERATOR: Bulldozer.....	\$ 18.29	1.31
OPERATOR: Drill.....	\$ 15.69	0.50
OPERATOR: Forklift.....	\$ 13.21	0.81
OPERATOR: Grader/Blade.....	\$ 13.03	0.00
OPERATOR: Loader.....	\$ 13.46	0.85
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 18.44	0.00
OPERATOR: Roller.....	\$ 15.04	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 13.35	5.10
PAINTER: Drywall Finishing/Taping Only.....	\$ 14.24	3.83
PIPEFITTER (HVAC Pipe Installation Only).....	\$ 20.45	4.00
PLASTERER.....	\$ 16.58	0.00
PLUMBER, Excludes HVAC Pipe Installation.....	\$ 22.46	4.06
ROOFER.....	\$ 17.19	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 21.13	4.79
SHEET METAL WORKER, Excludes HVAC Duct Installation.....	\$ 24.88	5.97
SPRINKLER FITTER (Fire Sprinklers).....	\$ 37.50	0.00
TILE FINISHER.....	\$ 11.22	0.00

TILE SETTER.....	\$ 14.25	0.00
TRUCK DRIVER: 1/Single Axle		
Truck.....	\$ 16.00	0.81
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer		
Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11

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

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

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

most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

END OF GENERAL DECISION"

- B. Except for work on legal holidays, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) the number of hours worked per day, except for overtime hours, times (b) the above respective rate per hour.
- C. For legal holidays, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) one and one-half times the above respective rate per hour, times (b) the number of hours worked on the legal holiday.
- D. For overtime work, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) one and one-half times the above respective rate per hour, times (b) the number of hours worked on overtime.

- E. Under the provisions of Texas Government Code, Title 10, Section 2258, Prevailing Wage Rates, the contractor or subcontractor of the contractor shall forfeit as a penalty to the entity on whose behalf the contract is made or awarded, sixty dollars (\$60.00) for each calendar day, or portion thereof, that the worker is paid less than the wage rates stipulated in the contract.
- F. If the construction project involves the expenditure of Federal funds in excess of \$2,000, the minimum wages to be paid various classes of laborers and mechanics will be based upon the wages that will be determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on the project of a character similar to the contract work.

- 1.45 Collin County Purchasing Department shall serve as Contract Administrator or shall supervise agents designated by Collin County.
- 1.46 All warranties shall be stated as required in the Uniform Commercial Code.
- 1.47 The Contractor and Collin County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.
- 1.48 Contractor shall not fraudulently advertise, publish or otherwise make reference to the existence of a contract between Collin County and Contractor for purposes of solicitation. As exception, Contractor may refer to Collin County as an evaluating reference for purposes of establishing a contract with other entities.
- 1.49 Contractor shall provide Collin County with diagnostic access tools at no additional cost to Collin County, for all Electrical and Mechanical systems, components, etc., procured through this contract.
- 1.50 **CRIMINAL HISTORY BACKGROUND CHECK:** If required, ALL individuals may be subject to a criminal history background check performed by the Collin County's Sheriff's Office prior to access being granted to Collin County property or facilities. Upon request, Contractor shall provide list of individuals to Collin County within five (5) working days.
- 1.51 Vendors/Contractors/Providers must be in compliance with the Immigration and Reform Act of 1986 and all employees specific to this solicitation must be legally eligible to work in the United States of America.
- 1.52 **CERTIFICATION OF ELIGIBILITY:** This provision applies if the anticipated Contract exceeds \$100,000.00 and as it relates to the expenditure of federal grant funds. By submitting a bid or proposal in response to this solicitation, the Bidder/Quoter/Offeror certifies that at the time of submission, he/she is not on the Federal Government's list of suspended, ineligible, or debarred contractors. In the event of placement on the list between the time of bid/proposal submission and time of award, the Bidder/Quoter/Offeror will notify the Collin County Purchasing Agent. Failure to do so may result in terminating this contract for default.
- 1.53 **NOTICE TO CONTRACTORS:** The Collin County Detention Facility houses persons who have been charged with and/or convicted of serious criminal offenses. When entering the Detention Facility, you could: (1) hear obscene or graphic language; (2) view partially clothed male inmates; (3) be subjected to verbal abuse or taunting; (4) risk physical altercations or physical contact, which could be minimal or possibly serious; (5) be exposed to communicable or infectious diseases; (6) be temporarily detained or prevented from immediately leaving the Detention Facility in the case of an emergency or "lockdown; and (7) subjected to a search of your person or property. While the Collin County Sheriff's Office takes every reasonable precaution to protect the safety of visitors to the Detention Facility, because of the inherently dangerous nature of a Detention Facility and the type of

the persons incarcerated therein, please be advised that the possibility of such situations exist and you should carefully consider such risks when entering the Detention Facility. By entering the Collin County Detention Facility, you acknowledge that you are aware of such potential risks and willingly and knowingly choose to enter the Collin County Detention Facility.

- 1.54 Contractors doing business with OWNER agree to comply with Federal Executive Order 13465 E-Verify. It is OWNER's intention and duty to comply and support the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification and non-discrimination. According to the INA, contractors/employers may hire only persons who may legally work in the United States. Subsequently, contractors and subcontractors doing business with OWNER must confirm their enrollment in the E-Verify system which verifies employment eligibility through completion and checking of I-9 forms. OWNER reserves the right to audit contractors process to verify enrollment compliance.

1.55 INSURANCE REQUIREMENTS

A. CONTRACTOR'S INSURANCE

1. Before commencing work, the CONTRACTOR shall be required, to furnish the Collin County Purchasing Agent with certified copies of all insurance certificate(s) required by Texas Law, and the coverages required herein, indicating the coverage is to remain in force throughout the term of this Contract. CONTRACTOR shall also be required to furnish the Collin County Purchasing Agent with certified copies of subcontractor's insurance certificates required by the Texas Department of Insurance, Division of Workers' Compensation, section 406.096(b), and coverages required herein in section 4.2. Without limiting any of the other obligations or liabilities of the CONTRACTOR, during the term of the Contract the CONTRACTOR and each subcontractor, at their own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly approved to do business in the State of Texas and satisfactory to the OWNER. Certificates of each policy for the CONTRACTOR and each subcontractor shall be delivered to the OWNER before any work is started, along with a written statement from the issuing company stating that said policy shall not be canceled, nonrenewed or materially changed without 30 days advance written notice being given to the OWNER.
2. In addition to any coverage required by Texas Law, the CONTRACTOR shall provide the following coverages at not less than the specified amounts:

- B. Workers Compensation insurance required by Texas Law at statutory limits, including employer's liability coverage at \$1,000,000. In addition to these, the CONTRACTOR and each subcontractor must comply with all the requirements of the Texas Department of Insurance, Division of Workers' Compensation, section 406.096(b); (Note: If you have questions concerning these requirements, you are instructed to contact the DWC.)

1. By signing this contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the OWNER that all employees of the CONTRACTOR and its subcontractors 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.

2. The CONTRACTOR'S failure to comply with any of these provisions is a breach of Contract by the Contractor which entitles the OWNER to declare the Contract void if the CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from the OWNER.

- C. Broad form commercial general liability insurance, including independent contractor's liability, completed operations and contractual liability, written on an occurrence form, covering, but not limited to, the liability assumed under the indemnification provisions of this contract, fully insuring CONTRACTOR'S and its subcontractors liability for injury to or death of OWNER'S employees and third parties, extended to include personal injury liability coverage with damage to property, with minimum limits as set forth below:

General Aggregate \$2,000,000

Products — Components/Operations Aggregate \$2,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence \$ 2,000,000

1. The policy shall include coverage extended to apply to completed operations, asbestos hazards (if this project involves work with asbestos) and XCU (explosion, collapse and underground) hazards. The completed operations coverage must be maintained for a minimum of one year after final completion and acceptance of the work, with evidence of same filed with OWNER.

- D. Comprehensive automobile and truck liability insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury and property damage minimum limit of \$1,000,000 per occurrence; or separate limits of \$1,000,000 for bodily injury (per person), \$1,000,000 for bodily injury (per accident) and \$1,000,000 for property damage. Such insurance shall include coverage for loading and unloading hazards.

- E. OWNER'S PROTECTIVE LIABILITY INSURANCE

CONTRACTOR shall obtain, pay for and maintain at all times during the prosecution of the work under this contract an OWNER'S protective liability insurance policy naming the OWNER as insured for property damage and bodily injury, which may arise in the prosecution of the Work or CONTRACTOR'S operations under this Contract. Coverage shall be on an "occurrence" basis, and the policy shall be issued by the same insurance company that carries the CONTRACTOR'S liability insurance with a combined bodily injury and property damage minimum limit of \$1,000,000 per occurrence and \$1,000,000 aggregate.

- F. "UMBRELLA" LIABILITY INSURANCE

CONTRACTOR shall obtain, pay for and maintain umbrella liability insurance during the contract term, insuring CONTRACTOR for an amount of not less than

\$1,000,000 per occurrence combined limit for bodily injury and property damage that follows from and applies in excess of the primary liability coverages required hereinabove. The policy shall provide “drop down” coverage where underlying primary insurance coverage limits are insufficient or exhausted. OWNER shall be named as an additional insured.

G. RAILROAD PROTECTIVE INSURANCE

When required in the Special Provisions, CONTRACTOR shall obtain, maintain and present evidence of railroad protective insurance (RPI). The policy shall be in the name of the railroad company having jurisdiction over the right-of-way involved. The minimum limit of coverage shall meet the specifications provided by the railroad company. The OWNER shall specify the amount of RPI necessary.

H. POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

1. Each insurance policy to be furnished by CONTRACTOR shall include the following conditions by endorsement to the policy:

- (a) each policy shall name the OWNER as an additional insured as to all applicable coverage;
- (b) each policy shall require that 30 days prior to the cancellation, nonrenewal or any material change in coverage, a notice thereof shall be given to OWNER by certified mail;
- (c) the term “OWNER” shall include all past, present or future, authorities, boards, bureaus, commissions, divisions, departments and offices of the OWNER and individual members, elected official, officers, employees and agents thereof in their official capacities and/or while acting on behalf of the OWNER;
- (d) the policy phrase “other insurance” shall not apply to the OWNER where the OWNER is an additional insured on the policy;
- (e) all provisions of the contract concerning liability, duty and standard of care together with the indemnification provision, shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies;
- (f) each policy shall contain a waiver of subrogation in favor of OWNER, and its, past, present and future, officials, employees, and volunteers; and, (g) each certificate of insurance shall reference the Project and Contract number, contain all the endorsement required herein, and require a notice to the OWNER of cancellation.

2. Insurance furnished by the CONTRACTOR shall be in accordance with the following requirements:

- (a) any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by the CONTRACTOR. The OWNER’S decision thereon shall be final;
- (b) all policies are to be written through companies duly licensed to transact that class of insurance in the State of Texas with a financial ratings of A+ VII or better as assigned by BEST Rating Company or equivalent; and

(c) All liability policies required herein shall be written with an “occurrence” basis coverage trigger.

3. CONTRACTOR agrees to the following:

- (a) CONTRACTOR hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against the OWNER, it being the intention that the insurance policies shall protect all parties to the Contract and be primary coverage for all losses covered by the policies;
- (b) Companies issuing the insurance policies and CONTRACTOR shall have no recourse against the OWNER for payment of any premiums or assessments for any deductibles, as all such premiums and deductibles are the sole responsibility and risk of the CONTRACTOR;
- (c) Approval, disapproval or failure to act by the OWNER regarding any insurance supplied by the CONTRACTOR (or any subcontractors) shall not relieve the CONTRACTOR of full responsibility or liability for damages and accidents as set forth in the Contract Documents. Neither shall the bankruptcy, insolvency or denial of liability by the insurance company exonerate the CONTRACTOR from liability; and
- (d) No special payments shall be made for any insurance that the CONTRACTOR and subcontractors are required to carry; all are included in the Contract Price and the Contract unit prices. Any of such insurance policies required under this section may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

1.56 Vendors/Contractors/Providers must be in compliance with the provisions of Section 2252.152 and Section 2252.153 of the Texas Government Code which states, in part, contracts with companies engaged in business with Iran, Sudan, or Foreign Terrorist Organizations are prohibited. A governmental entity may not enter into a contract with a company that is listed on the Comptroller of the State of Texas website identified under Section 806.051, Section 807.051 or Section 2253.253 which do business with Iran, Sudan or any Foreign Terrorist Organization. This Act is effective September 1, 2017.

1.57 Force Majeure: No party shall be liable or responsible to the other party, nor be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term of this Agreement, when and to the extent such failure or delay is caused by or results from acts beyond the affected party’s reasonable control, including, without limitation: acts of God; flood, fire or explosion; war, invasion, riot or other civil unrest; actions, embargoes or blockades in effect on or after the date of this Agreement; or national or regional emergency (each of the foregoing, a “Force Majeure Event”). A party whose performance is affected by a Force Majeure Event shall give notice to the other party, stating the period of time the occurrence is expected to continue and shall use diligent efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

1.58 Expenses for Enforcement: In the event either Party hereto is required to employ an attorney to enforce the provisions of this Agreement or is required to commence legal proceedings to enforce the provisions hereof, the prevailing Party shall be entitled to recover from the other, reasonable attorney's fees and court costs incurred in connection with such enforcement, including collection.

Section 004100-Bid Form



Collin County Purchasing

2021-099

**Construction, Collin County Sheriff's Office Fire Sprinkler
Modification**

Issue Date: 1/5/2021

Questions Deadline: 1/29/2021 12:00 PM (CT)

Response Deadline: 2/4/2021 02:00 PM (CT)

Collin County Purchasing

Contact Information

Contact: JD Griffin, CPPB Senior Buyer

Address: Purchasing

Admin. Building

Ste.3160

2300 Bloomdale Rd.

Ste. 3160

McKinney, TX 75071

Phone: (972) 548-4116

Fax: (972) 548-4694

Email: jgriffin@co.collin.tx.us

Event Information

Number: 2021-099
Title: Construction, Collin County Sheriff's Office Fire Sprinkler Modification
Type: Invitation for Bid - Construction
Issue Date: 1/5/2021
Question Deadline: 1/29/2021 12:00 PM (CT)
Response Deadline: 2/4/2021 02:00 PM (CT)
Notes: SCOPE OF WORK INCLUDES all materials, labor, equipment and services to produce or be incorporated in such construction. Contract will be a general contract for expansion of the existing PFC-6075R Pre-Action Fire Alarm System with the installation of new smoke detection and manual pull station for the Collin County Sheriff's Office Sprinkler Modification at 4300 Community Avenue, McKinney, Texas, as indicated and described in the contract documents. Log in to view bid documents.

Ship To Information

Address: Sheriff's Office
4300 Community Ave.
McKinney, TX 75071

Billing Information

Address: Auditor
Admin. Building
Ste. 3100
2300 Bloomdale Rd.
Ste. 3100
McKinney, TX 75071

Bid Activities

Mandatory Pre-Bid Conference (RSVP Required)

1/20/2021

A MANDATORY PRE-BID CONFERENCE will be held by Collin County at the Collin County Sheriff's Office Lobby, 4300 Community Ave., McKinney, TX 75071 on Wednesday, January 20, 2021 in order for bidders to ask questions regarding the proposed work. All bidders desiring to bid the work should have a representative at the pre-bid conference; bidders that do not attend the pre-bid conference shall not be considered in the evaluation for award of a contract per Texas Local Government Code 262.0256. Attendance shall be mandatory at the pre-bid conference. It is the bidder's responsibility to review the site and documents to gain a full understanding of the requirements of the bid. Due to the current COVID-19 social distancing recommendations, a limit of six (6) attendees will be allowed during each session in addition to three (3) County representatives. Each contractor attending shall be limited to two (2) participants. All participants will be required to provide and wear a face mask that covers the mouth and nose, have temperature checked and complete a Covid-19 screening questionnaire upon arrival. The first conference session will begin at 9:00 AM followed by sessions at 10:00 AM, 11:00 AM and 1:30 PM (as needed). Bidders interested in attending the pre-bid conference shall RSVP to purchasing@co.collin.tx.us with "2021-099, Collin County Sheriff's Office Fire Sprinkler Modification" in the subject line, no later than Tuesday, January 19, 2021 at 12:00 PM. RSVP response shall include company name, name of individuals that will be attending (maximum of 2) and the preferred session time. Attendees for each session will be scheduled in the order they are received. No oral, telegraphic, telephonic or facsimile bids will be considered. IFB's, RFP's, RFQ's and RFI's may be submitted in electronic format via Collin County eBid at <https://collincountytx.ionwave.net>

Bid Attachments

LEGAL NOTICE_2021-099.doc

Download

Legal Notice

Requested Attachments

Bid Bond

(Attachment required)

Bid Security: All Bidders must submit, prior to the bid opening time, a Certified Check, Cashier's Check or acceptable Bid Bond payable without recourse to Collin County in the amount of not less than five percent (5%) of the total bid plus alternates as submitted.

1. Bid Bond, certified check or Cashier's Check may be mailed or delivered to the Office of the Collin County Purchasing Agent, Collin County Administration Building, 2300 Bloomdale Road, Ste 3160, McKinney, TX 75071 and shall be delivered in an envelope, marked plainly on the outside with the Bid Name and Number.
2. Bidders submitting a bid via Collin County eBid shall upload a Bid Bond at <https://collincountytx.ionwave.net>.

Regardless of delivery method, all Bid Bonds shall be received prior to the bid opening time to be considered. Failure to submit a copy of bid security prior to bid opening shall be cause for rejection of bid.

The original Bid Bond shall be received in the Collin County Purchasing Department no later than close of business on the third working day after the bid opening. Late receipt of original Bid Bond shall be cause for rejection of bid.

W-9

(Attachment required)

Conflict of Interest Questionnaire

Bid Attributes

1 Solicitation Submittals

In an effort to avoid person-to-person interaction to comply with the latest Order issued to prevent the spread of COVID-19, Collin County Purchasing will temporarily only accept IFB, RFP, RFQ and Quote submittals electronically in Ionwave (eBid) or via parcel carrier until further notice. Please do not deliver your solicitation response in person. All bid openings will be completed on schedule and witnessed by Collin County Purchasing staff to ensure all procurement statutes, policies and state laws are followed. Please initial.

(Required: Maximum 1000 characters allowed)

2 eBid Notice

Collin County exclusively uses IonWave Technologies, Inc. (Collin County eBid) for the notification and dissemination of all solicitations. The receipt of solicitations through any other means may result in your receipt of incomplete specifications and/or addendums which could ultimately render your bid/proposal non-compliant. Collin County accepts no responsibility for the receipt and/or notification of solicitations through any other means. Please initial.

(Required: Maximum 1000 characters allowed)

3 Contact Information

List the contact name, email address and phone number of the main person(s) Collin County should contact in reference to this solicitation. Contact(s) shall be duly authorized by the company, corporation, firm, partnership or individual to respond to any questions, clarification, and or offers in response to this solicitation.

(Required: Maximum 4000 characters allowed)

4 Calendar Days Bid

Please state the consecutive calendar days bid from notice to proceed through completion of project.

(Required: Numbers only)

5 Exceptions

Do you take exception to the specifications? If so, by separate attachment, please state your exceptions.

☐ Yes ☐ No

(Required: Check only one)

6 Bonding Requirement Acknowledgement

I understand that the bonding requirements of this solicitation are required and are included in the submitted pricing. A bond certificate (payment, performance, and/or maintenance) as stated in the specification document shall be submitted to the Purchasing department if I am awarded all or a portion of the resulting contract. Please initial.

(Required: Maximum 1000 characters allowed)

7 Insurance Acknowledgement – Construction/Public Works

I understand that the insurance requirements of this solicitation are required and are included in the submitted pricing. The Contractor shall furnish certificates of insurance for both the Contractor and any subcontractor to the Purchasing department if awarded all or a portion of the resulting contract. Please initial.

(Required: Maximum 1000 characters allowed)

8 Subcontractors

State the business name of all subcontractors and the type of work they will be performing under this contract. If you are fully qualified to self-perform the entire contract, please respond with "Not Applicable-Self Perform".

(Required: Maximum 4000 characters allowed)

9 Reference No. 1

List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail.

(Required: Maximum 4000 characters allowed)

10 Reference No. 2

List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail.

(Required: Maximum 4000 characters allowed)

11 Reference No. 3

List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail.

(Required: Maximum 4000 characters allowed)

1
2 **Preferential Treatment**

The County of Collin, as a governmental agency of the State of Texas, may not award a contract to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located (Government Code, Title 10, V.T.C.A., Chapter 2252, Subchapter A).

1. Is your principal place of business in the State of Texas?
2. If your principal place of business is not in Texas, in which State is your principal place of business?
3. If your principal place of business is not in Texas, does your state favor resident bidders (bidders in your state) by some dollar increment or percentage?
4. If your state favors resident bidders, state by what dollar amount or percentage.

(Required: Maximum 4000 characters allowed)

1
3 **Debarment Certification**

I certify that neither my company nor an owner or principal of my company has been debarred, suspended or otherwise made ineligible for participation in Federal Assistance programs under Executive Order 12549, "Debarment and Suspension," as described in the Federal Register and Rules and Regulations. Please initial.

(Required: Maximum 1000 characters allowed)

1
4 **Immigration and Reform Act**

I declare and affirm that my company is in compliance with the Immigration and Reform Act of 1986 and all employees are legally eligible to work in the United States of America. I further understand and acknowledge that any non-compliance with the Immigration and Reform Act of 1986 at any time during the term of this contract will render the contract voidable by Collin County. Please initial.

(Required: Maximum 1000 characters allowed)

1
5 **Disclosure of Certain Relationships**

Chapter 176 of the Texas Local Government Code requires that any vendor considering doing business with a local government entity disclose the vendor's affiliation or business relationship that might cause a conflict of interest with a local government entity. Subchapter 6 of the code requires a vendor to file a conflict of interest questionnaire (CIQ) if a conflict exists. By law this questionnaire must be filed with the records administrator of Collin County no later than the 7th business day after the date the vendor becomes aware of an event that requires the statement to be filed. A vendor commits an offense if the vendor knowingly violates the code. An offense under this section is a misdemeanor. By submitting a response to this request, the vendor represents that it is in compliance with the requirements of Chapter 176 of the Texas Local Government Code. Please send completed forms to the Collin County County Clerk's Office located at 2300 Bloomdale Rd., Suite 2104, McKinney, TX 75071. Please initial.

(Required: Maximum 1000 characters allowed)

1
6**Anti-Collusion Statement**

Bidder certifies that its Bid/Proposal is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a Bid/Proposal for the same materials, services, supplies, or equipment and is in all respects fair and without collusion or fraud. No premiums, rebates or gratuities permitted; either with, prior to, or after any delivery of material or provision of services. Any such violation may result in Agreement cancellation, return of materials or discontinuation of services and the possible removal from bidders list. Please initial.

(Required: Maximum 1000 characters allowed)

1
7**Disclosure of Interested Parties**

Section 2252.908 of the Texas Government Code requires a business entity entering into certain contracts with a governmental entity to file with the governmental entity a disclosure of interested parties at the time the business entity submits the signed contract to the governmental entity. Section 2252.908 requires the disclosure form (Form 1295) to be signed by the authorized agent of the contracting business entity, acknowledging that the disclosure is made under oath and under penalty of perjury. Section 2252.908 applies only to a contract that requires an action or vote by the governing body of the governmental entity before the contract may be signed or has a value of at least \$1 million. Section 2252.908 provides definitions of certain terms occurring in the section. Section 2252.908 applies only to a contract entered into on or after January 1, 2016. Please initial.

(Required: Maximum 1000 characters allowed)

1
8**Notification Survey**

In order to better serve our offerors, the Collin County Purchasing Department is conducting the following survey. We appreciate your time and effort expended to submit your bid. Should you have any questions or require more information please call (972) 548-4165. How did you receive notice of this request?

- ☐ Plano Star Courier ☐ Plan Room ☐ Collin County eBid Notification ☐ Collin County Website
☐ Other

(Required: Check only one)

1
9**Bid Bond Acknowledgement**

I understand that accompanying this bid, is a certified check, cashier's check or Bid Bond in the amount of five percent (5%) of the total amount bid. Bidders submitting a bid via Collin County eBid shall upload a Bid Bond at <https://collincountytx.ionwave.net>. Regardless of delivery method, all Bid Bonds shall be received prior to the bid opening time to be considered.

I understand that the original Bid Bond shall be received in the Collin County Purchasing Department no later than close of business on the third working day after the bid opening. **Late receipt of original Bid Bond shall be cause for rejection of bid.** Please initial.

(Required: Maximum 4000 characters allowed)

20

Construction Acknowledgement

Bidder, declares that the only person or parties interested in this bid are those principals named herein, that his/her bid is made without collusion with any other person, firm or corporation, that he/she has carefully examined the Contract Documents including the Advertisement for Bids, Instruction to Bidders, Construction Agreement, Specifications and the Drawings, therein referred to and has carefully examined the locations, conditions and classes of materials for the proposed work, and agrees that he/she will provide all the necessary labor, machinery, tools, equipment, apparatus and other items incidental to construction and will do all the work and furnish all the materials called for in the Contract Documents in the manner prescribed therein. Bidder hereby declares that he/she has visited the site of the Work and has carefully examined the Contract Documents pertaining to the Work covered by the above Bid, and he/she further agrees to commence work within ten (10) consecutive calendar days after date of written Notice to Proceed and to substantially complete the work on which he/she has bid within the number of days specified subject to such extensions of time allowed by Specifications. Bidder certifies that the bid prices contained in this bid have been carefully checked and are submitted as correct and final. The prices have been shown in words and figures for each item listed in this bid and it is understood that in the event of a discrepancy, the words shall govern. Please initial.

(Required: Maximum 1000 characters allowed)

Bid Lines

1

Package Header

Bid Grand Total

Quantity: 1 UOM: lump sum Total: \$

Item Notes: Total Material Cost (Line 1.1) and Total Labor Cost (Line 1.2) must add up to the Bid Grand Total.

Supplier Notes:

- ☐ No bid
- ☐ Alternate specification
(Attach separate sheet)
- ☐ Additional notes
(Attach separate sheet)

Package Attributes**1. Bid Grand Total- Written in Words**

The contract award will be based on the total bid price.

(Required: Maximum 4000 characters allowed)

Package Items

1.1 Total Materials Cost Incorporated in Project

(Response required)

Quantity: 1 UOM: lump sum Price: \$ Total: \$

Supplier Notes: _____

☐ No bid
☐ Additional notes
(Attach separate sheet)

1.2 Total Labor Cost Incorporated in Project

(Response required)

Quantity: 1 UOM: lump sum Price: \$ Total: \$

Supplier Notes: _____

☐ No bid
☐ Additional notes
(Attach separate sheet)

2 Unit Prices

(Line excluded from response total)

Supplier Notes: _____

☐ Additional notes
(Attach separate sheet)

Item Attributes

1. Addressable photoelectric smoke detector (with base).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

2. Addressable duct detector (with 10-foot sampling tube).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

3. Remote LED indicator.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

4. Remote test switch.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

5. Addressable heat detector (with base).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

6. Conventional heat detector (with base).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

7. Addressable manual pull station.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

8. Addressable monitor module.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

9. Addressable control module.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

10. Voice amplifier (with batteries).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

11. Remote notification appliance power supply (with batteries).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

12. Conventional relay.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

13. Speaker (both wall and ceiling mount).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

14. ADA (UL 1971) strobe (both wall and ceiling mount).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

15. ADA (UL 1971) combination speaker/strobe (both wall and ceiling mount).

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

16. Thirty feet of 3/4" EMT conduit.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

17. Isolation module.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

18. Transponder with batteries.

Refer to Section 28 3100, 1.9 Unit Prices

\$

(Required: Numbers only)

Supplier Information

Company Name:

Contact Name:

Address:

Phone:

Fax:

Email:

Supplier Notes

The undersigned hereby certifies the foregoing bid submitted by the company listed below hereinafter called "bidder" is the duly authorized agent of said company and the person signing said bid has been duly authorized to execute same. Bidder affirms that they are duly authorized to execute this contract; this company; corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder or other person or persons engaged in the same line of business; and that the contents of this bid as to prices, terms and conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this bid.

Print Name

Signature

004313 BID BOND

STATE OF TEXAS §
COUNTY OF COLLIN §

KNOW ALL MEN BY THESE PRESENTS:

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____ County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety", a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto _____ (hereinafter referred to as "Owner") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

SIGNED, SEALED and DATED this _____ day of _____ 20_____.

WHEREAS, the Principal is herewith submitting its proposal for IFB 2021-099, Construction, Collin County Sheriff's Office Fire Sprinkler Modification.

The condition of the above obligations are such that if the aforesaid Principal shall be awarded the Contract, the said Principal will, within the time required, enter into a Contract and give Bonds, if required, for the faithful performance of the Contract and the prompt payment for labor and materials in the prosecution thereof, then this obligation shall be null and void; otherwise the Principal and Surety will pay unto the OWNER the full penal sum hereof, as liquidated damages, it being difficult and impractical to determine accurately the actual amount of damages occurring to OWNER by reason of Principal's failure to execute said Contract and Bonds.

PROVIDED FURTHER, that if any legal action be filed on this Bond, venue shall lie in _____ County, Texas.

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Address: _____

Phone Number: _____

WITNESS

PRINCIPAL

Printed/Typed Name _____

Title: _____

Company: _____

Address: _____

SURETY

Printed/Typed Name _____

Title: _____

Company: _____

Address: _____

WITNESS

NOTE: CERTIFIED COPY OF POWER-OF-ATTORNEY SHOULD BE ATTACHED HERETO.

Revised 11/2008

SECTION 00 43 25 - PRODUCT SUBSTITUTION REQUEST FORM

(Must be submitted a minimum of 7 days before the bid date)

Bidder: _____

Project No: **IFB 2021-099**

Project: **Construction, Collin County Sheriff's Office Fire Sprinkler Modification**

Section: _____ Article/ Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____

Telephone: _____ Proposed Model No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its installation.

The undersigned warrants and represents:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by substitution.

Submitted By: _____ Signed: _____

Firm: _____ Address: _____

Phone: _____

REVIEW & ACTION (Initial)

_____ Substitution approved - Make submittals in accordance with Project Manual requirements.

_____ Substitution approved as noted - Make submittals in accordance with Project Manual requirements.

_____ Substitution rejected - Use specified materials.

_____ Substitution Request received too late - Use specified materials.

Signature: _____ Date: _____

Supporting Data Attached: ____ Drawings ____ Product Data ____ Samples ____ Tests ____ Reports ____ Other

END OF REQUEST FORM

SECTION 004547-CONFLICT OF INTEREST
INFORMATION REGARDING
CONFLICT OF INTEREST QUESTIONNAIRE

During the 79th Legislative Session, House Bill 914 was signed into law effective September 1, 2015, which added Chapter 176 to the Texas Local Government Code. Recent changes have been made to Chapter 176 pursuant to HB23, which passed the 84th Legislative Session. Chapter 176 mandates the public disclosure of certain information concerning persons doing business or seeking to do business with Collin County, including family, business, and financial relationships such persons may have with Collin County officers or employees involved in the planning, recommending, selecting and contracting of a vendor for this procurement.

For a copy of Form CIQ and CIS:

http://www.ethics.state.tx.us/filinginfo/conflict_forms.htm

The vendor acknowledges by doing business or seeking to do business with Collin County that he/she has been notified of the requirements under Chapter 176 of the Texas Local Government Code and that he/she is solely responsible for complying with the terms and conditions therein. Furthermore, any individual or business entity seeking to do business with Collin County who does not comply with this practice may risk award consideration of any County contract.

For a listing of current Collin County Officers:

<http://www.collincountytexas.gov/government/Pages/officials.aspx>

At the time of this solicitation being released, the following County employees are known to be involved in the planning, recommending, selecting, and contracting for the attached procurement:

Department/Evaluation Team:

Bill Burke - Director of Building Projects

Brad Harris - Building Projects Coordinator

Purchasing:

Michelle Charnoski, CPPB – Purchasing Agent

J. D. Griffin, CPPB – Senior Buyer

Commissioners' Court:

Chris Hill – County Judge

Susan Fletcher – Commissioner Precinct No. 1

Cheryl Williams – Commissioner Precinct No. 2

Darrell Hale – Commissioner Precinct No. 3

Duncan Webb – Commissioner Precinct No. 4

Advisors:

MD Engineering, L.P., L.L.P.

1255 W. 15th St., Ste. 300

Plano, TX 75075

CONFLICT OF INTEREST QUESTIONNAIRE**FORM CIQ****For vendor doing business with local governmental entity****This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.**

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

Date

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;
or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

- (a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

005213 CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT is made and entered into by and between _____, a _____ corporation (hereinafter referred to as "Contractor"), and COLLIN COUNTY, TEXAS, a political subdivision of the State of Texas (hereinafter referred to as "County" or "OWNER"), to be effective from and after the date hereinafter provided.

For and in consideration of the covenants and agreements contained herein, and for the mutual benefits to be obtained hereby, the parties hereto agree as follows:

CONTRACT SUM

The County shall pay the Contractor in current funds for the performance of the work, subject to additions and deductions by Change orders as provided in the Contract Documents. The contract sum shall be the amount of _____ (\$ _____).

EFFECTIVE DATE

This Construction Agreement, having been previously approved by the Commissioners' Court of Collin County, Texas, shall be effective upon the date of delivery and execution by Contractor, provided the County executes the same within five (5) consecutive calendar days after said delivery and execution by Contractor.

I. CONTRACT GENERAL PROVISIONS

1.1 DEFINITIONS

Words which have well-known technical or construction industry meanings shall have their commonly understood meanings in the Contract Documents, unless a different meaning is stated in the Contract Documents. The following words and expressions, or pronouns used in their place, shall wherever they appear in this contract be construed as follows, unless a different meaning is clear from the context:

Addendum, Bulletin or Letter of Clarification: Any additional contract provisions, or change, revisions or clarification of the Contract Documents issued in writing by the OWNER, to prospective bidders prior to the receipt of bids.

Contract or Contract Documents: The written agreement covering the performance of the work. The Contract and Contract Documents include this written Construction Agreement between OWNER and CONTRACTOR, Advertisement for Bids, Instructions to Bidders, Requests for Proposal, all Addenda, the Specifications, including the general and supplemental special and technical conditions, Drawings, provisions, plans or working drawings — and any supplemental changes or agreements pertaining to the Work or materials therefor; and bonds and any additional documents incorporated by reference in the above.

CONTRACTOR: The person, persons, partnership, firm, corporation, association or organization, or any combination thereof, entering into the contract for the execution of the work, acting directly or through a duly authorized representative.

Other CONTRACTORS: Any contractor, other than the CONTRACTOR or his subcontractors, who has a direct contact with the OWNER for work on or adjacent to the site of the work.

Contract Work or Work: Everything expressly or impliedly required to be furnished and done by the CONTRACTOR by the Contract Documents.

Engineer: The term “Engineer” means the Engineer or his duly authorized representative. The Engineer shall be understood to be the Engineer of the OWNER, and nothing contained in the Contract Documents shall create any contractual or agency relationship between the Engineer and the CONTRACTOR.

Extra Work: Work other than that which is expressly or impliedly required by the Contract Documents at the time of the execution of the contract.

Change Order: A written order to the CONTRACTOR authorizing and directing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or the Contract time.

Contract Price: The total amount of money payable to the CONTRACTOR under the terms and conditions of the Contract Documents. When used in such context, it may also mean the unit price of an item of work under the Contract terms.

OWNER’S Representative: The Engineer or other duly authorized assistant, agent, Engineer, inspector or superintendent acting within the scope of their particular duties.

Drawings or Contract Drawings: Those drawings that are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, including but not limited to, the plans, elevations, sections, details, schedules, diagrams, any bulletin, or any detailed drawing furnished by the OWNER, pertaining or supplemental thereto.

Specifications: Those portions of the Contract Documents that specify the requirements for materials, equipment, systems, standards and workmanship for performance of the Work, and related services.

Inspector: Any representative of the OWNER designated to inspect the work.

Materialman or Supplier: Any subcontractor contracting with the CONTRACTOR, or any of his subcontractors, to fabricate or deliver or who actually

fabricates or delivers materials, supplies or equipment to be consumed or incorporated into the Work.

Notice: Written notice effective the date of the postmark thereon, or if hand delivered, effective the date of hand delivery.

OWNER: COLLIN COUNTY, TEXAS, a political subdivision of the State of Texas. The term OWNER means the OWNER or its authorized representative.

Payment Bond: A bond in the amount of the Contract executed by a corporate surety in accordance with all Texas Law, including but not limited to, Chapter 2253 of the Texas Government Code and Chapter 3503 of the Texas Insurance Code, for public works projects as security furnished by the CONTRACTOR and his sureties solely for the protection of payment bond beneficiaries supplying labor and materials in the prosecution of the Contract Work.

Performance Bond: A bond in the amount of the Contract executed by a corporate surety in accordance with all Texas Law, including but not limited to, Chapter 2253 of the Texas Government Code and Chapter 3503 of the Texas Insurance Code, for public works projects as security furnished by the CONTRACTOR and his sureties solely for the protection of the Owner, conditioned on the faithful performance of the Contract Work in accordance with the plans, specification, and Contract Documents.

Maintenance Bond: A bond executed by a corporate surety for 10% of the Contract Price that complies with all Texas Laws, including but not limited to, Chapter 3503 of the Texas Insurance Code, guaranteeing the prompt, full and faithful performance of the general guaranty and warranty contained in the Contract Documents, and Texas Law.

Project: The total construction of the work described in the Contract Documents performed by the Contractor, Other Contractor or the Owner in whole or part.

Proposal: The written statement or statements duly submitted to the OWNER by the person, persons, partnership, company, firm, association or corporation proposing to do the Work contemplated, including the approved form on which the formal bids for the Work are to be proposed.

Plan, or Plans: The plans are the drawings or reproductions therefrom made by the Owner or Owner's Representative and approved by the Owner showing the dimensions, location, design and position of the various elements of the Project and Work, including plans, elevations, sections, details, schedules, diagrams, working drawings, preliminary drawings, and such supplemental drawings as the Owner may issue to clarify other drawings or for the purpose of showing changes in the Contract Work authorized by the Owner, or for showing details not shown therein.

Special Provisions or Conditions: The special clauses of the Contract, or Contract Documents, setting forth conditions or requirements peculiar to the specific Project involved, supplementing the standard or general specifications and taking precedence over any conditions or requirements of the standard or general specifications with which they are in conflict.

Specifications or Contract Specifications: All of the general, special and technical conditions or provisions, and all addendum or supplements thereto consisting of written requirements for materials, equipment, systems, standards and performance of the work.

Site: The area upon or in which the CONTRACTOR'S operations are carried on, and such other areas adjacent thereto as may be designated as such by the OWNER.

Subcontractors: Any persons, firm or corporation, other than employees of the CONTRACTOR, who or which contracts with the CONTRACTOR to furnish, or who actually furnishes, labor and/or materials and equipment at or about the site.

Sureties: The corporate bodies which are bound by such bonds as are required with and for the CONTRACTOR. The sureties engaged to be responsible for the entire and satisfactory fulfillment of the Contract and for any and all requirements as set out in the specifications, Contract or plans.

The Work: All work including the furnishing of all labor, materials, tools, equipment, required submittals and incidentals to be performed by the CONTRACTOR under the terms of the Contract.

Directed, Required, Approved and Words of Like Import: Whenever they apply to the Work or its performance, the words "directed," "required," "permitted," "ordered," "designated," "established," "prescribed" and words of like import used in the Contract, specifications or upon the drawings shall imply the direction, requirement, permission, order, designation or prescription of the OWNER; and "approved," "acceptable," "satisfactory" and words of like import shall mean approved by, acceptable to or satisfactory to the OWNER.

Equal: Materials, articles or methods which are of equal or higher quality than those specified or shown on the drawings and as further defined in the "or equal" clause. Substitution of Materials shall be determined by the Engineer at his or her discretion, and approved by the Owner.

Working Time, Completion Time or Contract Time: The time set forth in the Contract for the performance and completion of the Work contracted for. The time may be expressed as calendar days, working days or a specific date.

Calendar Day or Days: Any successive days of the week or month, no days being excepted.

Working Day: A working day is defined as a calendar day not including Saturdays, Sundays or those legal holidays as specified in the list prepared by the OWNER for contract purposes. Nothing in this definition shall be construed as prohibiting the CONTRACTOR from working on Saturdays if he so desires, however permission of the OWNER shall be necessary if the CONTRACTOR chooses to work on Saturday. Work on Sundays shall not be permitted without the written permission of the OWNER. If Saturday or Sunday work is permitted, working time shall be charged on the same basis as week days. Where the working time is expressed as calendar days or a specific date, the concept of working days shall no longer be relevant to the contract.

CONTRACT DOCUMENTS

1.2 The parties agree that the Contract Documents shall consist of the following documents in addition to any other documents referenced or incorporated herein:

- A. This written Construction Agreement, including any changes or modifications;
- B. All addenda including the following listed and numbered addenda:
Addendum No. 1 dated _____ Received _____
Addendum No. 2 dated _____ Received _____
- C. Advertisement for Bids, Instructions to Bidder, the Invitation to Bid and Bid Form;
- D. The Special/Supplemental Conditions;
- E. The Specifications and the Project Drawings (if any);
- F. The Construction Details shown on plans;
- G. The Standard Specifications and Standard Drawings from the Public Works Construction Standards-North Central Texas Council of Governments, 2004 edition and all subsequent addendums;
- H. The Performance Bond in the sum of ONE HUNDRED PERCENT (100%) of the total Contract Price;
- I. The Payment Bond in the sum of ONE HUNDRED PERCENT (100%) of the total Contract Price.

1.2.1 PRIORITY OF THE CONTRACT DOCUMENTS

These Contract Documents (A through J above) form the Construction Agreement and are a part of this Construction Agreement as if fully set forth herein. In the event of an inconsistency in any of the provisions of the Contract Documents, the inconsistency shall be resolved by giving precedence to the Contract Documents in the order in which they are listed above.

1.2.2 THE CONTRACT

The Contract Documents form the Contract. The Contract represents the entire integrated agreement between the OWNER and the CONTRACTOR and supercedes all prior negotiations, and representations by either party.

1.3 CORRELATION AND INTENT OF DOCUMENTS

The Contract Documents are complementary and what is called for by any one shall be as binding as if called for by all. The intent of the documents, unless otherwise specifically provided, is to produce complete and finished work, which the CONTRACTOR undertakes to do in full compliance with the Contract Documents. It is not intended to mention every item of work in the specifications which can be adequately shown on the drawings nor to show on the drawings all items of work described or required by the specifications. All materials or labor for work shown on the drawings or reasonably inferable therefrom as being necessary to produce a finished job shall be provided by the CONTRACTOR whether or not same is expressly covered in the specifications. No verbal conversation, understanding or agreement with any officer or employee or agent of the OWNER, either before or after the execution of the Contract, shall affect or modify any of the terms, conditions or obligations contained in the Contract Documents.

1.3.1 CONTRACT DRAWINGS AND SPECIFICATIONS

The OWNER shall furnish the CONTRACTOR one copy of the Contract Drawings and any supplemental drawings and specifications reasonably necessary for the proper execution of the work. At least one copy of all drawings and specifications shall be accessible at all times to the OWNER at the job site.

1.3.2 SUPPLEMENTAL DRAWINGS AND SPECIFICATIONS

In order to carry out the intent of the Contract Documents and to assist the CONTRACTOR in performing its work, the OWNER, after the execution of the Contract, may, by supplemental drawings, specifications or otherwise, furnish additional information or instructions as may be necessary for construction purposes.

All such supplemental drawings, specifications or instructions are intended to be consistent with the Contract Documents and reasonably inferable therefrom. Therefore, no extra costs shall be allowed by the OWNER on a claim that particular supplemental drawings, specifications or instructions differ from the requirements of the Contract Documents, incurring extra costs, unless the CONTRACTOR has first brought the matter, in writing, to the OWNER'S attention for adjustment before proceeding with the work covered by such.

If the OWNER decides that there is no departure from the requirements of the Contract Documents, the CONTRACTOR shall then proceed with the work as shown, specified or directed. If the OWNER shall decide that Extra Work is involved, he shall so modify the supplemental drawings, specifications or instructions to eliminate the Extra Work, or cause a written Change Order to be issued in accordance with the Contract Documents.

1.3.3 ERRORS AND CORRECTIONS IN DRAWINGS AND SPECIFICATIONS

The CONTRACTOR shall not take advantage of any apparent errors, omissions or discrepancies in the drawings or specifications; and the Engineer shall be permitted to make such corrections or interpretations as may be necessary for the fulfillment of the intent of the Contract Documents. In case of any errors, omissions or discrepancies in the drawings or specifications, the CONTRACTOR shall promptly submit the matter to the OWNER or OWNER'S Representative in writing who, in turn, shall promptly make a determination and issue the necessary instructions in writing. Any adjustment by the CONTRACTOR without this determination and instructions shall be at the CONTRACTOR'S own risk and expense. The Work is to be made complete as intended by the Contract Documents.

1.3.4 EXISTING STRUCTURES

The plans show the general locations of some known surface and subsurface structures. The locations of many gas mains, water mains, conduits, sewers, other utilities, etc., however, are unknown, and the OWNER assumes no responsibility for failure to show any or all of these structures on the plans or to show them in their exact locations. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for Extra Work or for increasing the pay quantities in any manner whatsoever. The CONTRACTOR shall be solely responsible for locating all gas mains, water mains, conduits, sewers, other utilities etc., so as to perform the Work without damaging the same.

II. THE WORK

2.1 SCOPE OF WORK

Contractor shall provide all labor, supervision, materials, and equipment necessary to perform all work required by the Contract Documents in connection with **IFB 2021-099, Construction, Collin County Sheriff's Office Fire Sprinkler Modification.**

2.2 CHANGE OR MODIFICATION OF CONTRACT

2.2.1 ALTERATION OF PLANS AND SPECIFICATIONS

The OWNER reserves the right to make such changes in the plans and specifications and in the character of the work as may be necessary or desirable to insure completion in the most satisfactory manner, provided such changes do not materially alter the original plans and specifications or change the general nature of the Work as a whole. Such changes shall not be considered as waiving or invalidating any condition or provision of the Contract or bonds. Such changes shall be issued by the Engineer.

2.2.2 INCREASED OR DECREASED QUANTITIES OF WORK

The OWNER reserves the right and may from time to time, by written order, and without notice to any surety, make changes in the quantity or time of performance of the Work, as may be considered necessary or desirable and such changes shall not be considered as waiving or invalidating any conditions or provisions of the Contract or bonds. The CONTRACTOR shall perform all the Contract Work in strict compliance with the Contract Documents, and shall not make any changes to the Work without prior written authorization from the OWNER, in the form of a written Change Order. If such changes increase or decrease either the cost or the time necessary for the performance of the Work, then the parties will mutually agree upon an equitable adjustment to the price or time to perform the Work pursuant to the terms of the Contract.

2.2.3 EXTRA WORK/CHANGE ORDERS

When any work is necessary to the proper completion of the Project and for which no prices are provided for in the Bid or Proposal and Contract, the CONTRACTOR shall do such work, but only when and as ordered in writing by the OWNER. The OWNER may order changes in the Work without invalidating Contract. Payment for Extra Work shall be made as provided herein. Contractor agrees that overhead and profit for Extra Work shall not exceed 10% of the total cost of the Extra Work. The Contractor shall not be entitled to any additional funds for any work or Extra Work performed on the Project, unless a Change Order is issued and signed by the Owner. The CONTRACTOR shall perform the work as altered, whether increased or decreased, and no allowances shall be made for anticipated profits. Nothing in this section shall give rise to any claims for any delay or acceleration damages, and the CONTRACTORS sole remedy for any delays in the Project shall remain an equitable extension of time as provided for in the Contract Documents. CONTRACTOR acknowledges and agrees to waive all rights or claims for compensation for any additional or other work not specifically authorized by the OWNER.

2.3 DISPUTED WORK AND CLAIMS FOR ADDITIONAL COMPENSATION

If the CONTRACTOR is of the opinion that (a) the work necessary or required to accomplish the result intended by this Contract, or (b) any work ordered to be done as Contract Work by the OWNER is Extra Work and not Contract Work, or (c) any determination or order of the OWNER violates the terms and provisions of this Contract, the CONTRACTOR shall promptly, either before proceeding with such work or complying with such order or determination, notify the OWNER in writing of his contentions with respect thereto and request a final determination thereof.

Such determination of the OWNER shall be given in writing to the CONTRACTOR. If the OWNER determines that the work in question is Extra Work and not Contract Work, or that the order complained of requires performance by the CONTRACTOR beyond that required by the Contract or violates the terms and provisions of the Contract, thereupon the OWNER shall cause either (a) the issuance of a written Change Order covering the Extra Work as provided herein, or (b) the determination or order complained of to be rescinded or so modified so as to not require performance beyond that required by the terms and provisions of the Contract.

If the OWNER determines that the work in question is Contract Work and not Extra Work, or that the determination or order complained of does not require performance by the CONTRACTOR beyond that required by the Contract or violate the terms and provisions of the Contract, he shall direct the CONTRACTOR to proceed, and the CONTRACTOR must promptly comply. In order to reserve his right to claim compensation for such work resulting from such compliance, however, the CONTRACTOR must, within 20 calendar days after receiving the OWNER'S determination and direction, notify the OWNER in writing that the work is being performed, or that the determination and direction is being complied with, under protest.

If the CONTRACTOR fails to so appeal to the OWNER for a determination or, having so appealed, should the CONTRACTOR thus fail to notify the OWNER in writing of his protest, the CONTRACTOR shall be deemed to have waived any claim for extra compensation or damages therefore. No oral appeals or oral protests, no matter to whom made, shall be deemed even substantial compliance with the provisions of this item.

In addition to the foregoing requirements, the CONTRACTOR shall, upon notice from the OWNER, produce for examination for a minimum period of three (3) years following final payment or termination of contract and audit at the CONTRACTOR'S office, by the representatives of the OWNER, all his books and records showing all of his acts and transactions in connection with contractual performance as well as relating to or arising by reason of the matter in dispute. At

such examination a duly authorized representative of the CONTRACTOR may be present.

Unless the aforesaid requirements and conditions are complied with by the CONTRACTOR, the OWNER shall be released from all claims arising under, relating to or by reason of disputed work or Extra Work. It is further stipulated and agreed that no conduct on the part of the OWNER or any agent or employee of the OWNER shall ever be construed as a waiver of the requirements of this section, when such requirements constitute an absolute condition precedent to any approval of any claim for extra compensation, notwithstanding any other provisions of the Contract Documents; and in any action against the OWNER to recover any sum in excess of the contract amount, the CONTRACTOR must allege and prove strict compliance with the provisions of this section. The CONTRACTOR ASSUMES THE RISK OF NONPAYMENT, for failing to comply with any of the requirements of this section.

III. CONTRACTORS RESPONSIBILITIES

3.1 CONTRACTOR'S REPRESENTATIONS, WARRANTIES AND ASSURANCES.

In consideration of, and to induce the award of this contract to him, the CONTRACTOR represents and warrants: (a) That he is financially solvent, and sufficiently experienced and competent to perform the work; (b) That the facts stated in the proposal and the information given by him pursuant to the bidding documents are true and correct in all respects; (c) That he has read, understood and complied with all the requirements set forth in the bidding documents; (d) That he is familiar with and understands all laws and regulations applicable to the work; and (e) unless otherwise specifically provided for in the Contract Documents, the CONTRACTOR shall do all the Work and shall furnish all the tools, equipment, machinery, materials, labor and appliances, except as herein otherwise specified, necessary or proper for performing and completing the work required by this Contract, in the manner and within the time herein prescribed.

By executing the contract, the CONTRACTOR represents that he has visited the site of Work, has fully familiarized himself with the local and on-site conditions under which the work is to be performed and has correlated his observation with the requirements of the Contract Documents. In addition, the CONTRACTOR represents that he has satisfied himself as to subsurface conditions at the site of the Work. Information, data and representations contained in the Contract Documents pertaining to the conditions at the site, including subsurface conditions, are for information only and are not warranted or represented in any manner to accurately show the conditions at the site of the Work. The CONTRACTOR agrees that he shall make no claims for damages, additional compensation or extension of time against the OWNER because of encountering actual conditions in the course of the Work which vary or differ from conditions

or information contained in the Contract Documents. All risks of differing subsurface conditions shall be borne solely by the CONTRACTOR.

The CONTRACTOR shall carefully study and compare the Contract Documents and shall at once report to the OWNER any error, inconsistency or omission he may discover. The CONTRACTOR shall perform no portion of the Work at any time without Contract Documents or, where required, approved shop drawings, product data or samples for such portion of the work.

3.1.1 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. Shop drawings are drawings, diagrams, schedules and other data specially prepared for the work by the CONTRACTOR or any subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the CONTRACTOR to illustrate a material, product or system for some portion of the work.

C. Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the work shall be judged.

D. the CONTRACTOR shall provide, review, approve and submit to the Engineer with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the OWNER or any separate contractor, all shop drawings, product data and samples required by the Contract Documents. The Work will be performed in accordance with submittals approved by the Engineer. The CONTRACTOR shall not be relieved responsibility for deviations from the requirements of the Contract Documents by errors or omissions by the OWNER or Engineer in approving Shop Drawings, Product Data, samples or any other submittals.

E. By approving and submitting shop drawings, product data and samples, the CONTRACTOR represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or shall do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

F. As the Engineer's review is only for general conformance with the requirements of the Contract Documents, the CONTRACTOR shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Engineer's approval of shop drawings, product

data or samples unless the CONTRACTOR has specifically informed the Engineer in writing of such deviation at the time of submission and the Engineer have given written approval to the specific deviation. The CONTRACTOR shall not be relieved from responsibility for errors or omissions in the shop drawings, product data or samples by the Engineer's approval thereof. The CONTRACTOR shall direct specific attention, in writing or on resubmitted shop drawings, product data or samples, to revisions other than those requested by the Engineer on previous submittals.

G. the CONTRACTOR shall be responsible for delays caused by rejection of the submittal of inadequate or incorrect shop drawings, product data or samples. The CONTRACTOR shall be responsible for seeing that any "approved" copies of shop drawings bearing the approval of the Engineer are allowed on the job site. The CONTRACTOR shall be responsible for providing all copies of approved shop drawings necessary for the construction operations.

H. the CONTRACTOR shall keep adequate records of submittal and approvals so that an accurate up-to-date record file is maintained at the job site at all times.

I. No portion of the work requiring submission of a shop drawing, product data or sample shall be commenced until the submittal has been approved by the Engineer. All such portions of the work shall be in accordance with approved submittals.

3.1.2 SURETY BONDS

With the execution and delivery of the contract, the CONTRACTOR shall furnish and file with the OWNER in the amounts herein required, the surety bonds specified hereunder. Without exception, the OWNER'S bond forms, attached hereto as Section 00610 and 00611 must be used, and exclusive venue for any lawsuit in connection with such bonds shall be specified as the county in which the OWNER'S principal office is located. Such surety bonds shall be in accordance with Texas Law, including but not limited to, the provisions of Chapter 2253 of the Texas Government Code and Chapter 3503 of the Texas Insurance Code. These bonds shall automatically be increased by the amount of any change order or supplemental agreement which increases the contract price with or without notice to the surety, but in no event shall a change which reduces the contract amount reduce the penal amount of such bonds.

A. Performance Bond. A good and sufficient bond in an amount not less than 100 percent (100%) of the total amount of the Contract Price guaranteeing the full and faithful execution of the Work and performance

of the Contract in accordance with the plans, specifications and Contract Documents, including any extensions thereof, for the protection of the OWNER. This bond shall provide for the repair and/or replacement of all defects due to faulty materials and workmanship that appear within a period of one year from the date of completion and acceptance of the improvement by the OWNER or such lesser or greater period as may be designated in the Contract Documents.

B. Payment Bond. A good and sufficient bond in an amount not less than 100 percent (100%) of the total amount of the Contract Price guaranteeing the full and proper protection of all payment bond beneficiaries and claimants supplying labor and material in the prosecution of the work provided for in said Contract and for the use of each claimant.

C. Maintenance Bond. A good and sufficient bond in an amount not less than ten percent (10%) of the total amount of the Contract Price guaranteeing the project against defects.

D. Sureties. No sureties shall be accepted by the OWNER who are now in default or delinquent on any bonds or who are interested in any litigation against the OWNER. All bonds shall be made on forms furnished by the OWNER and shall be executed by not less than one corporate surety authorized to do business in the State of Texas and acceptable to the OWNER. The sureties shall be listed in the most current Federal Register Treasury List. Each bond shall be executed by the CONTRACTOR and surety. Each surety shall designate an agent resident in the OWNER'S jurisdictional area acceptable to the OWNER to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship. The OWNER reserves the right to reject any and all sureties.

E. Additional or Substitute Bonds. If at any time the OWNER is or becomes dissatisfied with any surety, then upon the performance or payment bond, the CONTRACTOR shall, within five days after notice from the OWNER to do so, substitute an acceptable bond (or bonds), or provide an additional bond, in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such bonds shall be paid by the CONTRACTOR without recourse to the OWNER. No further payments under the contract shall be deemed due or payable until the substitute or additional bonds shall have been furnished and accepted by the OWNER.

3.1.3 PERMITS AND FEES

The CONTRACTOR shall secure and pay for all building permits and other permits and governmental fees, licenses and inspections necessary

for proper execution and completion of the Work which are normally and legally required for the construction of similar projects in the State of Texas. The CONTRACTOR will give all notices required by laws, ordinances, rules, regulations and lawful orders of authorized public authorities required for the proper and legal performance of the Work.

3.14 CONTRACT DOCUMENTS AT SITE

The CONTRACTOR shall keep and maintain at the Project site one record copy of the Contract Documents, including but not limited to, the Drawings, Specifications, addenda, Change Orders, submittals, Product Data, Samples and other modifications, in good order and marked to show the current construction of the Project. These documents shall be available to the OWNER or Engineer to review at any time and shall be submitted to the OWNER upon completion of the Project, along with a complete set of as built drawings.

3.2 CONTRACTOR'S RESPONSIBILITIES

3.2.1 PERFORMANCE OF THE WORK

In addition to those matters elsewhere expressly made the responsibility of the CONTRACTOR, the CONTRACTOR shall have the full and direct responsibility for the performance and completion of the Work under this Contract and for any act or neglect of the CONTRACTOR, his agents, employees or subcontractors. He shall bear all losses, if any, resulting on account of the amount and character of the Work, or because the conditions under which the work must be done are different from what were estimated or anticipated by him, or because of weather, floods, elements or other causes.

3.2.2 MEANS AND METHODS OF CONSTRUCTION

Unless otherwise expressly provided in the contract drawings, specifications or bulletins, the means and methods of construction shall be such as the CONTRACTOR may choose; subject, however, to the OWNER'S right to prohibit means and methods proposed by the CONTRACTOR which in the OWNER'S judgment:

- A. shall constitute a hazard to the Work, or to persons or property, or shall violate express requirements of applicable laws or ordinances; or
- B. shall cause unnecessary or unreasonable inconvenience to the public; or
- C. shall not produce finished work in accordance with the requirements of the Contract Documents; or

D. shall not assure the Work to be completed within the time allowed by the contract.

The OWNER'S approval of the CONTRACTOR'S means or methods of construction, or the OWNER'S failure to exercise his right to prohibit such means or methods, shall not relieve the CONTRACTOR of his responsibility for the Work or of his obligation to accomplish the result intended by the Contract Documents; nor shall the exercise or non-exercise of such rights to prohibit create a cause of action for damages or provide a basis for any claim by the CONTRACTOR against the OWNER. The CONTRACTOR shall be solely responsible for, the construction means and methods, techniques, sequences, procedures, and for the safety precautions and programs in connection with the Work or the Project.

If the Contract Documents specify any means, methods, techniques, sequences or procedures, the CONTRACTOR shall evaluate said specifications and determine that they are safe for the proper prosecution of the Work. The CONTRACTOR shall be solely responsible for the job site safety of such means, methods, techniques, sequences or procedures. If the CONTRACTOR determines the specified means, methods, techniques, sequences or procedures may not be safe, the CONTRACTOR shall immediately notify the OWNER and Engineer and shall not proceed without further instructions.

3.2.3 CONSTRUCTION SCHEDULE

The CONTRACTOR, immediately after being awarded the contract, shall prepare and submit for the OWNER, and Engineer's information an estimated progress schedule for the work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents and shall provide for expeditious and reasonable execution of the work, not to exceed the time limits for completion provided in the Contract Documents. The progress schedule shall be updated as the Work proceeds or the schedule changes and immediately upon request by the OWNER. The CONTRACTOR shall also prepare a schedule of submittals that allows for a reasonable time for the OWNER or Engineer to review the submittals so as not to delay the Project.

3.2.4 TIME OF PERFORMANCE OF THE WORK

The CONTRACTOR shall begin the work to be performed under this Contract not later than 10 days from the date specified in the purchase or work order and shall conduct the work in such a manner and with sufficient equipment, material and labor as is necessary to insure its completion within the working time. It is the intent of this specification to

provide a continuous construction operation without delay except as occasioned by unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, and it shall be the CONTRACTOR's responsibility to execute the work in the most expeditious manner.

Work shall be done only during the regular and commonly accepted and prescribed working hours. No work shall be done on nights, Sundays or regular holidays unless permission is given by the OWNER

Time is of the Essence for the performance of the Work by the CONTRACTOR. CONTRACTOR agrees that the time allotted for the performance of the Work is reasonable.

3.2.5 PERFORMANCE OF EXTRA OR DISPUTED WORK

While the CONTRACTOR or his subcontractor is performing Extra Work in accordance with the OWNER'S written order, the cost of which is to be determined on a time and material basis, or is performing disputed work or complying with a determination or order under protest, the CONTRACTOR shall, on the Monday following the performance of the work, furnish the OWNER'S representative at the site with three copies of verified statements showing:

A. the name, address and telephone number of each workman employed on such Extra Work or engaged in complying with such determination or order, the character of Extra Work each is doing and the wages paid to him, including the rate and amount of payroll taxes, contributions for insurance, and federal social security; and

B. the nature, cost and quantity of any materials, plant equipment or construction equipment furnished or used in connection with the performance of such Extra Work or in complying with such determination or order, and from whom purchased or rented, along with copies of invoices for such materials, plant equipment or construction equipment.

The CONTRACTOR and his subcontractors, when required by the OWNER, must also produce for inspection for a minimum period of three (3) years following final payment or termination of contract, produce for examination and audit by designated OWNER representatives, any and all of his books, vouchers, records, daily job diaries and reports, canceled checks, etc. showing the nature and quantity of labor, materials and equipment actually used in the performance of the Extra Work; the amounts expended therefore; and the costs incurred for insurance premiums and other items of expense directly chargeable to such Extra

Work. The CONTRACTOR must permit the OWNER'S representatives to make extracts therefrom or copies thereof as may be desired.

Failure of the CONTRACTOR to comply strictly with the requirements of this section shall constitute a waiver of any claim for extra compensation on account of the performance of such Extra Work.

3.3 QUALITY OF WORK

3.3.1 INSPECTION AND TESTS

The CONTRACTOR shall furnish the OWNER with every reasonable accommodation and opportunity to ascertain whether or not the work performed is in accordance with the requirements and intent of the plans and specifications. Any work done or materials used without suitable inspection by the OWNER may be ordered removed and replaced at the CONTRACTOR'S expense. The CONTRACTOR shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the OWNER in his administration of the contract, or by inspections, tests or approvals required or performed by persons other than the CONTRACTOR.

Unless otherwise provided, the CONTRACTOR shall make arrangements for all tests, inspections and approvals with an independent testing laboratory or entity required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction over the Work or items to be tested, inspected or approved. If additional testing or inspection is required they shall be performed at the CONTRACTOR'S expense.

3.3.2 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

All work which has been rejected or condemned shall be repaired, or if it cannot be repaired satisfactorily, it shall be removed and replaced at the CONTRACTOR'S expense. Defective materials shall be immediately removed from the site of the work. Work done without line and grade having been given, work done beyond the lines or not in conformity with the grades shown on the plans or as given, save as herein provided, work done without written authority and prior agreement in writing as to process, shall be done at the CONTRACTOR'S risk and shall be considered unauthorized and at the option of the OWNER may be ordered removed at the CONTRACTOR'S expense.

Upon failure of the CONTRACTOR to repair satisfactorily or to remove and replace, if so directed, rejected, unauthorized or condemned work or materials immediately after receiving notice from the OWNER, the

OWNER shall, after giving written notice to the CONTRACTOR, have the authority to cause defective work to be remedied or removed and replaced, or to cause unauthorized work to be removed and to deduct the cost thereof from any monies due or to become due the CONTRACTOR. Alternatively, the OWNER may, at its option, declare the CONTRACTOR in default.

3.3.3 WORKING AREA; COORDINATION WITH OTHER CONTRACTORS; FINAL CLEANUP

The CONTRACTOR shall confine his equipment, storage of materials and construction operations to the area shown on the contract drawings or stated in the specifications, prescribed by ordinance, laws, or permits or as may be directed by the OWNER, and shall not unreasonably encumber the site or public right-of-way with his construction equipment, plant or materials.

Such area shall not be deemed for the exclusive use of the CONTRACTOR. Other contractors of the OWNER may enter upon and use such portions of the area and for such items as determined by the OWNER are necessary for all purposes required by their contracts. The CONTRACTOR shall give to such other contractors all reasonable facilities and assistance to the end that the work on this and other contracts shall not be unduly or unreasonably delayed. Any additional areas desired by the CONTRACTOR for his use shall be provided by him at his own cost and expense.

The CONTRACTOR is responsible for cutting, fitting or patching any parts of the Work where such work is necessary to make the Work complete, for parts to fit together, or for any damage to the Work prior to Final Acceptance.

The CONTRACTOR shall keep the Project and the surrounding area clean and free from the accumulation of waste materials or trash. Upon completion of the work and before final acceptance and final payment shall be made, the CONTRACTOR shall completely clean and remove from the site of the work surplus and discarded materials, temporary structures and debris of every kind. He shall leave the site of the work in a neat and orderly condition equal to that which originally existed, or as called for in the Contract Documents. Surplus and waste materials removed from the site of the work shall be disposed of at locations satisfactory to the OWNER, and at the CONTRACTOR'S sole cost.

3.4 LEGAL RESPONSIBILITIES

3.4.1. PATENTS AND COPYRIGHTS

The CONTRACTOR shall pay all royalties and license fees and shall provide, by suitable legal agreement with the patentee or owner, for the use of any design, device, material or process covered by letters, patent or any copyright. The CONTRACTOR shall indemnify, defend, hold and save the OWNER and its officers, employees and agents harmless from all liability and claims for infringement of any patent or copyright.

In the event that any claims, suit or action at law or in equity of any kind whatsoever is brought against the OWNER, or its officers, employees or agents involving any such patents, copyrights or license rights, then the OWNER shall have the right to and may retain from any money due or to become due to the CONTRACTOR such sum deemed necessary by the OWNER for its protection until such claim or suit shall have been settled and satisfactory evidence to that effect shall have been furnished the OWNER.

3.4.2 INDEMNIFICATION

To the fullest extent permitted by law, the CONTRACTOR and his sureties shall indemnify, defend and hold harmless the OWNER and all of its, past, present and future, officers, agents and employees from all suits, cause of action, claims, liabilities, losses, fines, penalties, liens, demands, obligations, actions, proceedings, of any kind, character, name and description brought or arising, on account of any injuries or damages received or sustained by any person, destruction or damage to any property on account of, in whole or part, the operations of the CONTRACTOR, his agents, employees or subcontractors; or on account of any negligent act or fault of the CONTRACTOR, his agents, employees or subcontractors in the execution of said Contract; failing to comply with any law, ordinance, regulation, rule or order of any governmental or regulatory body including those dealing with health, safety, welfare or the environment; on account of the failure of the CONTRACTOR to provide the necessary barricades, warning lights or signs; and shall be required to pay any judgment, with cost, which may be obtained against the OWNER growing out of such injury or damage. In no event shall OWNER be liable to CONTRACTOR for indirect or consequential damages or loss of income or profit irrespective of the cause, fault or reason for same. CONTRACTOR'S duty to indemnify herein shall not be limited by any limitation on the type or amount of damages payable by or for CONTRACTOR or any Subcontractor under workman's compensation acts, disability benefit acts or any other employee benefit acts.

In addition, the CONTRACTOR likewise covenants and agrees to, and does hereby, indemnify and hold harmless the OWNER from and against any and all injuries, loss or damages to property of the OWNER during the

performance of any of the terms and conditions of this Contract, arising out of or in connection with or resulting from, in whole or in part, any and all alleged acts or omissions of officers, agents, servants, employees, contractors, subcontractors, licenses or invitees of the CONTRACTOR.

The rights and responsibilities provided in this indemnification provision shall survive the termination or completion of this Contract.

3.5 SUPERVISION AND CONSTRUCTION PROCEDURES

3.5.1. SUPERVISION BY CONTRACTOR

The status of the CONTRACTOR is that of an independent CONTRACTOR under Texas law and the work under this Contract shall be under the direct charge and superintendence of the CONTRACTOR. Except where the CONTRACTOR is an individual and gives his personal superintendence to the work, the CONTRACTOR shall provide a competent superintendent or general foreman on the work site at all times during progress with full authority to act for the CONTRACTOR. The CONTRACTOR shall also provide an adequate staff for the coordination and expediting of the Work.

The superintendent and staff shall be satisfactory to the OWNER. The superintendent or general foreman shall not be changed during this Contract except with the written consent of the OWNER or unless the superintendent or general foreman proves unsatisfactory to the CONTRACTOR and ceases to be in his employ.

If the superintendent should be or become unsatisfactory to the OWNER, he shall be replaced by the CONTRACTOR upon written direction of the OWNER, and in such event, the CONTRACTOR shall not be entitled to file a claim for any additional working time or money from the OWNER.

3.5.2 EMPLOYEES

The CONTRACTOR shall employ only competent, efficient workmen and shall not use on the work any unfit person or one not skilled in the work assigned to him and shall at all times maintain good order among its employees. Whenever the OWNER shall inform the CONTRACTOR in writing that, in his opinion, any employee is unfit, unskilled, disobedient, or is disrupting the orderly progress of the work, such employee shall be removed from the work and shall not again be employed on it. Under urgent circumstances, the OWNER may orally require immediate removal of an employee for cause, to be followed by written confirmation.

The CONTRACTOR shall supervise and direct all the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, procedures and safety procedures and for coordinating all portions of the Work under the Contract. The CONTRACTOR shall be responsible to the OWNER for the acts and omissions of his employees, subcontractors and their agents, employees and subcontractors performing any of the work under a contract with the CONTRACTOR.

3.5.3 LABOR AND MATERIALS

Unless otherwise provided in the Contract Documents, the CONTRACTOR shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent and whether or not incorporated or to be incorporated into the work.

The CONTRACTOR shall at all times enforce strict discipline and good order among his employees and shall not employ on the work site any unfit person or anyone not skilled in the task assigned to him.

The rate of progress shall be such that the whole work shall be performed and the premises cleaned up in accordance with the Contract within the working time established in the Contract, unless an extension of time is made in the manner hereinafter specified.

3.5.4 WAGE SCALE

In accordance with The Texas Government Code, Title 10, Chapter 2258, Prevailing Wage Rates, the general prevailing wage rate has been determined for this locality for the craft or type of workman needed to execute work of a similar character of the project listed herein. The Contractor shall pay the prevailing wage rate in this locality to all his/her employees and subcontractors performing work on this project, and in no event shall the Contractor pay less than the rate shown in the following schedule.

"General Decision Number: TX20200239 08/28/2020

Superseded General Decision Number: TX20190239

State: Texas

Construction Type: Building

County: Collin County in Texas.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate

will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	02/14/2020
2	08/28/2020

ASBE0021-011 06/01/2016

Rates	Fringes
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ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 24.32	7.52
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BOIL0074-003 01/01/2017

Rates	Fringes
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BOILERMAKER.....	\$ 28.00	22.35
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CARP1421-002 04/01/2016

Rates	Fringes
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MILLWRIGHT.....\$ 26.60 8.65

ELEV0021-006 01/01/2020

Rates Fringes

ELEVATOR MECHANIC.....\$ 42.59 34.765

FOOTNOTES:

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

B. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Veterans Day.

* ENGI0178-005 06/01/2020

Rates Fringes

POWER EQUIPMENT OPERATOR

(1) Tower Crane.....\$ 32.85 13.10

(2) Cranes with Pile
Driving or Caisson

Attachment and Hydraulic
Crane 60 tons and above.....\$ 28.75 10.60

(3) Hydraulic cranes 59
Tons and under.....\$ 32.35 13.10

IRON0263-005 06/01/2017

Rates Fringes

IRONWORKER (ORNAMENTAL AND
STRUCTURAL).....\$ 23.25 7.32

PLUM0100-005 11/01/2017

Rates Fringes

HVAC MECHANIC (HVAC Unit
Installation Only).....\$ 30.84 11.51

PIPEFITTER (Excludes HVAC
Pipe Installation).....\$ 30.84 11.51

SUTX2014-015 07/21/2014

	Rates	Fringes
BRICKLAYER.....	\$ 21.06	0.00
CARPENTER, Excludes Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 15.78	0.00
CAULKER.....	\$ 15.16	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.04	0.00
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 13.00	0.00
ELECTRICIAN (Alarm Installation Only).....	\$ 20.93	3.86
ELECTRICIAN (Communication Technician Only).....	\$ 15.35	1.39
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 17.04	1.39
ELECTRICIAN, Excludes Low Voltage Wiring and Installation of Alarms/Sound and Communication Systems.....	\$ 20.01	2.69
FORM WORKER.....	\$ 11.89	0.00
GLAZIER.....	\$ 16.46	3.94
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$ 10.04	2.31
INSTALLER - SIDING (METAL/ALUMINUM/VINYL).....	\$ 14.74	0.00
INSTALLER - SIGN.....	\$ 15.50	0.00
INSULATOR - BATT.....	\$ 13.00	0.00
IRONWORKER, REINFORCING.....	\$ 12.29	0.00

LABORER: Common or General.....\$ 10.52 0.00

LABORER: Mason Tender - Brick...\$ 10.54 0.00

LABORER: Mason Tender -
Cement/Concrete.....\$ 10.93 0.00

LABORER: Pipelayer.....\$ 13.00 0.35

LABORER: Plaster Tender.....\$ 12.22 0.00

LABORER: Roof Tearoff.....\$ 11.28 0.00

LABORER: Landscape and
Irrigation.....\$ 10.55 0.00

LATHER.....\$ 16.00 0.00

OPERATOR:
Backhoe/Excavator/Trackhoe.....\$ 12.83 0.00

OPERATOR: Bobcat/Skid
Steer/Skid Loader.....\$ 13.93 0.00

OPERATOR: Bulldozer.....\$ 18.29 1.31

OPERATOR: Drill.....\$ 15.69 0.50

OPERATOR: Forklift.....\$ 13.21 0.81

OPERATOR: Grader/Blade.....\$ 13.03 0.00

OPERATOR: Loader.....\$ 13.46 0.85

OPERATOR: Mechanic.....\$ 17.52 3.33

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete).....\$ 18.44 0.00

OPERATOR: Roller.....\$ 15.04 0.00

PAINTER (Brush, Roller and
Spray), Excludes Drywall
Finishing/Taping.....\$ 13.35 5.10

PAINTER: Drywall

Finishing/Taping Only.....	\$ 14.24	3.83
PIPEFITTER (HVAC Pipe Installation Only).....	\$ 20.45	4.00
PLASTERER.....	\$ 16.58	0.00
PLUMBER, Excludes HVAC Pipe Installation.....	\$ 22.46	4.06
ROOFER.....	\$ 17.19	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 21.13	4.79
SHEET METAL WORKER, Excludes HVAC Duct Installation.....	\$ 24.88	5.97
SPRINKLER FITTER (Fire Sprinklers).....	\$ 37.50	0.00
TILE FINISHER.....	\$ 11.22	0.00
TILE SETTER.....	\$ 14.25	0.00
TRUCK DRIVER: 1/Single Axle Truck.....	\$ 16.00	0.81
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11

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

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017.

If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the

survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION"

Except for work on legal holidays, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) the number of hours worked per day, except for overtime hours, times (b) the above respective rate per hour.

For legal holidays, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) one and one-half times the above respective rate per hour, times (b) the number of hours worked on the legal holiday.

For overtime work, the "General Prevailing Rate of Per Diem Wage" for the various crafts or type of workers or mechanics is the product of (a) one

and one-half times the above respective rate per hour, times (b) the number of hours worked on overtime.

Under the provisions of Texas Government Code, Title 10, Chapter 2258, Prevailing Wage Rates, the contractor or subcontractor of the contractor shall forfeit as a penalty to the entity on whose behalf the contract is made or awarded, sixty dollars (\$60.00) for each calendar day, or portion thereof, that the worker is paid less than the wage rates stipulated in the contract.

If the construction project involves the expenditure of Federal funds in excess of \$2,000, the minimum wages to be paid various classes of laborers and mechanics will be based upon the wages that will be determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on the project of a character similar to the Contract Work.

- 3.5.5 Contractors doing business with OWNER agree to comply with Federal Executive Order 13465 E-Verify. It is OWNER'S intention and duty to comply and support the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification and non-discrimination. According to the INA, contractors/employers may hire only persons who may legally work in the United States. Subsequently, contractors and subcontractors doing business with OWNER must confirm their enrollment in the E-Verify system which verifies employment eligibility through completion and checking of I-9 forms. OWNER reserves the right to audit contractors process to verify enrollment compliance.

3.5.6 COMPLIANCE WITH LAWS

The CONTRACTOR shall fully comply with all local, state and federal laws, including all codes, ordinances and regulations applicable to this Contract and the Work to be done thereunder, which exist or which may be enacted later by governmental bodies having jurisdiction or authority for such enactment.

All work required under this Contract is intended to comply with all requirements of law, regulation, permit or license. If the CONTRACTOR finds that there is a variance, he shall immediately report this to the OWNER for resolution.

3.5.6.1 EQUAL EMPLOYMENT OPPORTUNITY

The CONTRACTOR shall comply with all local, state and federal employment and discrimination laws and shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin or any other class protected by law.

3.5.7 RAILWAY CROSSINGS

Where the Work encroaches upon any right-of-way of any railway, the OWNER shall secure the necessary easement for the work. Where railway tracks are to be crossed, the CONTRACTOR shall observe all the regulations and instructions of the railway company as to methods of doing the work or precautions for safety of property and the public. All negotiations with the railway company, except for right-of-way, shall be made by the CONTRACTOR. The railway company shall be notified by the CONTRACTOR not less than five days prior to commencing the work. The CONTRACTOR shall not be paid separate compensation for such railway crossing but shall receive only the compensation as set out in the proposal.

3.5.8 OTHER CONTRACTORS; OBLIGATION TO COOPERATE

The OWNER reserves the right to perform construction on the Project with its own forces or may award other contracts for additional work on this Project, and the CONTRACTOR shall fully cooperate with such other contractors and shall coordinate and fit his work to be done hereunder to such additional work as may be contracted by the OWNER. The CONTRACTOR shall not commit or permit any act which shall interfere with the performance of work by any other contractor.

Upon receiving written notice from the CONTRACTOR that the OWNER or another contractor is failing to coordinate his work with the Work under this Contract as directed by the OWNER, the OWNER shall promptly investigate the charge and take such necessary action as the situation may require. However, the OWNER shall not be liable to the CONTRACTOR for damages suffered by the CONTRACTOR due to the fault or negligence of another contractor or through failure of another contractor to carry out the directions of the OWNER. Should any interference occur between contractors, the Engineer may furnish the CONTRACTOR with written instructions designating priority of effort, whereupon the CONTRACTOR shall immediately comply with such direction. In such event, the CONTRACTOR shall be entitled to an extension of working time only for unavoidable delays verified by the Engineer; however, no increase in the Contract Price shall be due the CONTRACTOR.

3.5.9 SUBCONTRACTS

The CONTRACTOR shall not make any subcontract for performing any portion of the Work included in the contract without written notice to the OWNER. This contract having been made pursuant to the bid submitted by the CONTRACTOR and in reliance with the CONTRACTOR'S personal qualifications and responsibility, the OWNER reserves the right

to withhold approval of any subcontractor which the OWNER may deem would not be in the OWNER'S best interest.

The CONTRACTOR shall, as soon as practicable after signing the Contract, submit a separate written notice to the OWNER identifying each proposed subcontractor. Upon request of the OWNER, the CONTRACTOR shall promptly furnish additional information tending to establish that any proposed subcontractor has the necessary facilities, skill, integrity, past experience and financial resources to perform the work in accordance with the terms and conditions of this Contract.

If the OWNER determines that any proposed subcontractor is unacceptable, he shall so notify the CONTRACTOR, who may thereupon submit another proposed subcontractor unless the CONTRACTOR decides to do the work himself. Disapproval by the OWNER of any proposed subcontractor shall not provide a basis for any claim by the CONTRACTOR.

If an approved subcontractor fails to properly perform the work undertaken, he shall be removed from the job upon request of the OWNER, following notification to the CONTRACTOR in writing of the request for removal and the reasons therefore.

Each subcontract entered into shall provide that the provisions of this Contract shall apply to such subcontractor and his officers and employees in all respects as if he and they were employees of the CONTRACTOR. The OWNER'S decision not to disapprove of any subcontract shall not relieve the CONTRACTOR of any of his responsibilities, duties and liabilities hereunder. The CONTRACTOR shall be solely responsible for the acts, omissions, negligence or defaults of his subcontractors and of such subcontractor's officers, agents and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the CONTRACTOR to the extent of his subcontract.

The CONTRACTOR agrees to bind each subcontractor and each subcontractor agrees to be bound by the terms of the Contract Documents insofar as applicable to his work. The CONTRACTOR and each subcontractor jointly and severally agree that nothing in the Contract Documents or otherwise shall create or be deemed to create any rights in favor of a subcontractor against the OWNER; nor shall be deemed or construed to impose upon the OWNER any obligation, liability or duty to a subcontractor; or to create any contractual relation whatsoever between a subcontractor and the OWNER.

The provisions contained herein shall likewise apply to any sub-subcontracts.

3.6 PROTECTION OF WORK AND OF PERSONS AND PROPERTY

3.6.1 PROTECTION OF WORK

During performance and up to date of final acceptance, the CONTRACTOR shall be under the absolute obligation to protect the finished work against any damage, loss or injury. In the event of such damage, loss or injury, the CONTRACTOR shall promptly replace or repair such work, whichever the OWNER shall determine to be preferable. The obligation to deliver finished work in strict accordance with the Contract prior to final acceptance shall be absolute and shall not be affected by the OWNER'S approval of or failure to prohibit means and methods of construction used by the CONTRACTOR. All risk of loss or damage to the work shall be borne solely by the CONTRACTOR until final completion and acceptance of all work by the OWNER, as evidenced by the OWNER'S issuance of a certificate of acceptance.

3.6.2 PROTECTION OF PERSONS AND PROPERTY

The CONTRACTOR shall have the responsibility to provide and maintain all warning devices and take all precautionary measures required by law or otherwise to protect persons and property while said persons or property are approaching, leaving or within the work site or any area adjacent to said work site. No separate compensation shall be paid to the CONTRACTOR for the installation or maintenance of any warning devices, barricades, lights, signs or any other precautionary measures required by law or otherwise for the protection of persons or property.

The CONTRACTOR shall assume all duties owed by the OWNER to the general public in connection with the general public's immediate approach to and travel through the work site and the area adjacent to said work site.

Where the work is carried on in or adjacent to any street, alley, sidewalk, public right-of-way or public place, the CONTRACTOR shall at his own cost and expense provide such flagmen and watchmen and furnish, erect and maintain such warning devices, barricades, lights, signs and other precautionary measures for the protection of persons or property as may be prudent or necessary, or as are required by law. The CONTRACTOR'S responsibility for providing and maintaining flagmen, watchmen, warning devices, barricades, signs and lights and other precautionary measures shall not cease until the project shall have been completed and accepted by the OWNER, and shall cease when the certificate of acceptance is issued by the OWNER pursuant to the Contract Documents.

If the OWNER discovers that the CONTRACTOR has failed to comply with the applicable federal and state law (by failing to furnish the necessary flagmen, warning devices, barricades, lights, signs or other precautionary measures for the protection of persons or property), the OWNER may order the CONTRACTOR to take such additional precautionary measures as required by law to be taken to protect persons and property.

In addition, the CONTRACTOR shall be held responsible for all damages to the work and other public or private property due to the failure of warning devices, barricades, signs, lights or other precautionary measures in protecting said property; and whenever evidence is found of such damage, the OWNER may order the damaged portion immediately removed and replaced by and at the cost and expense of the CONTRACTOR.

3.6.3 SAFETY; TRENCH SAFETY; UNDERGROUND UTILITY SAFETY; PUBLIC CONVENIENCE AND SAFETY;

The CONTRACTOR shall be responsible for complying with state laws and federal regulations relating to safety, trench safety, and underground utility safety, including those which may be enacted during the performance under this Contract. The CONTRACTOR shall comply with the provisions of the The Standard Specifications and Standard Drawings from the Public Works Construction Standards-North Central Texas Council of Governments, 2004 edition and all subsequent addendums and the Instructions to Bidders regarding trench safety, public convenience and safety, and sanitary provisions. The CONTRACTOR shall be sole responsible for, the construction means and methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the Work and the Project.

3.6.4 STORM WATER PROTECTION

The Contractor shall perform, track, participate, implement, and comply with storm water pollution prevention minimum control measures, protocols, and best management practices (BMP) and ensure that water quality standards are not violated in accordance with all regulations and policies as they apply to the Texas Pollutant Discharge Elimination System general permits. Applicable permits include: 1) Texas Construction General Permit (TXR150000).

Contractors will obtain permit coverage for construction activities disturbing over one acre of land (total acreage is cumulative across all portions of the project). BMPs include, but are not limited to:

- Preparing and implementing a site-specific Storm Water Pollution Prevention Plan (SWPPP) as outlined in the permit and prior to any soil disturbance.
- Installing and managing erosion and sediment control.
- Make available, upon request, permit associated documentation.
- Practicing spill prevention and good housekeeping.
- Meeting the requirements of the MS4 permit.

3.7 MATERIALS AND WORKMANSHIP; WARRANTIES AND GUARANTEES

Unless otherwise expressly provided in the contract drawings or specifications, the work shall be performed in accordance with the best modern practice with materials and workmanship of the highest quality and suitable for their purpose. The OWNER shall judge and determine the CONTRACTOR'S compliance with these requirements.

3.7.1 MATERIALS AND EQUIPMENT

The CONTRACTOR shall be free to secure the approved materials, equipment and articles from sources of his own selection. However, if the OWNER finds that the work shall be delayed or adversely affected in any way because a selected source of supply cannot furnish a uniform product in sufficient quantity and at the time required and a suitable source does exist, or the product is not suitable for the Work, the OWNER shall have the right to require the original source of supply changed by the CONTRACTOR. The CONTRACTOR shall have no claim for extra cost or damage because of this requirement.

The CONTRACTOR warrants to the OWNER that all materials and equipment furnished under this contract shall be new unless otherwise specified in the Contract Documents and that same shall be of good quality and workmanship, free from faults and defects and in conformance with the Contract Documents. All materials and equipment not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective and shall be promptly repaired or replaced by the CONTRACTOR at the CONTRACTOR's sole cost upon demand of the OWNER. If required by the OWNER, the CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.7.1.1 "OR EQUAL" CLAUSE

A. Whenever a material or article required is specified or shown on the plans, by using the name of a proprietary product or of a particular manufacturer or vendor, any material or article which the Engineer determines shall perform adequately the duties imposed by the general

design or which the Engineer deems to be of similar appearance (in cases where appearance is of importance) shall be considered equal and satisfactory, provided the material or article so proposed is of equal substance and function. Authorization for any substitution of materials or articles must be obtained by the CONTRACTOR from the Engineer before proceeding with such substitution.

B. Should an authorized substitution require redesign of a portion of the work or alterations to the plans or specifications in order for the materials or articles which are to be substituted to properly fit or in other ways to be satisfactory, the Engineer shall accomplish such redesigns and alterations. The CONTRACTOR shall bear all reasonable costs associated with redesign and alteration efforts performed by the Engineer.

3.7.2 WORKMANSHIP

The CONTRACTOR shall promptly correct or replace all work rejected by the OWNER as defective or as failing to conform to the Contract Documents whether observed before or after substantial completion and whether or not fabricated, installed or completed. The CONTRACTOR shall bear all costs of correcting such rejected work, including costs incurred for additional services made necessary thereby.

3.8 WARRANTIES

3.8.1 SPECIAL WARRANTY

If within one year after final acceptance of the work by the OWNER, as evidenced by the final certificate of acceptance or within such longer or shorter period of time as may be prescribed by law or by the terms of any other applicable special warranty on designated equipment or portions of work as required by the Contract Documents, any of the work is found to be defective or not in accordance with the Contract Documents, the CONTRACTOR shall correct it promptly after receipt of a written notice from the OWNER to do so. This obligation shall survive termination or completion of the Contract. The OWNER shall give such notice promptly after discovery of the condition.

The CONTRACTOR shall remove from the site all portions of the work which are defective or nonconforming and which have not been corrected unless removal is waived in writing by the OWNER.

3.8.2 SUBCONTRACTORS' AND MANUFACTURERS' WARRANTIES

All subcontractors', manufacturers' and suppliers' warranties and guarantees, express or implied, respecting any part of the work and any materials used therein, shall be obtained and enforced by the CONTRACTOR for the benefit of the OWNER without the necessity of separate transfer or assignment thereof.

3.8.3 CORRECTED WORK WARRANTY

Any work repaired or replaced, pursuant to this section, shall be subject to the provisions of this section to the same extent as work originally performed.

3.8.4 RIGHTS AND REMEDIES

The rights and remedies of the OWNER provided in this section are in addition to, and do not limit, any rights or remedies afforded to the OWNER by law or any other provision of the Contract Documents, or in any way limit the OWNER'S right to recovery of damage due to default under the Contract. No action or inaction by the OWNER shall constitute a waiver of a right or duty afforded it under the Contract.

IV. INSURANCE

4.1 CONTRACTOR'S INSURANCE

Before commencing work, the CONTRACTOR shall be required, to furnish the Collin County Purchasing Agent with certified copies of all insurance certificate(s) required by Texas Law, and the coverages required herein, indicating the coverage is to remain in force throughout the term of this Contract. CONTRACTOR shall also be required to furnish the Collin County Purchasing Agent with certified copies of subcontractor's insurance certificates required by the Texas Department of Insurance, Division of Workers' Compensation, section 406.096(b), and coverages required herein in section 4.2. Without limiting any of the other obligations or liabilities of the CONTRACTOR, during the term of the Contract the CONTRACTOR and each subcontractor, at their own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly approved to do business in the State of Texas and satisfactory to the OWNER. Certificates of each policy for the CONTRACTOR and each subcontractor shall be delivered to the OWNER before any work is started, along with a written statement from the issuing company stating that said policy shall not be canceled, nonrenewed or materially changed without 30 days advance written notice being given to the OWNER.

In addition to any coverage required by Texas Law, the CONTRACTOR shall provide the following coverages at not less than the specified amounts:

4.2 Workers Compensation insurance required by Texas Law at statutory limits, including employer's liability coverage at \$1,000,000. In addition to these, the

CONTRACTOR and each subcontractor must comply with all the requirements of the Texas Department of Insurance, Division of Workers' Compensation, section 406.096(b); (Note: If you have questions concerning these requirements, you are instructed to contact the DWC.)

By signing this contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the OWNER that all employees of the CONTRACTOR and its subcontractors 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 which entitles the OWNER to declare the Contract void if the CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from the OWNER.

- 4.3 Broad form commercial general liability insurance, including independent contractor's liability, completed operations and contractual liability, written on an occurrence form, covering, but not limited to, the liability assumed under the indemnification provisions of this contract, fully insuring CONTRACTOR'S liability for injury to or death of OWNER'S employees and third parties, extended to include personal injury liability coverage with damage to property, with minimum limits as set forth below:

General Aggregate \$2,000,000

Products — Components/Operations Aggregate \$2,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence \$ 2,000,000

- 4.3.1 The policy shall include coverage extended to apply to completed operations, asbestos hazards (if this project involves work with asbestos) and XCU (explosion, collapse and underground) hazards. The completed operations coverage must be maintained for a minimum of one year after final completion and acceptance of the work, with evidence of same filed with OWNER.

- 4.4 Comprehensive automobile and truck liability insurance, covering owned, hired and non-owned vehicles, with a combined bodily injury and property damage minimum limit of \$1,000,000 per occurrence; or separate limits of \$1,000,000 for bodily injury (per person), \$1,000,000 for bodily injury (per accident) and

\$1,000,000 for property damage. Such insurance shall include coverage for loading and unloading hazards.

4.5 OWNER'S PROTECTIVE LIABILITY INSURANCE

CONTRACTOR shall obtain, pay for and maintain at all times during the prosecution of the work under this contract an OWNER'S protective liability insurance policy naming the OWNER as insured for property damage and bodily injury, which may arise in the prosecution of the Work or CONTRACTOR'S operations under this Contract. Coverage shall be on an "occurrence" basis, and the policy shall be issued by the same insurance company that carries the CONTRACTOR'S liability insurance with a combined bodily injury and property damage minimum limit of \$1,000,000 per occurrence and \$1,000,000 aggregate.

4.6 "UMBRELLA" LIABILITY INSURANCE

CONTRACTOR shall obtain, pay for and maintain umbrella liability insurance during the contract term, insuring CONTRACTOR for an amount of not less than \$1,000,000 per occurrence combined limit for bodily injury and property damage that follows from and applies in excess of the primary liability coverages required hereinabove. The policy shall provide "drop down" coverage where underlying primary insurance coverage limits are insufficient or exhausted. OWNER shall be named as an additional insured.

4.7 RAILROAD PROTECTIVE INSURANCE

When required in the Special Provisions, CONTRACTOR shall obtain, maintain and present evidence of railroad protective insurance (RPI). The policy shall be in the name of the railroad company having jurisdiction over the right-of-way involved. The minimum limit of coverage shall meet the specifications provided by the railroad company. The OWNER shall specify the amount of RPI necessary.

4.8 POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

All policies to be furnished by CONTRACTOR shall include the following conditions by endorsement to the policy:

- A. each policy shall name the OWNER as an additional insured as to all applicable coverage;
- B. each policy shall require that 30 days prior to the cancellation, nonrenewal or any material change in coverage, a notice thereof shall be given to OWNER by certified mail;
- C. the term "OWNER" shall include all past, present or future, authorities, boards, bureaus, commissions, divisions, departments and offices of the OWNER and individual members, elected official, officers, employees and

agents thereof in their official capacities and/or while acting on behalf of the OWNER;

D. the policy phrase “other insurance” shall not apply to the OWNER where the OWNER is an additional insured on the policy;

E. all provisions of the contract concerning liability, duty and standard of care together with the indemnification provision, shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies;

F. each policy shall contain a waiver of subrogation in favor of OWNER, and its, past, present and future, officials, employees, and volunteers; and,

G. each certificate of insurance shall reference the Project and Contract number, contain all the endorsement required herein, and require a notice to the OWNER of cancellation.

Insurance furnished by the CONTRACTOR shall be in accordance with the following requirements:

A. any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by the CONTRACTOR. The OWNER’S decision thereon shall be final;

B. all policies are to be written through companies duly licensed to transact that class of insurance in the State of Texas with a financial ratings of A+VII or better as assigned by BEST Rating Company or equivalent; and

C. All liability policies required herein shall be written with an “occurrence” basis coverage trigger.

CONTRACTOR agrees to the following:

A. CONTRACTOR hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against the OWNER, it being the intention that the insurance policies shall protect all parties to the Contract and be primary coverage for all losses covered by the policies;

B. Companies issuing the insurance policies and CONTRACTOR shall have no recourse against the OWNER for payment of any premiums or assessments for any deductibles, as all such premiums and deductibles are the sole responsibility and risk of the CONTRACTOR;

C. Approval, disapproval or failure to act by the OWNER regarding any insurance supplied by the CONTRACTOR (or any subcontractors) shall not relieve the CONTRACTOR of full responsibility or liability for damages and accidents as set forth in the Contract Documents. Neither shall the bankruptcy, insolvency or denial of liability by the insurance company exonerate the CONTRACTOR from liability; and

D. No special payments shall be made for any insurance that the CONTRACTOR and subcontractors are required to carry; all are included in the Contract Price and the Contract unit prices. Any of such insurance policies required under this section may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

V. OWNERS RIGHTS AND RESPONSIBILITIES

MONTHLY ESTIMATE, PARTIAL PAYMENTS AND FINAL PAYMENTS

5.1 Progress and final payments shall be paid to the Contractor based upon the progress of the Project as indicated by the approved Applications for Payment, certificates of acceptance, or Certificates for Payment, that include an approved Schedule of Values that will be submitted by the CONTRACTOR to the OWNER prior to the commencement of the Work and in accordance with the following:

5.2 MONTHLY ESTIMATES

The CONTRACTOR shall deliver to the OWNER an itemized Application for Payment that shall include the work completed, materials stored at the Project site but not incorporated into the work, materials ready to be installed and stored at another agreed location, and the percentage of Work completed, through the 20th day of each month, on an Application for Payment with a schedule of values previously submitted by the Contractor and approved by the Owner. Prior to release of funds in connection with any Application for Payment, the Owner may request, and the Contractor must provide, properly executed statements of full or partial releases of claims acceptable to Owner in form and content, for all persons or entities supplying labor or materials to the Project.

5.2.1 The Application for Payment is a representation by the CONTRACTOR to the OWNER that the construction has progressed to the point indicated, the quality of the Work covered by the application is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount requested.

5.2.2 INSPECTION AND PARTIAL PAYMENTS

Whenever the CONTRACTOR shall submit an Application for Payment to the OWNER for work performed by the CONTRACTOR, the CONTRACTOR shall notify the Engineer that the improvement is ready for inspection. The Engineer shall then make such inspection, and will have the authority to reject work that does not conform to the Contract Documents. If the work is satisfactory and in accordance with the specifications and Contract Documents, the Engineer shall issue a Certificate for Payment.

- 5.2.3 Within thirty (30) days of the Owner's receipt of a properly submitted and correct Application for Payment, and the issuance of a Certificate for Payment, the Owner shall make payment to the Contractor, in the amount approved by the Owner less 5% retainage. Such payment shall be adjusted for work that is incomplete or not in accordance with the Contract Documents or that is the subject of a separate contract, or subcontract or supplier claim or lien against the Contractor or the payment bonds for the project.
- 5.2.4 No partial or final payment or the entire use or occupancy of the Project by the OWNER shall be considered acceptance of work that does not strictly comply with the Contract Documents or release the CONTRACTOR of any of his responsibilities under the Contract.

5.2.5 PAYMENT FOR LABOR AND MATERIAL; NO LIENS

The CONTRACTOR for himself or any of his subcontractors shall pay all indebtedness which may become due to any person, firm or corporation having furnished labor, material or both in the performance of this Contract. It shall be the responsibility of each person, firm or corporation claiming to have furnished labor, materials or both, in connection with this Contract, to protect his or its interest in the manner prescribed by applicable laws of the State of Texas, provided, however, that as this Contract provides for a public works project, no lien of any kind shall ever exist or be placed against the Work or any portion thereof, or any public funds or retainage held by the OWNER; and any subcontractor shall look solely to the CONTRACTOR and the payment bond surety, and not the OWNER, for payment of any outstanding amounts due for labor, materials or any other indebtedness in connection with the Work. However, the OWNER may, at any time prior to making final payment, require the CONTRACTOR to furnish a Consent of Surety to any payment due the CONTRACTOR for completed work and may, at the discretion of the OWNER or the request of the Surety, make the check jointly payable to the CONTRACTOR and the Surety. The Owner shall have no obligation under this Agreement to pay or to be responsible in any way for payment to any Engineer, another design professional, contractor, subcontractor or supplier performing portions of the Work, pursuant to a contract with the Contractor.

5.2.6 PAYMENT WITHHELD

In addition to express provisions elsewhere contained in the contract, the OWNER may withhold from any payment otherwise due the CONTRACTOR such amount as determined necessary to protect the OWNER'S interest, or, if it so elects, may withhold or retain all or a portion of any progress payment or refund payment on account of:

A. unsatisfactory progress of the Work not caused by conditions beyond the CONTRACTOR'S control,
B. defective work not corrected,
C. CONTRACTOR'S failure to carry out instructions or orders of the OWNER or his representative,
D. a reasonable doubt that the Contract can be completed for the balance then unpaid,
E. work or execution thereof not in accordance with the Contract Documents,
F. claim filed by or against the CONTRACTOR or reasonable evidence indicating probable filing of claims,
G. failure of the CONTRACTOR to make payments to subcontractor or for material or labor,
H. damage to another contractor,
I. unsafe working conditions allowed to persist by the CONTRACTOR,
J. failure of the CONTRACTOR to provide work schedules as required by the OWNER,
K. use of subcontractors without the OWNER'S approval or,
L. failure of the CONTRACTOR to keep current as-built record drawings at the job site or to turn same over in completed form to the OWNER.
When the above grounds are removed, payment shall be made for amounts withheld because of them, and OWNER shall never be liable for interest on any delayed or late payment.

5.2.7 PAYMENT FOR EXTRA WORK

The Extra Work done by the CONTRACTOR as authorized and approved by the Engineer shall be paid for in the manner hereinafter described, and the compensation thus provided shall be accepted by the CONTRACTOR as payment in full for all labor, materials, tools, equipment and incidentals and all superintendents' and timekeepers' services, all insurance, bond and all other overhead expense incurred in the performance of the Extra Work.

Payment for Extra Work shall be made by one of the following methods:

- A. Method "A" — by unit prices agreed on in writing by the OWNER and CONTRACTOR before said Extra Work is commenced, subject to all other conditions of the contract.
- B. Method "B" — by lump sum price agreed on in writing by the OWNER and the CONTRACTOR before said Extra Work is commenced, subject to all other conditions of the contract.

5.2.8 SUBSTANTIAL COMPLETION

The Project will be considered substantially complete when the OWNER can utilize the Project for its intended purpose and the Work is in conformance with the Contract Documents.

5.3 APPLICATION FOR FINAL PAYMENT.

Upon full performance of all the Contract Work and the full performance of all the provisions of the Contract, the CONTRACTOR shall submit a final application for payment to the OWNER, the CONTRACTOR shall notify the Engineer that the improvement is ready for inspection. All warranties and guaranties required of the CONTRACTOR by the Contract Documents shall be assembled and delivered by the CONTRACTOR to the OWNER as Part of the final Application for Payment. The Contractor will assign to the Owner all manufacturer's warranties relating to materials and labor used in the work and will perform the Work in such a manner as to preserve all such manufacturer's warranties. The CONTRACTOR will deliver a certificate evidencing that insurance and bonds required by the Contract Documents will remain in full force and effect pursuant to the requirements of the Contract. The final Certificate for Payment will not be issued until all such warranties and guaranties have been received and accepted by the Owner, and a Certificate of Acceptance is issued by the Engineer.

5.3.1 FINAL INSPECTION AND ACCEPTANCE

Whenever the improvements provided for by the Contract shall have been completely performed on the part of the CONTRACTOR, the CONTRACTOR shall notify the OWNER, and Engineer that the improvement is ready for final inspection. The Engineer shall then make such final inspection, and if the work is satisfactory and in accordance with the specifications and Contract Documents, the CONTRACTOR shall be issued a certificate of acceptance.

5.3.2 FINAL PAYMENT

Whenever the improvements provided for by the Contract shall have been completely performed on the part of the CONTRACTOR, as evidenced in the certificate of acceptance, and all required submissions provided to the OWNER, a final estimate showing the value of the work shall be prepared by the Engineer as soon as the necessary measurements and computations can be made. All prior estimates upon which payments have been made are subject or necessary corrections or revisions in the final payment. The amount of this final estimate, less any sums that have been previously paid, or deducted under the provisions of the Contract, shall be paid the CONTRACTOR within 30 days after the final acceptance, provided that the CONTRACTOR has furnished to the OWNER a consent of surety and

an affidavit or other satisfactory evidence that all indebtedness connected with the Work and all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished for and used in the performance of the work have been paid or otherwise satisfied, or that the person or persons to whom the same may respectively be due have consented to such final payment.

The acceptance by the CONTRACTOR of the final payment as aforesaid shall operate as and shall be a release to the OWNER from all claims or liabilities under the Contract, including all subcontractor claims, for anything done or furnished or relating to the Work under the Contract or for any act or neglect of said OWNER relating to or connected with the Contract.

All warranties and guarantees shall commence from the date of the certificate of acceptance. No interest shall be due the CONTRACTOR on any partial or final payment or on the retainage.

5.3 MODIFICATIONS TO CONTRACT WORK OR TIME OF PERFORMANCE

5.3.1 OWNER'S RIGHT TO TEMPORARILY SUSPEND WORK

5.3.2 REASONS FOR SUSPENSION

The OWNER shall have the right by written order to temporarily suspend the work, in whole or in part, whenever, in the judgment of the OWNER, such temporary suspension is required:

- A. in the interest of the OWNER generally,
- B. due to government or judicial controls or orders which make performance of this contract temporarily impossible or illegal,
- C. to coordinate the work of separate contractors at the job site,
- D. to expedite the completion of a separate contract even though the completion of this particular Contract may be thereby delayed,
- E. because of weather conditions unsuitable for performance of the Work, or
- F. because the CONTRACTOR is proceeding contrary to contract provisions or has failed to correct conditions considered unsafe for workmen.

The written order of the OWNER to the CONTRACTOR shall state the reasons for suspending the work and the anticipated periods for such suspension. Upon receipt of the OWNER'S written order, the CONTRACTOR shall suspend the work covered by the order and shall take such means and precautions as may be necessary to properly protect

the finished and partially finished work, the unused materials and uninstalled equipment, including the providing of suitable drainage about the work and erection of temporary structures where necessary. The CONTRACTOR shall not suspend the Work without written direction from the OWNER and shall proceed with the work promptly when notified by the OWNER to resume operations.

5.3.3 NO ADDITIONAL COMPENSATION

No additional compensation shall be paid to the CONTRACTOR for a temporary suspension of the Work by the OWNER or otherwise where same is caused by the fault of the CONTRACTOR. Where such temporary suspension is not due to the fault of the CONTRACTOR, he shall be entitled to:

A. an equitable extension of working time for the completion of the work, not to exceed the delay caused by such temporary suspension, as determined by the OWNER; and

B. the actual and necessary costs of properly protecting the finished and partially finished work, unused materials and uninstalled equipment during the period of the ordered suspension as determined by the OWNER as being beyond the Contract requirements, such costs, if any, to be determined pursuant to the terms of the Contract; and

C. where the CONTRACTOR elects to move equipment from the job site and then return it to the site when the work is ordered resumed, the actual and necessary costs of these moves, in an amount determined by the OWNER pursuant to the terms of the Contract.

5.3.4 USE OF COMPLETED PORTIONS OF WORK

The OWNER may, after written notice to the CONTRACTOR, and without incurring any liability for increased compensation to the CONTRACTOR, take over and use any completed portion of the Work prior to the final completion and acceptance of the entire work included in the Contract, and notwithstanding that the time allowed for final completion has not expired. The OWNER and CONTRACTOR agree that occupancy of portions of the Work by the OWNER shall not in any way evidence the substantial completion of the entire work or signify the OWNER's acceptance of the Work.

The CONTRACTOR shall not object to, nor interfere in any way with, such occupancy or use after receipt of the OWNER'S written notice.

Immediately prior to such occupancy and use, the OWNER shall inspect such portion of the Work to be taken over and shall furnish the CONTRACTOR a written statement of the work, if any, still to be done on such part. The CONTRACTOR shall promptly thereafter complete such unfinished work to permit occupancy and use on the date specified in the OWNER'S written order, unless the OWNER shall permit specific items of work to be finished after the occupancy and use by the OWNER.

In the event the CONTRACTOR is unreasonably delayed by the OWNER exercising its rights under this section, the CONTRACTOR may submit a request for an extension of time; CONTRACTOR'S sole remedy for an unreasonable delay shall be an extension of time and shall not be entitled to any additional compensation.

5.4 COMMENCEMENT; TIME OF COMPLETION; DELAYS; EXTENSION OF TIME; LIQUIDATED DAMAGES

5.4.1 COMMENCEMENT; TIME OF COMPLETION

Contractor shall commence work within ten (10) consecutive calendar days after receiving from County a notice to proceed. Contractor agrees and covenants that the number of consecutive calendar days allowed to complete all work following a notice to proceed shall be as follows:

5.4.2. LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ON TIME

Time is of the essence in the progress and completion of this Contract. For each calendar day that any Work shall remain uncompleted after the time specified in the proposal and the Contract, or the increased time granted by the OWNER, or as equitably increased by additional work or materials ordered after the Contract is signed, the sum per day given in the following schedule, unless otherwise specified in the special provisions, shall be deducted from the monies due the CONTRACTOR:

One Hundred Seventy-Five and 00/100 Dollars (\$175.00)

The sum of money thus deducted for such delay, failure or noncompletion is not to be considered as a penalty, but shall be deemed, taken and treated as reasonable liquidated damages, per calendar day that the CONTRACTOR shall be in default after the time stipulated in the Contract for completing the Work. The said amounts are fixed and agreed upon by and between OWNER and CONTRACTOR because of the

impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER in such event would sustain; and said amounts are agreed to be the amount of damages which the OWNER would sustain and which shall be retained from the monies due, or that may become due, the CONTRACTOR under this Contract; and if said monies be insufficient to cover the amount owing, then the CONTRACTOR or his surety shall pay any additional amounts due.

5.4.3 EXTENSIONS OF TIME

The CONTRACTOR shall be entitled to an extension of working time under this Contract only when claim for such extension is submitted to the OWNER in writing by the CONTRACTOR within seven days from and after the time when any alleged cause of delay shall occur, and then only when such time is approved by the OWNER. In adjusting the Contract working time for the completion of the Project, unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including, acts of God or the public enemy, acts of the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors due to such causes beyond their control shall be taken into consideration.

If the satisfactory execution and completion of the Contract should require work and materials in greater amounts or quantities than those set forth in the Contract, requiring more time for completion than the anticipated time, then the contract working time shall be equitably increased, but not more than in the same proportion as the cost of the additional work bears to the cost of the original work contracted for. No allowances shall be made for delays or suspension of the performance of the Work due to the fault of the CONTRACTOR.

No adjustment to working time shall be made if, concurrently with the equitable cause for delay, there existed a cause for delay due to the fault or negligence of the CONTRACTOR, his agents, employees or subcontractors; and no adjustment shall be made to the Contract Price and the CONTRACTOR shall not be entitled to claim or receive any additional compensation as a result of or arising out of any delay resulting in adjustment to the working time hereunder, including delays caused by the acts or negligence of the OWNER. Notwithstanding any other provision of the Contract Documents, all claims for extension of working time must be submitted in accordance with the provisions of this Contract, and no act of the OWNER shall be deemed a waiver or entitlement of such extension.

5.5 TERMINATION FOR CONVENIENCE OF THE OWNER

5.5.1 NOTICE OF TERMINATION

The performance of the Work under this Contract may be terminated by the OWNER in whole or from time to time in part, in accordance with this section, whenever the OWNER shall determine that such termination is in the best interest of the OWNER. Any such termination shall be effected by mailing a notice of termination to the CONTRACTOR specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. Receipt of the notice shall be deemed conclusively presumed and established when the letter is placed in the United States Mail by the OWNER. Further, it shall be deemed conclusively presumed and established that such termination is made with just cause as therein stated; and no proof in any claim, demand or suit shall be required of the OWNER regarding such discretionary action.

5.5.2 CONTRACTOR ACTION

After receipt of a notice of termination, and except as otherwise directed by the OWNER or Engineer, the CONTRACTOR shall:

- A. stop work under the Contract on the date and to the extent specified in the notice of termination;
- B. place no further orders or subcontracts for materials, services or facilities except as may be necessary for completion of such portion the Work under the Contract as is not terminated;
- C. terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination;
- D. transfer title to the OWNER and deliver in the manner, at the times, and to the extent, if any, directed by the OWNER or Engineer:
 - 1. the fabricated or unfabricated parts, work in process, completed work, supplies and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the notice of termination; and
 - 2. the completed or partially completed plans, drawings, information and other property which, if the Contract had been completed, would have been required to be furnished to the OWNER.
- E. complete performance of such part of the work as shall not have been terminated by the notice of termination; and
- F. take such action as may be necessary, or as the Engineer may direct, for the protection and preservation of the property related to its Contract which is in the possession of the CONTRACTOR and in which the OWNER has or may acquire an interest.

At a time not later than 30 days after the termination date specified in the notice of termination, the CONTRACTOR may submit to the OWNER a list, certified as to the quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Engineer. Not later than 15 days thereafter, the OWNER shall accept title to such items and remove them or enter into a storage agreement covering the same, provided that the list submitted shall be subject to verification by the Engineer upon removal of the items, or, if the items are stored, within 45 days from the date of submission of the list, and provided that any necessary adjustments to correct the list as submitted shall be made prior to final settlement.

5.5.3 TERMINATION CLAIM

Within 60 days after notice of termination, the CONTRACTOR shall submit his termination claim to the Engineer and the OWNER in the form and with the certification prescribed herein. Unless one or more extensions in writing are granted by the OWNER upon request of the CONTRACTOR, made in writing within such 60-day period or authorized extension thereof, any and all such claims shall be conclusively deemed waived. The termination claim shall (1) list all Contract Work which the CONTRACTOR has completed but for which the CONTRACTOR asserts it has not been paid, including any retainage; (2) list of all fabricated or unfabricated parts, work in process, completed work, supplies and other material produced as a part of, or acquired in connection with the performance of the Contract and the itemized cost for each such fabricated or unfabricated part, work in process, completed work, supplies and other material; (3) list all costs and expenses saved as a result of the termination of the Contract. The termination claim must include a copy of all invoices for fabricated or unfabricated parts, supplies and other material produced as a part of, or acquired in connection with the performance of the Contract for which the CONTRACTOR seeks compensation; all invoices for any subcontractors providing services related to the Contract; and (3) evidence of payment of all material suppliers and subcontractors, together with CONTRACTOR's certification that all such-material suppliers and subcontractors have been fully paid together with executed lien releases from each such material supplier and subcontractor. The termination claim may not include any request for payment of Extra Work for which a Change Order has not been issued or for which the CONTRACTOR has not fully and timely complied with the provisions of section 2.3 of this Contract.

5.5.4 AMOUNTS

The CONTRACTOR and OWNER may agree upon the whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of work pursuant hereto, provided that such agreed amount or amounts shall never exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract Price of work not terminated. The contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount. No amount shall be due for lost or anticipated profits. Nothing prescribing the amount to be paid to the CONTRACTOR in the event of failure of the CONTRACTOR and the OWNER to agree upon the whole amount to be paid to the CONTRACTOR by reason of the termination of work pursuant to this section, shall be deemed to limit, restrict or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the CONTRACTOR pursuant to this paragraph.

5.5.5 FAILURE TO AGREE

In the event of the failure of the CONTRACTOR and the OWNER to agree, as provided herein, upon the whole amount to be paid to the CONTRACTOR by reason of the termination of work pursuant to this section, the OWNER shall determine, on the basis of information available to it, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amounts determined. No amount shall be due for lost or anticipated profits.

5.5.6 DEDUCTIONS

In arriving at the amount due the CONTRACTOR under this section, there shall be deducted (a) all unliquidated advance or other payments on account theretofore made to the CONTRACTOR, applicable to the terminated portion of this contract; (b) any claim which the OWNER may have against the CONTRACTOR in connection with this Contract; and (c) the agreed price for or the proceeds of sale of any materials, supplies or other things kept by the CONTRACTOR or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited to the OWNER.

5.5.7 ADJUSTMENT

If the termination hereunder be partial prior to the settlement of the terminated portion of this Contract, the CONTRACTOR may file with the Owner a request in writing for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract (the portion not terminated by the notice of termination), and such equitable adjustment as may be agreed upon shall be made in such

price or prices; nothing contained herein, however, shall limit the right of the OWNER and the CONTRACTOR to agree upon the amount or amounts to be paid to the CONTRACTOR for the completion of the continued portion of the Contract when said contract does not contain an established contract price for such continued portion.

5.5.8 NO LIMITATION OF RIGHTS

Nothing contained in this section shall limit or alter the rights which the OWNER may have for termination of this Contract under any other provision of this Contract or any other right which OWNER may have for default or breach of contract by CONTRACTOR.

5.6 CONTRACTOR DEFAULT: OWNER'S RIGHT TO SUSPEND WORK AND ANNUL CONTRACT

The Work or any portion of the Work under contract shall be suspended immediately on written order of the OWNER declaring the CONTRACTOR to be in default. A copy of such notice shall be served on the CONTRACTOR'S surety. The contract may be annulled by the OWNER for any good cause or causes, among others of which special reference is made to the following:

- A. failure of the CONTRACTOR to start the work within 10 days from date specified in the written work order issued by the OWNER to begin the work;
- B. evidence that the progress of the work being made by the CONTRACTOR is insufficient to complete the work within the specified working time;
- C. failure of the CONTRACTOR to provide sufficient and proper equipment, materials or construction forces for properly executing the Work;
- D. evidence that the CONTRACTOR has abandoned the Work or discontinuance of the performance of the Work or any part thereof and failure to resume performance within a reasonable time after notice to do so;
- E. evidence that the CONTRACTOR has become insolvent or bankrupt, or otherwise financially unable to carry on the Work;
- F. deliberate failure on the part of the CONTRACTOR to observe any requirements of the specifications or to comply with any orders given by the Engineer as provided for in the specifications;
- G. failure of the CONTRACTOR to promptly make good any defects in materials or workmanship, or any defects of any nature, the correction of which has been directed in writing by the OWNER;
- H. evidence of collusion for the purpose of illegally procuring a contract or perpetrating fraud on the OWNER in the construction of work under contract;
- I. repeated violations of safe working procedures;

J. the filing by the CONTRACTOR of litigation against the OWNER prior to final completion of the Work. When the Work is suspended for any of the causes itemized above, or for any other cause or causes, the CONTRACTOR shall discontinue the Work or such part thereof as the OWNER shall designate, whereupon the surety may either at its option assume the Contract or that portion thereof which the OWNER has ordered the CONTRACTOR to discontinue and perform the same or, with the written consent of the OWNER, sublet the same, provided, however, that the surety shall exercise its option within two weeks after the written notice to discontinue the work has been served upon the CONTRACTOR and upon the surety or its authorized agents. The surety in such event shall assume the CONTRACTOR'S place in all respects and shall be paid by the OWNER for all work performed by it in accordance with the terms of the Contract, but in no event shall such payments exceed the contract amount, regardless of the cost to the surety to complete the Work.

In the event that the surety assumes the CONTRACTOR'S place, duties and responsibilities in the Contract, all monies remaining due the CONTRACTOR at the time of his default shall thereupon become due and payable to the surety as the work progresses, subject to all terms of the Contract. In case the surety does not, within the hereinabove specified time, exercise its obligation to assume the Contract or that portion thereof which the OWNER has ordered the CONTRACTOR to discontinue, then the OWNER shall have the power to complete by contract or otherwise, as it may determine, the Work herein described or such part thereof as it may deem necessary; and the CONTRACTOR hereto agrees that the OWNER shall have the right to take possession of or use any or all of the materials, plans, tools, equipment, supplies and property of every kind provided by the CONTRACTOR for the purpose of the Work and to procure other tools, equipment and materials for the completion of the same and to charge to the account of the CONTRACTOR the expense of said contract for labor, materials, tools, equipment and expenses incident thereto. The expense so charged shall be deducted by the OWNER out of such monies as may be due or may at any time thereafter become due the CONTRACTOR under and by virtue of the Contract or any part thereof.

The OWNER shall not be required to obtain the lowest bid for the work of completing the Contract, but the expenses to be deducted shall be the actual cost of such work. In case such expense is less than the sum which would have been payable under the contract if the same had been completed by the CONTRACTOR, then in such case the OWNER may pay the CONTRACTOR the difference in the cost, provided that the CONTRACTOR shall not be entitled to any claim for damages or for loss of anticipated profits.

In case such expense shall exceed the amount which would have been payable under the Contract if the same had been completed by the CONTRACTOR, the CONTRACTOR and his surety shall pay the amount of the excess to the OWNER

on notice from the OWNER for excess due including any costs incurred by the OWNER, such as inspection, legal fees and liquidated damages. When any particular part of the Work is being carried out by the OWNER by contract or otherwise under the provisions of this section, the CONTRACTOR shall continue the remainder of the Work in conformity with the terms of the contract and in such manner as not to hinder or interfere with the performance of workmen employed as above provided by the OWNER or surety.

5.7 SUSPENSION BY COURT ORDER AGAINST THE OWNER

The CONTRACTOR shall suspend such part or parts of the Work pursuant to a court order issued against the OWNER and shall not be entitled to additional compensation by virtue of such court order; neither shall the CONTRACTOR be liable to the OWNER in the event the Work is suspended by such court order, unless such suspension is due to the fault or negligence of the CONTRACTOR. A delay of the CONTRACTOR due to a court order against the OWNER, or due to the OWNER'S failure to secure right-of-way at the time required or because of a conflict of a utility with the Work, shall not be cause for additional compensation for damages sustained by the CONTRACTOR, but may be a cause for extension of contract working time only. The CONTRACTOR'S sole remedy for any suspensions of the Work is an equitable extension of time to perform the Work.

5.8 NO WAIVER OF RIGHTS OR ESTOPPEL

The OWNER, or any officer or agent thereof, shall not be precluded at any time, either before or after final completion and acceptance of the Work and final payment therefore from:

A. showing the true and correct amount, classifications, quality and character of the Work done and materials furnished by the CONTRACTOR or any other person under this Contract, or from showing at any time that any determination, return, decision, approval, order, letter, payment or certification is untrue and incorrect or improperly made in any particular, or that the Work or the materials or any parts thereof do not in fact conform to the contract requirements; and (b) demanding the recovery from the CONTRACTOR of any overpayments made to him, or such damages as the OWNER may sustain by reason of the CONTRACTOR'S failure to perform each and every part of this Contract in strict accordance with its terms; or both.

VI. AUTHORITY OF THE ENGINEER

- 6.1 All work shall be performed in a good and workmanlike manner and to the satisfaction of the Engineer. The Engineer shall decide all questions which arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, sequence of the construction,

interpretation of the plans and specifications, acceptable fulfillment of the Contract, compensation, mutual rights between contractors under these specifications and suspension of the Work. He shall determine the amount and quality of work performed and materials furnished, and his decisions and estimates shall be final. His estimate in such event shall be a condition precedent to the right of the CONTRACTOR to receive money due him under the Contract.

6.2 OWNER'S REPRESENTATIVES

Where the Contract Documents indicate that determinations, directions or approvals shall be made by the OWNER or "Owner's representatives," this shall mean the OWNER acting directly, or through duly authorized persons acting within the limit of authority delegated to them. Any determination, direction or approval of such authorized representatives shall be subject to review by the OWNER. For purposes of administering the schedule or the payment provisions of this Contract the Engineer may act as the Owner's representative for purposes of approving payments, changes, scheduling, or acceptance of the Work, at the OWNER'S discretion.

6.3 INSPECTIONS OF WORK PROGRESS

The Engineer shall visit the site at during construction of the Project as necessary as the Owner's Representative to verify that the Work is being performed in compliance with the Contract Documents and shall be given total access to the Project by the CONTRACTOR. Site visits or inspections by the Engineer shall in no way relieve the CONTRACTOR of any of its responsibilities or duties pursuant to the Contract Documents. The Engineer will neither have control over, nor be responsible for, the construction means and methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the Work or the Project. The CONTRACTOR shall be solely responsible for, the construction means and methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the Work or the Project.

6.4 CONSTRUCTION STAKES

Engineer will provide the Contractor with primary horizontal and vertical control to consist of one construction baseline and two benchmarks.

The Contractor shall take all necessary precautions to preserve any and/or all markings and staking. Payment for costs of restaking shall be the responsibility of the Contractor.

6.5 APPROVAL OF SUBMITTALS

The Engineer shall review and approve or take other appropriate action the CONTRACTOR's submittals such as Shop Drawings, Product Data and Samples,

for the purpose of checking for conformance with the Contract Documents. The Engineers review of the submittals shall not relieve the CONTRACTOR of any of its obligations to perform the Work in strict compliance with the Contract Documents. The Engineer's review shall not be considered approval of safety precautions, means and methods, techniques, sequences or procedures that are the responsibility of the CONTRACTOR.

VII. CLAIMS OR DISPUTES

7.1 CLAIMS AGAINST OWNER AND ACTION THEREON.

No claim against the OWNER under the Contract or for breach of the Contract or additional compensation for extra or disputed work shall be made or asserted against the OWNER under the Contract or in any court action, unless the CONTRACTOR shall have strictly complied with all requirements relating to the giving of notice and information with respect to such claim as required by the Contract.

7.2 CLAIM AGAINST OFFICERS, EMPLOYEES OR AGENT OF THE OWNER.

No claim whatsoever shall be made by the CONTRACTOR against any, past, present or future, officer, employee or agent of the OWNER for or on account of, anything done or omitted to be done in connection with this Contract.

VIII. MISCELLANEOUS PROVISIONS

8.1 FINANCIAL INTEREST IN ANY CONTRACT BY OWNER'S OFFICERS, EMPLOYEES OR AGENTS

No officer, employee or agent of the OWNER shall have a financial interest, direct or indirect, in any contract with the OWNER or be financially interested, directly or indirectly, in the sale to the OWNER of any land, materials, supplies or services, except on behalf of the OWNER as an officer or employee. Any willful violation of this article shall constitute malfeasance in office, and any officer or employee guilty thereof shall thereby forfeit his office or position. Any violation of this article with the knowledge, expressed or implied, of the persons, partnership, company, firm, association or corporation contracting with the OWNER shall render the contract involved voidable by the OWNER.

8.2 SERVICE OF NOTICES

The OWNER and the CONTRACTOR shall each designate addresses where all notices, directions or other communication may be delivered or to which they may be mailed.

Notices to the surety or sureties on contract bonds shall be directed or delivered to the home office, or to the agent or agents who executed the bonds on behalf of the surety or sureties, or to their designated agent for delivery of notices.

Actual delivery of any such notice, direction or communication to the aforesaid places or depositing it in a postpaid wrapper addressed thereto in any post office regularly maintained by the United States Postal Service shall be conclusively deemed to be sufficient service thereof upon the above persons as of the date of such delivery or deposit.

The designated addresses may be changed at any time by an instrument in writing executed by the party changing the addresses and delivered to the other party.

Nothing herein contained shall, however, be deemed to preclude or tender inoperative the service of any notice, direction or communication upon the above parties personally or, if the CONTRACTOR be a corporation, upon any officer or director thereof.

8.3 UNLAWFUL PROVISIONS DEEMED STRICKEN

In the event a term, condition, or provision of this Agreement is determined to be void, unenforceable, or unlawful by a court of competent jurisdiction, then that term, condition, or provision shall be deleted and the remainder of the Agreement shall remain in full force and effect.

8.4 ALL LEGAL PROVISIONS INCLUDED

It is the intent and agreement of the parties to this contract that all legal provisions of law required to be inserted herein shall be and are inserted herein. If through mistake or oversight, however, any such provision is not herein inserted, or is not inserted in proper form, then upon application of either party, the contract shall be amended so as to strictly comply with the law and without prejudice to the rights of either party hereunder.

8.5 ASSIGNMENTS

The CONTRACTOR shall not assign, transfer, convey or otherwise dispose of this contract, or his right to execute it, or his right, title or interest in it or any part thereof without the previous written consent of the surety company and the written approval of the OWNER.

The CONTRACTOR shall not assign, either legally or equitably, by power of attorney or otherwise, any of the monies due or to become due under this Contract or its claim thereto without the prior written consent of the surety company and the written approval of the OWNER.

The approval of the OWNER of a particular assignment, transfer or conveyance shall not dispense with such approval to any further or other assignments.

The approval by the OWNER of any assignment, transfer or conveyance shall not operate to release the CONTRACTOR or surety hereunder from any of the Contract and bond obligations, and the CONTRACTOR shall be and remain fully responsible and liable for the defaults, negligent acts and omissions of his assignees, their agents and employees, as if they were his own.

8.6 STATE AND LOCAL SALES AND USE TAXES

The OWNER qualifies for exemption from the state and local sales and use taxes, pursuant to the provisions of Section 151.309 of the Texas Limited Sales, Excise and Use Tax Act. Therefore, the CONTRACTOR shall not pay such taxes which would otherwise be payable in connection with the performance of this Contract.

The CONTRACTOR shall issue an exemption certificate in lieu of the tax on the purchase, rental or lease of:

- A. all materials, supplies, equipment and other tangible personal property incorporated into the real property being improved; and
- B. all materials, supplies, equipment and other tangible personal property used or consumed by the CONTRACTOR in performing the Contract with the OWNER. Materials and supplies "used in the performance of a contract" include only those materials actually incorporated into the property being improved and those supplies directly used to incorporate such materials into the property being improved. Overhead supplies and supplies used indirectly or only incidental to the performance of the Contract with the OWNER are not included in the exemption.

Under "reasons said purchaser is claiming this exemption" in the exemption certificate, the CONTRACTOR must name the OWNER and the project for which the equipment, material and supplies are being purchased, leased or rented.

8.7 VENUE AND GOVERNING LAW

The parties agree that the laws of the State of Texas shall govern the interpretation, validity, performance and enforcement of this Construction Agreement, and that the exclusive venue for any legal proceeding involving this Construction Agreement shall be in Collin County, Texas.

8.8 NO WAIVER OF LEGAL RIGHTS

Inspection by the Engineer or OWNER; any order, measurement, quantity or certificate by the Engineer; any order by the OWNER for payment of money; any payment for or acceptance of any work; or any extension of time or any

possession taken by the OWNER shall not operate as a waiver of any provisions of the contract or any power therein reserved to the OWNER of any rights or damages therein provided. Any waiver of any breach of contract shall not be held to be a waiver of any other or subsequent breach. The OWNER reserves the right to correct any error that may be discovered in any estimate that may have been paid and to adjust the same to meet the requirements of the Contract Documents. The OWNER reserves the right to recover by process of law sums as may be sufficient to correct any error or make good any deficiency in the Work resulting from such error, dishonesty or collusion by the CONTRACTOR or his agents, discovered in the Work after the final payment has been made.

Neither final acceptance of the Work, nor final payment shall relieve the CONTRACTOR of responsibility for faulty materials or workmanship, and the CONTRACTOR shall promptly remedy any defects due thereto and pay for any damage to other work resulting therefrom. Likewise, neither final acceptance nor final payment, nor partial or entire use or occupancy of the work by the OWNER shall constitute acceptance of work not done in accordance with the Contract Documents or relieve CONTRACTOR of liability with respect to any expressed or implied warranties or responsibility for faulty materials or workmanship, whether same be patently or latently defective.

8.9 OBLIGATION TO PERFORM FUNCTIONS

Any failure or neglect on the part of OWNER or Engineer or inspectors to enforce provisions herein dealing with supervision, control, inspection, testing or acceptance and approval of the work shall never operate to relieve CONTRACTOR from full compliance with the Contract Documents nor render OWNER liable to CONTRACTOR for money damages, extensions of time or increased compensation of any kind.

8.10 SUCCESSORS AND ASSIGNS

Subject to the limitations upon assignment and transfer herein contained, this contract shall be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.

8.11 HEADINGS

The title and headings contained in the Contract Documents and the subject organization are used only to facilitate reference, and in no way define or limit the scope of intent of any of the provisions of this Contract.

8.12 ENTIRE AGREEMENT; AMENDMENTS; BINDING EFFECT

This Construction Agreement, including the Contract Documents and all the documents incorporated therein represents the entire and integrated agreement between the OWNER, Collin County, and the CONTRACTOR, and supersedes all prior negotiations, representations, or agreements, either written or oral. This Construction Agreement may be amended only by written instrument signed by both, the OWNER, Collin County, and the CONTRACTOR. CONTRACTOR

acknowledges that no representations have been made to it, upon which it is relying in entering into this Contract, which are not expressly set forth in the Contract Documents.

8.13 INTERPRETATION

Although this Agreement is drafted by the OWNER, Collin County, should any part be in dispute, the parties agree that this Construction Agreement shall not be construed more favorable for either party. No rule of construction requiring that ambiguities in this Contract shall be construed more favorably for either party shall apply.

8.14 EXPENSES FOR ENFORCEMENT

In the event either Party hereto is required to employ an attorney to enforce the provisions of this Agreement or is required to commence legal proceedings to enforce the provisions hereof, the prevailing Party shall be entitled to recover from the other, reasonable attorney's fees and court costs incurred in connection with such enforcement, including collection.

8.15 FORCE MAJEURE

No party shall be liable or responsible to the other party, nor be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term of this Agreement, when and to the extent such failure or delay is caused by or results from acts beyond the affected party's reasonable control, including, without limitation: acts of God; flood, fire or explosion; war, invasion, riot or other civil unrest; actions, embargoes or blockades in effect on or after the date of this Agreement; or national or regional emergency (each of the foregoing, a "Force Majeure Event"). A party whose performance is affected by a Force Majeure Event shall give notice to the other party, stating the period of time the occurrence is expected to continue and shall use diligent efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

IN WITNESS WHEREOF, the parties have executed this Construction Agreement upon the year and date indicated beneath their signatures hereto.

CONTRACTOR:

By: _____

Date: _____

ATTEST:

Secretary

COLLIN COUNTY, TEXAS:

By: _____
Michelle Charnoski, CPPB, Purchasing Agent

Date: _____

Collin County Commissioners' Court Order No.

ATTEST:

Secretary

ACKNOWLEDGMENTS

STATE OF TEXAS §

COUNTY OF _____ §

BEFORE ME, _____ on this day personally appeared _____
_____, of _____, a _____ corporation,
known to me (or proved to me on the oath of) _____ or
through _____ (description of identity card or other document) to be the
person whose name is subscribed to the foregoing instrument and acknowledged to me

that he/she executed the same as the act and deed of the corporation, for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the ____ day of , 2020

Notary Public, State of Texas

Printed Name

My Commission expires on the ____ day of _____, _____.

STATE OF TEXAS §

COUNTY OF COLLIN §

BEFORE ME, _____ on this day personally appeared _____, Purchasing Agent of COLLIN COUNTY, TEXAS, a political subdivision of the State of Texas, known to me (or proved to me on the oath of) _____ or through _____ (description of identity card or other document) to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same as the act and deed of COLLIN COUNTY, TEXAS, for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN under my hand and seal of office this the ____ day of _____, 2020

Notary Public, State of Texas

Printed Name

My Commission expires on the ____ day of _____, _____.

SECTION 005425 - W-9 FORM

Form W-9
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

**Give Form to the
requester. Do not
send to the IRS.**

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	6 City, state, and ZIP code	
7 List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number									
				-				-	
or									
Employer identification number									
				-					

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

006111 PERFORMANCE BOND

STATE OF TEXAS §
COUNTY OF COLLIN §

KNOW ALL MEN BY THESE PRESENTS:

That _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____ County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety", a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto _____ (hereinafter referred to as "Owner") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum of _____ Dollars (\$ _____) (not less than 100% of the approximate total amount of the Contract as evidenced in the proposal plus 10-percent of the stated penal sum as an additional sum of money representing additional court expenses, attorneys' fees, and liquidated damages arising out of or connected with the below identified Contract) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 202____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of IFB 2021-099, Construction, Collin County Sheriff's Office Fire Sprinkler Modification.

CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal fully and faithfully executes the work and performance of the Contract in accordance with the plans specifications, and Contract Documents, including any extensions thereof which may be granted with or without notice to Surety, during the original term thereof, and during the life of any guaranty required under the Contract, and according to the true intent and meaning of said Contract and the plans and specifications hereto annexed, if the Principal shall repair and/or replace all defects due to faulty materials or workmanship that appear within a period of one year from the date of final completion and final acceptance of the work by OWNER; and if the Principal shall fully indemnify and save harmless the OWNER from all costs and damages which OWNER may suffer by reason of failure to so perform herein and shall fully reimburse and repay OWNER all outlay and expense which the OWNER may incur in making good any default or deficiency, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said CONTRACTOR shall fail to do so, it is agreed that the OWNER may do said work and supply such materials and charge the same against said CONTRACTOR and Surety on this obligation. Provided further, that if any legal action be filed on this Bond, venue shall lie in Collin County, Texas.

"PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions Texas Government Code, Chapter 2253, as amended, and Chapter 3503 of the Texas Insurance Code, as amended, and all liabilities on this bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the bond shall automatically be increased by the amount of any Change Order or supplemental agreement which increases the Contract price with or without notice to the Surety, but in no event shall a Change Order or Supplemental Agreement which reduces the Contract price decrease the penal sum of the Bond. And further that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way 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 thereunder.

Surety agrees that the bond provides for the repairs and/or replacement of all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of completion and acceptance of the improvement by the OWNER.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 202____.

WITNESS

PRINCIPAL

Printed/Typed Name _____
Title: _____
Company: _____

Address: _____

WITNESS

SURETY

Printed/Typed Name _____
Title: _____
Company: _____

Address: _____

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____
Address: _____
Phone Number: _____

Note: Date of Bond must NOT be prior to date of contract.

Revised 11/2008

006113 PAYMENT BOND

STATE OF TEXAS §
COUNTY OF COLLIN §

KNOW ALL MEN BY THESE PRESENTS:

That _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____ County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety", a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto _____ (hereinafter referred to as "Owner") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum of _____ Dollars (\$ _____) (not less than 100% of the approximate total amount of the Contract as evidenced in the proposal) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 202____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of IFB 2021-099, Construction, Collin County Sheriff's Office Fire Sprinkler Modification.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that the bond guarantees the full and proper protection of all claimants supplying labor and material in the prosecution of the work provided for in said Contract and for the use of each claimant, and that conversely should the Principal faithfully perform said Contract and in all respects duly and faithfully observe and perform all and singular the covenants, conditions, and agreements in and by said Contract, agreed to by the Principal, and according to the true intent and meaning of said Contract and the claims and specifications hereto annexed, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modification to Surety being hereby waived, then this obligation shall be void; otherwise, to remain in full force and effect. Provided further, that if any legal action be filed on this Bond, venue shall lie in Collin County, Texas.

"PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions Texas Government Code, Chapter 2253, as amended, and Chapter 3503 of the Texas Insurance Code, as amended, and all liabilities on this bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the bond shall automatically be increased by the amount of any Change Order or supplemental agreement which increases the Contract price with or without notice to the Surety and that no change, extension of time, alteration or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same, shall in anyway 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 thereunder.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____ 202____.

WITNESS

PRINCIPAL

Printed/Typed Name _____

Title: _____

Company: _____

Address: _____

SURETY

Printed/Typed Name _____

Title: _____

Company: _____

Address: _____

WITNESS

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Address: _____

Phone Number: _____

Note: Date of Bond must NOT be
prior to date of contract.

21 13 13
AUTOMATIC FIRE SPRINKLER SYSTEM



Evan Wilson
12-11-2020

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Sprinkler System Installing Contractor (herein referred to as the Contractor) shall design, furnish and install all necessary equipment in connection with the expansion of an existing single-interlock pre-action fire sprinkler system, within the Collin County Sheriff's Office as indicated and described on the contract drawings and this specification.
- B. The existing sprinkler system, that will be extended, shall remain a single-interlock pre-action system as shown on the contract drawings.
- C. All automatic fire sprinkler systems shall be hydraulically calculated by the Contractor.
- D. The sprinkler system shall be a complete system throughout all areas of the building within the project scope as required by the latest edition of NFPA 13, except as permitted by the Authorities Having Jurisdiction (AHJ).
- E. The water supply for the automatic fire sprinkler systems is supplied from the city main. The Contractor shall be responsible for verifying that the water supply provided is adequate for the system expansion.
- F. Penetrations through fire- and smoke-rated construction shall be provided with a UL classified through penetration firestop systems and shown on the Contractor's submittal drawings.
- G. Contractor shall provide all spare parts as necessary by the applicable codes and standards (i.e., sprinklers, wrenches, etc.).
- H. Contractor shall verify system expansion does not exceed existing riser mounted air compressor capacity. Should system air compressor capacity be exceeded, Contractor shall provide replacement air compressor of sufficient capacity, per NFPA 13 requirements.
- I. Contractor shall remove all existing wet fire sprinkler pipe from the space where the single-interlock preaction system is indicated to be expanded. Demolition of this pipe must not impair the fire sprinkler protection in any other portion of the building.
- J. Contractor shall provide / coordinate with fire alarm contractor all required detection for release of the pre-action system and interconnection with the existing fire alarm system.
- K. Contractor shall repair or replace all damaged carpet, ceiling tile, or raised floor tiles to a like new condition upon completion of the construction.

1.02 SECTION INCLUDES

- A. Sprinkler Piping, Fittings and Support
- B. Underground Piping
- C. Valves

- D. Sprinklers
- E. Fire Department Connection
- F. Alarm and Supervisory Devices
- G. Gauges and Appurtenances
- H. Name Plates
- G. Connection to fire alarm system

1.03 RELATED SECTIONS

- A. Division 1 – Collin County General Specification
- B. 28 3100 – Fire Alarm System

1.04 REFERENCES

- A. The automatic fire sprinkler system shall comply with all applicable NFPA standards, Texas Department of Insurance - State of Texas Fire Marshal's Office requirements, and manufacturer instructions and recommendations.
- B. All equipment and devices shall be labeled, listed and or approved for the intended use by a Nationally Recognized Testing Laboratory (NRTL) as acceptable to the Authorities Having Jurisdiction and the Owner.
- C. Installation and testing shall be made in accordance with applicable provisions of the following codes and standards:
 - 1. NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2016 edition.
 - 2. NFPA 25, *Inspection, Testing and Maintenance of Water-Based Fire Protection Systems*, 2017 edition.
 - 3. NFPA 70, *National Electric Code*, 2017 edition.
 - 4. NFPA 72, *National Fire Alarm Code*, 2016 edition.
 - 10. The latest published edition of the equipment manufacturers' product datasheets, technical specifications, and installation instructions and guidelines.
 - 11. NFPA 170, *Fire Safety and Emergency Symbols*, 2012 edition.

1.04 SUBMITTALS

- A. The Contractor is responsible to prepare and submit a minimum of three hard copies of submittals for approval. Each submittal package shall be prepared and presented in a professional manner, be bound and shall include a title page and index. Each section of the submittal shall be numbered.

Submittal packages shall be complete and shall include all areas within the project scope. Partial submittal packages, including individual or partial areas of the project scope, will be returned without review. System working plans (as defined in NFPA 13) and calculations must be prepared and submitted for approval, by a registered professional engineer or a minimum NICET Level III certified technician who is licensed to practice in the State of Texas.

- B. The Contractor shall certify in writing that the submittal documentation is in conformance with all of the requirements of this specification and the applicable referenced local, state and national Codes, Standards and Regulations.
- C. Shop Drawings:
 - 1. Indicate pipe materials used, joining methods, supports, floor and wall penetration seals. Indicate installation, layout, weights, mounting and support details, and piping connections.
 - 2. The Contractor shall submit detailed and accurate shop drawings prepared in accordance with NFPA 13 (as defined for Working Plans) for approval of all equipment to be constructed and installed. Shop drawings shall identify all materials and list all equipment to be used (this includes auxiliary components such as drains, and automatic air release valves). Shop drawings shall include ceiling grid or reflected ceiling layout and shall be coordinated with existing conditions prior to submittal.
 - 3. Shop drawings shall include diagrams and elevation details as necessary to fully describe the installation.
 - 4. A detailed plan shall be submitted for review and shall be accurately scaled based upon the actual equipment to be used.
 - 5. Drawings shall indicate connections to the fire alarm system, including devices, wiring and all raceways.
- E. Product Data: Manufacturer's data sheets shall be provided for all materials and equipment for approval before purchase or installation. Data sheets shall describe the type of material, capacities, manufacturer, part numbers of equipment, and give information necessary for verifying equipment approval. All product data shall be clearly annotated to indicate specific models and sizes.
- F. Hydraulic Calculations.
 - 1. Hydraulic calculations for sprinkler systems shall comply with NFPA 13 and shall include comprehensive hydraulic data sheets. Provide a 10% or 10 psi safety factor for all sprinkler system hydraulic calculations, whichever is higher.
 - 2. Prior to preparing shop drawings and hydraulic calculations, the contractor shall verify the adequacy of the water pressure and other pertinent water supply data from the city water main. The Contractor shall coordinate with the City of McKinney to schedule and perform tests of the water supply. The contractor shall provide the record data at the point of the new connection as follows:
 - a. Building Name and flange elevation (ft)
 - b. Date and time of test
 - c. Flow rate (gpm), static pressure (psi), and residual pressure (psi)
 - d. Party responsible for the test readings

- G. Additional review of submittals caused by incomplete submittals or unacceptable submittals will be re-reviewed by the Engineer of Record at the Contractor's expense; this will be enforced for all submittals requiring more than two reviews. Labor costs necessary for re-review will be deducted from the Contractor's payments.
- H. No work shall be performed until the Owner has approved the shop drawings, calculations, and data sheets. The contractor is solely liable for any work performed prior to this approval. No time extensions will be granted based on unacceptable or incomplete submittals.
- I. The Owner will require a demonstration of all proposed equipment.
- J. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping."
- K. Maintenance Data: Contractor shall provide owner with a complete maintenance manual for the system. The maintenance manual shall describe in detail the purpose and function of all system devices and valves and inspection, testing and maintenance forms. Contractor shall provide owner with one (1) original (not re-produced) copy of the latest edition of NFPA 25, *Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems*, in addition to the maintenance manual.
- L. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds requirements specified, and suggested by listed codes. Submit summary and results of all test performed in accordance with the applicable codes.
- M. Final As-Built Documents: Provide at completion of installation, a record set of shop drawings, in CAD format, that includes all changes made during the installation and with locations of all drains clearly marked (if applicable), and a device/equipment map, also in CAD format, that includes device/equipment locations. CAD documentation of the As-Built "record" drawings shall be provided using a CAD layering standard comparable to the current National CAD Standard version 3.1. Provide all CAD drawings in electronic .dwg file format readable by AutoCAD 2007, or latest version used by Owner. CAD package shall be created using the "eTransmit" utility to include all necessary support files. Additionally, provide pdf's of the complete set, created at full size. Provide these files to the owner within 30 days of Substantial Completion, one electronic copy on CD.
- N. Provide copies of all required testing reports to include hydrostatic testing, contractor testing, and third party testing (if applicable). Additionally, provide copies of all overhead inspection reports related to sprinkler installation with date comments made as well as dates corrected (can be supplied in disk format or hard copies)

1.05 OPERATION AND MAINTENANCE DATA

- A. Maintenance Instructions: Include installation instructions, spare parts lists, procedures, and treatment programs.
- B. Provide copies of all discrepancies as related to fire sprinkler system to include date discrepancy identified, date corrected, and name of tech performing corrections.
- C. Provide a log of any and all variances or deviations from code granted during construction with name of agency granting variance or deviation. Include specific area and system covered.
- D. These O&M Manuals shall include the following:
 - 1. The final Equipment List identifying the quantities and types of equipment listed by manufacturer's part number.

2. A detailed narrative description of the system ancillary functions, intended sequence of operations, application considerations, and limitations.
3. An equipment datasheet (or specification sheet) on every piece of equipment installed.
4. Operator instructions for basic system operations.
5. A detailed description of routine maintenance and testing as required and recommended and as would be provided under a maintenance contract, including testing and maintenance instructions for each type of device installed.
 - a. This information shall include manuals that outline inspection, testing and maintenance procedures for all equipment, as well as any other special maintenance procedures for any other pieces of automatic fire sprinkler equipment installed in the building.
 - b. Include a replacement parts list for all systems.
6. Detailed drawings showing the location of all control valves and the areas served by those control valves.
7. A service directory, including a list of names and telephone numbers of those who provide service for the system.
8. Provide three (3) copies of record drawings in AutoCAD (2016 edition or newer) and PDF format.
9. Provide three (3) hard copies of as-builts.
10. Contractor to provide (1) original copy of the latest edition of NFPA 25 for each hard copy of the O&M required by contract.

1.06 QUALITY ASSURANCE

- A. Sprinkler System: Perform work to NFPA 13 and Insurer standards.
- B. Welding Materials and Procedures: Perform to ASME Code.
- C. Equipment and Components: Bear UL listing and/or FM label or marking. Provide manufacturer's name and pressure rating marked on valve body.
- D. Installation Contractor Qualifications: The Contractor shall be licensed in the State of Texas, shall be experienced in the installation of automatic fire sprinkler systems in buildings similar to the included Buildings, and shall have obtained design approval and inspection approval for similar projects from authorities having jurisdiction.
- E. Manufacturer Qualifications: Firms whose equipment, specialties, and accessories are listed by product name and manufacturer in UL's "Fire Protection Equipment Directory" and/or FM's "Fire Protection Approval Guide" and that comply with other requirements indicated shall be acceptable.
- G. Sprinkler Components: Listing and labeled by a testing agency for the intended use and acceptable to the Owner and the authorities having jurisdiction.
- H. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

- I. All materials and equipment shall be new and unused.
- J. All equipment supplied shall be first quality and the manufacturer's best type and latest model capable of complying with all requirements of this specification and shall have been in continuous production and in continuous service in commercial applications for at least one year. Obsolete equipment shall not be used.
- K. Design and install system under direct supervision of a NICET certified Level III sprinkler system technician or a registered professional fire protection engineer experienced in design of this work and licensed in the State of Texas. Supervision shall be accomplished with an individual with a minimum of five (5) years experience with sprinkler systems. All design submittal documents and shop drawings shall bear the RME signature and date.
- L. Any case of error, omission, discrepancy or lack of clarity shall be promptly identified to the Owner.
- M. Maintain one copy of each document on site.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to site in a manner so as to prevent rust, or damage. Pipe and material installed with visible rust will be required to be removed and replaced.
- B. Deliver and store valves in shipping containers, with labeling in place.
- C. Provide temporary protective coating on cast iron and steel valves.
- D. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

1.08 WARRANTY

- A. The Contractor shall guarantee all new equipment installed from defects in workmanship and inherent mechanical and electrical defects for a period of one (1) year from the date of substantial completion of the project and acceptance by the Owner.
- B. The Manufacturer or the authorized representative shall guarantee all new system equipment for a period of one (1) year from the date of substantial completion of the project and acceptance by the Owner.
- C. Upon completion of the installation of the fire sprinkler system equipment, the Contractor shall provide the Owner with a signed written statement, substantially in the form as follows:
- D. The warranty period shall begin on the date of substantial completion of the project and acceptance in writing by the Owner.
- E. Contractor shall be on site for any warranty requests within 24 hours of notification.

PART 2 - PRODUCTS

2.01 PIPE

A. Aboveground Pipe

1. All sprinkler system piping shall be a minimum of schedule 40 black steel with threaded fittings for sizes 1½ inch and smaller piping. Piping larger than 1½ inch shall be a minimum of schedule 40 black steel with grooved fittings, threaded fittings, welded fittings or other approved joining methods.
2. Pipe shall be new, designed for minimum 175 psi working pressure, conforming to ASTM specifications, and have the manufacturer's name and brand along with the applicable ASTM standard marked on each length of pipe.
3. Steel:
 - a. Overhead pipe used for fire sprinkler systems shall be black steel and must comply with the specifications of ASTM A53.
 - b. Dimensions for pipe shall be in accordance with the American Standard for Wrought Steel and Wrought Iron Pipe ANSI B36.10 for pressure up to 300 psi.
 - c. Schedule 40 pipe shall be permitted, and pipe ends shall be welded, threaded, or roll grooved.
4. Steel Pipe Fittings:
 - a. Changes of direction, unless otherwise noted, shall be accomplished by the use of fittings suitable for use in sprinkler systems and defined in NFPA 13. Bushings or unions shall not be used. Additional fittings, pipe and hangers required by site conditions shall be provided at no additional cost to Owner.
 - b. Screwed fittings shall be malleable or cast iron, 150 pound class, black and in accordance with ANSI B16.3.
 - c. Flanged fittings shall be cast iron, short body, Class 125, black and in accordance with ANSI B16.1. Gaskets shall be full-face of 1/8-inch minimum thickness red sheet rubber. Flange bolts shall be hexagon head machine bolts with heavy semi-finished hexagon head nuts, cadmium plated, having dimensions in accordance with ANSI B18.2.
 - d. Welded fittings shall be steel, standard weights, black, and in accordance with ANSI B16.9, ANSI B16.25, ANSI B16.5, ANSI B16.11 and ASTM A234.
 - e. Grooved couplings and mechanical fittings shall be malleable iron in accordance with ASTM A47. The couplings' gasket material shall be butyl rubber. Grooved couplings and mechanical fittings shall be tested and UL listed and FM Approved.
 - f. Grooved fittings, valves and pipe shall be joined using rubber gasketed couplings produced by the manufacturer of the fitting and/or valves. Gaskets shall be listed for use for the appropriate application. Rigid grooved couplings shall be used where horizontal piping runs require more than two couplings per run.
 - g. Saddle connections or other mechanical tee connections shall not be used.

- B. Piping shall be concealed above suspended ceilings to the extent possible as shown on the drawings. If exposed piping installations will be necessary, they will need to be reviewed with the Owner prior to installation. Piping shall be installed in a craftsman-like manner, and shall not interfere in the complete function of other systems such as cable trays, access panels, or pedestrian passageways. Installation of all piping shall be in coordination with piping, ducts, light fixtures, and any other existing conditions that may obstruct sprinklers. The contractor shall coordinate with all trades having materials installed above the ceiling prior to commencement of any work.
- C. All concealed pipe and exposed pipe that is not painted red is required to be marked "Fire Protection". Pipe Markers must be wrap-around type with white letters at a minimum of 1 inch in height. All pipe markers must be visible from the floor. Spacing and location as follows:
 - 1. Above Ceiling Corridors: Every 20 feet for mains. One (1) on each branch line.
 - 2. Above Rooms with Ceilings: One (1) in every room on each branch line. Every 20 feet for mains (at least one (1) in each room).
 - 3. Exposed Areas Non-painted Pipe: Every 20 feet for mains and branch lines (at least one (1) on each branch line) and at least one in each room.
 - 4. Exposed Areas Painted Pipe: Pipe markers not required as long as pipe is painted red – any other paint color to follow requirements for non-painted pipe.

2.02 MECHANICAL GROOVED COUPLINGS

- A. When grooved couplings are used, rolled-grooved joints are required with fittings and couplings designed for a working pressure of 300 psi. Malleable iron housing clamps: ASTM A47; UL labeled; engage and lock, designed to permit some angular deflection, contraction, and expansion (Firelock fittings acceptable). Cut grooved pipe is not permitted; all joints to be roll grooved only.
- B. "C" shaped composition sealing gasket: ASTM D2000.
- C. Steel bolts, nuts and washers: ASTM A183 heat treated with a minimum tensile strength of 110,000 psi.

2.03 SPRINKLERS

- A. Sprinklers shall be UL listed and / or FM approved and shall not include O-ring seals. Any sprinkler that incurs damage, is painted, or is sprayed with any obstructive material during construction shall be replaced at no cost to the Owner. Installation of sprinklers shall be coordinated with other utilities, including duct and electric fixture installation, to prevent sprinkler obstructions.
- B. Sprinklers located less than eight feet above finished floor or that may be subject to mechanical damage shall be provided with guards listed for use with the model of sprinkler installed.
- C. Quick-response sprinklers are required throughout all light-hazard occupancies, and may also be installed in ordinary-hazard occupancies for the quick response hydraulic design area reduction per NFPA 13 for utilizing quick response sprinklers.

- D. Dry-type concealed sprinklers shall be provided in areas with ceiling systems. Brass upright sprinklers shall be provided in areas without ceiling systems and spaces above non-concealed ceiling systems where required.
- E. Sprinklers shall be centered in two directions in ceiling tiles, unless specifically noted on contract drawings.
- F. Flexible sprinkler connections shall be permitted for use in sprinkler systems provided the connection is UL listed for use in sprinkler systems. In general, connections shall not exceed 3 feet in length. If extended lengths up to 6 feet are necessary for historic areas or to facilitate installation in difficult areas, the Contractor shall obtain approval by Owner for each installation exceeding 3 feet in length.

2.04 VALVES

- A. Unless specified otherwise, all valves shall be UL listed or FM approved and be suitable for the maximum anticipated system pressure or a minimum of 175 psi working pressure, whichever is greater.
- B. All control valves in the sprinkler system shall be UL listed butterfly type indicating valves except where indicated on the contract drawings. Victaulic control valves shall not be utilized.
- C. All butterfly valves shall have a built in tamper resistant switch for supervision of the open position. The switch shall be contained within a NEMA Type 1, general purpose indoor rated housing. Either unauthorized removal of the switch housing (when the valve is open) or closing the valve, shall cause the switch contacts to change position. The switch shall have four conductors to accommodate connections to Class A signaling line circuit devices.
- D. Normally closed butterfly valves shall utilize a valve with micro-switches installed and designed for normally closed use (Nibco Model - GD4765-C-8N or approved equal).
- E. Where OS&Y indicating valves are installed, the following shall apply:
 - 1. Valves 2-1/2 inches and larger shall be iron body with brass seats, discs, and stems. Include tamper switches listed for use with OS&Y valves.
 - 2. Valves 2 inches and smaller shall be brass body, stem, and seat. Include tamper switches listed for use with OS&Y valves.
- F. Check valves shall comply with the following:
 - 1. Check valves 2-1/2 inches and larger shall be iron body swing check with cast brass hinge, rod, and brass faced discs.
 - 2. Check valves 2 inches and smaller shall be UL listed brass body and all brass fitted.
- G. Ball valves shall be constructed of forged brass with Polytetrafluoroethylene (PTFE) seats and shall be provided with a vinyl-covered handle.
- H. All valves controlling water supply for sprinklers shall be readily accessible for use by emergency and maintenance personnel.
- I. All valves controlling water supply to sprinklers shall be supervised by the fire alarm system. Valve supervisory devices shall be provided for all control valves under this specification section. Wiring the supervisory devices and connection to the fire alarm system shall be provided under Specification Section 28 3100.

2.05 DRAINS AND TEST PIPING

- A. The sprinkler system shall be provided with drains as required by NFPA 13. Drain discharge shall be coordinated between Contractor and Owner.
- B. All trapped portions of the system shall be equipped with drains of the size specified in NFPA 13. Where possible, design a system that will completely drain to the system riser. Where any trapped water exists, provide an auxiliary drain per NFPA 13.
- C. Every waterflow switch shall have an inspector's test connection located downstream of the water flow switch and piped to the system drain.
- D. All drain piping shall be galvanized.

2.06 SLEEVES, INSERTS, AND FASTENINGS:

- A. General: Openings through floors, walls, and roofs, etc., regardless of material for the passage of piping, etc., shall be sleeved.

2.07 PIPING ACCESSORIES

- A. All hanger components other than all thread shall be UL listed or FM approved. No sprinkler piping is to be supported from any mechanical or electrical devices and/or equipment (ducts, lights, etc.). Hanger assemblies installed outside, or otherwise exposed to weather, shall be externally galvanized.
- B. Provide sleeves where pipes penetrate beams, floors, or walls. Install sleeves flush with all surfaces.
- C. Sleeves for underground pipe shall have mechanical rubber seals and be watertight.
- D. Floor, wall and ceiling plates shall be pressed steel or cast iron split plates, chromium plated.
- E. Pressure gauges shall be UL listed or FM approved for fire service.

2.09 ALARM DEVICES

- A. General: Types matching piping and equipment connections.
- B. Water-Flow Indicators: UL 346; electrical-supervision, vane-type water-flow detector; with minimum 175 psig pressure rating; and designed for horizontal or vertical installation. Include two single-pole, double-throw, circuit switches for isolated alarm and auxiliary contacts, complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed. Pressure switches and hi/lo air pressure sensors shall be provided for all pre-action fire sprinkler systems.
- C. Valve Supervisory Switches: UL 753; electrical; single-pole, double throw; with normally closed contacts. Include design that signals controlled valve is in other than fully open position.
- D. The Sprinkler Contractor will supply the waterflow indicators and the valve supervisory switches. The Fire Alarm Contractor will install addressable monitor modules, and will make all electrical connections of all alarm devices to the existing fire alarm system.

2.10 PRESSURE GAUGES

- A. Pressure Gauges: UL 393, 3½- to 4½-inch diameter dial with dial range of 0 to 300 psig. Install pressure gauge where required by NFPA 13.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine and verify actual locations of risers, mains and branchline piping before installation.
- B. Examine walls and partitions for suitable thickness, fire- and smoke-rated construction, framing and other conditions where pipes, risers and cross-mains are to be installed. Provide UL classified through penetration firestop system where required by the applicable codes and standards.
- C. All examinations shall be coordinated with the Owner.
- D. All locations shall be approved by the Owner before installation.
- E. Verify all device locations with Owner prior to rough-in.

3.02 PIPING APPLICATIONS

- A. Flanges, transition and special fittings with pressure ratings the same as or higher than system's pressure rating may be used in aboveground applications, unless otherwise indicated. The use of unions and bushings is not permitted
- B. Sprinkler Feed Mains and Risers: Use the following:
 - 1. Schedule 40 steel pipe with welded fittings or grooved ends; steel, grooved-end fittings; and grooved joints.
- C. Sprinkler System Piping: Use the following:
 - 1. NPS 1½ -inch and smaller: Schedule 40 steel pipe with threaded ends, malleable-iron threaded fittings, and threaded joints.
 - 2. NPS 2-inch and larger: Schedule 40 steel pipe with welded fittings or grooved ends; steel, grooved-end fittings; and grooved joints.

3.03 JOINT CONSTRUCTION

- A. Refer to manufacturer's specifications for basic piping joint construction.
- B. Steel-Piping, Grooved Joints: Use steel pipe with roll-grooved ends; steel, grooved-end fittings; and steel, keyed couplings. Assemble joints with couplings, gaskets, lubricant, and bolts according to coupling manufacturer's written instructions.
- C. Dissimilar-Piping-Material Joints: Construct joints using adapters or couplings compatible with both piping materials. Use dielectric fittings if necessary.

3.04 PIPING INSTALLATION

- A. Refer to manufacturer's specifications and NFPA 13 for basic piping installation.
- B. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated on drawings, as far as practical. Coordinate installation of sprinkler pipe with other trades and equipment.
- C. Use approved fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- D. The use of unions and bushings is not permitted
- E. Install flanges or flange adapters on valves, apparatus, and equipment having NPS 2½ and larger connections.
- F. Install "Inspector's Test Connections" in sprinkler piping, complete with shutoff valve, sized and located according to NFPA 13.
- G. Install piping with drains for complete system drainage.
- H. Install sprinkler control valves, test assemblies, and drain risers adjacent to risers.
- I. Install ball drip valves to drain piping between fire department connections and check valves. Drain to exterior.
- J. Install alarm devices in piping systems.
- K. Hangers and Supports: Install according to NFPA 13 for sprinkler piping.
- L. Install piping with grooved joints according to manufacturer's written instructions. Construct rigid piping joints, unless otherwise indicated.
- M. Install pressure gauges on riser or feed main, at each sprinkler test connection, and at top of risers. Include pressure gauges with connection not less than NPS ¼ and with soft metal seated globe valve, arranged for draining pipe between gauge and valve. Install gauges to permit removal, and install where they will not be subject to freezing.

3.05 VALVE INSTALLATION

- A. Install fire-protection specialty valves, trim, fittings, controls, and specialties according to NFPA 13, manufacturer's written instructions, and authorities having jurisdiction.
- B. Gate Valves: Install fire-protection-service valves supervised-open, located to control sources of water supply except from fire department connections. Provide permanent identification signs indicating portion of system controlled by each valve.
- C. Install check valve in each water-supply connection.
- D. Riser Check Valves: Install valves in vertical position for proper direction of flow.

3.06 SPRINKLER INSTALLATION

- A. Install sprinklers in patterns indicated on working drawings.
- B. Install sprinkler pipe concealed within ceiling to the maximum extent possible.
- C. Do not install pendent or sidewall, wet-type sprinklers in the indicated areas. Use dry-type sprinklers with water supply from heated space.
- D. Contractor is responsible for field verification of obstructions such as, but not limited to, beams and ducts and ensuring sprinklers are installed in accordance with NFPA 13.

3.07 CONNECTIONS

- A. Connect piping to specialty valves, specialties, and accessories.
- B. Connect alarm devices to fire alarm system.

3.08 LABELING AND IDENTIFICATION

- A. Install labeling and pipe markers on valves, equipment and piping according to requirements in NFPA 13.
- B. Identification signs shall be porcelain enameled 18 gauge and shall be affixed securely by brass chain to all valves. The signs shall be red in color.
- C. Provide an approved laminated valve chart in frame and plexiglass cover showing location and use of each valve, including drain valves. The chart shall be secured in a visible location acceptable to the Owner.
- D. The main drain sign shall be labeled "MAIN DRAIN". Riser drains shall be labeled "RISER DRAIN" or "DRAIN".
- D. Auxiliary drain signs shall be labeled "AUXILIARY DRAIN".
- E. Inspector's test connection signs shall be labeled "INSPECTOR'S TEST."
- F. All water supply control valves shall have a standard sign identifying the portion of the system controlled, noting that the valve shall be kept open, and leaving a blank space for notification information.
- G. All isolation valves shall be marked on identification tag whether valve is to be "normally open" (NO) or "normally closed" (NC).

3.09 TESTING / FIELD QUALITY CONTROL

- A. Flush entire system, perform hydrostatic test, and inspect piping according to NFPA 13, "System Acceptance." Coordinate hydrostatic test date and time of test with the Owner.
- D. Replace piping system components that do not pass test procedures and retest to demonstrate compliance. Repeat procedure until satisfactory results are obtained.
- E. Report test results promptly and in writing to the Owner.

3.10 CLEANING

- A. Clean dirt and debris from sprinklers.
- B. Remove and replace sprinklers having paint other than factory finish.

3.11 PROTECTION

- A. Protect sprinklers from damage.

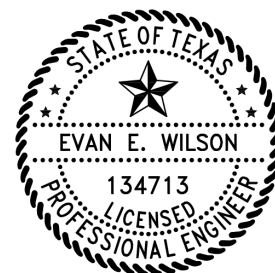
3.12 COMMISSIONING

- A. Verify that specialty valves, trim, fittings, controls, and accessories are installed and operate correctly.
- B. Verify that specified tests of piping are complete.
- C. Verify that damaged sprinklers and sprinklers with paint or coating not specified are replaced with new, correct type.
- D. Verify that sprinklers are correct types, have correct finishes and temperature ratings, and have guards as required for each application.
- E. Fill piping with water.
- G. Energize circuits to electrical equipment and devices.
- H. Coordinate with fire alarm tests. Operate as required.

3.13 DEMONSTRATION

- A. Demonstrate equipment, specialties, and accessories. Review operating and maintenance information.
- B. Schedule demonstration with the Owner with at least seven days advance notice.
- C. Schedule final Acceptance Test with Owner with at least seven days advance notice.

END OF SECTION



Evan Wilson

12-11-2020

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AUTOMATIC FIRE ALARM SYSTEM

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The fire alarm system installing contractor (herein referred to as the contractor) shall furnish all labor, equipment, and materials, and perform all operations in connection with the expansion of the existing PFC-6075R Pre-Action Fire Alarm System with the installation of new smoke detection and manual pull station for the Collin County Sheriff's Office Sprinkler Modification at 4300 Community Avenue in the City of McKinney, Texas, as indicated and described in the contract documents.
- B. This project is not intended to bring other existing systems (such as the mechanical system, sprinkler system, and egress components) into compliance with the applicable codes.
- C. New fire alarm system equipment shall be compatible with the existing fire alarm system. Provide additional equipment as required for the existing fire alarm control unit to expand the system.
- D. This Section specifies the requirements for furnishing and commissioning addressable fire alarm devices in the area of work with full interface with other related systems. Work shall include, but not be limited to, the following:
 - 1. Fire alarm control unit modification and expansion as required.
 - 2. Smoke and heat detection.
 - 3. Manual pull stations.
 - 4. Demolition of existing devices in work areas.
- E. Contractor shall repair or replace all damaged carpet, ceiling tile, or raised floor tiles to a like new condition upon completion of the construction.

1.2 RELATED SECTIONS

- A. Division 1 – Collin County General Specification
- B. Section 21 1313 – Automatic Sprinkler/Standpipe Systems

1.3 REFERENCES

- A. The fire alarm systems shall comply with all applicable NFPA standards, State of Texas Fire Marshal's requirements, and manufacturer instructions and recommendations.
- B. All equipment and devices shall be labeled, listed and/or approved for the intended use with the existing fire alarm control panel by a Nationally Recognized Testing Laboratory (NRTL) as acceptable to the Authorities Having Jurisdiction and the Owner. Each component of the fire alarm system shall be listed as a product of a single fire alarm system manufacturer under the appropriate category for the intended use by Underwriters Laboratories, Inc. (UL) and shall bear the "UL label". All control equipment shall be listed under UL category UOJZ Control Units System as a single unit. Partial listings, or multiple listings for various major sections of the control equipment, shall not be acceptable.
- C. Installation and testing shall be made in accordance with applicable provisions of the following:

1. International Building Code, 2018 edition.
2. International Fire Code, 2018 edition.
3. NFPA 72, *National Fire Alarm and Signaling Code*, 2016 edition.

1.4 SUBMITTALS

- A. The Contractor is responsible to prepare and submit a minimum of three hard copies of submittals for approval. In addition to the hard copies, submit complete electronic submittal to the Owner. Each submittal package shall be prepared and presented in a professional manner, be bound and shall include a title page and index. Each section of the submittal shall be numbered. Submittal packages shall be complete. Partial submittal packages will be returned without review. Submittals shall be prepared in accordance with 2016 NFPA 72, §7.4 Shop Drawings, for approval, by a fire protection engineer licensed in the State of Texas or a minimum NICET Level III certified technician certified in Fire Protection Engineering Technology, Fire Alarm Systems, who is legally qualified to practice in the State of Texas.
- B. The Contractor shall certify in writing that the submittal documentation is in conformance with all of the requirements of this specification and the applicable referenced local, state and national Codes, Standards and Regulations.
- C. Shop Drawings:
 1. Indicate manufacturer's name, model numbers, ratings, power requirements, equipment layout, conduit, device arrangement, and complete point to point wiring diagrams along with other required information including, but not limited to, the following:
 - a. General Drawing Notes
 - b. Electrical backbox requirements
 - c. Control equipment schedules
 - d. Panel schematics, showing all connections, between modules within panels, to all modules from field wiring with zone identified.
 - e. Riser diagrams indicating circuits, types of devices, number of devices, number of conductors, conduit size, junction boxes, and zones. Riser diagrams shall include candela value for visual appliances, wattage setting for audible appliances and address for all addressable devices (i.e., smoke detectors, heat detectors, duct smoke detectors, pull stations, addressable modules, etc.).
 - f. Scaled floor plans with layout of all devices with point numbers for initiating devices and notification appliances, wiring connections, zoning, wire sizes and routing.
 - (1) Wattage setting for each speaker labeled adjacent to the speaker.
 - (2) Candela rating for each strobe labeled adjacent to the strobe
 - (3) Circuit number and address for all addressable devices on the Signaling Line Circuit
 - g. Detailed Legend
 - h. Fire safety and related symbols shown on drawings and diagrams shall comply with NFPA 170.
 - i. Detailed input/output matrix.
- D. Product Data: Provide electrical characteristics, connection requirements and compatibility listing showing that components are compatible with each other including but not limited to:
 1. Full equipment list including model numbers and quantities
 2. Complete system operation
 3. Highlighted Data Sheets on Devices and Products
 - a. Fire Alarm Control Unit Expansion Equipment as required
 - b. Amplifiers
 - c. Remote power supplies
 - d. Wiring

- e. Batteries
 - f. Detectors and pull stations
 - g. Audible Notification Appliances
 - h. Visual Notification Appliances
 - i. Control Modules
 - j. Monitor Modules
 - k. Auxiliary Relays
 - l. Raceways and Electrical Boxes
 - m. Auxiliary power supplies
 - 4. Wiring diagrams of all equipment
 - 5. Installation instructions for all equipment
 - 6. Equipment testing procedures
 - 7. Equipment maintenance manuals
 - 8. Wire data sheets
- E. System Calculations - Complete calculations shall be provided which show the electrical load on the following system components:
- 1. Each system power supply, including standalone booster supplies and auxiliary supplies.
 - 2. Standby Battery Calculations plus a 20 percent derating factor
 - 3. Voltage drop calculations for each type of circuit (identify all mathematical formulas, variables, and constants)
 - 4. dB loss calculations for speaker circuits
 - 5. Each auxiliary control circuit that draws power from any system power supply (no circuit shall be loaded beyond 80% capacity, leaving 20% spare capacity for future use).
 - 6. Decibel loss for fiber optic pathways, demonstrating adherence to UL listing and manufacturer's recommendations.
- F. Software and Database Information:
- 1. Proposed point numbers
 - 2. Labels of all addressable devices
 - 3. English action messages
 - 4. Programming rules and/or equations with comments list
- G. No work shall be performed until the AHJ and Design Team has approved the shop drawings, calculations, and data sheets. The contractor is solely liable for any work performed prior to this approval.
- H. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 72.
- I. Maintenance Data: Contractor shall provide owner with a complete maintenance manual for the system. The maintenance manual shall describe in detail the purpose and function of all system devices and inspection, testing and maintenance forms. Contractor shall provide owner with one (1) copy of the latest edition of NFPA 72 in addition to the manufacturer's maintenance manual.
- J. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds requirements specified and suggested by listed codes.
- K. Submittals shall be complete and include all required information. Partial submittals will be returned not reviewed and marked revise and resubmit.

1.5 OPERATION AND MAINTENANCE DATA

- A. Maintenance Instructions: Include installation instructions, spare parts lists, procedures, and treatment programs.
- B. These O&M Manuals shall include the following:
1. The final As-Built Equipment List identifying the quantities and types of equipment listed by manufacturer's part number.
 2. A detailed narrative description of the system inputs, notification signaling, ancillary functions, annunciation, intended sequence of operations, expansion capability, application considerations, and limitations.
 3. An equipment datasheet (or specification sheet) on every piece of equipment installed.
 4. Operator instructions for basic system operations, including alarm acknowledgement, system reset, interpretation of system output, operation of manual notification signaling and ancillary functions controls.
 5. Standby power calculations and voltage drop calculations that coincide with the equipment that has been installed in the building. Final calculations shall demonstrate that the as-built product provides the required 20% spare capacity on all circuits.
 6. A point ID list referencing the signaling line circuit loops and the devices on those loops.
 7. A sensitivity report for all smoke detectors at the time of acceptance.
 8. The results of testing of all wiring free from faults, as specified. Provide results of wire testing in table form listing all values recorded during the test. (Note: the test shall be performed according to the requirements set forth in NFPA 72 (2016 edition), Chapter 14, Table 14.4.3.2, 15 – Conductors Metallic and 16 – Conductors Non-metallic).
 9. A detailed description of routine maintenance and testing as required and recommended and as would be provided under a maintenance contract, including testing and maintenance instructions for each type of device installed.
 - a. This information shall include manuals that outline inspection, testing and cleaning procedures for all detectors and control equipment, as well as any other special maintenance procedures for any other pieces of automatic fire alarm equipment installed in the building.
 10. Detailed troubleshooting instructions for each trouble condition generated from the monitored field wiring, including opens, grounds, and loop failures.
 - a. These instructions shall include a list of all trouble signals annunciated by the system, a description of the condition(s) that causes such trouble signals, and step-by-step instructions describing how to isolate such problems and correct them (or how to call for service, as appropriate).
 11. Detailed As-Built drawings indicating the final location of all devices and appliances and the areas served by those devices. Drawings shall reflect the address for addressable devices, the candela setting for visual appliances and the wattage setting for audible appliances.
 12. A service directory, including a list of names and telephone numbers of those who provide service for the system.
 13. Provide two (2) copies of record drawings on USB stick in AutoCAD 2007, or latest version used by the Owner, and Revit.
 14. Provide three (3) hard copies of as-builts.
 15. A copy of the system programming on USB stick shall be provided on-site. The thumb drive shall contain all programming software, programming keys required to modify or restore the system program, final materials list, product data sheets, final calculations, circuit readings and pressure differential readings.
 16. A completed electronic copy of the NFPA 72 Fire Alarm and Emergency Communication System Record of Completion. (NFPA 72, 2016 edition, Chapter 7, Figure 7.8.2(a)).
 17. A completed electronic copy of the NFPA 72 Fire Alarm and Emergency Communication System Inspection and Testing Form. (NFPA 72, 2016 edition, Chapter 7, Figure 7.8.2(g)).
 18. A completed electronic copy of the Texas Department of Insurance Fire Alarm Installation Certificate (FM-009A form).

19. A completed electronic copy of the Texas Department of Insurance Fire Alarm Installation Inspection Form.

1.6 QUALITY ASSURANCE

A. Fire Alarm Contractor Qualifications:

1. The Contractor shall be an authorized and designated representative of a fire alarm manufacturer to sell, install and service the proposed manufacturer's equipment. The contractor shall have a minimum of two (2) factory trained and certified technicians on staff in a local office for the system proposed.
2. The Contractor shall be licensed by the Texas State Fire Marshal's Office to sell, install, and service fire alarm systems.
3. The Contractor shall have been actively engaged in the business of selling, installing, and servicing fire alarm systems for at least five (5) years with a minimum of ten (10) such installations comparable in size and scope to the system proposed, completed and operating properly.
4. Equipment furnished shall be of current manufacture.

B. Fire Alarm and Signaling System Shop Drawing Designer and System Programmer Qualifications

1. Personnel shall be factory trained and certified for fire alarm system design and programming of the specific type and brand of system proposed.
2. The design shall be performed by a State of Texas Fire Alarm Planning Superintendent (NICET Level III minimum in Fire Protection Engineering Technology, Fire Alarm Systems) or by a Professional Engineer (P.E.) registered in Fire Protection in the State of Texas.
3. Programming shall be performed by individuals complying with the following qualifications:
 - a. NICET Level III (minimum) in Fire Protection Engineering Technology, Fire Alarm Systems.
 - b. Personnel who are factory trained and certified for programming with a minimum of three (3) years' experience of the specific type and brand of system to be provided.
4. The system designer and programmer shall provide evidence of their qualifications and/or certifications to the Owner.
5. Shop drawings shall be revised as necessary following installation to represent as-built conditions and shall include record drawings on all new systems and any existing system modifications. Record documents shall include revised floor plans, riser drawings, program changes and calculations.

C. System Installer:

1. Fire alarm systems and emergency communications systems installation personnel shall be qualified, or shall be supervised by persons who are qualified, in the installation, inspection and testing of the systems.
2. The installation of all fire alarm devices, signaling devices or systems, including monitoring equipment shall be performed by or under the direct supervision of a licensed fire alarm technician or a fire alarm planning superintendent. The certifying licensee shall be licensed under the ACR number of the primary registered firm and shall be present for the final acceptance test prior to certification.
3. The system installer(s) shall provide evidence of their qualifications and/or certifications to the Owner.

D. The equipment furnished shall be listed and approved by a testing laboratory that has been approved by the State of Texas Commission on Fire Protection. This listing shall be for all functions required by this specification.

- E. The Contractor shall provide a signed "Fire Alarm and Emergency Communication System Inspection and Testing form" for each system, consisting of completed copies of the appropriate pages from NFPA 72 at the final Acceptance Test. The fire alarm contractor shall attach the appropriate fire alarm tags to the panel as required by the State of Texas.
- F. The fire alarm contractor shall provide the Texas Insurance Code Fire Alarm System Installation Inspection Form to the Owner at the following intervals:
 - 1. At the completion of the device back-box installation but prior to the start of cable installation.
 - 2. At the completion of cable installation but prior to the start of device installation.
 - 3. At the completion of device installation but prior to activation of the fire alarm system.
 - 4. The fire alarm contractor shall schedule the inspections indicated in 1, 2 and 3 above such that they are witnessed by the professional service provider (PSP) (system designer). The Installation Inspection Form shall be signed by both the fire alarm contractor representative and the PSP at the completion of each inspection.
- G. Provide staff installation superintendents that are licensed by the State of Texas Fire Marshal's Office for such purpose and under whose supervision installation, final connections and testing will be performed.
- H. All system installations shall comply with the requirements of the applicable paragraphs of the National Electric Code.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver fire alarm system components in factory-fabricated containers.
- B. Store in a clean, dry space and protected from the weather.
- C. Handle control and annunciator panels carefully to avoid damage to material components, enclosure and finish.

1.8 WARRANTY

- A. The Contractor shall guarantee all new equipment installed from defects in workmanship and inherent mechanical and electrical defects for a period of one (1) years from the date of substantial completion of the project and acceptance by the Owner.
- B. The Manufacturer or the authorized representative shall guarantee all new system equipment for a period of one (1) years from the date of substantial completion of the project and acceptance by the Owner.
- C. Materials, installation or workmanship found to be defective during the warranty period shall be corrected/replaced without cost to the Owner. The Contractor shall initiate repair of any warranty defects within eight (8) hours of notification of such defects and shall be repaired within twenty-four (24) hours.
- D. The warranty or any part of the warranty shall not be made void by any required operation or inspection of the system after acceptance during the warranty period. Modifications to any part of the system shall not void the warranty as related to the overall system, only the portion of the system that is modified.

- E. If the Owner experiences more than two (2) nuisance alarms or unexplained false alarms or troubles in any twenty-four (24) hour period while the system is under warranty, the Contractor shall provide the necessary labor, materials and technical expertise to promptly correct the problem(s) at no cost to the Owner.
- F. The fire alarm contractor shall maintain a service organization with adequate spare parts stock and service technicians trained in service of the type systems installed within seventy-five (75) miles of the installation location.
- G. The warranty period shall begin on the date of substantial completion of the project and acceptance in writing by the Owner.

1.9 UNIT PRICES

- A. The Contractor shall provide unit prices with their bid for the items in the following list. The unit prices for the devices shall include the device, installation, 30 feet of conduit, wire, programming, profit, supervision and any other required work (the price shall be all inclusive). The unit prices shall be used for device additions and device deducts.
 - 1. Addressable photoelectric smoke detector (with base).
 - 2. Addressable duct detector (with 10-foot sampling tube).
 - 3. Remote LED indicator.
 - 4. Remote test switch.
 - 5. Addressable heat detector (with base).
 - 6. Conventional heat detector (with base).
 - 7. Addressable manual pull station.
 - 8. Addressable monitor module.
 - 9. Addressable control module.
 - 10. Voice amplifier (with batteries).
 - 11. Remote notification appliance power supply (with batteries).
 - 12. Conventional relay.
 - 13. Speaker (both wall and ceiling mount).
 - 14. ADA (UL 1971) strobe (both wall and ceiling mount).
 - 15. ADA (UL 1971) combination speaker/strobe (both wall and ceiling mount).
 - 16. Thirty feet of 3/4" EMT conduit.
 - 17. Isolation module.
 - 18. Transponder with batteries.
 - 19. Failure to provide unit pricing during the bid process shall result in typical industry unit prices as determined by the design team and Owner based on recent projects.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Contractor shall survey the existing building fire alarm system. All new equipment shall be compatible with the existing PFC-6075R pre-action fire alarm system fire alarm control unit.

2.2 FUNCTIONAL DESCRIPTION OF THE SYSTEM

- A. The system shall be expanded to include new control/communications equipment which is UL Listed to operate with the submitted smoke detectors and manual pull stations. The system

shall maintain the existing sequence of operations and alert building occupants using audible and visible notification appliances, supervise each system for conditions which would impair proper system operation, annunciate such abnormal conditions, and where applicable, control related equipment as indicated on contract documents such as door closure, elevator recall/shutdown, and air handling unit shutdown.

- B. Contractor shall review the existing fire alarm control unit's site-specific software and, to the maximum extent possible, ensure the functional sequence of operations of the new equipment matches the existing fire alarm system's sequence of operations. Where this is not possible due to a conflict of applicable codes or the additional requirements of the specification, the contractor shall inform the design team in writing.
- C. The existing sequence of operations shall remain.

2.3 FIRE ALARM CONTROL UNIT (FACU)

- A. Modify the existing fire alarm control unit to support the newly installed fire alarm system components. If required, Contractor shall provide transponder or any additional equipment to support the new fire alarm system components.
- B. Existing fire alarm control panel shall remain.

2.4 REMOTE MONITOR

- A. Remote monitoring shall be maintained in accordance with NFPA 72.

2.5 SMOKE DETECTORS

- A. All spot type smoke detectors shall be photoelectric or combination photoelectric and ionization type.
- B. Each smoke detector must have a unique digital address on the SLC.
- C. All smoke detectors must be field measurable and adjustable for sensitivity.
- D. All smoke detectors must be powered from the SLC.
- E. The FACU must function as the smoke detector sensitivity test set and must be approved and listed for that service.
- F. All smoke detectors must meet or exceed the requirements of Underwriter's Laboratory Standard 268, as amended, and must be listed and approved for use with the FACU provided.
- G. Where a smoke detector is installed in a concealed location or in arrangements where the detector's alarm or supervisory indication is not visible to responding personnel, the detector(s) shall be provided with a remote alarm or supervisory indication in a location acceptable to the authority having jurisdiction. Drawings and/or alpha-numeric labels at the FACU are not acceptable in lieu of remote indicators.
- H. Where a remote alarm indicator is provided for an automatic fire detector in a concealed or non-viewable location, the location of the detector, area protected by the detector and detector address label shall be prominently indicated at the remote device by a permanently attached label or by other approved means. Labels shall be white 9mm adhesive tape with black lettering in 4mm font.

2.6 MANUAL PULL STATIONS

- A. Contractor shall install one new addressable double-action manual pull station in the corridor identified on the drawings.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Contractor shall examine the areas and conditions under which the fire alarm system is to be installed and notify the Owner in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. The following inspections shall be performed by a licensed fire alarm technician or planner, be documented on the State of Texas inspection form and submitted to the Design Team prior to the start of the next installation phase:
 - 1. Inspect the raceway system at the completion of the device back-box installation but prior to the start of cable installation. Inspection shall be documented on "Fire Alarm System Installation Inspection Form" located in the Texas Insurance Code Chapter 6002 (formerly Article 5.43-2) Fire Detection and Alarm Device Installation and 28 TAC §§ 34/600 The Fire Alarm Rules.
 - 2. Inspect cable installation at the completion of the cable installation but prior to the start of device installation. Inspection shall be documented on "Fire Alarm System Installation Inspection Form" located in the Texas Insurance Code Chapter 6002 (formerly Article 5.43-2) Fire Detection and Alarm Device Installation and 28 TAC §§ 34/600 The Fire Alarm Rules.
 - 3. Inspect device installation at the completion of device installation but prior to activating the fire alarm system. Inspection shall be documented on "Fire Alarm System Installation Inspection Form" located in the Texas Insurance Code Chapter 6002 (formerly Article 5.43-2) Fire Detection and Alarm Device Installation and 28 TAC §§ 34/600 The Fire Alarm Rules.
- C. Penetrations through fire- and smoke-rated construction shall be provided with a UL classified through penetration firestop system shown on the Contractor's submittal drawings with clearly detailed plan drawings. Coordinate with architectural contract drawings for the locations and details of rated construction.

3.2 INSTALLATION

- A. Installation, workmanship, fabrication, assembly, erection, examination, inspection and testing shall be in accordance with NFPA 72, except as modified herein.
- B. The Contractor shall provide and install all required equipment, labels and accessories necessary for the proper operation of the system.
- C. All work shall be performed in accordance with the best and the most modern practices of the trade. The entire system shall be installed in a neat and workmanlike manner, in accordance with the standard instructions and recommendations of the manufacturer and in accordance with the approved manufacturer's wiring diagrams unless otherwise specifically permitted by the Owner.

- D. The system shall be installed under the supervision of a qualified, trained, NICET (level III minimum) in Fire Protection Engineering Technology, subfield Fire Alarm Systems, Certified manufacturer's representative. The technical representative is expected to be on site with the Contractor during the installation of wiring and during the entire time of final connections and testing of the fire alarm and emergency voice evacuation system. The system shall be demonstrated to perform all of the functions as specified.
- E. The supervisory work of the qualified manufacturer's technical representative shall include, but not necessarily be limited to, checking all the system wiring connections; advising the Contractor regarding technical details of the installation; and the adjustment and testing of all components of the system in order to ensure a complete and satisfactorily operable system. The manufacturer's technical representative shall be on site, as required by the Owner, during the entire installation and connection of the new control equipment. The technical representative shall monitor all wiring changes and assist the Contractor to ensure a smooth transition to the new control equipment. The cost of the technical representative shall be paid by the Contractor and shall be included in the bid price.
- F. The manufacturer's technical representative shall also be required to instruct designated building and management personnel in the general operation of the system and to give the designated personnel an overview of the system functions when the system is in normal, supervisory mode, alarm mode, and trouble mode, as specified in this specification.

3.3 WIRING

- A. All wiring shall comply with this section.
- B. A single SLC shall serve no more than 3 levels with short circuit isolators in place for each level.
- C. Fire alarm risers and network circuits shall be protected with Survivability Level 3 (listed 2-hour rated cable system). This includes horizontal and vertical runs.
- D. The entire wiring and raceway system for the fire alarm and emergency voice communication system shall be in full accordance with NFPA 70, *National Electrical Code*.
- E. The Contractor shall furnish all metal raceway, wiring, outlet boxes, junction boxes, cabinets, labels and similar devices necessary for the complete installation of the fire alarm and emergency voice communication system. All wiring shall be of the type as specified herein and recommended by the manufacturer. Utilize FPLP plenum fire alarm cable where possible.
- F. All wiring, conductors and raceways shall be concealed within the construction to the extent possible. Where concealed wiring and or raceways is not possible, the Contractor shall consult with the Owner for the location of the installation.
- G. Terminal cabinets with hinged, lockable red covers shall be provided at all junction points. Terminal cabinets shall be Space Age TC2 series or approved equal and labeled "FIRE ALARM TERMINAL BOX". All conductor splices shall be made on screw-type terminal blocks – wire nuts, butt, crimp or screw type connectors shall not be used. All terminals within a terminal cabinet shall be properly and permanently labeled.
- H. All junction box covers shall be painted red.

- I. Raceways containing conductors identified as "Fire Alarm System" conductors shall not contain any other conductors, and no AC carrying conductors shall be allowed in the same raceway with the DC fire alarm detection and signaling conductors.
- J. The conductors for the notification appliance circuits shall not be installed in the same raceway as the conductors for signaling line circuits unless written certification from the manufacturer is supplied to the Owner indicating that the inclusion of these circuits in the same raceway is acceptable and that no additional consideration is needed for these circuits.
- K. All wiring shall test free from grounds and short circuit faults. To ensure all wiring meets this requirement, the wiring shall be tested by the Contractor. Conductors shall be tested per the requirements of NFPA 72 (2016 edition), Chapter 14, Table 14.4.3.2, Test Methods, #15 – Conductors - metallic and #16 – Conductors - non-metallic. The testing results shall be recorded, signed by the Contractor and forwarded to the supplier and the Owner. All values identified during the testing shall be recorded for each conductor. No connections to the FACU shall be made until the system wiring has been accepted by the equipment supplier.
- L. All wiring for the initiating devices, notification appliances and remote 80-character LCD display shall be solid or stranded copper and shall comply with the appropriate sections of the *National Electrical Code*. All system wiring size shall be as determined suitable by the manufacturer and in compliance with the *National Electrical Code*, yet they shall not be any smaller than as specified herein.
- M. Unless otherwise indicated on the design drawings, the following minimum sizes of conductors shall be used for all new wiring:

1. Power Supply Conductors (Primary and Secondary)	No. 12 AWG
2. Signaling Line Circuit Conductors	No. 18 AWG
3. LCD Remote Alarm Annunciators	No. 18 AWG
4. Notification Appliance Circuits	No. 14 AWG
5. Speaker Circuits	No. 14 AWG
6. 24VDC Power Conductors	No. 14 AWG
7. Shielded Twisted Pair Audio Conductors	No. 14 AWG
- N. Color coding of conductors shall be approved by the Owner and the authorities having jurisdiction. Color coding shall be as follows:

1. SLC, IDC, FAA	Red Jacket
2. Speaker Circuits	Blue Jacket
3. Strobe Circuits	White Jacket
4. Power Circuits	Black Jacket
5. Grounding Conductors	Green Jacket
- O. Raceways shall be run parallel and perpendicular to the walls and ceilings. Wherever practical, exposed raceways shall be run on the ceiling as close as possible to a wall or as high as possible on a wall. Where exposed raceways shall cross under a structural beam or rib, they shall be run down on one side of the beam or rib, across its bottom, and up to the ceiling on the other side of the beam or rib. No spanning from beam to beam or rib to rib shall be permitted. The use of a raceway body on one side of a beam or rib shall be permitted provided it shall be readily accessible. Where metal raceway is installed exposed, it shall be painted to match the walls and/or ceilings on which it is installed, as instructed by the Owner. The method and location of all exposed raceways shall be approved by the Owner prior to start of any installation work.
- P. Fault isolator modules shall be furnished as required and shall be mounted as directed by the manufacturer. The field location of the fault circuit isolators shall be labeled so that the devices may be easily located, and that location shall be noted on the point-to-point and as-built drawings.

- Q. The power employed to operate the fire alarm and emergency voice evacuation system shall have a high degree of reliability and capacity for the intended service. Connections to this power service shall be made on a dedicated branch circuit(s). The circuit shall be mechanically protected.
- R. The electrical supply to the FACU shall be equipped with a dedicated fused disconnect with a handle that can be locked in the “power on” position. This disconnect is to be provided at the connection to the normal power supply serving the FACU. Circuit disconnecting means shall have a red marking, shall be accessible to authorized personnel, and shall be identified as “FIRE ALARM CIRCUIT CONTROL.” The location of the circuit disconnecting means shall be permanently identified on a nameplate installed on the inside of the FACU.
- S. All wiring within the control unit shall be neatly served in the panel gutters and be secured by means of Thomas & Betts "Ty-Raps" or by other approved means.
- T. Devices and/or enclosures containing end-of-line resistors shall be labeled “EOLR”. Labels shall be of professional quality and not hand-written.
- U. Fire alarm system risers shall be installed in conduit, end-to-end, including horizontal runs.
- V. Fire alarm system wiring above non-accessible ceilings shall be installed in conduit routed to an accessible area.
- W. Fire alarm system wiring in rooms without ceilings shall be installed in conduit.

3.4 TESTING

- A. Upon completion of the system, the Contractor must perform a complete and comprehensive test of the entire system in accordance with the provisions of NFPA 72. All testing shall be captured and documented electronically and provided to the Owner as part of the testing.
- B. It is the responsibility of the Contractor to demonstrate to the University that the system is installed and functions in accordance with the project documents and applicable codes.
- C. Specific Tests
 - 1. An acceptance test will be conducted at the completion of each project. The test will be the responsibility of the contractor and must be performed in strict compliance with the provisions of NFPA 72.
 - 2. In addition to the provisions of NFPA 72 and/or the above paragraph, it is the responsibility of the Contractor to provide all of the following:
 - a. Smoke detector sensitivity report.
 - b. Closed loop resistance and EOL resistance readings for all field wiring.
 - c. Programming volatility test.
 - 4. Fix Deficiencies:
 - a. A copy of the formatted check list shall be transmitted to the contractor to serve as a punch out list for the correction of the noted deficiencies. The Contractor shall notify the verifying party in writing that the deficiencies have been corrected along with a copy of the punch out list with the corrected deficiencies initialed by the Contractor to indicate the corrections.

3.5 TRAINING

- A. Upon completion of the installation, the Contractor must perform complete and comprehensive training of the system to the Owner. Training shall include two 4-hour sessions to train personnel on the proper use of and response to the system.

END OF SECTION



Hydraulic Overview

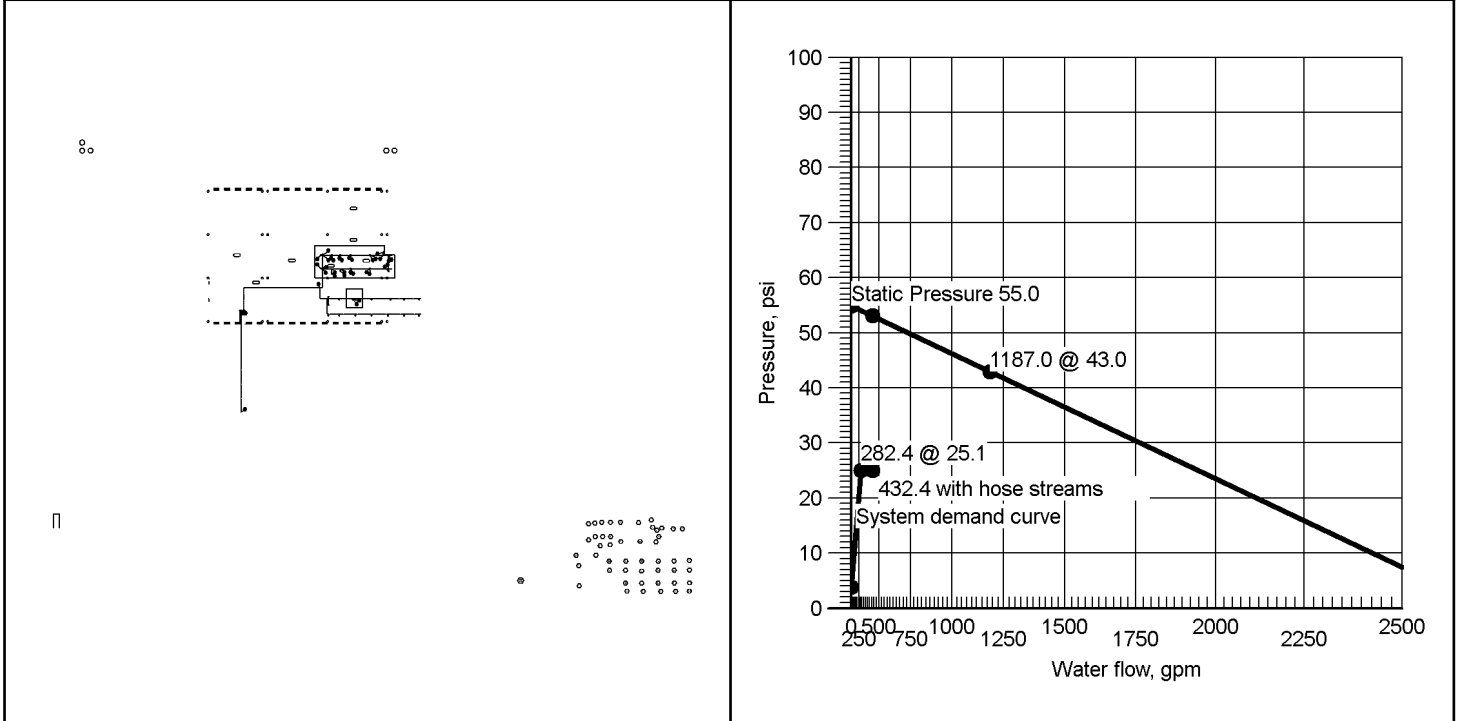
Job Number: 1
Report Description: COMBINED DESIGN AREA CALC

Job		
Job Number 1	Design Engineer	
Job Name: COLLIN COUNTY SHERIFF ADDITION	Phone	FAX
Address 1 4300 COMMUNITY AVENUE	State Certification/License Number	
Address 2 McKINNEY, TEXAS 75071	AHJ	
Address 3	Job Site/Building	

System		
Density 0.10gpm/ft ² , 0.15gpm/ft ²	Area of Application 166.34ft ² (Actual 166.34ft ²), 1500.00ft ² (Actual 1)	
Most Demanding Sprinkler Data 5.6 K-Factor 19.6 at 12.3	Hose Streams 150.0	
Coverage Per Sprinkler 168.00ft ² , 196.00ft ²	Number Of Sprinklers Calculated 1, 13	Number Of Sprinklers Calculated 0, 0
System Pressure Demand 25.1	System Flow Demand 282.4	
Total Demand 432.4 @ 25.1	Pressure Result +28.1 (52.8%)	

Supplies						Check Point Gauges			
Node	Name	Flow(gpm)	Hose Flow(gpm)	Static(psi)	Residual(psi)	Identifier	Pressure(psi)	K-Factor(K)	Flow(gpm)
1	Water Supply	1187.0	150.0	55.0	43.0	BOR	24.9	56.61	282.4

Collin County-3 Water Supply at Node 1 (1187.0, 150.0, 55.0, 43.0)





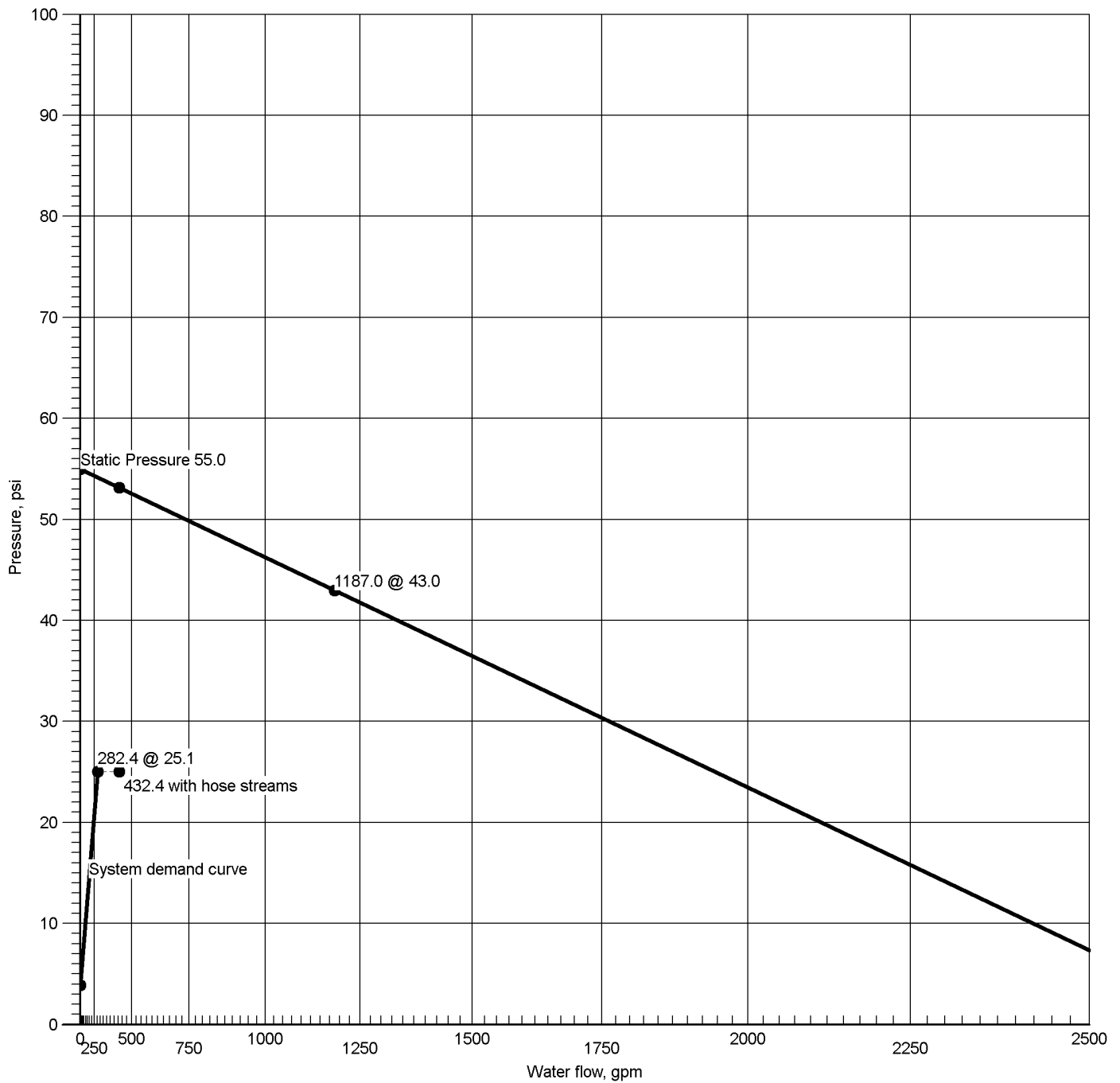
Hydraulic Summary

Job Number: 1
Report Description: COMBINED DESIGN AREA CALC

Job											
Job Number 1				Design Engineer							
Job Name: COLLIN COUNTY SHERIFF ADDITION				State Certification/License Number							
Address 1 4300 COMMUNITY AVENUE				AHJ							
Address 2 McKINNEY, TEXAS 75071				Job Site/Building							
Address 3				Drawing Name Collin County-3							
System				Remote Area(s)							
Most Demanding Sprinkler Data 5.6 K-Factor 19.6 at 12.3				Occupancy Light Hazard			Job Suffix				
Hose Allowance At Source 150.0				Density 0.10gpm/ft ²			Area of Application 166.34ft ² (Actual 166.34ft ²)				
Additional Hose Supplies <u>Node</u> <u>Flow(gpm)</u>				Number Of Sprinklers Calculated 1		Number Of Nozzles Calculated 0		Coverage Per Sprinkler 168.00ft ²			
				AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area							
				Occupancy Ordinary Group I			Job Suffix				
				Density 0.15gpm/ft ²			Area of Application 1500.00ft ² (Actual 1360.94ft ²)				
				Number Of Sprinklers Calculated 13		Number Of Nozzles Calculated 0		Coverage Per Sprinkler 196.00ft ²			
				AutoPeak Results: Pressure For Remote Area(s) Adjacent To Most Remote Area							
Total Hose Streams 150.0											
System Flow Demand 282.4		Total Water Required (Including Hose Allowance) 432.4									
Maximum Pressure Unbalance In Loops 0.0											
Maximum Velocity Above Ground 7.9 between nodes 67 and 303											
Maximum Velocity Under Ground											
Volume capacity of Wet Pipes 301.6gal		Volume capacity of Dry Pipes									
Supplies											
Node	Name	Hose Flow (gpm)	Static (psi)	Residual (psi)	@	Flow (gpm)	Available (psi)	@	Total Demand (gpm)	Required (psi)	Safety Margin (psi)
1	Water Supply	150.0	55.0	43.0		1187.0	53.1		432.4	25.1	28.1
Contractor											
Contractor Number		Contact Name				Contact Title					
Name of Contractor:				Phone				Extension			
Address 1				FAX							
Address 2				E-mail							
Address 3				Web-Site							



Water Supply at Node 1



Hydraulic Graph

Water Supply at Node 1

Static: Pressure

55.0

Residual: Pressure

43.0 @ 1187.0

Available Pressure at Time of Test

53.1 @ 432.4

System Demand

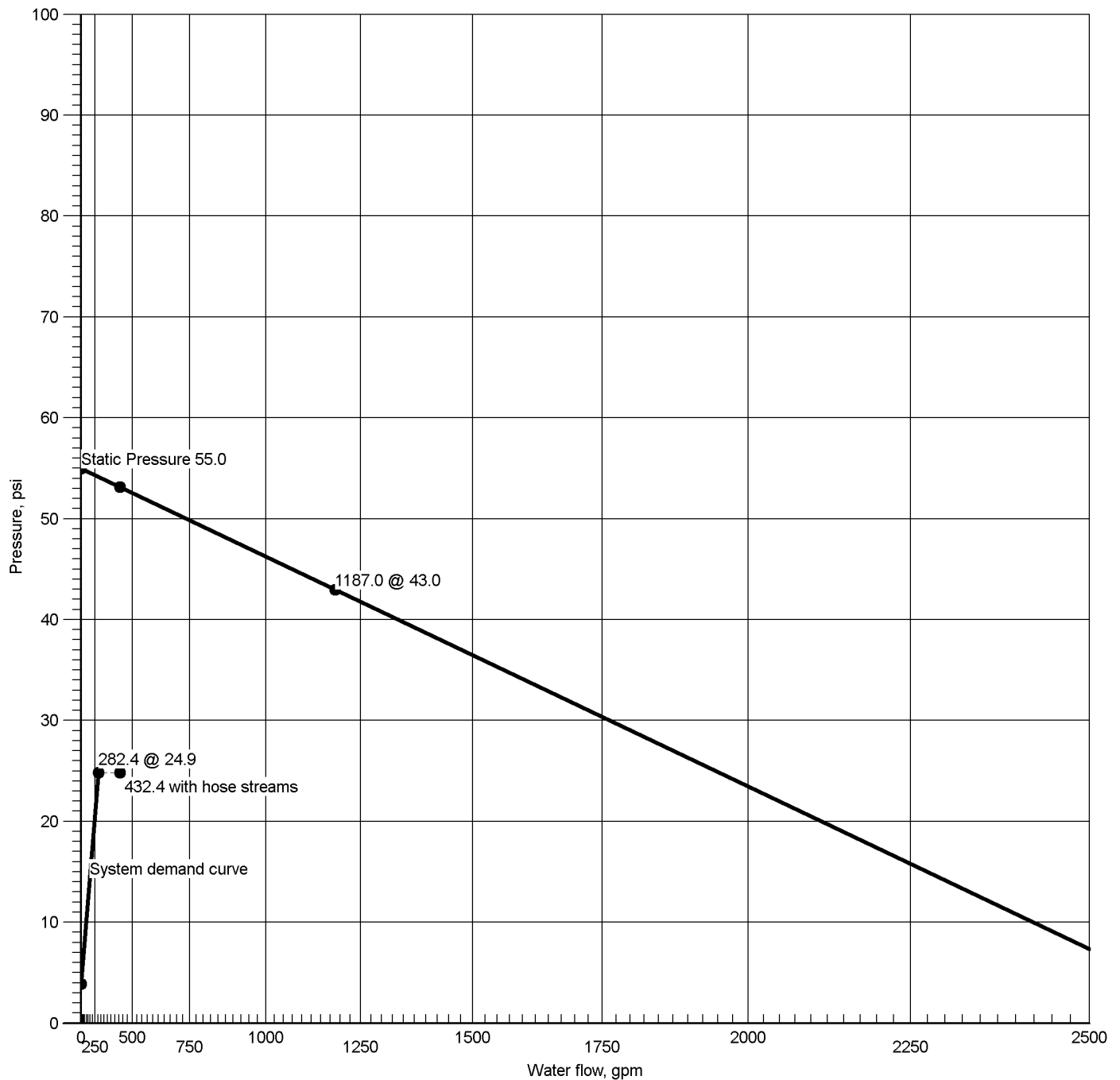
25.1 @ 282.4

System Demand (Including Hose Allowance at Source)

25.1 @ 432.4



BOR



Hydraulic Graph

BOR

Static: Pressure

N/A

Residual: Pressure

N/A

Available Pressure at Time of Test

N/A

System Demand

24.9 @ 282.4

System Demand (Including Hose Allowance at Source)

24.9 @ N/A



Summary Of Outflowing Devices

Job Number: 1

Report Description: COMBINED DESIGN AREA CALC

Device		Actual Flow (gpm)	Minimum Flow (gpm)	K-Factor (K)	Pressure (psi)		
Sprinkler	101	21.0	18.9	5.6	14.1		
Sprinkler	102	20.1	16.8	5.6	12.9		
Sprinkler	103	21.0	18.9	5.6	14.0		
Sprinkler	104	20.2	14.8	5.6	13.0		
Sprinkler	105	20.2	16.8	5.6	13.1		
Sprinkler	106	20.2	19.6	5.6	13.1		
Sprinkler	107	20.0	14.8	5.6	12.7		
Sprinkler	108	19.8	19.6	5.6	12.5		
Sprinkler	109	20.1	19.6	5.6	12.9		
⇒ Sprinkler	110	19.6	19.6	5.6	12.3		
Sprinkler	111	20.0	14.0	5.6	12.7		
Sprinkler	112	19.4	14.0	5.6	12.0		
Sprinkler	113	19.3	10.0	5.6	11.9		

⇒ Most Demanding Sprinkler Data



Node Analysis

Job Number: 1

Report Description: COMBINED DESIGN AREA CALC

Node	Elevation(Foot)	Fittings	Pressure(psi)	Discharge(gpm)
1	0-0	S	25.1	282.4
101	9-0	Spr(-14.1)	14.1	21.0
102	9-0	Spr(-12.9)	12.9	20.1
103	9-0	Spr(-14.0)	14.0	21.0
104	9-0	Spr(-13.0)	13.0	20.2
105	9-0	Spr(-13.1)	13.1	20.2
106	9-0	Spr(-13.1)	13.1	20.2
107	9-0	Spr(-12.7)	12.7	20.0
108	9-0	Spr(-12.5)	12.5	19.8
109	9-0	Spr(-12.9)	12.9	20.1
110	9-0	Spr(-12.3)	12.3	19.6
111	9-0	Spr(-12.7)	12.7	20.0
112	9-0	Spr(-12.0)	12.0	19.4
113	9-0	Spr(-11.9)	11.9	19.3
303	9-0	Spr(-14.6)	14.6	21.4
2	0-0	E(17-7), BOR	24.9	
3	2-0		23.6	
4	9-6	PO(8-6½)	15.6	
5	9-6	PO(3-7)	15.6	
6	9-6	PO(3-7)	14.8	
7	9-6	PO(3-7)	14.5	
8	9-6	PO(8-6½)	15.6	
9	9-6	PO(3-7)	15.5	
10	9-6	PO(3-7)	14.4	
11	9-6	PO(3-7)	14.4	
12	9-6	PO(3-7)	14.0	
13	9-6	PO(3-7)	13.8	
14	9-6	PO(3-7)	14.2	
15	9-6	PO(3-7)	13.5	
16	9-6	PO(3-7)	14.2	
17	9-6	PO(3-7)	13.4	
18	9-6	PO(3-7)	13.4	
51	9-6	PO(10-0)	16.3	
67	9-6	PO(5-0)	16.0	



Hydraulic Analysis

Job Number: 1

Report Description: COMBINED DESIGN AREA CALC

Pipe Type	Diameter	Flow	Velocity	HWC	Pn	Friction Loss	Length	Pressure
Downstream	Elevation	Discharge	K-Factor	Pt		Fittings	Eq. Length	Summary
Upstream							Total Length	
Route 1								
DR	1.0490	19.6	7.3	100		0.175645	1-10	Pf 1.4
110	9-0	19.6	5.6	12.3		Sprinkler,	6-5	Pe -0.2
15	9-6			13.5		2E(1-5), PO(3-7)	8-3	Pv
CM	2.4690	58.3	3.9	100		0.020407	14-0	Pf 0.3
15	9-6	38.7		13.5		Flow (q) from Route 10		Pe
13	9-6			13.8			14-0	Pv
CM	2.4690	78.1	5.2	100		0.035061	7-7½	Pf 0.3
13	9-6	19.8		13.8		Flow (q) from Route 2		Pe
12	9-6			14.0			7-7½	Pv
CM	2.4690	98.1	6.6	100		0.053456	6-4½	Pf 0.3
12	9-6	20.0		14.0		Flow (q) from Route 13		Pe
10	9-6			14.4			6-4½	Pv
CM	2.4690	118.3	7.9	100		0.075629	6-11	Pf 1.2
10	9-6	20.2		14.4		Flow (q) from Route 9	8-6½	Pe
8	9-6			15.6		PO(8-6½)	15-5½	Pv
CM	4.0260	139.3	3.5	100		0.009452	9-6	Pf 0.1
8	9-6	21.0		15.6		Flow (q) from Route 6		Pe
5	9-6			15.6			9-6	Pv
CM	4.0260	160.3	4.0	100		0.012259	0-5½	Pf 0.0
5	9-6	21.0		15.6		Flow (q) from Route 7		Pe
4	9-6			15.6			0-5½	Pv
CM	4.0260	261.0	6.6	100		0.030203	15-8½	Pf 0.6
4	9-6	100.7		15.6		Flow (q) from Route 3	4-10	Pe
51	9-6			16.3		fE(4-10)	20-6½	Pv
CM	4.0260	282.4	7.1	100		0.034948	78-3	Pf 4.1
51	9-6	21.4		16.3		Flow (q) from Route 5	38-1	Pe 3.2
3	2-0			23.6		3fE(4-10), DPV(10-0), BV(8-6½) , CV(5-0)	116-4½	Pv
FR	6.3570	282.4	2.9	120		0.002697	1-2½	Pf 0.4
3	2-0			23.6			158-5	Pe 0.9
2	0-0			24.9		2T(37-8½), fE(12-7), CV(40-3), BV(12-7), E(17-7), BOR	159-7½	Pv
CM	6.3570	282.4	2.9	120		0.002697	75-0	Pf 0.2
2	0-0			24.9			3-9½	Pe
1	0-0			25.1		PIV(3-9½), S	78-9½	Pv
		150.0				Hose Allowance At Source		
1		432.4						
Route 2								
DR	1.0490	19.8	7.4	100		0.179059	1-10	Pf 1.5
108	9-0	19.8	5.6	12.5		Sprinkler,	6-5	Pe -0.2
13	9-6			13.8		2E(1-5), PO(3-7)	8-3	Pv
Route 3								
DR	1.0490	20.1	7.5	100		0.184543	1-10	Pf 1.5
109	9-0	20.1	5.6	12.9		Sprinkler,	6-5	Pe -0.2
14	9-6			14.2		2E(1-5), PO(3-7)	8-3	Pv
CM	2.4690	40.1	2.7	100		0.010219	14-0	Pf 0.1
14	9-6	20.0		14.2		Flow (q) from Route 12		Pe
11	9-6			14.4			14-0	Pv
CM	2.4690	60.3	4.0	100		0.021757	7-7½	Pf 0.2
11	9-6	20.2		14.4		Flow (q) from Route 4		Pe
7	9-6			14.5			7-7½	Pv
CM	2.4690	80.5	5.4	100		0.037133	6-4½	Pf 0.2
7	9-6	20.2		14.5		Flow (q) from Route 14		Pe
6	9-6			14.8			6-4½	Pv
CM	2.4690	100.7	6.7	100		0.056095	6-11	Pf 0.9
6	9-6	20.1		14.8		Flow (q) from Route 8	8-6½	Pe
4	9-6			15.6		PO(8-6½)	15-5½	Pv
Route 4								
DR	1.0490	20.2	7.5	100		0.186247	1-10	Pf 1.5
106	9-0	20.2	5.6	13.1		Sprinkler,	6-5	Pe -0.2
11	9-6			14.4		2E(1-5), PO(3-7)	8-3	Pv
Route 5								
DR	1.0490	21.4	7.9	120		0.147677	1-10	Pf 1.6
303	9-0	21.4	5.6	14.6		Sprinkler,	9-0	Pe -0.2
67	9-6			16.0		2E(2-0), PO(5-0)	10-10	Pv



Hydraulic Analysis

Job Number: 1

Report Description: COMBINED DESIGN AREA CALC

Pipe Type	Diameter	Flow	Velocity	HWC	Friction Loss	Length	Pressure
Downstream	Elevation	Discharge	K-Factor	Pt	Pn	Eq. Length	Summary
Upstream					Fittings	Total Length	
BL	2.0670	21.4	2.0	120	0.005430	32-7	Pf 0.3
67	9-6			16.0		13-6	Pe
51	9-6			16.3	fE(3-6), PO(10-0)	46-1	Pv
Route 6							
DR	1.0490	21.0	7.8	100	0.198769	2-5	Pf 1.8
103	9-0	21.0	5.6	14.0	Sprinkler,	6-5	Pe -0.2
9	9-6			15.5	2E(1-5), PO(3-7)	8-10	Pv
CM	4.0260	21.0	0.5	100	0.000284	0-6	Pf 0.0
9	9-6			15.5			Pe
8	9-6			15.6		0-6	Pv
Route 7							
DR	1.0490	21.0	7.8	100	0.199825	2-5	Pf 1.8
101	9-0	21.0	5.6	14.1	Sprinkler,	6-5	Pe -0.2
5	9-6			15.6	2E(1-5), PO(3-7)	8-10	Pv
Route 8							
DR	1.0490	20.1	7.5	100	0.184403	4-10	Pf 2.1
102	9-0	20.1	5.6	12.9	Sprinkler,	6-5	Pe -0.2
6	9-6			14.8	2E(1-5), PO(3-7)	11-3	Pv
Route 9							
DR	1.0490	20.2	7.5	100	0.186306	1-10	Pf 1.5
105	9-0	20.2	5.6	13.1	Sprinkler,	6-5	Pe -0.2
10	9-6			14.4	2E(1-5), PO(3-7)	8-3	Pv
Route 10							
DR	1.0490	19.3	7.2	100	0.170388	3-10	Pf 1.7
113	9-0	19.3	5.6	11.9	Sprinkler,	6-5	Pe -0.2
17	9-6			13.4	2E(1-5), PO(3-7)	10-3	Pv
CM	2.4690	38.7	2.6	100	0.009559	10-0	Pf 0.1
17	9-6	19.4		13.4	Flow (q) from Route 11		Pe
15	9-6			13.5		10-0	Pv
Route 11							
DR	1.0490	19.4	7.2	100	0.172345	2-9½	Pf 1.6
112	9-0	19.4	5.6	12.0	Sprinkler,	6-5	Pe -0.2
18	9-6			13.4	2E(1-5), PO(3-7)	9-2½	Pv
CM	2.4690	19.4	1.3	100	0.002667	4-0	Pf 0.0
18	9-6			13.4			Pe
17	9-6			13.4		4-0	Pv
Route 12							
DR	1.0490	20.0	7.4	100	0.181859	2-10	Pf 1.7
111	9-0	20.0	5.6	12.7	Sprinkler,	6-5	Pe -0.2
16	9-6			14.2	2E(1-5), PO(3-7)	9-3	Pv
CM	2.4690	20.0	1.3	100	0.002814	14-0	Pf 0.0
16	9-6			14.2			Pe
14	9-6			14.2		14-0	Pv
Route 13							
DR	1.0490	20.0	7.4	100	0.182256	1-10	Pf 1.5
107	9-0	20.0	5.6	12.7	Sprinkler,	6-5	Pe -0.2
12	9-6			14.0	2E(1-5), PO(3-7)	8-3	Pv
Route 14							
DR	1.0490	20.2	7.5	100	0.185965	2-10	Pf 1.7
104	9-0	20.2	5.6	13.0	Sprinkler,	6-5	Pe -0.2
7	9-6			14.5	2E(1-5), PO(3-7)	9-3	Pv

Equivalent Pipe Lengths of Valves and Fittings (C=120 only)

C Value Multiplier

$$\left(\frac{\text{Actual Inside Diameter}}{\text{Schedule 40 Steel Pipe Inside Diameter}} \right)^{4.87} = \text{Factor}$$

Value Of C	100	130	140	150
Multiplying Factor	0.713	1.16	1.33	1.51



Hydraulic Analysis

Job Number: 1

Report Description: COMBINED DESIGN AREA CALC

Pipe Type	Diameter	Flow	Velocity	HWC	Friction Loss	Length	Pressure
Downstream	Elevation	Discharge	K-Factor	Pt	Pn	Eq. Length	Summary
Upstream					Fittings	Total Length	

Pipe Type Legend	Units Legend	Fittings Legend
AO Arm-Over BL Branch Line CM Cross Main DN Drain DR Drop DY Dynamic FM Feed Main FR Feed Riser MS Miscellaneous OR Outrigger RN Riser Nipple SP Sprig ST Stand Pipe UG Underground	Diameter Inch Elevation Foot Flow gpm Discharge gpm Velocity fps Pressure psi Length Foot Friction Loss psi/Foot HWC Hazen-Williams Constant Pt Total pressure at a point in a pipe Pn Normal pressure at a point in a pipe Pf Pressure loss due to friction between points Pe Pressure due to elevation difference between indicated points Pv Velocity pressure at a point in a pipe	ALV Alarm Valve AngV Angle Valve b Bushing BalV Ball Valve BFP Backflow Preventer BV Butterfly Valve C Cross Flow Turn 90° cplg Coupling Cr Cross Run CV Check Valve DelV Deluge Valve DPV Dry Pipe Valve E 90° Elbow EE 45° Elbow Ee1 11¼° Elbow Ee2 22½° Elbow f Flow Device fd Flex Drop FDC Fire Department Connection fE 90° FireLock(TM) Elbow fEE 45° FireLock(TM) Elbow flg Flange FN Floating Node fT FireLock(TM) Tee g Gauge GloV Globe Valve GV Gate Valve Ho Hose Hose Hose HV Hose Valve Hyd Hydrant LtE Long Turn Elbow mecT Mechanical Tee Noz Nozzle P1 Pump In P2 Pump Out PIV Post Indicating Valve PO Pipe Outlet PrV Pressure Relief Valve PRV Pressure Reducing Valve red Reducer/Adapter S Supply sCV Swing Check Valve SFx Seismic Flex Spr Sprinkler St Strainer T Tee Flow Turn 90° Tr Tee Run U Union WirF Wirsbo WMV Water Meter Valve Z Cap

D

C

B

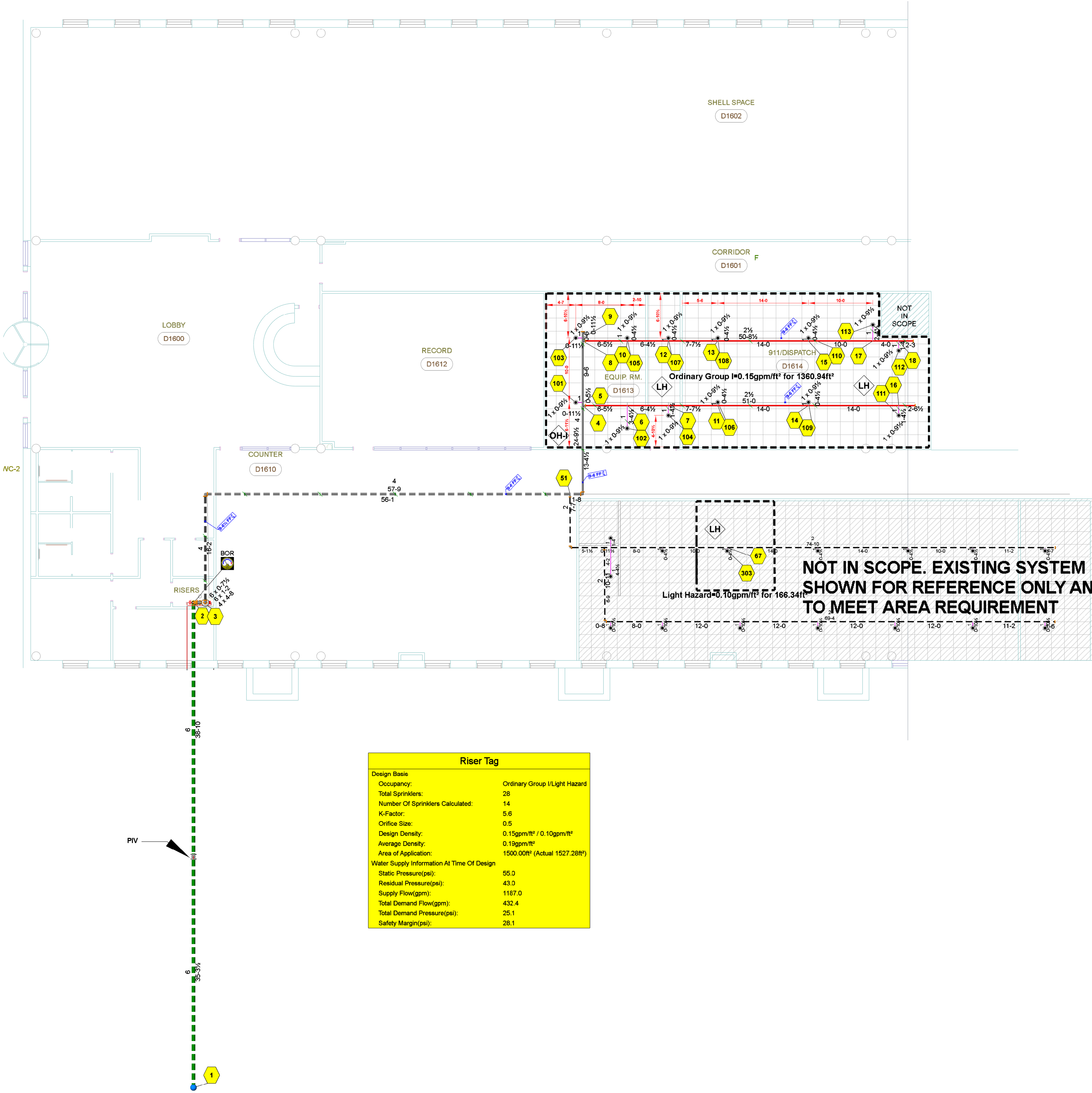
A

D

C

B

A



Riser Tag	
Design Basis	Ordinary Group (Light Hazard)
Occupancy	28
Total Sprinklers	14
Number of Sprinklers Calculated	14
K-Factor	5.6
Orifice Size	0.5
Design Density	0.15 gpm/ft^2 / 0.10 gpm/ft^2
Average Density	0.15 gpm/ft^2
Area of Application	1500.00ft^2 (Actual 1527.28ft^2)
Water Supply Information At Time Of Design	
Static Pressure(psi)	55.0
Residual Pressure(psi)	43.0
Supply Flow(gpm)	1167.0
Total Demand Flow(gpm)	432.4
Total Demand Pressure(psi)	25.1
Safety Margins(psi)	28.1

COLLIN COUNTY FIRE SPRINKLER ADDITION
SCALE: 1/8" = 1'-0"

GENERAL FIRE SPRINKLER DESCRIPTION OF WORK

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIALS, AND PERFORM ALL OPERATIONS IN CONNECTION WITH THE MODIFICATIONS TO THE EXISTING SINGLE-INTERLOCK PRE-ACTION SPRINKLER SYSTEM TO ACCOMMODATE BUILDING RENOVATIONS RELATED TO THE NEW DISPATCH AREA EXPANSION, AS INDICATED AND DESCRIBED IN THE CONTRACT DOCUMENTS.
2. A FIRE SPRINKLER CONTRACTOR LICENSED WITH THE TEXAS DEPARTMENT OF INSURANCE SHALL PREPARE A COMPLETE FIRE SPRINKLER DESIGN CONFORMING TO THE REQUIREMENTS OF NFPA 13, CHAPTER 23 - PLANS AND CALCULATIONS.
3. THE DETAILED DESIGN OF THE FIRE PROTECTION SYSTEM IS DELEGATED TO THE CONTRACTOR.

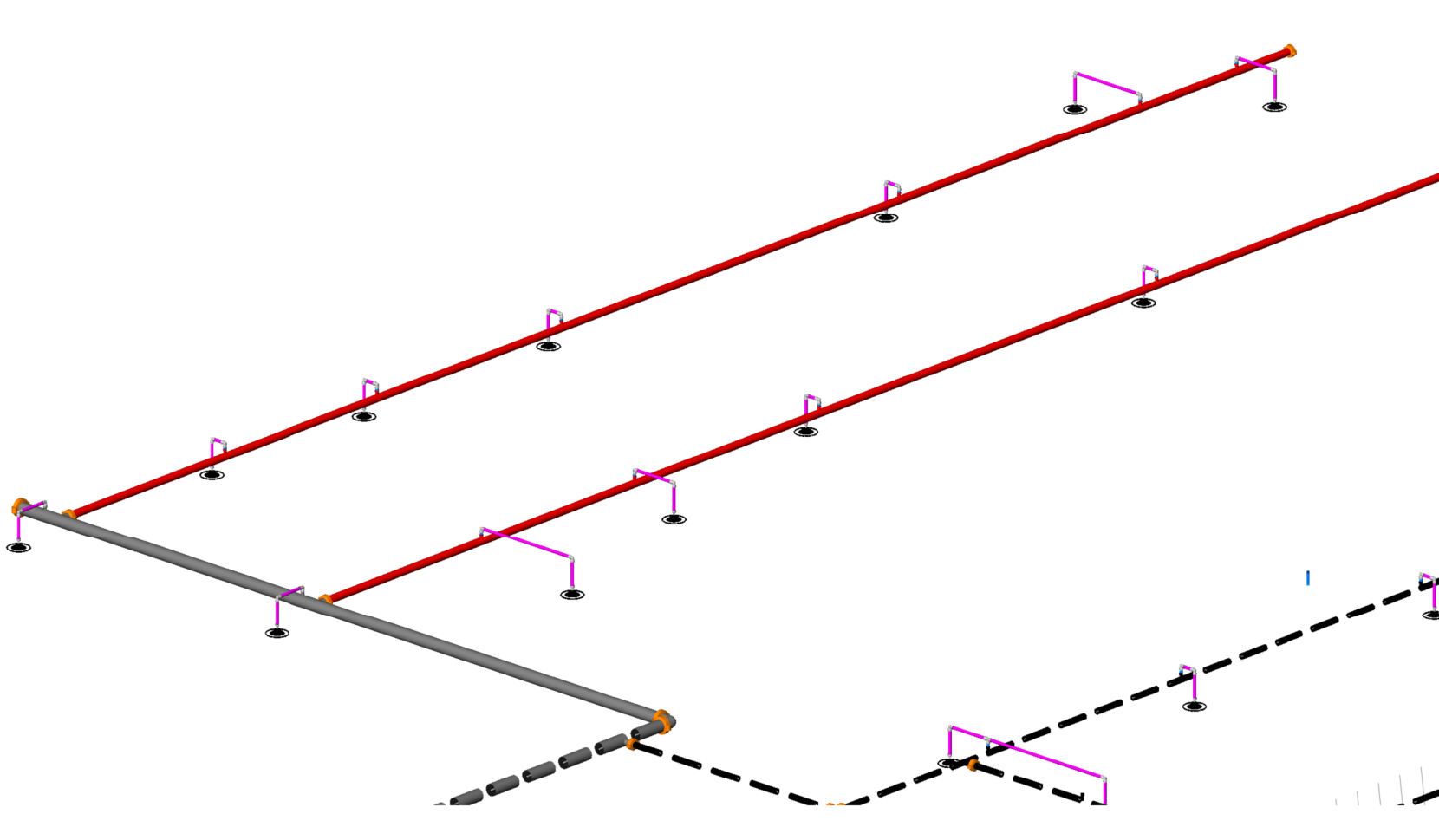
GENERAL FIRE SPRINKLER NOTES

1. APPLICABLE CODES
 - A. INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION
 - B. INTERNATIONAL FIRE CODE (IFC), 2018 EDITION
 - C. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2016 EDITION
2. GENERAL
 - A. VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE BEFORE COMMENCING ANY WORK AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. MATERIALS AND WORK TO CONFORM TO ALL GOVERNING BUILDING AND FIRE CODES, REGULATIONS AND ORDINANCES.
 - B. CONTRACTOR SHALL USE THE EXISTING PRE-ACTION VALVE AND PIPING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - C. MAINTAIN A COMPLETE SET OF DRAWINGS AT THE JOB SITE FOR USE IN MAKING "AS-BUILT DRAWINGS". ANY REVISIONS SHALL BE NOTED ON DRAWINGS AND SUBMITTED TO OWNER AT THE COMPLETION OF THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 - D. CONTRACTOR SHALL PROVIDE A RECORD SET OF DRAWINGS UPON COMPLETION OF WORK TO A/E TEAM FOR REVIEW.
 - E. PIPE ROUTING AND SIZING SHALL BE DETERMINED BY THE CONTRACTOR AND INDICATED ON THE SHOP DRAWINGS AND RECORD DRAWINGS.
 - F. PIPES PENETRATING THROUGH RATED/NON-RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROPRIATE APPLICABLE CODES.
 - G. UP TO DATE HYDRAULIC DATA NOT PROVIDED AT TIME OF DESIGN. CONTRACTOR TO PERFORM HYDRANT FLOW TEST PRIOR TO INSTALLATION.
 - H. REMOVE EXISTING WET PIPE PROTECTION ABOVE SCOPE OF WORK AREA AND VERIFY WET SYSTEM FUNCTION.
 - I. CONTRACTOR SHALL REPAIR OR REPLACE ALL DAMAGED CARPET, CEILING TILE, OR RAISED FLOOR TILES TO A LIKE NEW CONDITION UPON COMPLETION OF THE CONSTRUCTION.

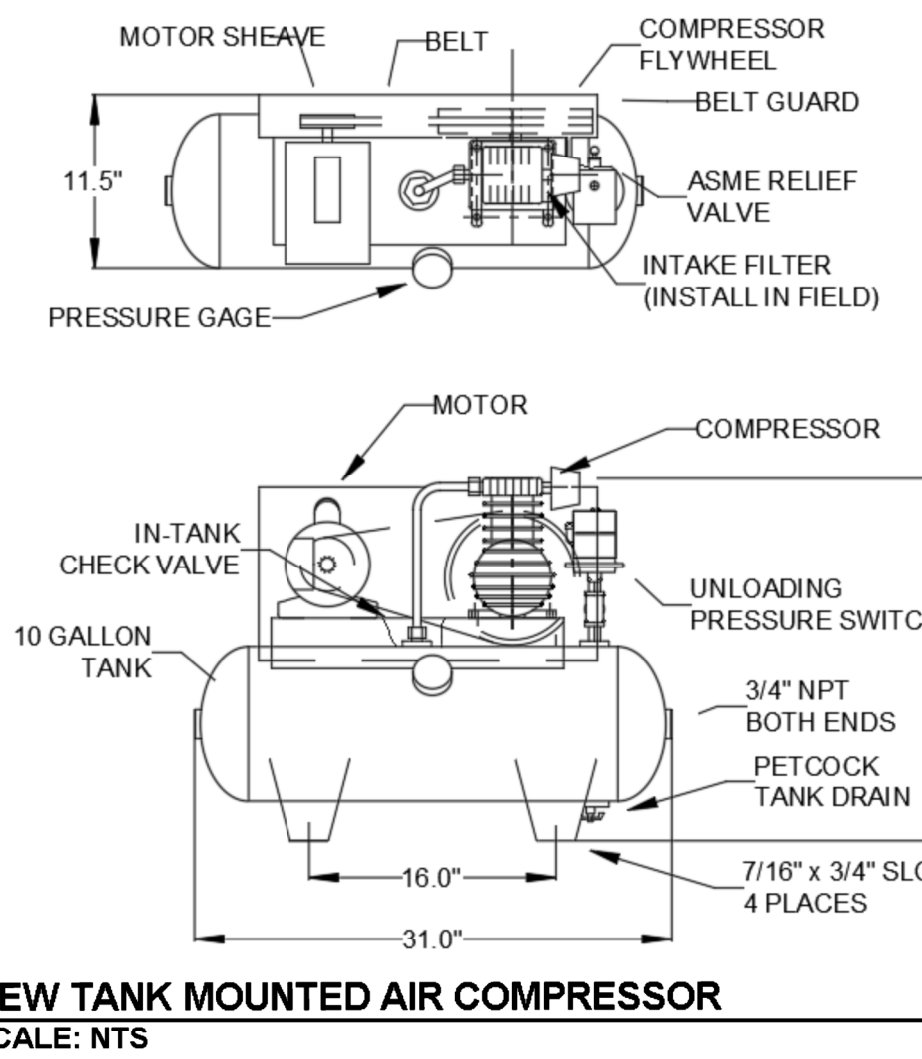
SYMBOLS	ABBREVIATIONS
-0-3/8" FF	ACT ACQUETICAL CEILING TILE
-0-3/8" FF	BFV BUTTERFLY VALVE
-0-3/8" FF	CL CENTER LINE
X	CON CONCENTRIC
X'-X	CT CENTER OF TILE
0	GALV GALVANIZED
---	GRV GROOVED
---	GWB GYPSUM (DRYWALL)
OH	N.I.C. NOT IN CONTRACT
LH	N.T.S. NOT TO SCALE
	O.C. ON CENTER
	OS&Y OUTSIDE SCREW & YOKE
	RED REDUCER
	RN RISER NIPPLE
	SP SPRIG
	THD THREADED



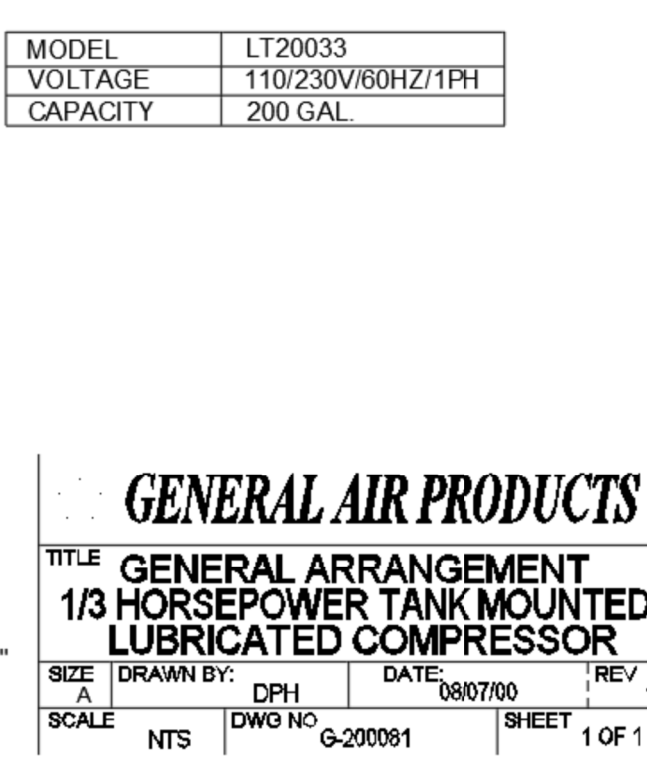
AREA MAP
SCALE: NTS



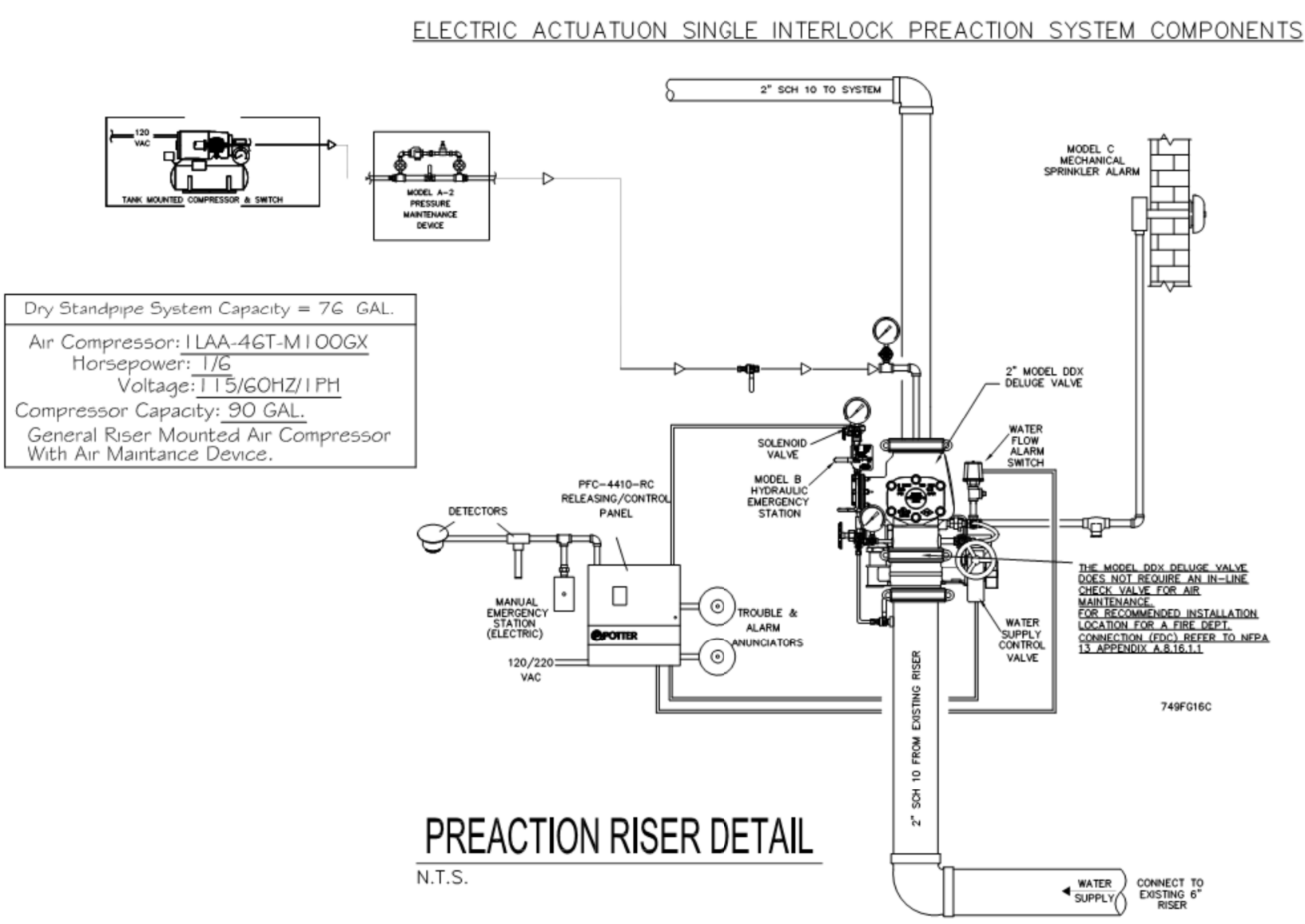
FIRE SPRINKLER ISOMETRIC
SCALE: NTS



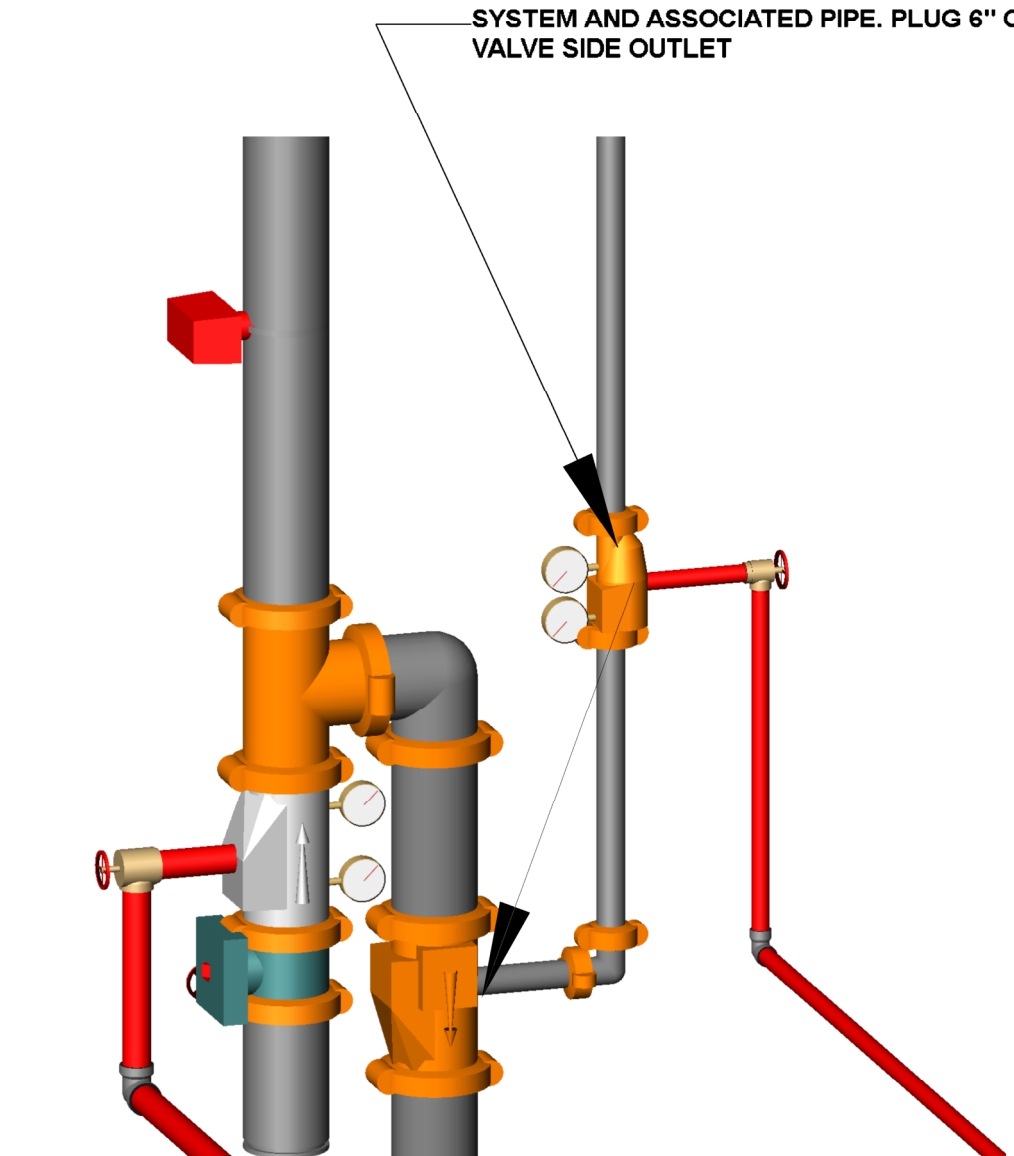
NEW TANK MOUNTED AIR COMPRESSOR
SCALE: NTS



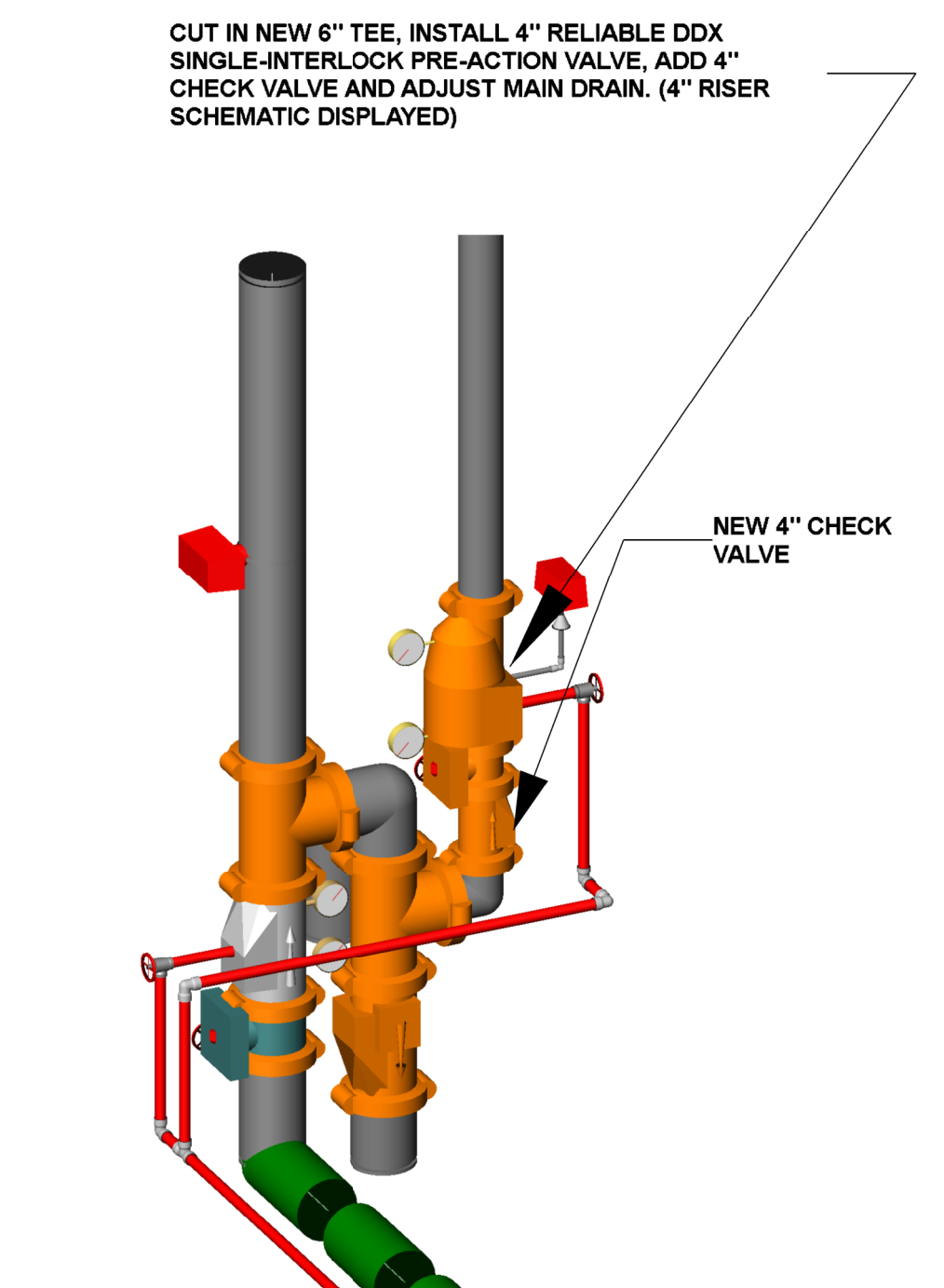
GENERAL AIR PRODUCTS
TITLE: GENERAL ARRANGEMENT
13 HORSEPOWER TANK MOUNTED
LUBRICATED COMPRESSOR
DATE: 06/01/2021
SCALE: NTS
SHEET 1 OF 1



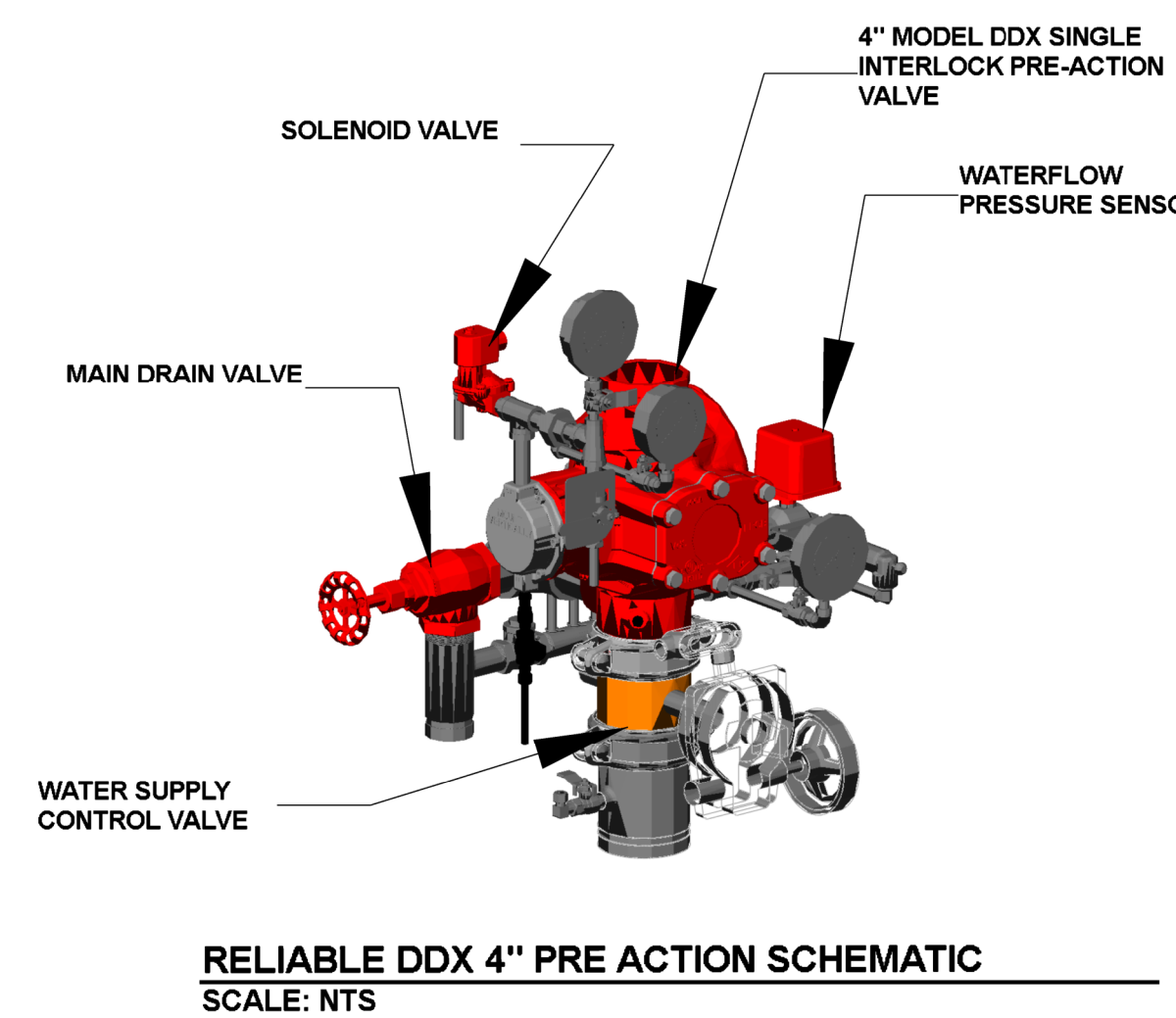
EXISTING 2" PRE-ACTION DIAGRAM (DEMO)
SCALE: NTS



EXISTING RISER ROOM ISOMETRIC (DEMO)
SCALE: NTS



RISER ROOM ISOMETRIC (ALTERATIONS)
SCALE: NTS



RELIABLE DDX 4" PRE ACTION SCHEMATIC
SCALE: NTS

SCALES	
0' 1' 2' 4' 8' 16'	1/8" = 1'-0"
0' 6' 10' 15' 20' 30'	1/16" = 1'-0"

SEAL

STATE OF TEXAS
EVAN E. WILSON
134713
Professional Engineer
12-11-2020

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PROJECT: COLLIN COUNTY SHERIFF'S OFFICE FIRE SPRINKLER MODIFICATION

ADDRESS: 4300 COMMUNITY AVENUE MCKINNEY, TEXAS 75071

PROJECT NO: 1EEW20009

DATE: APRIL 17, 2020

DESIGN: C.M. DRAWN BY: C.M. CHECKED BY: E.W.

SCALE: 1"=1/8"

TITLE: FIRE SPINKLER GENERAL NOTES

NUMBER: FP001

SHEET: 1 of 1

REV/DAT: FILE NAME: Z:\Shared\apps\JUS\JUS\000\Proj\1-MILS\N\LEDC0009 - Collin Co. Sheriff's Office (MD Trg)\Design Drawings\FA Layout\FA Layout.dwg LAYOUT NAME: FA001 PLOT/DWG: Tuesday, October 27, 2020 - 3:37pm

GENERAL DESCRIPTION OF WORK:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS, AND PERFORM ALL OPERATIONS IN CONNECTION WITH THE EXPANSION OF THE EXISTING PFC-6075R PRE-ACTION FIRE ALARM SYSTEM WITH THE INSTALLATION OF NEW SMOKE DETECTION AND MANUAL PULL STATION IN THE CCSO 911 DISPATCH CENTER AT 4300 COMMUNITY AVENUE IN THE CITY OF MCKINNEY, TEXAS, AS INDICATED AND DESCRIBED IN THE CONTRACT DOCUMENTS.
2. THIS PROJECT IS NOT INTENDED TO BRING OTHER EXISTING SYSTEMS (SUCH AS THE MECHANICAL SYSTEM, SPRINKLER SYSTEM, AND EGRESS COMPONENTS) INTO COMPLIANCE WITH THE APPLICABLE CODES.
3. CONTRACTOR SHALL REPAIR OR REPLACE ALL DAMAGED CARPET, CEILING TILE, OR RAISED FLOOR TILES TO A LIKE NEW CONDITION UPON COMPLETION OF THE CONSTRUCTION.

FIRE ALARM GENERAL NOTES:

1. APPLICABLE CODES
A. IBC, THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
B. IFC, THE INTERNATIONAL FIRE CODE, 2018 EDITION
C. NFPA 72, NATIONAL FIRE ALARM CODE, 2016 EDITION
2. GENERAL
A. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS, CONFLICTS WITH LIGHTING, CEILING OBSTRUCTIONS, SUPPLY/RETURN REGISTERS, MECHANICAL EQUIPMENT AND OTHER ITEMS MUST BE DOCUMENTED FOR OWNER REVIEW AND APPROVAL PRIOR TO ROUGH-IN. VARIATIONS FROM THE DESIGN MUST MEET THE REQUIREMENTS OF THE DESIGN DOCUMENTS.
B. THE EXACT LOCATIONS OF PANELS, DEVICES, AND NOTIFICATION APPLIANCES THROUGHOUT ELECTRICAL AND MECHANICAL AREAS SHALL BE DETERMINED BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR MOVING EXISTING EQUIPMENT OR PROVIDING STAND-OFF MOUNTING IF REQUIRED. EXTERIOR WIRING, JUNCTION BOXES, AND APPLIANCES SHALL BE RATED FOR OUTDOOR USE. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ACTUAL CONDITIONS. REFLECTED CEILING PLANS ARE NOT AVAILABLE IN CAD FORMAT.
C. THE SYSTEM SHALL BE INSTALLED UNDER THE SUPERVISION OF A MINIMUM LEVEL III NICET CERTIFIED TECHNICIAN SPECIALIZING IN FIRE ALARM SYSTEMS. THE NICET TECHNICIAN IS EXPECTED TO BE ON SITE WITH THE CONTRACTOR DURING THE INSTALLATION OF WIRING AND DURING THE ENTIRE TIME OF FINAL CONNECTIONS AND TESTING OF THE FIRE ALARM AND EMERGENCY VOICE EVACUATION SYSTEM AND ECS SYSTEM.
D. THE FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS.
E. FIRE ALARM DEVICE LOCATIONS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DEVIATIONS MUST BE APPROVED BY OWNER PRIOR TO ROUGH-IN.
F. REFLECTED CEILING PLANS ARE NOT AVAILABLE IN CAD FORMAT. LOCATIONS OF DEVICES SHOWN THROUGHOUT DESIGN DRAWINGS ARE APPROXIMATE. ALL CEILING MOUNTED DEVICES INSTALLED IN TILES SHALL BE CENTERED IN BOTH DIRECTIONS.
G. FOR REQUIRED WORK ABOVE CEILINGS, CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING CEILING TILES AND/OR CUTTING ACCESS HOLES AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING CEILING TILES AND/OR PATCHING AND PAINTING ACCESS HOLES AFTER WORK IS COMPLETE.

FIRE ALARM GENERAL NOTES (CONTINUED):

5. INITIATING DEVICES
A. ADDRESSABLE MANUAL PULL STATION SHALL BE LOCATED AT EXIT TO THE AREA OF WORK FOR MANUAL RELEASE OF THE PRE-ACTION SYSTEM. MANUAL PULL STATION SHALL BE LISTED AND APPROVED FOR USE WITH THE EXISTING PFC-6075R FIRE ALARM CONTROL PANEL (APS-SA/DA).
B. SYSTEM SPOT TYPE SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE. PROVIDE SMOKE DETECTORS AT CEILING LEVEL WITHIN THE AREA OF WORK AND BELOW THE FLOOR WITHIN THE AREA OF WORK AS DESCRIBED ON THE DRAWINGS. SMOKE DETECTOR SPACING IS BASED ON SUPPORTING AN AIR CHANGE EVERY 2 MINUTES. DO NOT LOCATE SMOKE DETECTORS WITHIN 3- FEET OF SUPPLY/RETURN REGISTERS. IN ADDITION, ALL SYSTEM SPOT TYPE SMOKE DETECTORS SHALL BE ADDRESSABLE, POWERED FROM THE SIGNALING LINE CIRCUIT, AND BE LISTED AND APPROVED FOR USE WITH THE EXISTING PFC-6075R FIRE ALARM CONTROL PANEL (PSA).
6. POWER SUPPLIES
A. CURRENT DRAW, CIRCUIT LOADING AND VOLTAGE DROP CALCULATIONS MUST BE PERFORMED AND SUBMITTED FOR REVIEW BY THE INSTALLING CONTRACTOR.
7. WIRING
A. ALL RISERS MUST BE INSTALLED IN MIN. 3/4 INCH EMT W/COMPRESSION TYPE FITTINGS.
B. ALL WIRE INSTALLED BELOW 7 FEET OR EXPOSED MUST BE INSTALLED IN EMT UNLESS NOTED OTHERWISE FOR ARCHITECTURAL REASONS.
C. ALL WIRE ABOVE 7 FEET OR NOTED OTHERWISE NOT INSTALLED IN CONDUIT MUST BE PLENUM GRADE AND SECURED ACCORDING TO NEC 70 AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
D. PROPERLY SECURED PLENUM GRADE FIRE ALARM CABLE MAY BE INSTALLED ABOVE FINISHED CEILING.
E. ALL WIRING SHALL BE CONCEALED WITHIN THE CONSTRUCTION. WHERE NOT POSSIBLE TO CONCEAL THE WIRING, THE OWNER SHALL BE CONSULTED FOR THE LOCATION OF THE INSTALLATION.
F. THE FOLLOWING MINIMUM SIZES OF CONDUCTORS SHALL BE USED FOR ALL NEW WIRING:

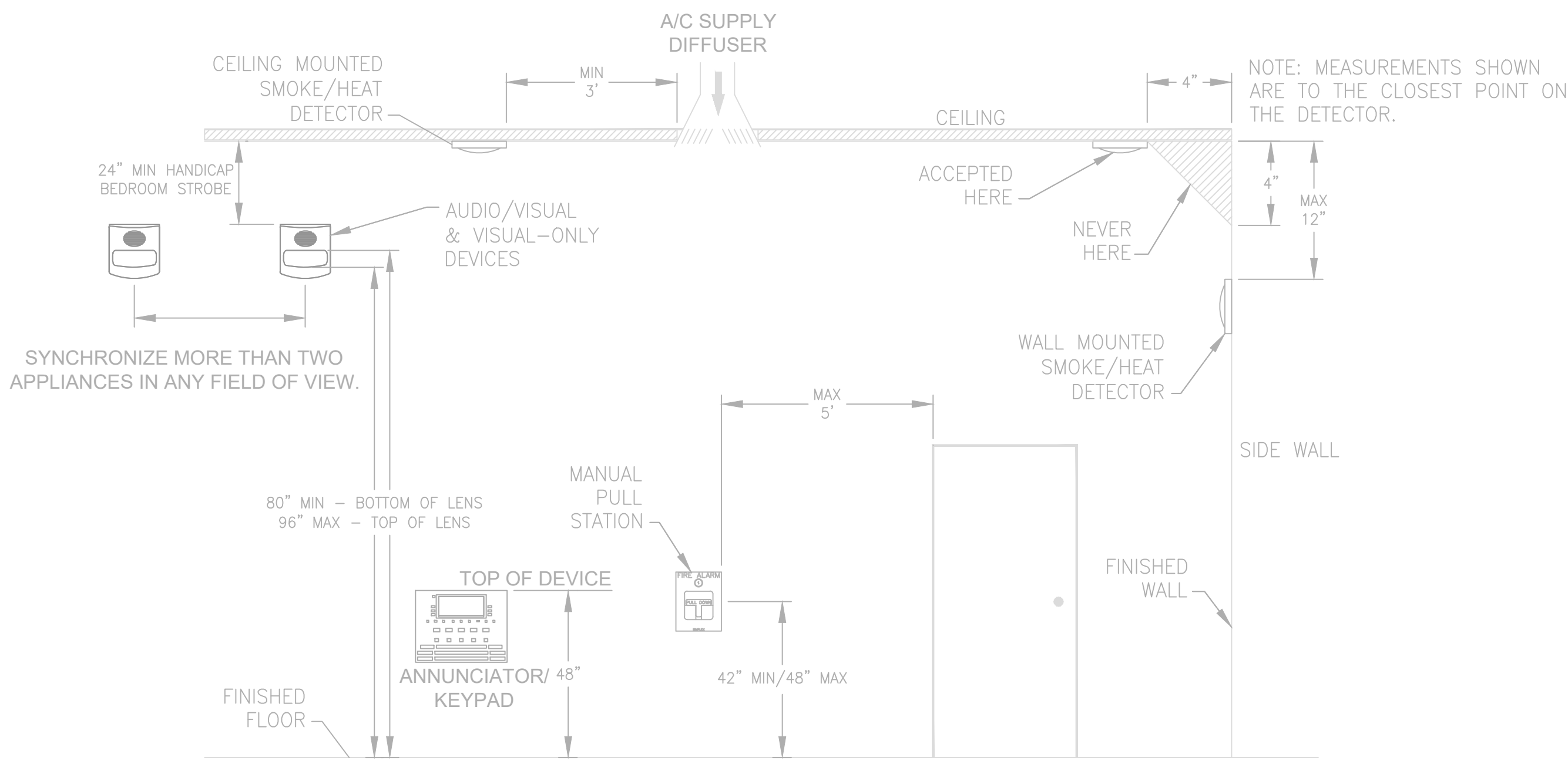
1. POWER SUPPLY CONDUCTORS (PRIMARY AND SECONDARY)	NO. 12 AWG
2. SIGNALING LINE CIRCUIT CONDUCTORS	NO. 18 AWG
3. LCD REMOTE ALARM ANNUNCIATORS	NO. 18 AWG
4. NOTIFICATION APPLIANCE CIRCUITS	NO. 14 AWG
5. SPEAKER CIRCUITS	NO. 14 AWG
6. 24 VDC POWER CONDUCTORS	NO. 14 AWG
7. SHIELDED TWISTER PAIR AUDIO CONDUCTORS	NO. 14 AWG
8. ECS RELAY CONDUCTORS	NO. 18 AWG
9. PUSH-TO-TALK AND SUPERVISORY CIRCUIT CONDUCTORS	NO. 18 AWG

G. COLOR CODING OF CONDUCTORS SHALL BE APPROVED BY THE OWNER AND AHJ AND SHALL BE AS FOLLOWS:

1. SLC, IDC, AND FAA	RED JACKET
2. SPEAKER CIRCUITS	BLUE JACKET
3. STROBE CIRCUITS	WHITE JACKET
4. POWER CIRCUITS	BLACK JACKET
5. ECS RELAY CONDUCTORS	RED JACKET
6. SUPPLEMENTAL MICROPHONE CIRCUITS	RED JACKET
7. ECS AUDIO CONDUCTORS	BLUE JACKET
8. GROUNDING CONDUCTORS	GREEN JACKET
8. SEQUENCE OF OPERATIONS
A. EXISTING SEQUENCE OF OPERATIONS SHALL REMAIN.

DEMOLITION NOTES:

1. PENETRATIONS AND/OR DAMAGE TO PARTITIONS, INTERIOR FINISH, OR OTHER BUILDING ELEMENTS RESULTING FROM DEMOLITION ARE TO BE REPAIRED.
2. CONTRACTOR SHALL PROTECT CONSTRUCTION TO REMAIN AGAINST DAMAGE AND SOILING DURING DEMOLITION.
3. CONTRACTOR SHALL NOTIFY OWNER OF ANY DEFECTS AND/OR DECAYING MATERIALS FOUND IN THE EXISTING STRUCTURE PRIOR TO ENCLOSING NEW CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE COVER PLATES OVER ABANDONED EXPOSED JUNCTION BOXES. CONTRACTOR SHALL PAINT COVER PLATES TO MATCH WALLS.



1 Typical Device Mounting Detail
Not to Scale

FIRE ALARM SYMBOL LEGEND

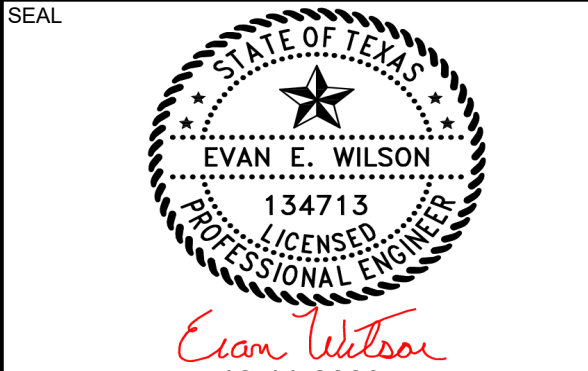
- | | |
|--|--|
| | FIRE ALARM CONTROL PANEL (EXISTING TO REMAIN) |
| | PHOTOELECTRIC SMOKE DETECTOR ABOVE FLOOR |
| | PHOTOELECTRIC SMOKE DETECTOR BELOW FLOOR |
| | PRE-ACTION MANUAL RELEASE |
| | PRE-ACTION AUDIO/VISUAL NOTIFICATION (SUBSCRIPT INDICATES CANDELA SETTING) |

NO.	REVISION	DATE
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KEY PLAN

12-11-2020

NORTH



IT IS A VIOLATION OF STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DRAWING IN ANY WAY. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS/HER SEAL AND THE NOTATION "ALTERED BY FOLLOWED BY HIS/HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION."

PROJECT
**COLLIN COUNTY
SHERIFF'S OFFICE
FIRE SPRINKLER
MODIFICATION**

ADDRESS
4300 COMMUNITY AVENUE
MCKINNEY, TEXAS 75071

PROJECT NO
1EEW20009

DATE
APRIL 17, 2020

DESIGN
DRAWN BY
NLB

CHECKED BY
EEW

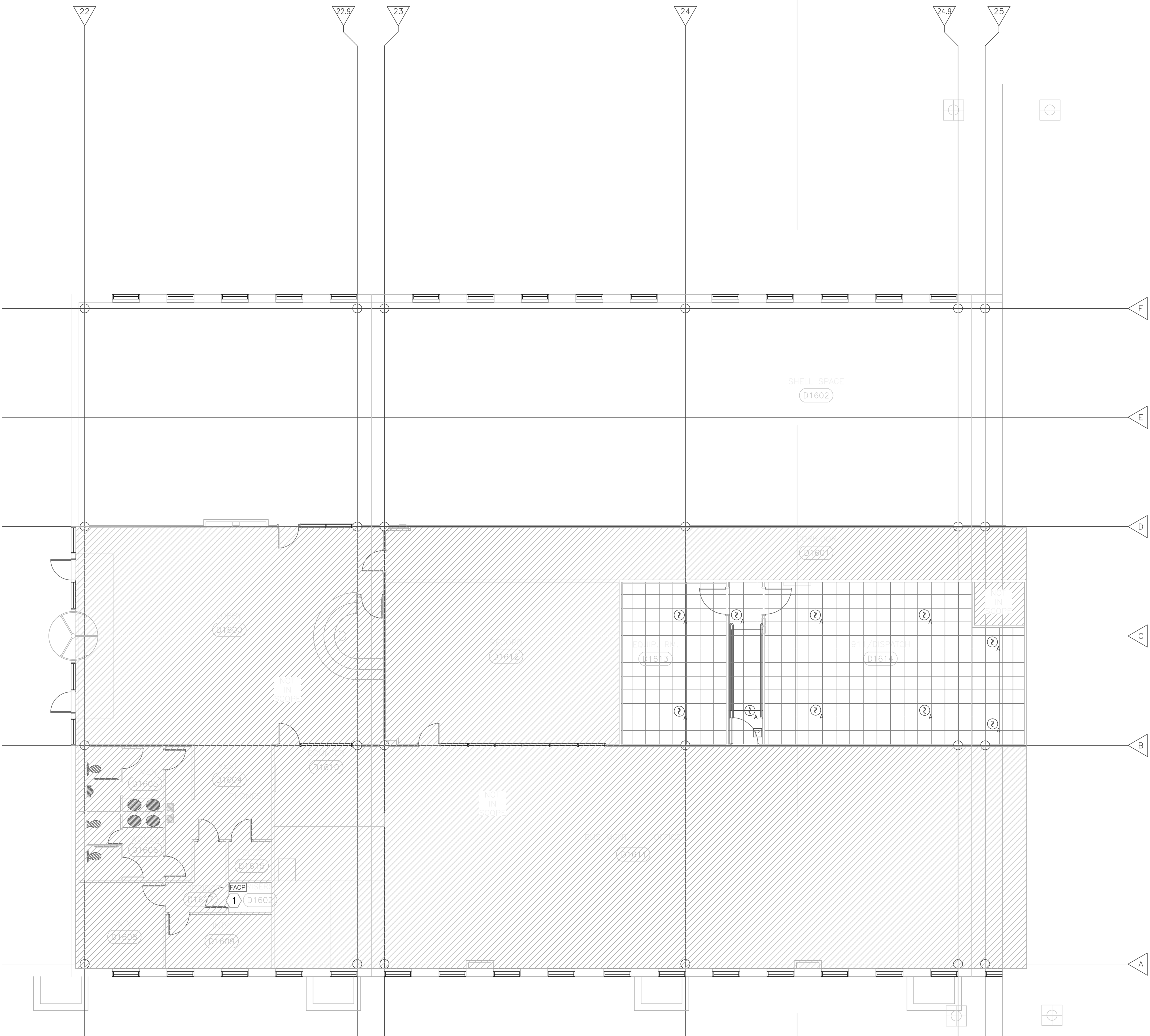
SCALE

TITLE
**FIRE ALARM
GENERAL NOTES**

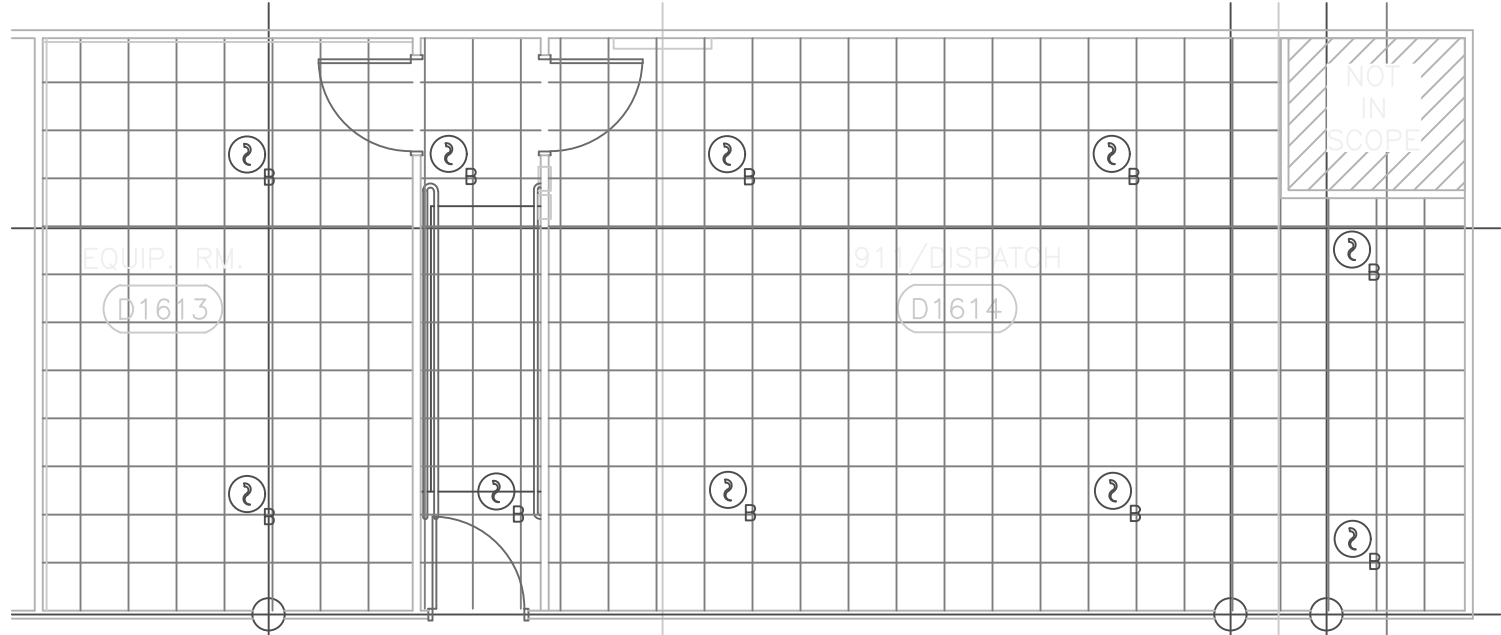
NUMBER
FA001

SHEET
1 of 2

REV/DAT: FILE NAME: Z:\Shared\Agency\AS\FA101\Proj1 - MCKINNEY\Drawings\FA Layout\FA Layout.dwg LAYOUT NAME: FA101 ROUTED: Tuesday, October 27, 2020 - 3:37pm



 **PREACTION FIRE ALARM LAYOUT *DRAFT VERSION***
SCALE: 1/8" = 1'-0"



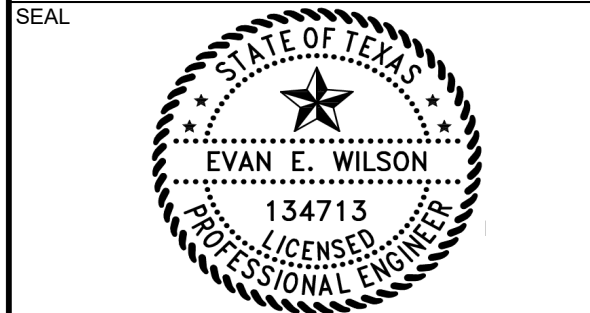
 **PREACTION FIRE ALARM LAYOUT (BELOW FLOOR) *DRAFT VERSION***
SCALE: 1/8" = 1'-0"

SHEET KEYED NOTES

- ① EXISTING PRE-ACTION PFC-6075R FIRE ALARM CONTROL PANEL TO BE EXPANDED.

NO.	REVISION	DATE
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KEY PLAN



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PROJECT: **COLLIN COUNTY SHERIFF'S OFFICE FIRE SPRINKLER MODIFICATION**

ADDRESS: 4300 COMMUNITY AVENUE
MCKINNEY, TEXAS 75071

PROJECT NO: 1EEW20009

DATE: APRIL 17, 2020

DESIGN: DRAWN BY: NLB CHECKED BY: EEW

SCALE:

TITLE: **FIRE ALARM PARTIAL FLOOR PLAN**

NUMBER: **FA101**

SHEET: 2 of 2