

SPECIFICATIONS AND
CONTRACT DOCUMENTS

FOR

JEFFERSON COUNTY, TEXAS
PHASE VI
FIRST-TIME SANITARY SEWER IMPROVEMENTS PROJECT
TDA – TxCDBG CONTRACT NO. 7218240



Prepared by:

LJA ENGINEERING, INC.

Texas Registered Engineering Firm F-1386
2615 Calder Avenue, Suite 500
Beaumont, Texas 77702

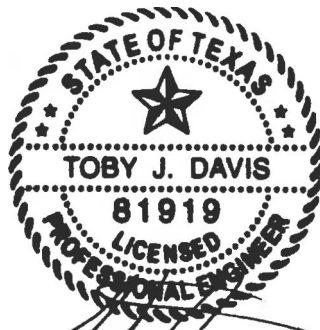
FEBRUARY 2021

APPROVED:

LJA ENGINEERING, INC.

BY: _____

Toby J. Davis, Vice President
P.E. No. 81919



[Signature]
2/10/2021



JEFFERSON COUNTY PURCHASING DEPARTMENT

Deborah L. Clark, Purchasing Agent

1149 Pearl Street, 1st Floor, Beaumont, TX 77701 409-835-8593 Fax 409-835-8456

LEGAL NOTICE Advertisement for Invitation for Bids

February 23, 2021

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for **(IFB 21-004/JW) Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240)**. Specifications for this project may be obtained from the Jefferson County website, <https://www.co.jefferson.tx.us/Purchasing/> or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and three (3) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME: Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240)

BID NO: IFB 21-004/JW

DUE DATE/TIME: 11:00 AM CT, Wednesday, March 24, 2021

MAIL OR DELIVER TO: Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, Texas 77701

There will be a pre-bid conference and walk-through at 2:00 PM CT on Wednesday, March 10, 2021, in the Jefferson County Engineering Conference Room (5th Floor, Historic Courthouse).

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars (\$100,000). If the contract is for one hundred thousand dollars (\$100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid submission requirements should be directed to Jamey West, Assistant Purchasing Agent, at 409-835-8593 or jwest@co.jefferson.tx.us.

Jefferson County encourages Disadvantaged Business Enterprises to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provisions of services. Individuals requiring special accommodations are requested to contact our office at 409-835-8593 to make arrangements no later than seven (7) calendar days prior to the submittal deadline. Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County.

All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation.

A handwritten signature in black ink that reads "Deborah Clark". Below the signature is a circular official seal of the Jefferson County Purchasing Department.

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

Publish: Beaumont Enterprise & Port Arthur News – February 24, 2021 and March 3, 2021

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Instructions to Bidders

1. Bid Submission

Bids must be submitted in complete original form by mail or messenger to the following address:

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Late bids will not be accepted and will be returned unopened to the bidder.

All bids submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

Bidder shall submit bid in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope or box shall also include the Bid Number, Bid Name, Bid Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bid Submissions:

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

<https://www.co.jefferson.tx.us/Purchasing/>

2. Bid Submissions During Time of Inclement Weather, Disaster, or Emergency

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the IFB and urgent County requirements preclude amendment to the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3. Courthouse Security

Bidders are advised that all visitors to the Courthouse must pass through Security. **Bidders planning to hand deliver bids must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal.** Mondays and Tuesdays are particularly heavy days. Bidders are strongly urged to plan accordingly.

4. Preparation of Bids

The bid shall be legibly printed in ink or typed.

The County requests that bid submissions NOT be bound by staples or glued spines.

If a unit price or extension already entered is to be altered, it shall be crossed out and initialed in ink by the bidder.

The bid shall be legally signed and shall include the complete address of the bidder.

Jefferson County is exempt from Federal and State Sales Taxes, and such taxes shall not be included in bid prices.

5. Signatures

All bids, notifications, claims, and statements must be signed by an individual authorized to bind the bidder. The individual signing certifies, under penalty of perjury, that he or she has the legal authorization to bind the bidder.

6. County Holidays – 2021:

January 18, 2021	Martin Luther King, Jr. Day	Monday
February 15, 2021	President's Day	Monday
April 2, 2021	Good Friday	Friday
May 31, 2021	Memorial Day	Monday
July 5, 2021	Independence Day	Monday
September 6, 2021	Labor Day	Monday
November 11, 2021	Veteran's Day	Thursday
November 25 & 26, 2021	Thanksgiving	Thursday & Friday
December 23 & 24, 2021	Christmas	Thursday & Friday
December 31, 2021	New Year's	Friday

7. Rejection or Withdrawal

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

8. Emergency/Declared Disaster Requirements

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s). Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling and drayage fees may apply.

9. Award

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected. Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any

substantial nonconformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

10. Contract

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

11. Waiver of Subrogation

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

12. Fiscal Funding

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

13. Bid Results

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page (<http://co.jefferson.tx.us/purchasing/main.htm>) as soon as possible following bid opening. A final tabulation will be posted following bid award, and will also be available for review in the Purchasing Department.

14. Changes and Addenda to Bid Documents

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

15. Specifications

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County, and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid. Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

16. Delivery

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

17. Interpretation of Bid and/or Contract Documents

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

18. Currency

Prices calculated by the bidder shall be stated in U.S. dollars.

19. Pricing

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

20. Notice to Proceed/Purchase Order

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

21. Certification

By signing the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.
- The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.

22. Definitions

"County" – Jefferson County, Texas.

"Contractor" – The bidder whose proposal is accepted by Jefferson County.

23. Minority-Women Business Enterprise Participation

It is the desire of Jefferson County to increase the participation of Minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

General Conditions of Bidding and Terms of Contract

By execution of this document, the vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. Bidding

1.1 Bids. All bids must be submitted on the bid form furnished in this package.

1.2 Authorized Signatures. The bid must be executed personally by the vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the vendor shall accompany the bid to become a valid bid.

1.3 Late Bids. Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 Withdrawal of Bids Prior to Bid Opening. A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 Withdrawal of Bids after Bid Opening. Bidder agrees that its offer may not be withdrawn or cancelled by the vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 Bid Amounts. Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 Exceptions and/or Substitutions. All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 Alternates. The Invitation for Bid and/or specifications may expressly allow bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 Descriptions. Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 Bid Alterations. Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 Tax Exempt Status. Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 Quantities. Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 Bid Award. Award of contract shall be made to the most responsible, responsive bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections or total bid.

1.14 Silence of Specifications for Complete Units. All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 Addenda. Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 General Bid Bond/Surety Requirements. Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 General Insurance Requirements. Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 Responsiveness. A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 Responsible Standing of Bidder. To be considered for award, bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 Confidential/Proprietary Information

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable, and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 Public Bid Opening. Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. Performance

2.1 Design, Strength, and Quality. Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

- 2.2 Age and Manufacture.** All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.
- 2.3 Delivery Location.** All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.
- 2.4 Delivery Schedule.** Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.
- 2.5 Delivery Charges.** All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.
- 2.6 Installation Charges.** All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.
- 2.7 Operating Instructions and Training.** Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.
- 2.8 Storage.** Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.
- 2.9 Compliance with Federal, State, County, and Local Laws.** Bids must comply with all federal, state, county and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.
- 2.10 OSHA.** The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.
- 2.11 Patents and Copyrights.** The successful vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.
- 2.12 Samples, Demonstrations and Testing.** At Jefferson County's request and direction, bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the bidder/vendor.
- 2.13 Acceptability.** All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.
- 2.14 Maintenance.** Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 Material Safety Data Sheets. Under the “Hazardous Communications Act,” common known as the “Texas Right to Know Act,” a bidder must provide the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 Evaluation. Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners’ Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves the right to contact any bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. Purchase Orders and Payment

3.1 Purchase Orders. A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 Invoices. All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as “N/C” to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 Prompt Payment. In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receive and acceptance by the County of the merchandise ordered and of a valid invoice. Successful bidder(s) is required to pay subcontractors within ten (10) days after the successful bidder receives payment from the County.

3.4 Funding. Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. Contract

4.1 Contract Definition. The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson County, shall constitute a contract equally binding between the successful bidder and Jefferson County.

4.2 Change Order. No different or additional terms will become part of this contract with the exception of a change order. 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 and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 Price Re-determination. A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer’s direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The bidder’s past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 Termination. Jefferson County reserves the right to terminate the contract for default if the bidder breached any of the terms therein, including warranties of bidder or if the bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County’s satisfaction and/or to meet all other obligations and

requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the bidder in default.

4.5 Conflict of Interest. Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 Injuries or Damages Resulting from Negligence. Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 Interest by Public Officials. No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 Warranty. The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.9 Uniform Commercial Code. The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.10 Venue. This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.11 Sale, Assignment, or Transfer of Contract. The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.12 Silence of Specifications. The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

Federal Emergency Management Agency (FEMA)

MANDATED CONTRACT PROVISIONS

1. REMEDIES

a. **Standard.** Contracts for more than the simplified acquisition threshold, currently set at \$250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).

b. **Applicability.** This requirement applies to all FEMA grant and cooperative agreement programs.

2. TERMINATION FOR CAUSE AND CONVENIENCE

a. **Standard.** All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be affected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).

b. **Applicability.** This requirement applies to all FEMA grant and co-operative agreement programs.

3. EQUAL EMPLOYMENT OPPORTUNITY

If applicable, exact language below in subsection 3.d is required.

a. **Standard.** Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. §60- 1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, Amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).

b. **Key Definitions.**

i. **Federally Assisted Construction Contract.** The regulation at 41 C.F.R. § 60-1.3 defines a “federally assisted construction contract” as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.

ii. **Construction Work.** The regulation at 41 C.F.R. § 60-1.3 defines “construction work” as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

c. **Applicability.** This requirement applies to all FEMA grant and cooperative agreement programs.

d. **Required Language.** The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to

ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any sub-contract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and

the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

4. DAVIS-BACON ACT

a. Standard. All prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.

b. Applicability. The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Non-profit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must do the following:

i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti-Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.

iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

COMPLIANCE WITH THE DAVIS-BACON ACT:

a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29C.F.R.pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.

b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

c. Additionally, contractors are required to pay wages not less than once a week.

5. COPELAND ANTI-KICKBACK ACT

a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”).

b. Applicability. This requirement applies to all contracts for construction or repair work above \$2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.

c. Requirements. If applicable, the non-Federal entity must include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

COMPLIANCE WITH THE COPELAND “ANTI-KICKBACK ACT”:

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12.”

6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of \$100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards Act. FEMA suggests including the following contract clause: Compliance with the Contract Work Hours and Safety Standards Act.

(1) Overtime requirements. No contractor or subcontractor contracting for any Part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

a. Standard. If the FEMA award meets the definition of “funding agreement” under 37C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or non-profit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).

b. Applicability. This requirement applies to “funding agreements,” but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of “funding agreement.”

c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines “funding agreement” as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).

b. Applicability. This requirement applies to contracts awarded by a non-Federal entity of amounts in excess of \$150,000 under a federal grant.

CLEAN AIR ACT:

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to Jefferson County and understands and agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT:

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to Jefferson County agrees that the County/Grant Administration Firm Acting on Behalf of the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

9. DEBARMENT AND SUSPENSION

a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

c. Requirements.

i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2 C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at www.sam.gov. See 2 C.F.R. § 180.530.

ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded

by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.

iii. Specifically, a covered transaction includes the following contracts for goods or services:

1. The contract is awarded by a recipient or subrecipient in the amount of at least \$25,000.
2. The contract requires the approval of FEMA, regardless of amount.
3. The contract is for federally-required audit services.
4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of \$25,000.

The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

SUSPENSION AND DEBARMENT:

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by the County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

10. BYRD ANTI-LOBBYING AMENDMENT

a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.

b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of \$100,000 or more under a federal grant must file the required certification. See 2 C.F.R. Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

c. Required Certification.

If applicable, contractors must sign and submit to the non-Federal entity the “**Certification Regarding Lobbying**” **Form** included within these bid specifications.

11. PROCUREMENT OF RECOVERED MATERIALS

a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.

b. Applicability. This requirement applies to all contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.

c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

1. Competitively within a timeframe providing for compliance with the contract performance schedule;
2. Meeting contract performance requirements; or
3. At a reasonable price.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

<https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program>.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.”

The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts. Although FEMA does not currently require additional provisions, FEMA recommends the following:

1. ACCESS TO RECORDS

a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

ACCESS TO RECORDS:

The following access to records requirements apply to this contract:

(1)The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to

any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

2. CHANGES

a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

3. DHS SEAL, LOGO, AND FLAGS

a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).

b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

"The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval."

4. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

5. NO OBLIGATION BY FEDERAL GOVERNMENT

a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

“The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.”

6. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

“The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor’s actions pertaining to this contract.”

Special Requirements/Instructions

The following requirements and instructions **supersede** General Requirements where applicable.

1. Bid Requirement

Each bidder shall ensure that required parts of the bid (included by not limited to a completed specifications packet in its entirety including any addenda, the bid bond(s), the contractor's certifications, local opportunity plan, and the statement of the bidder's qualifications, shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID." The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date and Time of Opening, and Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Bidder is responsible for submitting:

- **One (1) Original Bid Copy and (3) Numbered Bid Copies; with all copies to include a completed copy of this specifications packet, in its entirety.**

Additionally, Bidder must monitor the Jefferson County Purchasing Department Website (below) to check for any addenda and/or additional instructions that have been posted. Failure to return all required forms could result in a response being declared as non-responsive.

All bids shall be tightly sealed in an opaque envelope or box and plainly marked "SEALED BID."

The outside of the envelope or box shall also include: Bid Number, Bid Name, Bid Due Date, Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB. All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project.

All bids must be submitted on the forms provided and are subject to all requirements of the Contract Documents, including the Drawings.

All bids must be regular in every respect and no interlineation, excisions or special conditions may be made or included by the bidder.

The County may consider as irregular any bid on which there is an alteration of or departure from the bid form and, at its option, may reject any irregular bid.

If a contract is awarded, it will be awarded to a responsible bidder on the basis of the lowest/best bid and the selected alternate bid items, if any. The contract will require the completion of the work in accordance with the contract documents.

2. Bid Bond

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars (\$100,000). If the contract is for one hundred thousand dollars (\$100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

The bid bond will be returned to the bidder as soon as practical after the opening of the bids.

3. Section 3

Attention is called to the required Section 3 contracting and hiring objectives specified in the Contract Documents. These minimum objectives for hiring and contracting must be enforced. It is therefore the responsibility of the Bidder to inform themselves as to these requirements.

4. Vendor Registration: SAM (System for Award Management).

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an “active” status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: <https://www.sam.gov>

Bidders are strongly encouraged to review their firm's SAM (System for Award Management) status prior to Bid Submission.

5. Awarded Vendor(s): Submission of FORM 1295 (Texas Ethics Commission)

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an “unsworn declaration” which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an “unsworn declaration.”

FORM 1295 Exemptions: What type of contracts are exempt from the Form 1295 filing requirement under the amended law. The amended law adds to the list of types of contract exempt from the Form 1295 filing requirement. A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and o any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

Upon entering into a contract or professional agreement, the Jefferson County Purchasing Department will submit a request to the Vendor to both:

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.

Vendors must enter the required information on Form 1295, and print a copy of the completed form. The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department.

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

6. Statement of Bidders Qualifications

Each bidder shall submit on the form (Page 67) furnished for that purpose a statement of the bidder's qualifications. The County shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform its obligations under the contract, and the bidder shall furnish the County all such information and data for this purpose as it may request. The right is reserved to reject any bid where an investigation of the available data does not satisfy the County that the bidder is qualified to carry out properly the terms of the contract.

7. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

8. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

9. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

10. Wages and Salaries

Attention is particularly called to the requirement of paying not less than the prevailing Davis Bacon Related Acts (DBRA) wage rates specified in the Contract Documents. These rates are minimums to be paid during the life of the contract. It is therefore the responsibility of the Bidder to inform themselves as to local labor conditions.

11. Equal Employment Opportunity

Attention is called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual identity, gender identity, or national origin, and other civil rights requirements. (See Guidelines – Document A1001, Page 46)

12. Certification Regarding Lobbying

Contractors who apply or bid for an award shall provide the required certification that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining a Federal contract, grant or any other award covered by 31 USC § 1352.

13. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

14. Insurance

The contractor (including any and all subcontractors as defined in Section 14.1.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements

Public Liability, including Products & Completed Operations \$1,000,000

Excess Liability \$1,000,000

Property Insurance (policy below that is applicable to this project):

Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)

Builder's Risk Policy: Structural Coverage for Construction Projects

Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (see Section 13 below)

15. Workers' Compensation Insurance

15.1 Definitions:

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

15.1.2 Duration of the project – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

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

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

15.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – refer to Section 14 above.

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

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

15.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

15.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

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

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

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

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

15.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the project, for the duration of the project.

15.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

15.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

15.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

15.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

15.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

15.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

15.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

15.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs 15.1. – 15.7., with the certificates of coverage to be provided to the person for whom they are providing services.

15.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of 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.

15.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity 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 governmental entity.

16. Execution of Agreement/Performance and Payment Bonds

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars (\$100,000). If the contract is for one hundred thousand dollars (\$100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

The failure of the successful bidder to execute the agreement and supply the required bonds within thirty (30) days from the date of the notice of award-or within such extended period as the locality may grant, shall constitute a default and the locality may, at its option, either award the contract to the next lowest responsible bidder, or re-advertise for bids. In either case, the locality may charge against the bidder the difference between the amount of the bid, and the amount for which a contract is subsequently executed irrespective of whether this difference exceeds the amount of the bid bond. If a more favorable bid is received through re-advertisement, the defaulting bidder shall have no claim against the locality for a refund.

17. Multiple Vendor Award

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

18. Delivery

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

19. Payment

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to: Jefferson County Auditing Department, Attention: Accounts Payable, 1149 Pearl Street, 7th floor, Beaumont, TX 77701.

20. Usage Reports

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

Bidder Information Form

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: (IFB 21-004/JW) Phase VI: First-Time Sanitary Sewer Improvements Project
for Jefferson County (Community Development Block Grant)
(TxCDBG No. 7218240)

Bidder's Company/Business Name: _____

Bidder's TAX ID Number: _____

Contact Person: _____ **Title:** _____

Phone Number (with area code): _____

Alternate Phone Number if available (with area code): _____

Fax Number (with area code): _____

Email Address: _____

Mailing Address (Please provide a physical address for bid bond return, if applicable):

Address

City, State, Zip Code

Bidder: Complete & Return this Form with Offer.

CONSTRUCTION CONTRACT

THIS AGREEMENT made this the _____ day of _____, _____, by and between _____ (a corporation organized and existing under the laws of the State of Texas) (a partnership consisting of _____) (an individual trading as _____) hereinafter called the “Contractor”, and Jefferson County, Texas hereinafter called the “County.”

WITNESSETH, that the Contractor and the County for the considerations stated herein mutually agree as follows:

ARTICLE 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for the Project; namely, **Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240)** (funding provided to Jefferson County, Texas by Texas Department of Agriculture), all in strict accordance with the contract documents including all addenda thereto, numbered _____, dated _____ and _____, all as prepared by Jefferson County acting and in these contract documents preparation, referred to as the “County.”

ARTICLE 2. The Contract Price. The County will pay the Contractor for the performance of the Contract, in current funds, subject to additions and deductions as provided in Section 109 hereof, the sum of (\$_____).

ARTICLE 3. The Contract Documents. The executed contract documents shall consist of the following components:

- a. This Agreement (pgs. 1-3)
- b. Invitation for Bid (Bid Specifications in their entirety)
- c. Addenda
- d. Instructions to Bidders
- e. Signed Copy of Bid

ARTICLE 4. Performance. Work, in accordance with the Contract dated _____, _____, shall commence on or before _____, _____, and Contractor shall complete the WORK within _____ 100 consecutive working days thereafter. The date of completion of all WORK is therefore _____, _____.

This Agreement, together with other documents enumerated in this ARTICLE 3, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in triplicate original copies on the day and year first above written.

(The Contractor)

By_____

Title_____

Jefferson County, Texas

By_____

Jeff R. Branick

Title Jefferson County Judge

Corporate Certifications

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

Corporate
Seal

SAMPLE

(Corporate Secretary)

GENERAL CONDITIONS - PART I FOR CONSTRUCTION

1. Contract and Contract Documents

- (a) The project to be constructed pursuant to this contract will be financed with assistance from the Texas General Land Office and is subject to all applicable Federal and State laws and regulations.
- (b) The Specifications and Addenda shall form part of this contract and the provisions thereof shall be binding upon the parties as if they were herein fully set forth.

2. Definitions

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms here in defined:

- (a) The term "Contract" means the Contract executed between the (Jefferson County, Texas), hereinafter called the "County" and (Name of Construction Co.), hereinafter called "Contractor", of which these GENERAL CONDITIONS, form a part.
- (b) The term "Project Area" means the area within the specified Contract limits of the first-time sanitary sewer improvements contemplated in whole or in part under this contract.
- (c) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bid (Bid Specifications in their entirety), Addenda, Instructions to Bidders, Signed Copy of Bid.

3. Supervision by Contractor

- (a) Except where the Contractor is an individual and personally supervises the work, the Contractor shall provide a competent superintendent, satisfactory to the County, on the work at all times during working hours with full authority to act as Contractor's agent. The Contractor shall also provide adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall be responsible for all work executed under the Contract. Contractor shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until Contractor has verified the subcontractor is eligible to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the County except for cause.
- (c) The Contractor shall be as fully responsible to the County for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provision of the Contract, including Section 3 requirements.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the County.

5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

6. Payments to Contractor

(a) Partial Payments

- 1) The Contractor shall prepare the requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the County for approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) ten percent (10%) of the total amount, to be retained until final payment, and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and, on the unit, prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the County.
- 2) Monthly or partial payments made by the County to the Contractor are advanced for the purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the County. Such payments shall not constitute a waiver of the right of the County to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the County in all details.

(b) Final Payment

- 1) After final inspection and the acceptance by the County of all work under the Contract, the Contractor shall prepare the requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Contract. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments.
- 2) Before paying the final estimate, County shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor. The County may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
- 3) Any amount due the County under Liquidated Damages shall be deducted from the final payment due the Contractor.

(c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the County shall be made subject to submission by the Contractor of all written certifications required of it and its subcontractors.

(d) Withholding Payments

The County may withhold any payment due the Contractor as deemed necessary to protect the County, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the County and will not require the County to determine or adjust any claims or disputes between the Contractor and its subcontractors or material dealers, or to withhold any moneys for their protection unless

the County elects to do so. The failure or refusal of the County to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The County may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any obligations under the Contract or any guarantee given pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise. Additionally, all such change orders must be approved by Texas General Land Office and Jefferson County prior to execution of same.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the County authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Contract, the County may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original the total amount by eighteen percent (18%).
- (d) Each change order shall include in its final form:
 - 1) A detailed description of the change in the work.
 - 2) The Contractor's proposal of a price for the change, confirmed by a copy thereof.
 - 3) A definite statement as to the resulting change in the contract price and/or time.
 - 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
 - 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the County, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.
- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the County and work shall not proceed except at the Contractor's risk, until written instructions have been received from the County.

- (d) If, on the basis of the available evidence, the County determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

9. Termination, Delays, and Liquidated Damages

(a) Right of the County to Terminate Contract for Convenience

County may at any time and for any reason terminate Contractor's services and work at County's convenience upon providing written notice to the Contractor specifying the extent of termination and the effective date. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by County. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against County for any additional compensation or damages in the event of such termination and payment.

(b) Right of the County to Terminate Contract for Cause

In the event that any of the provisions of this contract are violated by the Contractor, or by any subcontractors, the County may serve written notice upon the Contractor and the Surety of its intention to terminate the contract. The notices shall contain the reasons for such intention to terminate the contract, and unless such violation or delay shall cease and satisfactory arrangement of correction be made within ten days, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the County shall immediately serve notice thereof upon the Surety and the Contractor. The Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the County may take over the work and complete the project by bid/contract or by force account at the expense of the Contractor and his Surety shall be liable to the County for any excess cost incurred. In such event the County may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

(c) Liquidated Damages for Delays.

If the work is not completed within the time stipulated in the applicable bid for Unit Price Contract provided, the Contractor shall pay to the County as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) the amount of \$500.00 for each working day of delay, until the work is completed. The Contractor and Contractor's sureties shall be liable to the County for the amount thereof.

(d) Excusable Delays.

- 1) The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
- 2) Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
- 3) Any acts of the County;
- 4) Causes not reasonably foreseeable by the parties to this Contract at the time of execution which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of

God, terrorism, war, acts of another Contractor in the performance of some other contract with the County, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.

- 5) Provided, however, that the Contractor promptly notifies the County within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the County shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the County shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

10. Assignment or Novation

The Contractor shall not assign nor transfer, whether by assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the County. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, Contractors, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

11. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings or vice versa shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the County for review. Contractor shall be liable for any issues or expenses in the event the discrepancy is not submitted to the County.

12. Disputes

In the event of any dispute, claim, question, or disagreement arising from or relating to this Agreement, or the breach thereof including determination of responsibility for any costs disallowed as a result of non-compliance with federal or state program requirements, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, the parties shall consult and negotiate with each other in good faith within 30 days of receipt of a written notice of the dispute or invitation to negotiate, and attempt to reach a just and equitable solution satisfactory to both parties. If the matter is not resolved by negotiation within 30 days of receipt of written notice or invitation to negotiate, the parties agree first to try in good faith to settle the matter by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration, litigation, or some other dispute resolution procedure. The parties may enter into a written amendment to this Agreement and choose a mediator that is not affiliated with the American Arbitration Association. The parties shall bear the costs of such mediation equally.

If the matter is not resolved through such mediation within 60 days of the initiation of that procedure, either party may proceed to file suit for a non-jury trial only.

13. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the County for any additional information which should be furnished by the County under the terms of this Contract, and which is required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

14. Permits and Codes

- (a) The Contractor shall give all notices required by and comply with all applicable federal and state laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the County. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the County will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.
- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the County.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.
- (e) The Contractor will be required to make arrangements for and pay the water, electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. At the close of each day's work, the Contractor, if directed by the County, shall moisten the surrounding area to prevent a dusty condition.

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15. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of its fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the County is authorized to act to prevent such threatened loss or injury. Contractor shall follow all instructions of County.
- (c) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and shall be responsible for completely repairing any damage thereto caused by the operations.
- (d) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the first-time sanitary sewer improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the County from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

16. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Department of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the County with reports concerning these matters.
- (d) The Contractor shall indemnify and hold harmless the County from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The Contractor shall at all time conduct work in such a manner as to ensure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the County, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the County at the expense of the Contractor.

17. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for laborers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, bottled or transported as to keep it safe and fresh and served from single service containers or satisfactory type of sanitary drinking stands or fountain. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

18. Use of Premises

- (a) The Contractor shall confine equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the County, and shall not unreasonably encumber the site or public rights of way with materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the County and all existing federal, state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

19. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

20. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the County and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The County shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality

without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the County may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the County.

- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the County will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the County sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the County, the Contractor shall uncover for inspection and recover such facilities at Contractor's expense, when so requested by the County.
- (d) Should it be considered necessary or advisable by the County at any time before final acceptance of the entire work to make an examination of work already completed, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be reimbursable and if completion of the work of the entire Contract has been delayed, a suitable extension of time will be approved.
- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards to: (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to forgery. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the County or its agents shall relieve the Contractor or its sureties of full responsibility for materials and work performed not in strict accordance with the Contract.

21. Review by County

The County and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the County through its authorized representatives or agents.

22. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the County in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The County will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

23. Deduction for Uncorrected Work

If the County deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the County and subject to settlement, in case of dispute, as herein provided.

24. Insurance

The Contractor shall not commence work under this contract until all required insurance under this paragraph has been secured and approved by the County.

The Contractor shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements as written with the Invitation for Bid/Bid Specifications for this project. Such insurance is to be provided at the sole cost of the Contractor. These requirements do not establish limits of the Contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees and agents; a copy of the policy wording or endorsement is required.

Proof of Insurance: The Contractor shall furnish the County with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the County."

25. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same, together with all improvements and appurtenances constructed or placed by Contractor, to the County free from any claims, liens, or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no former contract is entered into for such materials.

26. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract shall constitute use of the improvements included in this Contract by the County or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of _____ months from the date of final acceptance of the work.

27. Job Offices

- (a) The Contractor and its subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The County shall be consulted with regard to locations.
- (b) Upon completion of the improvements, or as directed by the County, the Contractor shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the Contract.

28. Partial Use of Site Improvements

The County may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- a. The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.

- b. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

29. Local Program Liaison

For purposes of this Agreement, the Jefferson County Judge or equivalent authorized person will serve as the Local Program Liaison and primary point of contact for the Contractor. All required progress reports and communication regarding the project shall be directed to this liaison and other local personnel as appropriate.

30. Access to Information

(a) The Texas Department of Agriculture (TDA), The U.S. Department of Housing and Urban Development (HUD), Inspectors General, the Comptroller General of the United States, and the County, or any of their authorized representatives, shall have access to any documents, papers, or other records of the Contractor which are pertinent to the TxCDBG award, in order to make audits, examinations, excerpts, and transcripts, and to closeout the County's TxCDBG contract with TDA.

- c. Contractor shall include the substance of this clause in all subcontracts it awards.

31. Records Retention

(a) The Contractor shall retain all required records for three years after the County makes its final payment and all pending matters are closed.

(b) Contractor shall include the substance of this clause in all subcontracts it awards.

32. Resolution of Program Non-Compliance and Disallowed Costs

In the event of any dispute, claim, question, or disagreement arising from or relating to this Contract, or the breach thereof, including determination of responsibility for any costs disallowed as a result of non-compliance with federal, state or County program requirements, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, the parties shall consult and negotiate with each other in good faith within 30 days of receipt of a written notice of the dispute or invitation to negotiate, and attempt to reach a just and equitable solution satisfactory to both parties. If the matter is not resolved by negotiation within 30 days of receipt of written notice or invitation to negotiate, the parties agree first to try in good faith to settle the matter by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration, litigation, or some other dispute resolution procedure. The parties may enter into a written amendment to this Contract and choose a mediator that is not affiliated with the American Arbitration Association. The parties shall bear the costs of such mediation equally. *[This section may also provide for the qualifications of the mediator(s), the locale of meetings, time limits, or any other item of concern to the parties.]* If the matter is not resolved through such mediation within 60 days of the initiation of that procedure, either party may proceed to file suit.

33. Compliance with Davis-Bacon Act

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate on any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act hereinafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (a copy of which is attached as Attachment __ and herein incorporated by reference), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the County for the cashing of the same without cost or

expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated under Section 1 (b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section 5.5 (a) (1) (iv) of Title 29, Code of Federal Regulations. Also, for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

The Contractor and its subcontractors shall not, by any means, induce any person employed in the construction, completion, or repair of public work, give up any part of the compensation to which he or she is otherwise entitled. The County must report all suspected or reported violations to TDA.

34. Conflicts of interest.

- (a) Governing Body. No member of the governing body of the County and no other officer, employee, or agent of the County, who exercises any functions or responsibilities in connection with administration, construction, engineering, or implementation of Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240) award between _____ and the County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Firm shall take appropriate steps to assure compliance.
- (b) Other Local Public Officials. No other public official, who exercises any functions or responsibilities in connection with the planning and carrying out of administration, construction, engineering or implementation of the Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240) award between _____ and the County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Contractor shall take appropriate steps to assure compliance.
- d. The Contractor and Employees. The Contractor warrants and represents that it has no conflict of interest associated with the Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240) award between _____ and the County or this Contract. The Contractor further warrants and represents that it shall not acquire an interest, direct or indirect, in any geographic area that may benefit from the Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240) award between TDA and the County or in any business, entity, organization or person that may benefit from the award. The Contractor further agrees that it will not employ an individual with a conflict of interest as described herein.

35. Debarment and Suspension (Executive Orders 12549 and 12689)

The Contractor certifies, by entering into this Contract, that neither it nor its principals are presently debarred, suspended, or otherwise excluded from or ineligible for participation in federally-assisted programs under Executive Orders 12549 (1986) and 12689 (1989). The term “principal” for purposes of this Contract is defined as an officer, director, owner, partner, key employee, or other person with primary management or supervisory responsibilities, or a person who has a critical influence on or substantive control over the operations of the Contractor. The Contractor understands that it must not make any award or permit any award (or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, “Debarment and Suspension.”

36. Provisions Required by Law Deemed Inserted shattered

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

37. [For Contracts that exceed \$100,000] Anti-Lobbying

Contractor shall file the required certification: The undersigned certifies, to the best of his or her knowledge and belief, that:

- (a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (c) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

38. [For Contracts > \$100K] Overtime Requirements

No Contractor or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 40 hours in such work week, as the case may be.

42. [For Contracts > \$150K] Clean Air Act and the Federal Water Pollution Control Act

The Contractor or subcontractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

39. Equal Opportunity Clause [applicable to contracts and subcontracts over \$10,000].

During the performance of this contract, the Contractor agrees as follows:

- (a.) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (b.) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (c.) The Contractor will not discourage or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation

of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

- (d.) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (e.) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, "Equal Employment Opportunity," and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (f.) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (g.) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (h.) The Contractor will include the portion of the sentence immediately preceding paragraph (a) and the provisions of paragraphs (a) through (h) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

40. Section 109 of the Housing and Community Development Act of 1974.

The Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

41. Section 504 Rehabilitation Act of 1973, as amended.

The Contractor agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.

42. Age Discrimination Act of 1975.

The Contractor shall comply with the Age Discrimination Act of 1975 which provides that no person in the United States shall on the basis of age be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

[If this Contract is greater than \$100,000, include the following Section 3 language:]

43. Economic Opportunities for Section 3 Residents and Section 3 Business Concerns.

- (a) The work to be performed under this Contract is subject to the requirements of section 3 of the Housing and Urban Development (HUD) Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this Contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this Contract, the parties to this Contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- (c) The Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- (d) The Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agree to take appropriate action as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- (e) The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the Contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135.
- 24 CFR part 135 establishes the following minimum numerical thresholds:
 - o For Hiring: 30% (1 in 3) of the aggregate number of project new hires must be Section 3 Residents.
 - o For Contracting: At least 10% of the total dollar amount of all Section 3 covered work must be awarded to Section 3 Business Concerns.
 - A Section 3 Resident is a low- or very-low income individual residing in the County in which project is taking place, and whose annual household income does not exceed specified HUD limits for said County
 - A Section 3 Business Concern is defined as (1) A business that is 51% or more owned by Section 3 residents; or (2) Whose permanent, full time employees include persons, at least 30% of whom are currently Section 3 Residents, or within three years of date of first employment with business concern

were Section 3 Residents; or (3) That provides evidence of a commitment to subcontract in excess of 25% of the dollar award of all subcontracts to business concerns that are Section 3

- (f) Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this Contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this Contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

44. Contract Documents and Drawings

The County will furnish the Contractor without charge 2 copies of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

45. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the County in the Notice to Proceed, and shall be fully completed within 100 working days thereafter.

46. Liquidated Damages

Since the actual damages for any delay in completion of the work under this contract are impossible to determine, the Contractor and his Surety shall be liable and shall pay to the County the sum of Five Hundred Dollars (\$500.00) as fixed, agreed and liquidated damages for each working day of delay from the above stipulated time for completion.

47. Gender Neutral - Gender References

When necessary, unless the context clearly requires otherwise, any gender-specific or gender-neutral term in this Contract (for example, he, she, it, etc.) is to be read as referring to any other gender or to no gender.

Equal Opportunity Guidelines for Construction Contractors

Note: To be included in bid packet and distributed at the preconstruction conference (optional)

1. **What are the responsibilities of the offeror or bidder to ensure equal employment opportunity?**

For contracts over \$ 10,000, the offeror or bidder must comply with the "Equal Opportunity Clause" and the "Standard Federal Equal Opportunity Construction Contract Specifications."

2. **Are construction contractors required to ensure a legal working environment for all employees?**

Yes, it is the construction contractor's responsibility to provide an environment free of harassment, intimidation, and coercion to all employees and to notify all foremen and supervisors to carry out this obligation, with specific attention to minority or female individuals.

3. **To alleviate developing separate facilities for men and women on all sites, can a construction contractor place all women employees on one site?**

No, two or more women should be assigned to each site when possible.

4. **Are construction contractors required to make special outreach efforts to Section 3 or minority and female recruitment sources?**

Yes, construction contractors must establish a current list of Section 3, minority and female recruitment sources. Notification of employment opportunities, including the availability of on-the-job training and apprenticeship programs, should be given to these sources. The efforts of the construction contractors should be kept in file.

5. **Should records be maintained on the number of Section 3 residents, minority and females applying for positions with construction contractors?**

Yes, records must be maintained to include a current list of names, addresses and telephone numbers of all Section 3, minority and female applicants. The documentation should also include the results of the applications submitted.

6. **What happens if a woman or minority is sent to the union by the Contractor and is not referred back to the Contractor for employment?**

If the unions impede the construction contractor's responsibility to provide equal employment opportunity, a written notice should be submitted to TDA.

7. **What efforts are made by construction contractors to create entry-level positions for Section 3 residents, women and minorities?**

Construction contractors are required to develop on-the-job training programs, or participate in training programs, especially those funded by the Department of Labor, to create positions for Section 3 residents, women and minorities and to meet employment needs.

8. **Are any efforts made by the Contractor to publicize their Equal Employment Opportunity (EEO) policy?**

Yes, the construction contractor is responsible for notifying unions and sources of training programs of their equal employment opportunity policy. Unions should be requested to cooperate in the effort of equal opportunity. The policy should be included in any appropriate manuals, or collective bargaining agreements. The construction contractor is encouraged to publicize the equal employment opportunity policy in the company newspaper and annual report. The Contractor is also responsible to include the EEO policy in all media advertisement.

9. **Are any in-service training programs provided for staff to update the EEO policy?**

At least annually a review of the EEO policy and the affirmative action obligations are required of all personnel employees of a decision-making status. A record of the meeting including date, time, location, persons present, subject matter discussed, and disposition of the subject matter should be maintained.

10. **What recruitment efforts are made for Section 3 residents, minorities and women?**
The construction contractor must notify both orally and in writing, Section 3, minority and female recruitment sources one month prior to the date of acceptance for apprenticeship or other training programs.
11. **Are any measures taken to encourage promotions for minorities and women?**
Yes, an annual evaluation should be conducted for all minority and female personnel to encourage these employees to seek higher positions.
12. **What efforts are taken to ensure that personnel policies are in accordance with the EEO policy?**
Personnel policies in regard to job practices, work assignments, etc. should be continually monitored to ensure that the EEO policy is carried out.
13. **Can women be excluded from utilizing any facilities available to men?**
No, all facilities and company activities are non-segregated except for bathrooms or changing facilities to ensure privacy.
14. **What efforts should be utilized to include minority and female contractors and suppliers?**
Take affirmative steps to ensure that small, minority, and women owned businesses are included on all lists for contractors/service providers. Solicit these businesses when issuing RFPs and RFQs and soliciting construction bids. Divide project activities into small tasks to allow participation. Keep records of all offers to minority and female construction contractors.
15. **If a construction contractor participates in a business-related association that does not comply with equal opportunity affirmative action standards, does that show his/her failure to comply?**
No, the construction contractor is responsible for its own compliance.
16. **Can a construction contractor hire a subcontractor who has been debarred from government contracts pursuant to EEO?**
No. The construction contractor must suspend, terminate or cancel its contract with any Subcontractor who is in violation of the EEO policy.
17. **What effort has been taken by the construction contractor to monitor all employment to insure the company EEO policy is being carried out?**
The construction contractor must designate a responsible individual to keep accurate records of all employees that includes specific information required by the government.

§ 135.38 Section 3 clause.

§ 135.38 Section 3 clause.

All section 3 contracts shall include the following clause (referred to as the section 3 clause):

- A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3 shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (1) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

Executed Section 3 Plan (Form A1002)

SAMPLE

Local Opportunity Plan

LOCAL OPPORTUNITY PLAN SECTION 3 PLAN FORMAT CONTRACTOR or SUBCONTRACTOR (if either contract exceeds \$100,000.00)

_____ agrees to implement the following
(NAME OF CONTRACTOR)
specific affirmative action steps directed at increasing the utilization of lower income residents
and businesses within the City/County of _____.

- A. To ascertain from the locality's CDBG/DRS program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- B. To attempt to recruit from within the City/County the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U. S. Employment Service.
- C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- D. * To insert this Section 3 Plan in all bid documents, and to require all bidders on subcontracts to submit a Section 3 Plan including utilization goals and the specific steps planned to accomplish these goals.
- E. * To ensure that subcontracts, which are typically let on a negotiated rather than a bid basis, in areas other than Section 3 covered project areas, are also let on a negotiated basis whenever feasible, if let in a Section 3 covered project area.
- F. To formally contact unions, subcontractors, and trade associations to secure their cooperation for this program.
- G. To ensure that all appropriate project area business concerns are notified of pending sub-contractual opportunities.
- H. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- I. To appoint or recruit an executive official of the company or agency as the Equal Opportunity Officer to coordinate the implementation of this Section 3 Plan.

Table A

TABLE A

PROPOSED SUBCONTRACT BREAKDOWN

CONTRACT NUMBER: _____

PROJECT NAME: _____

CONSTRUCTION CONTRACTOR: _____

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
TYPE OF CONTRACT (BUSINESS OR PROFESSION)	TOTAL NUMBER OF CONTRACTS	TOTAL APPROXIMATE DOLLAR AMOUNT	ESTIMATED NUMBER OF CONTRACTS TO PROJECT AREA BUSINESSES*	ESTIMATED DOLLAR AMOUNT TO PROJECT AREA BUSINESSES*

*The Project Area is coextensive with the County of _____’s boundaries.

EEO Officer’s Signature

Date

Table B

TABLE B

ESTIMATED PROJECT WORKFORCE BREAKDOWN

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Job Category	Total Estimated Positions	No. Positions Currently Occupied By Permanent Employees	No. Positions Not Currently Occupied	No. Positions To Be Filled w/LIPAR*
Officers/Supervisors				
Professionals				
Technicians				
Housing Sales/Rental/Mgmt.				
Office Clerical				
Service Workers				
Others				

SPECIFY TRADE CLASSIFICATION: _____

Journeyman				
Apprentices				
Maximum No. Trainees				
Others				

SPECIFY TRADE CLASSIFICATION: _____

Journeyman				
Apprentices				
Maximum No. Trainees				
Others				

SPECIFY TRADE CLASSIFICATION: _____

Journeyman				
Apprentices				
Maximum No. Trainees				
Others				

*Lower Income Project Area Residents. Individuals residing within the City/County of _____ whose family income does not exceed 80% of the median income in the State.

(EEO Officer's Signature)

(COMPANY NAME)

USE ADDITIONAL PAGES IF NECESSARY

SECTION 3 CERTIFICATION OF SELECTED BIDDER

Completed by Prime Contractor Only

Name of Prime Contractor

Project Name and Number

The undersigned hereby certifies that:

(Complete Section I or II)

I. A. The positions listed under part B that have been filled by _____
(Name of Prime Contractor)
since being notified of contract selection on _____
(Date of Award/Selection)

were not filled to circumvent the contractor's obligations to provide employment opportunities, including training positions, for Section 3 residents, as required by Section 3 residents of the Housing & Urban Development Act of 1968 and the implementing regulations, 24 CFR Part 135.

B. Employment Positions filled since _____
(Date of Contract Award/Selection)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

OR

II. No employment positions have been filled since _____
(Date of Contract Award/Selection)

Name of Signatory (print or type)

Title of Signatory

Signature

Date

NOTICE: This certification must be made BEFORE contract execution (24 CFR 135.38 (e))

Section 3 Certification of Selected Bidder

Page 1

**CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING
SECTION 3 AND SEGREGATED FACILITIES**

Name of Subcontractor

Project Name

Contract Number

The undersigned hereby certifies that:

- (a) Section 3 provisions are included in the Contract;
- (b) A written Section 3 plan was prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000);
- (c) Tables A and B were prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000); and
- (d) No segregated facilities will be maintained as required by Title VI of the Civil Rights Act of 1964.

Name & Title of Signer (Print or Type)

Signature

Date

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract in the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section I(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section I(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.doi.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) **Certification of Eligibility.** By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. **Complaints, Proceedings, or Testimony by Employees.** No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. **Contract Work Hours and Safety Standards Act.** The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

TITLE 29--Labor

Subtitle A--OFFICE OF THE SECRETARY OF LABOR

PART 3--CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

SEC.

- 3.1 Purpose and Scope
- 3.2 Definitions
- 3.3 Weekly Statement with respect to payment of wages
- 3.4 Submission of weekly statement and the preservation and inspection of weekly payroll records
- 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.
- 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.
- 3.7 Applications for the approval of the Secretary of Labor
- 3.8 Action by the Secretary of Labor upon applications.
- 3.9 Prohibited payroll deductions
- 3.10 Method of payment of wages
- 3.11 Regulations part of contract

AUTHORITY: The provisions of this Part 3 issued under R.S. 161, sec.2, 48 STAT. §48:Reorg. Plan No. 14 of 1950, 64 Stat. 1267, 5 U.S.C. Appendix; 5 U.S.C. 301; 40 U.S.C. 276c.

SOURCE: The provisions of this Part 3 appear at 29 F.R. 97, Jan.4, 1964, unless otherwise noted.

§ 3.1 Purpose and scope.

This part prescribes "anti-kickback" regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the

Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

§ 3.2 Definitions.

As used in the regulations in this part:

(a) The terms *building* or *work* generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a *building* or *work* within the meaning of the regulations in this part.

(b) The terms *construction*, *prosecution*, *completion*, or *repair* mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms *public building* or *public work* include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal

agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term *building or work financed in whole or in part by loans or grants from the United States* includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is *employed* and receiving wages, regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term *any affiliated person* includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

(g) The term *Federal agency* means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[29 FR 97, Jan. 4, 1964, as amended at 38 FR 32575, Nov. 27, 1973]

§ 3.3 Weekly statement with respect to payment of wages.

(a) As used in this section, the term *employee* shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3

and part 5 of this title during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on the back of Form WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Copies of Form WH 347 may be obtained from the Government contracting or sponsoring agency or from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982; 73 FR 77511, Dec. 19, 2008] **§ 3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.**

(a) Each weekly statement required under §3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

(Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1215-0017)

[29 FR 97, Jan. 4, 1964, as amended at 47 FR 145, Jan. 5, 1982]

§ 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

(a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.

(b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A *bona fide prepayment of wages* is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

(c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.

(d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: *Provided, however, That the following standards are met:*

(1) The deduction is not otherwise prohibited by law;

(2) It is either:

(i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for

the obtaining of or for the continuation of employment, or

(ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;

(3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and

(4) The deductions shall serve the convenience and interest of the employee.

(e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.

(f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.

(g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.

(h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.

(i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: *Provided, however, That a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.*

(j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under §516.25(a) of this title shall be kept.

(k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the

employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either

(1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or

(2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9770, May 28, 1971]

§ 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under §3.5. The Secretary may grant permission whenever he finds that:

(a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

§ 3.7 Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under §3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of §3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of §3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

(d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9771, May 28, 1971]

§ 3.8 Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of §3.6; and shall notify the applicant in writing of his decision.

§ 3.9 Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under §3.6 are prohibited.

§ 3.10 Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

§ 3.11 Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see §5.5(a) of this subtitle.

Statement of Bidders Qualifications Form

All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

Date: _____

Bidder (Legal Name of Firm): _____

Date Organized: _____

Address: _____

Date Incorporated: _____

Federal ID Number: _____

Number of Years in contracting business under present name _____

List all other names under which your business has operated in the last 10 years:

Work Presently Under Contract:

Contract	Amount \$	Completion Date
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_____	_____	_____
_____	_____	_____
_____	_____	_____

Type of work performed by your company: _____

Total Staff employed by Firm (Break down by Managers and Trades on separate sheet):

Have you ever failed to complete any work awarded to you? ☐ Yes ☐ No

(If yes, please attach summary of details on a separate sheet. Include brief explanation of cause and resolution)

Have you ever defaulted on a contract? ☐ Yes ☐ No

(If yes, please attach summary of details on a separate sheet.)

Statement of Bidders Qualifications Form (Continued)

Has your organization had any disbarments or suspensions that have been imposed in the past five years or that was still in effect during the five-year period or is still in effect? ☐ Yes ☐ No

(If yes, list and explain; such list must include disbarments and suspensions of officers, principals, partners, members, and employees of your organization.)

List the projects most recently completed by your firm (include project of similar importance):

Project	Amount \$	Mo/Yr Completed
_____	_____	_____
_____	_____	_____
_____	_____	_____

Major equipment available for this contract: _____

Are you in compliance with all applicable EEO requirements? ☐ Yes ☐ No
(If no, please attach summary of details on a separate sheet.))

Bank References

Address: _____ Contact Name: _____

City & State: _____ Zip: _____ Phone Number: _____

Credit available: \$ _____

Has the firm or predecessor firm been involved in a bankruptcy or reorganization? ☐ Yes ☐ No
(If yes, please attach summary of details on a separate sheet.)

List on a sheet attached hereto all judgements, claims, arbitration proceedings, or suits pending or outstanding against bidder over the last five (5) years with amount of claim and brief description.

List on a sheet attached hereto all lawsuits or requested arbitration with regard to construction contracts which bidder has initiated within the last five (5) years and brief explanation of claim and outcome.

Attach resume(s) for the principal member(s) of your organization, including the officers as well as the proposed superintendent for the project.

Signed this _____ day of _____, 20____.

Signature

Printed Name and Title

Statement of Bidders Qualifications Form (Continued)

Notary Statement:

_____, being duly sworn, says that he/she is the _____ Position/Title _____ of _____ (Firm Name), and hereby swears that the answers to the foregoing questions and all statements therein contained are true and correct. He/she hereby authorizes and requests any person, firm, or corporation to furnish any information requested County of _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Subscribed and sworn before me this _____ day of _____, 20_____.

Notary Public

Signature

Printed Name

My Commission Expires: _____,

The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

Bidder: Complete & Return this Form with Offer.

CONTRACTOR CERTIFICATIONS

U.S. Department of Housing and Urban Development

CERTIFICATION OF BIDDER REGARDING CIVIL RIGHTS LAWS AND REGULATIONS

INSTRUCTIONS

CERTIFICATION OF BIDDER REGARDING Executive Order 11246 and Federal Laws Requiring Federal Contractor to adopt and abide by equal employment opportunity and affirmative action in their hiring, firing, and promotion practices. This includes practices related to race, color, gender, religion, national origin, disability, and veterans' rights.

NAME AND ADDRESS OF BIDDER (include ZIP Code)

CERTIFICATION BY BIDDER

Bidder has participated in a previous contract or subcontract subject to Civil Rights Laws and Regulations.

☐ Yes

☐ No

The undersigned hereby certifies that:

☐ The Provision of Local Training, Employment, and Business Opportunities clause (Section 3 provision) is included in the Contract. A written Section 3 plan (Local Opportunity Plan) was prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000).

☐ The Equal Opportunity clause is included in the Contract (if bid equals or exceeds \$10,000).

Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?

☐ Yes

☐ No

NAME AND TITLE OF SIGNER (Please type)

SIGNATURE

DATE

Bidder: Complete & Return this Form with Offer.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM
CONTRACTOR'S CERTIFICATION

CONCERNING LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS

TO (appropriate recipient)	DATE
	PROJECT NUMBER (if any)
C/O	PROJECT NAME

1. The undersigned, having executed a contract with _____
_____ for the construction of the above-identified project, acknowledges that:

- (a) The Labor Standards provisions are included in the aforesaid contract,
- (b) Correction of any infractions of the aforesaid conditions, including infractions by any subcontractors and any lower tier subcontractors, is Contractor's responsibility.

2. Certifies that:

- (a) Neither Contractor nor any firm, partnership or association in which it has substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended.
- (b) No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. Contractor agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. Certifies that:

- (a) The legal name and the business address of the undersigned are:

(b) The undersigned is (choose one):

(1) A SINGLE PROPRIETORSHIP

(3) A CORPORATION ORGANIZED IN THE STATE OF

(2) A PARTNERSHIP

(4) OTHER ORGANIZATION (Describe)

(c) The name, title and address of the owner, partners or officers of the undersigned are:

NAME	TITLE	ADDRESS

- (d) The names and addresses of all other persons having a substantial interest in the undersigned, and the nature of the interest are:

NAME	ADDRESS	NATURE OF INTEREST

- (e) The names, addresses and trade classifications of all other building construction contractors in which the undersigned has a substantial interest are:

NAME	ADDRESS	TRADE CLASSIFICATION

Date _____

(Contractor)

By _____

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of Texas

County of (_____)

_____, being first duly sworn, deposes and says that:

- (1) He/She is _____ of _____, the Bidder that has submitted the attached Bid;
- (2) He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with another Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix an overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the _____ (Local Public Agency) or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Title

Subscribed and sworn to me this _____ day of _____.

By: _____
Notary Public

My commission expires _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned, _____
_____ as PRINCIPAL, and _____, as SURETY are
held and firmly bound unto (County) hereinafter called the "Local Public Agency", in the penal sum of
_____ Dollars, (\$ _____), lawful money of the
United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the
Accompanying Bid, dated _____, for _____

NOW, THEREFORE, the Principal shall not withdraw said Bid within the period specified therein after
the opening of the same, or, if no period be specified, within thirty (30) days after the said opening, and
shall within the period specified therefor, or if no period be specified, within ten (10) days after the
prescribed forms are presented to him for signature, enter into a written contract with the Local Public
Agency in accordance with the Bid as accepted, and give bond with good and sufficient surety or sureties,
as may be required, for the faithful performance and proper fulfillment of such contract; or in the event
of the withdrawal of said Bid within the period specified, or the failure to enter into such Contract and
give such bond within the time specified, if the Principal shall pay the Local Public Agency the difference
between the amount specified in said Bid and the amount for which the local Public Agency may procure
the required work or supplies or both, if the latter be in excess of the former, then the above obligation
shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS THEREOF, the above parties have executed this instrument this _____ day of
_____, the name and corporate seal of each corporate party being hereto
affixed and these present signed by its undersigned representative, pursuant to authority of its
governing body.

(SEAL)

(SEAL)

Attest:

By: _____

Affix
Corporate
Seal

Attest:

By: _____

Affix
Corporate
Seal

Attest:

By: _____

Countersigned

By _____

* Attorney-in-Fact, State of Texas

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the bid bond; that _____, who signed the said bond on behalf of the Principal was then _____ of said corporation; that I know his/her signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed, and attested to, on behalf of said corporation by authority of its governing body.

Corporate
Seal

Title: _____

* Power-of-attorney for person signing for Surety Company must be attached to bond.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that:

(Name of Contractor or Company)

(Address)

a _____, hereinafter called Principal,
(Corporation / Partnership)

and _____
(Name of Surety Company)

(Address)

hereinafter called Surety, are held and firmly bound unto

(Name of Recipient)

(Recipient's Address)

hereinafter called OWNER, in the penal sum of \$ _____

Dollars, \$ _____ in lawful money of the United States, for this payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONFIDENTIALITY OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the ____ day of _____, a copy of which is hereto attached and made a part hereof for the construction of:

(Project Name)

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUB-CONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUB-CONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS 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 or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counter-parts, each on of (Number) which shall be deemed an original, this the _____ day of _____.

ATTEST: _____
(Principal)

(Principal Secretary) By _____ (s)

(SEAL)

(Witness as to Principal) (Address)

(Address)

ATTEST: _____
(Surety)

(Witness as to Surety) By _____
(Attorney in Fact)

(Address) (Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that:

(Name of Contractor or Company)

(Address)

a _____ hereinafter called Principal, and

(Name of Surety Company)

(Address)

hereinafter called Surety, are held and firmly bound unto

(Name of Grant Recipient)

(Grant Recipient's Address)

hereinafter called OWNER, in the penal sum of \$ _____

Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, successors, and assigns, jointly and severally, firmly in these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER dated the _____ day of _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties in all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and

shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS 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 or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____
counterparts, each one of which shall be deemed an original, this the _____ day of _____.

ATTEST: _____
(Principal)

(Principal Secretary) By _____(s)

(SEAL)

(Witness as to Principal) (Address)

(Address)

ATTEST: _____
(Surety)

(Witness as to Surety) By _____
(Attorney in Fact)

(Address) (Address)

NOTE: Date of BOND must not be prior to date of Contract. If PRINCIPAL/CONTRACTOR is Partnership, all partners should execute BOND.

ATTORNEY'S REVIEW CERTIFICATION

I, the undersigned, _____, the duly authorized and acting legal representative of the _____, do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and am of the opinion that each of the agreements may be duly executed by the proper parties, acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties; and that the agreements shall constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Attorney's signature: _____ Date: _____

Print Attorney's Name: _____

Texas State Bar Number: _____

Bidder: Complete & Return this Form with Offer.

Wage Rate Issuance Notice

A702

The Davis-Bacon Act requires a valid Wage Decision be included in the bid package and construction contract specifications before bids are opened and be in effect on the date of the construction contract award. Obtain the most current Davis-Bacon wage decisions at www.wdol.gov.

TxCDBG Contract:Grant Recipient Name: **Jefferson County Texas**TxCDBG Contract #: **TDA 7218240**

LSO Name: Susan Stover

Detailed Description of
Bid Activity: Sanitary Sewer Improvements

Date LSO Issued Wage Rates: 2-12-21

Estimated Bid Opening Date: 3-24-21

I have determined that the following General Wage Decision to be applicable for this construction work:

Wage Decision Number: TX20210053 Published: 1-1-21Type of Work (check one): ☒ Heavy ☐ Highway ☐ Building ☐ Residential

ISSUED BY:Name: Susan Stover Date: 2-12-2021Address: P.O. Drawer 900 City: JasperState: Texas Zip: 75951 Phone No: (409) 384-3458

*****Attach wage decision to this form and retain copy in local files.
Do not send a copy of this form to TDA*****

	Rates	Fringes
Carpenters:		
Form Building/Form Setting..	\$ 13.15	
All Other Work.....	\$ 13.56	
Concrete Finisher.....	\$ 13.50	
Laborers:		
Common.....	\$ 7.41	
Pipelayer.....	\$ 8.29	
Painters:		
Spray and Brush.....	\$ 12.07	
PILEDRIVERMAN.....	\$ 13.65	
PLUMBER.....	\$ 18.28	4.69
Power equipment operators:		
Backhoe.....	\$ 15.55	1.89
Bulldozer.....	\$ 15.00	
Crane.....	\$ 13.77	
Front End Loader.....	\$ 10.63	
Trackhoe.....	\$ 15.60	
Truck drivers:		
Dump.....	\$ 10.00	

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

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

CERTIFICATE OF PAYROLL OFFICER

HUD COMPLAINT REGISTER

OFFER AND ACCEPTANCE FORM

OFFER TO CONTRACT

To Jefferson County:

We hereby offer and agree to furnish the materials or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation for Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete, and states that he/she has the authority to submit this bid, which will result in a binding contract if accepted by Jefferson County.

We acknowledge receipt of the following amendment(s): _____, _____, _____, _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

_____ Company Name	For clarification of this offer, contact:
_____ Address	_____ Name
_____ City State Zip	_____ Phone Fax
_____ Signature of Person Authorized to Sign	_____ E-mail
_____ Printed Name	
_____ Title	

Bidder: Complete & Return this Form with Offer.

ACCEPTANCE OF OFFER

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by Jefferson County.

This contract shall henceforth be referred to as Contract No. 21-004/JW, Phase VI: First-Time Sanitary Sewer Improvements Project for Jefferson County (Community Development Block Grant) (TxCDBG No. 7218240)

The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

Countersigned:

Jeff R. Branick
County Judge

Date

Attest:

Carolyn L. Guidry
County Clerk

Bidder: Complete & Return this Form with Offer.

BID SUMMARY

Owner: Jefferson County, Texas
1149 Pearl Street, 1st floor
Beaumont, Texas 77701

Engineer: LJA Engineering, Inc.
2615 Calder Avenue, Suite 500
Beaumont, Texas 77702
409-833-3363

Project: Jefferson County, Texas
Phase VI: First-Time Sanitary Sewer Improvements Project
TDA – TxCDBG No. 7218240

Receipt is hereby acknowledged of the following addenda to the Plans and Contract Documents.

Addendum No. 1	Dated _____	Received _____
Addendum No. 2	Dated _____	Received _____
Addendum No. 3	Dated _____	Received _____
Addendum No. 4	Dated _____	Received _____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
1	1 L.S.	Mobilization costs including transportation, moving on site, payment bond, performance bond, insurance, submittals, NOT TO EXCEED 3% of project total, all in accordance with the Plans and Specifications, for _____ _____ dollars and _____ cents per LS.	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
2	9 EA	<p>Furnish and install Sanitary Sewer Grinder Pump Station, to the limits shown in the plans, complete in place, including but not limited to, meeting/coordination with homeowner, SCH 40 PVC gravity piping tie-in(s), cleanouts, fiberglass tank & cover, submersible grinder pump, control panel, 30A breaker disconnect, electrical conduit & conductors, and floats, to the limits shown in the plans, complete in place, including but not limited to, the connections to proposed and existing equipment, fittings, hardware, excavation, backfill, surface restoration, seeding, utility coordination, testing and all necessary appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per EA.</p>	\$_____	\$_____
3	5 EA	<p>Construct Near Side Sanitary Sewer Service Connection with 1-1/4" HDPE SDR 11 pipe, to the limits shown in the plans, complete in place, all depths, including but not limited to, tapping saddle, valves, fittings, plastic valve box, tracer wire, boring, backfill, seeding, surface restoration, testing, utility coordination, and all appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per EA.</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
4	4 EA	<p>Construct Far Side Sanitary Sewer Service Connection with 1-1/4" HDPE SDR 11 pipe, to the limits shown in the plans, complete in place, all depths, including but not limited to, tapping saddle, valves, fittings, plastic valve box, tracer wire, boring, backfill, seeding, surface restoration, testing, utility coordination, and all appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and _____cents</p> <p>per EA.</p>	\$_____	\$_____
5	1,200 LF	<p>Construct 2" PVC SDR 21 Sanitary Sewer Force Main by Open Cut installed in trench, by Boring, or by Directional Drilling, complete in place, all depths, including fittings, valves, polywrap, boring, directional drilling insertion pits, steel casing, necessary clearing, embedment, backfill, thrust blocking, surface restoration, seeding, testing, and all appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and _____cents</p> <p>per LF.</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
6	1 EA	<p>Construct Sanitary Sewer Force Main Cleanout, complete in place, all depths, including fittings, valve, Megalug flanges, concrete or fiberglass housing, manhole ring and cover, backfill, surface restoration, seeding, testing, and all necessary appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per EA.</p>	\$_____	\$_____
7	12 EA	<p>Abandon Existing On-site Sanitary Sewer Facility, complete in place, all depths, including but not limited to, disposal of contents in the tank in accordance with all local, state, & federal laws, demolition of existing structures, backfill, surface restoration, seeding, and all appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____Dollars and</p> <p>_____Cents per EA</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
8	1 LS	<p>Furnish and install an On-site Sanitary Sewer Facility at 9529 Gilbert Road, to the limits shown in the plans, complete in place, including but not limited to, meeting/coordination with homeowner, 2-year operation & maintenance contract, filing of permit through Jefferson County and TCEQ, SCH 40 PVC gravity piping tie-in(s), cleanouts, piping, and electrical equipment, conduit, & conductors, to the limits shown in the plans, complete in place, including but not limited to, the connections to proposed & existing equipment, fittings, hardware, excavation, backfill, surface restoration, seeding, utility coordination, testing and all necessary appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per LS.</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
9	1 LS	<p>Furnish and install an On-site Sanitary Sewer Facility at 14252 Dubois Road, to the limits shown in the plans, complete in place, including but not limited to, meeting/coordination with homeowner, 2-year operation & maintenance contract, filing of permit through Jefferson County and TCEQ, SCH 40 PVC gravity piping tie-in(s), cleanouts, piping, and electrical equipment, conduit, & conductors, to the limits shown in the plans, complete in place, including but not limited to, the connections to proposed & existing equipment, fittings, hardware, excavation, backfill, surface restoration, seeding, utility coordination, testing and all necessary appurtenances, all in strict accordance with the Plans and Specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per LS.</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
10	1 LS	<p>Furnish and install an On-site Sanitary Sewer Facility at 16539 Sandell Drive, to the limits shown in the plans, complete in place, including but not limited to, meeting/coordination with homeowner, 2-year operation & maintenance contract, filing of permit through Jefferson County and TCEQ, SCH 40 PVC gravity piping tie-in(s), cleanouts, piping, and electrical equipment, conduit, & conductors, to the limits shown in the plans, complete in place, including but not limited to, the connections to proposed & existing equipment, fittings, hardware, excavation, backfill, surface restoration, seeding, utility coordination, testing and all necessary appurtenances, all in strict accordance with the plans and specifications for</p> <p>_____</p> <p>_____dollars and</p> <p>_____cents</p> <p>per LS.</p>	\$_____	\$_____
11	1 LS	<p>Provide Trench Safety Plan, sealed by a Professional Engineer licensed in Texas, complete in place, all in strict accordance with the plans and specifications for</p> <p>_____Dollars and</p> <p>_____Cents per LS.</p>	\$_____	\$_____

ITEM NO.	ESTIMATED QUANTITIES	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT BID
12	1,200 LF	Trench Safety System in accordance with specification item No. 950 for all excavations in excess of 5 feet deep, complete in place, including design, supervision, maintenance, and all necessary appurtenances, all in strict accordance with the plans and specifications for _____ _____ _____ Dollars and _____ Cents per LF	\$ _____	\$ _____
13	500 SF	Special shoring as required for Trench Safety in accordance with specification item No. 950, complete in place, including design, supervision, maintenance, and all necessary appurtenances, all in strict accordance with the Plans and Specifications for _____ _____ _____ Dollars and _____ Cents per SF	\$ _____	\$ _____

TOTAL BID PRICE

TOTAL BASE BID ITEMS: \$ _____.

Amounts are to be shown in both words and figures. In case of discrepancy the amounts shown in words will govern. The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

If the contract is to be awarded, it will be awarded to the Best Bid, the lowest Bidder or the Bidder whose evaluation by OWNER or whose Bid indicates to the OWNER that the award will be in the best interest of the Project.

Bidder understands that the Owner reserves the rights to reject any and all bids and to waive any informalities in the bidding. Bidder acknowledges that quantities are not guaranteed, and final

payment will be based on actual quantities determined as provided in the Contract Documents and Specifications, if applicable.

Bidder agrees that the work will be completed and ready for final payment within **100 working days**. Bidder accepts the provision of the agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the agreement.

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions for the Bidding Documents.

In submitting this bid, Bidder represents that Bidder has visited the Site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress and performance of the work.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled bid opening for bids.

Bidder: _____
Address: _____

Telephone: _____

Signed: _____
By: _____
Title: _____
Date: _____
Attest: _____

Bidder: Complete & Return this Form with Offer.

Vendor References Form

Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or similar products and/or services as contained in this specification package were recently provided.

THIS FORM MUST BE RETURNED WITH YOUR BID.

REFERENCE ONE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

REFERENCE TWO

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

REFERENCE THREE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

Bidder: Complete & Return this Form with Offer.

Signature Page

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? **Yes** ☐ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Bidder (Entity Name)

Signature

Street & Mailing Address

Print Name

City, State & Zip

Date Signed

Telephone Number

Fax Number

E-mail Address

Bidder: Complete & Return this Form with Offer.

Conflict of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity		FORM CIQ
<p>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</p> <p>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).</p> <p>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.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p>	OFFICE USE ONLY <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>	
<div style="border: 1px solid black; padding: 2px;"> 1 Name of vendor who has a business relationship with local governmental entity. </div>		
<div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div> 2 Check this box if you are filing an update to a previously filed questionnaire. </div> </div> <p style="margin-top: 10px;">(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.)</p> </div>		
<div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div> 3 Name of local government officer about whom the information in this section is being disclosed. </div> </div> <div style="margin-top: 10px; text-align: center;"> <div style="border-bottom: 1px solid black; width: 200px; margin: 0 auto;"></div> <p>Name of Officer</p> </div> <p style="margin-top: 10px;">This section (item 3 including subparts A, B, C, & D) must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.</p> <p>A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?</p> <div style="display: flex; justify-content: center; gap: 50px; margin-top: 5px;"> <div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div> </div> <p>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 named in this section AND the taxable income is not received from the local governmental entity?</p> <div style="display: flex; justify-content: center; gap: 50px; margin-top: 5px;"> <div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div> </div> <p>C. Is the filer of this questionnaire employed by 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?</p> <div style="display: flex; justify-content: center; gap: 50px; margin-top: 5px;"> <div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div> </div> <p>D. Describe each employment or business and family relationship with the local government officer named in this section.</p> </div>		
<div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 45%;"> <div style="border-bottom: 1px solid black; width: 100%; margin-bottom: 5px;"></div> <p style="font-size: small;">Signature of vendor doing business with the governmental entity</p> </div> <div style="width: 45%;"> <div style="border-bottom: 1px solid black; width: 100%; margin-bottom: 5px;"></div> <p style="font-size: small;">Date</p> </div> </div> </div>		

Adopted 8/7/2015

Bidder: Complete & Return this Form with Offer
Local Government Officer
Conflicts Disclosure Statement – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT		FORM CIS
<p>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</p> <p>This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.</p>		OFFICE USE ONLY <div style="border: 1px solid black; height: 150px; width: 100%;"></div>
1	Name of Local Government Officer	
2	Office Held	
3	Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code	
4	Description of the nature and extent of employment or other business relationship with vendor named in item 3	
5	List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds \$100 during the 12-month period described by Section 176.003(a)(2)(B). <div style="margin-bottom: 10px;"> Date Gift Accepted _____ Description of Gift _____ </div> <div style="margin-bottom: 10px;"> Date Gift Accepted _____ Description of Gift _____ </div> <div style="margin-bottom: 10px;"> Date Gift Accepted _____ Description of Gift _____ </div> <p style="text-align: center;">(attach additional forms as necessary)</p>	
6	AFFIDAVIT <p style="text-align: center;">I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.</p> <div style="text-align: right; margin-top: 20px;"> _____ Signature of Local Government Officer </div> <p style="margin-top: 20px;">AFFIX NOTARY STAMP / SEAL ABOVE</p> <p>Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div>_____ Signature of officer administering oath</div> <div>_____ Printed name of officer administering oath</div> <div>_____ Title of officer administering oath</div> </div>	

Adopted 8/7/2015

Good Faith Effort (GFE) Determination Checklist

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded). ☐ Yes ☐ No

Instructions: In order to determine if a “Good Faith Effort” was made in soliciting HUBs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant, and returned with the Prime Contractor/ Consultant’s bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of HUB Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting HUB Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .

- | | | |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum HUB Subcontractor participation? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 2. Notify in writing a reasonable number of HUBs, allowing sufficient time for effective participation of the planned work to be subcontracted? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 3. Provide HUBs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contact within the Prime Contractor/Consultant’s organization)? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 4. Negotiate in good faith with interested HUBs, and not reject bids from HUBs that qualify as lowest and responsive bidders? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 5. Document reasons HUBs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected HUBs? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 6. If Prime Contractor/Consultant has zero (0) HUB participation, please explain the reasons why. |

**If “No” was selected, please explain and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.**

Printed Name of Authorized Representative

Signature

Title

Date

Bidder: Complete & Return this Form with Offer.

Notice of Intent (NOI) to Subcontract with Historically Underutilized Business (HUB)

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded). ☐ Yes ☐ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____

Street	City	State	Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: \$ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____

Street	City	State	Zip
--------	------	-------	-----

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Printed Name of Contractor Representative

Signature of Representative

Date _____

Printed Name of HUB

Signature of Representative

Date _____

NOTE: NOTHING ON THIS NOTICE OF INTENT FORM IS INTENDED TO CONFER ANY RIGHTS, EXPRESSED OR IMPLIED, TO ANY THIRD PARTIES.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "HUB Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

PAGE 1 OF 4

This information must be submitted with your bid.

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded). ☐ Yes ☐ No

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: \$ _____ Total HUB Subcontract(s): \$ _____

Construction HUB Goals: 12.8% MBE:: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African-American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR HUB OFFICE USE ONLY:

Verification date HUB Program Office reviewed and verified HUB Sub information Date: _____ Initials: _____

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

PAGE 2 OF 4

HUB SUBCONTRACTOR DISCLOSURE

PART I: Continuation Sheet

(Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All HUB Subcontractor Participation may be verified with the
HUB Subcontractor(s) listed on Part I.

Bidder: Complete & Return this Form with Offer.

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

PAGE 3 OF 4

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING HUB SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the HUB goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-HUBs." (Complete Part III)
- ☐ HUBs were solicited but did not respond.
- ☐ HUBs solicited were not competitive.
- ☐ HUBs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County HUB Office contacted for assistance in locating HUBs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-HUB" SUBCONTRACTS

The bidder shall use this area to provide a listing of all "Non-HUB" Subcontractors, including suppliers, that will perform under this project. A list of those "Non-HUB" Subcontractors the bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that bidder is the apparent low bidder. A list of those "Non-HUB" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Historically Underutilized Business (HUB) Subcontracting Participation Declaration Form

PAGE 4 OF 4

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: \$ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *HUB Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attached any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

Residence Certification/Tax Form

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☐ I certify that _____ [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ (city and state).

Taxpayer Identification Number (T.I.N.):	
Company Name submitting bid/proposal:	
Mailing address:	
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

Bidder: Complete & Return this Form with Offer.

House Bill 89 Verification

I, _____, the undersigned representative of (company or business name) _____ (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:

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

Signature of Company Representative

Date

On this _____ day of _____, 20____, personally appeared

_____, the above named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Notary Signature

Date

Bidder: Complete & Return this Form with Offer.

Senate Bill 252 Certification

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Company Name

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

Bidder: Complete & Return this Form with Offer.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official *(Please Print)*

Date

Bidder: Complete & Return this Form with Offer.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether sub-awardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the sub-awardee, e.g., the first sub-awardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Sub-awardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Red

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See reverse for public burden disclosure)

1. Type of Federal Action: a. contract _____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. bid/offer/application _____ b. initial award c. post-award	3. Report Type: a. initial filing _____ b. material change For material change only: Year _____ quarter _____ Date of last report _____
4. Name and Address of Reporting Entity: _____ Prime _____ Sub-awardee Tier _____, if Known: Congressional District, if known:		5. If Reporting Entity in No. 4 is Sub-awardee, Enter Name and Address of Prime: Congressional District, if known:
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	

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Bid Affidavit

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF _____ COUNTY OF _____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____,

on this day personally appeared _____, who
(name)

after being by me duly sworn, did depose and say:

"I, _____ am a duly authorized officer of/agent
(name)

for _____ and have been duly authorized to execute the
(name of firm)

foregoing on behalf of the said _____.
(name of firm)

I hereby certify that the foregoing bid has not been prepared in collusion with any other bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of bidder: _____

Fax: _____ Telephone# _____

by: _____ Title: _____
(print name)

Signature: _____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of _____, 20____.

Notary Public in and for
the State of _____

Bidder: Complete & Return this Form with Offer.

MINORITY/FEMALE GOALS AND TIMETABLES

The female employment goal is effective as of April 1980 and is currently 6.9%. The percentages for minority participation in Texas are:

Texarkana Area:

Texarkana & Bowie Co.	19.7
Non-MSA Counties of Camp, Cass, Lamar, Morris, Red River & Titus	20.2

Tyler-Longview Area:

Longview, Gregg Co. & Harrison Co.	22.8
Tyler & Smith Co.	23.5
Non-MSA Counties of Anderson, Angelina, Cherokee, Henderson, Marion, Nacogdoches, Panola, Rusk, San Augustine, Shelby, Upshur & Wood	22.5

Beaumont-Port Arthur Area:

Beaumont, Port Arthur, Orange, Hardin Co., Jefferson Co., & Orange Co.	22.6
Non-MSA Counties of Jasper, Houston, Newton, Sabine, & Tyler	22.6

Houston Area:

Bryan, College Station & Brazos Co.	23.7
Galveston, Texas City & Galveston Co.	28.9
Houston, Brazoria Co., Fort Bend Co., Harris Co., Liberty Co., Montgomery Co. & Waller Co.	27.3
Non-MSA Counties of Austin, Burleson, Calhoun, Chambers, Colorado, DeWitt, Fayette, Goliad, Grimes, Jackson, Lavaca, Leon, Madison, Matagorda Polk, Robertson, San Jacinto, Trinity, Victoria, Walker, Washington, & Wharton	27.4

Austin Area:

Austin, Hays Co., Travis Co., & Williamson Co.	24.1
Non-MSA Counties of Bastrop, Blanco, Burnet, Caldwell, Lee & Llano	24.2

Waco, Killeen, Temple Area:

Killeen, Temple, Bell Co. & Coryell Co.	16.4
Waco & McLennan Co.	20.7
Non-MSA Counties of Bosque, Falls, Freestone, Hamilton, Hill, Lampasas, Limestone, Milam & Mills	18.6

Dallas, Fort Worth Area:

Dallas, Fort Worth, Collin Co., Dallas Co., Denton Co., Ellis Co., Hood Co., Johnson Co., Kaufman Co., Parker Co., Rockwall Co., Tarrant Co. & Wise Co.	18.2
Sherman, Denison & Grayson Co.	9.4
Non-MSA Counties of Cooke, Delta, Erath, Fannin, Franklin, Hopkins, Hunt, Jack, Montague, Navarro, Palo Pinto, Rains, Somervell, & Van Zandt	17.2

Wichita Falls Area:

Wichita Falls, Clay Co. & Wichita Co.	12.4
Non-MSA Counties of Archer, Baylor, Cottle, Foard, Hardeman, Wilbarger & Young	11.0

Abilene Area:

Abilene, Callaghan Co., Jones Co. & Taylor Co.	11.6
Non-MSA Counties of Brown, Coleman, Comanche, Eastland, Fisher, Haskell, Kent, Knox, Mitchell, Nolan, Scurry, Shackelford, Stephens, Stonewall & Throckmorton	10.9

San Angelo Area:

San Angelo & Tom Green Co.	19.2
Non-MSA Counties of Coke, Concho, Crockett, Irion, Kimble, McCullough, Mason, Menard, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton & Terrell	20.0

San Antonio Area:

Laredo & Webb Co.	87.3
San Antonio, Bexar Co., Comal Co. & Guadalupe Co.	47.8
Non-MSA Counties of Atascosa, Bandera, Dimmit, Edwards, Frio, Gillespie, Gonzales, Jim Hogg, Karnes, Kendall, Kerr, Kinney, La Salle, McMullen, Maverick, Medina, Real, Uvalde, Val Verde, Wilson, Zapata & Zavala	49.4
<u>Corpus Christi Area:</u>	
Corpus Christi, Nueces Co. & San Patricio Co.	41.7
Non-MSA Counties of Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak & Refugio	44.2
<u>Brownsville, McAllen, Harlingen Area:</u>	
Brownsville, Harlingen, San Benito & Cameron Co.	71.0
McAllen, Pharr, Edinburg & Hidalgo Co.	72.8
Non-MSA Counties of Starr & Willacy	72.9
<u>Odessa, Midland Area:</u>	
Midland & Midland Co.	19.1
Odessa & Ector Co.	15.1
Non-MSA Counties of Andrews, Crane, Glasscock, Howard, Loving, Martin, Pecos, Reeves, Upton, Ward & Winkler	18.9
<u>El Paso Area:</u>	
El Paso & El Paso Co.	57.8
Non-MSA Counties of Brewster, Culbertson, Hudspeth, Jeff Davis & Presidio	49.0
<u>Lubbock Area:</u>	
Lubbock & Lubbock Co.	19.6
Non-MSA Counties of Bailey, Borden, Cochran, Crosby, Dawson, Dickens, Floyd, Gaines, Garza, Hale, Hockley, King, Lamb, Lynn, Motley, Terry & Yoakum	19.5
<u>Amarillo Area:</u>	
Amarillo, Potter Co. & Randall Co.	9.3
Non-MSA Counties of Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Roberts, Sherman, Swisher, & Wheeler	11.0

4.1.2 Temporary Project Signage

All TxCDBG construction projects utilizing TxCDBG funding must have temporary signage erected in a prominent location at the construction project site or along a major thoroughfare within the community as directed by the owner. A photo of this signage must be submitted to TDA prior to the release of construction funds.

Requirements of temporary signage include:

- placement in a prominent visible public area that is not blocked or obscured;
- constructed of durable materials;

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- minimum size of 11" x 17" with lettering no smaller than 1/2";
- Required text (or similar)*:

"This project is funded by the Texas Department of Agriculture with funds allocated by the U.S. Department of Housing and Urban Development through the Community Development Block Grant Program."

*Note: The text requirement above is satisfied by using the text in this manual. Alternate wording may be approved by TDA upon request.

Temporary signage may be reused for future TxCDBG projects as appropriate.

TECHNICAL SPECIFICATIONS

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ITEM 100 – PIPING CONSTRUCTION AND MATERIALS (SEWER).....	100 - 1 of 23
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OSSF DESIGN – 16539 SANDELL DRIVE	1 of 7

ITEM 50

MOBILIZATION

50.01 DESCRIPTION

This item shall consist of the mobilization of personnel, equipment and supplies at the project site in preparation for beginning work on other contract items. Mobilization shall include, but is not limited to, the movement of equipment, personnel, material, supplies, etc. to the project site and the establishment of office and other facilities necessary prior to beginning the work.

50.02 MEASUREMENT

Measurement of the Item, "Mobilization" as specified herein will be by the "Lump Sum", as the work progresses.

50.03 PAYMENT

Partial payments of the "Lump Sum" bid for mobilization will be as follows. The adjusted contract amount for construction items as used below is defined as the total contract amount less the lump sum bid for Mobilization.

1. When 1% of the adjusted contract amount for construction items is earned, 50% of the mobilization lump sum bid will be paid.
2. When 5% of the adjusted contract amount for construction items is earned, 75% of the mobilization lump sum will be paid. Previous payment under this item will be deducted from the above amount.
3. When 10% of the adjusted contract amount for construction items is earned, 100% of the mobilization lump sum bid will be paid. Previous payments under this item will be deducted from the above amount.

ITEM 100

PIPING CONSTRUCTION AND MATERIALS (SEWER)

100.01 GENERAL

Construction of sanitary sewer lines includes all preparation of site, clearing, grubbing, excavation, street surface removal, dewatering, sheeting, bracing, laying and joining of pipe, bedding, backfilling, installation of fittings, testing, and clean up of the site. The work includes furnishing of all materials, equipment, tools, labor and all other incidentals to complete the construction.

100.02 SEQUENCE OF WORK

The Contractor shall pursue the job in an orderly fashion. All sewer pipe shall begin at the downstream connection to the existing or proposed facilities. All appurtenances shall be constructed as soon as the pipe line they serve is constructed to their location. The construction of appurtenances may be postponed upon approval of the Engineer and determination that the circumstances were beyond the control of the Contractor. A sufficient space as determined by the Engineer, shall be provided for proper installation at a later time.

At least ten (10) days prior to construction, the Contractor shall submit to the Engineer, in writing, a Construction Plan detailing the sequence in which each line segment will be constructed. The Contractor shall alter this plan at the request of the Engineer. The Contractor shall not deviate from this plan without the approval of the Engineer.

100.03 SUB-SURFACE CONDITIONS

If soil borings have been conducted as part of this project, the boring logs can be found in the Appendix. Neither the Engineer nor the Owner make any guarantees as to the accuracy of this information. The contractor should make himself familiar with the conditions along the project route and area. The contractor may, with the permission of the Engineer, conduct his own sub-surface investigation.

100.04 SITE OF WORK

The Owner will furnish the site, easements, or any right of way considered necessary by the Engineer. If the Contractor needs more working area, he shall make his own arrangements and indemnify the Owner from any damages or claims.

100.05 PROTECTION OF THE PUBLIC

The Contractor shall make any provisions necessary to protect the public from inconveniences and dangers caused by the construction. Storage and stringing of the material and equipment

and excavation shall be done in a manner to cause minimum obstruction and inconvenience to the traffic and the property owners along or adjacent to the construction site. Fire hydrants, water meters, water valves, gas valves, manholes, catch basins, and boxes for telephone, signal, and alarms shall not be obstructed or covered.

The Owner reserves the right to remedy any neglect on the part of the Contractor in regards to public conveniences and safety which may come to its attention. After twenty-four (24) hours notice in writing to the Contractor, save in cases of emergency, when the Owner shall have the right to remedy any neglect without notice, and, in either case, the cost of such work done by the Owner shall be deducted from monies due or to become due to the Contractor.

100.06 HANDLING OF TRAFFIC

The Contractor shall make any provision necessary to handle, direct, and divert traffic when traffic is interrupted due to the contractor's work. At no time shall a street be closed due to the Contractor's construction without 48 hours notification to the city street department. Dead end streets must be kept accessible to the residents at all times.

100.07 BARRICADES, LIGHTS AND WATCHMEN

Where the work is carried on in, or adjacent to any street, alley, or public place, the Contractor shall, at his own expense, furnish and erect such barricades, fences, lights and danger signals and shall provide such watchmen and shall take such precautionary measures for the protection of persons, property, and of the work, as necessary in the opinion of the Engineer. Barricades shall be recently painted in a color that will be visible at night. From sunset to sunrise the Contractor shall furnish and maintain adequate lights at each barricade. A sufficient number of barricades shall be erected to keep vehicles from being driven on or into any work under construction. The Contractor shall furnish watchmen in sufficient numbers to protect the work.

The Contractor shall be held responsible for all damage to the work due to failure of barricades, signs, lights and watchmen to protect it, and whenever evidence is found of such damage, the Engineer may order the damaged portion immediately removed and replaced by the Contractor at the Contractor's cost and expense. The Contractor's responsibility for the maintenance of barricades, signs and lights, and for providing watchmen, shall not cease until the project has been accepted by the Owner.

Barricades, signs, and handling of traffic shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices as adopted by the Texas Highway Department, and as directed by the Engineer, all in accordance with these specifications. A copy of the manual is available for review without charge at the Engineer's office.

100.08 PROTECTION OF UTILITIES

The Contractor shall inspect the route of the construction during the bidding period to check the location of such utilities, possibility of any conflict, and addition of new utilities. If, during construction, it is determined that a conflict exists with the alignment of the proposed sewer mains, the Engineer may, at his option, make necessary changes in the alignment of the sewer line. The Contractor shall be responsible for the location of all utilities. Utilities shown on the plans are for informational purposes only. He shall be responsible for making any provisions necessary to protect all utilities, services, and appurtenances. He shall locate and give the owner-operator of each utility that utility's required advance notice prior to progressing to such utility. The Contractor and/or utility owner shall be responsible for repairing and damaged utilities. If the contractor is required to repair a utility, it shall be done without delay.

100.09 PROTECTION OF PRIVATE PROPERTY

The Contractor shall not enter upon private property for any purpose without having previously obtained permission from the Owner. The Contractor shall be responsible for the preservation of, and shall use every precaution to prevent damage to all trees, shrubbery, plants, lawns, fences, culverts, bridges, pavement, driveways, sidewalks, buildings, service lines, or any other structure in or adjacent to private property. The contractor shall be responsible for any damage to private (or public) property caused by his work.

100.10 PREPARATION OF THE SITE AND THE ROUTE

The Contractor shall make all preparation necessary before excavation starts. The construction site, and or the route which the pipe will be laid in, shall be cleared and grubbed before pipe laying. All stumps, brush, logs, rubbish and other objectionable material shall be removed and disposed of in a manner approved by the Engineer at the sole cost of the Contractor. Burning and/or hauling of the material shall be executed in compliance with ordinances of the City, County, or any other governmental body. If work is proceeding through a utility easement, care shall be taken to clear all the proposed easement as specified above.

100.11 PROTECTION OF STREET AND DRAINAGE

The Contractor shall make all attempts to keep streets and drainage ways open. Streets should be cleaned when the contractor's work leaves the streets dirty and/or muddy. Drainage ditches shall be kept open and if backfilled by the Contractor, they shall be reopened before the crew leaves the site at the end of a working day. The contractor shall provide temporary pumping facilities to provide drainage when a ditch is blocked by the contractor's work, as instructed by the Engineer and the Owner, at no additional cost to the owner.

100.12 MATERIALS

A. PVC GRAVITY SEWER PIPE AND FITTINGS

This specification covers PVC (Poly Vinyl Chloride) pipe to be used as a gravity sewer line.

1. PVC gravity sanitary sewer pipe up to 15" in diameter shall consist of the following:
 - a. Pipe. Pipe and fittings shall be manufactured to the dimensions and minimum design criteria as set forth in "Type PSM (Poly Vinyl Chloride) (PVC) Sewer Pipe and Fittings", ASTM D-3034 for diameters up to 15" with an allowed cell classification of 12454-B or 12454-C only. Sanitary sewer pipe in these sizes shall be a minimum SDR 26.
 - b. Installation. PVC pipe shall be installed in flat-bottom trenches with tamped backfill as shown in the details. PVC sewer pipe shall be installed in accordance with ASTM D-2321 and the details in the plans.
 - c. Joints. Joints shall be push-on type factory pre-molded gasketed joints and installed in accordance with the manufacturer's recommendations.
 - d. Fittings. Where specifically called for in the plans, fittings shall be either ductile iron fittings meeting the specifications herein with transition gaskets or SDR 26 PVC heavy wall gasketed sewer fittings meeting ASTM D 3034. SDR 26 fittings are for non-pressure applications.
 - e. Service Lines. Sanitary sewer service line shall be 4" SDR 35 or SCH 40 pipe with solvent weld joints. Fittings shall be SDR 35 or SCH 40 fittings. Connections to existing service lines shall be made with a PVC coupling or a flexible fitting with stainless steel straps.
2. PVC gravity sanitary sewer pipe from 18" to 36" in diameter shall consist of the following
 - a. Pipe. Pipe and fittings shall be manufactured to the dimensions and minimum design criteria as set forth in "Type PSM (Poly Vinyl Chloride) (PVC) Sewer Pipe and Fittings", ASTM F679, with an allowed cell classification of 12454-B or 12454-C only. Sanitary sewer pipe in these sizes shall be a minimum SDR 26 with a minimum pipe stiffness of 115 psi.

- b. Installation. PVC pipe shall be installed in flat-bottom trenches with tamped backfill as shown in the details. PVC sewer pipe shall be installed in accordance with ASTM D-2321 and the details in the plans.
 - c. Joints. Joints shall be push-on type factory pre-molded gasketed joints and installed in accordance with the manufacturer's recommendations.
- 3. PVC gravity sanitary sewer pipe 48" in diameter shall consist of the following:
 - a. Pipe. Pipe and fittings shall be manufactured to the dimensions and minimum design criteria as set forth in "Type PSM (Poly Vinyl Chloride) (PVC) Sewer Pipe and Fittings", ASTM F679, with an allowed cell classification of 12454-B or 12454-C only. Sanitary sewer pipe in these sizes shall be a minimum pipe stiffness of 46 psi.
 - b. Installation. PVC pipe shall be installed in flat-bottom trenches with tamped backfill as shown in the details. PVC sewer pipe shall be installed in accordance with ASTM D-2321 and the details in the plans.
 - c. Joints. Joints shall be push-on type factory pre-molded gasketed joints and installed in accordance with the manufacturer's recommendations.

B. PVC FORCE MAIN PIPE AND FITTINGS

The following specification covers PVC (Polyvinyl Chloride) pipe to be used under pressure for sanitary sewer force mains. All ANSI and AWWA references shall be the latest revision thereof. All PVC pipe and fittings used in this contract shall meet the requirements of the American National Standards Institute/National Sanitation Foundation (ANSI/NSF) standard 61 and ASTM D-1784. All PVC pipe shall bear the National Foundation Seal of Approval.

- 1. Pipe. Pipe shall consist of SDR 21 pipe & couplings with push-on type factory pre-molded gasketed joints and shall be made from Class 12454-B virgin compounds as defined in ASTM D-1784 and conforming with the outside dimensions of cast iron pipe.
- 2. Installation. PVC pipe shall be installed in flat-bottom trenches with tamped backfill and a minimum of three (3) feet of cover as per ASTM D-2774 and/or as shown in the details.
- 3. Joints. Joints shall be mechanical type or the push-on type as specified with confined elastomeric gasket and installed in accordance with the manufacturer's recommendations.

4. Fittings. Fittings shall be manufactured and tested in accordance with AWWA C-110\ANSI A21.10, "Specification For Gray-Iron and Ductile Iron Fittings For Water and Other Liquids". Fittings shall be Mechanical Joint with Megalug restraining flanges. Transition gaskets shall be used where necessary to connect to existing piping.

C. DUCTILE IRON PIPE

The following specification covers ductile iron pipe to be used in both gravity and pressure applications. All ANSI and AWWA references shall be the latest revision thereof.

1. Pipe and Fittings. Ductile Iron Pipe shall be designed, manufactured, and tested in accordance with ANSI A21.51 (AWWA C-151) and ANSI 21.50 (AWWA C-150). Pipe and spool pieces 12" and smaller shall be Class 350; 14" to 20" shall be Class 250; 24" shall be Class 200; and sizes larger than 24" shall be Class 150, unless otherwise noted on the plans. Flanged joints shall be as per AWWA C-115-1985 and mechanical joints shall be as per AWWA C-111-1985.

Fittings shall be manufactured and tested in accordance with AWWA C-110\ANSI A21.10, "Specification for Gray-Iron and Ductile Iron Fittings for Water and Other Liquids".

2. Coating. The interior of the pipe and fittings for sanitary sewer lines shall be completely lined with a minimum of 40 MILS of Protecto 401 ceramic epoxy-lining, or prior approved equivalent.

The exterior of all underground ductile iron pipe and fittings shall be coated with 1 mil of asphaltic coating applied at the factory. All underground ductile iron piping and fittings shall be totally encased with a single layer 8 mils high-density "Polywrap" polyethylene film, ANSI/ASTM D1248, installed to manufacturer's instructions and AWWA C105, unless otherwise specified.

The exterior of all exposed (above ground) ductile iron pipe and fittings shall be prepared and coated according to the below specifications.

Priming (by pipe manufacturer) - **All above ground (exposed) ductile iron pipe shall be shop primed.** The primer shall be compatible with Tnemec paint. The pipe supplier shall supply the Contractor with one gallon of the same primer used to prime the pipe so that the Contractor can field prime areas of the pipe that may be damaged during delivery.

Field painting - All exposed (above ground) ductile iron pipe and fittings shall be prepared and coated according to the following specifications:

Surface preparation: Sand all surfaces using 150 grit sandpaper to uniform and thoroughly abraded surface. If necessary, clean surface with solvents (for example, MEK) to remove grease, oil and other soluble contaminants. All surfaces shall be dry, clean and free of all dust, dirt, oil, grease and other contaminants. In areas where the coating has been damaged, clean with wire brushes and apply one coat of primer (provided by pipe supplier) to the bare area. Feather edges smooth. All surface preparation shall be in accordance with the painting specification, or approved equivalent.

First coat: Apply one coat of Tnemec Series N69 Hi-Build Epoxoline II at 6.0 to 8.0 dry mils. Thin only with Tnemec No. 4 Thinner.

Finish coat: Apply one coat of Tnemec Series 1074 Endura-Shield II at 2.0 to 5.0 dry mils. Thin only with Tnemec No. 39 Thinner. Finish color shall be battleship grey.

For ductile iron piping to be used in a sewage wetwell environment the following coating shall be used.

First coat: Apply one coat of Tnemec Series N69 Hi-Build Epoxoline II at 6.0 to 8.0 dry mils. Thin only with Tnemec No. 4 Thinner.

Finish coat: Apply one coat of Tnemec Series N69 Hi-Build Epoxoline II at 2.0 to 5.0 dry mils. Thin only with Tnemec No. 4 Thinner. Finish color shall be battleship grey.

3. Joints. Pipe and fittings shall be furnished with the type of joint and end combinations as well as pressure class specified. Mechanical joint fittings shall be furnished complete with glands, gaskets and nuts and bolts. Mechanical Joint fittings shall have Megalug restraining flanges and transition gaskets shall be used where necessary to connect to existing piping. Flanged joint fittings shall be furnished complete with gaskets and nuts and bolts. All bolts, glands and gaskets shall be in accordance with AWWA Standard Specification C111-85 and installed in accordance with the manufacturer's recommendations.
4. Installation. Ductile Iron pipe shall be installed in flat-bottom trenches with tamped backfill as shown in the details.

D. HIGH DENSITY POLYETHYLENE (HDPE) PIPE

This specification covers HDPE (High Density Polyethylene) pipe to be used as a sewer main. Pipe shall be manufactured from a high density high molecular weight polyethylene (HDPE) resin which conforms to ASTM D-1248 and AWWA C906 and meets the requirements for Type III, Class B, Grade P34, Category 5, and has a PPI rating of PE 3408, when compounded. The pipe produced from this resin shall have a minimum cell classification of 345434E (inner wall shall be light in color) under ASTM D3350.

Pipe supplied under this specification shall have a nominal DIPS (Ductile Iron Pipe Size) or IPS (Iron Pipe Size) as shown on the plans and in the specifications.

Before beginning work, the Contractor shall submit to the Engineer for approval, the vendor's specific technical data with complete physical properties of pipe and pipe dimensions pertinent to this job.

The outside diameter and minimum wall thickness shall conform to dimensions listed in Table I and shall be measured in accordance with ASTM D-2122.

TABLE 1
POLYETHYLENE PIPE DIMENSIONS

DIPS (Inches)	NOMINAL OD (Inches)	MINIMUM WALL THICKNESS (Inches)	
		DR 17	DR 11
4	4.80	0.282	0.436
6	6.90	0.406	0.627
8	9.05	0.532	0.823
10	11.10	0.653	1.009
12	13.20	0.776	1.200
14	15.30	0.900	1.391
16	17.40	1.024	1.582
18	19.50	1.147	1.773
20	21.60	1.271	1.964
24	25.80	1.518	2.345

30	32.00	1.882	2.909
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Standard dimension ratio is calculated by dividing the specified outside diameter by the minimum wall thickness. The wall thickness tolerance shall be within plus 12%.

Tests for compliance with this specification shall be made according to the applicable ASTM specification. A certificate of compliance with this specification shall be provided by the manufacturer for all material furnished under this specification. In addition, the purchaser may, at his own expense, witness inspection and test of the materials.

1. Intermediate Connections

a. Fusion Fittings

Fusion couplings for adjoining HDPE pipe in the trench may be used. Materials shall be as specified by the pipe manufacturer. Installation procedures shall only include equipment recommended and provided by the pipe manufacturer. The Contractor **MUST** provide proof to the Engineer that the equipment used in the installation process is approved by the pipe manufacturer for use on the pipe and fusion fittings to be used in this project.

2. Installation Procedures

a. Finished Pipe

Pipe with gashes, nicks, abrasions, or any such physical damage which may have occurred during storage and/or handling, which are larger/deeper than 10% of the wall thickness shall not be used and shall be removed from the construction site. The installed pipe shall meet requirements of the pressure test as specified herein.

b. Pipe Joining

Sections of polyethylene replacement pipe shall be assembled and joined on the job site above the ground. Joining shall be accomplished by the heating and butt-fusion method in strict conformance with the manufacturer's printed instructions and ASTM D-2657.

The butt-fusion method for pipe joining shall be carried out in the field by operators with prior experience in fusing polyethylene pipe with similar equipment using proper jigs and tools per standard procedures outlined by

the pipe manufacturer. These joints shall have a smooth, uniform, double rolled back bead made while applying the proper melt, pressure, and alignment. It shall be the sole responsibility of the Contractor to provide an acceptable butt-fusion joint. All joints shall be made available for inspection by the Engineer before insertion. The replacement pipe shall be joined on the site in appropriate working lengths near the insertion pit.

c. Insertion of Pipe

The pipe shall be allowed time to relax prior to making connections and sealing the ends of casing. The Contractor shall allow the time recommended by the manufacturer, but not less than twelve (12) hours, for the pipe to relax from the stretching incurred during the pulling process.

3. Testing of HDPE Pipe

Pressure testing will be required as called for in the Technical Specifications Item 320.

4. Quality Assurance

a. Referenced Specifications for HDPE: This Specification references American Society for Testing and Materials (ASTM) standard specification and American Water Works Association (AWWA) standards, which are made apart hereof by such reference and shall be the latest edition and revision thereof:

1. ASTM D 1784 - Specification for Rigid (Poly Vinyl Chloride) (PVC) Compounds.
2. ASTM D 1248 - Polyethylene Plastics Molding and Extrusion Material.
3. ASTM D 2122 - Determining Dimensions of Thermoplastic Pipe and Fittings.
4. ASTM D 2412 - Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
5. ASTM D 2837 - Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.
6. ASTM D 3350 - Polyethylene Plastics Pipe and Fittings Materials.
7. ASTM F 385 - Practice for Insertion of Flexible Polyethylene Pipe Into Existing Sewers.
8. ASTM F 714 - Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter.

9. AWWA C906 - Polyethylene (PE) Pressure Pipe and Fittings, 4 in. through 63 in. for Water Distribution.

- b. Causes for rejection of piping material and fittings shall include but not be limited to physical defects in pipe including but not limited to concentrated ridges, chain marks, discoloration, excessive spot roughness, pitting, visible cracks, foreign inclusions, and varying wall thickness.

E. SERVICE TAPS

Service taps shall be as per details located in the plans. If no details are provided, the service taps shall be made using a flexible saddle and series 300 stainless steel bands, as manufactured by Hefco Plastics, Inc., an In Insert-a-Tee, or prior approved equivalent. The saddle shall be constructed of a durable non-corrosive material. The saddle may be either "T" shaped or wye shaped. Where applicable on large diameter pipes, Insert-a-Tee fittings may be used in lieu of saddles.

100.13 EXCAVATION AND BACKFILL

Excavation for the sewer line shall be by open trench method as necessary to install the sewer main to the grade and alignment shown on the plans. Backfill and bedding shall be in accordance with the details in the plans for each specific surface type. Backfill of stabilized material in the street shall be done in 12" lifts or as indicated in the plans and shall be compacted as indicated in the plans to prevent voids in the backfill. Surface restoration shall be as shown in the details and shall be to the original condition or better. Backfill outside of the pavement shall be done in 12" lifts and shall be the more stricter of that shown in the plans or select native material compacted to the density of the surrounding soil except driveways which shall be the same as for streets of the same types of materials. Backfilling shall begin as soon as the joining of the pipe has been completed. All open trenches and pits shall be backfilled before the end of the day. No open pits shall be left open overnight unless they are barricaded in accordance with this specification and they are out of the roadway.

All excavations deeper than five (5) feet shall adhere to the trench safety specification herein.

A. BEDDING

The bedding will typically be 6" thick or as indicated in the details. The bedding should be compacted as indicated except that joint locations shall be over excavated to allow the pipe to rest on its barrel and not on the bell or joints. The top 2" of the bedding area shall be loosened to provide a soil envelope for the pipe barrel. Bedding material shall be as specifically called for in the plans and details in accordance the definitions below:

1. Select (Native) Fill - select fill material shall be composed of native material or material obtained from borrow, channel, or structural excavations as approved by the

Engineer. The select material may be composed of graded sand-clay mixtures; graded gravel (less than three (3") inches) with sand-clay binder; and /or sand. This material shall have a binder with a Plasticity Index between 0 and 13 and a liquid limit less than 46. The material shall be free of vegetation, debris, rocks with a diameter over 1.5 inches and clay lumps. This material shall not include soils with a Unified System Classification of OL, MH, OH, CH, and PT or soils with an AASHTO classification of A-7. Sand-clay material should be 50-70% sand and 30-50% clay with sand size range being that portion passing a #10 sieve and retained on a #270 sieve, or as approved by the Engineer;

2. Crushed Stone - crushed stone shall be Class I materials, well graded angular crushed stone in the range of 3/4" to 1/16" with good stability. Crushed stone shall be graded in accordance with Size #67 and #68 of AASHTO M43, ASTM D448;
3. Sand (or Bank Sand) - sand shall be Class II materials, sands with very little or no fines. Soils with a Unified System Classification of SW, SM, and SP, or an AASHTO classification of A-3 shall be required.
4. Gravel - gravel shall be Class II materials, have less than 10% by weight fines. The sieve analysis of gravel shall be in accordance with Size #67 or #68 of AASHTO M43, ASTM D448;
5. Concrete - concrete shall be Class B concrete in accordance the applicable specifications herein.

B. PIPE ZONE

Pipe Zone backfill is from the top of the bedding to normally a minimum of 12" above the top of the pipe but as indicated on the plans and details. Backfill shall be one of the materials listed above, as indicated on the plans and details. Only hand operated compaction equipment shall be used within the pipe zone.

The Contractor shall not disturb the pipe location, jointing, or embedment when moving trench protection equipment. Removal of trench protection below the top of the pipe and within 2 ½ pipe diameters of each side of the pipe shall not be done once the pipe zone has been compacted. Any voids left in the embedment material or relaxing of the trench envelope by support removal shall be carefully filled with granular material and compacted as indicated in the plans and details.

C. BACKFILL ABOVE THE PIPE ZONE

Backfill above the pipe zone and ultimate surface restoration shall be as shown on the plans and details for the specific conditions.

100.14 BACKFILL COMPACTION TESTING

The Contractor shall have all necessary laboratory testing performed at his own expense by a commercial laboratory acceptable to the Engineer. Reports shall be provided to the Engineer on a regular basis or as soon as they are provided to the Contractor. If a section of backfill fails a compaction test, the Contractor shall immediately remedy the situation by excavating the failed area and recompacting with new material and re-testing each lift at his own expense. If the Owner elects to conduct additional testing at its own expense, the Contractor shall coordinate with the Owner's testing laboratory regarding access to the construction, scheduling, and notification of on going work.

Materials shall be compacted to the minimum percentage indicated on the plans of the Standard Proctor Density as determined by ASTM D698. In place density tests shall be performed in accordance with ASTM D2922 at a frequency of every 300 linear feet of trench for the bedding and each lift within the pipe zone and each lift within the backfill above the pipe zone where a specific density percentage requirement is called out. Where the details call for compaction to the density of the surrounding soil, compaction testing is not required.

Stabilized sand backfill shall be compacted to the minimum percentage indicated on the plans of the maximum dry density as determined by ASTM D558 .

100.15 LAYING OF PIPE

The Engineer has provided sufficient information on the plan sheets to establish horizontal alignment of the sewer mains to be constructed. Unless otherwise noted in the plans and specifications, no construction staking will be provided by the Engineer. The contractor is responsible for both horizontal and vertical control. Proper implements, tools, and equipment should be used for placement of the pipe in the trench to prevent damage. Under no circumstances should the pipe or accessories be dropped into the trench. Jointing of pipes shall be in strict accordance with manufacturer's printed instructions. Each pipe segment shall rest on the bottom of the trench the entire length of the pipe.

PVC Pipe shall be installed in accordance with ASTM D-2774. Pipe bells should be laid on the upstream end. All foreign matter or dirt should be removed from the pipe interior. Pipe joints should be assembled with care. Whenever pipe laying is interrupted, the open ends of installed pipe shall be closed to prevent entrance of trench water, mud, or foreign matter.

All pipe lines must be laid in a straight line, unless otherwise shown on the drawings, with the flow line of the pipe at the grade shown on the plans. Pipe joints shall not be located inside of manholes. Instead, pipe bells shall be placed two to three feet outside of the manhole walls and a straight pipe section used to make the entry.

No variation from true and even grade, alignment, and invert will be permitted except to avoid existing underground utilities, and then only with the written permission of the Engineer.

If a piece of pipe that is installed is determined to be defective or collapses, the Contractor shall replace that section of pipe, at no additional cost to the Owner, including surface restoration.

100.16 FLOW CONTROL

The contractor shall bypass pump when necessary to maintain sewer service. Temporarily blocking of a line is permissible as long as the Owner is given 24 hours notice and the sewer main is restored to service at the end of the day. The contractor shall not allow any sewage to back up into private property and shall continually monitor a blocked sewer line to prevent overflows. If this happens, the contractor shall replace and restore any damaged Owner or private property to its original condition or better.

100.17 LOCATING INTERSECTING PIPES

The Contractor shall make attempts to locate intersecting lines ahead of pipe laying. He shall locate and excavate in advance any sewer lines which will be tied into the system being constructed. All service connections shall be restored to the property line immediately. No residence shall be left out of service overnight.

All pipe lines and gas lines, as well as underground power lines and telephone cables, shall be located and the owner given proper notification prior to construction near the lines.

100.18 DEWATERING

Under no circumstances shall the surface water be allowed to flow in the trench. When ground water exists in the trench, the Contractor shall drain it away from the pipe laying area, pump it out of the trench, or provide for dewatering by other means. Well pointing, when provided for in the Bid Proposal, shall be paid for at the bid price and other means of trench dewatering will be incidental to the line installation. The approval of the engineer is required prior to using well pointing. When not provided for in the Bid Proposal, well pointing shall be considered incidental to other appropriate bid items.

100.19 TRENCH BOTTOM STABILIZATION

If quicksand, water sand, or standing water is present in the trench bottom, and cannot be removed with dewatering or dewatering is not included in the project, the Contractor shall, with the approval of the Engineer, undercut the trench subgrade a minimum of 6" (or more as necessary) below the bedding area and replace it with a Class I granular material, such as crushed stone or gravel, wrapped in a non-woven filter fabric. The filter fabric shall be

overlapped a minimum of 12".

Payment shall be as specified in the Payment portion of this specification. No payment shall be made for trench bottom stabilization unless approval from the Engineer is obtained prior to placement of the material.

100.20 STREET SURFACES

Streets shall be restored in the most workmanlike manner without needless delay and shall in every respect be equal in quality, character, material and workmanship to the original street or better. The expense of restoring the streets must be included in the price bid per linear foot for main lines, unless otherwise provided. Backfill in and along streets shall be as per the details in the plans. If the streets are not immediately restored, temporary base material shall be placed in the upper portion of the excavation until such time that the street is restored to its original condition. No extra payment will be made for temporary street materials.

100.21 CROSSING OF DRIVEWAYS

Should the Contractor damage any portions of a driveway, or Wastewater Treatment Plant (WWTP) road the shall restore those driveways and their culverts to their original condition or better as soon as possible. He shall inform citizens which will be affected by this work at least 24 hours prior to the start of the work. No driveway shall be left unusable overnight.

All asphalt and concrete driveways shall be bored without casing unless otherwise noted on the plans.

For any disturbed concrete driveways, the disturbed areas shall be backfilled to within 2" of the existing concrete with 2 sack per ton stabilized sand and then with 3000 psi reinforced concrete. Asphalt driveways shall be replaced similarly to asphalt streets, as shown in the details in the plans. Driveways which are open cut shall be replaced with sand or native material around the pipe, 2 sack per ton cement stabilized sand to within 8" of the surface, and with the original material to the surface and to the original condition or better. Care should be taken when compacting the backfill under existing driveways so that future settlement does not occur.

This backfill is only for those driveway crossings called for in the plans to have stabilized backfill. Any other areas must have the approval of the Engineer prior to placement of stabilized backfill.

100.22 UTILITY LINE CROSSINGS

The plans note the existence of pipe lines and utility lines in the route of construction. Exact locations are not in the plans. The Owner and the Engineer assume no responsibility for inaccuracies, additions, omissions, or revisions. It is the responsibility of the Contractor to

locate all utility lines, contact the owner of the utility line, and make arrangements for crossing such lines. It is best to locate such lines a few hundred feet ahead of the pipe laying operation in order to make revisions in grade or alignment, if they are necessary and approved by the Engineer.

100.23 EXCESS SOILS

Excess soils shall be disposed of by the Contractor in accordance with all local, state, and federal laws. The Contractor shall make his own arrangements, at his own cost, to dispose of the excess soils in a manner approved by the Engineer. If, in the opinion of the Engineer, the excess soils constitute a hazard or a nuisance, the Contractor shall dispose of those soils immediately.

110.24 AGENCY REQUIREMENTS TO BE MET

All water and sewer lines installed shall meet the requirements of the Texas Commission on Environmental Quality (TCEQ). Sewer lines shall comply with the requirements of design criteria for sewerage systems as established by the TCEQ. In particular, all sanitary sewer installations shall be in accordance with the 30 TAC Chapter 217:

§217.53(d) Separation Distances.

For this section the term “Reclaimed Water Line” and “Non-Potable” water line shall be the same.

The following rules apply to separation distances between potable water, water lines and sanitary sewers.

- A. Separation distances between public water supply pipes and wastewater collection system pipes or manholes.
 - (1) Collection system pipes must be installed in trenches separate from public water supply trenches.
 - (2) Collection system pipes must be no closer than nine feet in any direction to a public water supply line.
 - (3) If a nine-foot separation distance cannot be achieved, the following guidelines will apply:

- (a) If a collection system parallels a public water supply pipe the following requirements apply:
 - (i). A collection system pipe must be constructed of cast iron, ductile iron, or PVC meeting ASTM specifications with at least a 150 pounds per square inch (psi) pressure rating for both the pipe and joints.
 - (ii). A vertical separation must be at least two feet between the outside diameters of the pipes.
 - (iii). A horizontal separation must be at least four feet between the outside diameters of the pipes.
 - (iv). A collection system pipe must be below a public water supply pipe.
- (b) If a collection system pipe crosses a public water supply pipe, the following requirements apply:
 - (i). If a collection system is constructed of cast iron, ductile iron, or PVC with a minimum pressure rating of 150 psi, the following requirements apply:
 - (I). A minimum separation distance is six inches between outside diameters of the pipes.
 - (II). A collection system pipe must be below a public water supply pipe.
 - (III). Collection system pipe joints must be located as far as possible from an intersection with a public water supply line.
 - (ii). If a collection system pipe crosses under a public water supply pipe and the collection system pipe is constructed of acrylonitrile butadiene styrene (ABS) truss pipe, similar semi-rigid plastic composite pipe, clay pipe, or concrete pipe with gasketed joints, the following requirements apply:
 - (I). A minimum separation distance is two feet.

(II). If a collection system pipe is within nine feet of a public water supply pipe, the initial backfill around the collection system pipe must be:

(-a-) sand stabilized with two or more 80 pound bags of cement per cubic yard of sand for any section of collection system pipe within nine feet of a public water supply pipe.

(-b-) installed from one quarter of the diameter of the collection system pipe below the centerline of the collection system pipe to one pipe diameter (but not less than 12 inches) above the top of the collection system pipe.

(iii). If a collection system crosses over a public water supply pipe, one of the following procedures must be followed:

(I) Each portion of a collection system pipe within nine feet of a public water supply pipe must be constructed of cast iron, ductile iron, or PVC pipe with at least 150 psi pressure rating using appropriate adapters.

(II). A collection system pipe must be encased in a joint of at least 150 psi pressure class pipe that is:

(-a-) centered on the crossing;

(-b-) sealed at both ends with cement grout or manufactured seal;

(-c-) at least 18 feet long;

(-d-) at least two nominal sizes larger than the wastewater collection pipe; and

(-e-) supported by spacers between the collection system pipe and the encasing pipe at a maximum of five-foot intervals.

4. Public water supply pipe and collection system manhole separation.

- A. Unless collection system manholes and the connecting collection system pipe are watertight, as supported by leakage tests showing no leakage, they must be installed a minimum of nine feet of horizontal clearance from an existing or proposed public water supply pipe.
- B. If a nine-foot separation distance cannot be achieved, the requirements in paragraph (3) of this subsection apply.

B. Non potable water line/sewer line separation

For this section the term “Reclaimed Water Line” and “Non-Potable” water line shall be the same.

Where a reclaimed water line parallels a sewer line, horizontal separation distance shall be three feet (outside to outside) with the reclaimed water line at the level of or above the sewer line. Reclaimed water lines which parallel sewer lines may be placed in the same benched trench.

- 1. New waterline installation - parallel lines.
 - a. Where new potable water lines.
 - (I) Where a new potable waterline parallels an existing, non-pressure or pressure rated wastewater main or lateral and the licensed professional engineer licensed in the State of Texas is able to determine that the existing wastewater main or lateral is not leaking, the new potable waterline shall be located at least two feet above the existing wastewater main or lateral, measured vertically, and at least four feet away, measured horizontally, from the existing wastewater main or lateral. Every effort shall be exerted not to disturb the bedding and backfill of the existing wastewater main or lateral.
 - (II) Where a new potable waterline parallels an existing pressure rated wastewater main or lateral and it cannot be determined by the licensed professional engineer if the existing line is leaking, the existing wastewater main or lateral shall be replaced with at least 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the new wastewater line, measured vertically, and at least four feet away, measured horizontally, from the replaced wastewater main or lateral.
 - (III) Where a new potable water line parallels a new wastewater main,

the wastewater main or lateral shall be constructed of at least 150 psi pressure rated pipe. The new potable water line shall be located at least two feet above the wastewater main or lateral, measured vertically, and at least four feet away, measured horizontally, from the wastewater main or lateral

2. New waterline installation - crossing lines.

- a. Where a new potable waterline crosses an existing, non-pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least two feet above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. If the existing wastewater main or lateral is disturbed or shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.
- b. Where a new potable waterline crosses an existing, pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least six inches above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. If the existing wastewater main or lateral shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.
- c. Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral and the standard pipe segment length of the wastewater main or lateral is at least 18 feet, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least two feet above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. The wastewater pipe shall have a

minimum pipe stiffness of 115 psi at 5.0% deflection. The wastewater main or lateral shall be embedded in cement stabilized sand (see clause f) of this subparagraph) for the total length of one pipe segment plus 12 inches beyond the joint on each end.

- d. Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral and a standard length of the wastewater pipe is less than 18 feet in length, the potable water pipe segment shall be centered over the wastewater line. The materials and method of installation shall conform with one of the following options.
 - (I) Within nine feet horizontally of either side of the waterline, the wastewater pipe and joints shall be constructed with pipe material having a minimum pressure rating of at least 150 psi. An absolute minimum vertical separation distance of two feet shall be provided. The wastewater main or lateral shall be located below the waterline.
 - (II) All sections of wastewater main or lateral within nine feet horizontally of the waterline shall be encased in an 18-foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The encasing pipe shall be centered on the waterline and shall be at least two nominal pipe diameters larger than the wastewater main or lateral. The space around the carrier pipe shall be supported at five-foot (or less) intervals with spacers or be filled to the springline with washed sand. Each end of the casing shall be sealed with watertight non-shrink cement grout or a manufactured watertight seal. An absolute minimum separation distance of six inches between the encasement pipe and the waterline shall be provided. The wastewater line shall be located below the waterline.
 - (III) When a new waterline crosses under a wastewater main or lateral, the waterline shall be encased as described for wastewater mains or laterals in subclause (II) of this clause or constructed of ductile iron or steel pipe with mechanical or welded joints as appropriate. An absolute minimum separation distance of one foot between the waterline and the wastewater main or lateral must pass a pressure and leakage test as specified in AWWA C600 standards.
- e. Where a new potable waterline crosses a new, pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over

the wastewater line such that the joints of the waterline pipe or equidistant and at least nine feet horizontally from the center line of the wastewater main or lateral. The potable waterline shall be at least six inches above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. The wastewater pipe shall have a minimum pressure rating of at least 150 psi. The wastewater main or lateral shall be embedded in cement stabilized sand (see clause (f) of this subparagraph for the total length of one pipe segment plus 12 inches beyond the joint on each end.

- f. Where cement stabilized sand bedding is required, the cement stabilized sand shall have a minimum of 10% cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume(at least 2.5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be a minimum of six inches above and four inches below the wastewater main or lateral. The use of brown coloring in cement stabilized sand for wastewater main or lateral bedding is recommended for the identification of pressure rated wastewater mains during future construction.

100.25 MEASUREMENT AND PAYMENT

Pipe and fittings will be measured by the linear foot of pipe complete in place. Such measurement will be along the centerline between the ends of the pipe barrel, as installed. When provided for in the bid proposal, unit price shall include all materials, labor, excavation, backfilling, testing, pavement and surface restoration, seeding where required, bypass pumping, and other incidentals necessary for a complete installation. Otherwise, all piping shall be incidental to appropriate bid items. No payment shall be made for line that is not backfilled. Unless specifically provided for in the bid proposal, there will be no extra payment for the removal and disposal of brush, trees, and roots. Such payment shall be incidental to the installation of the pipe.

Special embedment materials, if approved by the Engineer and provided for in the bid proposal, shall be paid for at the unit bid per linear feet of trench, otherwise it shall be incidental to the appropriate bid items. Special embedment material shall be materials determined to be necessary after inspection of the trench bed. Sand, if used, is not considered special embedment material. Non-woven filter fabric, if used and approved by the Engineer and provided for in the bid proposal, shall be paid for at the unit price bid per linear feet of trench, otherwise it will be incidental to the appropriate bid items.

If not specifically provided for in the bid proposal, no extra payment will be made for the control of groundwater or surface water in trenches or pits, including well pointing systems. Such payment shall be considered incidental to cost of the various bid items.

Fittings shall be paid for individually if specifically called for in the plans and provided for in the bid proposal. Any other fittings that are a result of a field decision shall be incidental to the line work. The cost for the Megalug restraining flanges and any necessary transition gaskets shall be considered incidental to the installation of the fittings. Payment for the connections of proposed lines to existing lines shall be considered full payment for the connection regardless of any field modifications or other fittings that may be necessary due to space or other limitations or conditions.

ITEM 120

PROJECT RECORD DOCUMENTS

120.01 GENERAL

Prepare and maintain record documents for the project to accurately reflect the construction “As Built.” Documents must be maintained up to date on an ongoing basis. Proof of this shall be required for each monthly pay estimate. Documents must also be submitted at work completion as a condition of final acceptance.

120.02 MAINTENANCE OF RECORD DOCUMENTS

A. Maintain at the job site, one copy of:

- (1) Contract drawings.
- (2) As-Built drawings.
- (3) Specifications.
- (4) Addenda.
- (5) Reviewed shop drawings.
- (6) Change orders and field orders.
- (7) Other contract modifications.
- (8) Field test records.
- (9) Correspondence.

B. Store record documents in an approved location apart from documents used for construction. Do not use record documents for construction purposes. Provide files and racks for orderly storage. Maintain documents in clean, dry, legible condition. Make documents and samples available at all times for inspection by the Engineer.

120.03 MARKING DEVICES

Mark all changes legibly in red ink.

120.04 RECORDING

- A. Keep record documents current. Do not permanently conceal any work until required information has been recorded.
- B. Label each document "PROJECT RECORD" in neat, large, printed letters. Legibly mark contract drawings to record actual construction:
 - (1) Alignment and profile of water line, and location and depth of appurtenances.
 - (2) Horizontal and vertical location of underground and under slab utilities and appurtenances referenced to permanent surface improvements.
 - (3) Location of internal utilities and appurtenances referenced to permanent surface improvements.
 - (4) Field changes of dimension and detail.
 - (5) Changes made by change order or field order.
 - (6) Details not on original contract drawings.
- C. Legibly mark specifications and addenda to record:
 - (1) Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 - (2) Changes made by change order or field order.
 - (3) Other matters not originally specified.
- D. Legibly annotate shop drawings to record changes made after review.

120.05 SUBMITTAL

- A. At project completion, deliver record documents to the Engineer. Place all letter-sized material in a 3-ring binder, neatly indexed. Bind contract drawings and shop drawings in rolls of convenient size for ease of handling.
- B. Accompany the SUBMITTAL with a transmittal letter in duplicate, containing:
 - (1) Date.
 - (2) Project title and number.

- (3) Contractor's name and address.
- (4) Title and number of each record document.
- (5) Certification that each document as submitted is complete and accurate.
- (6) Signature of Contractor.

ITEM 125

SUBSURFACE CONDITIONS

125.01 DESCRIPTION

Soil borings have been conducted as part of this project. A copy of the boring logs and the soils report is included in the Appendix. The Contractor may, with the permission of the Engineer, conduct his own subsurface investigation to establish the condition of the soil. Neither this specification nor any other portion of the Plans and Specifications shall be construed as being a warrant of subsurface conditions.

125.02 ADDITIONAL INFORMATION

Bidders should visit the proposed project site to acquaint themselves with the site conditions prior to bidding on the project.

125.03 CONSTRUCTION METHODS

The Contractor shall submit a plan of construction, including sketches and other information, covering in detail his proposed construction methods, procedures, and equipment.

ITEM 130

CLEARING AND GRUBBING

130.01 SCOPE

Clearing and grubbing shall consist of the removal and disposal of trees, stumps, brush, roots, vegetation, logs, rubbish and other objectionable matter.

130.02 CONSTRUCTION METHODS

The entire street or drainage right-of-way and/or other specified areas shall be cleared, except such trees and brush as may be designated by the Engineer for preservation. Trees and brush designated to be left in place shall be carefully trimmed as directed and shall be protected from scarring, barking or other injuries during construction operations.

When directed by the Engineer, this item shall receive priority and shall be completed throughout the project.

Areas required for embankment construction, structural fill, foundation construction and any other construction shall be cleared and grubbed a minimum of 8" or more if indicated in the plans from natural ground and shall remove all organic materials prior to subbase preparation.

On areas required for roadway, channel or structural excavation and for storm sewer construction, all stumps, roots, etc., shall be removed to a depth of at least two (2) feet below the existing ground surface. All holes remaining after clearing and grubbing shall be backfilled with select materials and tamped as directed by the Engineer.

All cleared and grubbed material shall become the property of the Contractor and shall be disposed of at the Contractor's expense.

130.03 MEASUREMENT AND PAYMENT

When specifically included as a Bid Item, Clearing and Grubbing performed as specified herein, will be measured by the acre of surface area as measured on the ground within the limits designated on the plans. All work performed satisfactorily as specified and measured as herein provided shall be paid for at the unit price bid for "Clearing and Grubbing" which price shall be full compensation for furnishing all labor, materials, equipment, tools, supplies and incidentals necessary to perform the work as specified.

When not included as a Bid Item, Clearing and Grubbing will not be paid for directly but will be considered subsidiary to pay items.

ITEM 140

EMBANKMENT AND FILL

140.01 DESCRIPTION

This item shall govern the placement and compaction of all materials obtained from roadway, borrow, channel, structural excavation and purchased material for utilization in the construction of roadway embankments, levees, dykes, concrete slabs, and all other areas or items which require fill.

140.02 FILL MATERIAL

1. General - All fill material shall be free from all humus or organic debris, inorganic silt, and gravel larger than three (3") inches. The fill material shall not contain highly expansive or compressible clays, highly plastic soils, very loose sand and silts, or poorly drained less soils. No large lumps or clods will be permitted, and material should be friable. Very moist or dry material shall not be used until the material has been reworked to proper moisture content.

Trees, stumps, roots, and other vegetation shall not be placed in fills and embankments.

Unless otherwise indicated on the plans, the surface of ground of all unpaved areas other than rock which are to receive embankment shall be loosened by scarifying or plowing to a depth of not less than 4 inches. The loosened material shall be recompacted with the new embankment as hereinafter specified.

2. Select (Structural) Fill - Select fill material shall be composed of native material or material obtained from borrow, channel, or structural excavations as approved by the Engineer.

The selected materials shall be composed of graded sand and gravel with clay binder. The maximum size of the granular portion should be limited to 1.5". The clay binder shall have a Plastic Index less than 10 ($PI < 10$) and a Liquid Limit less than 40 ($LL < 40$). The selected soil shall conform to AASHTO Classification Group A4. The selected soil (clayey sand soil) should be 50% to 70% sand with 30% to 50% clay. The sand particles shall 100% pass a Standard Sieve #10 and the clay particles shall 100% be retained between a sieve #200 and #270. The selected material shall be free of any organic material (OH), Clay with high plasticity (CH), silt with high compressibility (MH), peat materials (PT). The material shall be free of vegetation, debris, and clay lumps.

3. Sand Cushion Under Structures - The top layer of fill underneath a slab shall consist of clean sand or clean bank sand free from clay, clay lumps, shale, loam, organic matter, or

excessive amounts of silt or other deleterious materials. The fine particle should be limited to 5% by weight of the soil and should have a maximum Plasticity Index of seven percent (7%).

4. Granular Fill Under Structures - The Contractor shall provide an 18" to 24" thick layer of granular fill under the entire footing of a structure. The Contractor shall over excavate the structure by 18 to 24 inches and compact the subgrade before installing granular material. Granular fill shall be installed in 8-inch lifts and shall be compacted to 95% of its maximum density confirmed by Standard Proctor Compaction Test. Granular material shall be a mix of well graded sand and gravel with a maximum particle size of one inch (1"). The fine portion of the soil shall be less than 5% by weight.

140.03 CONSTRUCTION METHODS

1. Preparation and Scarifying - Fill and embankment shall not be placed until stripping and/or clearing and grubbing has been completed for the excavation sources and for the proposed fill areas. Stump holes or other small excavations in the limits of the embankment shall be backfilled with suitable material and thoroughly tamped by approved methods before commencing embankment construction. The surface of the ground, including plowed, loosened ground, or surface roughened by small washes or otherwise, shall be restored to approximately its original slope by blading or other methods. Where indicated on plans or required by the Engineer, the ground surface thus prepared shall be compacted by sprinkling and rolling.

Where embankments are to be placed adjacent to or over existing roadbeds, or levees, the existing slopes shall be plowed or scarified to a depth of not less than four (4") inches and the embankment built up in successive layers, as hereinafter specified, to the satisfaction of the Engineer, the top of the old bed shall be scarified and re-compacted with the next layer of the new embankment. The total depth of the scarified and added material shall not exceed the permissible depth for a layer.

Other areas shall be scarified to the satisfaction of the Engineer before placing any fill material.

2. Layer Construction - Unless otherwise required by the plans, all fill shall be constructed in layers approximately parallel to finished grade, covering the full length and width of the fill area. Layers of embankment for roadbeds, levees, or similar purposes shall have a uniform slope of one-fourth (1/4") inch per foot from the centerline of the roadbed to the outside.

Fill under structures and roads shall be placed in eight (8") inch maximum layers (measured loose). Where fill to subgrade is less than six (6") inches, the ground shall be scarified to a depth of six (6") inches and compacted as specified. All fill shall be placed to subgrade elevation without addition of topsoil.

Fill not covered by structures or roads shall be placed in ten (10") inch maximum layers (measured loose). This fill shall be placed within four (4") inches of finish grade unless otherwise specified by the plans. Four (4") inches of topsoil shall be placed over these fill areas within limits shown on plans, or as directed by the Engineer.

Regardless of the fill location, fill shall be placed in six (6") inch maximum layers (measured loose) when pneumatic tire rollers are used.

3. Spreading, Sprinkling, and Compaction - Layers of fill may be placed by equipment which will spread the material as it is dumped; or the material may be dumped in piles or windrows, then spread evenly by blading or other acceptable method.

Each layer of fill shall be uniform as to material, density, and moisture content before beginning compaction. Where layers of unlike materials abut each other, each layer shall be feather-edged or the material shall be so mixed as to prevent abrupt change in the soil. No material placed in the fill by dumping in a pile or windrow shall be incorporated in a layer in that position, but all such piles or windrows shall be moved by blading or similar methods.

Clods or lumps shall be broken and the fill material mixed by blading, barrowing, or similar methods, so that a uniform material of uniform density is secured in each layer.

All fill shall be compacted at or near optimum moisture for maximum compaction. Water needed to bring the material to this moisture level shall be evenly applied, and the Contractor shall secure a uniform moisture content throughout the layer by such methods as may be necessary. In order to facilitate uniform wetting of the fill material, the Contractor may apply water at the material source if the sequence and methods used are such as not to cause an undue waste of water. Such procedure shall be subject to the approval of the Engineer. Water shall be clean fresh (not salty) and free of oil or any organic materials.

Each layer of fill shall be compacted until there is no evidence of further compaction. The material shall be kept leveled with suitable equipment to insure uniform compaction over the entire layer.

Where the placement method above is impractical, such as fill placed against buildings, retaining walls, or structural walls, the material shall be compacted with mechanical tampers. Layers shall not exceed six (6") inches in depth, and moisture content must be suitable for effective compaction by this method.

established by the Engineer. Completed embankments shall be constructed to the general shape of the typical sections shown on the plans, and each section of the embankment shall correspond to the detailed section of slopes established by the Engineer. After completion of the

earthwork, the embankment shall be continuously maintained to its finished section and grade until the project is accepted.

5. Compaction Requirements - Minimum density of fill shall be ninety-five (95%) percent standard Proctor (Maximum Density - Optimum Moisture), as per ASTM D698, unless noted otherwise in the plans. This requirement shall also apply to undisturbed native soil which will directly support load bearing members. Should the subgrade, due to any reason or cause, lose the required stability, density or finish before the pavement or the structure is placed, it shall be recompacted and refinished at the sole expense of the Contractor. Excessive loss of moisture in the subgrade shall be prevented by sprinkling, sealing or covering with a subsequent layer or granular material. Excessive loss of moisture shall be construed to exist when the subgrade soil moisture content is more than 4 percent below the optimum of compaction ratio density.
6. Testing - The Contractor shall have all necessary laboratory testing performed at his own expense by a commercial laboratory acceptable to the Engineer.

Required material tests prior to fill placement are as follows:

- a. At least one (1) Proctor needle plasticity test for each material type to be used in fill areas.
- b. At least one (1) Atterberg limit test per 500 cu. yds. of material.

Required density tests following compaction are as follows:

- a. At least one test per lift per 400 sq. ft. under structures.
 - b. At least one test per lift per 1000 sq. ft under driving areas and parking lots.
 - c. At least one test per lift per 5000 sq. ft in other areas not under concrete or other structural units.
 - d. At least one test per 150 linear ft. in levee and roadway areas.
7. Waste Materials - The Contractor shall waste stripped materials from areas so indicated on the plans. Waste material shall be spread over designated areas as directed by the Engineer, dressed by blading, and sloped to provide drainage.
 8. Final Cleanup - Washes, ruts, depressions, and mounds shall be leveled to give the finish.

140.04 MEASUREMENT AND PAYMENT

Embankment construction will be measured in its original position and the volume computed in cubic yards by the method of average end areas.

When specifically included as a bid item, payment will be made at the unit price bid per cubic yard of Embankment construction, measured as provided herein, for the actual quantity excavated within the theoretical section specified, which price shall be full compensation for furnishing all labor, materials, equipment and incidentals required to complete the work as specified.

Interim measurements of embankment construction shall be made by the Contractor while the final grade inspection and volume calculations will be made by the Owner for final payment. The method of volume calculations shall be the average end area or other Engineer approved method.

When not specifically provided for in the Bid Proposal, embankment shall be incidental to other appropriate bid items. When provided for as a lump sum item, unit price quantities will not be used.

ITEM 150

EXISTING UTILITIES

150.01 DESCRIPTION

Utility locations shown on the plans are for informational purposes only and are not exact. The Contractor shall be responsible for locating and protecting all utility lines during the construction and for support and maintenance in position of all ducts and conduits. The Contractor should also make sure that all utilities have been located as there may be more utilities present than what is shown on the plan sheets. The Contractor shall be responsible for any damage to existing utilities and shall promptly repair same, or make arrangements for such repair with the Owner of the utility involved.

150.02 CONSTRUCTION METHOD

In all cases the Contractor shall coordinate his work with the Owners of the various utilities and shall notify their proper representative not less than forty-eight (48) hours in advance of any work which might damage, interfere with or require adjustments to utilities along or adjacent to the work.

All utility adjustments shall be the responsibility of the Owners of the utilities and if in the opinion of the Engineer adjustment is required, the Contractor will be responsible for notifying the respective owner.

150.03 PAYMENT

Payment for this item will be subsidiary to other items.

ITEM 160

STRUCTURAL EXCAVATION, FOUNDATIONS, & BACKFILL

160.01 DESCRIPTION

This item shall provide for the removal of all earth, rock, water, and other materials, as necessary for the construction of the facilities shown on the plans. This item shall include preparing the subgrade and/or sub-base for the foundation of the facilities and backfilling around the facilities to the grades established by the plans or as required by the Engineer.

160.02 EXCAVATION AND FOUNDATIONS

1. General. Excavations shall be sized as necessary for the construction of the work in the manner, shape, and size shown on the plans. Excavation shall extend a sufficient distance from the walls to allow for placing and removal of forms, installation of piping, and inspection. The sides of the excavation shall be laid back or stepped when warranted by the soil conditions encountered. The Contractor shall furnish all necessary temporary supports for piping and structures within the excavation, at no extra compensation. All work shall conform to the trench safety specification in this contract.

Final trimming and bottom excavation shall be done just prior to placing of steel and concrete to insure a firm footing base. If such bases become softened, the Contractor shall excavate to firm material by facing and concreting to replace the softened material at no extra compensation.

When caissons are used for excavation, no excavation shall be made outside the outer face of the caisson.

2. Seal Slabs. The contractor may, at his option and at no extra compensation, provide a seal slab underneath a proposed structural slab. The seal slab shall cover the bottom of the excavation on which the structure will rest, as shown on the plans. The Contractor shall excavate to the depth required for the seal slab, performing final excavation to grade just before placement of the seal slab.
3. Protection of Excavations. Excavations shall be protected from rainfall and surface water. If bearing values of supporting soils are affected by excessive moisture or drying, the Contractor shall excavate deeper and/or wider at no cost to the Owner.

The Contractor shall pump or bail from the foundation enclosure if necessary to prevent water from moving through or alongside concrete being placed. No pumping or bailing shall be done during concrete placement.

Pumping or bailing for dewatering sealed cofferdams shall not be started until the seal has set for at least 36 hours.

160.03 STRUCTURAL BACKFILLING

The backfill material shall consist of excavated clay soils or an imported clay or sand. Granular backfill with less than 12 percent passing the No. 200 sieve shall be compacted to a relative density between 60 and 70 percent of the maximum density. Sand with more than 12 percent passing the No. 200 sieve or clay backfill shall be compacted to a minimum of 90 or 95 percent of the maximum density, as indicated on the plans, and as defined by the standard moisture-density relationship (ASTM D-698). If the Contractor uses sand backfill, a minimum of 24-inch thick clay cover shall be used.

All backfilling inside structural units and concrete paved areas shall be in layers of eight inches (8") thick or less and shall be compacted to at least 95% of its maximum density obtained by a certified geotechnical laboratory and confirmed by the Standard Proctor Tests (ASTM D-698 or AASHTO T-99).

All backfilling outside of structural units or concrete shall be deposited in layers of not more than twelve (12) inches thick and shall be compacted to the density of the surrounding soil, unless indicated otherwise in these specifications and on the plans. No backfill may be placed against a concrete wall until the concrete has cured at least seven (7) days and the forms have been removed. In the case of a concrete box or similar underground structure, no backfill may be placed adjacent to or over the structure until the top slab has attained 1500 psi flexural strength.

Before placing backfill against walls of a partially completed structure, the Contractor shall determine from the Engineer whether the design features of the wall will permit such backfilling operations. The Contractor shall exercise care to prevent wedging action of backfill against structures, including stepping or serrating adjacent slopes if necessary.

All backfilling adjacent to a wall or a structure within three feet (3') or less shall be done using hand operating compaction equipment. Backfilling in this area shall be maximum six inches (6") thick.

Unless otherwise authorized by the Engineer, all backfilling shall be performed in the presence of the Engineer or his authorized representative.

160.04 MEASUREMENT AND PAYMENT

When not included as a Bid Item, this item will not be paid for directly but will be considered subsidiary to pay items.

ITEM 190

ABANDONMENT OR REMOVAL EXISTING STRUCTURES

190.01 DESCRIPTION

This item shall provide for the removal and disposal of old structures or portions of old structures, as noted on the plans, and shall include all excavation and backfilling necessary to complete the removal. The work shall be done in accordance with the provisions of these specifications.

190.02 METHOD OF REMOVAL

1. Culverts or Sewers:

Pipe shall be removed by careful excavation of all dirt on top and the sides in such manner that the pipe will not be damaged. Those pipes which are deemed unsatisfactory for re-use by the Engineer may be removed in any manner the Contractor may select. Those pipes which are to be crushed in place shall be thoroughly crushed and may not be used as fill material within the eighteen (18") inches of the finished grade. Those pipes which are to be abandoned in place shall be sealed at both ends with concrete unless otherwise approved by the Engineer.

2. Concrete or Brick Structures:

Concrete or brick structures or concrete portions of structures shall be removed by sledging the concrete into sizes not larger than one cubic foot. (Except designated salvageable items such as concrete pipe, beams, pilings, etc.).

3. Steel Structures:

Steel structures (or steel portions of structures) shall be dismantled in sections as determined by the Engineer. The sections shall be of such weight and dimensions as will permit convenient handling, hauling, and storing. All necessary severing of connections between members, or between members and supports, shall be done in a manner which will not injure the members for reuse. Flame-cutting of members will be permitted only with the written permission of the Engineer.

4. Timber Structures:

Timber structures or timber portion of structures shall be removed in such manner as to damage the timber for further use as little as possible. All bolts and nails shall be removed from such lumber as deemed salvageable by the Engineer.

Unless otherwise specified on the plans, timber piles shall be either pulled or cut off at a point not less than two (2) feet below ground line, with the choice between these two methods resting with the Contractor.

5. Fiberglass Structures:

Fiberglass structures shall be removed from the site and shall become the property of the Contractor to salvage or dispose of at his discretion, unless indicated otherwise on the plans.

190.03 UNDERGROUND PORTIONS OF STRUCTURES

Concrete portions of structures below the permanent ground line, which will, in the opinion of the Engineer, not interfere in any manner with the proposed construction, may be left in place. The removal shall be carried at least two feet below the permanent ground line and neatly squared off, unless indicated otherwise on the plans and details. Reinforcement shall be cut off close to the concrete.

When a sewer line, lift station, or other structure is to be constructed on the site of a structure to be removed, removal shall extend at least two (2') feet below and outside the proposed structure. If the old structure is located under a proposed road excavation, removal shall extend at least two (2') feet below the proposed undercut. The excavation shall be backfilled according to the requirements of the new structure or roadway.

190.04 SALVAGE

All material such as pipes, timbers, railings, concrete beams, etc., which the Engineer deems as salvageable for re-use shall be carefully removed and placed within the right-of-way at convenient loading points which will not interfere with traffic of construction. All of these materials shall be the property of the Owner. When specified, salvaged materials shall be hauled to a storage site designated by the Owner to be off loaded by the Contractor.

Materials which are not deemed salvageable by the Engineer shall become the property of the Contractor and shall be removed to suitable disposal areas away from the construction site as arranged for by the Contractor or otherwise disposed of in a manner satisfactory to the Engineer.

190.05 BACKFILL

All excavation made in connection with this item and all openings below the natural ground line caused by the removal of old structures or portions thereof shall be backfilled to the level of the original ground line, unless otherwise provided on the plans.

That portion of the backfill which will support any portion of that roadbed or embankment shall be placed in layers of the same depth as those required for placing embankment. Material in each layer shall be wetted uniformly if required and shall be compacted to the density required in the adjoining embankment. In places inaccessible to blading and rolling equipment, mechanical or hand tamps or rammers shall be used to obtain the required compaction.

Backfill which will support any portion of a structure or an underground pipe shall be placed in layers and compacted to the same density as the surrounding undisturbed soil. Special backfill material may be required by the specifications for the structure.

That portion of the backfill which will not support any portion of the roadbed nor embankment shall be placed as directed by the Engineer in such a manner and to such state of compaction as will preclude objectionable amounts of settlement.

190.06 MEASUREMENT AND PAYMENT

When specifically included as a bid item, payment will be made at the lump sum price bid for removing structures. When not specifically included as a bid item, no direct pay will be made for this work and payment shall be considered subsidiary to pay items provided.

ITEM 200

STRUCTURAL CONCRETE

200.01 DESCRIPTION

This item governs materials, proportioning and mixing, testing, placing, finishing, and curing of all plain and reinforced cast-in-place concrete, fibermesh reinforced concrete, and prestressed concrete.

The concrete shall be composed of portland and other hydraulic cements, fine and coarse aggregate, fibermesh, and water, with or without admixtures, conforming to the design and test requirements of The American Concrete Institute(ACI), Mix Design or this specification. This item excludes lightweight concrete.

200.02 QUALITY ASSURANCE

1. Materials and work shall conform to the requirements of all standards, codes and recommended practices required in this section. In conflicts between standards, required standards and this specification, or this specification and the local building code, the more stringent requirement shall govern.
2. Contractor shall provide at least one person, when requested by the Engineer, who shall be present at all times during execution of any concrete work and who shall be thoroughly trained and experienced in placing the type of concrete specified and who shall direct all work performed under this section.

200.03 MATERIALS

Ready mix concrete conforming to ASTM C-94 or site-mixed concrete (dry weight 145-150 pounds per cubic foot.)

1. All cement used in any monolithic placement shall be of the same type and brand. Only one brand of each type of cement will be permitted in any one structure unless otherwise authorized by the Engineer. Only one brand of cement shall be used for exposed concrete. The Contractors shall furnish the Engineer with Certified Mill Test Reports for all types of cement used in the work.
 - a. Type I Portland Cement shall conform to ASTM C-150.
 - b. Blended Hydraulic Cement shall conform to ASTM C-595, excluding Type S and Type SA.

- c. Expansive Hydraulic Cement, Type E-1 shall conform to ASTM C-845-76T.

CLASSIFICATION TABLE

C l a s s - Type	Min. Comp. Strength		Max Water Content		Min. Cement Per C.Y.		S l u m p R a n g e (in.)	T o t a l A i r Content (%)	M a x . A g g . Size
	7 Day	28 Day	l b s . o f Water/ lb. Cement	Gallons of W a t e r / B a g Cement	Lbs.	Bags			
Structural	2800	4000	0.45	5.65	564	6	5 - 7	2.5-4.5	0.75"-1"
General	2000	3000	0.60	6.75	470	5	5 - 7	2.5-4.5	1"-1.25"

* All Slump Ranges $\pm \frac{1}{2}$ inch Tolerance.

Note: a) Structural Concrete to contain approved admixture to increase workability. Water is not to be added to increase workability.

b) The Contractor shall submit his mix design to the Engineer for approval and shall modify as directed at no additional cost to the Owner.

- Water used in mixing concrete shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances that may be deleterious to concrete or reinforcement.
- Aggregates shall be clean, uncoated, and free of any impurities other than nominal amounts of fine particles (clay and silt), the limits of which are specified herein. Aggregates shall conform with ASTM C-33 except that the gradation shall be within limits specified in the classification table. Aggregates shall be well graded and clean (Fine particles $\leq 5\%$ by weight).
- Fibermesh Reinforcement. Shall be 100 percent virgin polypropylene, fibrillated fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement. Volume (Weight) per cubic yard shall equal a minimum of 0.1% (1.5 pounds).
- Admixtures (requiring prior approval of the Engineer) to be used in concrete shall be produced and serviced by established, reputable manufacturers and used in compliance with manufacturer's recommendations.

- a. Air-entraining Admixture shall conform to ASTM C-260, and when requested, certification attesting to compliance shall be furnished by the manufacturer.
 - b. Water-reducing, Set Controlling Admixture shall conform to ASTM C-494 and when requested, a qualified concrete technician employed by the manufacturer shall be available to advise and assist in the use, proportioning and adjustment of concrete mix.
 - c. Fly-ash or Other Pozzolans used as admixtures shall conform to ASTM C-618. Use 25% fly-ash for water tight structures such as water/wastewater treatment units; wet wells; etc.
6. Bar Supports (chairs) shall be plastic, plastic protected wire, stainless steel, or precast concrete supports. Precast concrete bar supports shall be wedge-shaped, not larger than 3-1/2 X 3-1/2 inches of thickness equal to that indicated for concrete cover and shall have an embedded hooked tie wire for anchorage.
 7. Metal Accessories shall be spacers, chairs, ties, and other approved devices necessary for properly assembling, spacing and supporting the reinforcement in place.
 8. Expansion Joint Material shall be premolded saturated felt, or other approved material, not less than plan thickness and as wide as the slab depth.

200.04 CONCRETE PROPORTIONING

The Contractor shall be responsible for the design and costs of all concrete mixtures and all concrete testing. Concrete shall be proportioned and produced to provide an average compressive strength as provided for herein. (f'_c = specified ultimate compressive strength of concrete).

1. Proportioning of concrete for the required compression strength (f'_c) shall be based on 28-day compressive test and shall be based on laboratory trial batches performed by an independent testing laboratory meeting the requirements of ASTM E-329 and approved by the Engineer, and/or on the basis of field experience, both as set forth in ACI 318-Latest Edition and this specification. The average compressive strength used as a basis for selecting the proportions shall exceed the specified f'_c as required by Engineer.
2. Proportions of materials for concrete shall conform to minimum cement content and maximum water to cement ratios for various classes as shown on Classification Table.
3. Where different materials are to be used for different portions of the work, each combination shall be evaluated separately.

4. Concrete proportions, including water-cement ratio, shall be established on the basis of field experience, or laboratory trial batches, with materials to be employed, as required herein.

5. Average Strength Reduction

After sufficient test data become available from the job, methods of "Recommended Practice for Evaluation of Compression Test Results of Concrete (ACI 214-65)" may be used to reduce the amount by which the average strength must exceed f'_c .

- (1) Probable frequency of strength tests more than 500 psi below f'_c will not exceed 1 in 100;
- (2) Probable frequency of an average of three consecutive strength tests below f'_c will not exceed 1 in 100, and;
- (3) Concrete Classification Requirements Table are met.

6. Evaluation and Acceptance of Concrete

- a. Frequency of Testing. Samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, nor less than once for each 100 cubic yard of concrete, nor less than once for each 5000 sq. ft. of surface area for slabs or walls. A minimum of four (4) samples will be taken.

On a given project, if total volume of concrete is such that frequency of testing required would provide less than five strength tests for a given class of concrete, tests shall be made from at least five randomly selected batches or from each batch if fewer than five batches are used.

When total quantity of a given class of concrete is less than 50 cubic yards, strength tests may be waived by the Engineer if in his judgment adequate evidence of satisfactory strength is provided.

Average strength of two cylinders from the same sample, tested at 28 days or the specified earlier age, is required for each strength test. Tests shall be made at 7, 14, and 28 days or prior to removal of forms or shoring (any temporary structures).

- b. Tests of Cured Specimens. Samples for strength tests shall be taken in accordance with "Method of Sampling Fresh Concrete" (ASTM C-172).

Samples for strength tests shall be taken in accordance with "Method of Sampling Fresh Concrete" (ASTM C-172). Cylinders for strength tests shall be molded and laboratory cured in accordance with "Method of Making and Curing Concrete

Test Specimens in the Field” (ASTM C-31) and tested in accordance with “Method of Test for Compressive Strength of Cylindrical Concrete Specimens” (ASTM C-39).

Strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:

- (1) The average of all sets of three consecutive strength tests equal or exceed required f'_c .
- (2) No individual strength test (average of two cylinders) falls below required f'_c by more than 500 psi.

- c. Investigation of Low-Strength Test Results. If any strength test of cured cylinders falls below required f'_c by more than 500 psi or if test indicate deficiencies in protection and curing, steps shall be taken to assure that load-carrying capacity of the structure is not jeopardized.

If the likelihood of low-strength concrete is confirmed and computations indicate that load-carrying capacity may have been significantly reduced, tests of cores drilled from the area in question may be required in accordance with "Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete" (ASTM C-42). In such case, three cores shall be taken for each strength test more than 500 psi below required f'_c .

If concrete in the structure will be dry under service conditions, cores shall be air dried (temperature 60 to 80 F, relative humidity less than sixty (60%) percent) for seven (7) days before test and shall be tested dry.

If concrete in the structure will be more than superficially wet under service conditions, cores shall be immersed in water for at least 48 hours and be tested wet.

Concrete in an area represented by core tests shall be considered structurally adequate if the average of three cores is equal to at least eighty-five (85%) percent of f'_c and if no single core is less than seventy-five (75%) percent of f'_c . To check testing accuracy, locations represented by erratic core strengths may be retested.

If criteria above are not met, and if structural adequacy remains in doubt, the Engineer may order load tests for the questionable portion of the structure, or take other action appropriate to the circumstances.

- d. Slump Test: The contractor shall perform a slump test on the concrete prior to placing. The slump shall be in accordance with the classification table.

200.05 MIXING AND PLACING CONCRETE

1. Preparation

Preparation before concrete placement shall include the following:

- (1) All equipment for mixing and transporting concrete shall be clean.
- (2) All debris and ice shall be removed from spaces to be occupied by concrete.
- (3) Forms shall be properly coated.
- (4) Masonry filler units that will be in contact with concrete shall be well drenched.
- (5) Reinforcement shall be thoroughly clean of ice or other deleterious coatings.
- (6) Water shall be removed from place of deposit before concrete is placed unless a tremie is to be used or unless otherwise permitted by the Engineer.
- (7) All laitance and other unsound material shall be removed before additional concrete is placed against hardened concrete.

2. Mixing

All concrete shall be mixed until there is a uniform distribution of materials and shall be discharged completely before mixer is recharged.

Ready-mixed concrete shall be mixed and delivered in accordance with requirements set forth in "Specification for Ready-Mixed Concrete" (ASTM C-94). Mixing water shall not be added after a truck has left the plant. No concrete shall be used in the work which has been held longer than one hour in a mixer truck.

Job-mixed concrete shall be mixed in accordance with the following:

- (1) Mixing shall be done in a batch mixer of approved type.
- (2) Mixer shall be rotated at a speed recommended by the manufacturer.
- (3) Mixing shall be continued for at least 1-1/2 minutes after all materials are in the drum, unless a shorter time is shown to be satisfactory by the mixing uniformity tests of "Specification for Ready-Mixed Concrete" (ASTM C-94).

3. Conveying

Concrete shall be conveyed from mixer to place of final deposit by methods that will prevent separation or loss of materials.

Conveying equipment shall be capable of providing a supply of concrete at site of placement without separation of ingredients and without interruptions sufficient to permit loss of plasticity between successive increments.

4. Depositing

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing.

Concreting shall be carried on at such a rate that at all times concrete remains plastic and flows readily into spaces between reinforcement. All concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms. The use of approved type of mechanical vibration is recommended and urged.

Concrete that has partially hardened or been contaminated by foreign materials shall not be deposited in the structure.

Retempered concrete or concrete that has been remixed after initial set shall not be used unless approved by the Engineer.

Top surfaced of vertically formed lifts shall be generally level.

When construction joints are required, joints shall be made in accordance with the details provided on structural drawings and Item 200.07.4, and in accordance with the General Concrete Construction Notes in the Construction Plans.

No concrete shall be placed until all pipes, conduits, sleeves, thimbles hangers, flashing and other items required to be placed in the concrete have been properly installed and approved by the Engineer.

Concrete may be placed when the temperature is 45 F, or more and rising, provided there is no reason to expect a drop in temperature to below 45 F within 12 hours of the placement of concrete. Concrete may not be placed when the temperature of the concrete is more than 90 F.

Before depositing concrete, forms shall be thoroughly wetted or coated with an approved form release product and all debris removed.

Water shall be removed from the space to be occupied by concrete and any continuous flow of water shall be diverted to a sump or removed by pumping.

Concrete shall be deposited continuously or in layers of such thickness that no concrete shall be deposited against hardened concrete. If a section cannot be placed continuously, construction joints may be located at points as provided for in the drawings or approved by the Engineer. Before depositing new concrete against old, the forms shall be retightened, the hardened surfaces cleaned and covered with a coating of mortar of an approved bonding liquid approved by the Engineer.

200.06 CURING

1. Concrete (other than high-early-strength) shall be maintained above 50° F and in a moist condition for at least the first seven (7) days after placement, except when cured in accordance with 200.06.3.
2. High-early strength concrete shall be maintained above 50° F and in a moist condition for at least the first three (3) days, except when cured in accordance with 200.06.3.
3. Accelerated Curing
 - a. Curing by high pressure steam, steam at atmospheric pressure, heat and moisture, or other accepted process, may be employed to accelerate strength gain and reduce time of curing, with prior approval of the Engineer.
 - b. Accelerated curing shall provide a compressive strength of the concrete at the load stage considered at least equal to required design strength at that load stage.
 - c. Curing process shall be such as to produce concrete with a curability at least equivalent to the curing method of 200.06.1 or 200.06.2.
 - d. Supplementary strength tests may be required to assure that curing is satisfactory. The Engineer may require strength tests of cylinders cured under field conditions to check adequacy of curing and protection of concrete in the structure.
4. Cold Weather Requirements
 - a. Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather.
 - b. All concrete materials and all reinforcement, forms fillers, and ground with which concrete is to come in contact shall be free from frost.
 - c. Frozen materials or materials containing ice shall not be used.
 - d. Temperature of concrete at time of placement shall not be less than 50 F.

5. Hot Weather Requirements

During hot weather, proper attention shall be given to ingredients, production methods, handling, placing, protection, and curing to prevent excessive concrete temperatures or water evaporation that may impair required strength or serviceability of the member or structure. Temperature of concrete at time of placement shall not be more than 90 F.

6. Immediately after placement, concrete shall be protected from premature drying, extremes in temperatures, rapid temperature changes, mechanical injury, and injury from rain and flowing water. All materials and equipment needed for adequate curing and protection shall be available at the job site prior to start of concrete placement. Concrete shall be protected from the damaging effects of rain for 12 hours, flowing water for 14 days and direct rays of the sun for 3 days. All concrete shall be adequately protected from damage. No fire nor excessive heat shall be permitted near nor in direct contact with concrete at any time.

7. Moist Curing:

Concrete moist-cured shall be maintained continuously (not periodically) wet for the entire curing period. If water or curing materials used stain or discolor concrete surfaces which are to be permanently exposed, they shall be cleaned as required by the Engineer. When wooden form sheathing is left in place during curing, the sheathing shall be kept wet at all times.

Horizontal surfaces shall be cured by ponding, by covering with a minimum uniform thickness of two (2") inches continuously saturated sand, or by covering with saturated non-staining burlap or cotton mats or sealed impervious sheet materials. . .the following exceptions are permitted:

- 1) Horizontal construction joints may be allowed to dry for twelve (12) hours immediately prior to placing of the following lift.
- 2) Where insulation is approved for cold weather protection, all joints in the insulation shall be sealed to prevent moisture loss and maintained sealed throughout curing period.

8. Membrane Curing:

Any surface to which concrete, paint, sack rubbed finish or any subsequent treatment that depends on adhesion or bonding to the concrete shall not be cured with curing compound. Curing compound shall be of an approved pigmented or non-pigmented type. On surfaces permanently exposed to view, the non-pigmented type containing a fugitive dye shall be shaded from direct rays of the sun for the first seven days of the curing period.

The curing compound shall be applied to formed surfaces immediately after the forms are removed and prior to any patching or other surface treatment except the cleaning of loose sand, mortar, and debris from the surface. The surfaces shall be thoroughly moistened with water and curing compound applied to unformed surfaces as soon as free water has disappeared. The curing compound shall be applied in a two-coat continuous operation by approved power spraying equipment and at a uniform coverage of not more than 400 square feet per gallon for each coat. Concrete surfaces on which the curing compound has been applied shall be adequately protected for the duration of the entire curing period from pedestrian and vehicular traffic and from any other cause which will disrupt the continuity of the curing membrane.

200.07 FORMWORK AND CONSTRUCTION JOINTS

1. Design

- a. Forms shall be so constructed that the finished concrete will conform to the shape, line, grades, and dimensions indicated on the drawings. Lumber used in the forms for exposed surfaces shall be dressed to a uniform thickness and shall be horizontal or vertical. Lumber once used in forms, or used lumber, shall be cleaned and satisfactorily reconditioned to the satisfaction of the Engineer.
- b. Forms shall be substantial and sufficiently tight to prevent leakage of mortar. They shall be properly shored, braced, and otherwise supported so as to maintain the desired position and shape during and after placing concrete.
- c. Bolts and rods shall be used for interval ties; they shall be arranged so that when the forms are removed, no metal shall be within the recommended concrete cover but not less than one (1") inch.
- d. Forms and their supports shall be designed and erected without damaging previously placed structures.
- e. Design of formwork shall include the following factors:
 - (1) Rate and method of placing concrete;
 - (2) Construction loads, including vertical, horizontal, and impact loads;
 - (3) Special form requirements for construction of shells, folded plates, domes, architectural concrete, or similar types of elements.
- f. Forms for prestressed concrete members shall be designed and constructed to permit movement of the member without damage during application of

prestressing force.

- g. If conditions are favorable, the Engineers may permit the use of earth forms for trenches or footings; in which case the bottom shall be level, clean and without fill; and the sides shall be even and clean and unless otherwise shown, shall be vertical. The bottom shall be covered with two inches (2") of compacted clean sand or a layer of plastic cover (Minimum of 4 mil. Thickness).
- h. Suitable moldings or bevels shall be placed in the angles of forms to round or bevel the edges of the concrete where such shaping is shown on the drawing or where directed by the Engineer.
- i. The inside of forms shall be coated with a non-staining mineral oil or other approved material. Oil shall be applied before the reinforcement is placed.
- j. Temporary openings shall be provided at the base of column and wall forms and at other points where necessary to facilitate cleaning and inspection immediately before depositing concrete.
- k. Form designs shall be submitted to the Engineer if the Contractor plans to construct any portion of vertical wall or columns at a height above 14'.

2. Removal of Forms

- a. The removal of forms shall be subject to the Engineer's approval and shall not be started until the concrete has attained the necessary strength to support 125% of the sum of its own weight, weight of concrete and any construction live loads.

Sufficient strength may be demonstrated by field-cured test cylinders and by a structural analysis considering proposed loads in relation to field-cured cylinder strengths and strength of the forming and shoring system. Such analysis and strength test data shall be furnished by the Contractor to the Engineer when so required.

- b. No construction loads exceeding combination of superimposed dead load plus specified live load shall be supported on any unshored portion of the structure under construction, unless the Contractor provides a detailed analysis that indicates adequate strength to support such additional loads.
- c. Forms shall be removed in such manner without impairing the safety and serviceability of the structure. All concrete to be exposed by form removal shall

have sufficient strength not to be damaged thereby.

- d. Form supports for prestressed concrete members may be removed when sufficient prestressing has been applied to enable prestressed members to carry their dead load and anticipated construction loads.
- e. Forms will remain in place a minimum of 72 hours for all conditions except in the following case:

Concrete subject to high bending stress and wholly (or almost wholly) reliant on forms for vertical support. Examples: Roof or floor slabs and beams; undersides of sloping surfaces (flatter than 1:1); walkways and platforms; bridge decks and girders.

Forms will remain in place a minimum of 4-1/2 days in those areas where no immediate superimposed loading will occur and a minimum of 10 days at all other areas.

- f. The early removal of forms (except as noted above) to facilitate the normal progress of work will be permitted only by approval of the Engineer, and in no case less than 24 hours after placement.

3. Conduits and Pipes Embedded in Concrete

- a. Conduits, pipes and sleeves of any material not harmful to concrete may be embedded in concrete with approval of the Engineer, provided they are not considered to replace structurally the displaced concrete.
- b. Except when plans for conduits and pipes are approved by the Structural Engineer, conduits and pipes embedded within a slab, wall, or beam (other than those merely passing through) shall satisfy the following:
 - (1) They shall not be larger in outside dimension than 1/3 the overall thickness of slab, wall, or beam in which they are embedded.
 - (2) They shall not be spaced closer than 3 diameters or widths on center.
 - (3) They shall not impair significantly the strength of the concrete.
 - (4) Concrete cover for pipes and fittings shall not be less than one and one-half (1-1/2") inches for concrete exposed to earth or weather, nor three-fourths (3/4") inches for concrete not exposed to weather or in contact with ground.

4. Construction Joints

- a. Where a construction joint is to be made, the surface of concrete shall be thoroughly cleaned and all laitance and standing water removed.
- b. Vertical construction joints shall be thoroughly wetted and coated with neat cement grout immediately before new concrete placement.
- c. Construction joints not indicated on the design drawings shall be so made and located as not to impair significantly the strength of the structure and shall be approved by the Engineer.
- d. Construction joints in floors shall be located near the middle of spans of slabs, beams, or girders, unless a beam intersects a girder at the middle location, in which case joints in the girders shall be offset a distance equal to twice the width of the beam.

Provision shall be made for transfer of shear and other forces through construction joints.

- e. Beams, girders, or slabs supported by columns or walls shall not be cast or erected until concrete in the vertical support members is no longer plastic.
- f. Beams, girders, column capitals, and haunches shall be considered as part of a slab system and shall be placed monolithically therewith.
- g. Structures containing liquids shall have all exterior walls and bottom slab joints constructed with water stops and/or seals. When prevention of contamination and/or control of leakage is necessary at exterior or interior wall/slab, water stops and/or seals shall be provided at joints.
- h. Horizontal joints in walls less than twelve feet high are not to be located for contraction or expansion, but for construction only. Such horizontal wall joints shall be minimal and as approved by the Engineer only.

Triangular fillet seals should be made on liquid-face when leakage control is necessary.

- i. Vertical joints in walls shall be located at points of no shear. Joints shall be constructed with water-stops and fillet seals where control of leakage is required.
- j. Where slabs are cast in two separate lifts, joints are to be staggered. All joints shall be located at positions of no shear.
- k. Longitudinal keys at least one and one-half (1 - 2") inches deep shall be provided in all joints in walls and between walls and slabs or footings.

1. When joints are not indicated on plans, Contractor shall supply shop drawings clearly indicating all joints in any part of the structures, sequence of pours and time lapse for control of shrinking, for approval by the Engineer. No intermediate joints will be allowed other than those on the approved shop drawings without the express approval of the Engineer.

200.08 PATCHING AND SURFACE FINISH

1. GENERAL

After forms are removed, the Contractor shall remove all concrete fins, projections and form ties. All surfaces which will remain exposed will be inspected by the Engineer and all voids, stone pockets, tie holes, honeycombed and defective areas shall be patched as directed. The patching mortar shall be sand-cement grout with sufficient white Portland Cement added to effect a match with the concrete surfaces. Areas to be patched shall be clean, free of loose material and dampened before applying grout. The patched areas shall be rubbed before the grout is set hard to blend into adjacent areas.

2. FINISHED EXPOSED SURFACES

The type of surface finish shall be one of the three types herein described as called for on the plans or in the special provisions. Where the plans do not specify the type of surface finish, Type I Surface Finish shall be used.

Type I Surface Finish:

All faces of concrete units including the exterior and interior sections, the underside of overhanging beams, and all portions of piers, columns, bents, retaining walls, and culverts which are exposed to view after backfill is placed shall be surface finished with a first and second rubbing as hereinafter described. The area inside of culvert barrels including both sidewalls and the underside of the top slab shall be a distance equal to one-third (1/3) the clearance height but not less than eighteen (18) inches shall be considered exposed to view.

Forms for all surfaces which are to be finished as specified above shall be face lined with a lining material such as masonite or plywood.

The finish for the joints of concrete culverts (including those used for basin construction), seams from concrete forms, and all others concrete sections shall have the same look, texture, and be uniform for all surfaces within view of normal pedestrian trafficked areas.

Type II Surface Finish: All concrete units including the exterior and interior sections, the underside of overhanging beams, and all portions of piers, columns, bents, retaining

walls, and culverts which are exposed to view after backfill is placed shall be surface finished with a first and second rubbing as hereinafter described.

The following concrete surfaces, while not required to be rubbed, shall be made of smooth and uniform texture by face lining the forms with a lining material such as masonite or plywood; the outside vertical face of curbs and slabs, the underside of overhanging slabs, and all portions of piers, columns, bents, and retaining walls which are exposed to view after backfill.

Type III Surface Finish: All concrete units including the exterior and interior sections, the underside of overhanging beams, and all portions of piers, columns, bents, retaining walls, and culverts which are exposed to view after backfill is placed shall be surface finished with a first and second rubbing as hereinafter described. No other rubbing will be required except as hereinafter specified for patching and correcting defective surfaces. No face lining of forms will be required with Type III Surface Finish.

The first rubbings shall be performed as follows: as soon as forms are removed, all necessary pointing shall be done. When the pointing has set sufficiently to permit it, all surfaces requiring surface finish shall be wet with a brush and given a first surface rubbing with No. 16 Carborundum Stone or an abrasive of equal quality. The rubbings shall be continued sufficiently to bring the surface to a paste, to remove all form marks and projections and to produce a smooth dense surface without pits or irregularities. The use of cement to form a surface paste will not be permitted.

Where a second rubbing is not specified, cambered corners shall be rubbed in the first rubbing and the material which has been ground to a paste in the rubbing process shall be spread uniformly over all rubbed surfaces by striping with a brush and the mortar on the surface shall be allowed to take a re-set. The surface shall be left with a clean, neat, and uniform appearance and shall be uniform in color.

Where a second rubbing is to follow the first rubbing, the material ground into a paste during the first rubbing shall be carefully spread or brushed uniformly over the surface and allowed to take a re-set, but washing down following this first rubbing will not be required. Also, cambered corners generally shall not be rubbed in the first rubbing if a second rubbing is to follow.

The second rubbing, when required, shall be performed as follows: during the process of conditioning the complete structure for final acceptance, the surfaces of the entire structure requiring finish shall be given a final finish with a No. 30 Carborundum Stone or an abrasive of equal quality. On completion of this rubbing, the surface shall be neatly striped with a brush, and the mortar on the surface shall be allowed to take a re-set. The surface shall then be washed down with clean water. The entire structure shall be left with a clean, neat and uniform appearing finish and shall be uniform in color. The

surface of concrete roadway and sidewalk slabs shall be finished by floating, screening and belting.

Rubbing of surfaces other than those herein specified will not be required, unless such surfaces are not true or have porous spots or honeycombed areas. In case these defects occur, the areas immediately affected shall be given a first surface rubbing. Such rubbing shall extend over a sufficient area around the blemished portions to blend the rubbed area into the surrounding unfinished surface, but this shall not be construed to require the rubbing of large areas of unblemished surfaces of the portion of the structure in question unless, however, the result is a non-uniform look. In this case, the remaining surfaces shall be finished for a uniform look for all surfaces within view of normal pedestrian trafficked areas.

200.09 DEFECTIVE WORK

The following defects shall be cause for rejection of placed concrete:

1. Voids, rock pockets, honeycombing, and spalled areas which, in the opinion of the Engineer, cannot be satisfactorily repaired, will affect the strength of the structure materially, or will limit the life of the reinforcement.
2. Uneven or bulged surfaces resulting from shifting of the forms during placement or curing.
3. Concrete found structurally inadequate after thorough investigation according to Item 200.04.6 Subsections a through c.

Upon discovery of any of these defects, the Engineer may declare the structure defective and require the Contractor to remove and replace the portion of the structure affected, at the Contractor's expense.

200.10 PAYMENT

Payment for concrete in place will be paid for only when specifically included as a bid item. This price shall be full compensation for furnishing, forming, pouring, providing and installing reinforcing steel, finishing, and curing.

When not included as a bid item, concrete placement will be considered incidental to pay items.

ITEM 247

ROAD BASE/FLEXIBLE LIMESTONE

247.01 DESCRIPTION

This item shall govern for the delivery and stockpiling as herein specified or established by the Engineer.

247.02 MATERIALS

The flexible base material shall be crushed as necessary to meet the requirements herein, and shall consist of durable coarse aggregate particles and binding materials.

A. General

The use of flexible base-limestone, as shown on the plans, shall be the thickness indicated compacted in place to 95% Standard Proctor.

B. Physical Requirements

1. General

The flexible base material shall meet the physical requirements for the specified grade(s) as set forth in Table 1.

Additives, such as, but not limited to, lime, cement or fly ash, shall not be used to alter the soil constants or strengths shown in Table 1, unless otherwise shown on the plans.

Unless otherwise shown on the plans, the base material shall have a minimum Bar Linear Shrinkage of 2 percent as determined by Test Method Tex-107-E, Part II

2. Type A

Type A material shall be crushed stone produced from oversize quarried aggregate, sized by crushing and produced from a naturally occurring single source. Crushed gravel or uncrushed gravel shall not be acceptable for Type A material. No blending of sources and/or additive materials will be allowed in Type A material.

TABLE 1

PHYSICAL REQUIREMENTS

GRADE 1		GRADE 2	
Triaxial Class 1: Min. compressive strength, psi: 45 at 0 psi lateral pressure and 175 at 15 psi lateral pressure		Triaxial Class 1 to 2.3: Min. compressive strength, psi: 35 at 0 psi lateral pressure and 175 at 15 psi lateral pressure	
Master Grinding		Master Grinding	
1-3/4"	0	2-1/2"	0
7/8"	10-35	1-3/4"	0-10
3/8"	30-50		
No. 4	45-65	No. 4	45-75
No. 40	70-85	No. 40	60-85
Max LL	35	Max LL	40
Max PI	10	Max PI	12
Wet Ball Mill		Wet Ball Mill	
Max	40	Max	45
Max increase in Passing		Max increase in Passing	
No. 40	20	No. 40	20

Notes:

1. Gradation requirements are percent retained on square sieves.
2. When a magnesium, soundness value is shown on the plans the material will be tested in accordance with Test Method Tex-411-A.
3. When lightweight aggregates are used, the wet ball mill requirements will not apply and the lightweight aggregate shall meet the Los Angeles Abrasion, Pressure Slaking and Freeze Thaw requirements of Item 303, "Aggregate for Surface Treatment (Lightweight)".

C. Pilot Grading

When pilot grading is required on the plans, the flexible base shall not vary from the designated pilot grading of each sieve by more than five (5) percentage points. However, the flexible base grading shall be within the master grading limits as shown in Table 1. The pilot grading may be varied by the Engineer as necessary to insure that the base

material produced will meet the physical requirements shown in Table 1.

D. Testing

Testing of flexible base materials shall be in accordance with the following Department standard laboratory test procedures:

Moisture Content	Tex-103-E
Liquid Limit	Tex-104-E
Plasticity Index	Tex-106-E
Bar Linear Shrinkage	Tex-107-E, Part II
Sieve Analysis	Tex-110-E
Moisture-Density Determination	Tex-113-E
Roadway Density	Tex-115-E
Wet Ball Mill	Tex-116-E
Triaxial Tests	Tex-117-E
(Part I or II as selected by the Engineer)	
Particle Count	Tex-460-A, Part I

Samples for testing the base material for triaxial class, soil constants, gradation and wet ball mill will be taken prior to the compaction operations.

E. Tolerances

Unless otherwise shown on the plans, the limits establishing reasonably close conformity with the specified gradation and plasticity index are defined by the following:

1. Gradation

The Engineer may accept the material, providing not more than one (1) out of the most recent five (5) consecutive gradation tests performed are outside the specified limits for master grading or pilot grading, as applicable, on any individual sieve by no more than five (5) percentage points.

2. Plasticity Index

The Engineer may accept the material providing not more than one (1) out of the most recent five (5) consecutive plasticity index samples tested are outside the specified limit by no more than two (2) percentage points.

F. Material Sources

The flexible base material shall be furnished by the Contractor. When a non-commercial

source is utilized, it shall be opened in such manner as to immediately expose the vertical faces of all the various strata of acceptable material. Unless otherwise approved by the Engineer, the material shall be secured and processed by successive vertical cuts extending through all of the exposed strata.

Unless otherwise shown on the plans, the flexible base material shall be temporarily stockpiled prior to delivery to the roadway. Unless otherwise shown on the plans, the stockpile shall not be less than 10 feet in height and shall be made up of layers not greater than two (2) feet in thickness. After a sufficient stockpile has been constructed the Contractor may proceed with loading from the stockpile for delivery. In loading from the stockpile for delivery, the material shall be loaded by making successive vertical cuts through the entire depth of the stockpile.

When temporary stockpiles are to be tested for acceptance prior to delivery to its intended use, any stockpile that has been sampled and accepted shall not have material added or removed unless otherwise approved by the Engineer. The Contractor will be charged for additional sampling and testing required as a result of material being removed from a previously approved stockpile without the approval of the Engineer. Such charges will be deducted from the Contractor's estimates.

G. Stockpile Delivery

It shall be the responsibility of the Contractor to prepare the stockpile site, to provide and deliver the required amount of base material to the designated stockpile site and to construct the stockpile. Unless otherwise shown on the plans, the stockpile shall not be less than ten (10) feet in height and shall be made up in layers not to exceed two (2) feet in thickness.

247.03 MEASUREMENT

Measurement will either be by lump sum, square yards or be by the ton of 2000 pounds dry weight in vehicles as delivered. For weight measurement, a set of standard platform truck scales conforming to the requirements of Item 520, "Weighing and Measuring Equipment" shall be furnished by the Contractor and placed at a location approved by the Engineer. When the material is weighed during mixing or batching, reweighing will not be necessary. The dry weight will be determined by deducting the weight of the moisture in the material at the time of weighing from the gross weight of the material. The moisture in the material will be determined in accordance with Test Method Tex-103-E at least once each day and more often if conditions warrant.

247.04 PAYMENT

The work performed and materials furnished in accordance with this Item and measured as

provided under “Measurement” will be paid for at the unit price bid for “Flexible Base-Limestone” of the type, grade and measurement specified. This price shall be full compensation for securing and furnishing all materials, including royalty and freight involved; for furnishing scales and labor involved in weighing the material when required; for loading all materials; for hauling and delivering, for labor, tools and incidentals necessary to complete the work.

When the plans specify “Flexible Base (Stockpile Delivery)”, the unit price bid also will be full compensation for preparing the stockpile area and for spreading and shaping the material in the stockpile.

When not specifically provided for in the Bid Proposal, Flexible Base Limestone shall be incidental to other appropriate bid items. When provided for as a lump sum item, unit price quantities will not be used.

ITEM 300

VALVES

300.01 GENERAL

The Contractor shall furnish all equipment, materials, fittings, and appurtenances and perform all necessary operations required for a complete installation of each valve in its specified location. This shall include all nuts and bolts, gaskets, and supports. Where required, manhole enclosures shall be installed as shown in the details with traffic load lids marked "Sewer" or "Water", as appropriate.

300.02 GATE VALVES

Gate valves shall strictly conform to the requirements of the latest revisions of the American Water Works Association Standard Specification C509 in addition to changes and additions specifically stated in these specifications. Gate valves for this project shall be American Valve & Hydrant Model AFC-500 FLG x FLG or prior approved equivalent. The gate valve shall be designed to withstand a minimum of 400 psi while in the open position and a minimum of 200 psi in the closed position.

Valve Construction shall be as follows:

1. All gate valves shall be of the non-rising stem type and shall be resilient seated. Those valves installed under ground shall have an operating nut and shall include a valve box as indicated in the plans and those valves installed above ground shall have a hand wheel. Valve boxes for sewage applications shall have lids marked "Sewer" and those for water applications shall have lids marked "Water".
2. The valve body and the bonnet shall be cast from a high grade gray cast iron conforming to the latest revision of ASTM A-126 Class B. The valve stem, stem nuts, and stem collars shall be forged from manganese bronze.
3. The minimum number of turns required to fully open a gate valve shall be a minimum of 4 turns per inch of nominal diameter for each gate valve.
4. All ferrous surfaces, both inside and out, shall be coated with a fusion bonded epoxy conforming to the latest revision of AWWA C550.

300.03 SWING CHECK VALVES

Check valves shall be swing check type and shall conform to the latest revisions of AWWA C508. Check valves shall be gray iron flange x flange, ANSI B16.1 Class 125, with stainless steel shaft and ductile iron hinge with pin. The check valve shall have a minimum working pressure of 200 psi. The check valve shall be as per AFC 50SC line swing check valve or prior approved equivalent. Check valves shall be supplied with outside weight, lever, and spring.

300.04 SILENT GLOBE CHECK VALVES

Check valves shall be globe style silent check valves and shall conform to the latest revisions of AWWA C508. Check valves shall be gray iron ASTM A-126-B, with stainless steel spring and screws. The seat, plug and bushings shall be bronze, B-62. The check valve shall have a minimum working pressure of 400 psi.

300.05 BALL VALVES

Ball valves shall conform to the latest revisions of AWWA specifications. The ball valve shall be threaded and have a full ported all bronze body except the ball and stem which shall be stainless steel, unless noted otherwise on the plans.

300.06 PLUG VALVES

Eccentric plug valves shall be DeZurik Permaseal valves or approved equivalent. The valve body shall be constructed of cast iron or ductile iron. It shall be equipped with ANSI Class 150 flanges on each end and a handle. All joints and castings shall be completely watertight. No casting shall show any indication of permanent distortion. The resilient mechanism shall provide zero leakage at the rated water working pressure when installed with the flow in either direction. All seats shall be PTFE type. The valve shall be furnished with all required bolts, glands, and gaskets for a complete installation.

300.07 BUTTERFLY VALVES

Butterfly valves shall strictly conform to the requirements of the latest revisions of the American Water Works Association Standard Specification C504 in addition to changes and additions specifically stated in these specifications. Butterfly valves for this project shall be DeZurik valves or prior approved equivalent.

Butterfly valves shall have wafer type or flanged bodies and shall be resilient seated. The valve body shall be cast from a high grade gray cast iron conforming to the latest revision of ASTM A-126 Class B. The disc shall be ductile iron conforming to the latest revision of ASTM A 395. The shaft shall be type 416 stainless steel conforming to ASTM A276. The wafer type valves shall be operated with a minimum 10 position lever while the flanged butterfly valves shall have an operating nut with a removable handle.

300.08 COMBINATION AIR VALVES FOR SEWAGE/WATER SERVICE

The combination air release valve (single body double orifice) shall be of the single housing type and have both the features of an air/vacuum and an air release valve with a working pressure of up to 250 psi. The combination valve shall have an inlet and an outlet as shown in the plans. The valve body shall be epoxy coated steel. Floats shall be made of composite material. Nuts

and bolts shall be stainless steel according to ASTM 276. The valve shall not have any corrosive type materials in its construction.

The Contractor shall furnish all equipment, appurtenances, and labor necessary for the installation of a complete air valve. Installation shall be in the vertical position at high points in the piping system and will include an inlet valve, and air valve. The inlet valve shall be a stainless steel ball valve with stainless steel stem and handle, or other non-corrosive material approved by the Engineer. PVC valves or handles will not be allowed. The assembly shall be installed in accordance with the locations and notes in the plans. Backflushing attachments shall be provided with the valve.

Manufacturers shall be **A.R.I. Flow Control Accessories, model D-020, D-023, and D-023 NS** or prior approved equivalent.

300.09 PAYMENT

Payment for valves shall include payment for furnishing all equipment and materials necessary for a complete installation. Materials shall include, but not be limited to Megalug flanges, valve, valve box or other specified enclosure such as manholes, fittings, nuts and bolts, polywrap, painting, and testing. Where not specifically provided for in the bid proposal, payment for valves shall be considered incidental to appropriate bid items.

ITEM 325

SANITARY SEWER SYSTEM TESTING

325.01 DESCRIPTION

This Item shall govern for the furnishing of all materials and equipment and performance of all operations necessary for testing of the completed sanitary sewer lines and manholes prior to being placed in service.

The Contractor shall provide all necessary equipment and shall perform all work required in connection with the tests. All pipe installations shall be tested. The contractor shall complete the test record form and submit it to the Engineer before the improvements are considered tested.

325.02 PRESSURE MAIN TESTING

The test pressure shall be 50 psi greater than the maximum force main design pressure or 125 pounds per square inch gauge, whichever is greater. The test shall be held for a period of four (4) hours.

Each test section shall be slowly filled with water, care taken to expel all air from the pipe. If necessary, the pipes shall be tapped at high points to vent the air. There will be no extra charge to the Owner for venting.

At the end of the test period, the amount of leakage shall be determined by the quantity of water that must be supplied into the pipe, or any valved section thereof, to maintain pressure within five pounds per square inch of the specified test pressure, after the air in the pipe has been expelled. The maximum allowable leakage shall be calculated using the following formula.

$$L = \frac{10 \cdot S \cdot D \cdot T}{(5280)(24)}$$

Where L = total leakage in gal.

S = length of pipe in ft

D = inside diameter of pipe in inches

T = duration of test in hours

If the quantity of leakage exceeds the maximum amount calculated, the failed section will be rejected and not accepted until it meets the above requirements.

325.03 GRAVITY LINE TEST

A. Ground Water Level

It is imperative to determine an accurate water table at the time of testing. Any approved and logical method of determining the water table will be considered.

B. Low Pressure Air Test

A low pressure air test shall be conducted on the sewer lines less than 36" in diameter unless the pipe is to be joint tested.

Conduct test between two (2) consecutive manholes, as directed by the Engineer.

The test section of sewer line is plugged at each end. One of the plugs used at the manhole must be tapped and equipped for the air inlet connection for filling the line from the air compressor.

All plugs shall be properly braced against the internal pressure to prevent air leakage by slippage and blowouts.

Connect air hose to tapped plug selected for the air inlet. Then connect the other end of air hose to the portable air control equipment which consists of valves and pressure gauges used to control:

- a. The air entry rate to the sewer test section, and
- b. to monitor the air pressure in the pipe line.

More specifically, the air control equipment includes a shut-off valve, pressure regulating valve, pressure reduction valve and a monitoring pressure gauge having a pressure range from 0 to 15 psi. The gauge shall have minimum divisions of 0.10 psi and an accuracy of + or - 0.04 psi.

Connect another air hose between the air compressor and the air control equipment.

Supply air to the test section slowly, filling the pipe line until a constant pressure of 3.5 psig plus 0.433 psi for each foot of ground water level above the invert of the pipe. The air pressure must be regulated to prevent pressure inside the pipe from exceeding 15.0 psig.

When constant pressure of 3.5 psig above ground water pressure adjustment is reached, throttle the air supply to maintain the internal pressure at 3.5 psig plus ground water pressure adjustment for at least 5 minutes. If leakage is detected at any cap or plug, release the pressure in the line and tighten all leaky caps and plugs. Then start the test operation again by supplying air. When it is necessary to bleed off the air to tighten or repair a faulty plug, a new five-minute interval must be allowed after pipe line has been refilled.

After the stabilization period, adjust the air pressure to just above 3.5 psig above ground water pressure adjustment and shut off or disconnect the air supply.

Observe the gauge until the air pressure reaches 3.5 psig above ground water pressure adjustment. At 3.5 psig above ground water pressure, commence timing with a stop watch which is to run until the line pressure drops to 2.5 psig above the ground water pressure at which time the stop watch is stopped.

If the time, in minutes and seconds, for the air pressure to drop 1.0 psig is greater than that shown in the table below for the designated pipe size, the section undergoing test shall have passed.

If the time, in minutes and seconds, for the 1.0 psig drop is less than that shown in the table below for the designated pipe size, the section of pipe shall not have passed the test; therefore, adequate repairs must be made and the line retested.

Minimum Time-Air Test

$$T = \frac{0.085 \times D \times K}{Q}$$

- T = time for pressure to drop 1.0 pound per square inch gauge in seconds
- K = 0.000419 X D X L, but not less than 1.0
- D = average inside pipe diameter in inches
- L = length of line of same pipe size being tested, in feet
- Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface shall be used

Since a K value of less than 1.0 shall not be used, there are minimum testing times for each pipe diameter as follows:

Pipe Diameter (inches)	Minimum Time (seconds)	Length for Minimum Time	Time for Longer Length (seconds)
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(feet)

6	340	398	0.855(L)
8	454	298	1.520(L)
10	567	239	2.374(L)
12	680	199	3.419(L)
15	850	159	5.342(L)
18	1020	133	7.693(L)
21	1190	114	10.471(L)
24	1360	100	13.676(L)
27	1530	88	17.309(L)
30	1700	80	21.369(L)
33	1870	72	25.856(L)

The test may be stopped if no pressure loss has occurred during the first 25% of the calculated testing time. If any pressure loss or leakage has occurred during the first 25% of the testing period, then the test shall continue for the entire test duration as outlined above or until failure.

C. Joint Testing for Pipes 36" and Larger in Diameter

Lines with a 27-inch average diameter and larger may be air tested at each joint instead of low pressure air testing. Pipe greater than 36 inch diameter must be tested for leakage at each joint. If the joint test is used, a visual inspection of the joint shall be performed immediately after testing. The pipe is to be pressurized to 3.5 psi greater than the pressure exerted by groundwater above the pipe. Once the pressure has stabilized, the minimum time allowable for the pressure to drop from 3.5 pounds per square inch gauge to 2.5 pounds per square inch gauge shall be 10 seconds.

D. Deflection Test

Deflection tests shall be performed on all semi-rigid pipe in accordance with the TCEQ Chapter 217 design requirements. The test shall be conducted after the final backfill is in place for 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid mandrel (required for pipes less than 27" in diameter), the diameter of the mandrel shall be a minimum of 95% of the inside diameter of the carrier pipe in accordance with the TCEQ requirements. The test shall be performed without the use of mechanical pulling devices.

325.04 MANHOLE TESTING

Testing of new or rehabilitated sanitary sewer manholes shall be independent of testing of sanitary sewer lines and shall be by either hydrostatic exfiltration test or vacuum test according to the following.

A. Hydrostatic Exfiltration Test

The hydrostatic exfiltration test shall be as follows:

1. Plug all incoming and outgoing lines securely.
2. Fill manhole with water up to the top.
3. The water level shall be maintained full for at least one hour.
4. If the water loss exceeds the maximum allowable of 0.025 gallons per foot diameter per foot of manhole depth per hour, the manhole shall have failed the test.

For concrete manholes, a wetting period of 24 hours may be used prior to testing in order to allow for saturation of the concrete.

5. Repair and retest any manholes which fails the test.

B. Vacuum Test

1. DESCRIPTION

This specification governs all work and materials necessary to perform vacuum testing of new or existing sanitary sewer manholes. Manholes may be tested after installation with all connections (existing and/or proposed) in place. Vacuum testing may be performed prior to or after backfilling by the installer. Final acceptance, in accordance with the requirements of this specification, will consist of vacuum testing of the completed and installed structure (manhole) in place to include manhole/adjustment rings and manhole casting.

2. MATERIALS

Vacuum testing shall consist of a minimum of the following:

- a. Engine.

- b. Vacuum Pump.
- c. Hose.
- d. Test Head device capable of sealing opening in manhole casting as required.
- e. Pneumatic Test Plugs - these plugs shall have a sealing length equal to or greater than the diameter of the connecting pipe to be sealed.

3. PROCEDURE

- a.. The test head shall be placed at te to of the manhole in accordance with the manufacturer's recommendations.
- b. A vacuum of 10 inches of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches of mercury.
- c. The manhole shall pass if the time for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury meets or exceeds the values indicated in Table
- d. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.

TABLE 1 - Minimum Test Times for Various Manhole Diameters (ASTM C1244)

Depth	Diameter, inches				
(Feet)	42	48	54	60	72
	Time, seconds				
8	17	20	23	26	33
10	21	25	29	33	41
12	25	30	35	39	49
14	30	35	41	46	57
16	34	40	46	52	67
18	38	45	52	59	73
20	42	50	53	65	81
22	46	55	64	72	89
24	51	59	64	78	97
26	55	64	75	85	105
28	59	69	81	91	113
30	68	74	87	98	121

4. TESTING AND CERTIFICATION

- a. Testing shall be done by the Contractor and witnessed by the Engineer or his representative. All manholes and structures shall be tested as finished and completed for final acceptance.
- b. ANY DEFECTIVE WORK OR MATERIALS shall be corrected or replaced by the Contractor and retested. This shall be repeated until all work and materials are acceptable.

325.04 MEASUREMENT AND PAYMENT

Work performed and materials furnished as prescribed by this Item will not be measured or paid for directly, but shall be considered subsidiary to the various bid items in the contract.

A. Pressure Main Test Report Form

Date: _____

Line Segment(s) Tested (with Line Size): _____

All Valves Open/Closed: _____ Flow Meter Calibrated: _____

Initial Flow Meter Reading: _____ gal

Beginning Pressure: _____ psi

Low Pressure: _____ psi Water Pumped: _____ gal Resulting Pressure: _____ psi

Low Pressure: _____ psi Water Pumped: _____ gal Resulting Pressure: _____ psi

Low Pressure: _____ psi Water Pumped: _____ gal Resulting Pressure: _____ psi

Low Pressure: _____ psi Water Pumped: _____ gal Resulting Pressure: _____ psi

Low Pressure: _____ psi Water Pumped: _____ gal Resulting Pressure: _____ psi

Total Water Pumped: _____ gal

Leakage Calculation: _____

Allowable Leakage for Test Section: _____ gal Passed: _____ Failed: _____

B. Air Test Report for Gravity Sewer Line

Date : _____

Line Segment(s) Tested (with Line Size): _____

Time allowed for 0.5 psi pressure drop: _____

Beginning pressure: _____

Ending pressure: _____

Time for drop: _____ Passed: _____ Failed: _____

Person conducting test: _____

C. Vacuum Test Report for Gravity Sanitary Sewer Manholes

Date: _____

Manhole Designation: _____

Time for vacuum drop from 10 inches of Mercury to 9 inches of Mercury: _____

Pass: _____ Fail: _____

Person conducting test: _____

D. Hydrostatic Exfiltration Test

Date: _____

Manhole Designation: _____

Height of water that leaked from manhole: _____

Volume of water that leaked from manhole: _____ gal per ft diam per ft depth per hour

Pass: _____ Fail: _____

Person conducting test: _____

ITEM 350

BORING

350.01 GENERAL

This specification shall cover materials and procedures required for installing pipelines under roadways, highways, railroads and ditches as indicated on the plans. Items of work included herein are bore without encasement and bore with encasement.

350.02 MATERIALS

The carrier pipe shall be as specified under appropriate specifications included herein. The encasement pipe shall be as called for in the plans and specified below.

A. Steel Encasement

Specification for steel encasement pipe shall be steel pipe ASTM A 139, Grade B. The exterior of the casing pipe shall have a minimum of 20 mils of coal tar epoxy applied in three separate coats after surface preparation. Surface preparation shall be a minimum SSPC-SP10-85, a near white condition. The Contractor shall mechanically brush any blemishes and welded joints and paint with a quick cure coal tar epoxy.

The contractor shall be responsible for determining the appropriate wall thickness of the casing. The casing and joints shall be designed to carry thrust of jacks or loads due to pulling mechanism in combination with overburden, earth, and hydrostatic loads. Select casings for dry augering to withstand action of auger without damage. Use the following design elements:

1. Design stress in pipe wall shall be 50 percent of minimum yield point of steel or 18,000 psi, whichever is less, when subjected to applicable loading conditions;
2. Wall thickness shall provide for a maximum allowable deflection which does not exceed 3 percent of nominal casing diameter;
3. Use Cooper E-80 locomotive loading distribution as criteria for railroad crossings in accordance with AREMA specifications for culverts. In design, account for additive loadings due to multiple tracks;
4. Use H-20 vehicle loading distribution as criteria for truck loading in accordance with AASHTO;
5. When not specifically indicated on the plans or in the specifications, select casing diameter to permit practical installation (including skids or spacers) and grouting.

B. HDPE Encasement

Specification for high density polyethylene (HDPE) encasement pipe shall be high density polyethylene DR11 pipe, iron pipe size (IPS) in accordance with ASTM D 3350 and ASTM F 714. Pipe meet the requirements of AWWA C906-90 "Polyethylene (PE) Pressure Pipe and Fittings, 4 in through 63 in, for Water Distribution."

C. Carrier and Casing Sizes

The carrier and casing material options shown below are approximate sizes and thicknesses for bidding purposes. The Contractor shall submit the recommended sizes, thicknesses, and clearances to the Engineer in accordance with the design parameters contained herein.

<u>Carrier Pipe</u>	<u>Steel Casing Pipe</u>

350.03 METHODS OF CONSTRUCTION

A. GENERAL

Bore pits and tail trenches shall be located to prevent damage to surrounding facilities and shall not be larger or deeper than required for the bore and as shown on the plans. Any damages to adjacent facilities caused by the Contractor's work shall be repaired or replaced by the Contractor at his expense. The Contractor shall provide shoring, sheet piling, or other stabilization equipment as required for a safe installation and in accordance with the Trench Safety specification contained herein. All trench backfill shall be mechanically tamped back to its original density. Clean up of the area requires all roadway shoulders, berms, slopes, and ditches be shaped to original condition or better.

All bores shall be accomplished with a mechanical boring machine capable of producing a smooth, straight bore. The boring device shall be capable of making grade adjustments at the boring face during the boring process. Grade shall be controlled using a laser beam or other approved leveling device. The size of the bore shall be such that sufficient room is provided for bells and joints.

Bores in Texas Department of Transportation ROW shall be wet bores if the bore hole is 15" or smaller and shall be dry bores if the bores are larger than 15".

B. HORIZONTAL DIRECTIONAL DRILLING

Steerable method for the installation of pipes using a surface launched drilling rig, in which a fluid filled pilot bore is drilled. The hole is then enlarged to the size required by rotating a large pipe and cutting head. Tracking of the drill string is done by using a down hole survey tool. The required deviation during pilot boring is achieved by positioning the bent sub. The void between the pipe and the bore hole wall shall not be greater than 1" or it shall be pumped full of grout in accordance with ASTM C 476.

The contractor shall be responsible for ensuring the facilities crossed are not damaged from heaving of the soil or any other portion of the boring operation. The contractor shall employ whatever means necessary to prevent damage including relief holes, removal of materials to prevent excessive pressures, additional incremental cutting procedures, and/or any other procedure recommended by the equipment manufacturer. Any damage caused by the contractor shall be repaired or replaced at his expense.

C. WET BORES

The bore hole shall be of such a diameter to permit the insertion of the carrier pipe following the removal of excess materials from the bore hole. The bore shall allow for the insertion of the carrier pipe by jacking without exceeding the jacking load capacity of the pipe as specified by the manufacturer. The bore diameter shall not be more than 1" larger than the maximum diameter of the carrier pipe. Annular void between the pipe and the bore hole wall shall be pumped full of grout if the annular space is greater than 1". Pumping of grout shall be in accordance with ASTM C-476.

D. DRY BORES

The bore shall be made so as to facilitate the immediate placement of the casing pipe by jacking. Casing shall be installed with even bearing throughout its length laid at the grade indicated on the plans. The bore hole shall be of such a diameter to permit the insertion of the casing pipe without exceeding the jacking load as specified by the manufacturer. The bore diameter shall not be more than 1" larger than the maximum diameter of the casing pipe. Annular voids between the pipe and the bore hole wall shall be pumped full of grout if the annular space is greater than 1". Pumping of grout shall be in accordance with ASTM C-476. The removal of excess material through the inside of the casing shall be accomplished in a manner that will not damage the protective coating. The carrier pipe shall be supported with a minimum of casing spacers with a minimum of two per joint of pipe so as to provide adequate support and to prevent damage to pipe bells during installation. Casing spacers shall be of a non corroding material such as polyethylene and must be approved by the Engineer. The pipe shall not rest on the pipe bells, but, rather, on the supports. The annular space at both ends of the encasement pipe shall be plugged with grout 12" into the pipe to prevent excessive water infiltration.

E. JACKING OF CASING PIPE

Heavy duty jacks suitable for jacking of the casing pipe size and type as specified herein shall be used by the Contractor. The jacking process shall provide for even pressure around the entire circumference of the casing pipe. The jacking head shall be not less than six (6) inches larger in diameter than the casing pipe. The boring equipment shall be such that an even grade and alignment as called for in the plans can be obtained and such that all forces are transmitted to undisturbed soils in the bore pits. Once the jacking process has begun, the operations shall be complete without interruption. Any pipe damaged in this process shall be replaced by the Contractor at his own expense. Bore pits and trenches shall be backfilled immediately upon completion of the boring process.

350.04 NOTIFICATION

The contractor shall notify the appropriate R.O.W. owner at least seven (7) days prior to initiation of construction. R.O.W. owners shall be informed of all construction schedule changes within their respective R.O.W.'s.

350.05 MEASUREMENT AND PAYMENT

Boring shall be measured for payment in linear feet along the centerline from end to end of the casing specified to be placed therein. Boring shall be paid for at the contract unit price per linear foot complete in place. The linear foot price shall be total compensation for furnishing and placing all materials including grout packing, backfill, jacking, boring, excavation, backfill, bore pits, dewatering, drainage control, disposal of materials, labor, tools, equipment, and incidental necessary for a complete installation, as specified in the plans and specifications.

Payment shall be only for the limits as shown on the plans, unless prior approval is obtained from the Engineer.

ITEM 380

HORIZONTAL DIRECTIONAL DRILLING

380.1 GENERAL

A. SCOPE OF WORK

This section contains guidelines and specifications applicable to the installation of sanitary sewer force mains using horizontal directional drilling (HDD). It includes minimum requirements for design, materials and equipment used for the horizontal directional drilling for the substantially trenchless construction of pipelines. The section also includes materials, dimensions and other pertinent properties of pipe and required accessories. These properties provide minimum performance requirements for various components including joints.

The Contractor shall submit to the Engineer for review, the bore profile produced from the boring software used prior to making the bores.

B. DESCRIPTION OF SYSTEM

Installation of sanitary sewer force mains shall be carried out by HDD, where shown on the drawings and elsewhere by approval of the Engineer. The bore path shall be designed by the drilling contractor to ensure that pipe joints do not deflect more than 50% of manufacturer's recommended maximum deflection.

380.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. The following standards contain provisions that, through reference in this text, constitute provisions of these guidelines. All standards are subject to revision, and users of these guidelines are cautioned to use the latest revisions.

1. American National Standards Institute (ANSI)/American Water Works Association (AWWA)

380.3 SUBMITTALS

- A. Prior to beginning work, the Contractor shall submit to the Engineer a work plan detailing the procedure and schedule to be used to execute the project. The work plan shall include a description of all equipment to be used, down-hole tools, a list of personnel and their qualifications and

experience (including back-up personnel in the event that an individual is unavailable), list of subcontractors, a schedule of work activity, a safety plan (including MSDS of any potentially hazardous substances to be used), traffic control plan (if applicable), an environmental protection plan and contingency plans for possible problems. Work plan shall be comprehensive, realistic and based on actual working conditions for this particular project. Plan shall document the thoughtful planning required to successfully complete the project.

- B. Specifications on material to be used shall be submitted to Engineer and material shall include the pipe, fittings, drilling mud, drilling additives and any other item, which is to be an installed component of the project or used during construction.

- C. GENERAL

- 1. The bore path alignment and design for HDD shall be based on the Engineer's plans and other factors. Some of these factors are the pipe bell and barrel diameters, the optimum individual pipe length, bore path inside diameter and maximum deflection capabilities of the joint.
 - 2. Prior to the start of drilling, reaming and pipe placement operations, the Contractor shall properly locate and identify all existing utilities in proximity to the pipeline alignment. The Contractor shall confirm the alignment of all critical utilities, using vacuum excavation or other suitable excavation method, for further detailed confirmations as necessary.

- D. PIPE AND FITTINGS

- 1. Pipe and fittings shall meet the requirements of AWWA/ANSI C151/A21.51 and ANSI/AWWA C153/A21.53, respectively. Pipe used for directional drilling shall be as specified by the engineer, with pipe manufacturer designed restrained flexible joints and smoothly contoured bells. Joints with bulky glands or flanges that may prevent the smooth flow of the drilling fluid/soil slurry over the joint shall not be acceptable.

- E. LININGS AND COATINGS

- 1. Pipe for sewer applications shall be Cement-Mortar lined in accordance with ANSI/AWWA C104/A21.4 or if required by the engineer, lined with PROTECTO 401[®].

The Contractor shall have equipment and expertise, appropriate for horizontal directional drilling installations. This includes the preparation and maintenance of the bore path using drilling fluids appropriate for the geology of the soils. The Contractor shall also have experience in safety and dependability installing, in similar geology, similar size and length of piping involved.

A. DRILLING SYSTEMS

1. The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at variable angles down to 8 degrees above horizontal, while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall have a capacity to adequately complete the drilling and piping installation. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor the maximum pull-back pressure during the pull-back operation. The rig shall be grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drill string and an audible alarm, which automatically sounds when an electrical current is detected.
2. The drill head shall be a steerable type and shall provide the necessary cutting surfaces and drilling fluid jets. Mud motors shall be adequate power to turn the required drilling tools.

B. GUIDANCE SYSTEM

1. A conventional electromagnetic sound walkover system, Magnetic Guidance System (MGS) probe or proven gyroscopic probe and interface shall be used to provide a continuous and accurate determination of the location of the drill head during the drilling operation. The guidance shall be capable of tracking at the maximum depth required and in any soil condition, including hard rock. It shall enable the driller to guide the drill head by providing immediate information to the tool face, azimuth (horizontal direction), and inclination (vertical direction). The guidance system shall be accurate to $\pm 2\%$ of the vertical depth of the borehole at sensing position at depths up to one hundred feet and accurate within 4.5 feet, (54"), horizontally.
2. The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The

Operator shall be aware of any geo-magnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

C. DRILLING FLUID (MUD) SYSTEM

1. A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid composed of bentonite clay, potable water and appropriate additives. Mixing system shall be able to molecularly shear individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing. The drilling fluid reservoir tank shall be a minimum of 500 gallons. Mixing system shall continually agitate the drilling fluid during drilling operations.
2. Additives to drilling fluid such as drill soap, polymers, etc. shall be 'environmentally safe' and be approved for such usage. No diesel fuel shall be used.

D. OTHER EQUIPMENT

1. Pipe rollers shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull-back operations. Sufficient number of rollers shall be used to prevent excess sagging of pipe. Rollers shall be used as necessary to assist in pull back operations and in layout/jointing of piping.
2. Hydraulic or pneumatic pipe rammers may only be used if necessary and with the authorization of Engineer.
3. Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the Engineer prior to commencement of the work. Consideration for approval shall be made on an individual basis for each specified location. The proposed device or system shall be evaluated prior to approval or rejection on its potential ability to complete the utility placement satisfactorily without undue stoppage and to maintain line and grade within the tolerances prescribed by the particular conditions of the project.

380.5 JOINTS, INTERCONNECTIONS, AND PULLING BELL ASSEMBLIES

- A. Joints used for directional drilling shall be boltless, flexible, restrained. Pipe and joint seals, when properly assembled and installed, shall be capable of dependably handling the specified internal pressure, as well as vacuum and external pressures that can occur in pipeline operation. Joints shall exhibit such performance attributes in straight alignment or at maximum rated joint deflection. The pipe pulling head shall be made of ductile-iron and designed and furnished by the pipe manufacturer or an approved equal. The pulling head assembly shall have the same performance characteristics as the pipe to which it is connecting. It shall also be supplied with a filling/testing port, of appropriate size, for testing of the pipe after it is pulled through the bore path.
- B. For pipe that is installed using the Assembly Line method or Ramp Method, described as follows, the pulling head may also be used as one of the two (2) bulkheads required for a low pressure air test of the pipe string prior to pull back, if required by the engineer. After complete installation, the pulling head may also be helpful, with or without further connection of piping, in normal higher pressure hydrostatic testing of the installed piping.

380.6 PROOF-OF-DESIGN TESTS

The Manufacturer shall have representative proof-of-design tests of flexible restrained pipe joints.

380.7 EXECUTION

A. GENERAL

- 1. The Engineer must be notified 48 hours in advance of starting work. The Directional Bore shall not begin until the Engineer is present at the job site and agrees that proper preparations for the operation have been made. The Engineer approval for beginning the installation shall in no way relieve the Contractor of the ultimate responsibility for the satisfactory completion of the work as authorized under the Contract.
- 2. The drawings show existing utilities that are believed to be near the directional drill alignment. There is no guarantee that these utilities are located as shown or that the other utilities may not be present. The Contractor is to field locate existing utilities in advance of the work so as not to delay work and avoid conflict or disruption of utility services.

B. PERSONNEL REQUIREMENTS

- 1. All personnel shall be fully trained in their respective duties as part of the directional drilling crew and in safety. Contractor must show job

history and reference list of equal or greater size and length of piping involved. The Supervisor must have at least two years directional drilling experience. A competent and experienced supervisor representing the Drilling Contractor shall be present at all times during the actual drilling operations. A responsible representative who is thoroughly familiar with the equipment and type work to be performed, must be in direct charge and control of the operation at all times.

C. DRILLING PROCEDURE

1. Work site as indicated on drawings, within right-of-way, shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made. Contractor shall confine all activities to designated work areas.
2. Entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on drawings. If Contractor is using a magnetic guidance system, drill path shall be surveyed for any surface geo- magnetic variations or anomalies.
3. Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner.
4. Pipe lengths shall be connected together in one length, if space permits. Pipe shall be placed on pipe rollers before pulling into bore hole with rollers spaced close enough to prevent excessive sagging of pipe.
5. Pilot hole shall be drilled on bore path with no deviations greater than 5% of depth over a length of 100'. In the event that pilot hole does deviate from bore path more than 5% of depth in 100', Contractor shall notify Engineer and Engineer may require Contractor to pull-back and re-drill from the location along bore path before the deviation.
6. Upon successful completion of pilot hole, Contractor shall ream bore hole to a minimum of 25% greater than outside diameter of pipe bell for straight pulls and 50% greater for curved or radius pulls using the appropriate tools. Contractor shall have the option to pre-ream or ream and pull back pipe in one operation if conditions allow. Contractor shall not attempt to ream at one time more than the drilling equipment and mud system are designed to safely handle.
7. After successfully reaming bore hole to the required diameter, Contractor shall pull the pipe through the bore hole. In front of the pipe shall be a swivel. Once pull-back operations have commenced, operations must continue without interruption until pipe is completely pulled into bore hole. During pull-back operations Contractor shall not apply more than the maximum safe pipe pull force at any time. In the event that pipe becomes stuck, Contractor shall notify Engineer.

Engineer, Contractor, and/or the maintaining agency shall discuss options and then work shall proceed accordingly.

8. Excess pipe shall be removed and the bore hole associated with this excess pipe shall be filled with flowable fill or grout unless the area of the excess pipe is excavated and backfilled as part of the tie-in operations. In the event that a drilling fluid fracture, inadvertent returns or returns loss occurs during pilot hole drilling operations, Contractor shall cease operations and shall discuss corrective options with the Engineer and/or maintaining agency, then work shall proceed accordingly.

D. BASIC ASSEMBLY/PULLING METHODS

1. Cartridge Assembly (Option 1) - Cartridge assembly option is defined as the assembling of individual sections of flexible restrained joint carrier pipe in a secured entry and assembly pit. The pipe sections are assembled individually and then progressively pulled into the bore path a distance equivalent to a single pipe section. This assembly-pull process is repeated for each pipe length until the entire line is pulled through the bore path to the exit point.
2. Assembly-Line or Ramp Method (Option 2) - Assembly-line option is defined by the pre-assembly of multiple lengths of flexible restrained joint carrier pipe, with subsequent pulling installation into the bore path as a long pipe string. With this option the Contractor shall provide an entry ramp to the entrance of the bore path. The ramp shall be of sufficient length and grade such that any one pipe joint does not exceed the allowable joint deflection at any point prior to the pipe string entering the bore path. The Contractor shall be responsible for providing the necessary equipment or ground surface preparation to allow the pipe to be pulled back along the surface prior to the entry ramp and bore path without damaging the PE encasement, if required. The Contractor shall repair any damage to the wrap prior to the pipe section entering the bore path.

E. JOINT CLEANING/ASSEMBLIES IN HDD

1. The Contractor shall be responsible for the proper assembly of all pipe and appurtenances in accordance with the Manufacturers written installation procedure and as supplemented by these guidelines. Prior to joint assembly all joints and joint components shall be thoroughly cleaned and examined to ensure proper assembly and performance. In the event that the Contractor is not experienced with the assembly of the type of flexible restrained joint being used, it shall be the responsibility of the Contractor to contact a factory-trained representative for recommendations on the proper and efficient installation of the joint.

F. PIPE TESTING

1. Following successful pullback of pipe, Contractor shall hydro-test pipe.

G. SITE RESTORATION

1. Following drilling operations, the Contractor shall de-mobilize equipment and restore the work-site to original condition. Any noticeable surface defects, due to the drilling operation, shall be repaired by the Contractor.

H. RECORD KEEPING

1. Contractor shall maintain a daily record of the drilling operations and a guidance system log with a copy given to Engineer at completion of boring. As-built drawings shall be certified by the Contractor, for accuracy.
2. Contractor shall accurately record, maintain, and provide to the Engineer, copies of the plan and profile drawings of the Contractor installed horizontal directional drilled carrier pipe.

ITEM 401

FLOWABLE BACKFILL

401.01 GENERAL

This Specification is from the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges. All references to other Specification Items hereby incorporate those Texas Department of Transportation Specifications into this project

401.02 DESCRIPTION

Furnish and place flowable backfill for trench, hole, or other void.

401.03 MATERIALS

- A. Cement. Furnish cement conforming to DMS-4600, "Hydraulic Cement."
- B. Fly Ash. Furnish fly ash conforming to DMS-4610, "Fly Ash."
- C. Chemical Admixtures. Furnish chemical admixtures conforming to DMS-4640, "Chemical Admixtures for Concrete."
- D. Fine Aggregate. Provide fine aggregate that will stay in suspension in the mortar to the extent required for proper flow and that meets the gradation requirements of Table 1.

Table 1
Aggregate Gradation Chart

Sieve Size	Percent Passing
3/4 in.	100
No. 200	0-30

Test fine aggregate gradation in accordance with Tex-401-A.

Plasticity Index (PI) must not exceed 6 when tested in accordance with Tex-106-A.

- E. Mixing Water. Use mixing water conforming to the requirements of Item 421, "Hydraulic Cement Concrete."

401.04 CONSTRUCTION

Submit a construction method and plan, including mix design and shrinkage characteristics of the mix, for approval. Provide a means of filling the entire void area, and be able to demonstrate

that this has been accomplished. Prevent the movement of any inserted structure from its designated location. If voids are found in the fill or if any of the requirements are not met as shown on the plans, remove and replace or correct the problem without additional cost to the Department.

Unless otherwise shown on the plans, furnish a mix meeting the requirements of Sections 401.3.A, "Strength," and 401.3.B, "Consistency."

- A. Strength. The 28-day compressive strength range, when tested in accordance with Tex-418-A, must be between 80 psi and 150 psi unless otherwise directed. Two specimens are required for a strength test, and the compressive strength is defined as the average of the breaking strength of the 2 cylinders.
- B. Consistency. Design the mix to be placed without consolidation and to fill all intended voids. Fill an open-ended, 3-in.-diameter-by-6-in.-high cylinder to the top to test the consistency. Immediately pull the cylinder straight up. The correct consistency of the mix must produce a minimum 8-in.-diameter circular spread with no segregation.

When necessary, use specialty type admixtures to enhance the flowability, reduce shrinkage, and reduce segregation by maintaining solids in suspension. All admixtures must be used and proportioned in accordance with the manufacturer's recommendations.

Mix the flowable fill using a central-mixed concrete plant, ready-mix concrete truck, pug mill, or other approved method.

Furnish all labor, equipment, tools, containers, and molds required for sampling, making, transporting, curing, removal, and disposal of test specimens. Furnish test molds meeting the requirements of Tex-447-A. Transport, strip, and cure the test specimens as scheduled at the designated location. Cure test specimens in accordance with Tex-447-A. The Engineer will sample, make, and test all specimens. Dispose of used, broken specimens in an approved location and manner. The frequency of job control testing will be at the direction of the Engineer.

401.05 MEASUREMENT

This Item will be measured by the cubic yard of material placed. Measurement will not include additional volume caused by slips, slides, or cave-ins resulting from the Contractor's operations.

401.06 PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Flowable Backfill." This price is full compensation for furnishing, hauling, and placing materials and for equipment,

tools, labor, and incidentals. Where not specifically provided for in the bid proposal, payment for grouting annular spaces will be incidental to boring, tunneling, or other bid items bid items.

ITEM 900

SEEDING

900.01 DESCRIPTION

This Item shall govern for preparing ground, providing for sowing of seeds, mulching with straw, hay, or cellulose fiber and other management practices along and across such areas as are designated on the plans and in accordance with these specifications.

900.02 MATERIALS

All seed must meet the requirements of the Texas Seed Law including the labeling requirements for showing pure live seed (P.S. = purity x germination), name and type of seed. Seed furnished shall be of the previous season's crop and the date of analysis shown on each bag shall be within nine months of the time of use on the project. Each variety of seed shall be furnished and delivered in separate bags or containers. A sample of each variety of seed shall be furnished for analysis and testing when directed by the Engineer. The amount of seed planted per acre shall be of the type specified below.

<u>Common Name</u>	<u>Scientific Name</u>
Bermuda and giant Bermuda grass (Hulled or Unhulled)	Cynodon dactylon
Annual Rye	Lolium multiflorum
German Foxtail Millet	Setaria italica

900.03 PLANTING SEASON

Planting dates, seed mixtures and application rates shall conform to the following table.

<u>Planting Date</u>	<u>Application Rate</u> <u>Type(s)</u>	<u>(Lbs. per Acre P.S.)</u>
April 1 - September 30	Bermuda and Giant	20
	Bermuda grass (Hulled)	
	Millet	40
October 1 - March 31	Hulled Bermuda	20
	Unhulled Bermuda	20
	Annual Ryegrass	40

900.04 FERTILIZER

All fertilizers used shall be delivered in bags or containers clearly labeled showing the analysis. The fertilizer is subject to testing in accordance with the Texas Fertilizer Law. A palette or granulated fertilizer shall be used with an analysis of 13-13-13 or having the analysis shown on the plans. The figures in the analysis represent the percent of nitrogen, phosphoric acid, and potash nutrients respectively as determined by the methods of the Association of Official Agricultural Chemists.

In the event it is necessary to substitute a fertilizer of a different analysis, it shall be a palette or granulated fertilizer with a lower concentration, but the total amount of nutrients furnished and applied per acre shall equal or exceed that specified for each nutrient.

Palette or granulated fertilizer shall be applied uniformly over the area specified to be fertilized and in the manner directed for the particular item of work. The fertilizer shall be dry and in good physical condition. Fertilizer that is powdered or caked will be rejected. Distribution of fertilizer for the particular item of work shall meet the approval of the Engineer.

Unless otherwise indicated in the plans or specifications, fertilizer shall be applied uniformly at the average rate of 600 pounds per acre for all types of "Seeding."

900.05 SPRINKLE IRRIGATION

Sprinkle Irrigation shall consist of the authorized application of water on those portions of the right of way as shown on plans or as directed by the Engineer, and as herein specified.

Water shall be furnished by the Contractor and shall be clean and free of industrial wastes and other substances harmful to the growth of grass.

This work will be done only at such time as approved by the Engineer and in sufficient frequency to allow optimum germination. The Contractor shall furnish and operate approved sprinklers which will insure the distribution of water in a uniform and controllable rate of application.

900.06 STRAW MULCH

Straw mulch shall be oat, wheat, or rice straw. Hay mulch shall be prairie grass, Bermuda grass, or other hay as approved by the Engineer. The mulch shall be free of Johnson grass or other noxious weeds and foreign materials. It shall be kept in a dry condition and shall not be molded or rotted.

900.07 CELLULOSE FIBER MULCH

Cellulose fiber mulch shall be a natural cellulose fiber mulch produced from grinding clean, whole wood chips, or fiber produced from ground newsprint with a labeled ash content not to

exceed 7%. The mulch shall be designed for use in conventional mechanical planting, hydraulic planting of seed or hydraulic mulching of grass seed, either alone or with fertilizers and other additives. The mulch shall be such that when applied the material shall form a strong, moisture-retaining mat without the need of an asphalt binder. Application rate for mulch in HYDRO MULCH SEEDING shall be 2000 Lbs/acre.

900.08 SOIL STABILIZER/TACKING AGENT

Soil stabilizer for hydro-mulch seeding shall be of a commercially available type approved by the Engineer and shall be applied at a rate of 40 Lbs./acre unless otherwise specified.

900.09 CONSTRUCTION METHODS

After the designated areas have been completed to the lines, grades and cross sections shown on the plans and as provided for in other items of this contract, seeding shall be performed in accordance with the requirements hereinafter described. All areas to be seeded shall be cultivated to a depth of at least four (4") inches, unless otherwise directed by the Engineer. The seed bed shall be cultivated sufficiently to reduce the soil to a state of good tilth when the soil particles on the surface are small enough and lie closely enough together to prevent the seed from being covered too deep for optimum germination. Cultivation of the seed bed will not be required in loose sand where depth of sand is four (4") inches or more.

The cross-section previously established shall be maintained throughout the process of cultivation and any necessary reshaping shall be done prior to any planting of seed.

The following are four methods of seeding which may be specified in the plans:

900.10 STRAW OR HAY MULCH SEEDING

The seed or seed mixture in the quantity specified shall be uniformly distributed over the areas shown on plans or where directed by the Engineer. If the sowing of seed is by hand, rather than by mechanical methods, the seed shall be sown in two directions at right angles to each other. If mechanical equipment is used, all varieties of seed as well as fertilizer may be distributed at the same time provided that each component is uniformly applied at the specified rate. When seed and fertilizer are to be distributed as a water slurry, the mixture shall be applied to the area to be seeded within 30 minutes after all components are placed in the equipment. Upon completion of planting of seed, straw or hay mulch shall be spread uniformly over the seeded area at the rate of approximately 1½ to 21 tons of hay or 2 to 2½ tons of straw per acre. A mulching machine approved by the Engineer shall be equipped to inject a tacking agent into the straw or hay uniformly as it leaves the equipment at a rate of 0.05 to 0.10 gallon of tacking agent per square yard of mulched area. If the straw or hay and tacking agent are placed by hand, then the rate of application for the tacking agent shall be approximately 0.15 gallon per square yard.

900.11 CELLULOSE FIBER MULCH SEEDING

The seed or seed mixture, in the quantity specified, and fertilizer, shall be uniformly distributed over the areas shown on the plans or where directed. If the sowing of seed is by hand, rather than by mechanical methods, the seed shall be sown in two directions at right angles to each other. If mechanical equipment is used all varieties of seed as well as fertilizer may be distributed at the same time, provided that each component is uniformly applied at the specified rate. When seed and fertilizer are to be distributed as a water slurry, the mixture shall be applied to the area to be seeded within 30 minutes after all components are placed in the equipment. After planting, the planted area shall be rolled with a corrugated roller of the "Cultipacker" type. All rolling of the slope areas shall be on the contour. Upon completion of planting and cultipacking of the seed, cellulose fiber mulch shall be spread uniformly over the area at the rate of 2000 lbs. per acre given in dry weight of mulch per acre. A mulching machine, approved by the Engineer, shall be equipped to eject the thoroughly wet mulch material at a uniform rate to provide the mulch coverage specified.

900.12 HYDRO MULCH SEEDING

The seed or seed mixture, in the quantity specified, shall be mixed in an approved mixer/distributor with fertilizer and Cellulose Fiber Mulch at the specified rates. Mixing and distributing shall be in such a manner so that thoroughly wet mulch material will be distributed at a uniform rate to provide the coverages specified. Soil stabilizer/tacking agent shall be added to the mixture at the specified rates.

900.13 BROADCAST SEEDING

The seed or seed mixture in the quantity specified shall be uniformly distributed over the areas shown on plans or where directed by the engineer. If the sowing of seed is by hand, rather than by mechanical methods, the seed shall be sown in two directions at right angles to each other. If mechanical equipment is used, all varieties of seed as well as fertilizer may be distributed at the same time provided that each component is uniformly applied at the specified rate. When seed and fertilizer are to be distributed as a water slurry, the mixture shall be applied to the area to be seeded within 30 minutes after all components are placed in the equipment. After planting, the planted area shall be rolled with a corrugated roller of the "Cultipacker" type. All rolling of the slope areas shall be on the contour.

900.14 REQUIRED COVERAGE

Germination and establishment of a good stand of Bermuda grass will be required in order to qualify any Seeding as "Acceptable Work." Substantial bare spots and ruts designed by the Engineer will be reseeded and fertilized as required to achieve germination. Isolated bare spots measuring 2 ft. in diameter or less will be considered as acceptable work. These requirements will be adhered to assuming normal weather conditions. In the event of abnormal flooding conditions, these requirements will be applied to areas above measured high-water marks.

900.15 MEASUREMENT AND PAYMENT

Work and accepted material as prescribed for this item, will be incidental to those bid items calling for seeding. This shall include all materials, for all excavation, loading, hauling, stockpiling, placing, sprinkling, and rolling and for furnishing all labor, equipment, tools, supplies and incidentals necessary to complete the work. There will be no separate pay item for Seeding.

ITEM 950

TRENCH SAFETY SYSTEMS

950.01 DESCRIPTION

This section covers excavation and supporting systems for trenches to protect the safety of workers, provide suitable means for constructing utility lines, and to protect public or private property, including existing utilities. A trench system shall be required for all trenches or excavation 5 feet or greater in depth.

The Contractor shall comply with the minimum requirements of this specification. Maintenance and inspection of any shoring and related equipment shall be the responsibility of the Contractor. The Contractor shall determine the safety system needed for the project within the minimum requirements of this specification. The Contractor has the sole responsibility to provide a safe work environment for all of his employees and anyone else present at the work site.

950.02 SUBMITTALS

The Contractor shall submit to the Owner's Engineer a Trench Safety System designed and sealed by a Registered Professional Engineer registered and in good standing in the State of Texas. The Trench Safety System along with certification from the Contractor's Registered Professional Engineer indicating that the Contractor's Trench Safety System meets the minimum requirements of this specification shall be submitted to the Owner's Engineer. The Contractor shall make adjustments as required by the Owner and/or Engineer to meet minimum requirements at Contractor's expense. Approval of a trench safety system by the Owner and/or Engineer shall not relieve the Contractor of his responsibility to provide a safe working place for his employees.

In addition, the Contractor shall submit a general safety program that conforms to OSHA standards that govern the activities of individuals in and around trench excavations. Both the Trench Safety System and the general safety plan shall be submitted to the Owner's Engineer prior to the start of construction.

950.03 REGULATORY COMPLIANCE

All trench excavations shall be accomplished in accordance with the detailed specifications set out in the provisions for Excavations, Trenching, and Shoring, as published by the Federal Occupational Safety and Health Administration (OSHA), 29 CFR, Part 1926, Subpart P, Section 1926.650 - 1926.653, and also the Rules published in the Federal Register (Vol. 52, No. 209, pages 45959 - 45991) on Tuesday October 31, 1989, or the latest revision thereof. These sections are hereby incorporated, by reference, into these specifications. Whatever method or option the Contractor may select, a request in writing must be submitted to the Engineer for approval before work can start.

REVIEW AND APPROVAL OF METHOD, EQUIPMENT AND PLANS BY THE ENGINEER WILL BE ONLY FOR GENERAL CONFORMANCE WITH OSHA SAFETY STANDARDS, AND IN NO CASE WILL REVIEW AND APPROVAL RELIEVE THE CONTRACTOR OF SOLE AND COMPLETE RESPONSIBILITY AND LIABILITY FOR ENSURING THE SAFETY OF ALL PERSONS PRESENT AT HIS WORK SITE OR FROM PROTECTING PROPERTY FROM DAMAGE WHICH MAY RESULT FROM HIS CONSTRUCTION OPERATIONS.

950.04 EXISTING STRUCTURES

Where existing buildings, other utilities, streets, highways, or other structures are in close proximity to the trench, adequate protection shall be provided by the use of sheeting and shoring to protect the structure, street, or highway from possible damage. In the case of utilities, the Contractor may elect to remove the utility provided that the removal and subsequent replacement meets with the approval of the Engineer and the utility owner. In all cases, it shall be the responsibility of the Contractor to protect public and private property and any person or persons who might, as a result of the Contractor's work, be injured.

950.05 IMPLEMENTATION AND INSPECTION

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspections are to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or failures, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. The Contractor shall maintain a permanent record of daily inspections.

It is the sole duty, responsibility and prerogative of the Contractor, not the Owner or the Engineer, to determine the specific applicability of trench safety systems to each field and soil condition encountered on the project. He shall pay special attention to the type of soil or soils in which he will be working, any adjacent roads, highways, and railroads, and any previous excavations. All underground installations shall be located, including utility lines , pipelines, etc., before any excavation begins.

The Contractor shall provide a trench safety system in every trench. The trench safety system shall be installed in a true horizontal position, be spaced vertically and shall be secured to prevent sliding, falling, or kickouts. The trench safety system shall be effective to the bottom of the excavation. All trenches shall be provided with an adequate means of exit at all times with spacings of 25 feet or less. These means of exit shall be anchored in place in order to aid in the event a quick exit is necessary. During trench excavation, the excavated material shall be placed a minimum of two feet (2') away from the edge of the trench.

950.06 MATERIALS AND MAINTENANCE

Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition. All materials which are found to be defective in any way shall be immediately removed from the job site. It shall be the responsibility of the Contractor to

regularly check all trench safety equipment for soundness and adequacy. Steel trench shields shall be constructed of steel plate sides, welded to a steel framework. All shields shall be constructed in order to provide protection equivalent to or greater than sheeting or shoring required for the trench. Adjustable jacks may be used in order to adjust the shield to varying trench widths. An access ladder shall be provided at the midpoint.

All maintenance of the trench safety equipment shall be the sole responsibility of the Contractor.

950.07 INDEMNIFICATION

The Contractor shall indemnify and hold harmless the Owner, its employees and agents and the Engineer, from any and all damages, costs (including, without limitation, legal fees, court costs, and the cost of investigation), judgments or claims by anyone for injury or death of persons resulting from the failure of trenches constructed under this contract.

The Contractor acknowledges and agrees that this indemnity provision provides indemnity for the Owner and the Engineer in case the Owner and/or Engineer is negligent either by act or omission in providing for trench safety, including, but not limited to inspections, failure to issue stop work orders, and the hiring of the Contractor.

The Trench Safety System plan by the Contractor's Engineer should cover all situations that may be encountered during construction. It should be recognized that information contained in the Geotechnical Report is based on the data obtained from the soil borings and conditions along the line route may differ from those found at the individual soil boring locations. It is the Contractor's responsibilities to detect varying conditions which may be hazardous and take appropriate action. The Contractor is responsible for determining the appropriate trench safety systems necessary for specific locations based on actual subsurface conditions encountered during construction. The Owner and Owner's Engineer shall be held harmless from any claim or liability for injury or loss that results from failure on the part of the Contractor to implement the Trench Safety System plan properly or to make necessary changes to the trench safety systems necessitated by conditions encountered during construction.

950.08 MEASUREMENT AND PAYMENT

Measurement for payment for temporary sheeting, shoring, and bracing or equivalent method shall be paid for by the linear foot, all depths, as measured along the center line of the pipe including manholes/inlets and bore pits in accordance with the specification.

Measurement for payment for temporary sheeting, shoring, and bracing or equivalent method shall be paid for by the square foot for all shoring from five feet below ground to the bottom of the excavation.

Payment shall be full compensation, in accordance with the pay items set in the bid for the trench safety system, including but not limited to planning, engineering, materials, equipment, fabrications, installation, inspection, recovery, all incidental work required, excavation and

backfill including all benching, sloping, hauling shoring, sheeting, excess excavations, dewatering, sheet piling, bracing, trench shields, and all other incidentals necessary to provide the trench safety system as specified in the approved Trench Safety System plan.

ITEM 1000

INDIVIDUAL GRINDER PUMP STATION

1000.01 DESCRIPTION

This item shall govern for the furnishing and installation of individual progressive cavity grinder pump stations for residential domestic wastewater.

1000.02 GENERAL

A. Contractor shall furnish all labor, materials, equipment and incidentals required to provide submersible centrifugal sewage grinder pump station(s) as specified herein, each consisting of a basin, grinder pump, and all necessary appurtenances to form a complete package system.

1000.03 OPERATING CONDITIONS

A. Each pump shall be rated 2 HP, 230 Volts, 1 Phase, 60 Hertz, and 3500 RPM. The unit shall produce 25 U.S. GPM at 112 feet TDH.

1000.03 CONSTRUCTION

A. Each pump shall be of the sealed submersible grinder type, model HVRS-200 as manufactured by Hydromatic Pump. The pump volute, motor and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30. All external mating parts shall be machined and Nitrile O-ring sealed on a beveled edge. Gaskets shall not be acceptable. All fasteners exposed to the pumped liquid shall be 316 series stainless steel.

1000.04 ELECTRICAL POWER/CONTROL CORD

A. Electric power/control cord shall be SOOW water resistant 600V, UL and/or CSA approved. The single cord shall incorporate both power and sensor leads and shall be a minimum of seven (7) 12 gauge conductors.

B. The pump shall be protected with compression fitting and epoxy potted area at the power cord entry to the pump. A separation between the junction box areas of the pump and the motor by a stator lead sealing gland or terminal board shall not be acceptable.

C. The power cable entry into the cord cap assembly shall first be made with a compression fitting. Each individual lead shall be stripped down to bare wire, at staggered intervals, and each strand shall be individually separated. This area of the cord cap shall then be filled with an epoxy compound potting which will prevent water contamination to gain entry even in the

event of wicking or capillary attraction.

D. The power cord leads shall then be connected to the motor leads with extra heavy connectors having copper inserts with a crimped wire-to-wire connection, rather than a terminal board that allows for possible leaks.

E. The cord cap assembly shall be sealed with a Nitrile O-ring on a beveled edge to assure proper sealing.

1000.05 MOTOR

A. The stator, rotor and bearings shall be mounted in a sealed submersible type housing. The stator windings shall have Class F insulation (155°C or 311°F) and a dielectric oil-filled motor, NEMA B design (3 phase), NEMA L design (single phase). Because air-filled motors do not dissipate heat as efficiently as oil-filled motors, they shall not be acceptable.

B. The pump and motor shall be specifically designed so that they may be operated partially dry or completely submerged in the liquid being pumped. The pump shall not require cooling water jackets. Dependence upon, or use of, water jackets for supplemental cooling shall not be acceptable.

C. Stators shall be securely held in place with a removable end ring and threaded fasteners. No special tools shall be required for pump and motor disassembly.

D. Pump shall be equipped with heat sensors. The heat sensor(s) (one on single phase, two on three phase) shall be a low resistance, bimetal disc that is temperature sensitive. It (they) shall be mounted directly in the stator and sized to open at 120°C or 130°C and automatically reset at 30–35°C differential. The sensor shall be connected in series with the motor starter coil so that the starter is tripped if a heat sensor opens. The motor starter shall be equipped with overload heaters so all normal overloads are protected by an external heater block.

1000.06 BEARINGS AND SHAFT

A. An upper single row ball radial bearing and a lower single row ball thrust bearing shall be provided. Bearings shall be permanently lubricated by the dielectric oil that fills the motor housing.

B. The shaft shall be machined from solid 400 series stainless steel and be designed with large diameters and minimum overhang to reduce shaft deflection and prolong bearing and seal life.

1000.07 SEALS AND SENSORS

A. The rotor and stator in the motor housing shall be separated and protected from the pumped liquid by an oil-filled seal housing incorporating two type 21 carbon ceramic mechanical seals mounted in tandem. The seal housing shall be equipped with a moisture sensing probe installed between the seals, and the sensing of moisture in the seal chamber shall be automatic, continuous, and not require the pump be stopped or removed from the wet well.

1000.08 IMPELLER

A. The impeller shall be designed for rough duty service and shall be of a five-vane, semi-open design with hydrodynamic sealing vanes on the rear shroud. The impeller shall be constructed of engineered thermoplastic, with a permanently molded, hexagonally locked bronze insert. The impeller shall be of a non-overloading design and be factory or field trimable to meet specific performance conditions.

B. Optional all bronze impeller available.

1000.09 GRINDER CUTTERS

A. The combination centrifugal pump impeller and grinder unit shall be attached to the common motor and pump shaft made of 416 stainless steel. The grinder unit shall be on the suction side of the pump impeller and discharge directly into the impeller inlet, leaving no exposed shaft to permit packing of ground solids. The grinder shall consist of two stages. The cutting action of the second stage shall be perpendicular to the plane of the first cut for better control of the particle size. The grinder shall be capable of grinding normal domestic sewage. Both stationary and rotating cutters shall be made of 440C stainless steel hardened to Rockwell 60C and ground to close tolerance.

B. The upper (axial) cutter and stationary cutter ring shall be reversible to provide new cutting edges to double life. The stationary cutter ring shall be pressed into the suction opening of the volute and held in place by three (3) 300 series stainless steel screws. The lower (radial) cutter shall macerate the solids against the I.D. of the cutter ring and extrude them through the slots of the cutter ring. The upper (axial) cutter shall cut off the extrusions, as they emerge from the slots of the cutter ring to eliminate any roping effect that may occur in single stage cutting action. The upper (axial) cutter shall fit over the hub of the impeller and the lower (radial) cutter shall be slip-fit and secured by means of peg and hole and rotate simultaneously with the rotation of the shaft and impeller. The grinding mechanism shall be locked to the shaft by a 300 series stainless steel countersunk washer in conjunction with a 300 series stainless steel flat head cap screw threaded into the end of the shaft.

1000.10 STARTUP/TESTING

A. Prior to startup of the installed individual grinder pump station, the pump core must be

removed, the incoming sewer line flushed, and all debris removed from the wet well. After the wet well has been thoroughly cleaned, the pump core shall be reinstalled.

B. Commercial testing shall be required and include the following:

1. The pump shall be visually inspected to confirm that it is built in accordance with the specifications as to HP, voltage, phase and hertz.
2. The motor and seal housing chambers shall be hi-potted to test for moisture content and/or insulation defects.
3. Pump shall be allowed to run dry to check for proper rotation.
4. Discharge piping shall be attached, the pump submerged in water, and amp readings taken in each leg to check for an unbalanced stator winding. If there is a significant difference in readings, the stator windings shall be checked with a bridge to determine if an unbalanced resistance exists. If so, the stator will be replaced.

1000.11 PAINT

- A. The pump shall be painted with waterborne hybrid acrylic/alkyd paint. This custom engineered, quick dry paint shall provide superior levels of corrosion and chemical protection.

1000.12 WARRANTY

- A. The pump unit or any part thereof shall be warranted against defects in material or workmanship for a period of twelve (12) months from the date of installation or eighteen (18) months after receipt of shipment, whichever occurs first, and shall be replaced at no charge with a new or remanufactured part, F.O.B., factor or authorized warranty service station. The warranty shall not assume responsibility for removal, reinstallation or freight, nor shall it assume responsibility of incidental damages resulting from the failure of the pump to perform. The warranty shall not apply to damage resulting from accident, alteration, design, misuse or abuse.
- B. Shop Drawings: After receipt of notice to proceed, the manufacturer shall furnish the engineer a minimum of six (6) sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction. The engineer shall promptly review this data, and return two (2) copies to the manufacturer as approved, or approved as noted. Upon receipt of accepted shop drawings, the manufacturer shall proceed immediately with fabrication of the equipment.

1000.13 PUMP STATION EQUIPMENT

- A. PUMP: As noted in Section 1000.03 of these specifications.
- B. BASIN: The pump basin shall be 24'x 60" fiberglass, with anti -float ring and bolt on fiberglass lid. The basin shall be field modifiable and will include four Adaptaflex Fittings (3 – 1 1/4" and 1 – 4") rubber grommets.
- C. CONTROL/PANEL: Each pump station control panel shall be Single Phase Simplex SJE-Rhombus Type 113 and shall include a NEMA 4X Non Metallic enclosure. It shall include circuit breaker(s) and all necessary components to accomplish proper pump and control operation including the following alarm capabilities:
 - 1. When liquid level in sewage wet-well rises above the alarm level, a visual alarm will be activated.
 - 2. Visual alarm remains illuminated until sewage in wet-well returns to normal operating level.
 - 3. Alarm for seal failure.

The visual alarm shall be a red fluted lens mounted to the top of the enclosure in such a manner as to maintain rain proof integrity.
- D. FLOAT CONTROL SWITCH: Control switches shall be Sensor Float Control Switch by SJE-Rhombus.
- E. DISCHARGE PIPING: Includes 1 1/4" Sch. 80 threaded PVC pipe with male adaptor, 1 1/4" Alprene 90 ° Bend PVC with grip rings.
- F. CORROSION PROTECTION: All materials exposed to wastewater shall have inherent corrosion protection: i.e. cast iron, fiberglass, stainless steel, PVC. Cable connectors must be liquid-tight in NEMA 4X enclosures. All conduit running from the sump or tank to the control panel must be sealed with conduit sealant to prevent moisture or gases from entering the panel.

1000.14 MANUALS

- A. The manufacturer shall supply four (4) copies of Operation and Maintenance Manuals to the District, and one (1) copy of the same to the engineer.

1000.15 PAYMENT

- A. Payment shall be per bid item.

ITEM 1050

ON-SITE SANITARY SEWER FACILITY (OSSF)

1050.01 DESCRIPTION

This item shall govern for the furnishing and installation of the on-site sanitary sewer facilities for residential domestic wastewater.

1050.02 GENERAL

Contractor shall furnish all labor, materials, equipment, and incidentals required to provide a complete on-site sanitary sewer facility as specified herein, consisting of all equipment, tanks, piping, hardware, fittings, and all necessary appurtenances to form a complete and operable on-site sanitary sewer package system.

1050.03 DESIGN REQUIREMENTS

Design requirements are set forth in the Registered Sanitarian/Professional Engineer's design package following the technical specifications.

1050.04 PERMITTING

The Contractor shall be responsible filing the necessary documentation to Jefferson County and the Texas Commission on Environmental Quality (TCEQ) for the permitting of the on-site sanitary sewer facilities. Proof of permitting shall be provided prior to the close-out of the project.

1050.05 SUBMITTALS

Submittals shall be provided in accordance with the General Conditions and shall include the following:

1. Manufacturer's catalog data and descriptive literature.
2. General arrangement and dimensional drawings of the on-site sanitary sewer facility.
3. Written recommended procedures for storage, handling, installation, and start-up of the equipment.

Operation and maintenance manuals to be provided at the completion of the project and in accordance with the General Conditions.

1050.06 WARRANTY & MAINTENANCE CONTRACT

A two (2) year warranty, operation, & maintenance contract shall be provided with each on-site sanitary sewer facility installed. The on-site sanitary sewer facility or any part thereof shall be warranted against defects in material and shall be replaced at no charge with a new or remanufactured part. The warranty, operation, & maintenance contract shall be included in the cost of the bid item and shall cover all components of the on-site sanitary sewer facility. The contract shall also include customer service calls for operational issues and periodical site visits for routine maintenance. This contract shall be provided to the homeowner prior to the close of the project and shall be transferable.

1050.07 OPERATION & MAINTENANCE MANUALS

The manufacturer shall supply four (4) copies of Operation and Maintenance Manuals to the County, one (1) copy to the Homeowner, and one (1) copy of the same to the Engineer.

1050.08 PAYMENT

Payment shall be per bid item.

ITEM 1400

PROJECT SIGN

1400.01 GENERAL

The Contractor shall furnish all materials and appurtenances required for a complete installation of a project sign.

1400.02 DESCRIPTION

Public buildings, facilities, centers, constructed with Texas Community Development Block Grant (TxCDBG) assistance shall have permanent signage placed in a prominent visible public area with the wording provided below. The formatting of such signage will be at local discretion to best fit the architectural design of the facility constructed but should be legible from at least three feet distance.

Other construction projects, e.g., water transmission lines, sewer collection lines, drainage, roadways, housing rehabilitation, etc. utilizing TxCDBG funding shall have temporary signage erected in a prominent location at the construction project site or along a major thoroughfare within the locality as directed by the Owner.

Project Sign Wording:

“This project is funded by the Office of Rural Affairs of the Texas Department of Agriculture with funds allocated by the United States Department of Housing and Urban Development through the Community Development Block Grant Program.”

1400.03 PERMANENT SIGN CONSTRUCTION METHOD

The temporary project sign shall consist of an 12" x 18"x 1/16" aluminum plate with the required wording with lettering no smaller than 1/2" printed on laminated paper to withstand weather throughout the duration of construction. Sign shall be attached to a support comprised of a minimum 1" x 1" x 1/8" galvanized angle with 3/8" nuts and bolts. The bottom of the sign shall be at least 48" above natural ground.

1400.04 PAYMENT

Payment for furnishing and installing the project sign shall be paid for directly as per the bid proposal.

LESTER A. SAUCIER, JR., P.E. No. 32372

ENGINEER MANAGEMENT

P.O. BOX 886, BRIDGE CITY, TEXAS 77611

(409)735-7155, FAX (409)735-7156

DATE: Feb. 8, 2021

JEFFERSON COUNTY HEALTH DEPARTMENT

2748 VITERBO ROAD BOX 4

BEAUMONT, TEXAS

ATTENTION: Ronda Conlin

SUBJECT: ON SITE SEWAGE DESIGN
SURFACE TREATED WASTEWATER

TECHNICAL AND SITE INFORMATION

SUBJECT: William Hranicky

LOT: 1-acre

ADDRESS: 14252 Dubois Rd.

OSSF: TABLE III

Fannett, Texas

INSTALLER: _____

TEL. #: (409)

OTHER: _____

PROPERTY & SOIL INFORMATION: Residence on 1-acre

BUILDING SIZE Residence SQ. FT. LIVING 2300 NO. BEDROOMS 3 NO. BATHS 2 W.S.D. yes

One Restroom (not public)

WATER DEMAND GPD = 240 GPD

EXCEPTIONS OSSF TABLE III 240 GPD TOTAL

SURFACE DESIGN AREA: TABLE III (OSSF): 240 GPD ÷ 0.35 in/hr G/ sq. ft./D = 6857 SQ. FT.

SPRAY SYSTEM #1 2289 ft² 27 Ø #2 2289 ft² 27 Ø #3 2289 ft² 27 Ø TOTAL 6867 ft²

WASTEWATER SYSTEM SPECIFICATIONS: MANUFACTURER _____ MODEL NO. _____

PRE-TREATMENT TANK 500 gal. AERATION TANK 500 gal. PUMP TANK 500 gal.

CHLORINATOR STACK EFFLUENT PUMP 12 ½ GPM/HP *Timer

SPRINKLER 4 GPM (MFG) IRRIGATION PIPE 1 IN./TYPE

OTHER REQUIREMENTS OR COMMENTS:

OWNER HAS A RESIDENCE ON A 1-ACRE WITH A FAILED SYSTEM AND WOULD LIKE TO INSTALL AN AEROBIC WASTEWATER SYSTEM. IT IS MY RECOMMENDATION TO INSTALL AN AEROBIC WASTEWATER SYSTEM AS SHOWN ON THE ATTACHED DRAWING. WATER IS TO BE PROVIDED FROM A PUBLIC SOURCE. A TIMER WILL BE INSTALLED IN ORDER TO REDUCE THE BUFFER ZONE FROM 20' TO 10'.

The purpose of this design is to provide an individual with on-site sewage facilities for the disposal of treated effluent so as not to contaminate potable water supplies or threaten the health and welfare of the public. The data provided herein is to establish minimum standards for the construction of these on-site sewage facilities. The use of brand names, manufacturers, trademarks or other identifying symbols appearing in the drawings is to establish a standard or equal and does not constitute an endorsement. All construction must be done in accordance with the TCEQ and local government laws and regulations.

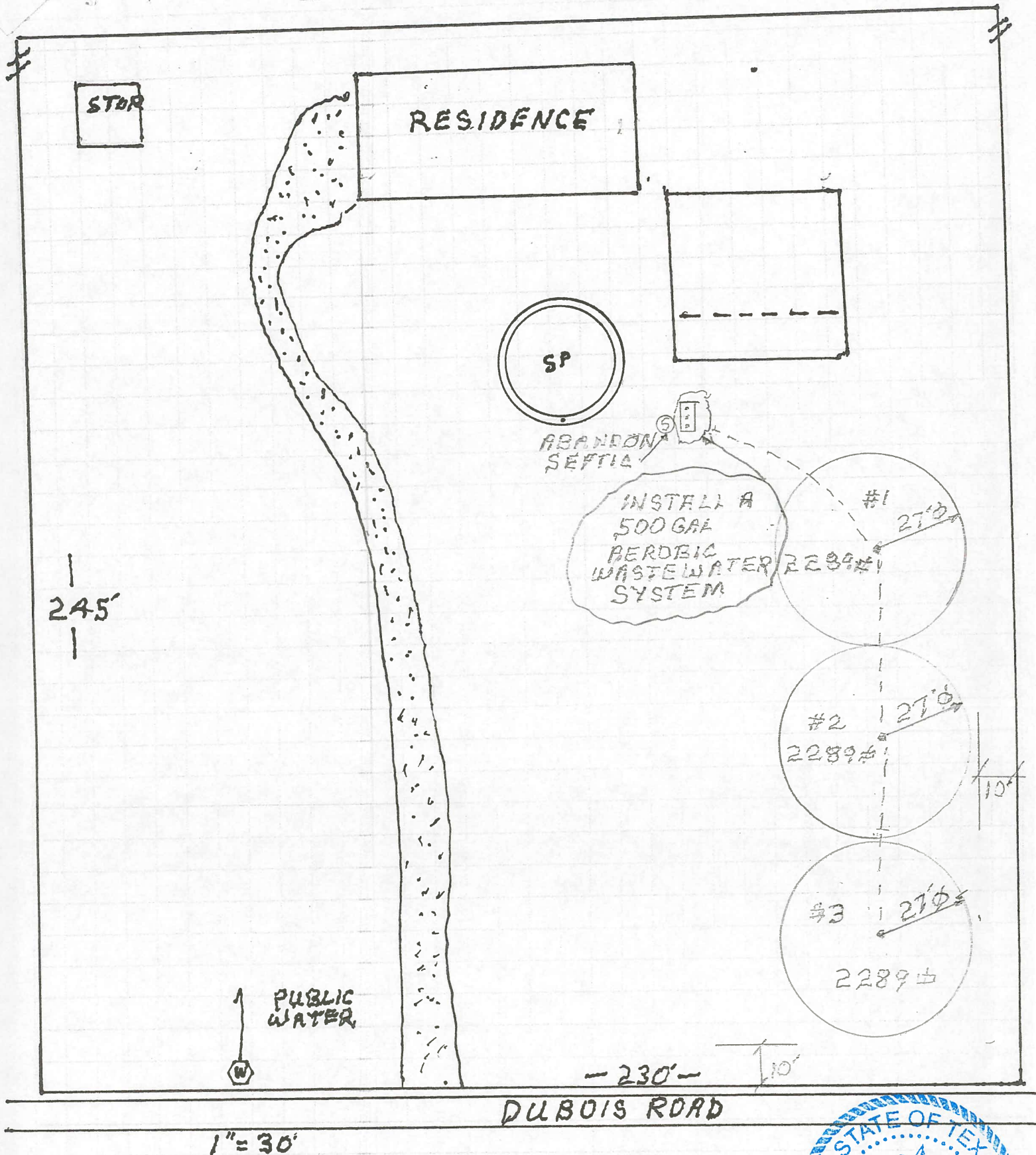
A person may not construct, alter, repair, extend, modify an OSSF system without obtaining a permit and approved plans from TCEQ or its authorized agent. Only a registered and/or qualified installer may install a system. All equipment utilized must be approved for use in accordance with the Texas Administration Code #285.12 (c)(7). The owner of each system shall have on-going maintenance as provided by an approved company.

Criteria considered in this design was location, application area soil classification, buffer requirements, equipment data and etc. in my professional opinion, the proposed system can be installed and maintained without causing a threat or harm to any existing supply system or to the public health, or causing a threat of pollution or nuisance conditions, provided the system is properly installed, loaded and maintained.

LESTER A. SAUCIER, JR.



ON-SITE SEWAGE DATA SHEET



LESTER A. SAUCIER, JR.
3122 TEXAS AVE.
BRIDGE CITY, TEXAS
TEL. 409-735-7155

NAME WILLIAM HRANICKY
ADDRESS 14252 DUBOIS RD
LOCATION FANNETT, TEXAS



Texas Commission of Environmental Quality
ON-SITE SEWAGE FACILITY
TECHNICAL INFORMATION FOR PERMIT

PROFESSIONAL DESIGN REQUIRED?: ☒ Yes ☐ No If yes, professional design attached: ☒ Yes ☐ No
Designer Name: Lester A. Saucier, Jr. License Type and No. P.E. 32372
Phone No. (409) 735-7155 Other or Fax No. (409) 735-7156
Mailing Address: 3122 Texas Avenue City: Bridge City State: Tx Zip: 77611

I. TYPE AND SIZE OF PIPING FROM: (EXAMPLE: 4" SCH 40 PVC)
Stub out to treatment tank: 4" SCH 26" PVC
Treatment tank to disposal system: 1" SCH 40" PVC

II. DAILY WASTEWATER USAGE RATE: Q = 240 (gallons/day)
Water Saving Devices: ☐ Yes ☒ No

III. TREATMENT UNIT(S): ☐ Septic Tank ☒ Aerobic Unit
A. Tank Dimensions: 500
Size Proposed: 500 (gal) Liquid Depth (bottom of tank to outlet):
Material/Model #: Hoot Manufacturer:
Pretreatment Tank: ☒ Yes ☐ No SIZE: 500 (gal) ☐ No ☐ NA
Pump/Lift Tank: ☒ Yes ☐ No SIZE: 500 (gal) ☐ No ☐ NA

B. OTHER

☐ Yes ☒ No

If yes, please attach description.

IV. DISPOSAL SYSTEM:

Disposal Type: Surface Spray System
Manufacturer and Model:
Area Proposed: 6867 square feet

V. ADDITIONAL INFORMATION:

NOTE - THIS INFORMATION MUST BE ATTACHED FOR REVIEW TO BE COMPLETED.
A. Soil/Site evaluation B. Planning materials (If Applicable)

DO NOT BEGIN CONSTRUCTION PRIOR TO OBTAINING AUTHORIZATION TO CONSTRUCT.
UNAUTHORIZED CONSTRUCTION CAN RESULT IN CIVIL AND/OR ADMINISTRATIVE
PENALTIES.

SIGNATURE OF INSTALLER OR DESIGNER: 

DATE: 2/8/2021

If you have questions on how to fill out this form or about the on-site sewage facility program, please contact us at your local regional office or at 512/239-3799. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

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OSSF Soil Evaluation

Date: 2/8/2021

Applicant Information:

Name: William Hranicky
 Address: 14252 Dubois Rd.
 City: Fannett
 Zip Code: _____

Phone: _____ State: Tx
 Fax: _____

Number: 32372

Site Evaluator Information:

Name: LESTER A. SAUCIER, JR. P.E.
 Company: LASCO
 Address: 3122 TEXAS AVE.
 City: BRIDGE CITY
 Zip Code: 77611 Phone: 735-7155 State: TEXAS
 Fax: 735-7156

Soil Boring Number: 1

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 7"	II	Sandy Loam			
1					
2	III	Clay Loam			
3					
4					
5					

Soil Boring Number: 2

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 7"	II	Sandy Loam			
1					
2	III	Clay Loam			
3					
4					
5					

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.

Signature of Site Evaluator

2/8/2021
 Date



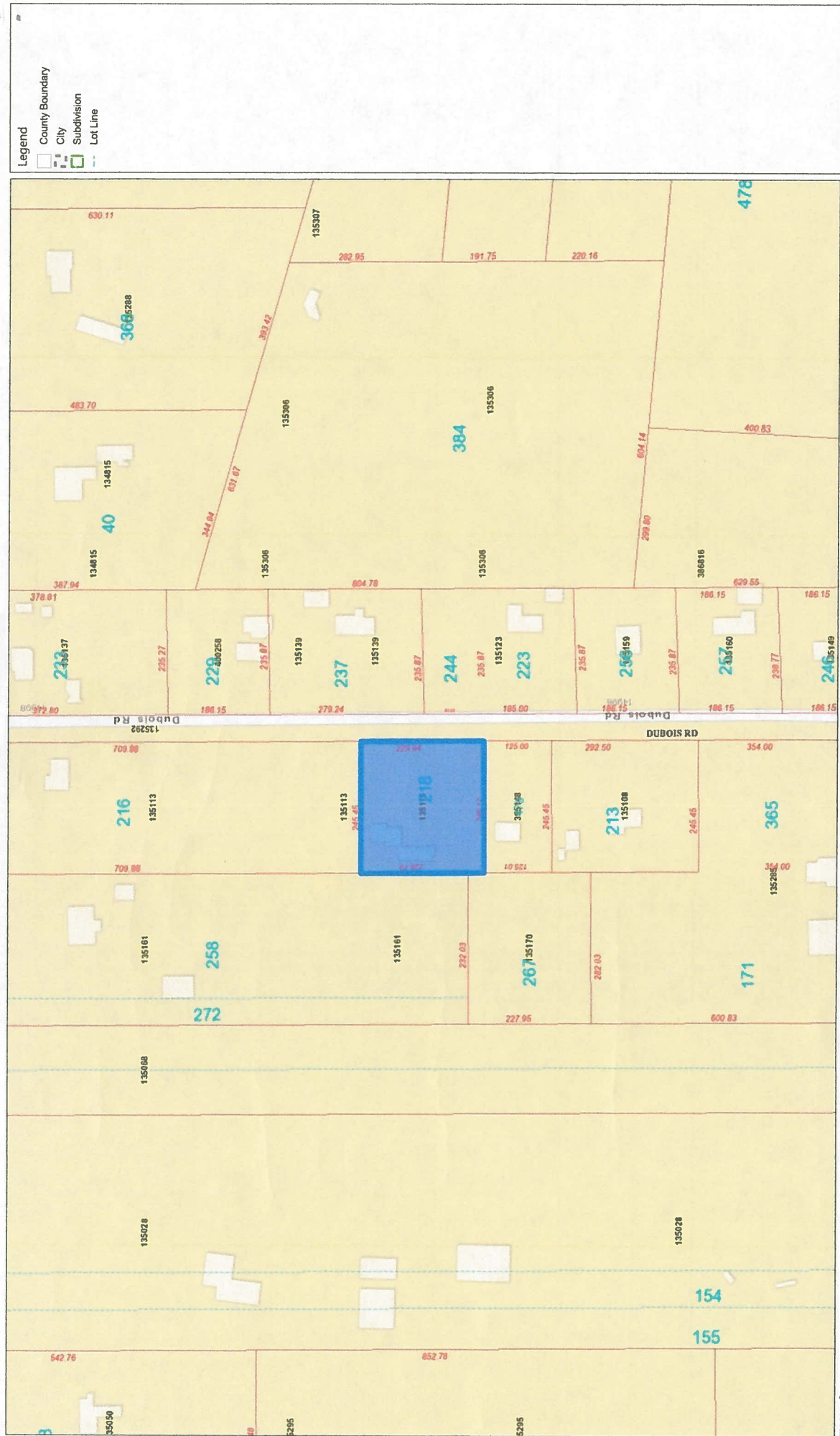
Dubois Rd

114252 Dubois - Fannett

© 2020 Google

Go

Imagery Date: 11/23/2019 29.5242, 00° N 94.51349 91° W al



LESTER A. SAUCIER, JR., P.E. No. 32372

ENGINEER MANAGEMENT

P.O. BOX 886, BRIDGE CITY, TEXAS 77611
(409)735-7155, FAX (409)735-7156

DATE: February 10, 2021

JEFFERSON COUNTY HEALTH DEPARTMENT
2748 VITERBO ROAD BOX 4
BEAUMONT, TEXAS

ATTENTION: Ronda Conlin

SUBJECT: ON SITE SEWAGE DESIGN
SURFACE TREATED WASTEWATER

TECHNICAL AND SITE INFORMATION

SUBJECT: John Burden Jr.

LOT: 3/4-acres

ADDRESS: 9529 Gilbert Road

OSSF: TABLE III

Fannett, Texas

INSTALLER: _____

TEL. #: (409)

OTHER: _____

PROPERTY & SOIL INFORMATION: Residence on 3/4-acre

BUILDING SIZE Residence SQ. FT. LIVING 1250 NO. BEDROOMS 2 NO. BATHS 1 W.S.D.
yes

WATER DEMAND GPD = 180 GPD

EXCEPTIONS OSSF TABLE III 180 GPD TOTAL

SURFACE DESIGN AREA: TABLE III (OSSF): 180 GPD ÷ 0.035 in/hr G/ sq. ft./D = 5142 SQ. FT.

SPRAY SYSTEM #1 1809 ft² 24 Ø #2 1809 ft² 24 Ø #3 1809 ft² 24 Ø TOTAL 5427 ft²

WASTEWATER SYSTEM SPECIFICATIONS: MANUFACTURER _____ MODEL NO. _____

PRE-TREATMENT TANK 500 gal. AERATION TANK 500 gal. PUMP TANK 500 gal.

CHLORINATOR STACK EFFLUENT PUMP 12 ½ GPM/HP *Timer

SPRINKLER 4 GPM (MFG) IRRIGATION PIPE 1 IN./TYPE

OTHER REQUIREMENTS OR COMMENTS:

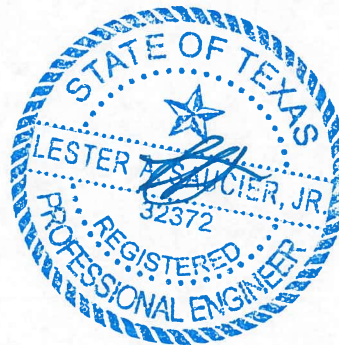
OWNER HAS A RESIDENCE ON A ¾ ACRE TRACT WITH A FAILED SYSTEM AND WOULD LIKE TO
INSTALL AN AEROBIC WASTEWATER SYSTEM IT IS MY RECOMMENDATION TO INSTALL AN AEROBIC
WASTEWATER SYSTEM AS SHOWN ON THE ATTACHED DRAWING. WATER IS PROVIDED FROM A PUBLIC
SOURCE. A TIMER WILL BE INSTALLED IN ORDER TO REDUCE THE BUFFER ZONE FROM 20' TO 10'.

The purpose of this design is to provide an individual with on-site sewage facilities for the disposal of treated effluent so as not to contaminate potable water supplies or threaten the health and welfare of the public. The data provided herein is to establish minimum standards for the construction of these on-site sewage facilities. The use of brand names, manufacturers, trademarks or other identifying symbols appearing in the drawings is to establish a standard or equal and does not constitute an endorsement. All construction must be done in accordance with the TCEQ and local government laws and regulations.

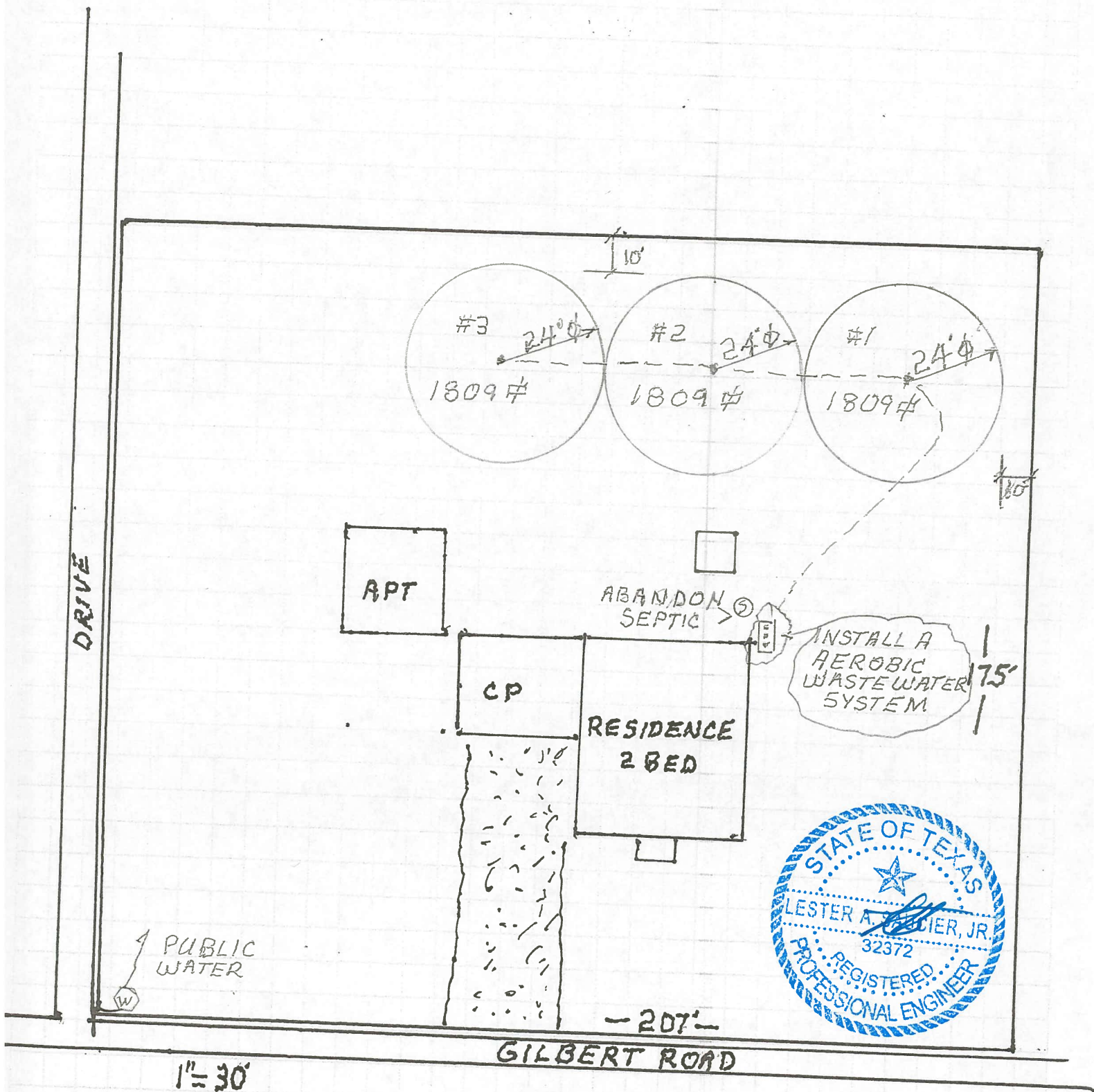
A person may not construct, alter, repair, extend, modify on OSSF system without obtaining a permit and approved plans from TCEQ or its authorized agent. Only a registered and/or qualified installer may install a system. All equipment utilized must be approved for use in accordance with the Texas Administration Code #285.12 (c)(7). The owner of each system shall have on-going maintenance as provided by an approved company.

Criteria considered in this design was location, application area soil classification, buffer requirements, equipment data and etc. in my professional opinion, the proposed system can be installed and maintained without causing a threat or harm to any existing supply system or to the public health, or causing a threat of pollution or nuisance conditions, provided the system is properly installed, loaded and maintained.

LESTER A. SAUCIER, JR.



ON-SITE SEWAGE DATA SHEET



LESTER A. SAUCIER, JR.
3122 TEXAS AVE.
BRIDGE CITY, TEXAS
TEL. 409-735-7155

NAME JOHN BURDEN JR.
ADDRESS 9529 GILBERT RD
LOCATION FANNETT, TEXAS

Texas Commission of Environmental Quality
ON-SITE SEWAGE FACILITY
TECHNICAL INFORMATION FOR PERMIT

PROFESSIONAL DESIGN REQUIRED?: ☐ Yes ☐ No If yes, professional design attached: ☐ Yes ☐ No
Designer Name: Lester A. Saucier, Jr. License Type and No. P.E. 32372
Phone No. (409) 735-7155 Other or Fax No. (409) 735-7156
Mailing Address: 3122 Texas Avenue City: Bridge City State: Tx Zip: 77611


I. TYPE AND SIZE OF PIPING FROM: (EXAMPLE: 4" SCH 40 PVC)
Stub out to treatment tank: 4" SCH 26" PVC
Treatment tank to disposal system: 1" SCH 40" PVC

II. DAILY WASTEWATER USAGE RATE: Q= 180 (gallons/day)
Water Saving Devices: ☐ Yes ☐ No

III. TREATMENT UNIT(S): ☐ Septic Tank ☒ Aerobic Unit
A. Tank Dimensions: 500
• Size Proposed: 500 (gal) • Liquid Depth (bottom of tank to outlet):
• Material/Model #: Hoot Manufacturer:
• Pretreatment Tank: ☒ Yes SIZE: 500 (gal) ☐ No ☐ NA
• Pump/Lift Tank: ☒ Yes SIZE: 500 (gal) ☐ No ☐ NA
B. OTHER ☐ Yes ☐ No If yes, please attach description.

IV. DISPOSAL SYSTEM:
Disposal Type: Surface Spray System
Manufacturer and Model:
Area Proposed: 5427 square feet

V. ADDITIONAL INFORMATION:
NOTE - THIS INFORMATION MUST BE ATTACHED FOR REVIEW TO BE COMPLETED.
A. Soil/Site evaluation B. Planning materials (if Applicable)
DO NOT BEGIN CONSTRUCTION PRIOR TO OBTAINING AUTHORIZATION TO CONSTRUCT.
UNAUTHORIZED CONSTRUCTION CAN RESULT IN CIVIL AND/OR ADMINISTRATIVE
PENALTIES.

SIGNATURE OF INSTALLER OR DESIGNER:  DATE: 2/9/2021

If you have questions on how to fill out this form or about the on-site sewage facility program, please contact us at your local regional office or at 512/239-3799. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

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OSSF Soil Evaluation

Date: 2/8/2021

Applicant Information:

Name: John Burden Jr.
 Address: 9529 Gilbert Road
 City: Fannett
 Zip Code: _____ Phone: _____ State: Tx
 Fax: _____

Number: 32372

Site Evaluator Information:

Name: LESTER A. SAUCIER, JR. P.E.
 Company: LASCO
 Address: 3122 TEXAS AVE.
 City: BRIDGE CITY
 Zip Code: 77611 Phone: 735-7155 State: TEXAS
 Fax: 735-7156

Soil Boring Number: 1

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 6"	II	Sandy Loam	_____	_____	_____
1 - _____	III	Clay Loam	_____	_____	_____
2 - _____			_____	_____	_____
3 - _____			_____	_____	_____
4 - _____			_____	_____	_____
5 - _____					

Soil Boring Number: 2

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 6"	II	Sandy Loam	_____	_____	_____
1 - _____	III	Clay Loam	_____	_____	_____
2 - _____			_____	_____	_____
3 - _____			_____	_____	_____
4 - _____			_____	_____	_____
5 - _____					

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.

Signature of Site Evaluator _____

2/8/2021
 Date

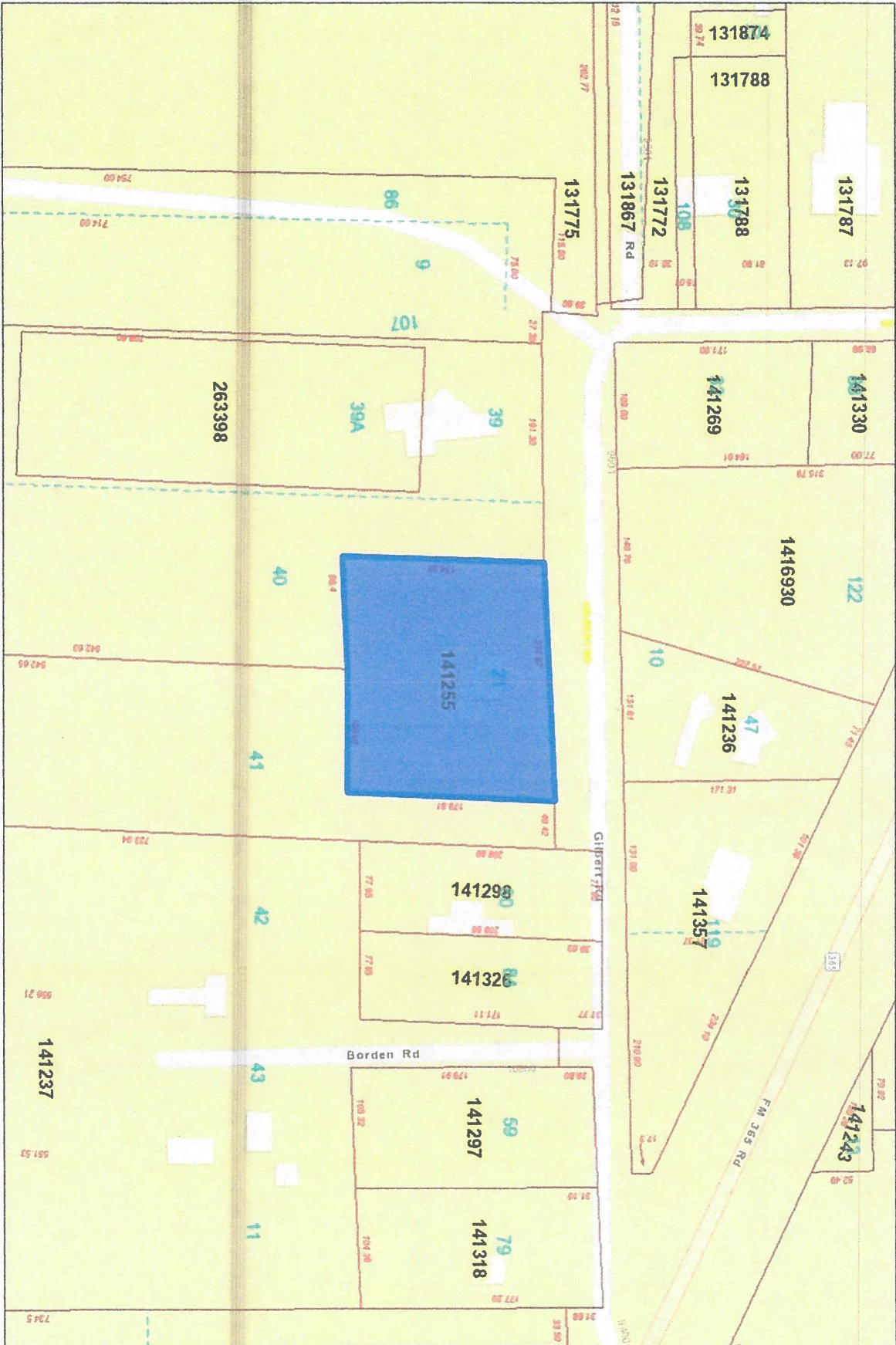


9529 Gilbert - Fannett

© 2020 Google

Imagery Date: 11/23/2019 29°55'45.32" N 94°15'38.65" W elev 14

Google



- Legend
- County Boundary
 - City
 - Subdivision
 - Lot Line

LESTER A. SAUCIER, JR., P.E. No. 32372

ENGINEER MANAGEMENT
P.O. BOX 886, BRIDGE CITY, TEXAS 77611
(409)735-7155, FAX (409)735-7156

DATE: February 10, 2021

JEFFERSON COUNTY HEALTH DEPARTMENT
2748 VITERBO ROAD BOX 4
BEAUMONT, TEXAS

ATTENTION: Ronda Conlin

SUBJECT: ON SITE SEWAGE DESIGN
SURFACE TREATED WASTEWATER

TECHNICAL AND SITE INFORMATION

SUBJECT: Kim Danforth
ADDRESS: 16539 Sandell Rd.
Hamshire, Texas
TEL. #: (409)

LOT: 1-acre
OSSF: TABLE III
INSTALLER: _____
OTHER: _____

PROPERTY & SOIL INFORMATION: Residence on 1-acre
BUILDING SIZE Residence SQ. FT. LIVING 1850 NO. BEDROOMS 3 NO. BATHS 1½ W.S.D.
yes

WATER DEMAND GPD = 180 GPD

EXCEPTIONS OSSF TABLE III 180 GPD TOTAL

SURFACE DESIGN AREA: TABLE III (OSSF): 180 GPD ÷ 0.035 in/hr G/ sq. ft./D = 6857 SQ. FT.

SPRAY SYSTEM #1 2289 ft² 27 Ø #2 1963 ft² 25 Ø #3 1413 ft² ½-30 Ø TOTAL 7078 ft²

WASTEWATER SYSTEM SPECIFICATIONS: MANUFACTURER _____ MODEL NO. _____

PRE-TREATMENT TANK 500 gal. AERATION TANK 500 gal. PUMP TANK 500 gal.

CHLORINATOR STACK EFFLUENT PUMP 12 ½ GPM/HP *Timer

SPRINKLER 4 GPM (MFG) IRRIGATION PIPE 1 IN./TYPE

OTHER REQUIREMENTS OR COMMENTS:

OWNER HAS A RESIDENCE ON A ½ ACRE TRACT WITH A FAILED SYSTEM AND WOULD LIKE TO
INSTALL AN AEROBIC WASTEWATER SYSTEM IT IS MY RECOMMENDATION TO INSTALL AN AEROBIC
WASTEWATER SYSTEM AS SHOWN ON THE ATTACHED DRAWING. WATER IS PROVIDED FROM A PRIVATE
WELL. A TIMER WILL BE INSTALLED IN ORDER TO REDUCE THE BUFFER ZONE FROM 20' TO 10'.

The purpose of this design is to provide an individual with on-site sewage facilities for the disposal of treated effluent so as not to contaminate potable water supplies or threaten the health and welfare of the public. The data provided herein is to establish minimum standards for the construction of these on-site sewage facilities. The use of brand names, manufacturers, trademarks or other identifying symbols appearing in the drawings is to establish a standard or equal and does not constitute an endorsement. All construction must be done in accordance with the TCEQ and local government laws and regulations.

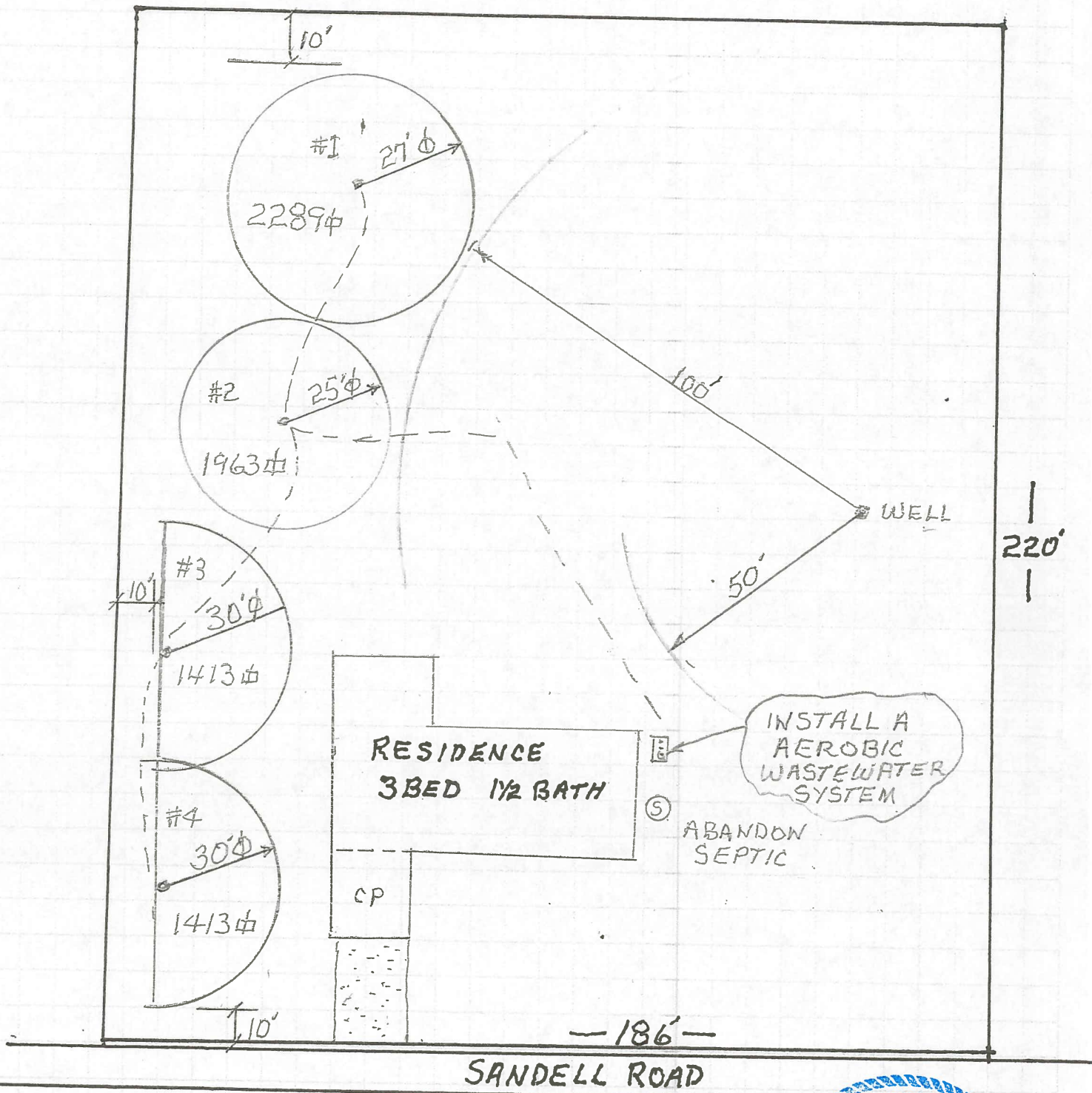
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Criteria considered in this design was location, application area soil classification, buffer requirements, equipment data and etc. in my professional opinion, the proposed system can be installed and maintained without causing a threat or harm to any existing supply system or to the public health, or causing a threat of pollution or nuisance conditions, provided the system is properly installed, loaded and maintained.

LESTER A. SAUCIER, JR.



ON-SITE SEWAGE DATA SHEET



LESTER A. SAUCIER, JR.
3122 TEXAS AVE.
BRIDGE CITY, TEXAS
TEL. 409-735-7155

NAME KIM DANFORTH
ADDRESS 16539 SANDELL RD
LOCATION HAMPSHIRE TEXAS



Texas Commission of Environmental Quality
ON-SITE SEWAGE FACILITY
TECHNICAL INFORMATION FOR PERMIT

PROFESSIONAL DESIGN REQUIRED?: ☒ Yes ☐ No If yes, professional design attached: ☒ Yes ☐ No
Designer Name: Lester A. Saucier, Jr. License Type and No. P.E. 32372
Phone No. (409) 735-7155 Other or Fax No. (409) 735-7156
Mailing Address: 3122 Texas Avenue City: Bridge City State: Tx Zip: 77611

I. TYPE AND SIZE OF PIPING FROM: (EXAMPLE: 4" SCH 40 PVC)
Stub out to treatment tank: 4" SCH 26" PVC
Treatment tank to disposal system: 1" SCH 40" PVC

II. DAILY WASTEWATER USAGE RATE: Q = 240 (gallons/day)
Water Saving Devices: ☒ Yes ☐ No

III. TREATMENT UNIT(S): ☐ Septic Tank ☒ Aerobic Unit

A. Tank Dimensions: 500
Size Proposed: 500 (gal)
Material/Model #: _____
Liquid Depth (bottom of tank to outlet): _____
Manufacturer: _____

Pretreatment Tank: ☒ Yes ☐ No SIZE: 500 (gal)
Pump/Lift Tank: ☒ Yes ☐ No SIZE: 500 (gal)
B. OTHER ☐ Yes ☐ No If yes, please attach description.

IV. DISPOSAL SYSTEM:
Disposal Type: Surface Spray System
Manufacturer and Model: _____
Area Proposed: 7078 square feet

V. ADDITIONAL INFORMATION:

NOTE - THIS INFORMATION MUST BE ATTACHED FOR REVIEW TO BE COMPLETED.
A. Soil/Site evaluation B. Planning materials (If Applicable)

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PENALTIES.

SIGNATURE OF INSTALLER OR DESIGNER: _____

DATE: 2/10/2021

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OSSF Soil Evaluation

Date: 2/10/2021

Applicant Information:

Name: Kim Danforth
Address: 16539 Sandell
City: Hamshire
Zip Code: _____

Phone: _____ State: Tx
Fax: _____

Number: 32372

Site Evaluator Information:

Name: LESTER A. SAUCIER, JR. P.E.
Company: LASCO
Address: 3122 TEXAS AVE.
City: BRIDGE CITY
Zip Code: 77611 Phone: 735-7155 State: TEXAS
Fax: 735-7156


Soil Boring Number: 1

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 7"	II	Sandy Loam			
1 -	III	Clay Loam			
2 -					
3 -					
4 -					
5 -					

Soil Boring Number: 2

Depth (Feet)	Textural Class	Structure (if applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 - 7"	II	Sandy Loam			
1 -	III	Clay Loam			
2 -					
3 -					
4 -					
5 -					

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.

Signature of Site Evaluator 

2/10/2021
Date



Sandell Dr

16539 Sandell - Hamshire

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Google

