

AGENDA ITEM # 21October 28, 1997*

Open and consider awarding, rejecting or extending bids for construction of County Road 305.

At 11:10 a.m. Judge Doerfler announced time to receive bids for construction of County Road 305.

At 11:12 a.m. Judge Doerfler announced time closed to receive bids for construction of County Road 305.

Bids were opened and read aloud from:

Austin Bridge and Road, Inc.	\$1,230,113.30
Bay Maintenance Co., Inc.	1,061,465.14
Burris Construction, Inc.	923,992.64
Capital Excavation Company	1,327,446.52
Garey Construction Construction, Inc.	767,558.30
J. C. Evans Construction Company, Inc.	1,171,700.47
J. K. L., Inc.	997,491.60
McLean Construction, Inc.	1,334,017.27
ODell Geer Construction Company, Inc	974,218.20
Rogers Construction Company	1,021,086.65

Moved: Judge Doerfler

Seconded: Commissioner Boatright

Motion: To note receipt of bids with award to be made at a later date.

Vote: Motion carried 5 - 0

< Clerk copy here >

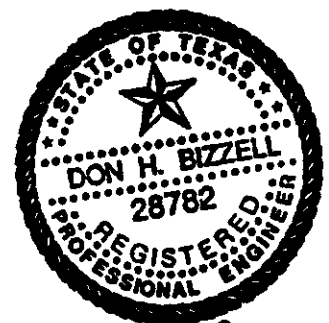
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97

ATTACHMENT 2-S

ADVERTISEMENT AND INVITATION FOR BIDS
FOR CONSTRUCTION

The Williamson County Commissioners' Court, Williamson County, Texas will receive bids for County Road Reconstruction, Jarrell Tornado Recovery Project, T.C.D.P. Contract No. 716307 until 11:00 a.m. on October 28, 1997 at Williamson County Courthouse, 2nd Floor, Georgetown, Texas. The bids will be publicly opened and read aloud at 11:00 a.m. on October 28, 1997 at Williamson County Courthouse, 2nd Floor, Georgetown, Texas.

A mandatory pre-bid conference will be held at Williamson County Courthouse, 2nd Floor, Georgetown, Texas on October 24, 1997 at 9:00 a.m.. The subject of discussion will be the overall scope of the project. Bids will not be accepted from bidders not attending this conference.

Bids are invited for several items and quantities of work as follows:

1. 65,543 S.Y. Roadway Excavation	8. 1275.5 L.F. Metal Beam Guard Fence
2. 69,944 S.Y. Subgrade Preparation	9. 35 Ea. Terminal Anchor Section
3. 37,610 S.Y. Rework Base Material	10. 18,760 L.F. Silt Fence
4. 61,002 S.Y. Base Material	11. 1,458 L.F. Rock Berm
5. 60,861 S.Y. Asphaltic Concrete Pavement	12. 2,942 S.F. Trench & Excavation Safety
6. 20,581 L.F. Roadside Pitch	13. 58 Ea. Culvert Modification
7. 42 Ea. Paved Driveway	14. 1 L.S. Street Signage

Bid/Contract Documents, including Drawings and Technical Specifications are on file at Steger & Bizzell Engineering, Inc., 1978 South Austin Avenue, Georgetown, Texas 78626.

Copies of the Bid/Contract Documents may be obtained by depositing \$100.00 with Steger & Bizzell Engineering, Inc. for each set of documents obtained. The deposit will be refunded if the documents and drawings are returned in good condition with 10 days following the bid opening.

A bid bond in the amount of 5% of the bid issued by an acceptable surety shall be submitted with each bid. A certified check or bank draft payable to the County of Williamson or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.

Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate, as issued by the Texas Department of Housing and Community Affairs and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, age or national origin.

The Williamson County Commissioners' Court reserves the right to reject any or all bids or to waive any informalities in the bidding.

Bids may be held by Williamson County Commissioners' Court for a period not to exceed 30 days from the date of the bid opening for the purpose of reviewing the bids and investigating the bidders qualifications prior to the contract award.

Williamson County Commissioners' Court, John C. Doerfler, County Judge Date: Sept. 30, 1997

All contractors/subcontractors which 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.

**SAMPLE
INSTRUCTION TO BIDDERS
FOR CONSTRUCTION**

1. Use of Separate Bid Forms

These contract documents include a complete set of bid and contract forms which are for the convenience of the bidders and are not to be detached from the contract document, completed or executed. Separate bid forms are provided for your use.

2. Interpretations or Addenda

No oral interpretations will be made to any bidder. Each request for an interpretation shall be made in writing to the locality or engineer no less than seven (7) days prior to the bid opening. Each interpretation made will be in the form of an Addendum to the contract documents and will be distributed to all parties holding contract documents no less than five (5) days prior to the bid opening. It is, however, the bidder's responsibility to make inquiry as to any addenda issued. All such addenda shall become part of the contract documents and all bidders shall be bound by such addenda, whether or not received by the bidders.

3. Inspection of Site

Each bidder should visit the site of the proposed work and fully acquaint himself with the existing conditions there and should fully inform himself as to the facilities involved, the difficulties and restrictions attending the performance of the contract. The bidder should thoroughly examine and familiarize himself with the drawings, technical specifications and all other contract documents. The contractor, by the execution of the contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal document or to visit the site or acquaint himself with the conditions there existing. The city/county will be justified in rejecting any claim based on lack of inspection of the site prior to the bid.

4. Alternate bid Items

No alternate bids or bid items will be considered unless they are specifically requested by the technical specifications.

5. Bids

- a) All bids must be submitted on the forms provided and are subject to all requirements of the Contract Documents, including the Drawings.
- b) All bids must be regular in every respect and no interlineation, excisions or special conditions may be made or included by the bidder.
- c) Bid documents, including the bid, the bid bond, and the statement of bidders' qualifications shall be sealed in an envelope and clearly labeled with the words "Bid Documents", the project number, name of bidder and the date and time of bid opening.
- d) The locality 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.
- e) 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.

6. Bid Modifications Prior to Bid Opening

- a) Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the city/county prior to the closing time, and provided further, the city/county is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. The telegraphic communication should not reveal the bid price but should provide the addition, subtractions or other modifications so that the final prices or terms will not be known by the city/county until the sealed bid is open. If written confirmation is not received within two (2) days from the closing time, no consideration will be given to the telegraphic modification.
- b) Likewise, any bidder may modify a bid by submitting a supplemental bid in person prior to the scheduled closing time for receipt of bids. Such supplemental bid should mention only additions or subtractions to the original bid so as to not reveal the final prices or terms to the city/county until the sealed bid is open.

7. Bid Bond

- a) A bid bond in the amount of 5% of the bid issued by an acceptable surety shall be submitted with each bid. A certified check or bank draft payable to the locality or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.
- b) The bid bond or its comparable, will be returned to the bidder as soon as practical after the opening of the bids.

8. Statement of Bidders Qualifications

Each bidder shall submit on the form furnished for that purpose a statement of the bidder's qualifications. The locality shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform his obligations under the contract, and the bidder shall furnish the locality 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 locality that the bidder is qualified to carry out properly the terms of the contract.

9. Unit Price

The unit price for each of the several items in the bid shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price bid represents the total bid. Any bid not conforming to this requirement may be rejected as informal. Special attention is drawn to this condition, as the unit prices will be used to determine the amount of any change orders resulting from an increase or decrease in quantities.

10. Corrections

Erasures or other corrections in the bid must be noted over the signature of the bidder.

11. Time for Receiving Bids

Bids received prior to the advertised hour of opening shall be kept securely sealed. The officer appointed to open the bids shall decide when the specified time has arrived and no bid received thereafter will be considered; except that when a bid arrives by mail after the time fixed for opening, but before the reading of all other bids is completed, and it is shown

to the satisfaction of the locality that the late arrival of the bid was solely due to delay in the mail for which the bidder was not responsible, such bid will be received and considered.

12. Opening of Bids

The locality shall, at the time and place fixed for the opening of bids, open each bid and publicly read it aloud, irrespective of any irregularities therein. Bidders and other interested individuals may be present.

13. Withdrawal of Bids

Bidder may withdraw the bid before the time fixed for the opening of bids, by communicating his purpose in writing to the locality. Upon receipt of such notice, the unopened bid will be returned to the bidder. The bid guaranty of any bidder withdrawing his bid will be returned promptly.

14. Award of Contract/Rejection of Bids

- a) The contract will be awarded to the responsive, responsible Bidder submitting the lowest/best bid. The bidder selected will be notified at the earliest possible date. The locality reserves the right to reject any or all bids and to waive any informality in bids received where such rejection or waiver is in its interest.
- b) The locality reserves the right to consider as unqualified to do the work any bidder who does not habitually perform with his own forces the major portions of the work involved in construction of the improvements embraced in this contract.

15. Execution of Agreement/Performance and Payment Bonds

- a) Performance and Payment Bonds, Requires all prime contractors which enter into a formal contract in excess of \$25,000 with the State, any department, board, agency, municipality, county, school district or any division or subdivision thereof, to obtain a Payment Bond in the amount of the contract before commencing with work and a performance bond for public works contracts in excess of \$100,000.
- b) The failure of the successful bidder to execute the agreement and supply the required bonds within ten (10) days after the prescribed forms are presented for signature, 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.

16. 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.

17. Equal Employment Opportunity

Attention is called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of their race, color, creed, sex, or national origin.

PROPOSAL & BID SCHEDULE

Date: _____

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard:	\$	\$
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard:	\$	\$
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard:	\$	\$
4.	61,002 s.y.	Base Material, complete in place, per square yard:	\$	\$
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard:	\$	\$

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot:	\$	\$
7.	42 ea.	Paved Deiveway, complete in place, per each:	\$	\$
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot:	\$	\$
9.	35 ea.	Terminal Anchor Section, complete in place, per each:	\$	\$
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum:	\$	\$
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum:	\$	\$

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum:			
			\$	\$	
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum:			
			\$	\$	
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum:			
			\$	\$	
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum:			
			\$	\$	
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum:			
			\$	\$	
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum:			
			\$	\$	
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum:			
			\$	\$	
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum:			
			\$	\$	
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum:			
			\$	\$	
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum:			
			\$	\$	
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum:			
			\$	\$	
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum:			
			\$	\$	
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum:			
			\$	\$	
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum:			
			\$	\$	
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum:			
			\$	\$	
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum:			
			\$	\$	
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum:			
			\$	\$	
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum:			
			\$	\$	
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum:			
			\$	\$	
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum:			
			\$	\$	
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
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36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum:			
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			\$	\$	
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37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum:			
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			\$	\$	
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38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum:			
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			\$	\$	
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39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum:			
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			\$	\$	
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40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum:			
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			\$	\$	
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41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum:			
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			\$	\$	
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<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum:			
			\$	\$	
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum:			
			\$	\$	
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum:			
			\$	\$	
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum:			
			\$	\$	
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum:			
			\$	\$	
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum:			
			\$	\$	
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<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum:			
			\$	\$	
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum:			
			\$	\$	
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum:			
			\$	\$	
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum:			
			\$	\$	
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum:			
			\$	\$	
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
54.	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:			
			\$	\$	
55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum:			
			\$	\$	
56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum:			
			\$	\$	
57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum:			
			\$	\$	
58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum:			
			\$	\$	
59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
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60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum:
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\$	\$
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61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum:
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\$	\$
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62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum:
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\$	\$
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63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum:
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\$	\$
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64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum:
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\$	\$
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65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum:
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\$	\$
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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST TOTAL
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum:		
			\$	\$
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum:		
			\$	\$
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot:		
			\$	\$
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot:		
			\$	\$
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot:		
			\$	\$

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot:			
			\$		\$
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot:			
			\$		\$
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot:			
			\$		\$
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot:			
			\$		\$
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot:			
			\$		\$

76. 1 l.s. Street Signage, complete in place, per
lump sum:

_____ \$ _____ \$

TOTAL BID: _____ \$

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The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: _____

By (Name & Title): _____

(Signature): _____

Mailing Address: _____

Telephone Number: _____

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

Bond No. _____

**BID BOND (5%)
(EXAMPLE)**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,
_____ as Principal, and _____
as Surety, are hereby held and firmly bound unto _____
as OWNER in the penal sum of _____
for the payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns.

Signed, this _____ day of _____, 19____. The Condition of the above obligation is
such that whereas the Principal has submitted to _____ a certain BID,
attached hereto and hereby made a part hereof to enter into a contract in writing, for the
_____.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract
in the Form of Contract attached hereto (properly completed in accordance with
said BID) and shall furnish a BOND for his faithful performance of said contract,
and for the payment of all persons performing labor or furnishing materials in
connection therewith, and shall in all other respects perform the agreement
created by the acceptance of said BID, then this obligation shall be void, otherwise
the same shall remain in force and effect; it being expressly understood and agreed
that the liability of the Surety for any and all claims hereunder shall, in no event,
exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

Surety

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Bond No. _____

**PERFORMANCE BOND (100%)
(EXAMPLE)**STATE OF TEXAS {
COUNTY OF {

KNOW ALL MEN BY THESE PRESENTS: That _____ of the City of _____, County of _____, and State of _____, as principal, and _____ authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto (Owner), in the penal sum of _____ Dollars (\$ _____) for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 19____, to which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Contract and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by said Contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Plans and Specifications hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect;

"PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of (Article 5160 for Public Work) (Article 5472d for Private Work)* of the Revised Civil Statutes of Texas as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein."

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the Plans, Specifications, or drawings accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder.

* Not applicable for federal work. See "The Miller Act", 40 U.S.C. S270.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument
this _____ day of _____, 19_____.

Principal	Surety
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
_____	_____
_____	_____
_____	_____

The name and address of the Resident Agent of Surety is:

Bond No. _____

**PAYMENT BOND (100%)
(EXAMPLE)**

STATE OF TEXAS {

COUNTY OF _____{

KNOW ALL MEN BY THESE PRESENTS: That _____ of the City of _____, County of _____, and State of _____, as principal, and _____ authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto (Owner), in the penal sum of _____ Dollars (\$_____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 19____, to which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then, this obligation shall be void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Article 5160 of the Revised Civil Statutes of Texas as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, shall in anywise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument
this _____ day of _____, 19 _____.

Principal _____

Surety _____

By: _____

By: _____

Title: _____

Title: _____

Address: _____

Address: _____

The name and address of the Resident Agent of Surety is:

STANDARD FORM OF AGREEMENT

As Adopted By
THE TEXAS SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS
October 7, 1971

Revised November 17, 1928
Revised April 15, 1932
Revised October 27, 1934
Revised October 19, 1945
Revised April 8, 1954
Revised April 21, 1960
Revised October 7, 1971

Approved as to Legal Form by
Legal Counsel

STATE OF TEXAS {
COUNTY OF WILLIAMSON {

THIS AGREEMENT, made and entered into this _____ day of _____, A.D. 199__,
by and between _____ of the County
of _____, State of Texas, acting through
_____, thereunto
duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and

of the City of _____, County of _____ and State
of _____, Party of the Second Part, hereinafter termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter
mentioned, to be made and performed by the Party of the First Part (OWNER), and under the
conditions expressed in the bond bearing even date herewith, the said Party of the Second Part
(CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence
and complete the construction of certain improvements described as follows:

and all extra work in connection therewith, under the terms as stated in the General Conditions of the Agreement and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction, in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with the Notice to Contractors, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore, as prepared by Steger & Bizzell Engineering, Inc. herein entitled the ENGINEER, each of which has been identified by the CONTRACTOR and the ENGINEER, together with the CONTRACTOR'S written Proposal, the General Conditions of the Agreement, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

The CONTRACTOR hereby agrees to commence work within 10 calendar days after the date of written notice to do so shall have been given to him, and to complete the same within 120 calendar days of the date of the written notice to commence work, subject to such extensions of time as are provided by the General and Special Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this Contract, such payments to be subject to the General and Special Conditions of the Contract.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Party of the First Part (OWNER)

Party of the Second Part (CONTRACTOR)

By: _____

By: _____

ATTEST:

ATTEST:

**GENERAL CONTRACT CONDITIONS
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 Community Development Program (TCDP) and is subject to all applicable Federal, State, and local laws and regulations.
- b.) The Plans, Specifications and Addenda, hereinafter enumerated in Paragraph 1 of the Supplemental General Conditions shall form part of this contract and the provisions hereof shall be as binding upon the parties hereto 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 County of Williamson, hereinafter called the Locality and _____, hereinafter called Contractor, of which these GENERAL CONDITIONS, form a part.
- b.) The term "Project Area" means the area within which are the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- c.) The term "Engineer" means Steger & Bizzell Engineering, Inc, Engineer in charge, serving the Locality with architectural or engineering services, his successor, or any other person or persons, employed by the Locality for the purpose of directing or having in charge the work embraced in this contract.
- d.) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings).

3. Supervision By Contractor

- a.) Except where the Contractor is an individual and gives his personal supervision to the work, the Contractor shall provide a competent superintendent, satisfactory to the Local Public Agency and the Engineer, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.
- b.) The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He 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 he has verified the subcontractor as eligible to participate in federally funded contracts.
- b.) No proposed subcontractor shall be disapproved by the city/county except for cause.

- c) The Contractor shall be as fully responsible to the city/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 provisions of the Contract.
- e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Locality.

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

- The Contractor shall prepare his requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for his 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 Engineer.
- Monthly or partial payments made by the Locality to the Contractor are moneys 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 Locality. Such payments shall not constitute a waiver of the right of the Locality 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 Locality in all details.

b) Final Payment

- After final inspection and acceptance by the Locality of all work under the Contract, the Contractor shall prepare his 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 Agreement. 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.
- The Locality before paying the final estimate, 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, if the Locality deems it necessary in order to protect its interest. The Locality may, if it deems such action advisable, 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.
- Any amount due the Locality 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 Locality shall be made subject to submission by the Contractor of all written certifications required of him and his subcontractors.

d) **Withholding Payments**

The Locality may withhold from any payment due the Contractor whatever is deemed necessary to protect the Locality, 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 Locality and will not require the Locality to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the Locality elects to do so. The failure or refusal of the Locality 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 Locality 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 of his obligations under the Contract or any guarantee given by him 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 the TCDP staff 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 Locality 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 Agreement, the Locality 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%) for counties or twenty-five percent (25%) for cities.
- d) Each change order shall include in its final form:
 - A detailed description of the change in the work.
 - The Contractor's proposal (if any) or a confirmed copy thereof.
 - A definite statement as to the resulting change in the contract price and/or time.
 - The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
 - 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 Locality, 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 Locality and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Locality.
- d) If, on the basis of the available evidence, the Locality 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 Locality to Terminate Contract.

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Locality 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 Locality 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 Locality 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 Locality for any excess cost incurred. In such event the Locality 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.

b) Liquidated Damages for Delays.

If the work is not completed within the time stipulated in the applicable bid for Lump Sum or Unit Price Contract provided, the Contractor shall pay to the Locality 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 calendar day of delay, until the work is completed. The Contractor and his sureties shall be liable to the Locality for the amount thereof.

c) Excusable Delays.

- 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:
- 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;
- Any acts of the Locality;

- Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Locality, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.
- Provided, however, that the Contractor promptly notifies the Locality within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Locality 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 Locality 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 or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Locality; provided, however, that assignments to banks or other financial institutions may be made without the consent of the Locality. 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, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

11. Disputes

- All disputes arising under this Contract or its interpretation except those disputes covered by FEDERAL LABOR STANDARDS PROVISIONS whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall, within ten (10) days of commencement of the dispute, be presented by the Contractor to the Locality for decision. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt of the Locality.
- The Contractor shall submit in detail his claim and his proof thereof.
- If the Contractor does not agree with any decision of the Locality, he shall in no case allow the dispute to delay the work but shall notify the Locality promptly that he is proceeding with the work under protest.

12. 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 Locality, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

13. Shop Drawings

- All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in SIX copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The

Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.

- b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.
- c) If a shop drawing is in accordance with the contract or involves only a minor adjustment in the interest of the Locality not involving a change in contract price or time; the engineer may approve the drawing. The approval shall not relieve the Contractor from his responsibility for adherence to the contract or for any error in the drawing.

14. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the Locality for any additional information not already in his possession which should be furnished by the Locality under the terms of this Contract, and which he will require 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.

15. Materials and Workmanship

- a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- b) The Contractor shall furnish to the Locality for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- e) The Locality may require the Contractor to dismiss from the work such employee or employees as the Locality or the Engineer may deem incompetent, or careless, or insubordinate.

16. Samples, Certificates and Tests

- a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.
- c) Approval of any materials shall be general only and shall not constitute a waiver of the Locality's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 - The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
 - The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
 - The Contractor shall assume all costs of testing materials offered in substitution for those found deficient;
 - The Locality will pay all other expenses.

17. Permits and Codes

- a) The Contractor shall give all notices required by and comply with all applicable 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 Locality. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the Locality 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 Locality.

- 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. Prior to the close of a day's work, the Contractor, if directed by the Locality, shall moisten the bank and surrounding area to prevent a dusty condition.

18. Care of Work

- a) The Contractor shall be responsible for all damages to person or property that occur as a result of his 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) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the Locality is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Locality.
- d) 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 he shall at his own expense completely repair any damage thereto caused by his operations.
- e) 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 construction of the 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 Locality or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Locality 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 Locality may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

19. 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 Secretary 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 Locality with reports concerning these matters.
- d) The Contractor shall indemnify and save harmless the Locality 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. House Bill 1569 concerning trench safety legislation are made a part of these contract documents for Contractor's reference. All OSHA Standards for trench safety must be adhered to by the Contractor.
- f) The Contractor shall at all time conduct his work in such a manner as to insure 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 city/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 Locality at the expense of the Contractor.

20. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. 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, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

21. Use of Premises

- a) The Contractor shall confine his 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 Locality, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b) The Contractor shall comply with all reasonable instructions of the Locality and all existing state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

22. 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.

23. Inspection

- a) All materials and workmanship shall be subject to inspection, examination, or test by the Locality and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The Locality 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 Locality 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 Locality.
- b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the Locality 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 Locality 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 Locality, the Contractor shall uncover for inspection and recover such facilities at his own expense, when so requested by the Locality.
- d) Should it be considered necessary or advisable by the Locality at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, 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 his 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 allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.
- 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 (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 fraud. 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 Locality or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

24. Review By Locality

The Locality 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 Locality through its authorized representatives or agents.

25. Final Inspection

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

26. Deduction for Uncorrected Work

If the Locality 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 Locality and subject to settlement, in case of dispute, as herein provided.

27. Insurance

a) The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Locality.

b) Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Worker's Compensation Insurance as required by the State of Texas for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance.

Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the following amounts: (\$ 1,000,000), (\$ 1,000,000), and (\$ 1,000,000).

c) Proof of Insurance: The Contractor shall furnish the Locality 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 Locality."

28. 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 him to the Locality 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 in the hands of the Locality. 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 formal contract is entered into for such materials.

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29. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements included in this Contract by the Locality 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 (12) months from the date of final acceptance of the work.

30. Compliance with Air and Water Acts

- a) In compliance with the Clean Air Act, as amended, 41 U.S.C. Sec. 7401 et. seq., and the regulations of the Environmental Protection Agency with respect thereto, the Contractor agrees that:
- Any facility to be utilized in the performance of this contract or any subcontract shall not be a facility listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20.
 - He will comply with all requirements of Section 114 of the Clean Air Act, as amended.
 - Materials utilized in the project shall be free of any hazardous materials, except as may be specifically provided for in the specifications.
- b) If the Contractor encounters existing material on sites owned or controlled by the city/county or in material sources that are suspected by visual observation or smell to contain hazardous materials, the Contractor shall immediately notify the Engineer and the Locality. The Locality will be responsible for testing for and removal or disposition of hazardous materials on sites owned or controlled by the Locality. The Locality may suspend the work, wholly or in part during the testing, removal or disposition of hazardous materials on sites owned or controlled by the Locality.

31. Equal Employment Opportunity

- a) The Contractor will not discriminate against any employee or the applicant for employment because of race, color, religion, sex, 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, or national origin. Such action shall include, but not be limited to the following: employment, promotion, 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 by the Locality.
- 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 consideration for employment without regard to race, color, religion, sex, or national origin.
- c) The Contractor will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this contract so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- d) The goals and timetables for minority and female participation, are as follows:

Timetables	Goals for minority participation for each trade	Goals for female participation in each trade
------------	--	---

- e) These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area.
- f) The Contractor shall take affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions.
- g) Contractors are encouraged to participate in voluntary associations which assist in fulfilling their affirmative action obligations.
- h) A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority.
- i) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- j) The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts.
- k) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.

32. Affirmative Action for Handicapped Workers

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, promotion, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

33. 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, 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.

34. The Provision of Local Training, Employment, and Business Opportunities

- a) To the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.
- b) The Contractor will include this clause in every subcontract for work in connection with the project.

35. Non Segregated Facilities

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained.

As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

36. Job Offices

- a) The Contractor and his 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 Locality shall be consulted with regard to locations.
- b) Upon completion of the improvements, or as directed by the Locality, the Contractors 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.

37. Partial Use of Site Improvements

- a) The Locality 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:
- b) The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- c) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- d) The period of guarantee stipulated in the Section 132 hereof shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

38. Contract Documents and Drawings

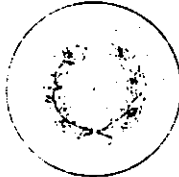
The Local Public Agency will furnish the Contractor without charge (3) copies of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

39. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the Locality in the Notice to Proceed, and shall be fully completed within (120) calendar days thereafter.

40. 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 Sureties shall be liable for and shall pay to the Locality the sum of FIVE HUNDRED DOLLARS, (\$500.00) as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated time for completion.



TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS

George W. Bush
GOVERNOR

Larry Paul Manley
EXECUTIVE DIRECTOR

TEXAS COMMUNITY DEVELOPMENT PROGRAM
ISSUANCE OF PREVAILING GENERAL WAGE DECISION

BOARD MEMBERS
Margie Lee Bingham, Chair
Donald R. Bethel
Robert O. Brewer
Harvey Clemons Jr.
C. Kent Conine
James A. Daross
Florita Bell Griffin, Ph. D.
Michael E. Jones
Paul R. Rodriguez

August 5, 1997

The Honorable John C. Doerfler
County Judge, Williamson County
Williamson County Courthouse
Georgetown, TX 78626

Re: TCDP Contract No. 716307

Dear Judge Doerfler:

We have received your 8-1-97 request for wage rates for the following bid activity: Pavement replacement, a water well, & 8 septic systems.

The following has been determined to be the prevailing General Wage Decision that is applicable to this project:

General Wage Decision No.

Publication Date

TX 970043

2-14-97

Any classifications employed on this project but not listed on the General Wage Decision must be requested as an Additional Classification following award of the construction contract. The Request for Additional Classifications Form, Attachment 7-Q, can be found in Chapter 7 of the Implementation Manual.

Please note, contractors and subcontractors may not employ helpers on any Davis-Bacon covered contract awarded on or after October 31, 1993. In addition, the regulatory provision that allowed the consideration of additional classification actions for helpers is also suspended. THEREFORE, ALL HELPERS MUST BE CLASSIFIED AND PAID ACCORDING TO THE CLASSIFICATION IN WHICH THEY USE THE TOOLS OF THE TRADE OR AS UTILITY LABORERS.

If I can be of any assistance, please feel free to contact me at (512) 475-3823.

Issued by: Julie Hartley
Julie Hartley
Labor Standards Specialist

Attachment(s)

copy to: DN
Jane Tableriou

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Request for Wage Determination And
Response to Request
(Davis Bacon Act as Amended and Related Statutes)

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division

FOR DEPARTMENT
OF LABOR USE

Response To Request

☒ Use area determination issued for
this area

970043

2-14-97

☐ The attached decision noted
below is applicable to this project

Decision Number

Date of Decision

Expires

Supersedes Decision Number

Approved

RECEIVED

AUG 01 1997

Mail Your Request To:

Texas Department of Housing and Community Affairs
ATTN: Texas Community Development Program
P.O. Box 13041
Austin, Texas 78711-3041

Requesting Officer (Typed name and signature)

Jane Tableriou

Department, Agency, or Bureau

Williamson County

Date of Request

7-28-97

Estimated Advertising Date

08-15-97

Estimated Bid Opening Date

08-29-97

Prior Decision Number (if any)

Estimated \$ Value of Contract

☐ Under 1/2 MI ☐ 1 to 5 MI ☐ Highway
☒ 1/2 to 1 MI ☐ Over 5 MI ☐ Recl.

Type of Work

☐ Bldg. ☐ Highway
☐ Recl. ☐ Heavy

Address to which wage determination should be mailed. (Print or type)

710 Main St., Suite 201
Georgetown, Texas 78626

Location of Project (City, County, State, Zip Code)

Jarrell, Williamson County, Texas

TCDP Contract Number

716307

Description of Work (Be specific) (Print or type)

The proposed project includes replacement of approximately 13,000
l.f. of street, including sub-grade preparation, flexible base,
HMAC, striping, signs, culverts & driveways. This project also
includes the replacement of eight (8) septic tanks and one (1)
water well.

CHECK OR LIST CRAFTS NEEDED
(Attach continuation sheet if needed)

Asbestos workers
Boilermakers
Bricklayers

Carpenters
Cement masons
Electricians

Glaziers

Ironworkers

Laborers (Specify classes)

Lathers

Marble & tile setters, terrazzo workers

Painters

Placemen

Plasterers

Plumbers

Roofers

Sheet metal workers

Soft floor layers

Steamfitters

Welders - rails for craft

Truck drivers

Power equipment operators (Specify types)

Other Crafts

General Decision Number TX970043

Superseded General Decision No. TX960043

State: TEXAS

Construction Type:
HEAVY
HIGHWAY

County(ies):

BELL	CORYELL	TRAVIS
BEXAR	GUADALUPE	WILLIAMSON
BRAZOS	HAYS	
COMAL	MCLENNAN	

Heavy (excluding tunnels and dams) and Highway Construction Projects (does not include building structures in rest area projects). *NOT TO BE USED FOR WORK ON SEWAGE OR WATER TREATMENT PLANTS OR LIFT/PUMP STATIONS IN BELL, CORYELL, MCLENNAN AND WILLIAMSON COUNTIES.

Modification Number
0

Publication Date
02/14/1997

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COUNTY(ies):

BELL
BEXAR
BRAZOS
COMAL

CORYELL
GUADALUPE
HAYS
MCLENNAN

TRAVIS
WILLIAMSON

SUTX2042A 11/16/1991

	Rates	Fringes
AIR TOOL OPERATOR	6.500	
ASPHALT HEATER OPERATOR	6.500	
ASPHALT RAKER	7.011	
ASPHALT SHOVELER	6.550	
BATCHING PLANT WEAHER	8.173	
BATTERBOUARD SETTER	7.700	
CARPENTER	9.054	
CONCRETE FINISHER-PAVING	8.60	
CONCRETE FINISHER-STRUCTURES	7.903	
CONCRETE RUBBER	6.740	
ELECTRICIAN	13.71	
FLAGGER	5.150	
FORM BUILDER-STRUCTURES	8.017	
FORM LINER-PAVING & CURB	7.250	
FORM SETTER-PAVING & CURB	7.683	
FORM SETTER-STRUCTURES	7.928	
LABORER-COMMON	6.078	
LABORER-UTILITY	6.852	
MECHANIC	10.774	
OILER	9.389	
SERVICER	7.280	
PAINTER-STRUCTURES	10.000	
PILEDRIIVER	6.600	
PIPE LAYER	7.229	
BLASTER	9.067	
ASPHALT DISTRIBUTOR OPERATOR	7.304	
ASPHALT PAVING MACHINE	7.945	
BROOM OR SWEEPER OPERATOR	7.117	
BULLDOZER, 150 HP & LESS	8.125	
BULLDOZER, OVER 150 HP	8.593	
CONCRETE PAVING CURING MACHINE	7.633	
CONCRETE PAVING FINISHING MACHINE	9.067	
CONCRETE PAVING GANG VIBRATOR	7.250	
CONCRETE PAVING SAW	6.200	
SLIPFORM MACHINE OPERATOR	8.700	
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL LESS THAN 1 1/2 C.Y.	8.427	
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL 1 1/2 C.Y. & OVER	9.880	
FOUNDATION DRILL OPERATOR CRAWLER MOUNTED	10.475	
FOUNDATION DRILL OPERATOR		

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TRUCK MOUNTED	10.923
FRONT END LOADER 2 1/2 C.Y. & LESS	7.499
FRONT END LOADER OVER 2 1/2 C.Y.	8.255
HOIST - DOUBLE DRUM	10.750
MOTOR GRADER OPERATOR	9.657
PAVEMENT MARKING MACHINE	6.078
PLANER OPERATOR	7.250
ROLLER, STEEL WHEEL PLANT-MIX PAVEMENTS	7.083
ROLLER, STEEL WHEEL OTHER FLATWHEEL OR TAMPING	6.403
ROLLER, PNEUMATIC, SELF PROPELLED	6.433
SCRAPER-17 C.Y. & LESS	7.245
SCRAPER-OVER 17 C.Y.	7.495
SELF PROPELLED HAMMER OPERATOR	6.078
SIDE BOOM	9.000
TRACTOR-CRAWLER TYPE	7.539
TRACTOR-PNEUMATIC	6.707
TRENCHING MACHINE	6.850
WAGON-DRILL/BORING MACHINE/POST HOLE DRILLER OPERATOR	6.926
REINFORCING STEEL SETTER PAVING	8.158
REINFORCING STEEL SETTER STRUCTURES	9.062
STEEL WORKER-STRUCTURAL	9.242
SIGN ERECTOR	8.640
SPREADER BOX OPERATOR	6.541
BARRICADE SERVICER WORK ZONE	6.078
MOUNTED SIGN INSTALLER PERMANENT GROUND	6.078
TRUCK DRIVER-SINGLE AXLE LIGHT	6.493
TRUCK DRIVER-SINGLE AXLE HEAVY	6.674
TRUCK DRIVER-TANDEM AXLE SEMI- TRAILER	6.824
TRUCK DRIVER-LOWBOY/FLOAT	8.041
TRUCK DRIVER-TRANSIT MIX	6.078
WELDER	8.824

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

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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Washington, D. C. 20210

- 4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

U.S. Department of Labor Program Highlights

VOL 0093 PAGE 265



Fact Sheet No. ESA-14

June 1983

AGRICULTURAL WORKERS--YOUR RIGHTS UNDER THE MIGRANT AND SEASONAL AGRICULTURAL WORKER PROTECTION ACT

What is the Migrant and Seasonal Agricultural Worker Protection Act?

The Migrant and Seasonal Agricultural Worker Protection Act (MSPA) is a new federal law which requires agricultural employers, agricultural associations, and farm labor contractors to observe certain labor standards when employing migrant and seasonal agricultural workers, unless exemptions apply. Certain persons and organizations, such as family businesses, small businesses, some seed and tobacco operations, labor unions, and their employees, are exempt.

The MSPA requires farm labor contractors to register with the U.S. Department of Labor.

The MSPA replaced the Farm Labor Contractor Registration Act, effective April 14, 1983.

What is the difference between migrant and seasonal agricultural workers?

As defined by the MSPA, migrant agricultural workers are those employed in agricultural work of a seasonal or temporary nature who are required to be absent overnight from their permanent residence.

Seasonal agricultural workers also are employed in agricultural work of a seasonal or temporary nature, but return to their permanent residence at night. There are two classes of seasonal agricultural workers: field workers; and workers employed in canning, packing, ginning, seed conditioning, and other processing operations who are transported to or from their place of employment by means of a day-haul operation. Day-haul workers assemble at a pick-up point each day waiting to be hired and employed, are transported to the job site, and later the same day are transported to a drop-off point.

What type of information about prospective employment must be provided to migrant and seasonal agricultural workers?

When migrant agricultural workers are recruited by farm labor contractors, agricultural employers, and agricultural associations, accurate information about the prospective employment must be disclosed to them. The information must be presented in writing in English, Spanish, or other languages, as appropriate, and must include:

- where they will work and whether there is a strike, work stoppage, slowdown, or interruption of operations by employees at the work site;
- the crops and kinds of activities on which they may be employed;
- how long they will be employed;
- how much they will be paid;
- whether transportation, housing, and other benefits will be provided, and the charges for the benefits;
- whether the employer will receive commissions or other benefits for sales made to the workers by any establishment in the area of the job site; and
- the terms and conditions for occupancy of migrant housing.

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This is one of a series of fact sheets highlighting U.S. Department of Labor programs. It is intended as a general description only and does not carry the force of legal opinion.

The above information must be disclosed in writing to day-haul workers when they are being recruited. Other seasonal agricultural workers have a right to disclosure of the information in writing upon request when they are offered work. When presented in writing, the information must be in English, Spanish, or other languages, as appropriate.

Thereafter, migrant and seasonal agricultural workers have a right to receive upon request a written statement containing the information described above.

What other rights do migrant and seasonal agricultural workers have?

Migrant and seasonal agricultural workers have the following rights, regardless of whether their employers are farm labor contractors, agricultural employers, or agricultural associations:

- to have the terms of their working arrangements met;
- when being recruited, to have farm labor contractors show proof that they have registered with the Department of Labor;
- to be paid wages when due;
- to receive itemized, written statements of earnings for each pay period which include information concerning any amounts deducted and the reasons for the deductions;
- to purchase goods and services from the source of their choice;
- when provided transportation, to be transported in vehicles which are properly insured, are operated by licensed drivers, and meet federal and state safety standards;
- to have a poster setting forth their rights displayed in a conspicuous place at the job site; and
- for migrant workers who are provided housing:
 - *to be housed in a facility which meets substantive federal and state safety and health standards; and
 - *to have a statement of the terms and conditions of occupancy posted in a conspicuous place at the housing site or presented to them.

What are the penalties for violations of the MSPA?

Violations of the MSPA may result in administrative sanctions, civil or criminal prosecution, civil money penalties of up to \$1,000 per violation, fines of up to \$10,000, and prison terms of up to three years.

How much must migrant and seasonal agricultural workers be paid for their labor?

Migrant and seasonal agricultural workers have a right to receive the wages their employer agreed to pay them. Under the Fair Labor Standards Act, that amount is generally not less than \$3.35 an hour (the federal minimum wage). Federal law does not require overtime pay for most agricultural workers.

Who enforces the MSPA?

The Wage and Hour Division of the U.S. Labor Department's Employment Standards Administration enforces the MSPA. Inquiries received by the division are treated in a confidential manner.

Are workers who exercise their rights protected from retaliation?

The MSPA prohibits retaliation or discrimination against workers who file complaints, testify, or in any way exercise their rights on their own behalf or on behalf of others. The MSPA requires that complaints of discrimination be filed with the Wage and Hour Division within 180 days of the date the discrimination occurred.

Where can I get more information about the MSPA?

Get in touch with a local office of the state employment service or of the Wage and Hour Division. The division's offices are listed in most telephone directories under U.S. Government, Department of Labor. Or you may consult the department's regulations implementing the MSPA which appear at 29 CFR Part 500.



Fact Sheet No. 008

Police And Fire Fighters Under The Fair Labor Standards Act (FLSA)

This fact sheet provides general information concerning the application of the FLSA to law enforcement and fire protection personnel.

Characteristics

Fire protection personnel are employees working for an organized fire department or fire district who have been trained for and have the legal authority and responsibility to engage in the prevention and control of fires.

Law enforcement personnel are employees who are empowered by state or local ordinance to enforce laws designed to maintain peace and order, protect life and property, and to prevent and detect crimes: who have the power to arrest; and who have undergone training in law enforcement.

Coverage

Employees of state and local governments are covered by the FLSA.

Requirements

Hours of work include all of the time an employee is on duty at the employers establishment or at a prescribed work place, as well as all other time during which the employee is suffered or permitted to work for the employer. Under certain specified conditions time spent in sleeping and eating may be excluded from compensable time.

The FLSA requires that all covered, non-exempt employees be paid at least the statutory minimum wage, currently \$4.25 per hour. ^{14.75}

The FLSA requires that all covered, non-exempt employees be paid time and one-half their regular rates of pay for all hours worked in excess of 40 in a workweek.

Section 13(b)(20) of the FLSA provides an overtime exemption to law enforcement and fire protection employees of a public agency which employs less than five employees in such activities.

Section 7(K) of the FLSA provides that employees engaged in fire protection and/or law enforcement may be paid overtime on a "work period" basis. A "work period" may be from 7 consecutive days to 28 consecutive days in length. For example, fire protection personnel are due overtime under such a plan after 212 hours worked during a 28-day period, while law enforcement personnel must receive overtime after 171 hours during a 28-day period. For work periods with a length between 7 days and 28 days overtime compensation is required when the ratio of the number of hours worked to the number of days

+5.15 effective 9/1/97

in the work period exceeds the ratio of 212 (171 for law enforcement personnel) hours to 28-days.

Under certain prescribed conditions, a state or local government agency may give compensatory time at a rate of not less than one and one-half hours for each overtime hour worked, in lieu of cash overtime compensation. Employees engaged in police and fire protection work may accrue up to 480 hours of compensatory time.

An employee should be permitted to use compensatory time within a reasonable period after making the request, if doing so does not "unduly disrupt" the operations of the employer.

At the time of their termination an employee must be paid the higher of (1) his/her final regular rate of pay or (2) the average regular rate during his/her last three years of employment for any compensatory time remaining "on the books" when termination occurs.

No covered employer may employ any minor in violation of the provisions of the FLSA. The Act establishes specific provisions concerning prohibited occupations and/or hours of employment of minors under age 18.

Covered employers must make, keep and preserve payroll-related records as described by Regulations 29 CFR Part 516.

Where to Obtain Additional Information

This publication is for general information and is not to be considered in the same light as official statements of position contained in the regulations. Copies of Wage and Hour publications may be obtained by contacting the nearest office of the Wage and Hour Division listed in most telephone directories under U.S. Government, Department of Labor.

—DISCLAIMER—

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Fact Sheet No. 007

State and Local Government Under the Fair Labor Standards Act (FLSA)

This fact sheet provides general information concerning the application of the FLSA to State and local government employees.

Characteristics

State and local government employers consist of those entities that are defined as public agencies by the FLSA. "Public Agency" is defined to mean the Government of the United States, the government of a state or political subdivision thereof, an agency of the United States, a state or political subdivision of a state, or any interstate governmental agency. The public agency definition does not extend to private companies that are engaged in work activities normally performed by public employees.

Coverage

Section 3(s)(1)(c) of the FLSA stipulates that all public agency employees of a state, a political subdivision of a state, or an interstate government agency are covered by the FLSA.

Requirements

The FLSA requires employers to:

- ☐ - pay at least the federal minimum wage (currently ~~\$4.25~~^{\$4.75} an hour), to all covered non-exempt employees for all hours worked
- ☐ - pay at least one and one-half times the employees' regular rates of pay to all covered non-exempt employees for all hours worked over 40 in the workweek
- ☐ - comply with the child labor standards
- ☐ - comply with the recordkeeping requirements

In locations with concurrent State wage laws, some states may not recognize or permit the application of some or all of the following exemptions. Since an employer must comply with the most stringent of the State or Federal provisions, it is strongly recommended that the State laws be reviewed prior to applying any of the herein discussed exclusions or exemptions.

Certain employees in the following examples MAY be exempt from the overtime requirements of the FLSA:

- ☐ - subject to restrictions and prior agreement, employees of State or local governments may be paid time and one-half in compensatory time rather than cash
- ☐ - employees who solely at their option occasionally or sporadically work on a part-time basis for the same public agency in a different capacity

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* \$5.15 effective 9/1/97

- ☐ - employees at their option with approval of the agency, who substitute for one another during scheduled work hours in the same work capacity
- ☐ - employees that meet exemption requirements for Executive, Administrative, Professional or Outside Sales occupations
- ☐ - Hospital or Residential care establishment MAY with agreement or understanding with employees adopt a fixed work period of 14 consecutive days and pay overtime after 8 and 80 hours, whichever is greater in the 2 week period
- ☐ - Mass transit employees' time spent in charter activities MAY be excludable from regular rate
- ☐ - Minimum wage and overtime MAY not be required for employees working in separate seasonal amusement or recreational establishments such as swimming pools, parks, etc.

Special Exemption for Employees Engaged in Fire Protection and Law Enforcement Activities

- ☐ - employees may at their own option perform special duty work in fire protection and law enforcement for a separate and independent employer without including wages and hours in regular rate or overtime determinations
- ☐ - Fire Department or Police Department MAY establish a work period ranging from 7 to 28 days in which overtime need be paid only after a specified number of hours in each work period
- ☐ - Any employee who in any workweek is employed by an agency employing less than 5 employees in fire protection or law enforcement may be exempt from overtime

Where to Obtain Additional Information

This publication is for general information and is not to be considered in the same light as official statements of positions contained in the regulations. Copies of Wage and Hour publications may be obtained by contacting the nearest office of the Wage and Hour Division listed in most telephone directories under U. S. Government, Department of Labor.

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Federal Labor Standards Provisions

U.S. Department of Housing
and Urban Development

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 (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less 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 Part 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 Part 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 rate and fringe benefits therefore 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 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

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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)(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 an 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 (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), 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 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 (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). 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 or contributions or costs anticipated for bona fide fringe benefits or cash equivalents there of the types described in Section 1(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 (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 1(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 Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-0014-1), U. S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (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 maintained under 29 CFR Part 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 paragraph A.3.(ii)(b) of this section.

(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 paragraph A.3.(i) of this section 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 Part 5.12.

(4) Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at least 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, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, 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 Bureau of Apprenticeship and Training 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 Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, 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 least 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 this part 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 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may be 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 the contract clauses in 29 CFR Part 5.5.

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 David-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 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

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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 1010, 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. 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 he or she is employed on such work to work in excess of eight hours in any calendar day 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 any calendar day or in excess of forty hours in such workweek, whichever is greater.

(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 eight hours or in excess of the standard workweek of forty 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 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

(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 (formerly part 1518) 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).

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

ATTACHMENT 2-V

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

CONTRACTOR'S LOCAL OPPORTUNITY PLAN

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

- To ascertain from the Locality's TCDP program official the exact boundaries of the project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- To attempt to recruit from within the city 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 and servicing 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.
- 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.
- To insert this plan in all bid documents and to require all bidders on subcontracts to submit an affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- To insure that subcontracts (greater than \$10,000), which are typically let on a negotiated rather than a bid basis in areas other than the covered project area, are also let on a negotiated basis, whenever feasible, in a covered project area.
- To formally contact unions, subcontractors, and trade associations to secure their cooperation in this effort.
- To insure that all appropriate project area business concerns are notified of pending subcontractual opportunities.
- To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this plan.
- To maintain records concerning the amount and number of contracts, subcontracts, and purchases which contribute to objectives.
- To maintain records of all projected work force needs for all phases of the project by occupation, trade, skill level, and number of positions and to update these projections based on the extent to which hiring meets these Local Opportunity objectives.

As officers and representatives of (name of company), we the undersigned have read and fully agree to this Plan, and become a party to the full implementation of the program and its provisions.

Signature

Title

Date

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 he desires.

Name of Bidder:

Address:

Date Organized:

Date Incorporated:

Number of Years in contracting business under present name:

CONTRACTS ON HAND:

Contracts

Dollar Amount**Completion Date**

Type of work performed by your company:

Have you ever failed to complete any work awarded to you?

Have you ever defaulted on a contract?

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

Project

Dollar Amount

Mo/Yr Completed

Major equipment available for this contract:

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

Credit available: \$

Bank reference:

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this _____ day of _____, 19 _____

by:

(Signature)

(Title)

**SPECIAL CONDITIONS AND INSTRUCTIONS TO PROSPECTIVE BIDDERS
FOR THE JARRELL TORNADO RECOVERY PROJECT**

I. As a result of the May, 1997 tornado, Williamson County secured a Community Development grant in order to repair several roads in the Jarrell area. Steger & Bizzell Engineering, Inc. was hired by Williamson County to prepare the engineering plans and bid documents for this project.

On a repair project like this, it is difficult to depict all aspects of the proposed improvements. Basically, it is our goal to scarify and blend the top six (6) inches of the existing road, widen the crowns, add eight (8) inches of flexible base, and pave with 1-1/2" of hot mix. This must be done within the confines of the existing right-of-way while at the same time matching the grades of the adjoining driveways. We are also extending and upsizing most of the existing drainage structures. All of the work will require testing.

II. The Contractor is responsible for all testing expenses. The testing laboratory shall be approved by the Owner.

III. The Contractor is responsible for all construction staking expenses.

IV. The following three (3) pages titled 'WORKERS' COMPENSATION INSURANCE COVERAGE' are hereby considered an integral part of this contract. This coverage is required for all contracts with Williamson County and shall supercede any conflicting sections of this contract.

WORKERS' COMPENSATION INSURANCE COVERAGE.

A. Definitions:

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 (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

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.

Persons providing services on the project ("subcontractor" in S406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, 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" include, 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.

- B. The contractor shall provide coverage, based on proper 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 employees of the contractor providing services on the project, for the duration of the project.
- C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. 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.
- E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:
- (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
 - (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 of coverage ends during the duration of the project.
- F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. 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.
- H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:
- (1) provide coverage, based on proper 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 of its employees providing services on the project, for the duration of the project;
 - (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;

(3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(4) obtain from each other person with whom it contracts, and provide to the contractor:

(a) a certificate of coverage, prior to the other person beginning work on the project; and

(b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

(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

(7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

J. 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 on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

K. 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.

ATTACHMENT 2-W

SAMPLE

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: _____

PROPOSED CONTRACTS BREAKDOWN

Type of Contracts	No. of Contracts	Approx. Total Dollar Amount	Estimated No. \$ to Local Business	Estimated \$ Amount to Local Business
Totals:				

ESTIMATED PROJECT WORKFORCE BREAKDOWN

Work Classifications	Total Estimated Positions	No. Positions Currently Filled	No. Positions Not Filled	No. Positions to Fill with LM Residents
Totals:				

VIII. TECHNICAL SPECIFICATIONS FOR PAVING AND DRAINAGE PROJECTS

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VIII. TECHNICAL SPECIFICATIONS FOR PAVING AND DRAINAGE PROJECTS

VIIIA RIGHT-OF-WAY PREPARATION

VIIIA-1 Description

The work covered by this item consists of preparing the right-of-way construction operations by removing and disposing of all obstructions from the right-of-way and from designated easements, where removal of such obstructions is not otherwise provided for in the Plans and Specifications.

Such obstructions shall be considered to include remains of houses not completely removed by others, foundations, floor slabs, concrete, brick, lumber, plaster, cisterns, water wells, septic tanks, basements, abandoned utility pipes or conduits, underground service station tanks, equipment of other foundations, fences, retaining walls, outhouses, shacks and all other debris.

This item shall also include the removal of trees, stumps, bushes, shrubs, curb and gutter, driveways, paved parking areas, miscellaneous stone, brick, concrete, sidewalks, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron, all rubbish and debris whether above or below ground except live utility facilities.

It is the intent of this Specification to provide for the removal and disposal of all obstructions to the new construction together with other objectionable materials not specifically provided for elsewhere by the Plans and Specifications.

VIIIA-2 Construction Methods

Areas designated on the Plans shall be cleared of all obstructions, vegetation, abandoned structures as defined above; except trees or shrubs specifically designated by the ENGINEER for preservation shall be carefully trimmed as directed and shall be protected from scarring, barking, or other injuries during construction operations. Exposed ends of pruned limbs shall be treated with an approved asphaltic material.

Unless otherwise indicated on Plans, all underground obstructions shall be removed to the following depths:

- a) In areas to receive embankment, one (1) foot below natural ground.
- b) In areas to be excavated, one (1) foot below the lower elevation of the excavation.
- c) All other areas, one (1) foot below natural ground.

Holes remaining after removal of all obstructions, objectionable material, trees, stumps, etc. shall be backfilled and tamped as directed by ENGINEER.

Stumps, roots, etc. shall be removed to a depth of at least one (1) foot below natural ground or finished cut section as the case may be.

Where a conduit is shown to be replaced, it shall be removed in its entirety and all connections to the existing line shall be extended to the new line.

Where an existing conduit is to be cut and plugged, the line shall be cut and plugged with concrete or brick and mortar or a precast stopper grouted in place.

All salvageable material, as determined by the ENGINEER, will remain the property of the Owner and will be stored at the site as directed by the ENGINEER. Material to be removed will be designated "Salvageable" or "Non-Salvageable" by the ENGINEER prior to removal by the CONTRACTOR.

All "Non-Salvageable" materials and debris removed shall become the property of the CONTRACTOR and shall be removed from the site.

VIIIB CLEARING AND GRUBBING**VIIIB-1 Description**

The work covered by this item consists of removing and disposing of all trees, stumps, brush, roots, shrubs, vegetation, logs, rubbish and other objectionable material.

VIIIB-2 Construction Methods

The right-of-way shall be cleared of all trees, stumps, brush, etc. as defined above, except those trees or shrubs specifically designated on the plans or by the Engineer for preservation. Trees and shrubs designated for preservation shall be carefully trimmed as directed by the Engineer and shall be protected from scarring, barking, or other injuries during construction operations. Exposed ends of pruned limbs shall be treated with an approved asphaltic material.

Areas required for embankment construction, for street, channel and structural excavation shall be cleared and grubbed. On areas required for street, channel, or structural excavation, all stumps, roots, etc., shall be removed to a depth of at least one (1) foot below the lower elevation of the excavation. On areas required for embankment construction, all stumps, roots, etc., shall be removed to a depth of at least one (1) foot below the existing ground surface. All holes remaining after clearing and grubbing shall be backfilled and tamped as directed by the Engineer and the entire area bladed to prevent ponding of water and to provide drainage, except in areas to be immediately excavated the Engineer may direct the holes not to be backfilled.

All cleared and grubbed material shall be disposed of in a manner satisfactory to the Engineer. Unless otherwise provided, all materials as above described shall become the property of the of the Contractor.

The Contractor may not be allowed to burn material, except by permission of the Fire Marshall.

VIIID STREET EXCAVATION

VIIID-1 Description

The work covered by this item consists of excavating and properly utilizing or otherwise satisfactorily disposing of all excavated material, of whatever character, within the limits of the work and the constructing, compacting, shaping and finishing of all earthwork on the entire length of the street and approaches in accordance with Specification requirements herein outlined and in conformity with the required lines, grades and typical cross sections shown on the Plans or directed by the ENGINEER.

VIIID-2 Classification

All excavation shall be unclassified and shall include all materials encountered regardless of their nature or the manner in which they are removed.

VIIID-3 Construction Methods

All street excavation shall be performed as specified herein and shall conform to the established alignment, grades and cross sections. The CONTRACTOR will be required to set blue-tops for the subgrades on center-lines at quarter points and curb lines at intervals not exceeding 50 feet. Suitable excavated materials shall be utilized, insofar as practicable in constructing required embankments. The construction of all embankments shall be in accordance with the provisions of "Embankment".

Unsuitable excavated materials or excavation in excess of that needed for construction shall be known as "Waste" and shall become the property of the CONTRACTOR and it shall become his sole responsibility to dispose of this material off the limits of the right-of-way in an environmentally sound manner as approved by the ENGINEER.

All Blasting shall conform to the General Conditions of Agreement. In all cases a Blasting Permit must be obtained in advance from the appropriate agency.

VIIIF BORROW

VIIIF-1 Description

"Borrow" shall consist of required excavation, removal and proper utilization of materials secured from sources obtained by the Contractor and approved by the Engineer. Compaction of embankments constructed from borrow as provided shall herein shall conform to the method of "Density Control" as outlined in "Embankment".

Borrow will be resorted to only when shown on plans or directed by the Engineer and then only from approved sources.

VIIIF-2 Types

All authorized borrow shall conform to one of the following types:

Type A (Select Borrow)

This material shall consist of sand or other suitable granular material, free from vegetation or other objectionable matter reasonably free from lumps of earth and when tested by standard TxDOT laboratory methods, shall meet the following requirements:

The liquid limits shall not exceed.....	45
The plasticity index shall not be less than.....	4
nor more than.....	15

Type B

This material shall consist of suitable earth material such as loam, clay or other such materials that will form a stable embankment.

Type C

This material shall conform to the specification requirements shown on the plans.

VIIIF-3 Construction Methods

All suitable material shall be used in the formation of embankments as required by "Embankment", or shall otherwise be utilized as indicated on plans or as directed, and the completed work shall conform to the established alignment, grades and cross section. During construction the borrow sources shall be kept drained, insofar as practicable, to permit final cross sections to be taken when required.

The borrow source shall be left in a suitable condition, so as to provide proper drainage where practical and to permit accurate measurement when required.

The Engineer shall be notified sufficiently in advance of opening any approved borrow source to permit necessary testing, taking and measurement, when required.

VIII G EMBANKMENT**VIII G-1 Description**

The work covered by this item consists of the placing and compacting of suitable materials obtained from approved sources for utilization in the construction of street or channel embankments, berms, levees and dikes.

VIII G-2 Construction Methods**(1) General**

Prior to placing any embankment, all "Right-of-Way Preparation" and/or "Clearing and Grubbing" operations shall have been completed on the areas over which the embankment is to be placed. Stump holes or other small excavations in the limits of the embankments 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 washed shall be restored to approximately its original slope and the ground surface thus prepared shall be compacted by sprinkling and rolling.

Unless otherwise indicated on plans, the surface of the 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 four (4) inches. The loosened material shall be recompacted with the new embankment as hereinafter specified.

Where indicated on plans or directed by the Engineer, the surface of hillsides to receive embankment shall be loosened by scarifying or plowing to a depth of not less than four (4) inches, or cut into steps before embankment materials are placed. The embankment shall then be placed in layers, as hereinafter specified, beginning at the low side in part width layers and increasing the widths as the embankment is raised. The material which has been loosened shall be recompacted simultaneously with the embankment material placed at the same elevation.

Where embankments are to be placed adjacent to or over existing roadbeds, the roadbed slopes shall be plowed or scarified to a depth of not less than six (6) inches and the embankment built up in successive layers, as hereinafter specified, to the level of the old roadbed shall be scarified, and recompacted with the next layer of the new embankment. The total depth of the scarified and added material shall not exceed the permissible depth layer.

Trees, stumps, roots, vegetation, or other unsuitable materials shall not be placed in embankment.

Except as otherwise required by the plans, all embankment shall be constructed in layers approximately parallel to the finished grade of the roadbed and unless otherwise specified, each layer shall be so constructed as to provide a uniform slope of 1/4 inch per foot from the center line of the roadbed to the outside, except that on super elevated curves, each layer shall be constructed to conform to the super elevated curves, each layer shall be constructed to conform to the super elevation required by the governing standard.

Embankments shall be constructed to the grade established by the Engineer and completed embankments shall correspond to the general shape of the typical sections shown on the plans and each section of the embankment shall correspond to the detailed section or slopes established by the Engineer. After completion of the street, it shall be continuously maintained to its finished section and grade until that portion of the work is accepted.

(2) Earth Embankments

Earth embankments shall be defined as those composed of material other than rock, and shall be constructed of accepted material from approved sources.

Except as otherwise specified, earth embankments shall be constructed in successive six (6) inch layers for the full width of the individual street cross section and in such length as are best suited to the sprinkling and compaction methods utilized.

Minor quantities of rock encountered in constructing earth embankment shall be incorporated in the specified embankment layers, or may be placed in accordance with the requirements for the construction of rock embankments in the deeper fills, provided such placement of rock is not immediately adjacent to structures.

Each layer of embankment 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 featheredged for at least 100 feet or the material shall be so mixed as to prevent abrupt changes in the soil. No material placed in the embankment by dumping in a pile or windrows shall be moved by blading or similar methods. Clods or lumps of material shall be broken and the embankment material mixed by blading, harrowing, discing or similar methods to the end that a uniform material of uniform density is secured in each layer. Water required for sprinkling to bring the material to the moisture content necessary for maximum compaction shall be evenly applied and it shall be the responsibility of the Contractor to secure a uniform moisture content throughout the layer by such methods as may be necessary.

All earth cuts, full width or part width cuts in side hill, which are not required to be excavated below subgrade elevation shall be scarified to a uniform depth of at least six (6) inches below grade, and the material shall be mixed and reshaped by blading and then

sprinkled and rolled in accordance with the requirements outlined above for earth embankments and to the same density as that required for the adjacent embankment.

Compaction of embankments shall be obtained by the "Density Control" method. Each layer shall be compacted to the required density by any method, type and size of equipment which will give the required compaction. Prior to and in conjunction with the rolling operation, each layer shall be brought to the moisture content necessary to obtain the required density and shall be kept leveled with suitable equipment to insure uniform compaction over the entire layer.

For each layer of earth embankment and select material, it is the intent of this specification to provide the density as required herein, unless otherwise shown on the plans. Soils shall be sprinkled as required and compacted to the extent necessary to provide not less than 95 percent of the density as determined in accordance with TxDOT Test Method Tex-113-E.

After each layer of earth embankment or select material is complete, tests as necessary will be made by the Engineer. If the material fails to meet the density specified, the course shall be reworked as necessary to obtain the specified compaction.

Just prior to placing any base materials, density and moisture content of the top three (3) inches of compacted subgrade may be checked and if tests show the density to be more than two (2) percent below the specified minimum or the moisture content to be more than three (3) percent above or below the optimum, the course shall be reworked as necessary to obtain the specified compaction and moisture content.

(3) Rock Embankments

Rock embankments shall be defined as those composed principally of rock, and shall be constructed of accepted material from approved sources.

Except as otherwise specified, rock embankments, normally shall be constructed in successive layers for the full width of the individual roadway cross section and of eighteen (18) inches or less in depth. When, in the opinion of the Engineer, the rock sizes necessitate a greater depth of layer and the height of fill will permit, the layer depth may be increased as necessary, but in no case shall the depth of layer exceed two and one half (2 1/2) feet. Each layer shall be constructed by starting at one end and dumping the rock on top of the layer being constructed then pushing the material ahead with an approved "Bulldozer" in such manner that the larger rock will be placed on the ground or preceding embankment layer and the interstices between the larger stones will be filled with small stones and spalls by the operation and from the placing of succeeding loads of material.

The maximum dimension of any rock used in embankment shall be less than the depth of the embankment layer, and in no case shall any rock over two (2) feet in its greatest dimension be placed in the embankment. All oversized rock which is otherwise suitable for construction shall be broken to the required dimension and utilized in embankment construction where proposed by plans, except that when preferred by the Contractor and acceptable to the Engineer, such rock may be placed at other points where the embankment layer is of greater depth, thus requiring less breakage.

Unless otherwise provided, the upper or final layer of the embankment shall contain no stones larger than four (4) inches in their greatest dimension, and shall be composed of material so graded that the density and uniformity of the surface layer may be secured by the methods and requirements as set forth for "Density Control" method.

Exposed oversize material shall be reduced by sledging or other methods.

Each layer shall be compacted to the required density as outlined for "Earth Embankment", except in those layers where rock will make density testing difficult, the Engineer may accept the layer by visual inspection.

(4) At Culverts and Bridges

Embankments adjacent to culverts and bridges which cannot be compacted by use of the blading and rolling equipment used in compacting the adjoining sections of embankment shall be compacted in the manner prescribed under Item No. 401, "Structural Excavation and Backfill".

Embankment placed around spill-through type abutments shall be constructed in six (6) inch loose layers of uniform suitable material placed in such manner as to maintain approximately the same elevation on each side of the abutment, and all materials shall be mixed, wetted, and compacted as specified above.

As a general rule embankment material placed adjacent to any portion of any structure and in the first two layers above the top of any culvert or similar structure shall be an earth free of any appreciable amount of gravel or stone particles more than four (4) inches in greatest dimension and of such gradation as to permit thorough compaction. When, in the opinion of the Engineer, such material is not readily available, the use of rock or gravel mixed with earth will be permitted in which case no particles larger than twelve (12) inches in greatest dimension and six (6) inches in least dimension may be used and the percentage of fines shall be sufficient to fill all voids and insure a uniform and thoroughly compacted mass of proper density.

VIIH SUBGRADE PREPARATION**VIIH-1 Description**

The work covered by this item consists of scarifying, blading and rolling the subgrade to obtain a uniform texture and provide as nearly as practicable a uniform density for the top six inches of the subgrade.

VIIH-2 Construction Methods

The subgrade shall be shaped in conformity with the typical sections shown on the plans and to the lines and grades established by the ENGINEER by the removal of existing material or addition of approved material. All unstable or otherwise objectionable material shall be removed from the subgrade and replaced with approved material. All holes, ruts and depressions shall be filled with approved material. The surface of the subgrade shall be finished to the lines and grades as established, and be in conformity with the typical sections shown on the Plans. Any deviation in excess of one-half (1/2) inch cross section and in a length of sixteen (16) feet measured longitudinally shall be corrected by loosening, adding, or removing material, reshaping and compacting by sprinkling and rolling. Sufficient subgrade shall be prepared in advance to insure satisfactory prosecution of the work. The CONTRACTOR will be required to set blue tops for the subgrade on center-line, at quarter points and curb lines at intervals not exceeding fifty (50) feet.

Material removed may be utilized in the addition of material to the subgrade if approved by the ENGINEER. All other material required for completion of the subgrade shall also be subject to approval by the ENGINEER.

Subgrade materials shall be compacted by approved mechanical tamping equipment to an apparent dry density of the total material of not less than ninety five (95) percent of the maximum dry density as determined in accordance with TxDOT Test Method TEX-113-E. Tests for density will be made within 24 hours after compacting operations are completed. If the material fails to meet the density specified, it shall be reworked as necessary to obtain the density required. Just prior to placing any base materials, density and moisture content of the top six (6) inches of compacted subgrade shall be checked and if tests show the density to be more than two (2) percent below the specified minimum or the moisture content to be more than three (3) percent above or below the optimum, the subgrade shall be reworked as necessary to obtain the specified compaction and moisture content.

VIII REWORKING BASE MATERIAL

VIII-1 Description

This Item shall govern for reworking existing base material (with or without an asphaltic concrete pavement) in accordance with the requirements as herein specified and as shown on the plans. This Item shall also govern for incorporation of new base material when shown on the plans.

VIII-2 Types of Work

Reworking base material shall consist of one (1) of the following types of work.

Type A. Scarifying only.

Type B. Scarifying, Salvaging and Replacing.

Type C. Scarifying, Salvaging and Stockpiling.

Type D. Scarifying and Reshaping.

Scarifying shall consist of loosening and breaking the existing base material.

Salvaging shall consist of removing, saving and temporarily stockpiling, if necessary, the existing base material.

Stockpiling shall consist of final storage of the salvaged base material at the location shown on the plans or as directed by the Engineer.

Replacing shall consist of returning and reworking the salvaged base material, with or without additional new base material, on the prepared roadbed.

Reshaping shall consist of reworking the in-place base material with or without additional new base material.

VIII-3 Materials

(1) **Flexible Base.** New base material shall meet the material requirements for the type and grade as shown on the plans.

(2) **Water.** Water shall meet the material requirements of "Sprinklering".

VIII-4 Construction Methods

(1) **General.** The work shall be performed to the width and depth shown on the typical sections and as specified below for the type of work shown on the plans.

(2) **Removal of Asphaltic Concrete Pavement.** When shown on the plans, any asphaltic concrete pavement, including any accompanying surface treatment, plant-mix seal and micro-surfacing, shall be removed prior to scarifying the existing base material. The Contractor shall make any necessary provision to prevent contamination of the asphaltic material during removal of the asphaltic material. Removal of the asphaltic material shall be in accordance with the applicable bid items. When the existing pavement consists only of a surface treatment, it will not be removed before scarifying.

(3) **Type of Work.**

(a) **Type A (Scarifying only).** The existing base, with or without existing asphaltic concrete pavement, shall be scarified for its full width and depth, unless otherwise shown on the plans. All material shall be broken into particles of a maximum size as approved by the Engineer, or as shown on the plans.

(b) **Type B (Scarifying, Salvaging and Replacing).**

(i) **Scarifying.** The existing base, with or without existing asphaltic concrete pavement, shall be cleaned of all objectionable materials by blading, brooming or other approved methods, prior to scarifying. After cleaning, the existing material shall be scarified for its full width and depth, unless otherwise shown on the plans. However, in no case shall the underlying subgrade be disturbed. Unless otherwise shown on the plans, the material shall be broken into particles of not more than two and one half (2-1/2) inches in size.

(ii) **Salvaging.** All salvaging operations, including temporary stockpiling or windrowing, shall be conducted in such a manner as not to interfere with traffic, proper drainage or the general requirements of the work. All material shown on the plans to be salvaged shall be kept reasonably free of soil from the subgrade or roadbed during salvaging operation. The scarified material shall be removed from the roadbed using equipment approved by the engineer. The salvaged material may be placed in temporary stockpiles or windrows until sufficient subgrade has been prepared to receive the material.

(iii) **Replacing.**

(*) **Preparation of Subgrade).** Prior to replacing the salvaged material, the subgrade shall be constructed and shaped to conform to the typical sections as shown on the plans or as established by the Engineer. This work shall be done in accordance with the provisions of applicable bid items.

Prior to replacing the salvaged material, when shown on the plans and when directed by the Engineer, the Contractor shall proof roll the roadbed in accordance with "Rolling (Proof)". Soft spots shall be corrected as directed by the Engineer.

(*) Replacement of Salvaged Material. The salvaged material shall be deposited on the prepared subgrade, sprinkled if directed, bladed, and shaped to conform to the typical sections shown on the plans or as directed by the Engineer.

New base material, when shown on the plans to be mixed with the salvaged base material, shall be placed and uniformly incorporated with the salvaged material.

All areas and nests of segregated material shall be corrected or removed and replaced with satisfactory and/or new material as directed by the Engineer. All salvaged material shall be kept reasonably free of objectionable materials during the replacing operations.

(4) Type C (Scarifying, Salvaging and Stockpiling).

(a) Scarifying. The existing base, with or without existing asphaltic concrete pavement, shall be cleaned of all objectionable materials by blading, brooming or other approved methods, prior to scarifying. After cleaning, the existing material shall be scarified for its full width and depth, unless otherwise shown on the plans. However, in no case shall the underlying subgrade be disturbed. Unless otherwise shown on the plans, the material shall be broken into particles of not more than two and one half (2-1/2) inches in size.

(b) Salvaging. All salvaging operations, including temporary stockpiling or windrowing, shall be conducted in such a manner as not to interfere with traffic, proper drainage or the general requirements of the work. All materials shown on the plans to be salvaged shall be kept reasonably free of soil from the subgrade or roadbed during the salvaging operation. The scarified material shall be removed from the roadbed using equipment approved by the Engineer. Scarified material may be placed in temporary stockpiles or windrows prior to loading into approved equipment for hauling to the final stockpile site.

(c) Stockpiling. Trash, wood, brush, stumps and other objectionable materials at the final storage (stockpile) site shall be removed and disposed of as shown on the plans or as approved by the Engineer prior to the stockpiling of the salvaged base material. The Contractor shall prepare the stockpile site and shall deliver the salvaged material to the prepared final stockpile area. The material shall be worked into a neat stockpile as shown on the plans or as approved by the Engineer.

(5) Type D (Scarifying and Reshaping).

(a) Preparation of Subgrade. Prior to scarifying the existing base, if required, any new subgrade shall be constructed and shaped to conform to the typical sections as shown on the plans or

as established by the Engineer. This work shall be done in accordance with the provisions of applicable bid items.

(b) **Scarifying.** The existing base, with or without existing asphaltic concrete pavement, shall be cleaned of all objectionable materials by blading, brooming or other approved methods, prior to scarifying. After cleaning, the existing material shall be scarified for its full width and depth, unless otherwise shown on the plans. However, in no case shall the underlying subgrade be disturbed. Unless otherwise shown on the plans, the material shall be broken into particles of not more than two and one half (2-1/2) inches in size.

(c) **Reshaping.** After completion of scarifying, the existing base shall be mixed and shaped to conform to the typical sections shown on the plans. However, in no case, shall the underlying subgrade be disturbed.

New base material, when shown on the plans to be mixed with the scarified material, shall be placed on the existing scarified material, and uniformly incorporated.

VIII-5 Compaction Methods

(1) **General.** The base material shall be compacted either by "Ordinary Compaction" or "Density Control" as shown on the plans.

(2) **Ordinary Compaction.** When "Ordinary Compaction" is shown on the plans, the following shall apply:

The material shall be sprinklered and rolled as directed by the Engineer. Compaction equipment shall be approved by the Engineer. All irregularities, depressions or weak spots which develop shall be corrected immediately by scarifying the areas and recompacting by sprinklering and rolling.

Should the material lose the required stability, compaction or finish before the next course is placed, or the project is accepted, it shall be reworked as described in "Reworking a Section". However, compaction shall be in accordance with "Ordinary Compaction".

(3) **Density Control.** When "Density Control" is shown on the plans, the following shall apply:

Unless otherwise shown on the plans, each course shall be sprinklered as required and compacted to the extent necessary to provide not less than 98 percent of the optimum density as determined by TxDOT Test Method Tex-113-E. Roadway density testing will be as outlined in TxDOT Test Method Tex-115-E.

When material fails to meet the density requirements, or should the material lose the required stability, density or finish before the next course is placed, or the project is accepted, it shall be reworked as described below.

(4) Reworking a Section. Should the reworked base material, due to any reason or cause, lose the required stability, density or finish before the next course is placed or the project is accepted, it shall be recompact and refinished at the Contractor's expense until it is acceptable.

VIII-6 Tolerances

(1) Density Tolerances. The Engineer may accept the work providing not more than one (1) out of the most recent five (5) density tests performed is below the specified density provided the failing test is no more than three (3.0) pounds per cubic foot below the specified density.

(2) Grade Tolerances. In areas on which pavement is to be placed, any deviation in excess of 1/4 inch in cross section or 1/4 inch in a length of 16 feet measured longitudinally shall be corrected by loosening, adding or removing material, reshaping and recompact by sprinklering and rolling.

VIIIM FLEXIBLE BASE (CRUSHED STONE)**VIIIM-1 Description**

"Flexible Base" shall consist of a foundation course for surfacing, pavement or other base courses; shall be composed of crushed stone or gravel, and shall be constructed as herein specified in one or more courses in conformity with the typical sections shown on the Plans and to the lines and grades as established by the ENGINEER.

VIIIM-2 Material

The material shall be crushed or uncrushed as necessary to meet the requirements hereinafter specified, and shall consist of durable stone or gravel, crushed and/or screened to the required particle size, with or without other approved fine sized material. The material shall be from approved sources.

Testing of flexible base materials shall be in accordance with the following TxDOT standard laboratory test procedures:

- | | | |
|----|--|-------------|
| 1) | Preparation for Soil Constants and Sieve Analysis..... | Tex-101-E |
| 2) | Liquid Limit..... | Tex-104-E |
| 3) | Plastic Limit..... | Tex-105-E |
| 4) | Plasticity Index | Tex-106-E |
| 5) | Sieve Analysis..... | Tex-110-E |
| 6) | Wet Ball Mill | Tex-116-E |
| 7) | Triaxial Test | Tex-117-E/2 |

Unless otherwise specified on the Plans, job-control samples for testing the materials for Soil Constants, Gradation and Wet Ball Mill shall be taken prior to the compaction operations.

Unless otherwise specified on the Plans, all base material will be stockpiled after crushing; tested by the testing agency designated by the OWNER, and approved by the OWNER, prior to being hauled to the project site.

The material shall be well graded and when properly tested, shall meet the following requirements:

Retained on Sq. Sieve	%
1 3/4"	0
7/8"	10-35
3/8"	30-50
No. 4	45-65
No. 40	70-85
Maximum Liquid Limit	35
Maximum Plasticity Index	10
*Max Wet Ball Mill	50

Minimum compressive strength when subjected to the triaxial test: 35 PSI at 0 PSI lateral pressure and 175 PSI at 15 PSI lateral pressure, unless otherwise designated on the Plans.

*Unless otherwise shown on Plans, the maximum increase in material passing the number 40 sieve resulting from the Wet Ball Mill Test shall not exceed 20.

VIIIM-3 Construction Methods

1) Preparation Subgrade

The street shall be prepared and shaped in conformity with Item 201, "Subgrade Preparation", and the typical sections shown on Plans and to the lines and grades as established by the ENGINEER. The surface of the subgrade shall be finished to line and grade as established and in conformity with the typical section shown on Plans, and any deviation in excess of 1/4 inch in cross section and in a length of 10 feet measured longitudinally shall be corrected by loosening, adding or removing material, reshaping and recompacting by sprinkling and rolling. Sufficient subgrade shall be prepared in advance to insure satisfactory prosecution of the work. Material excavated in the preparation of the subgrade shall be utilized in the construction of slopes or otherwise disposed of as directed, and any additional material required for the completion of slopes shall be secured from sources indicated on Plans or designated by the ENGINEER. Blue tops shall be set by the CONTRACTOR for subgrade on center-line, quarter points and curb lines at intervals not exceeding 50 feet.

2) First Course

Immediately before placing the base material, the subgrade shall be checked as to conformity with grade and section. The thickness of each course shall not exceed 6 inches and will be equal increments of the total depth.

The material shall be delivered in approved vehicles of a uniform capacity and it shall be the charge of the CONTRACTOR that the required amount of specified material shall be delivered in each 100 foot station. Material deposited upon the subgrade shall be spread and shaped the same day unless otherwise directed by the ENGINEER in writing. In the event inclement weather or other unforeseen circumstances render impractical the spreading of the material during the first 24 hour period, the material shall be scarified and spread as directed by the ENGINEER. The material shall be sprinkled, if directed, and shall then be bladed, dragged and shaped to conform to typical sections as shown on Plans. All areas and "nests" of segregated course or fine material shall be corrected or removed and replaced with well graded material, as directed by the ENGINEER. If additional binder is considered desirable or necessary after the material is spread and shaped, it shall be furnished and applied in the amount directed by the ENGINEER. Such binder material shall be carefully and evenly incorporated with the material in place by scarifying, harrowing, brooming or by other approved methods.

The course shall be sprinkled as required and compacted to the extent necessary to provide not less than the percent density as hereinafter specified under "Density". In addition to the requirements specified for density, the full depth of flexible base shown on the Plans shall be compacted to the extent necessary to remain firm and stable under construction equipment. After each section of flexible base is completed, tests as necessary will be made by the ENGINEER. If the material fails to meet the density requirements, it shall be reworked as necessary to meet these requirements. Throughout this entire operation the shape of the course shall be maintained by blading, and the surface upon completion shall be smooth and in conformity with the typical section shown on the Plans and to the established lines and grades. In that area on which pavement is to be placed, any deviation in excess of 1/4 inch in cross section and in a length of 10 feet measured longitudinally shall be corrected by loosening, adding or removing material, reshaping and recompacting by sprinkling and rolling. Should the base course, due to any reason or cause, lose the required stability, density and finish before the surfacing is complete, it shall be recompacted and refinished at the sole expense of the CONTRACTOR.

3) Succeeding Courses

Construction methods shall be the same as prescribed for the first course. Blue tops shall be set by the CONTRACTOR for finished base grade on center-line and intermediate points not exceeding 11 feet between points at 50 foot intervals.

4) Density

Each course of flexible base shall be compacted to not less than 100 percent density when tested in accordance with TxDOT Test Method TEX-113-E. Field density determination shall be made in accordance with approved methods.

VIIIN SPRINKLING FOR DUST CONTROL**VIIIN-1 Description**

Sprinkling for dust control shall consist of the authorized application of water asphalt emulsion on specified streets, detour or haul routes, or on the construction site for the purpose of maintaining these areas relatively free of dust.

VIIIN-2 Construction Methods

Dust control shall be achieved by the application of water or asphalt emulsion by sprinkling in amounts sufficient to control the dust to the satisfaction of the Engineer.

The Contractor shall furnish and operate an approved sprinkler, equipped with valves to regulate the flow of the liquid to the sprinkler bar so that the liquid will be evenly distributed and at a controllable rate over the entire width sprinkled. It shall be the Contractor's continuous responsibility at all times including nights, holidays, weekends, etc. until acceptance of the project by the Owner to maintain the specified areas relatively free of dust in a manner which will cause the least inconvenience to the public.

VIII ROLLING (FLAT WHEEL)**VIII-1 Description**

"Rolling (Flat Wheel)" shall consist of the compaction of embankment, flexible base, surface treatments, by the operation of approved power rollers as herein specified and as directed by the Engineer.

VIII-2 Equipment**(1) Embankments and Flexible Bases**

Power rollers shall be of the three-wheel, self propelled type, weighing not less than 10 tons and shall provide a compression on the rear wheels of not less than 325 pounds per linear inch of tire width. All wheels shall be flat, the rear wheels shall have a diameter of not less than 48 inches, and each shall have a tire width of not less than 20 inches.

(2) Surface Treatments

Power rollers shall be the three-wheel on tandem, self-propelled type, weighing not less than 3 tons nor more than 6 tons. All wheels shall be flat.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction within the same period of time as would be expected of the specified equipment, as determined by the Engineer, its use shall be discontinued.

Rollers shall be maintained in good repair and operating conditions and shall be approved by the Engineer.

VIII-3 Construction Methods**(1) Embankments and Flexible Bases**

The embankment layer of the base course shall be sprinkled if directed and rolling with a power roller shall start longitudinally at the sides and proceed towards the center, overlapping on successive trips by at least one-half of the width of the rear wheel of the power roller. On superelevated curves, rolling shall begin at the low sides and progress toward the high sides. Alternate trips of the roller shall be slightly different in length. The rollers, unless otherwise directed, shall be operated at a speed between 2 and 3 miles per hour.

(2) Surface Treatments

Rolling shall be done as called for in surface treatment items. The sequence of work shall be as specified for embankment layer or base course. The operating speed shall be determined from rates shown on plans or shall be as directed by the Engineer.

VIII ROLLING (PNEUMATIC TIRE)

VIII-1 Description

"Rolling (Pneumatic Tire)" shall consist of the compaction of embankment, flexible base, surface treatments or pavements by the operation of approved pneumatic tire rollers as herein specified and as directed by the Engineer.

(1) Light Pneumatic Tire Roller

The light pneumatic tire roller shall consist of not less than nine (9) pneumatic tired wheels, running on axles in such manner that the rear group of tires will cover the entire gap between adjacent tires of the forward group, and mounted in a rigid frame and provided with a loading platform of body suitable for ballast loading. The front axle shall be attached to the frame in such manner that the roller may be turned within a minimum circle. the pneumatic tire roller under working conditions shall have an effective rolling width of approximately 60 inches and shall be so designed that by ballast loading, the total load may be varied uniformly from 9,000 pounds or less to 18,000 pounds or more. The roller shall be equipped with tires that will afford ground contact pressures to 45 pounds per square inch or more. the operating load and tire air pressure shall be within the range of the manufacturer's chart as directed by the Engineer. The roller under working conditions shall provide a uniform compression under all wheels. The pneumatic tire roller shall be drawn by either a suitable crawler type tractor, or pneumatic tired tractor, or a truck of adequate tractive effort, or may be of the self propelled type, and the roller, when drawn or propelled by either type of equipment, shall be considered a light pneumatic tire roller unit.

(2) Medium Pneumatic Tire Roller (Type A)

The medium pneumatic tire roller (Type A) shall consist of not less than seven pneumatic tired wheel, running on axles in such manner that the rear group of tires will cover the entire gap between adjacent tires of the forward group and mounted in a rigid frame and provided with a loading platform or body suitable for ballast loading. The front axle shall be attached to the frame in such a manner that the roller may be turned within a minimum circle. The pneumatic tire roller under working conditions shall have an effective rolling width of approximately 84 inches and shall be so designed that by ballast loading the total load may be varied uniformly from 23,500 pounds or less to 50,000 pounds or more. The operating load and tire air pressure shall be within the range of the manufacturer's chart as directed by the Engineer.

The pneumatic tire roller shall be drawn by either a suitable crawler type tractor, a pneumatic tired tractor, or a truck of adequate tractive effort, or may be of the self-propelled type and roller, when drawn or propelled by either type of equipment, shall be

considered a medium pneumatic tire roller unit. the power unit shall have adequate tractive effort to properly move the operating roller at variable uniform speeds up to approximately 5 mile per hour.

(3) Medium Pneumatic Tire Roller (Type B)

The medium pneumatic tire roller (Type B) shall conform to the requirements for Medium Pneumatic Tire Roller, Type A as specified in Article 232.1(2) except that the roller shall be equipped with tires that will afford ground contact pressures to 90 pounds per square inch or more.

When used on seal coats, asphaltic surface treatments and bituminous mixture pavements, the roller shall be self-propelled and equipped with smooth tread tires whether "Rolling (Light Pneumatic Tire)" or "Rolling (Medium Pneumatic Tire)" is specified on the plans. The roller shall be so constructed as to be capable of being operated in both a forward and a reverse direction. When used on bituminous mixture pavements, the roller shall have suitable provisions for moistening the surface of the tires while operating.

When turning is impractical or detrimental to the work and when specifically directed by the Engineer, the roller shall be of the self-propelled type.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction within the same period of time as would be expected of the specified equipment, as determined by the Engineer, its use shall be discontinued.

Rollers shall be maintained in good repair and operating condition and shall be approved by the Engineer.

VHHP-2 Construction Methods

The embankment layer or the base course shall be sprinkled if directed and rolling with a pneumatic tire roller shall start longitudinally at the sides and proceed towards the center, overlapping on successive trips by at least one-half of the width of the pneumatic tire roller. On superelevated curves, rolling shall begin at the low sides and progress toward the high sides. Alternate trips of the roller shall be slightly different in length.

The light pneumatic tire roller shall be operated at speeds between 4 and 12 miles per hour for asphalt surfacing work and between 2 and 6 mile per hour for all other work.

The medium pneumatic tire roller shall be operated at speeds as directed by the Engineer.

Sufficient rollers shall be provided to compact the material in a satisfactory manner, the minimum number of rolling units to be governed by progress in placing the materials to be compacted. The quantity of material placed per hour shall be determined by averaging the total quantity of material placed within any one working day. When operations are so isolated from one another that one roller unit cannot perform the required compaction satisfactorily additional roller units shall be provided and operated as directed by the Engineer.

VIIIQ ROLLING (TAMPING)**VIIIQ-1 Description**

"Rolling (Tamping)" shall consist of the compaction of embankment or of flexible base by the operation of approved tamping rollers as herein specified and as directed by the Engineer.

VIIIQ-2 Equipment

The tamping rollers shall consist of two metal rollers, drums or shells of 40 inches minimum diameter; each not less than 42 inches in length and unit-length and unit-mounted in a rigid frame in such manner that each roller may oscillate independently of the other; and each roller, drum or shell shall be surmounted by metal studs with tamping feet projecting not less than seven (7) inches from the surface and spaced not less than six (6) inches nor more than ten (10) inches measured diagonally center to center and the cross-sectional area of each tamping foot, measured diagonally center to center and the cross-sectional area of each tamping foot, measured perpendicularly to the axis of the stud, shall be not less than five (5) nor more than eight (8) square inches. the roller shall be supplemented with cleaning teeth to provide self-cleaning. The roller shall be so designed that by ballast loading, the load on each tamping foot may be varied uniformly from 125 to not less than 175 pounds per square inch of cross-sectional area. The load per tamping foot will be determined by dividing the total weight of the roller by the number of tamping feet in one row parallel to or approximately parallel to the axis of the roller. The compression to be provided at any time shall be as directed by the Engineer. The tamping roller shall be drawn by suitable power equipment of adequate tractive effort. Two tamping rollers consisting of four cylinders, conforming to the above prescribed requirements, drawn by approved power equipment, shall be considered a roller unit.

Where turning is impractical or detrimental to the work and when specifically directed by the Engineer, one tamping roller consisting of two cylinders, fastened to the front end of approved power equipment, shall be considered a roller unit.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction within the same period of time as would be expected of the specified equipment, as determined by the Engineer, its use shall be discontinued.

Rollers shall be maintained in good repair and operating condition and shall be approved by the Engineer.

VIIIQ-3 Construction Methods

This work shall be done only when ordered by the Engineer. The embankment layer or the base course shall be sprinkled if directed and rolling with a tamping roller unit shall start longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least one-half of the width of the tamping roller unit. On superelevated curves rolling shall begin at the low sides and progress toward the high sides. Alternate trips of the unit shall be slightly different in length. The tamping roller unit, unless otherwise directed, shall be operated at a speed between 2 and 3 miles per hour.

Sufficient rollers shall be provided to compact the material in a satisfactory manner, the minimum number of rolling units to be governed by the basis of estimate for rolling shown in the plans and progress in placing the material to be compacted. The quantity of material placed per hour shall be determined by averaging the total quantity of material placed within any one working day. When operations are so isolated from one another that one roller unit cannot perform the required compaction satisfactorily, additional roller units shall be provided and operated as directed by the Engineer.

VIIIR ROLLING (PROOF)**VIIIR-1 Description**

"Rolling (Proof)" shall consist of furnishing and operating heavy pneumatic tired compaction equipment for compacting and testing the compaction of embankment subgrade, flexible base, foundation course, roadbed treatment or pavements. Proof rolling is designed to either achieve additional compaction, locate unstable areas or both.

VIIIR-2 Equipment

The proof rolling equipment shall consist of not less than four pneumatic tired wheels, running on axles carrying not more than two wheels and mounted in a rigid frame and provided with loading platform or body suitable for ballast loading. All wheels shall be arranged so that they will carry approximately equal loads when operating on uneven surfaces.

The proof roller under working conditions shall have a rolling width of from eight (8) feet to ten (10) feet and shall be so designed that by ballast loading, the gross load may be varied uniformly from 25 tons to 50 tons. The tires shall be capable of operating under the various loads with variable air pressure up to 15 pounds per square inch. Tires shall be practically full of liquid. (Tires shall be considered as being practically full when liquid will flow from the valve stem of a fully inflated tire with the stem in the uppermost position.) The operating load and tire pressure shall be within the range of the manufacturer's chart as directed by the Engineer.

The proof roller shall be drawn by a suitable crawler type tractor or rubber tire tractor of adequate tractive effort or may of self-propelled type and the roller unit when drawn or propelled by either type of equipment shall be considered a heavy pneumatic tire proof roller unit.

There shall be a sufficient quantity of ballast available to load the equipment to a maximum gross weight of 50 tons.

Rubber tired tractive equipment shall be used on base courses and asphalt pavements. Other type tractive equipment may be used on embankment subgrade. The heavy pneumatic tire roller unit shall be capable of turning 180 degrees in the crown width.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction within the same period of time as would be expected of the specified equipment, as determined by the Engineer, its use shall be discontinued.

VIIIR-3 Construction Methods

This work shall be done when directed by the Engineer. On embankment compaction each layer will be placed to specified thickness at optimum moisture and compacted with conventional equipment to comply with requirements of governing embankment item. Prior to placing the overlaying course the layer shall be further compacted with the proof roller. Proper moisture control is of utmost importance in proof rolling. The moisture content shall range from optimum moisture to not more than three (3) percent below optimum moisture for the particular layer of material being rolled. For cohesive soils whose optimum moisture is near its plastic limit, the range shall be from two (2) percent to three (3) percent below optimum moisture.

Within the ranges set forth in "Equipment", the load and tire inflation pressures shall be adjusted as directed by the Engineer. It is proposed to use a contact pressure corresponding as nearly as practical to the maximum supporting value of the subgrade. As stronger layers are placed the load and tire inflation pressures shall be increased to the maximum contact required. Each succeeding trip of the proof roller shall be offset by not greater than one tire width.

When the operation of the proof roller unit shows an area to be unstable or non-uniform, such area shall be brought to satisfactory stability and uniformity by additional compaction or by removal of unsuitable materials, replacement with suitable materials and recompaction. The subgrade shall then be checked for conformity with line and grade and any irregularities corrected.

Rollers shall be operated at speeds directed by the Engineer which shall be between two (2) and six (6) miles per hour.

Flexible bases, foundation courses, roadbed treatments or asphaltic pavements shall be compacted and tested in a manner similar to that described above and as directed by the Engineer.

VIII ASPHALTS, OILS AND EMULSIONS

VIII-1 Description

This item establishes the requirements for oil asphalts, cut-back asphalts, road oils, emulsified asphalts, asphalt cement and other miscellaneous asphaltic materials and asbestos and latex additives.

VIII-2 Materials

When tested according to TxDOT Test Methods, the various materials shall meet the applicable requirements of this Specification.

a) Asphalt Cement

The material shall be homogeneous, shall be free from water, shall not foam when heated to 347°F and shall meet the following requirements:

Test	Viscosity Grade									
	AC-3		AC-5		AC-10		AC-20		AC-40	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Viscosity 140° Stokes	300+50		500+100		1000+200		2000+400		4000+800	
Viscosity 275° Stokes	1.1	-	1.4	-	1.9	-	2.5	-	3.5	-
Penetration 77° 100g, 5 sec.	210	-	135	-	85	-	55	-	35	-
Flash Point, C.O.C.F.	425	-	425	-	450	-	450	-	450	-
Solubility in trichloroethylene percent	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-
Tests on residues from thin film oven test; Viscosity, 140° Stokes	-	900	-	1500	-	3000	-	6000	-	12000
Ductility 77°F 5cms per min, cms	100	-	100	-	70	-	50	-	30	-
Spot Test	Negative for all grades									

b) Latex Additive

A minimum of two (2) percent by weight, latex additive (solids basis) shall be added to AC-5 Asphalt when specified on the Plans or in other Specifications in the Contract. The latex additive shall be governed by the following Specifications:

The latex is to be anionic emulsion of butadiene-styrene low-temperature copolymer in water, stabilized with fatty-acid soap so as to have good storage stability, and possessing the following properties:

Monomer ratio, B/S	70/30
Minimum solids content	67%
Solids content per gal. at 67%	5.3 lbs
Coagulum on 80-mesh screen	0.1% max.
Type Anti-oxidant	staining
Mooney Viscosity of Polymer(M/L 4 at 212°F)	100 min.

pH of Latex
Surface tension
Brookfield Viscosity of Latex

9.4 - 10.5
28-42 dynes/cm²
1200 ps max at 67% solids

The finished latex-asphalt blend shall meet the following requirements

Viscosity at 140°F stokes
Ductility at 39.2°F.1 cm. per min. cm

1500 max.
100 min.

c) Cut-back Asphalt

The material shall meet the requirements shown in the following table:

Type-Grade	RC-1		RC-2		RC-250		RC-3		RC-4		RC-5	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Water, %	-	0.2	-	0.2	-	-	-	-	-	0.2	-	0.2
Flash Point, T.O.C., F	80	-	80	-	80	80	80	80	80	-	80	-
Fuel Viscosity, sec	-	-	-	-	-	-	-	-	-	-	-	-
At 122°F	100	180	200	300	-	-	-	-	-	-	-	-
At 140°F	-	-	-	-	125	-	250	400	-	-	-	-
At 180°F	-	-	-	-	-	250	-	-	125	250	350	500
The Distillate, expressed as percent by volume of total distillate to 680°F, shall be as follows:												
Off at 437°F	55	80	50	75	35	-	50	70	35	60	20	55
Off at 500°F	70	90	70	90	60	-	65	85	60	80	55	75
Off at 600°F	90	-	90	-	80	-	85	-	80	-	75	-
Residue from 680°F	-	-	-	-	-	-	-	-	-	-	-	-
Distillation Volume %	50	-	70	-	65	-	73	-	78	-	82	-
Test on Distillation Residue:												
Penetration at 77°F, 100G 5 sec	70	100	110	150	80	120	110	150	110	150	110	150
Ductility at 77°F, 5 cms min. cms	100	-	100	-	100	-	100	-	100	-	100	-
Solubility in Trichloroethylene %	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-
Spot Test	Neg.	-	Neg.	-	Neg.	-	Neg.	-	Neg.	-	Neg.	-
*If penetration of residue is more than 200 and ductility at 77°F is less than 100 cm, the material will be acceptable if its ductility at 60° is more than 100.												
Type-Grade	MC-30		MC-70		MC-250		MC-800		MC-3000			
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
Water, %	-	0.2	-	0.2	-	0.2	-	-	-	0.2		
Flash Point, T.O.C., F	100	-	80	-	80	-	80	80	80	-		
Kinematic Viscosity At 140°F	30	60	70	140	250	500	800	1600	3000	6000		
The Distillate, expressed as percent by volume of total distillate to 680°F, shall be as follows:												
Off at 437°F	-	25	-	20	-	10	-	-	-	-		
Off at 500°F	40	70	20	80	15	55	-	35	-	15		
Off at 600°F	75	93	65	90	60	87	45	80	15	75		
Residue from 680° F	-	-	-	-	-	-	-	-	-	-		
Distillation Volume %	50	-	55	-	67	-	75	-	80	-		
Test on Distillation Residue:												
Penetration at 77°F, 100G 5 sec	120	250	120	250	120	250	120	250	120	250		
Ductility at 77°F, 5 cms min. cmn	100	-	100	-	100	-	100	-	100	-		
Solubility in Trichloroethylene %	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-		
Spot Test	Neg.	-	Neg.	-	Neg.	-	Neg.	-	Neg.	-		

d) Emulsions

The material shall be homogenous. It shall show no separation of asphalt after thorough mixing and shall meet the viscosity requirements at any time within 30 days after delivery.

Anionic Emulsions												
TYPE	Rapid Setting				Medium Setting				Slow Setting			
GRADE	EA-HRVS		EA-HRVS-90		EA-HVMS-90		EA-HVMS-90		EA-11M		EA-10S	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Furol Viscosity at 77°F, sec	-	-	-	-	-	-	-	-	30	100	30	100
Furol Viscosity at 122°F, sec	100	300	100	300	100	300	100	300	-	-	-	-
Residue by Distillation, %	63	-	63	-	63	-	63	-	60	-	60	-
Oil Portion of Distillate, %	-	2.0	-	2.0	-	2.0	-	2.0	0	2.0	0	2.0
Sieve Test %	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1
Miscibility (std test)	-	-	-	-	-	-	-	-	Passing	-	Passing	-
Coating	-	-	-	-	-	-	-	-	Passing	-	Passing	-
Cement Mixing, %	-	-	-	-	-	-	-	-	-	-	-	2.0
Demulsibility 50cc of N/10 CaCl ₂ , %	-	-	-	-	-	-	-	-	-	-	-	-
Demulsibility 35cc of N/10 CaCl ₂ , %	60	-	60	-	-	30	-	30	-	-	-	-
Settlement of 5 days, %	-	5.0	-	5.0	-	5.0	-	5.0	-	5.0	-	5.0
Freezing Test 3 cycles	-	-	-	-	Passing	-	Passing*	-	Passing*	-	Passing*	-
Test on Residue 5cms												
Penetration at 77°F,	120	180	80	110	120	180	80	110	120	180	120	180
Solubility in Trichloroethylene, %	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-
Ductility at 77°F, 5 cm/min. cms	100	-	100	-	100	-	100	-	100	-	100	-

*Applies only when ENGINEER designates material for winter use.

Cationic Emulsions												
TYPE	Rapid Setting				Medium Setting				Slow Setting			
GRADE	EA-CRS-2		EA-CRS-2h		EA-CMS-2		EA-CMS-2h		EA-CSS-1		EA-CSS-1	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Test on Emulsions												
Viscosity, Saybolt Furol at 77°F, sec	-	-	-	-	-	-	-	-	-	-	-	-
Viscosity, Saybolt Furol at 122°F, sec	-	2.0	-	2.0	-	2.0	-	2.0	-	2.0	-	2.0
Settlement 5 days %	100	300	100	300	100	300	100	300	-	-	-	-
Storage stability test, 1 day %	-	5	-	5	-	5	-	5	-	5	-	5
Demulsibility, 35 ml 0.8% sodium dioctyl sulfosuccinate, %	-	1	-	1	-	1	-	1	-	1	-	1
Demulsibility, 35 ml 0.8% sodium dioctyl sulfosuccinate, %	40	-	40	-	-	-	-	-	-	-	-	-
Coating ability & water resistance	-	-	-	-	good	good	-	-	Passing	-	-	-
Coating, dry aggregate	-	-	-	-	fair	fair	-	-	-	-	-	-
Coating, after spraying	-	-	-	-	fair	fair	-	-	-	-	-	-
Coating, wet aggregate	-	-	-	-	fair	fair	-	-	-	-	-	-
Coating, after spraying	-	-	-	-	fair	fair	-	-	-	-	-	-
Particle charge test	Positive		Positive		Positive		Positive		Positive		Positive	
Sieve test, %	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10
Cement Mixing test, %	-	-	-	-	-	-	-	-	-	-	-	-
Distillation:												
Oil distillate, by volume of emulsion, %	-	3	-	3	-	12	-	12	-	-	-	-
Residue, %	60	-	65	-	65	-	65	-	60	-	60	-
Tests on Residue from Distillation test												
Penetration 77°F, 100g, 5 sec	120	180	80	110	120	180	80	110	120	180	80	110
Ductility, 77°F 100g, 5 sec	100	-	100	-	100	-	100	-	100	-	100	-
Solubility in trichloroethylene, %	98	-	98	-	97.5	-	97.5	-	97.5	-	97.5	-
Ash, %	-	-	-	-	-	-	-	-	-	-	-	-

- 1) The test requirement for settlement may be waived when the emulsified asphalt is used in less than 5 days time or the ENGINEER may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than 5 days.
- 2) The 24-h (1 day) storage stability test may be used instead of the 5 day settlement test.
- 3) The demulsibility test shall be made within 30 days from date of shipment.

e) Flux Oil

Fluxing material shall be free from foreign matter and shall meet the following requirements:

Type	Min.	Max.
Water, %	-	0.2
Furol Viscosity at 122°F, sec	50	100
Flash, C.O.C., F	200	-
Loss on Heating, 50g, 5 hrs at 325°F, %.....	-	5
Content of 85 to 115 penetration by vacuum distillation weight, %.....	25	-

f) Precoat Material

Precoat material may consist of any one of the various types of asphaltic materials listed in this Specification, approved by the ENGINEER, including "Special Precoat Material".

Special Precoat Material

Type	Min.	Max.
Water, %	-	0.2
Flash, C.O.C., F	200	-
Furol Viscosity at 140°F, sec	150	250
Distillation to 680°F:		
Initial Boiling point, F	50	-
Residue by weight, %	70	-
Penetration residue, 77°F, 100g, 5 sec	200	300

g) Catalytically-Blown Asphalt Joint and Crack Sealer

Catalytically-blown asphalt shall be uniformly blended with ten (10) percent diatomaceous earth filler which passes the No. 325 sieve. It shall form a suitable joint and crack sealer which may be melted to pouring consistency in the regular asphalt kettle at a temperature of approximately 450° to 475°F. The material shall meet the following requirements:

TYPE-GRADE	68-88 Pen		38-45 Pen	
	Min	Max	Min	Max
Penetration, 77°F, 100g, 5 sec	68	80	38	45
Penetration, 32°F, 200g, 60 sec	38	-	-	-
Penetration, 115°F, 50g, 5 sec	-	160	-	-
Softening Point, R & B, F	175	200	185	200
Flash, C.O.C., F	500	-	500	-
Ductility, 77°F, 5 cm/min, cms	5	-	3	-
Flow, 140°F, cm	-	0.5	-	0.5
Ash, Weight, %	8	-	8	-
Settlement Ratio	-	1.02	-	1.02
Brittleness Test, 32°F	No Cracking		No Cracking	

h) Asbestos Additive

Asbestos fiber shall be used only when specified on the Plans or in other Specifications in the Contract. Asbestos fiber shall be Crysettle Asbestos. Asbestos fiber shall be 7M grade by Quebec Standard Screen Test.

Guaranteed Minimum Test

ROTAP (3-minute procedure)	35% minimum retained on No. 20 sieve
WET WASH (QAMA Procedure)	20% minimum retained on No. 20 mesh sieve
PENETRATION-EFFICIENCY TEST	70-105%

The manufacturer will furnish a notarized certification that the asbestos meets the above requirements.

Storing and Handling

While stored at the site of the batch plant, the asbestos shall be given suitable protection from moisture. Any asbestos which is wet or damp shall be rejected for use.

VIII-3 Storage, Heating and Application

Asphaltic materials should be applied at the temperature which provides proper and uniform distribution and within practical limits avoiding higher temperatures than necessary. Satisfactory

application usually should be obtained within the recommended ranges shown below. No material shall be heated above the following maximum temperatures.

Type-Grade	Application and Mixing		Heating and Storage Max °F
	Recommended Range, °F	Maximum Allow °F	
AC-3,5,10,20,40	275-325	350	400
RC-1	100-150	175	175
RC-2	125-180	200	200
RC-250	150-200	210	210
RC-3	160-210	230	230
RC-4	180-240	270	270
RC-5	215-270	285	285
MC-30	70-150	175	175
MC-70	125-175	200	200
MC-250	125-210	240	240
MC-800	175-260	275	275
MC-3000	225-275	290	290
RO-3	160-210	250	250
RO-4	100-150	200	200
RO-95	230-300	325	325
RO-Special	160-220	260	260
Cracked Fuel Oil	160-220	260	260
Crude Oil	100-150	175	175
EA-10S EA-11M, EA-CSS-1, EA-CSS-1h	50-130	140	140
EA-HVRS, EA-HVMS, EA-HVRS-90, EA-HVMS-90			
EA-CRS-2, EA-CRS-2h, EA-CMS,2, EA-CMS-2h	110-150	160	160
Cat Blown Asph	425-475	500	500
Special Precoat Material	125-250	275	275

Warning to Contractors

Attention is called to the fact that asphaltic materials are very flammable. The utmost care shall be taken to prevent open flames from coming in contact with the asphaltic material or the gases of same. The CONTRACTOR shall be responsible for any fires or accidents which may result from heating the asphaltic materials.

b) Proportioning

The proportioning of the various materials entering into the mixture shall be as directed by the ENGINEER and in accordance with these specifications. Aggregate shall be proportioned by weight using the weigh box and batching scales herein specified when the weight-batch type of plant is used and by volume using the aggregate proportioning device when the continuous mixer type of plant is used. The precoat material of flux oil shall be proportioned by weight or by volume based on weight using the specified equipment.

e) Mixing

1) Batch Type Mixer

In the charging of the weigh box and in the charging of the mixer from the weigh box, such methods or devices shall be used as are necessary to secure a uniform mixture. In introducing the batch into the mixer, the mineral aggregate shall be introduced first; shall be mixed thoroughly, as directed, to uniformly distribute the various sizes throughout the batch before the precoat material or flux oil is added; the precoat material or flux oil shall then be added and the mixing continued until such time that the aggregate is properly coated. This mixing period may be varied, if, in the opinion of the ENGINEER, the mixture is not uniform.

2) Continuous Type Mixer

The amount of aggregate and precoat material or flux oil entering the mixer and the rate of travel through the mixer shall be so coordinated that a uniform mixture of the specified grading and percent by weight of precoat material or flux oil will be produced.

VIIHY PRIME COAT**VIIHY-1 Description**

"Prime Coat" shall consist of an application of asphaltic material on the completed base course and/or other approved areas in accordance with these Specifications as directed by the ENGINEER.

VIIHY-2 Materials

The asphalt material for Prime Coat shall meet the requirements for Cut- Back Asphalt, MC-30, "Asphalts, Oils and Emulsions" of these Specifications.

VIIHY-3 Construction Methods

When, in the opinion of the ENGINEER, the area and/or base is satisfactory to receive the prime coat, the surface shall be cleaned by sweeping or other approved methods as directed by the ENGINEER. If directed by the ENGINEER, the surface shall be lightly sprinkled with water just prior to application of the asphaltic material. The asphaltic material shall be applied on the clean surface by an approved type of self-propelled pressure distributor so operated as to distribute the prime coat at a rate not to exceed 0.25 gallon per square yard of surface, evenly and smoothly, under a pressure necessary for proper distribution. During the application of prime coat, care shall be taken to prevent splattering of adjacent pavement, curb and gutters or structures. The CONTRACTOR shall be responsible for cleaning splattered areas as determined and directed by the ENGINEER.

Prime Coat shall not be applied when the air temperature is below 60°F and falling, but it may be applied when the air temperature is above 50°F and is rising; the air temperature being taken in the shade and away from artificial heat. Asphaltic material shall not be placed when general weather conditions, in the opinion of the ENGINEER, are not suitable.

The distributor shall have been recently calibrated and the ENGINEER shall be furnished an accurate and satisfactory record of such calibration. After beginning of the work, should the yield on the asphaltic material applied appear in error, the distributor shall be calibrated in a manner satisfactory to the ENGINEER before proceeding with the work.

The CONTRACTOR shall be responsible for the maintenance of the surface until the work is accepted by the ENGINEER. No traffic, hauling or placement of any subsequent courses shall be permitted over the freshly applied prime coat until authorized by the ENGINEER.

VIIIAD HOT MIX ASPHALTIC CONCRETE PAVEMENT**VIIIAD-1 Description**

This item shall consist of a leveling-up course, a surface course or a combination of these courses as shown on the Plans, each to be composed of a compacted mixture of mineral aggregate and asphaltic material.

The pavement shall be constructed on the previously completed and approved subgrade, base, existing pavement, bituminous surface or in the case of a bridge, on the prepared slab as herein specified and in accordance with the details shown on the Plans.

VIIIAD-2 Materials**1) Mineral Aggregate**

The mineral aggregate shall be composed of a course aggregate, a fine aggregate, and if required, a mineral filler. Samples of coarse aggregate, fine aggregate and mineral filler shall be submitted for testing as directed by the ENGINEER and approval of both material and of the source of supply must be obtained from the ENGINEER prior to delivery.

Combined mineral aggregate, after final processing by the mixing plant and prior to addition of asphalt and mineral filler, shall have a sand equivalent value of not less than 45 unless otherwise shown on Plans when tested in accordance with Test Method Tex-203-F. Mineral aggregate from each source will meet the quality tests specified hereafter unless otherwise specified on the Plans.

a) Coarse Aggregate

Coarse aggregate shall be that part of the aggregate retained on the No. 10 sieve; shall consist of clean, tough, durable fragments of stone, crushed blast furnace slag, crushed gravel, gravel, cinder aggregate (produced by burning lignite or coal) or combination thereof as hereinafter specified of uniform quality throughout.

When the coarse aggregate is tested in accordance with Test Method Tex-217-F (Part I, Separation of Deleterious Material), the amount of organic matter, clay, loam or particles coated therewith of other undesirable materials shall not exceed two percent and when the remaining part of the sample is further tested in accordance with Test Method Tex-217-F (Part II, Decantation), the amount of material removed shall not be more than two percent.

The coarse aggregate (each coarse aggregate when a combination of materials is used) shall have an abrasion of not more than forty percent loss by weight when subjected to the Los Angeles Abrasion Test, Test Method Tex-410-A.

b) Fine Aggregate

The fine aggregates shall be that part of the aggregate passing the No. 10 sieve and shall consist of sand, screenings, or combination thereof as hereinafter specified of uniform quality throughout.

Fine aggregate shall consist of durable particles free from injurious foreign matter. Screenings shall be of the same or similar material as specified for coarse aggregate. The plasticity index of that part of the fine aggregate passing the No. 40 sieve shall be not more than 6 when tested in accordance with Test Method Tex-106-E. Fine aggregate from each source shall meet plasticity requirements.

Where stone screenings are specified for use, the stone screenings shall meet the following grading requirements unless otherwise shown on Plans:

<u>Percent by Weight</u>	
Passing the 3/8" Sieve	100
Passing the No. 200 Sieve	10-30

When authorized by the ENGINEER, stone screenings containing particles larger than 3/8" may be used but only that portion of the material passing the 3/8" sieve shall be considered as fulfilling the requirements for screenings when a minimum percentage of screenings is specified for a particular mixture.

c) Mineral Filler

Mineral filler shall consist of thoroughly dry stone dust, slate dust, portland cement, fly ash or other mineral dust approved by the ENGINEER. The mineral filler shall be free from foreign and other injurious matter.

When tested by Test Method Tex-200-F (Dry Sieve Analysis), it shall meet the following grading requirements:

<u>Percent by Weight</u>	
Passing a No. 30 Sieve	95 to 100
Passing a No. 80 Sieve, not less than	75
Passing a No. 200 Sieve, not less than	55

2) Asphaltic Material

a) Paving Mixture

Asphalt for the paving mixture shall be of the types of asphalt cement or oil asphalt as determined by the ENGINEER and shall meet the requirements of "Asphalts, Oil and Emulsions". The grade of asphalt used shall be as designated by the ENGINEER after design tests have been made using the mineral aggregates that are to be used in the project. If more than one type of asphaltic concrete mixture is specified for the project, only one grade of asphalt will be required for all types of mixtures, unless otherwise shown on Plans. The CONTRACTOR shall notify the ENGINEER of the source of his asphaltic material prior to design or production of the asphaltic mixture and this source shall not be changed during the course of the project except on written permission of the ENGINEER.

b) Prime Coat or Tack Coat

Either a prime coat or tack coat of asphaltic material will be required as shown on the Plans and included in the Contract. These materials shall meet the requirements of "Asphalts, Oil and Emulsions".

1. Types

The paving mixtures shall consist of a uniform mixture of coarse aggregate, fine aggregate, asphaltic material and mineral filler, if required.

The grading of each constituent of the mineral aggregate shall be such as to produce, when properly proportioned, a mixture which, when tested in accordance with Test Method Tex-200-F (Dry Sieve Analysis), will conform to the limitations for master grading given below for the type specified.

Type "B" (Leveling-Up Course)	Percent by Weight
Passing 1" sieve.....	100
Passing 7/8" sieve.....	95 to 100
Passing 7/8" sieve, retained on 3/8" sieve.....	20 to 50
Passing 3/8" sieve, retained on No. 4 sieve.....	10 to 40
Passing 3/8" sieve, retained on No. 4 sieve.....	0 to 40
Passing No. 4 sieve, retained on No. 10 sieve.....	5 to 25
Total retained on No. 10 sieve.....	55 to 70
Passing No. 10 sieve, retained on No. 40 sieve.....	0 to 30
Passing No. 40 sieve, retained on No. 80 sieve.....	4 to 20
Passing No. 80 sieve, retained on No. 200 sieve.....	3 to 20

Passing No. 200 sieve..... 0 to 10

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight unless specified otherwise on the Plans.

Type "C" (Coarse Graded Surface Course)	Percent by Weight
Passing 7/8" sieve	100
Passing 5/8" sieve	95 to 100
Passing 5/8" sieve, retained on 3/8" sieve	15 to 40
Passing 3/8" sieve, retained on No. 4 sieve	10 to 35
Passing No. 4 sieve, retained on No. 10 sieve	10 to 30
Total retained on No. 10 sieve	50 to 70
Passing No. 10 sieve, retained on No. 40 sieve	0 to 30
Passing No. 40 sieve, retained on No. 80 sieve	4 to 25
Passing No. 80 sieve, retained on No. 200 sieve	3 to 25
Passing No. 200 sieve	0 to 10

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight unless specified otherwise on the Plans.

Type "D" (Fine Graded Surface Course)	Percent by Weight
Passing 1/2" sieve	100
Passing 3/8" sieve	95 to 100
Passing 3/8" sieve, retained on No. 4 sieve	20 to 40
Passing No. 4 sieve, retained on No. 10 sieve	10 to 30
Total retained on No. 10 sieve	50 to 70
Passing No. 10 sieve, retained on No. 40 sieve	0 to 30
Passing No. 40 sieve, retained on No. 80 sieve	4 to 25
Passing No. 80 sieve, retained on No. 200 sieve	3 to 25
Passing No. 200 sieve	0 to 10

The asphaltic material shall form from 4 to 7 percent of the mixture by weight unless specified otherwise on the Plans.

2) Tolerances

The ENGINEER will designate the exact grading of the aggregate and asphalt content, within the above limits, to be used in the mixture. The paving mixture produced should not vary from the designated grading and asphalt content by more than the tolerances allowed herein; however, the mixture produced shall conform to the limitations for master grading specified above.

Percent by Weight

Passing 7/8" sieve, retained on 3/8" sieve	Plus or minus 5
Passing 5/8" sieve, retained on 3/8" sieve	Plus or minus 5
Passing 3/8" sieve, retained on No. 4 sieve	Plus or minus 5
Passing No. 4 sieve, retained on No. 10 sieve	Plus or minus 5
Total retained on No. 10 sieve	Plus or minus 5
Passing No. 10 sieve, retained on No. 40 sieve	Plus or minus 3
Passing No. 40 sieve, retained on No. 80 sieve	Plus or minus 3
Passing No. 80 sieve, retained on No. 200 sieve	Plus or minus 3
Passing No. 200 sieve	Plus or minus 3
Asphalt Material	Plus or minus 0.5

Should the paving mixture produced vary from the designated grading and asphalt content by more than the above tolerances, proper changes are to be made until it is within these tolerances.

3) Extraction Text

Samples of the mixture when tested in accordance with Test Method Tex- 210-F shall not vary from the grading proportions of the aggregate and the asphalt content designated by the ENGINEER by more than the respective tolerances specified above and shall be within the limits specified for master grading.

4) Sampling and Testing

It is the intent of this specification to produce a mixture which when designed and tested in accordance with these Specifications and methods outlined in TxDOT Bulletin C-14, will have the following density and stability unless otherwise shown on the Plans.

<u>Density</u>		<u>Percent</u>	<u>Stability, Percent</u>
Min	Max	Optimum	Not less than 40 unless
95	99	99	shown on Plans

Stability and density are control tests. If the laboratory stability and/or density of the mixture produced has a value lower than that specified, and in the opinion of the ENGINEER is not due to change in source or quality of materials, production may proceed, and the mix shall be changed until the laboratory stability and density falls within the specified limits and as near the optimum value as is practicable. If there is, in the opinion of the ENGINEER, a fundamental change in any material from that used in the design mixtures, production will be discontinued until a new

design mixture is determined by trial mixes. It is the intent of this specification that the mixture will be designed to produce a mixture of optimum density.

VIIIAD-3 Equipment

1) Mixing Plants

Mixing plants that will not continuously produce a mixture meeting all of the requirements of this Specification will be condemned.

Mixing plants may be either the weight-batching type, the continuous mixing type or dryer drum mixing type. Each type of plant shall be equipped with satisfactory conveyors, power units, aggregate handling equipment, hot aggregate screens and bins and dust collectors and shall consist of the following essential pieces of equipment.

a) Weight-batching Type

Cold Aggregate Bin and Proportioning Device

The aggregate bin shall have at least four compartments of sufficient size to store the amount of aggregate required to keep the plant in continuous operation and of proper design to prevent overflow of material of one bin to that of another bin. The proportioning device shall be such as will provide a uniform and continuous flow of aggregate in the desired proportion to the dryer. Each aggregate shall be proportioned in a separate compartment.

Dryer

The dryer shall be of the type that continually agitates the aggregate during heating and in which the temperature can be so controlled that aggregate will not be injured in the necessary drying and heating operations required to obtain a mixture of the specified temperature. The burner, or combination of burners, and type of fuel used shall be such that in the process of heating the aggregate to the desired or specified temperature, no residue from the fuel shall adhere to the heated aggregate. A recording thermometer shall be provided which will record the temperature of the aggregate when it leaves the dryer. The dryer shall be of sufficient size to keep the plant in continuous operation.

Screening and Proportioning

The screening capacity and size of the bins shall be sufficient to screen and store the amount of aggregate required to properly operate the plant and keep the plant in continuous operation at full capacity. Provisions shall be made to enable

inspection forces to have easy and safe access to the proper location of the mixing plant where representative samples may be taken from the hot bins for testing. The aggregate shall be separated into at least four bins when producing Type "B" and Type "C" mixtures, at least three bins when producing Type "D" mixtures. If mineral filler is used, an additional bin shall be provided. These bins shall contain the following sizes of aggregates:

TYPE "B" (Leveling-Up Course)

- Bin No. 1 - will contain aggregates of which 85 to 100 percent by weight will pass the No. 10 sieve.
- Bin No. 2 - will contain aggregates of which at least 70 percent by weight will be of such size as to pass the No. 4 sieve and be retained on the No. 10 sieve.
- Bin No. 3 - will contain aggregates of which at least 75 percent by weight will be of such size as to pass the 3/8" sieve and be retained on the No. 4 sieve.
- Bin No. 4 - will contain aggregates of which at least 75 percent by weight will be of such size as to pass the 1 inch sieve and be retained on the 3/8 inch sieve.

TYPE "C" (Coarse Graded Surface Course)

- Bin No. 1 - will contain aggregates of which 85 to 100 percent by weight will pass the No. 10 sieve.
- Bin No. 2 - will contain aggregates of which at least 70 percent by weight will be of such size as to pass the No. 4 sieve and be retained on the No. 10 sieve.
- Bin No. 3 - will contain aggregates of which at least 75 percent by weight will be of such size as to pass the 3/8" sieve and be retained on the No. 4 sieve.
- Bin No. 4 - will contain aggregates of which at least 75 percent by weight will be of such size as to pass the 7/8 inch sieve and be retained on the 3/8 inch sieve.

TYPE "D" (Fine Graded Surface Course)

- Bin No. 1 - will contain aggregates of which 85 to 100 percent by weight will pass the No. 10 sieve.
- Bin No. 2 - will contain aggregates of which at least 70 percent by weight will be of such size as to pass the No. 4 sieve and be retained on the No. 10 sieve.

Bin No. 3 - will contain aggregates of which at least 75 percent by weight will be of such size as to pass the 1/2" sieve and be retained on the No. 4 sieve.

Aggregate Weigh Box and Batching Scales

The aggregate weigh box and batching scales shall be of sufficient capacity to hold and weigh a complete batch of aggregate.

- A) The weigh box scales used for weighing aggregate shall be equipped with a quick adjustment at zero to provide for any change in tare. The scales shall be provided with pointers or "tell-tale" indicators of the springless dial type to indicate full load for each aggregate. The dial or "tell- tale" device shall be in full view of operator while charging the weigh box and he shall have convenient access to all controls.

Asphaltic Material Bucket and Scales

The asphaltic material bucket and scales shall be of sufficient capacity to hold and weigh the necessary asphaltic material for one batch.

- B) If the material is measured by weight, the bucket shall be properly attached to the scales. If the proportioning is by volume based on weight, the measuring bucket used shall be of the over-flow type and shall meet the requirements of the ENGINEER. The valves at the asphaltic material bucket shall be of a quick cut-off type that do not leak.
- C) On batch plants equipped with a pressure type flow meter for volumetric measurement of the asphalt required in each batch, the metering device and auxiliary equipment shall meet the following requirements:

The volumetric meter shall be so designed and constructed to automatically measure the asphaltic material into each batch within the tolerance of plus or minus 0.1 percent of the total batch weight. The meter shall be so constructed that any setting may be locked and the meter will automatically reset itself to this setting after the addition of the asphaltic material to each batch. A thermometer shall be installed in the asphalt line to accurately measure the temperature within plus or minus 5°F over a range from 50°F to 400°F. Provisions of a permanent nature shall be made for checking accuracy of meter output, including scales and container of such size that a full batch of asphaltic material may be weighed.

Mixer

The mixer shall be of the pug mill type and shall have a capacity of not less than 3,000 pounds in a single batch unless otherwise shown on the Plans. The number of blades and the position of same shall be such as to give a uniform and complete circulation of the batch in the mixer. The mixer shall be equipped with an approved spray bar that will distribute the asphaltic material quickly and uniformly throughout the mixer. Any mixer that has a tendency to segregate the mineral aggregate or fails to secure a thorough and uniform mixing with the asphaltic material shall not be used. This shall be determined by mixing the standard batch for the required time, then dumping the mixture and taking samples from its different parts. This will be tested by the extraction test and must show that the batch is uniform throughout. All mixers shall be provided with an automatic time lock that will lock the discharge doors of the mixer for required mixing period. The dump door or doors and the shaft seals of the mixer shall be tight enough to prevent spilling of aggregate or mixture from the pug mill.

b) Continuous Mix Type

Cold Aggregate Bin and Proportioning Device

Same as for weight-batching type of plant.

Dryer

Same as for weight-batching type of plant.

Screening and proportioning

Same as for weight-batching type of plant.

Hot Aggregate Bin

The hot bins shall be so constructed that oversize and overload material will be discarded through a discharge chute. Hot bins that become deficient in material shall activate a switch that automatically stops the plant until the proper adjustments are made in the aggregate gates.

Hot Aggregate Proportioning Device

The hot aggregate proportioning device shall be so designed that when properly operated a uniform and continuous flow of aggregate into the mixer will be maintained.

Asphaltic Material Spray Bar

The asphaltic material spray bar shall be so designed that the asphalt will spray uniformly and continuously into the mixer.

Asphaltic Material Meter

An accurate asphaltic material recording meter shall be placed in the asphalt line leading to the spray bar so that the cumulative amount of asphalt used can be accurately determined. Provisions of a permanent nature shall be made for checking the accuracy of the meter output. The asphalt meter and line to the meter shall be protected with a jacket of hot oil or other approved means to maintain the temperature of the line and meter at near that temperature specified for the asphaltic material. The temperature of the asphaltic material entering the recording meter shall be maintained at $+10^{\circ}\text{F}$ of the temperature at which the asphalt metering pump was calibrated and set. Inability to maintain this tolerance in temperature shall result in an adjustment of the pay quantity for the asphaltic material.

Mixer

The mixer shall be of the pug mill continuous type and shall have a capacity of not less than 40 tons of mixture per hour. Any mixer that has a tendency to segregate the aggregate or fails to secure a thorough and uniform mixing of the aggregate with the asphaltic material shall not be used. The dam gate at the discharge end of the pug mixer and/or pitch of the mixing paddles shall be so adjusted to maintain a level of mixture in the pug mixer between the paddle shaft and the paddle tips (except at the discharge end).

Truck Scales

A set of standard platform truck scales, conforming to the Item, "Weighing and Measuring Equipment", shall be placed at a location approved by the ENGINEER.

c) Dryer-Drum Mixing Plant

The CONTRACTOR may, at his option, elect to use the dryer-drum mixing process in the mixing of asphaltic-concrete material. The plant shall be adequately designed and constructed for the process of mixing aggregates and asphalt in the dryer-drum without preheating the aggregates. The plant shall be equipped with satisfactory conveyors, power units, aggregate-handling equipment and feed controls and shall consist of the following essential pieces of equipment:

Cold Aggregate Bin and Feed System

The number of compartments in the cold aggregate bin shall be equal to or greater than the number of stockpiles of individual materials to be used.

The bin shall be of sufficient size to store the amount of aggregate required to keep the plant in continuous operation and of proper design to prevent overflow of material of one bin to that of another bin. The feed system shall be such as will provide a uniform and continuous flow of aggregate in the desired proportion to the dryer. Each aggregate shall be proportioned in a separate compartment with total and proportional control.

The system shall provide positive weight measurement of the combined cold aggregate feed by use of belt scales or other devices. A scalping screen may be required if directed by the ENGINEER.

Asphaltic Material Measuring System

An accurate asphaltic material measuring device shall be placed in the system prior to the introduction of the asphalt to the dryer-drum mixer so that the amount of asphalt used can be accurately determined. Unless otherwise shown on the Plans the temperature of the asphaltic material entering the mixer shall be maintained at +10°F of the temperature selected by the ENGINEER.

Synchronization Equipment for Feed Control Systems

The asphaltic material feed control shall be coupled with the total aggregate weight measurement device in such manner as to automatically vary the asphalt feed rate as required to maintain the required proportion.

Dryer-Drum Mixing System

The dryer-drum mixing system shall be of the type that continually agitates the aggregate and asphalt mixture during heating and in which the temperature can be so controlled that aggregate and asphalt will not be injured in the necessary drying and heating operations required to obtain a mixture of the specified temperature. A continuous recording thermometer shall be provided which will indicate the temperature of the mixture as it leaves the dryer-drum mixer. The dryer-drum mixing system shall be of sufficient size to keep the plant in continuous operation.

Surge-Storage System

The system shall be adequate to minimize the production interruptions during the normal day's operations.

Truck Scales

A set of standard platform truck scales, conforming to the TxDOT Item "Weighing and Measuring Equipment", shall be placed at a location approved by the ENGINEER.

2) Asphaltic Material Heating Equipment

Asphaltic material heating equipment shall be adequate to heat the amount of asphaltic material required to the desired temperature. Asphaltic material may be heated by stream coils which shall be absolutely tight. Direct fire heating of asphaltic materials will be permitted, provided the heater used is manufactured by a reputable concern and there is positive circulation of the asphalt throughout the heater. Agitation with steam or air will not be permitted. The heating apparatus shall be equipped with a recording thermometer with a 24-hour chart that will record the temperature of the asphaltic material at the highest temperature.

3) Spreading and Finishing Machine

The spreading and finishing machine shall be of a type approved by the ENGINEER, shall be capable of producing a surface that will meet the requirements of the typical cross section and the surface test, when required, and when the mixture is dumped directly into the finishing machine shall have adequate power to propel the delivery vehicles in a satisfactory manner. The finishing machine shall be equipped with a flexible spring and/or hydraulic type hitch sufficient in design and capacity to maintain contact between the rear wheels of the hauling equipment and the pusher rollers of the finishing machine while the mixture is being unloaded.

The use of any vehicle which requires dumping directly into the finishing machine and which the finishing machine cannot push or propel in such a manner as to obtain the desired lines and grades without resorting to hand finishing will not be allowed. Unless otherwise permitted by the Plans, vehicles of the semi-trailer type are specifically prohibited from dumping directly into the finishing machine while in contact with the finishing machine.

Vehicles dumping directly or indirectly into the finishing machine shall be so designed and equipped that unloading into the finishing machine can be mechanically and/or automatically operated in such a manner that overloading the finishing machine being used

cannot occur and the required lines and grades will be obtained without resorting to hand finishing.

Asphaltic concrete spreading and finishing machines shall be equipped with an approved Automatic dual longitudinal screed control system and a transverse screed control system unless otherwise noted on the Plans or directed by the ENGINEER. The longitudinal controls shall be capable of operating from any longitudinal grade reference including a string line, ski, mobile stringline or matching shoe. The CONTRACTOR shall furnish all equipment required for grade reference. It shall be maintained in good operating condition by personnel trained in the use of this type of equipment. The equipment shall be such as to construct a finished surface within specified tolerances.

4) Motor Grader

The motor grader, if used, shall be a self-propelled power motor grader. It shall be tight and in good operating condition and approved by the ENGINEER.

5) Pneumatic Tire Rollers

The rollers shall be acceptable medium pneumatic tire rollers conforming to the requirements of "Rolling (Pneumatic Tire)", Type B, unless otherwise specified on Plans.

The tire pressure of each tire shall be adjusted as directed by the ENGINEER and this pressure shall not vary by more than 5 pounds per square inch.

6) Two Axle Tandem Roller

This roller shall be an acceptable power driven tandem roller weighing not less than 8 tons.

7) Three Wheel Roller

This roller shall be an acceptable power driven three wheel roller weighing not less than 10 tons.

8) Three Axle Tandem Roller

This roller shall be an acceptable power driven three axle roller weighing not less than 10 tons.

9) Trench Roller

This roller shall be an acceptable power driven trench roller equipped with sprinkler for keeping the wheels wet and adjustable road wheel so that the roller may be kept level during rolling. The drive wheel shall be not less than 20 inches wide.

The roller under working conditions shall produce 325 pounds per linear inch of roller width and be so geared that a speed of 1.8 miles per hour is obtained in low gear.

10) Straightedges and Templates

When directed by the ENGINEER, the CONTRACTOR shall provide acceptable 10 foot straight edges for surface testing. Satisfactory templates shall be provided as required by the ENGINEER.

11) Equipment Maintenance

All equipment shall be maintained in good repair and operating condition and shall be approved by the ENGINEER.

12) Alternate Equipment

When permitted by the ENGINEER in writing, equipment other than that specified which will consistently produce satisfactory results may be used.

VIIAD-4 Stockpiling, Storage, Proportioning and Mixing

1) Stockpiling of Aggregates

Prior to stockpiling of aggregates, the area shall be cleaned of trash, weeds and grass and be relatively smooth. Aggregates shall be stock-piled in such a manner as to prevent mixing of one aggregate with another. Coarse aggregates for Type "B" and Type "C" shall be separated into at least two stockpiles of different gradation, such as a large coarse aggregate and a small coarse aggregate stockpile and such that the grading requirements of the specified type will be met when the piles are combined in the asphaltic mixture. No coarse aggregate stockpile shall contain more than 15 percent by weight of material that will pass a No. 10 sieve except as noted on the Plans. Fine aggregate stockpiles may contain coarse aggregate in the amount of up to 20 percent by weight, however, the coarse aggregate shall meet the quality test specified herein for "Coarse Aggregates". Suitable equipment of acceptable size shall be furnished by the CONTRACTOR to work the stockpiles and prevent segregation of the aggregates.

2) Storage and Heating of Asphaltic Materials

The asphaltic material storage shall be ample to meet the requirements of the plant. Asphalt shall not be heated to a temperature in excess of that specified in "Asphalts, Oils and Emulsions". All equipment used in the storage and handling of asphaltic material shall be kept in a clean condition at all times and shall be operated in such manner that there will be no contamination with foreign matter.

3) Feeding and Drying of Aggregate

The feeding of various sizes of aggregate to the dryer shall be done through the cold aggregate bin and proportioning device in such a manner that a uniform and constant flow of materials in the required proportions will be maintained. When specified on the Plans, the cold aggregate bins shall be charged by use of a clamshell, dragline, shovel or front end loader. The aggregate shall be dried and heated to the temperature necessary to produce a mixture having the specified temperature. In no case shall the aggregate be introduced into the mixing unit at a temperature more than 400°F.

4) Proportioning

The proportioning of the various materials entering into the asphaltic mixture shall be as directed by the ENGINEER and in accordance with these Specifications. The feedings of various sizes of aggregate to the dryer-drum mixer shall be done through the cold aggregate bin and feed system in such a manner that a uniform and constant flow of materials in the required proportions will be maintained. Aggregate shall be proportioned by weight using the weigh box and batching scales herein specified when the weight-batch type of plant is used and by volume using the hot aggregate proportioning device when the continuous mixer type of plant is used. The asphalt material shall be proportioned by weight or by volume based on weight using the specified equipment.

5) Mixing

a) Batch Type Mixer

In the charging of the weigh box and in the charging of the mixer from the weigh box, such methods or devices shall be used as are necessary to secure a uniform asphaltic mixture. In introducing the batch into the mixer, all mineral aggregate shall be introduced first; shall be mixed thoroughly for a period of 5 to 20 seconds, as directed, to uniformly distribute the various sizes throughout the batch before the asphaltic material is added; the asphaltic material shall then be added and the mixing continued for a total mixing period of not less than 30 seconds. This mixing period may be increased, if, in the opinion of the ENGINEER, the mixture is not uniform.

b) Continuous Type Mixer

The amount of aggregate and asphaltic material entering the mixer and the rate of travel through the mixer shall be so coordinated that a uniform mixture of the specified grading and asphalt content will be produced. The differential in temperature of the aggregates and the asphalt as they enter the pug mixer shall not exceed 25°F.

Checks on the asphalt used shall be made at least twice daily by comparing the asphalt used in ten loads of completed mix as shown on the asphalt recording meter and the design amount for these ten loads. The acceptable percent of variation between the asphalt used and the design amount will be as shown on the Plans or as determined by the ENGINEER.

c) Dryer-Drum Mixer

The amount of aggregate and asphaltic materials entering the dryer-drum mixer and the rate of travel through the mixing unit shall be so coordinated that a uniform mixture of the specified grading and asphalt content will be produced.

d) Produced Mixture

The mixture produced from each type of mixer shall not vary from the specified mixture by more than the tolerances herein specified.

e) Asphaltic Mixture

The asphaltic mixture from each type of mixer shall be a temperature between 225°F and 350°F when discharged from the mixer. The ENGINEER will determine the temperature, within the above limitations, and the mixture when discharged from the mixer shall not vary from this selected temperature more than 25°F.

f) Temporary Storing

Temporary storing or holding of the asphaltic mixture by the surge-storage system may be used during the normal day's operation. Overnight storage will not be permitted unless authorized in the Plans or in writing by the ENGINEER. The mixture coming out of the surge-storage bin must be of equal quality to that coming out of the mixer. The mixture when discharged from the plant shall have a moisture content not greater than 3% by weight unless otherwise permitted by the ENGINEER. The moisture content shall be determined in accordance with Test Method Tex-103-E.

VIIIAD-5 Construction Methods

The prime coat, tack coat or the asphaltic mixture when placed with a spreading and finishing machine, shall not be placed when the air temperature is below 60°F and is falling, but it may be placed when the air temperature is above 50°F and is rising. The air temperature shall be taken in the shade away from artificial heat. It is further provided that the prime coat, tack coat or asphaltic mixture shall be placed only when the humidity, general weather conditions and temperature and moisture condition of the base, in the opinion of the ENGINEER, are suitable.

If the temperature of the asphaltic mixture of a load or any part of a load becomes 50°F or more less than the temperature selected by the ENGINEER under "Mixing" of this specification after being dumped from the mixer and prior to placing while passing through the lay-down machine, all or any part of the load may be rejected and payment will not be made for the rejected material.

1) Prime Coat

If a prime coat is required, it shall be applied conforming to the requirements "Prime Coat", except the application temperature shall be as provided above. The asphaltic concrete shall not be applied on a previously primed flexible base until the primed base has completely cured to the satisfaction of the ENGINEER.

2) Tack Coat

Before the asphaltic mixture is laid, the surface upon which the tack coat is to be placed shall be cleaned thoroughly to the satisfaction of the ENGINEER. The surface shall be given a uniform application of tack coat using asphaltic materials of this specification. This tack coat shall be applied, as directed by the ENGINEER, with an approved sprayer at a rate not to exceed 0.05 gallons per square yard of surface. Where the mixture will adhere to the surface on which it is to be placed without the use of a tack coat, the tack coat may be eliminated by the ENGINEER. All contact surfaces of curbs and structures and all joints shall be painted with a thin uniform coat of the asphaltic material meeting the requirements for tack coat. The tack coat shall be rolled with a pneumatic tire roller when directed by the ENGINEER.

3) Transporting Asphaltic Concrete

The asphaltic mixture, prepared as specified above, shall be hauled to the work in tight vehicles previously cleaned of all foreign material. The dispatching of the vehicles shall be arranged so that all material delivered may be placed, and all rolling shall be completed during daylight hours. In cool weather or for long hauls, canvas covers and insulating of the truck bodies may be required. The inside of the truck body may be given a light coating of oil, lime slurry or other material satisfactory to the ENGINEER, if necessary, to prevent mixture from adhering to the body.

4) Placing

- a) Generally the asphaltic mixture shall be dumped and spread on the approved prepared surface with the specified spreading and finishing machine, in such manner that when properly compacted the finished pavement will be smooth, of uniform density and will meet the requirements of the typical cross sections and the surface tests. During the application of asphaltic material, care shall be taken to prevent splattering of adjacent pavement, curb and gutter and structures.

When automatic screed controls for asphaltic concrete spreading and finishing machines are required, the grade reference used by the CONTRACTOR may be of any type approved by the ENGINEER. Control points if required by the Plans or ENGINEER will be established for the finished profile by the ENGINEER. These points will be set on both sides of the course being laid, when necessary, at intervals not to exceed 50 feet. The CONTRACTOR shall set the grade reference for the sensor of the automatic control to follow from the control points established by the ENGINEER and the grade reference shall have sufficient support so that the maximum deflection shall not exceed 1/16 inch per 25 feet.

- b) In placing a level-up course with the spreading and finishing machine, binder twine or cord shall be set to line and grade established by the ENGINEER. When directed by the ENGINEER, level-up courses shall be spread with the specified motor grader.
- c) When the asphaltic mixture is placed in a narrow strip along the edge of an existing pavement, or used to level up small areas of an existing pavement or placed in small irregular areas where the use of a finishing machine is not practical, the finishing machine may be eliminated when authorized by the ENGINEER, provided a satisfactory surface can be obtained by other approved methods.

d) Flush Structures

Adjacent to flush curbs, gutters, liners and structures, the surface shall be finished uniformly high so that when compacted it will be slightly above the edge of the curb and flush structure.

5) Compacting

- a) As directed by the ENGINEER, the pavement shall be compressed thoroughly and uniformly to the required density.

- b) Rolling with the three wheel and tandem rollers shall start longitudinally at the sides and proceed toward the center of the pavement, overlapping on successive trips by at least half the width of the rear wheel unless otherwise directed by the ENGINEER. Alternate trips of the roller shall be slightly different in length. On super-elevated curves, rolling shall begin at the low side and progress toward the high side unless otherwise directed by the ENGINEER. Rolling with pneumatic-tire roller shall be done as directed by the ENGINEER. Rolling shall be continued until no further compression can be obtained and all roller marks are eliminated. If the CONTRACTOR elects, he may substitute the three axle tandem roller for the two axle tandem roller and/or the three wheel roller; but in no case shall less than two rollers be in use on each job. Additional rollers shall be provided if needed. The motion of the roller shall be slow enough at all times to avoid displacement of the mixture. If any displacement occurs, it shall be corrected at once by the use of rakes and of fresh mixtures where required. The roller shall not be allowed to stand on pavement which has not been fully compacted. To prevent adhesion of the surface mixture to the roller, the wheels shall be kept thoroughly moistened with water, but an excess of water will not be permitted. All rollers must be in good mechanical condition. Necessary precautions shall be taken to prevent the dropping of gasoline, oil, grease or other foreign matter on the pavement, either when the rollers are in operation or when standing.

In lieu of the rolling equipment specified, the CONTRACTOR may, upon written permission from the ENGINEER, operate other compacting equipment that will produce equivalent relative compaction as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction as would be expected of the specified equipment, as determined by the ENGINEER, its use shall be discontinued.

- c) In Place Density

It is the intent of this specification that the material be placed and compacted to 95 percent of the density developed in the laboratory test and determined by Test Method Tex-207-F. The CONTRACTOR shall furnish the ENGINEER with field specimens for each 2,000 square yards or part thereof, of asphaltic concrete pavement placed and shall also patch the surface where the specimen is taken with no extra payment being made for this work. The ENGINEER will specify the location where the specimen will be taken and the CONTRACTOR shall remove the specimen on the day following placement of the asphaltic concrete pavement. The field specimens utilized for the in place density testing may be either cores or sections of asphaltic pavement. Other methods of determining in place density which correlate satisfactorily with those results obtained through use of the test method Tex-207-F may be used. In place density tests are intended for compaction control tests. If the in place density of the mixture produced has a value lower than

that specified and in the opinion of the ENGINEER is not due to a change in the quality of the material, production may proceed with subsequent changes in the mix and/or construction operations until the in place density equals or exceeds the specified density.

d) Hand Tamping

The edges of the pavement along curbs, headers and similar structures, and all places not accessible to the roller, or in such positions as will not allow thorough compaction with the rollers, shall be thoroughly compacted with lightly oiled tamps.

- e) Rolling with the trench type roller will be required on widening areas in trenches and other limited areas where satisfactory compaction cannot be obtained with the rollers specified or approved.

6) Surface Tests

The surface of the pavement, after compression, shall be smooth and true to the established line, grade and cross section, and when tested with a 10 foot straightedge placed parallel to the centerline of the roadway or tested by other equivalent and acceptable means, except as provided herein, the maximum deviation shall not exceed 1/8 inch in 10 feet, and any point in the surface not meeting this requirement shall be corrected as directed by the ENGINEER. The completed surface shall meet the approval of the ENGINEER for riding surface finish and appearance.

7) Opening to Traffic

The pavement shall be opened to traffic when directed by the ENGINEER. The CONTRACTOR'S attention is directed to the fact that all construction traffic allowed on pavement open to the public will be subject to the City Ordinances, County Regulations and State Laws governing traffic on streets and highways.

Surface raveling, cracking and other defects shall be corrected at the CONTRACTOR'S expense as directed by the ENGINEER.

VIII AF STRUCTURAL EXCAVATION AND BACKFILL**VIII AF-1 Description**

This item shall govern the excavation for the placing of structures, except pipe sewers; for the disposal of such excavated material; and for the backfilling around completed structures to the level of the original ground. The work shall include all necessary pumping or bailing, sheathing, drainage, and the construction and removal of any required cofferdams. Unless otherwise provided, the work included hereunder shall provide for the removal of old structures or portions thereof (abutments, wingwalls, piers) trees and all other obstructions necessary to the proposed construction.

Where excavation is not classified, it will be grouped under "Unclassified Structural Excavation", which shall include the removal of all materials encountered regardless of their nature or the manner in which they are removed.

Where excavation is classified, it shall be classed as "Common Structural Excavation" or "Rock Structural Excavation" in accordance with following criteria;

"Common Structural Excavation" shall include the removal of all materials other than rock.

"Rock Structural Excavation" shall include the removal of firm and compact materials that cannot be excavated with power equipment, without first being loosened or broken by blasting, sledging or drilling.

To avoid the grouping of excavation of widely different character into a single bid item, the proposal may show "Structural Excavation" subdivided into items relating to individual structures, to parts of structures, or to groups of structures, as for example "Unclassified Structural Excavation-Retaining Walls", "Unclassified Structural Excavation-Bridges" or "Unclassified Structural Excavation-Culverts".

VIII AF-2 Construction Methods

- (1) Excavation shall be done in accordance with the lines and depths indicated on the plans or as established by the Engineer. Unless otherwise specified on the plans or permitted by the Engineer no excavation shall be made outside a vertical plane three feet from the footing lines and parallel thereto.

- (2) Excavation shall conform to elevations shown on the plans, or raised or lowered by written order of the Engineer, when such alterations are judged proper. When deemed necessary to increase or decrease the plan depth of footing, the alterations in the details of the structure shall be as directed by the Engineer. The Engineer shall have the right to substitute revised details resulting from consideration of changes in the design conditions.
- (3) When a structure is to rest on an excavated surface other than rock, special care shall be taken not to disturb the bottom of the excavation and the final excavation to grade shall not be performed by the Contractor for excavation which disturbs what was otherwise stable subgrade material, as shown by laboratory tests, will not be used as justification for payment for excavating to extra depth or for payment for stabilizing materials which may be ordered by the Engineer.
- (4) Excavated material required to be used for backfill may be deposited by the Contractor in storage piles at points convenient for its rehandling during the backfilling operations. The location of storage piles shall be subject to the approval of the Engineer, who may require that the survey center line of the structure and the transverse or hub line of any unit of the structure be kept free of any obstruction. In all cases, the Contractor shall comply with the "Special Provisions" of the contract in locating storage piles for excavated material.
- (5) Excavated material required to be wasted shall be disposed of as directed by the Engineer, in a manner which will not obstruct the stream or otherwise impair the efficiency or appearance of the structure or other part of the work.
- (6) For all single and multiple box culverts, pipe culverts, pipe arch culverts, and box sewers of all types, where the soil encountered at established footing grade is a quicksand, muck, or similar unstable material, the following procedure shall be used unless other methods are called for on the plans:

The depth which unstable material is removed will be determined by the Engineer. It will not exceed two feet below the footing of culverts that are two feet or more in height, and will not exceed the height of culverts for those less two feet high. Excavation shall be carried at least one foot horizontally beyond the limits of the structure on all sides. All unstable soil removed shall be replaced with suitable stable material, in uniform layers of suitable depth for compacted by rolling or tamping as required to provide a stable foundation for the structure. Soil which has sufficient stability to properly sustain the adjacent sections of the roadway embankment will be considered a suitable foundation material.

When, in the opinion of the Engineer, it is not feasible to construct a stable footing as outlined above, the Contractor shall construct it by the use of special materials, such as flexible base, cement stabilized base, cement stabilized backfill or other material, as directed by the Engineer.

Special materials used, or additional excavation made, for the Contractor's convenience to expedite the work will not be paid for directly, but shall be subsidiary to the various classes of structural excavation. In addition, if the Contractor's construction methods and equipment creates conditions necessitating usage of special materials or additional excavation, the work and materials will not be paid for directly, but shall be subsidiary to the various classes of structural excavation.

- (7) When the material encountered at footing grade of a culvert is found to be partially rock, or incompressible material, and partially a compressible soil which is satisfactory for the foundation, the incompressible material shall be removed for a depth of six inches below the footing grade and backfilled with a compressible material similar to that used for the rest of the structure.
- (8) When the material encountered at footing grade of a bridge bent or pier is found to be partially of rock or incompressible material, and partially of a compressible material, the foundation shall not be placed until the Engineer has inspected the footing and authorized such changes necessary to provide an adequate foundation.

VIII AF-3 Cofferdams

The term cofferdam, whenever used in this specification, designates any temporary or removable structure constructed to hold the surrounding earth, water, or both, out of the excavation, whether the structure is formed of earth, timber, steel, concrete, or a combination of these. It includes earthen dikes, timber cribs, any type of sheet piling, removable shells and the like and all necessary bracing; and it shall be understood also to include the use of pumping wells or well points for the same purpose. The cost of cofferdams, when required, shall be included as a part of the bid price for excavation.

It is the intent of this specification to require that a suitable cofferdam be provided for all excavation when necessary in order to control water so that the foundation may be placed in a dry condition, as to preclude sliding and caving of walls of the excavation. Where no ground or surface water is encountered, the cofferdam need be sufficient only to protect the workmen and to avoid cave-ins or slides beyond the excavation limits.

The type, strength and clearance of cofferdams, insofar as such details affect the character of the finished work and the safety of laborers and inspectors working therein, will be subject to the approval of the Engineer. Other details or design will be left to the choice of the Contractor, who will be responsible for the successful completion of the work. Approval of the drawings by the Engineer will not relieve the Contractor of responsibility in any manner. The interior dimensions of cofferdams shall provide sufficient clearance for the construction and removal of any required forms and the inspection of their exteriors and to permit pumping outside of the forms.

Unless otherwise provided, cofferdams shall be removed by the Contractor after the completion of the substructure without disturbing or marring the structure.

VIII AF-4 Pumping or Bailing

The manner of pumping or bailing from the interior of any foundation enclosure shall preclude the possibility of the movement of water through or alongside any concrete being placed. No pumping or bailing will be permitted during the placing of concrete or for a period of at least 24 hours thereafter, unless from a suitable sump separated from the concrete work by a water tight wall.

VIII AF-5 Backfilling

(1) General

As soon as practicable, all portions of excavation not occupied by the permanent structure shall be backfilled. Backfill material shall be free from large or frozen lumps, wood or other extraneous material.

That portion of backfill which will not support any portion of completed roadbed or embankment shall be placed in layers not more than 10 inches in depth (loose measurement) and shall be compacted to a density comparable with the adjacent, undisturbed material.

If the excavation has been made through a hard material resistant to erosion, the backfill around piers and in front of abutments and wings may be ordered by the Engineer to be of stone or lean concrete. Unless otherwise provided, such backfill shall be paid for as extra work.

That portion of the backfill which will support any portion of the roadbed or embankment shall be placed in uniform layers not to exceed six inches in depth (loose measurement) and each layer compacted to the density specified herein. Each layer of backfill material, if dry, shall be wetted uniformly to the moisture content required to obtain the specified density and shall be compacted to that density by means of mechanical tampers or rammers, except that the use of rolling equipment of the type generally used in compaction embankments will be permitted on portions which are accessible to such equipment. All portions of embankment too close to any portion of a structure to permit compaction by the use of the blading and rolling equipment used on adjoining sections of embankment, shall be placed and compacted in the same manner as specified above for backfill material.

These provisions require the mechanical compaction, by means of either rolling equipment or mechanical tamps or rammers, of all backfill and embankment adjoining the barrels and wingwalls or culverts and adjoining all sides of bridge abutments and retaining walls, regardless of whether or not such embankment or backfill is above or below the original surface of the ground and regardless of whether the excavation at structure site was performed as "Structural Excavation", "Street Excavation", or "Channel Excavation". Unless otherwise provided by the plans or "Special Excavation", or "Channel Excavation". Unless otherwise provided by the plans or "Special Provisions", hand tamping will not be accepted as an alternate for mechanical compaction. As a general rule, material used in filling or backfilling the portions described in this paragraph shall be an earth free of any appreciable amount of gravel or stone particles more than four inches in greater dimension and of a gradation that permits thorough compaction. When, in the opinion of the Engineer, such material is not readily available, the use of rock or gravel mixed with earth will be permitted, provided that no particles larger than 12 inches in the greatest and 6 inches in least dimension may be used. The percentage of fines shall be sufficient to fill all voids and insure a uniform and thoroughly compacted mass of proper density. When required by the plans or by written order of the Engineer, cement stabilized material shall be used for backfilling.

All portion of fill and backfill described in the preceding paragraph shall be compacted to the same density requirements specified for the adjoining sections of embankment in accordance with the governing specifications thereof.

Where no embankment is involved on the project and no specifications therefore are included in the contract, all backfill shall be compacted to a density comparable with the adjacent undisturbed material.

No backfill shall be placed against any abutment or retaining wall until such structure has been in place at least seven days. No backfill shall be placed adjacent to or over single and multiple boxes until the top slab has attained 500 psi flexural strength. Backfill placed around abutments and piers shall be deposited on both sides to approximately the same elevation at the same time.

Care shall be taken to prevent any wedging action of backfill against the structure, and the slopes bounding the excavation shall be stepped or serrated to prevent such action.

(2) Pipe Culverts

The following requirements shall apply to the backfilling of pipe culverts in addition to the pertinent portions of the general requirements given in the preceding section.

Selected materials from excavation, borrow or other approved material shall be wetted, if required, and placed along both sides of the pipe equally, in uniform layers not exceeding six inches in depth (loose measurement) and thoroughly compacted so that there shall be a berm of thoroughly compacted material on each side of the pipe. The method and degree of compaction shall be the same as specified in "Backfilling" for portions of backfill within the limits of embankment or roadbed.

Filling and/or backfilling shall be continued in this manner to the elevation of the top of the pipe. Special care shall be taken to secure thorough compaction of the material placed under the haunches of the pipe. All fill or backfill below the top of the pipe shall be compacted mechanically in the manner and to the density prescribed above, regardless of whether or not such material is placed within the limits of the embankment or roadbed. In the case of pipe placed in trenches, that portion of the backfill above the top of the pipe which supports embankment or the roadbed shall receive mechanical compaction as specified in "Backfilling" and the portion which will not support any portion of embankment or roadbed shall be placed in layers not compacted more than 10 inches in depth (loose measurement) and shall be compacted by whatever means the Contractor chooses, to a density comparable with the adjacent, undisturbed material. Embankments above the top of pipe shall be placed in accordance with the provisions for placing street embankment as prescribed in the pertinent specifications. During construction adequate cover must be provided to protect the structure from damage.

Whenever excavation is made for installing pipe culverts or box sewers across private property or beyond the limits of the embankment, the top soil removed in excavating the trench shall be kept separate and replaced as nearly as feasible in its original position, and the entire area involved in the construction operations shall be restored to a presentable condition.

(3) Cement Stabilized Backfill

When indicated on the plans, trenches shall be backfilled to the elevations shown with stabilized backfill containing a minimum of 2 sacks of standard Type I cement per cubic yard of material as placed. The materials for such cement stabilized backfill shall consist of aggregate, standard Portland cement, and water. Cement and water shall conform to the requirements of "Concrete Pavement". Aggregate shall be as noted on the plans and approved by the Engineer.

Cement stabilized backfill below the spring line of pipe culverts shall be sufficiently plastic to completely fill all voids in the trench. The pipe shall be held in alignment by jacks or other suitable means to prevent the mortared joints from cracking due to displacement caused by placing the backfill material.

Cement stabilized backfill above the spring line of pipe culverts may be dry enough to be transported without special mixing equipment.

On structures other than pipe culverts, special mixing equipment will not be required to transport the cement stabilized backfill unless indicated otherwise on plans.

Hand-operated mechanical tampers may be used with approval of the Engineer for compacting this backfill.

VIIIAG CONCRETE FOR STRUCTURES**VIIIAG-1 Description**

Concrete for structures shall govern the quality of concrete materials, storing and handling of these materials, and for the proportioning and mixing of concrete for bridges, culverts, prestressed concrete, and incidental concrete construction.

The concrete shall be composed of Portland cement, aggregates (fine and coarse), admixtures if desired or required, and water, proportioned and mixed as hereinafter provided.

VIIIAG-2 Materials**(1) Cement**

The cement shall be either Type I, II or III Portland Cement conforming to ASTM Designation: C-150.

For cement strength requirements, either the tensile or compressive test may be used.

Either Type I or II cement shall be used unless Type II is specified on the plans. Except when Type II is specified on the plans, Type III cement may be used when the anticipated air temperature for the succeeding 12 hours will not exceed 60°F. Type III cement may be used in all precast prestressed concrete except in piling when Type II cement is required for substructure concrete.

(2) Mixing Water

Water for use in concrete and for curing shall be free from oils, acids, organic matter or other deleterious substances and shall not contain more than 1,000 parts per million of chlorides as Cl nor more than 1,000 parts per million of sulfates as SO.

Water from municipal city supplies is preferred, but water from other sources may be sampled and tested before use in structural concrete.

Tests shall be made in accordance with the "Standard Method of Test for Quality of Water to be used in Concrete" (AASHTO Method T26), except where such methods are in conflict with provisions of this specification.

(3) Coarse Aggregate

Coarse aggregate shall consist of durable particles of gravel, crushed blast furnace slag, crushed stone, or combinations thereof, free from frozen material or injurious amounts of

lumps. When subjected to the color test for organic impurities (Test Method Tex-408-A), it shall not show a color darker than standard.

The fine aggregate shall produce a mortar having a tensile strength equal to or greater than that of Ottawa sand mortar when tested in accordance with Test Method Tex-317-D.

Where manufactured sand is used in lieu of natural sand for slab concrete subject to direct traffic, the acid insoluble residue of the fine aggregate shall be not less than 28 percent by weight when tested in accordance with Test Method Tex-612-J.

When tested by approved methods, the fine aggregate or combinations of aggregates including mineral filler shall conform to the grading requirements shown in Table 2.

Table 2

Fine Aggregate Gradation Chart

		Percent Retained on Each Sieve						
Aggregate Grade No.	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200
1	0	0-5	0-20	15-50	35-75	70-90	90-100	97-100

Fine aggregate will be subjected to the Sand Equivalent Test (Test Method Tex-203-F). The sand equivalent shall not be less than 80 nor less than the value shown on the plans, whichever is greater.

For Class A, C, E and F Concrete, the fineness modulus as defined below for fine aggregates shall be between 2.30 and 3.10.

For Class H Concrete, the fineness modulus of the fine aggregates shall be between 2.40 and 2.90.

The fineness modulus will be determined by adding the percentages by weight retained on the following sieves, and dividing by 100; Nos. 4, 8, 16, 30, 50 and 100.

NOTE 1: Where the sand equivalent value is greater than 85, the retainage on the No. 50 sieve may be 70 to 94 percent.

NOTE 2: Where manufactured sand is used in lieu of natural sand, the percent retained on the No. 200 sieve shall be 94 to 100.

salt, alkali, vegetable matter, or other objectionable material either free or as an adherent coating; and its quality shall be reasonably uniform throughout. It shall not contain more than 0.25 percent by weight of clay lumps, nor more than 1.0 percent by weight of shale, nor more than 5 percent by weight of laminated and/or friable particles when tested in accordance with Test Method Tex-413-A. It shall have a wear of not more than 40 percent when tested in accordance with Test Method Tex-410-A.

Unless otherwise specified on the plans, coarse aggregate may be subjected to five cycles of the soundness test in accordance with Test Method Tex-411-A. The loss shall not be greater than 12 percent when sodium sulfate is used, or 18 percent when magnesium sulfate is used.

Permissible sizes of aggregate shall be governed by Table 4, except that when exposed aggregate surfaces are required, coarse aggregate gradation will be as specified on the plans.

When tested by approved methods, the coarse aggregate, including combinations of aggregates when used, shall conform to the grading requirements shown in Table 1.

Table 1

Coarse Aggregate Gradation Chart

Aggregate Grade No.	Nominal Size	Percent Retained on Each Sieve						
		3"	2 1/2"	2"	1 1/2"	3/4"	1/2"	3/8"
1	2 1/2"	0	0-5	0-20	15-50	60-80		
2	1 1/2"			0	0-5	30-60		70-90
3	1"				0-5	10-40	40-75	
4	3/8"						0	5-30

The aggregate shall be washed. The Loss by Decantation (Test Method Tex-406-A) plus the allowable weight of clay lumps, shall not exceed one percent, or the value shown on the plans, whichever is smaller.

(4) Fine Aggregate

Fine aggregate shall consist of clean, hard, durable and uncoated particles of natural or manufactured sand or a combination thereof, with or without a mineral filler. It shall be free from frozen material or injurious amounts of salt, alkali, vegetable matter or other objectionable material and it shall not contain more than 0.5 percent by weight of clay

(5) Mineral Filler

Mineral filler shall consist of stone dust, clean crushed sand, or other approved inert material.

(6) Mortar (Grout)

Mortar for repair of concrete shall consist of 1 part cement, 2 parts finely graded sand, and enough water to make the mixture plastic. When required to prevent color difference, white cement shall be added to produce the color required. When required by the Engineer, latex adhesive shall be added to the mortar.

(7) Admixtures

Calcium chloride will not be permitted. Unless otherwise noted, air-entraining, retarding and water reducing admixtures may be used in all concrete and shall conform to the requirements of "Concrete Admixtures".

VIIIAG-3 Storage of Cement

All cement shall be stored in well ventilated weatherproof buildings or approved bind, which will protect it from dampness or absorption of moisture. Storage facilities shall be ample, and each shipment of packaged cement shall be kept separated to provide ease access for identification and inspection.

The Engineer may permit small quantities of sacked cement to be stored in the open for a maximum of 48 hours on a raised platform and under waterproof covering.

VIIIAG-4 Storage of Aggregate

The method of handling and storing concrete aggregate shall prevent contamination with foreign materials. If the aggregates are stored on the ground, the sites for the stock piles shall be clear of all vegetation. The bottom layer of aggregate shall not be disturbed or used without recleaning.

When conditions require the use of two or more sizes of aggregates, they shall be separated to prevent intermixing. Where space is limited, stock piles shall be separated by physical barriers.

Methods of handling aggregates during stockpiling and subsequent use shall be such that segregation will be minimized.

Unless otherwise authorized by the Engineer, all aggregate shall be stockpiled at least 24 hours to reduce the free moisture content.

VIIIAG-5 Measurement of Materials

The measurement of the materials, except water, used in batches of concrete shall be by weight. The fine aggregate, coarse aggregate and mineral filler shall be weighed separately. Where bulk cement is used it shall be weighed separately but batch weighing of sacked cement will not be required. Where sacked cement is used, the quantities of material per batch shall be based upon using full bags of cement. Batches involving the use of fractional bags will not be permitted.

Allowances shall be made for the water content in the aggregates.

Bags of cement varying more than 3 percent from the specified weight of 94 pounds may be rejected; and when the average weight per bag in any shipment, as determined by weighing 50 bags taken at random, is less than the net weight specified, the entire shipment may be rejected. If the shipment is accepted, the Engineer will adjust the concrete mix to a net weight per bag fixed by an average of all individual weights which are less than the average weight determined from the total number weighed.

VIIIAG-6 Classification and Mix Design

It shall be the responsibility of the Contractor to furnish the mix design, using a Coarse Aggregate Factor acceptable to the Engineer, for the class(es) of concrete specified. The mix shall be designed by a qualified commercial laboratory to conform with the requirements contained herein and in accordance with TxDOT Bulletin C-11. The Contractor shall perform, at his own expense, the work required to substantiate the design including the testing of strength specimens. Complete concrete design data shall be submitted to the Engineer for approval.

It shall also be the responsibility of the Contractor to determine and measure the batch quantity of each ingredient, including all water, so that the mix conforms to these specifications and any other requirements shown on the plans.

The coarse aggregate factor shall not be more than 0.82 except that when the voids in the coarse aggregate exceed 48 percent of the total dry loose volume, the coarse aggregate factor shall not exceed 0.85. The coarse aggregate factor shall not be less than 0.70 for Grades 1, 2 and 3 aggregate.

If the strength required for the class of concrete being produced is not secured with the cement specified in Table 4, the Contractor may use an approved water reducing and retarding admixture, or he shall furnish aggregates with different characteristics, which will produce the required results. Additional cement may be required or permitted as a temporary measure until the redesign is checked.

Water reducing or retarding agents may be used with all classes of concrete at the option of the Contractor, and will be required for hot weather concreting and for continuous slab placement.

When a retarding admixture is required for hot weather concreting, the amount to be used will be as required in "Concrete Admixtures". When used in continuous slab placement, the amount to be used will be established by several trial batches with varying retarder content and simulating the placing conditions to be encountered. When water reducing or retarding agents are used at the option of the Contractor, reduced dosage of the admixture will be permitted.

Entrained air will be required in accordance with Table 4. The concrete shall be designed to entrain 5 percent air when Grade 2 coarse aggregate is used and 6 percent when Grade 3 coarse aggregate is used. Concrete as placed in the structure shall contain the proper amount as required above with a tolerance of plus or minus 1 1/2 percentage points. Occasional variations beyond this tolerance will not be cause for rejection. When the quantity entrained air is found to be above 7 percent with Grade 2 coarse aggregate or 8 percent for Grade 3 coarse aggregate, additional test beams or cylinders will be made. If these beams or cylinders pass the minimum flexural or compressive requirements, the concrete will not be rejected because of the variation in air content.

VIIIAG-7 Consistency

In cases where the consistency requirements cannot be satisfied without exceeding the maximum allowable amount of water, the Contractor may use, or the Engineer may require an approved water reducing or retarding agent or the Contractor shall furnish additional aggregates, or aggregates with different characteristics, which will produce the required results. Additional cement may be required or permitted as a temporary measure until aggregates are changed and designs checked with the different aggregates or admixture.

The consistency of the concrete as placed should allow the completion of all finishing operations without the addition of water to the surface. When field conditions are such that additional moisture is needed for the final concrete surface finishing operation, the required water shall be applied to the surface by fog spray only, and shall be held to a minimum. The concrete shall be workable, cohesive, possess satisfactory finishing qualities, and of the stiffest consistency that can be placed and vibrated into a homogenous mass. Excessive bleeding shall be avoided. Slump requirements will be as specified in Table 3.

Table 3

Slump Requirements

Concrete Designation	Desired Slump	Max. Slump
Structural Concrete		
(1) Cased Drilled Shafts	5	6
(2) Uncased Drilled Shafts, Thin Walled Sections (9" or less), and Prestressed Concrete Members	4	5
(3) Slabs, Caps Columns, Piers Wall Sections Over 9", etc.	3	4
Underwater or Seal Concrete	5	6
Riprap, Curb, Gutter and Other Miscellaneous Concrete	As specified by Engineer	

NOTE: No concrete will be permitted with slump in excess of the maximums shown.

VIIIAG-8 Quality of Concrete, General

The concrete shall be uniform and workable. The cement content, maximum allowable water cement ratio, the desired and maximum slump and the strength requirements of the various classes of concrete shall conform to the requirements of Tables 3 and 4 and as required herein.

During the progress of the work the Engineer will cast test cylinders or beams as a check on the compressive or flexural strength of the concrete actually placed.

A test shall be defined as the average of the breaking strength of three cylinders or three beams as the case may be. Specimen will be tested in accordance with Test Methods Tex-418-A or Tex-420-A.

Test beams or cylinders will be required as specified in The Schedule of Minimum Requirements. For small placements on structures such as manholes, inlets, culverts, wingwalls, etc., the Engineer may vary the number or tests to a minimum of one for each 25 cubic yards placed over a several day period.

All test specimens, beams or cylinders, representing tests for removal of forms and/or falsework shall be cured using the same methods, and under the same conditions as the concrete represented.

"Design Strength" beams and cylinders shall be cured in accordance with ASTM Methods, latest revision.

When control of concrete quality is by twenty-eight day compressive tests, job control will be by seven day flexural test which are shown to provide the required twenty-eight day strength, based on results from trial batches. If the required seven day strength is not secured with the cement specified in Table 4, changes in the batch design will be made as specified in Article 403.6.

Table 4

Classes of Concrete

Class of Conc.	Sk. Cement per C.Y.	Min. Comp. Strength (fc) 28 Day psi	Min. Beam Strength 7 Day psi	Max. Water Cement Ratio	Coarse Aggr. No.
A*	5.0	3000	#500	6.5	2-3-4
B	4.0	2000	330	8.0	2-3-4
C*	6.0	3600	#600	6.0	**1-2-3
D	4.5	2500	#425	7.5	2-3-4
E	6.0	3000	500	7.0	2-3
F*	6.0 to 8.0	As Specified on Plans	fc 6	5.5	2-3
H***	6.0 to 8.0	As Specified on Plans	N.A.	5.5	3

* Entrained Air (Slabs, pier and bent concrete).

** Grade 1 coarse Aggregate may be used in foundation only (Except cased drilled shafts).

*** Entrained Air for slab concrete.

When Type II Cement is used with Class C Concrete, the 7 day beam break requirement will be 550 psi; with Class A, 460 psi. min.

X Permission to use grad 4 aggregate must have prior approval of the Engineer.

VIIIAG-9 Mixing Conditions

The concrete shall be mixed in quantities required for immediate use. Any concrete which is not in place within the limits outlined in "Placing Concrete, General" shall not be used. Retempering of concrete will not be permitted.

In threatening weather, which may result in conditions that will adversely affect quality of the concrete to be placed, the Engineer may order postponement of the work. Where work has been started and changes in weather conditions require protective measures, the Contractor shall furnish adequate shelter to protect the concrete against damage from rainfall, or from freezing temperatures. If necessary to continue operations during rainfall, the Contractor shall also provide protective coverings for the material stock piles. Aggregate stock piles need to be covered only to the extent necessary to control the moisture conditions in the aggregates to adequately control the consistency of the concrete.

VIIIAG-10 Mixing and Mixing Equipment

All equipment, tools, and machinery used for hauling materials and performing any part of the work shall be maintained in such condition to insure completion of the work under way without excessive delays for repairs or replacements.

The mixing shall be done in a batch mixer of approved type and size that will produce uniform distribution of the material throughout the mass. Mixers may be either the revolving drum type or the revolving blade type, and shall be capable of producing concrete meeting the requirements of these specifications.

The mixing equipment shall be capable of producing sufficient concrete to provide the quantities required to comply with "Placing Concrete, General".

After all the ingredients are assembled in the drum, the mixing shall continue not less than 1 minute for mixers of one cubic yard or less capacity plus 15 seconds for each additional cubic yard or portion thereof.

The mixer shall operate at the speed and capacity designated by the Mixer Manufacturers Bureau of the Associated General Contractors of America. The mixer shall have a plate affixed showing the manufacturer's recommended operating data.

The absolute volume of the concrete batch shall not exceed the rated capacity of the mixer.

The entire contents of the drum shall be discharged before any materials are placed therein for the succeeding batch.

The first batch of concrete materials placed in the mixer for each placement shall contain an extra quantity of sand, cement, and water sufficient to coat the inside surface of the drum.

Upon the cessation of mixing for any considerable length of time, the mixer shall be thoroughly cleaned.

The concrete mixer shall be equipped with an automatic timing device which is put into operation when the skip is raised to its full height and dumping. This device shall lock the discharging mechanism and prevent emptying of the mixer until all the materials have been mixed together for the minimum time required, and it shall ring a bell after the specified time of mixing as elapsed.

The water tank shall be arranged so that the amount of water can be measured accurately, and when the tank starts to discharge, the inlet supply shall cut off automatically.

Whenever a concrete mixer is not adequate or suitable for the work, it shall be removed from the site upon a written order from the Engineer and a suitable mixer provided by the Contractor.

Pick-up and throw-over blades in the drum of the mixer which are worn down more than 10 percent in depth shall be repaired or replaced by new blades.

Improperly mixed concrete shall not be placed in the structure.

Job mix concrete shall be concrete mixed in an approved batch mixer, in accordance with the requirement stated above, adjacent to the structure for which the concrete is being mixed, and moved to the placement site in non-agitating equipment.

The use of ready-mixed concrete will be permitted provided the batching plant and mixer trucks meet requirements of quality specified herein.

When Ready-Mix Concrete is used, additional mortar (one sack cement, three parts sand and sufficient water) shall be added to the batch to coat the drum of the mixer or agitator truck. This shall be required for every load of Class C, F and H concrete only.

Delivery of concrete to the site of the work and its discharge from the truck mixer, agitator, or non-agitating equipment shall be in accordance with the requirements of "Placing Concrete, General".

Hand mixing of concrete will be permitted only for small placements or in case of an emergency and then only on the authorization of the Engineer. Hand-mixed batches shall not exceed a two bag batch in volume.

VIIIAG-11 Excavation and Backfill and Concrete Placing, Curing and Finishing

The placing on concrete, including construction of forms and falsework, curing and finishing, shall be in accordance with "Structural Excavation and Backfill" and "Concrete Structures".

VIIIAG-12 Clean-Up

All equipment, materials, trash, broken concrete, lumber, etc. shall be removed from the construction site. The entire construction site shall be graded and cleaned to present a sightly appearance prior to acceptance of the project by the Owner.

VIIIAI CONCRETE ADMIXTURES

VIIIAI-1 Description

This item shall govern the materials used, methods of tests, and construction methods for the use of admixtures in concrete.

VIIIAI-2 General

An "air-entraining admixture" is defined as a material which, when added to a concrete mixture in the correct quantity, will entrain uniformly dispersed microscopic air.

A "water-reducing, retarding admixture" is defined as a material which, when added to a concrete mixture in the correct quantity, will reduce the quantity of mixing water required to produce concrete of a given consistency and will retard the initial set of the concrete.

A "water-reducing admixture" is defined as a material which, when added to a concrete mixture in the correct quantity, will reduce the quantity of mixing water required to produce concrete of a given consistency.

VIIIAI-3 Retarding and Water Reducing Admixtures

The admixture shall meet the requirements for Type A or Type D admixture as specified in ASTM Designation: C-494, modified as follows:

- (1) The water-reducing retarder shall retard the initial set of the concrete a minimum of 2 hours and a maximum of 4 hours, at a specified dosage rate, at a temperature of 90°F.
- (2) The cement used in any series of tests shall be either the cement proposed for specific work or a "reference" Type I cement from one mill.
- (3) Unless otherwise noted on the plans, the minimum relative durability factor shall be 80.

The air entraining admixture used in the reference and test concrete shall be neutralized Vinsol resin.

VIIIAI-4 Air Entraining Admixture

The admixture shall meet the requirements of ASTM Designation: C-260 modified as follows:

- (1) The cement used in any series of tests shall be either the cement proposed for specific work or a "reference" Type I cement from one mill.
- (2) Unless otherwise noted on the plans, the minimum relative durability factor shall be 80.

The air entraining admixture used in the reference concrete shall be neutralized Vinsol resin.

VIIIAI-5 Approval of Admixtures

The manufacturer shall certify that the material to be furnished meets the requirements of this Item, and of ASTM Designation: C-260 or C-494, as modified herein, and shall furnish test reports from an approved laboratory having prior approval of the Engineer. At the time of original request for approval of admixture, the manufacturer shall state in writing the chloride content of the admixture. No admixture to which chlorides have been added during manufacture will be permitted to be used.

The Engineer may request additional information to be submitted such as infrared spectrophotometry scan, solids content, pH value, etc., for further identification. A change in formulation discovered by any of the tests prescribed herein, or other means, and not reported and retested, may be cause to permanently bar the manufacturer from furnishing admixtures for the Owner.

The Owner reserves the right to perform any or all of the tests required by ASTM Designation: C-260 and C-494 as a check on the tests reported by the manufacturer. In case of any variance the Owner's test will govern.

VIIIAI-6 Construction use of Admixtures

When used in construction in conformance with the basic reference specifications and this specification, the Contractor will be allowed to use any admixture which has been approved. The Contractor shall submit to the Engineer three copies of the invoice showing the admixture or admixtures to be used on the project. Prior to using an admixture in the work, trial mixes shall be made and tested in the field using the materials and equipment to be used on the project.

Mix designs from previous or concurrent jobs may be used without trial batches if it is shown that no substantial change in any of the proposed ingredients has been made.

For air entraining admixtures the dosage shown on the approved list is the dosage utilized in approval test of the admixture. This dosage must be adjusted as necessary to produce the required air content in the concrete within the specified tolerances.

The normal dosage rate for retarding and water reducing admixtures will be as specified on the approved list. For extended retardation the dosage rate will be established from trial mixes. an approved retarding admixture (for normal hot weather concreting) may no perform satisfactorily for extended retardation, in which cast its use will not be permitted.

All admixtures used shall be in the liquid state and shall be dispensed with the mixing water into the concrete. No admixture shall be dispensed onto dry aggregates. Each admixture shall be dispensed separately.

Normally air entraining agents shall be charged into the mixer at the beginning of the batch and retarding or water reducing admixtures shall be charged into the mixer during the last part (approx. 1/3) of the batch when an air entraining agent is used.

For individual placements of concrete of 25 cubic yards or more and for all Ready-Mix concrete, the admixture shall be measured and dispensed by a readily adjustable dispenser. When set to a predetermined volume the dispenser shall fill to the preset amount and hold it positively without leakage until the operator releases the content into the mixing water, by some positive means. Unless otherwise shown on the plans, completely automatic dispensing will not be required, except for use with a fully automatic plant.

The calibrated container shall be a measuring reservoir of the type where the level of the admixture is visible at all times. A strip gauge with one ounce increments for air-entraining admixtures, ten ounce increments for dispersing admixtures, shall be attached securely to the measuring apparatus. The strip shall be a material possessing weather-resistant qualities. The accuracy required for these systems shall be plus or minus three percent. The equipment shall visibly show the total amount to be dispensed for ready check by the Engineer.

For contract work, with individual placements of less that 25 cubic yards and with the concrete batched on the job site, the Engineer may waive the requirements for mechanical dispensing equipment.

Admixtures shall be agitated as required to prevent separation of sedimentation of solids. Air agitation of neutralized Vinsol resin will not be permitted.

When deemed necessary by the Engineer, the Contractor shall furnish additional quantities of the admixture being used for further testing. Further use of the admixture will not be allowed until the results of such tests are known and the material meets the requirements of this item.

VIIIAJ REINFORCING STEEL**VIIIAJ-1 Description**

This item shall govern for the furnishing and placing of reinforcing steel, deformed and smooth, of the size and quantity designated on the plans and in accordance with these specifications.

VIIIAJ-2 Materials

Unless otherwise designated on the plans, all bar reinforcement shall be deformed, and shall conform to ASTM Designation: C-615, A-616, Grades 40, 60, or 75, and shall be open hearth, basic oxygen, or electric furnace new billet steel.

Large diameter new billet steel (Nos. 14 and 18), Grade 75, will permitted for straight bars only.

Where bending of bar sizes No. 14 or No. 18 of Grades 40 or 60 is required, bend testing shall be performed on representative specimens as described for smaller bars in the applicable ASTM specification. The required bend shall be 90 degrees at a minimum temperature of 60°F around a pin having a diameter of 10 times the nominal diameter of the bar and shall be free of cracking.

Spiral reinforcement shall be smooth (not deformed) bars or wire of the minimum diameter shown on the plans, and shall be made by one or more of the following processes: open hearth, basic oxygen, or electric furnace. Bars shall be rolled from billets reduced from ingots and shall comply with ASTM Designation: A-306, Grade 65 minimum (Reference to ASTM Designation: A-29 is voided. Dimensional tolerances shall be in accordance with ASTM Designation: A-615), or ASTM Designation: A-615, A-616, Grade 40 or 60, except for deformations. Wire shall be cold-drawn from rods that have been hot-rolled from billets and shall comply with ASTM Designation: A-82.

In cases where the provisions of this item are in conflicts with the provisions of the ASTM Designation to which reference is made, the provisions of this item shall govern.

Report of chemical analysis, showing the percentages of carbon, manganese, phosphorus and sulfur will be required for all reinforcing steel, when it is to be welded. No tack welding will be allowed. All welding shall conform to the requirements of AWS D-1-72.

The nominal size and area and the theoretical weight of reinforcing steel bars covered by these specifications are as follows:

BAR SIZE NUMBER	NOMINAL DIAMETER IN.	NOMINAL AREA SQ. IN.	WEIGHT PER LINEAR FOOT
2	0.250	0.05	0.167
3	0.375	0.11	0.376
4	0.500	0.20	0.668
5	0.625	0.31	1.043
6	0.750	0.44	1.502
7	0.875	0.60	2.044
8	1.000	0.79	2.670
9	1.128	1.00	3.400
10	1.270	1.27	4.303
11	1.410	1.56	5.313
14	1.693	2.25	7.57
13	2.257	4.00	13.60

Smooth round bars shall be designated by size number through No. 4. Smooth bars above No. 4 shall be designated by diameter in inches.

VIII AJ-3 Bending

The reinforcement shall be bent cold, true to the shapes indicated on the plans. Bending shall preferably be done in the shop. Irregularities in bending shall be cause for rejection.

Unless otherwise shown on the plans, the inside diameter of bar bends, in terms of the nominal bar diameter (d), shall be as follows:

Bends of 90° and greater in stirrups, ties and other secondary bars that enclose another bar in the bend.

	GRADE 40	GRADE 60
#3, #4, #5	3d	4d
#6, #7, #8	4d	5d

All bends in main bars and in secondary bars not covered above.

	GRADE 40	GRADE 60	GRADE 75
#3 THRU #8	5d	6d	-
#9, #10	5d	8d	-
#11	5d	8d	8d
#14, #18	10d	10d	-

VIII AJ-4 Storing

Steel reinforcement shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable, from mechanical injury and surface deterioration caused by exposure to conditions producing rust. When placed in the work, reinforcement shall be free from dirt, paint, grease, oil or other foreign materials. Reinforcement shall be free from injurious defects such as cracks and laminations. Rust, surface seams, surface irregularities or mill scale will not be cause for rejection, provided the minimum dimensions, cross-sectional area and tensile properties of a hand wire brushed specimen meets the physical requirements for the size and grade of steel specified.

VIII AJ-5 Splices

No splicing of bars, except when provided on the plans, or specified herein, will be permitted without written approval of the Engineer.

Spliced not provided for on the plans will be permitted, but not included for measurement, in Grade 40 bars only, sizes No. 8 and smaller, subject to the following:

For bars exceeding 40 feet in plan length, the distance center to center of splices shall not be less than 40 feet and no individual bar length shall be less than 10 feet. splices will not be permitted in bars less than 40 feet in plan length. splices which are not shown on the plans, but permitted hereby, shall be made in accordance with Table 1 below. The specified concrete cover shall be maintained at such splices and the bars placed in contact and securely tied together.

Splices will not be permitted in main reinforcement at points of maximum stress. When permitted in main bars, splices in adjacent bars will staggered a minimum of two splice lengths.

Table 1

MINIMUM LAP REQUIREMENTS
(Bar Sizes thru #8, Grade 40 only)

Horizontal Bars with 12 inches of concrete or less below the bar:	20 Bar Diameters*
Horizontal Bars with more than 12 inches of concrete below the bar:	35 Bar Diameters*
Vertical Bars	30 Bar Diameters*

*12 inch minimum

Welding of reinforcing bars may be used only where shown on the plans or as permitted herein. All welding operations, processes, equipment, materials, workmanship, and inspection shall conform to the requirements of the plans. All splices shall be of such dimension and character as to develop the full strength of the bar being spliced.

End preparation for butt welding reinforcing bars, shall be done in the field, except No. 6 size and larger shall be done in the shop. Delivered bars shall be of sufficient length to permit this practice.

For box culvert extensions with less than one foot of fill, the existing longitudinal bars shall have a 20 diameter lap with the new bars. For extensions with more than one foot of fill, a minimum of 6 inch lap will be required.

Unless otherwise shown on the plans, dowel bars transferring tensile stresses, shall have a minimum imbedment equal to the minimum lap requirements shown in Table 1. Shear transfer dowels shall have a minimum imbedment of 12 inches.

VIIIAJ-6 Placing

Reinforcement shall be placed as near as possible in the position shown on the plans. Unless otherwise shown on the plans, dimensions shown for reinforcement are to the center of the bars. In the plane of the steel parallel to the nearest surface of concrete, bars shall not vary from plan placement by more than one-twelfth of the spacing between bars. In the plane of the steel perpendicular to the nearest surface of concrete, bars shall not vary from plan placement by more than one-quarter inch. Cover of concrete to the nearest surface of steel shall meet the above requirements but shall never be less than one inch.

Vertical stirrups shall always pass around the main tension members and be attached securely thereto. The reinforcing steel shall be spaced its required distance from the form surface by means of approved galvanized metal spacers, metal spacers with plastic coated tips, stainless steel spacers, plastic spacers, or approved pre-cast mortar or concrete blocks. For approval of plastic spacers on a project, representative samples of the plastic shall show no visible indications of deterioration after immersion in a 5 percent solution of sodium hydroxide for 120 hours.

All reinforcing steel shall be tied at all intersections, except that where spacing is less than one foot in each direction, alternate intersections only, need to be tied.

Before any concrete is placed, all mortar shall be cleaned from the reinforcement. Pre-cast mortar or concrete blocks to be used for holding steel in position adjacent to formed surfaces shall be cast in molds meeting the approval of the Engineer and shall be cured by covering with wet burlap or cotton mats for a period of 72 hours.

The blocks shall be cast in the form of a frustum of a cone or pyramid with the smaller face placed against the forms.

All suitable tie wire shall be provided in each block, to be used for anchoring to the steel. Except in unusual cases, and when specifically otherwise authorized by the Engineer, the size of the surface to be placed adjacent to the forms shall not exceed two and one-half inches square or the equivalent thereof in cases where circular or rectangular areas are provided. Blocks shall be cast accurately to the thickness required, and the surface to be placed adjacent to the forms shall be a true plane free of surface imperfections.

Reinforcement shall be supported and tied in such manner that a sufficiently rigid cage of steel is provided. If the cage is not adequately supported to resist settlement or floating upward of the steel, overturning of truss bars, or movement in any direction during concrete placement, permission to continue concrete placement will be withheld until corrective measures are taken. Sufficient measurements shall be made during concrete placement to insure compliance with the first paragraph of this Article.

No concrete shall be deposited until the Engineer has inspected the placement of the reinforcing steel and given permission to proceed.

VIII AK WELDED WIRE FABRIC**VIII AK-1 Description**

Welded wire fabric shall consist of furnishing and placing of smooth steel wire of the size and quantity designated on the Plans and in accordance with these Specifications.

VIII AK-2 Materials

Wire for fabric reinforcement shall be cold-drawn from rods hot-rolled from open hearth, basic oxygen, or electric furnace billets. Wire shall conform to the requirements of the Standard Specifications for cold drawn steel wire for concrete reinforcement, ASTM Designation: A-82, latest revision. Wire fabric, when used as reinforcement, shall conform to ASTM Designation: A-185, latest revision.

When wire is ordered by gauge numbers, the following relation between number and diameter, in inches, shall apply unless otherwise specified:

GAUGE NUMBER	EQUIVALENT DIAMETER INCHES	GAUGE NUMBER	EQUIVALENT DIAMETER INCHES
0	0.3065	8	0.1620
1	0.2830	9	0.1483
2	0.2625	10	0.1350
3	0.2437	11	0.1205
4	0.2253	12	0.1055
5	0.2070	13	0.0915
6	0.1920	14	0.0800
7	0.1770		

VIII AK-3 Placing

Mats of wire fabric shall overlap each other sufficiently to maintain a uniform strength and shall be fastened securely at the ends and edges to ensure final placement in the center depth of the concrete or at other locations in the concrete as detailed on the Plans. The placement location of the fabric shall be maintained by a sufficient number of approved galvanized metal spacers, metal spacers with plastic coated tips, plastic spacers, precast bricks, or precast mortar or concrete blocks. Bricks, precast mortar or concrete blocks, when used, shall be thoroughly wetted prior to placing concrete.

No concrete shall be deposited until the ENGINEER has inspected the placement of the fabric and has given permission to proceed.

VIIIAL EXPANSION JOINT MATERIALS**VIIIAL-1 Description**

This item shall govern for the furnishing and placing of all expansion joint filler material as herein specified in the various items of these specifications or as shown on the plans or directed by the Engineer.

VIIIAL-2 Material

The material used for expansion joint filler shall conform to either of the following:

1. Preformed Bituminous Fiber Material formed from cane or other suitable fibers of a cellular nature securely bound together and uniformly impregnated with a suitable asphaltic binder and meeting the requirements of the Standard Specifications for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction, ASTM Designation D-1751.
2. Boards obtained from Redwood or Cypress timber of sound heartwood, free from sapwood, knots, clustered birdseye, checks and splits. Occasional sound or hollow birdseye, when not in clusters, will be permitted provided the board is free from any other defects that will impair its usefulness as a joint filler.

VIIIAL-3 Construction Methods

All materials used shall extend the full depth of the concrete and shall be perpendicular to the exposed face. All joints shall be shaped to conform to the contour of the finished section in which they are installed. All material shall be minimum of one-half (1/2) inch thick, and as shown on the plans.

VIIIAN CONCRETE STRUCTURES**VIIIAN-1 Description**

The work covered by this item consists of the construction of all types of structures involving the use of structural concrete, except where the requirements are waived or revised by other governing specifications.

All concrete structures shall be constructed in accordance with the design requirements and details shown on the plans in conformity with the pertinent provisions of the items contracted for; the incidental items referred to; and in conformity with the requirements herein.

VIIIAN-2 Materials**(1) Concrete**

All concrete shall conform to the provisions of "Concrete for Structures."

The class of concrete for each type of structure or unit shall be as specified on the plans, or by pertinent governing specifications.

(2) Expansion Joint Material**(a) Preformed Fiber Material**

Preformed fiber expansion joint material shall be of the dimensions shown on the plans. At the Contractor's option, the material shall be one of the following, unless otherwise noted on the plans:

- (1) "Preformed Bituminous Fiber Material" shall meet the requirements of the Standard Specifications for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction, ASTM Designation: D-1751.
- (2) "Preformed Non-Bituminous Fiber Material" shall meet the requirements of the Standard Specifications for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction, ASTM Designation: D-1751, except that the requirements pertaining to bitumen content, density and water absorption shall be voided.

(b) Joint Sealing Material

Unless otherwise noted on the plans, the sealer shall be a two-component, synthetic polymer conforming to the requirements of "Concrete Pavement."

(c) Asphalt Board

Asphalt Board shall consist of two liners of 0.016 inch asphalt impregnated paper, filled with a mastic mixture of asphalt and vegetable fiber and/or mineral filler. When tested in accordance with Test Method Tex-524-C, the asphalt board shall not deflect from the horizontal more than one inch in three and one-half inches.

(d) Rebonded Neoprene Filler

Rebonded neoprene filler shall consist of ground closed-cell neoprene particles, rebonded and molded into sheets of uniform thickness of the dimensions shown on plans, meeting the requirements of ASTM Designation: D-1752, Type 1. Certification that the material meets these requirements shall be furnished to the Engineer.

(3) Waterstop

(a) Unless otherwise noted on the plans, copper water stop shall be 16 ounce material.

(b) Other types as specified on the plans.

(4) Curing Materials

(a) Membrane curing shall conform to "Membrane Curing."

Type 1 (Resin Base Only) curing compound will be permitted for slab concrete in bridge decks and top slabs of direct traffic culverts.

(b) Cotton mats shall consist of a filling material of cotton "bat" or "bats" (min. 12 oz. per sq. yd.); covered with unsized cloth (min. 6 oz. per sq. yd.); tufted or stitched to maintain stability; shall be free from tears; and shall be in good general condition.

(c) Polyethylene sheeting shall be opaque, of 4 mil. minimum thickness and free from visible defects.

- (d) Burlap-Polyethylene mats shall be made from burlap impregnated on one side with a film of opaque polyethylene and free from visible defects.
 - (e) Laminated mats shall have not less than one layer of an impervious material such as polyethylene, vinyl plastic or other acceptable material (either as a solid sheet or impregnated into another fabric) and shall be free of visible defects.
- (5) Other

Retarding, water reducing and air entraining agents shall comply with the requirements of "Concrete Admixtures."

VIIIAN-3 General Requirements

Before starting work, the Contractor shall inform the Engineer fully of the construction methods he proposes to use, the adequacy of which shall be subject to the approval of the Engineer. Plans for forms and falsework for piers and superstructure spans over 20 feet long and for all widening details shall be submitted to the Engineer for review and approval if requested. Similar plans shall be submitted for other units of the structure, if requested by the Engineer. The plans shall be prepared on standard 22 inch by 36 inch sheets and shall show all essential details of the proposed forms, falsework and bracing to permit a structural analysis. Four sets of such plans will be required.

Concurrence on the part of the Engineer in any proposed construction methods, approval of equipment, or of form and falsework plans does not relieve the Contractor of the responsibility for the safety or correctness of his methods and adequacy of his equipment or from carrying out the work in full accordance with the contract.

Unless otherwise provided on the plans, the requirements in the succeeding five paragraphs shall govern the time sequence in which construction operations may be carried on and for the opening of completed structures to traffic:

Superstructure members, forms, falsework, or erection equipment shall not be placed on the substructure before the concrete therein has attained a 500 psi flexural strength.

Storage of materials on completed portions of a structure will not be permitted until all curing requirements for those particular portions have been met.

No forms shall be erected on concrete footings supported by piling or drilled shafts until the concrete therein has attained a minimum flexural strength of 400 psi. Such work may begin on spread footings after the concrete therein has aged at least two curing days. Concrete may be placed as soon as the forms and reinforcing steel are approved.

The support of tie beam and/or forms by falsework placed on previously placed tie beams is permissible provided such beams have attained 500 psi flexural strength, curing requirements are completed, and they are properly supported to eliminate stresses not provided for in the design.

Bridges and direct traffic culverts shall not be opened to construction traffic or to the traveling public until authorized by the Engineer in accordance with the following:

Authorization may be given after the last slab concrete has been in place at least 14 days for light construction traffic not to exceed a three-quarter ton vehicle.

Authorization for normal construction traffic, and when necessary to the traveling public, may be given after the slab concrete has been in place 30 days.

VIIIAN-4 Drains

Weep holes and roadway drains shall be installed and constructed as shown on the plans.

VIIIAN-5 Expansion Joints

Joints and devices to provide for expansion and contraction shall be constructed where and as indicated herein or on the plans.

The bearing area under the expansion ends of concrete slabs and slab and girder spans shall be given a steel trowel finish, and finished to the exact grades required. The material used to separate expansion surfaces shall be as shown on the plans and placed so that concrete or mortar cannot be subsequently worked around or under it.

Concrete adjacent to armor joints and finger joints shall be placed carefully to avoid defective anchorage and porous or honeycombed concrete in such areas.

All open joints and joints to be filled with expansion joint material, shall be constructed using forms adaptable to loosening or early removal.

To avoid expansion or contraction damage to the adjacent concrete, these forms shall be loosened as soon as possible after final concrete set to permit free movement of span without requiring full form removal.

When designated as a "Type A" joint, preformed fiber joint material, or other material shown on the plans, shall be used in the vertical joints of the roadway slab, curb, median or sidewalk. The top one inch thereof shall be filled with joint sealing material, as specified herein. When different material is shown on the plans it shall be used.

Prior to placing the sealing material, the vertical faces of the joint shall be cleaned of all laitance by sandblasting or by mechanical routing. Cracked or spalled edges shall be repaired. The joint shall be blown clean of all foreign material and sealed.

Where preformed fiber joint material is used, it shall be anchored to the concrete on one side of the joint by light wire or nails, to prevent the material from falling out.

Finished joints shall conform to the indicated outline with the concrete sections completely separated by the specified opening or joint material.

Soon after form removal and again where necessary after surface finishing, all projecting concrete shall be removed along exposed edges to secure full effectiveness of the expansion joints.

VIIIAN-6 Construction Joints

The joint formed by placing plastic concrete in direct contact with concrete that has attained its initial set shall be deemed a construction joint. The term monolithic placement shall be interpreted to mean that the manner and sequence of concrete placing shall not create construction joints.

Construction joints shall be of the type and at the locations shown on the plans. Additional joints will not be permitted without written authorization from the Engineer, and when authorized, shall have details equivalent to those shown on the plans for joints in similar locations.

Unless otherwise provided, construction joints shall be square and normal to the forms. Bulkheads shall be provided in the forms for all joints, except when horizontal. All vertical construction joints shall be chamfered. All horizontal construction joints shall be routed or grooved.

Construction joints requiring the use of joint sealing material shall be as detailed on the plans or as directed by the Engineer. The material will be specified on the plans without reference to joint type.

A concrete placement terminating at a horizontal construction joint shall have the top surface roughened thoroughly as soon as practicable after initial set is attained. The surfaces at bulkheads shall be roughened as soon as forms are removed.

The hardened concrete surface shall be thoroughly cleaned of all loose material, laitance, dirt or foreign matter and saturated with water so it is moist when placing fresh concrete against it. Forms shall be drawn tight against the existing concrete and the joint surface flushed with grout just prior to placing the fresh concrete.

VIIIAN-7 Foundations

Excavation for foundations shall be made in accordance with the requirements of "Structural Excavation and Backfill."

Concrete for foundation seals, unless otherwise specified, shall be Class "E", and placed in accordance with the requirements herein. The top of the completed seal shall not vary from plan grade or the grade established by the Engineer, by more than one foot.

Where a concrete seal is required by the plans, the design will be based on the normal water elevation as shown on the plans. If the foundation concrete can be placed in the dry at the time of construction, the seal will not be required. If additional seal is necessary for the conditions existing during the time of construction, its thickness shall be increased as deemed necessary by the Contractor and at his expense. If the conditions existing at the time of construction require a seal for placing the foundation concrete in the dry and none is provided on the plans, the Contractor shall place an adequate seal at his expense.

The seal shall be allowed to set for at least 36 hours before the caisson or cofferdam is de-watered, after which the top of the seal shall be cleaned of all laitance or other soft material, and all high spots exceeding the above limitation shall be cut off and removed.

VIIIAN-8 Falsework

All falsework shall be designed and constructed to safely carry the maximum anticipated loads and to provide the necessary rigidity. Details of falsework construction shall be subject to review and approval by the Engineer.

For evaluating the adequacy of job fabricated falsework, a weight of 150 pounds per cubic foot shall be assumed for concrete, and a live load allowance of 50 pounds per square foot of horizontal surface of the form work shall be included.

Commercially produced structural units used in falsework shall not exceed the manufacturer's maximum allowable working load for moment and shear or end reaction. The maximum allowable working load shall include an allowance of 35 pounds per square foot of horizontal form surface and sufficient details and data shall be submitted for use in checking falsework details for approval.

All timber used in falsework centering shall be sound, in good condition, and free from defects which will impair its strength. When wedges are used to adjust falsework to desired elevations, they shall be used in pairs to insure even bearing.

Sills or grillages shall be large enough to support the superimposed load without settlement, and unless founded on solid rock, shale or other hard materials, precautions shall be taken to prevent yielding of the supporting material.

Falsework which cannot be founded on a satisfactory spread footing shall be placed on piling driven to a bearing capacity sufficient to support the superimposed load without settlement. The safe bearing capacity of piling shall be determined by test loads or by such other methods that may be required or acceptable to the Engineer.

In general, each falsework bent shall be capped transversely by a member of proper size. A short cap section forming a T-head may be substituted to permit the removal of portions of the forms without disturbing the falsework. Caps shall be securely fastened to each pile or column in the bent and set at the proper elevation to produce, in conjunction with the use of approved wedges or jacks, permanent camber indicated on the plans or specified, plus a construction camber covering allowance for deformation of the forms and falsework. The use of wedges to compensate for incorrectly cut bearing surfaces will not be permitted. Each falsework bent shall be securely braced to provide the stiffness required with the bracing securely fastened to each pile or column it crosses.

In setting falsework for arches, allowances shall be made for settlement of falsework, deflection of the arch and permanent camber. Provision shall be made by suitable wedges, sand jacks, or other acceptable devices for the controlled lowering of falsework when the arch is swung. Falsework may be required to be placed on jacks to provide for settlement correction during concrete placement.

When the falsework is no longer required, it shall be removed. Falsework piling shall be pulled or cut off not less than six inches below finished ground level. Falsework and piling in a stream, lake, or bay shall be completely removed to a point specified by the Engineer to prevent any obstruction to the waterway.

VIIIAN-9 Forms

Forms for precast prestressed concrete members and for prestressed piling shall be constructed in accordance with the provisions of the Item, "Prestressed Concrete Structures", TxDOT Standard Specifications:

(1) General

Except where otherwise specified, forms may be of either timber or metal.

Forms for round columns exposed to view shall be of steel, except that other materials will be allowed with written permission of the Engineer.

Forming plans shall be submitted for approval. Forms shall be designed for the pressure exerted by a liquid weighing 150 pounds per cubic foot. The rate of placing the concrete shall be taken into consideration in determining the depth of the equivalent liquid. For job fabricated forms an additional live load of 50 pounds per square foot shall be allowed on horizontal surfaces.

Commercially produced structural units used in form work shall not exceed the manufacturer's maximum allowable working load for moment, shear or end reaction. The maximum working load shall include a live load of 35 pounds per square foot of horizontal form surface and sufficient details and data shall be submitted for use in checking form work details for approval.

Forms shall be practically mortar-tight, rigidly braced and strong enough to prevent bulging between supports and maintained to the proper line and grade during concrete placement. Forms shall be maintained in a manner that will prevent warping and shrinkage.

Deflections due to cast-in-place slab concrete and railing shown in the dead load deflection diagram shall be taken into account in the setting of slab forms.

All forms and footing areas shall be cleaned of any extraneous matter before placing concrete.

Permission to place concrete will not be given until all of such work is complete to the satisfaction of the Engineer.

If, at any stage of the work, the forms show signs of bulging or sagging, the portion of the concrete causing such condition shall be removed immediately, if necessary, and the forms shall be reset and securely braced against further movement.

(2) Timber Forms

Lumber for forms shall be properly seasoned, of good quality, and free from imperfections which would affect its strength or impair the finished surface of the concrete. The lumber used for facing or sheathing shall be finished on at least one side and two edges and shall be sized to uniform thickness.

Form lining will be required for all formed surfaces, except for the inside of culvert barrels, inlets, manholes and box girders; the bottom of bridge decks between beams or girders; surfaces that are subsequently covered by backfill material or are completely enclosed; and any surface formed by a single finished board. Lining will not be required when plywood forms are used.

Form lining shall be of an approved type such as masonite or plywood. This membrane sheeting such as polyethylene sheets shall not be used for form lining.

Forms may be constructed of plywood not less than one-half inch in thickness, with no form lining required. The grain of the face plies on plywood forms shall be placed parallel to the span between the supporting studs or joists.

Plywood used for forming surfaces which remain exposed shall be equal to that specified as B-B Plyform Class I or Class II Exterior of the U.S. Department of Commerce, National Bureau of Standards, U.S. Product Standard, latest edition.

Forms or form lumber to be reused shall be maintained clean and in good condition. Any lumber which is split, warped, bulged, marred or has defects that will produce inferior work shall not be used and, if condemned, shall be promptly removed from the work.

Studs and joists shall be spaced so that the facing form material remains in true alignment under the imposed loads.

Wales shall be spaced close enough to hold forms securely to the designated lines and scabbed at least 4 feet on each side of joints to provide continuity. A row of wales shall be placed near the bottom of each placement.

Facing material shall be placed with parallel and square joints and securely fastened to supporting studs.

Forms for surfaces receiving only an ordinary finish and exposed to view shall be placed with the form panels symmetrical, i.e., long dimensions in the same direction. Horizontal joints shall be continuous.

Molding specified for chamfer strips or other uses shall be made of materials of a grade that will not split when nailed and which can be maintained to a true line without warping. Wood molding shall be mill cut and dressed on all faces. Unless otherwise provided, forms shall be filleted at all sharp corners and edges with triangular chamfer strips measuring three-fourths inch on the sides.

Forms for railings and ornamental work shall be constructed to standards equivalent to first class millwork. All molding, panel work and bevel strips shall be straight and true with neatly mitered joints designed so the finish work is true, sharp and clean cut.

All forms shall be constructed to permit their removal without marring or damaging the concrete. The forms may be given a slight draft to permit ease of removal.

Metal form ties of an approved type or a satisfactory substitute shall be used to hold forms in place and shall be of a type that permits ease of removal of the metal as hereinafter specified.

All metal appliances used inside of forms for alignment purposes shall be removed to a depth of at least one-half inch from the concrete surface. They shall be made so the metal may be removed without undue chipping or spalling, and when removed, shall leave a smooth opening in the concrete surface. Burning off of rods, bolts or ties will not be permitted.

Any wire ties used shall be cut back at least one-half inch from the face of the concrete.

Devices holding metal ties in place shall be capable of developing the strength of the tie and adjustable to allow for proper alignment.

Metal and wooden spreaders which are separate from the forms shall be removed entirely as the concrete is being placed.

Adequate clean-out openings shall be provided for narrow walls and other locations where access to the bottom of the forms is not readily attainable.

Prior to placing concrete, the facing of all forms shall be treated with oil or other bond breaking coating of such composition that it will not discolor or otherwise injuriously affect the concrete surface. Care shall be exercised to prevent coating of the reinforcing steel.

(3) Metal Forms

The foregoing requirements for timber forms as regards design, mortar tightness, filleted corners, beveled projections, bracing, alignment, removal, reuse and wetting shall also apply to metal forms, except that these will not require lining, unless specifically noted on the plans.

The thickness of form metal shall be as required to maintain the true shape without warping or bulging. All bolt and rivet heads on the facing sides shall be countersunk. Clamps, pins or other connecting devices shall be designed to hold the forms rigidly together and to allow removal without injury to the concrete. Metal forms which do not present a smooth surface or line up properly shall not be used. Metal shall be kept free from rust, grease or other foreign materials.

VIIIAN-10 Placing Reinforcement

Reinforcement in concrete structures shall be placed carefully and accurately and rigidly supported as provided in "Reinforcing Steel". Reinforcing steel supports shall not be welded to I beams or girders.

VIIIAN-11 Placing Concrete, General

The minimum temperature of all concrete at the time of placement shall be not less that 50° F.

The maximum temperature of cast-in-place concrete in bridge superstructures shall not exceed 85°F when placed. Concrete diaframs, parapets, concrete portions of railing, curbs and sidewalks, unless monolithically placed with the slab, shall not be subject to the above maximum. Other portions of structures, when so noted on the plans, shall require the temperature control specified.

For continuous placement of the deck on continuous steel units, the initial set of the concrete shall be retarded sufficiently to insure that it remains plastic in not less than three spans immediately preceding the one being placed. For simple spans, retardation shall be required only if necessary to complete finishing operations.

The consistency of the concrete as placed should allow the completion of all finishing operations without the addition of water to the surface. When conditions are such that additional moisture is needed for finishing, the required water shall be applied to the surface by fog spray only, and shall be held to a minimum amount. Fog spray for this purpose may be applied with hand operated fogging equipment.

The maximum time interval between the addition of cement to the batch, and the placing of concrete in the forms shall not exceed the following:

Air or Concrete Temperature		Maximum Time
Non-Agitated Concrete		
Up to 80°F	.....	30 minutes
Over 80°F	.....	15 minutes
Agitated Concrete		
90°F or above	.....	45 minutes
75°F to 89°F	.....	60 minutes
35°F to 74°F	.....	90 minutes

The use of an approved retarding agent in the concrete will permit the extension of each of the above temperature-time maximums by 30 minutes, for bridge decks, top slabs of direct traffic culverts and cased drilled shafts, and one hour for all other concrete except that the maximum time shall not exceed 30 minutes for non-agitated concrete.

From the time of initial strike-off until final finish is complete, the uniformed surfaces of slab concrete in bridge decks and top slab of direct traffic culverts, shall be kept damp, not wet, to offset the effects of rapid evaporation of mixing water from the concrete due to wind, temperature, low humidity or combinations thereof. Fogging equipment capable of applying water in the form of a fine fog mist, not a spray, will be required. Fogging will be applied at the times and in the manner directed by the Engineer.

Fogging equipment may be either water, pumped under high pressure, or a combination of air and water, either system in combination with a proper atomizing nozzle. The equipment shall be sufficiently portable for use in the direction of any prevailing winds. The equipment shall be adapted for intermittent use to prevent excessive wetting of the surfaces.

Upon completion of the final finish, interim curing will be required for slab concrete in bridge decks and top slabs of direct traffic culverts as follows:

- (1) Unless otherwise shown on the plans, Type 1 membrane curing compound (Resin Base Only) shall be applied to the slab surface.

Required water curing shall begin as soon as it can be done without damaging the concrete finish.

- (2) When required by the plans, emulsified linseed oil curing compound shall be applied to the slab as interim curing.

The Contractor shall give the Engineer sufficient advance notice before placing concrete in any unit of the structure to permit the inspection of forms, reinforcing steel placement, and other preparations. Concrete shall not be placed in any unit prior to the completion of form work and placement of reinforcement therein.

Concrete mixing, placing and finishing shall be done in daylight hours, unless adequate provisions are made to light the entire site of all operations.

Concrete placement will not be permitted when impending weather conditions will impair the quality of the finished work. If rainfall should occur after placing operations are started, the Contractor shall provide ample covering to protect the work.

The sequence of placing concrete shall be as provided on the plans or as required herein. The placing shall be regulated so the pressures caused by the plastic concrete shall not exceed the loads used in the form design.

The method of handling, placing and consolidation of concrete shall minimize segregation and displacement of the reinforcement, and produce a uniformly dense and compact mass. Concrete shall not have a free fall of more than 5 feet, except in the case of thin walls such as in culverts. Any hardened concrete spatter ahead of the plastic concrete shall be removed.

The method and equipment used to transport concrete to the forms shall be capable of maintaining the rate of placement approved by the Engineer. Concrete may be transported by buckets, chutes, buggies, belt conveyors, pumps or other acceptable methods.

When belt conveyors or pumps are used, sampling for testing will be done at the discharge end. Concrete transported by conveyors shall be protected from sun and wind, if necessary, to prevent loss of slump and workability.

Pipes through which concrete is pumped shall be shaded and/or wrapped with wet burlap, if necessary, to prevent loss of slump and workability. Concrete shall not be transported through aluminum pipes, tubes or other aluminum equipment. The coarse aggregate content of the concrete shall be within the limits specified in "Concrete for Structures".

Chutes, troughs, conveyors or pipes shall be arranged and used so that the concrete ingredients will not be separated. When steep slopes are necessary, the chutes shall be equipped with baffle boards or made in short lengths that reverse the direction of movement, or the chute ends shall terminate in vertical down-spouts. Open troughs shall extend, if necessary, down inside the forms or through holes left in them. All transporting equipment shall be kept clean and free from hardened concrete coatings. Water used for cleaning shall be discharged clear of the concrete.

Each part of the forms shall be filled by depositing concrete as near its final position as possible. The coarse aggregate shall be worked back from the face and the concrete forced under and around the reinforcement bars without displacing them. Depositing large quantities at one point and running or working it along the forms will not be allowed.

Concrete shall be deposited in the forms in layers of suitable depth but not more than 36 inches in thickness, unless otherwise directed by the Engineer.

The sequence of successive layers or adjacent portions of concrete shall be such that they can be vibrated into a homogeneous mass with the previously placed concrete without a cold joint. Not more than one hour shall elapse between adjacent or successive placements of concrete. Unauthorized construction joints shall be avoided by placing all concrete between the authorized joints in one continuous operation.

An approved retarding agent shall be used to control stress cracks and/or unauthorized cold joints in mass placements where differential settlement and/or setting time may induce stress cracking, such as on falsework, in deep girder stems, etc.

Openings in forms shall be provided, if needed, for removal of laitance or foreign matter of any kind.

All forms shall be wetted thoroughly before the concrete is placed therein.

All concrete shall be well consolidated and the mortar flushed to the form surfaces by continuous working with immersion type vibrators. Vibrators shall operate by attachment to forms or reinforcement will not be permitted, except on steel forms. At least one stand-by vibrator shall be provided for emergency use in addition to the ones required for placement. For lightweight concrete, vibrators of the high frequency type, which produce a minimum of 7000 impulses per minute, will be required.

The concrete shall be vibrated immediately after deposit. Prior to the beginning of work, a systematic spacing of the points of vibration shall be established to insure complete consolidation and thorough working of the concrete around the reinforcement, embedded fixtures, and into the corners and angles of the forms. Immersion type vibrators shall be inserted vertically, at points 18 to 30 inches apart, and slowly withdrawn. The vibrator may be inserted in a sloping or horizontal position in shallow slabs. The entire depth of each lift shall be vibrated, allowing the vibrator to penetrate several inches into the preceding lift. Concrete along construction joints shall be thoroughly consolidated by operating the vibrator along and close to but not against the joint surface. The vibration shall continue until thorough consolidation, and complete embedment of reinforcement and fixtures is produced, but not long enough to cause segregation. Vibration may be supplemented by hand spading or rodding, if necessary, to insure the flushing of mortar to the surface of all forms.

Holes for anchor bolts in piers, abutments, bents, or pedestals may be drilled or formed by the insertion of oiled wooden plugs or metal sleeves in the plastic concrete. Formed holes shall be large enough to permit horizontal adjustments of the bolts. The bolts shall be carefully set in mortar. In lieu of the above, anchor bolts may be set to exact locations when the concrete is placed.

Slab concrete shall be mixed in a plant located off the structure. Carting or wheeling concrete batches over completed slabs will not be permitted until they have aged at least four full curing days. If carts are used, timber planking will be required for the remainder of the curing period. Carts shall be equipped with pneumatic tires. Curing operations shall not be interrupted for the purpose of wheeling concrete over finished slabs.

Exposed concrete surfaces, while still plastic, shall be stamped with an impression having the Contractor's name and the month and year, when so directed by the Engineer or otherwise called for in the contract. The stamp shall be of an approved design.

After concrete has taken its initial set, to prevent damage to the concrete, at least one curing day shall elapse before placing strain on projecting reinforcement.

The storing of reinforcing or structural steel on completed roadway slabs generally shall be avoided and, when permitted, shall be limited to quantities and distribution that will not induce excessive stresses.

VIIIAN-12 Placing Concrete in Cold Weather

(1) Cast-in Place Concrete

Concrete may be placed when the atmospheric temperature is not less than 35°F. Concrete shall not be placed in contact with any material coated with frost or having temperature less than 32°F.

Aggregates shall be free from ice, frost and frozen lumps. When required, in order to produce the minimum specified concrete temperature, the aggregate and/or the water shall be heated uniformly, in accordance with the following:

The water temperature shall not exceed 180°F, and/or the aggregate temperature shall not exceed 150°F. The heating apparatus shall heat the mass of aggregate uniformly. The temperature of the mixture of aggregates and water shall be between 50°F and 85°F before introduction of the cement.

All concrete shall be effectively protected as follows:

- (a) The temperature of slab concrete of all unformed surfaces shall be maintained at 50°F or above for a period of 72 hours from time of placement and above 40° F for an additional 72 hours.
- (b) The temperature at the surface of all concrete in bents, piers, culvert walls, retaining walls, parapets, wingwalls, bottom of slabs, and other similar forms shall be maintained at 40°F or above for a period of 72 hours from time of placement.
- (c) The temperature of all concrete, including the bottom slabs of culverts placed on or in the ground, shall be maintained above 32°F for a period of 72 hours from time of placement.

Protection shall consist of providing additional covering insulated forms or other means, and if necessary, supplementing such covering with artificial heating. Curing shall be provided during this period until all requirements for curing have been satisfied.

When impending weather conditions indicate the possibility of the need for such temperature protection, all necessary heating and covering material shall be on hand ready for use before permission is granted to begin placement.

Sufficient extra test specimens will be made and cured with the placement to ascertain the condition of the concrete as placed prior to for removal and acceptance.

(2) Precast Concrete

A fabricating plant for precast products which has adequate protection from cold weather in the form of permanent or portable framework and covering, which protects the concrete when placed in the forms, and is equipped with approved steam curing facilities, may place concrete under any low temperature conditions provided:

- (a) The framework and covering are placed and heat is provided for the concrete and the forms within one hour after the concrete is placed. This shall not be construed to be one hour after the last concrete is placed, but that no concrete shall remain unprotected longer than one hour.
- (b) Steam heat shall keep the air surrounding the concrete between 50°F and 85°F for a minimum of three hours prior to beginning the temperature rise which is required for steam curing.

The Contractor is responsible for the protection of concrete placed under any and all weather conditions. Permission given by the Engineer for placing during freezing weather will in no way relieve the Contractor of the responsibility for producing concrete in quality to that placed under normal conditions. Should concrete placed under such conditions prove unsatisfactory, it shall be removed and replaced.

VIIIAN-13 Placing Concrete in Hot Weather

When the temperature of the air is above 85°F, an approved retarding agent will be required in all concrete used in superstructures, top slabs of direct traffic culverts, and will be required in all cased drilled shafts regardless of temperature.

VIIIAN-14 Placing Concrete in Water

Concrete shall be deposited in water only when specified on the plans or with written permission of the Engineer. The forms, cofferdams or caissons shall be sufficiently tight to prevent any water

current passing through the space in which the concrete is being deposited. Pumping will not be permitted during the concrete placing, nor until it has set for at least 36 hours.

The concrete shall be placed with a tremie, closed bottom-dump bucket, or other approved method, and shall not be permitted to fall freely through the water nor shall it be disturbed after it has been placed. Its surface shall be kept approximately level during placement.

The tremie shall consist of a water-tight tube 14 inches or less in diameter. It shall be constructed so that the bottom can be sealed and opened after it is in place and fully charged with concrete. It shall be supported so that it can be easily moved horizontally to cover all the work area and vertically to control the concrete flow.

Bottom-dump buckets used for underwater placing shall have a capacity of not less than one-half cubic yard. It shall be lowered gradually and carefully until it rests upon the concrete already placed and raised very slowly during the upward travel; the intent being to maintain still water at the point of discharge and to avoid agitating the mixture.

The placing operations shall be continuous until the work is complete.

Unless otherwise specified by the plans, all concrete placed under water shall be Class "E".

VIIIAN-15 Placing Concrete in Superstructure

Unless otherwise specified on the plans, simple span roadway slabs shall be placed without transverse construction joints by using a longitudinal screed, or a self propelled transverse finishing machine. The screed shall be adequately supported on a header or rail system sufficiently stable to withstand the longitudinal or lateral thrust of the equipment. Unless otherwise shown on the plans, temporary intermediate headers will be permitted for placements exceeding 50 feet in length for the longitudinal screed, provided the rate of placement is rapid enough to prevent a cold joint and these headers are designed for early removal to permit satisfactory consolidation and finish of the concrete at their locations.

Unless otherwise specified on the plans, slabs on continuous units shall be placed in one continuous operation without transverse construction joints using a longitudinal screed, or a self propelled transverse finishing machine. Rails for transverse finishing machines supported from the beams or girders shall be installed so they may be removed without damage to the slab. Bond between removable supports and the concrete shall be prevented in a manner acceptable to the Engineer. Rail support parts which remain embedded in the slab shall not project above the upper mat of reinforcing steel. Rail or screed supports attached to I-beams or girders shall be subject to the requirements of "General Requirements".

One or more passes shall be made with the screed over the bridge deck segment prior to the placement of concrete thereon to insure proper operation and maintenance of grades and clearances.

Slab concrete shall be deposited between the exterior beam and the adjacent beam prior to placing concrete in the overhand portion of the slab.

For transverse slab finishing, concrete shall be placed in transverse strips, proceeding from the lowest end of the placement.

For longitudinal screeding, concrete shall be placed in longitudinal strips starting at a point in the center of the segment adjacent to one side, except as provided herein, and the strip completed by placing uniformly in both directions toward the ends except that for spans on a grade of 1.5 percent or more, placing shall start at the lowest end. The width of strips shall be such that the concrete therein will remain plastic until the adjacent strip is placed. Where monolithic curb construction is specified, the concrete shall be placed therein in proper sequence to be monolithic with the adjacent longitudinal strips of the slabs.

Forms for the bottom surface of concrete slabs, girders and overhangs shall be maintained true to the required vertical alignment during concrete placing. An approved system of checking shall be used to detect any vertical movement of the forms or falsework. Unless otherwise provided on the plans, girders, slab and curbs of deck girder spans shall be placed monolithically.

Filling girder stems first will be permitted provided the slab concrete is placed within the time limits specified in Article 410.11. Construction joints when permitted for slab placements on steel and prestressed concrete beams shall be as shown on the plans. Where plans permit segmental placing, without specifying a particular order of placement, any logical placing sequence which will not result in the overstressing of any of the supporting members will be permitted subject to the approval of the Engineer.

Any falsework under steel girder or truss spans shall be released and the spans swung free on their permanent supporters before placing any slab concrete thereon.

When the curb forms are filled, the top of curb and sidewalk section shall be brought to the correct camber and alignment and finished.

The slab shall be finished as specified in "Finish of Roadway Slabs". When the slab is to receive an additional wearing surface or level-up (widening), it shall be given a reasonable smooth float or screed finish.

VIIIAN-16 Placing Concrete in Concrete Arches

Concrete shall be placed in arch rings so the loading is kept symmetrical on the falsework. The arch rings and ribs shall be placed in one continuous operation unless otherwise specified or permitted by the Engineer. The spandrel walls or columns and the beams shall not be placed until the arch is swung. Floor slab, railing, parapet walls, etc., shall not be placed until all spandrels are complete. Slab placement shall be symmetrical about the transverse centerline so the loading of the arch is kept approximately symmetrical.

The placing sequence shall be as shown on the plans.

VIIIAN-17 Placing Concrete in Box Culverts

In general, construction joints will be permitted only where shown on the plans.

Where the top slab and walls are placed monolithically in culverts more than 4 feet in clear height, an interval of not less than one nor more than 2 hours shall elapse before placing the top slab to allow for shrinkage in the wall concrete.

The base slab shall be trowel finished accurately at the proper time to provide a smooth uniform surface. Top slabs which carry traffic shall be finished as specified for roadway slabs. Top slabs of fill type culverts shall be given a reasonably smooth float finish.

VIIIAN-18 Placing Concrete in Foundations and Substructure

Concrete shall not be placed in footings until the depth and character of the foundation has been inspected by the Engineer and permission has been given to proceed.

Placing of concrete footings upon seal courses will be permitted after the caissons or cofferdams are free from water and the seal course cleaned. Any necessary pumping or bailing during the concreting operation shall be done from a suitable sump located outside the forms.

All temporary wales or braces inside cofferdams or caissons shall be constructed or adjusted as the work proceeds to prevent unauthorized construction joints in footings or shafts.

When footings can be placed in a dry excavation without the use of cofferdams or caissons, forms may be omitted, if desired by the Contractor and approved by the Engineer, and the entire excavation filled with concrete to the elevation of the top of footing in which case measurement for payment will be based on the footing dimensions shown on the plans.

Concrete in columns shall be placed monolithically unless otherwise provided. Columns and caps and/or tie beams supported thereon may be placed in the same operation. To allow for shrinkage

of the column concrete, it shall be placed to the lower level of the cap or tie beam and placement delayed for not less than one hour nor more than two before proceeding.

VIIIAN-19 Treatment and Finishing of Horizontal Surfaces Except Roadway Slabs

All unformed upper surfaces shall be struck off to grade and finished. The use of mortar topping for surfaces under this classification will not be permitted.

After the concrete has been struck off, the surface shall be floated with a suitable float. Bridge sidewalks shall be given a wood float or broom finish or may be striped with a brush, as specified by the Engineer. Top of caps and piers shall be given a smooth finish with a steel trowel, except that where elastomeric pads are used under beams the bearing area shall be given a wood float finish. Other surfaces shall be wood float finished and striped with a fine brush leaving a fine grained texture.

VIIIAN-20 Finish of Roadway Slabs

As soon as the concrete has been placed and vibrated in a section of sufficient width to permit working, the surface shall be approximately leveled, struck off and screed, carrying a slight excess of concrete ahead of the screed to insure filling of all low spots. The screed shall be designed rigid enough to hold true to shape and shall have sufficient adjustments to provide for the required camber. A vibrating screed shall be used in all slabs more than 20 feet in width. The screeds shall be provided with a metal edge.

Longitudinal screeds shall be moved across the concrete with a saw-like motion while their ends rest on headers or templates set true to the roadway grade or on the adjacent finished slab.

The surface of the concrete shall be screed a sufficient number of times, and at such intervals to produce a uniform surface, true to grade and free of voids.

If necessary, the screed surface shall be worked to a smooth finish with a long handled wood or metal float of the proper size, or hand floated from bridges over the slab.

When required by the Engineer, the Contractor shall perform sufficient checks with a long handled 10 foot straightedge on the plastic concrete to insure that the final surface will be within the tolerances specified below. The check shall be made with the straightedge parallel to the centerline. Each pass thereof shall lap half of the preceding pass. All high spots shall be removed and all depressions over one-sixteenth inch in depth shall be filled with fresh concrete and floated. The checking and floating shall be continued until the surface is true to grade and free of depressions, high spots, voids or rough spots.

Rail support holes shall be filled with concrete and finished to match the top of the slab.

A broom finish shall be applied with longitudinal screeding. A broom or burlap drag finish shall be applied with transverse screeding.

Unless otherwise specified, the burlap drag shall consist of four or more layers of 10-ounce burlap fabric, free of seams, dirt or hardened concrete; it shall be kept wet when in use and it shall be drawn over the surface in as many passes as required to produce the desired texture depth. Broom finishes shall be applied with stiff bristled brooms. The Contractor shall have on hand at all times brooms for the purpose of providing the desired texture depth when surface conditions are such that the burlap drag will not provide it.

Upon completion of the floating and/or straight edging and before the disappearance of the moisture sheen, the surface shall be given a broom or burlap drag finish. The grooves of these finishes shall be parallel to the structure centerline. It is the intent that the average texture depth resulting from the number of tests directed by the Engineer be not less than 0.035 inches with a minimum texture depth of 0.030 inches for any one test when tested in accordance with Test Method Tex-436-A. Should the texture depth fall below that intended, the finishing procedures shall be revised to produce the desired texture.

Work bridges or other suitable facilities shall be provided from which to perform all finishing operations and check measurements for slab thickness and reinforcement cover.

After the concrete has attained its final set, the roadway surface shall be tested with a standard 10 foot straightedge. The straightedge shall be placed parallel to the centerline of roadway to bridge any depressions and straightedge to the surface of the slab shall not exceed one-eighth of an inch, making proper allowances for camber, vertical curvature and surface texture. Occasional variations, not exceeding three-sixteenth on an inch will be acceptable, if in the opinion of the Engineer it will not affect the riding qualities.

When directed by the Engineer, irregularities exceeding the above requirements shall be corrected.

In all roadway slab finishing operations, camber for specified vertical curvature and transverse slopes shall be provided.

For concrete slab or concrete girder spans cast in place on falsework, an additional amount of camber shall be provided to offset the initial and determined from the dead load deflection diagram shown on the plans. When dead load deflection is not shown on the plans, the additional amount of camber shall be one-eighth inch per ten foot of span length but not to exceed one-half inch. For pan girder spans the additional camber for initial and final deflections shall be approximately one-half inch for 30 foot spans and three-fourths inch for 40 foot spans.

Roadway slabs supported on prestressed concrete, steel beams or girders shall receive no additional amount of camber, except that for slabs without vertical curvature, the longitudinal camber shall be approximately one-fourth inch.

Dead load deflection shall be taken into account in setting the grades of headers and rail systems.

VIIIAN-21 Curing Concrete

The Contractor shall inform the Engineer fully of the methods and procedures proposed for curing; shall provide the proper equipment and material in adequate amounts, and shall have the proposed method, equipment and material approved prior to placing concrete.

Inadequate curing and/or facilities therefore shall be cause for the Engineer to stop all construction on the job until remedial action is taken.

All concrete shall be cured for a period of 4 curing days except as noted herein.

Exceptions to 4-Day Curing

Upper Surfaces of Bridge Slabs and Top Slabs of Direct Traffic Culverts.	8 curing days (Type I or III cement). 10 curing days (Type II cement).
Concrete Piling (non-prestressed)	6 curing days

When the air temperature is expected to drop below 35°F, the water curing mats shall be covered with polyethylene sheeting, burlap-polyethylene blankets or other material to provide protection.

A curing day is defined as a calendar day when the temperature, taken in the shade away from artificial heat, is above 50°F for at least 19 hours, (or colder days if satisfactory provisions are made to maintain the temperature at all surfaces of the concrete above 40°F for the entire 24 hours). The required curing period shall begin when all concrete therein has attained its initial set.

The following methods are permitted for curing concrete subject to the restrictions of Table 1 and the following requirements for each method of curing.

(1) Form Curing

When forms are left in contact with the concrete, other curing methods will not be required except for cold weather protection.

(2) Water Curing

All exposed surfaces of the concrete shall be kept wet continuously for the required curing time. The water used for curing shall meet the requirements for concrete mixing water as

specified in "Concrete for Structures". Sea water will not be permitted. Water which stains or leaves an unsightly residue shall not be used.

(a) Wet Mat

Cotton mats shall be used for this curing method. They shall be placed as soon as possible after the surface has sufficiently hardened to prevent damage to the concrete. Damp burlap blankets made from nine ounce stock may be placed on the damp concrete surface for temporary protection prior to the application of the cotton mats which may be placed dry and wetted down after placement.

The mats shall be weighted down adequately to provide continuous contact with all concrete surfaces where possible. The surfaces of the concrete shall be kept wet for the required curing time. Surfaces which cannot be cured by contact shall be enclosed with mats, anchored positively to the forms, or to the ground, so that outside air cannot enter the enclosure. Sufficient moisture shall be provided inside the enclosure to keep all surfaces of the concrete wet.

(b) Water Spray

This method shall consist of overlapping sprays or sprinklers that keep all unformed surfaces continuously wet.

(c) Ponding

This method requires the covering of the surfaces with a minimum of two inches of clean granular material, kept wet at all times, or a minimum of one-inch depth water. Satisfactory provisions shall be made to provide a dam to retain the water or saturated sand.

(3) Membrane Curing

Unless otherwise provided herein or shown on the plans, either Type 1 or Type 2 membrane curing compound may be used where permitted except that Type 1 (Resin Base Only) will be permitted for slab concrete in bridge decks and top slabs of direct traffic culverts.

For substructure concrete, only one Type of curing compound will be permitted on any one structure. Material requirements and construction methods shall be as required by "Membrane Curing", except as changed herein. Membrane shall be applied in a single, uniform coating at the rate of coverage recommended by the manufacturer and as approved by the Engineer, but not less than one gallon per 180 square feet of area. Tests for acceptance shall be at this specified rate.

Membrane curing shall not be applied to dry surfaces, but shall be applied just after free moisture has disappeared. Formed surfaces and surfaces which have been given a first rub shall be dampened and shall be moist at the time of application of the membrane.

When membrane is used for complete curing, the film shall remain unbroken for the minimum curing period specified. Membrane which is damaged shall be corrected immediately by reapplication of membrane. Unless otherwise noted herein or on the plans, the choice of membrane type shall be at the option of the Contractor, except that the Engineer may require the same curing method for like portions of a single structure.

VIIIAN-22 Removal of Forms and Falsework

Except as herein provided, forms for vertical surfaces may be removed when the concrete has aged not less than one day when Type I or Type II cement is used, and not less than one-half day when Type III cement is used provided it can be done without damage to the concrete.

Forms for inside curb faces may be removed in approximately three hours provided it can be done without damage to the curb.

Weight supporting forms and falsework for all bridge components and culvert slabs, shall remain in place a minimum of 4 curing days after which they may be removed if the concrete has attained a flexural strength of 500 psi, as evidenced by strength tests using specimen made from the same concrete and cured under the same conditions as the portion of the structure involved. Forms for other structural components may be removed as specified by the Engineer.

If all beams made for the purpose of form removal have been broken without attaining the required strength, forms shall remain in place for a total of 14 curing days.

The above provisions relative to form removal shall apply only to forms or parts thereof which are constructed to permit removal without disturbing forms or falsework required to be left in place for a longer period on other portions of the structure.

VIIIAN-23 Defective Work

Any defective work discovered after the forms have been removed shall be repaired as soon as possible.

If the surface of the concrete is bulged, uneven or shown excess honeycombing or form marks, which in the opinion of the Engineer, cannot be repaired satisfactorily, the entire section shall be removed and replaced at the expense of the Contractor.

VIIIAN-24 Finishing Exposed Surfaces**(1) Ordinary Surface Finish**

An Ordinary Surface Finish shall be applied to all concrete surfaces either as a final finish or preparatory to a higher grade or class of finish. Where a grade or class of finish is specified, an Ordinary Surface Finish, only, will be required.

Ordinary Surface Finish shall be provided as follows:

After form removal, all porous or honeycombed areas and spalled areas shall be corrected by chipping away all loose or broken material to sound concrete.

Feather edges shall be eliminated by cutting a face perpendicular to the surface. Shallow cavities shall be repaired using adhesive grout or epoxy grout. If judged repairable by the Engineer, large defective areas shall be corrected using concrete or other material approved by the Engineer.

Holes and spalls caused by removal of metal ties, etc., shall be cleaned and filled with adhesive grout or epoxy grout. Exposed parts of metal chairs on surfaces to be finished by rubbing, shall be chipped out to a depth of one-half inch and the surface repaired.

All fins, runs, drips or mortar shall be removed from surfaces which remain exposed. Form marks and chamfer edges shall be smoothed by grinding and/or dry rubbing.

Grease, oil, dirt, curing compound, etc., shall be removed from surfaces requiring a higher grade of finish. Discolorations resulting from spillage or splashing of asphalt, paint or other similar material shall be removed.

Repairs shall be dense, well bonded and properly cured, and when made on surfaces which remain exposed and do not require a higher finish, shall be finished to blend with the surrounding concrete.

Unless otherwise specified on the plans Ordinary Surface Finish shall be the final finish for the following exposed surfaces: inlets, manholes, sewer appurtenance, inside of culvert barrels, bottom of bridge decks between beams or girders, vertical and bottom surfaces of interior concrete beams or girders.

(2) Rubbed Finish

In general the following areas shall require a rubbed finish and shall receive a first and second rubbing:

- (a) The top, exterior, and roadway facia of curbs and parapet walls.
- (b) All concrete surfaces of railing.
- (c) The exterior vertical facia of slab spans, rigid frames, arches, and box girders.
- (d) The outside and bottom surfaces of facia beams or girders (except precast concrete beams excluded).
- (e) The underside of overhanging slabs to the point of juncture of the supporting beams.
- (f) All vertical surfaces of piers, columns, bent caps, abutments, wingwalls, and retaining walls which are exposed to view after all backfill and embankment is placed.
- (g) Exposed formed surfaces of inlet and outlet structures on culverts, transition structures, headwalls and inlets.
- (h) Such other surfaces specified elsewhere to receive a rubbed finish and such additional surfaces required by the Engineer to receive a rubbed finish.

After removal of forms and as soon as the mortar used in pointing has set sufficiently, surfaces to be rubbed shall be wet with a brush and given a first surface rubbing with a medium coarse carborundum stone. This rubbing shall be done before the concrete has cured more than 48 hours.

The second rubbing shall present a cleaned uniform appearance free from drip marks and discoloration. It shall be given with a No. 30 carborundum stone or an abrasive of equal quality.

If the Contractor elects to use an epoxy paint in lieu of the second rubbing, he may do so upon approval of the Engineer.

VIII BC CORRUGATED METAL PIPE**VIII BC-1 Description**

This item shall govern for the furnishing and installing of all corrugated metal pipe and/or materials for constructing corrugated metal pipe culverts or corrugated metal sewer drains, laterals, stubs and inlet leads. The pipes shall be of the sizes, types, design and dimensions shown on the plans and shall include all connections and joints to new or existing pipes, sewer, manholes, inlets, headwalls and other appurtenances as may be required to complete the work.

VIII BC-2 Materials

Unless otherwise specified on the plans or herein, corrugated metal pipe may be galvanized steel, aluminized steel, aluminum or precoated galvanized steel conforming to the following:

Galvanized Steel	AASHTO M218
Aluminized Steel	AASHTO M274
Aluminum	AASHTO M197
Precoated Galvanized Steel	AASHTO M246

Corrugated metal pipe for sewers shall be Type IA and the smooth liner shall be polymer coated with a minimum thickness of ten (10) mils on each side. The outer liner shall be galvanized, unless otherwise shown on the plans.

Where reference is made to gage of metal, the reference is to U.S. Standard Gage for uncoated sheets. Tables AASHTO M218 and AASHTO M274 list thicknesses for coated sheets in inches. Tables in AASHTO M197 list thickness in inches for clad aluminum sheets.

Sampling and testing of metal sheets and coils used for corrugated metal pipe shall be in accordance with TxDOT Test Method Tex-708-I.

Damaged galvanized coating shall be repaired in accordance with TxDOT Item 445 "Galvanizing".

Damaged aluminized and/or polymer coating shall be repaired in accordance with the manufacturer's recommendations.

VIII BC-3 Fabrication

Corrugated metal pipe of all types may be fabricated with annular corrugations, lap joint construction with riveted seams or may be fabricated with helical lock seams. Steel corrugated metal pipe may also be fabricated with resistance spot welded seams or helical continuous welded

seams. All corrugated metal pipe shall be Type I (circular), Type IA (circular, smooth-lined) or Type II (arch) as specified on the plans.

(1) **Steel Pipe.** Galvanized or aluminized steel pipe shall conform to the requirements of AASHTO M36.

(2) **Aluminum Pipe.** Aluminum pipe shall conform to the requirements of AASHTO M196.

(3) **Precoated Galvanized Steel Pipe.** Precoated galvanized steel pipe shall conform to the requirements of AASHTO M245. Unless otherwise noted on the plans, both inside and outside coating shall be a minimum thickness of 10 mils.

VIII BC-4 Selection of Gages

The plans will provide a summary indicating the location and length for all pipes. For full circle pipe, the diameter, permissible corrugations and required gages will be shown. Pipe arch design size and permissible corrugations will be shown on the plans. The shape and minimum gage for pipe arch shall be designated in Tables A, B, or C for the specified design and corrugation for steel pipe, and in Table D for aluminum pipe.

All dimensions are measured from the inside crests of the corrugations. A tolerance of \pm one (1) inch or two (2) percent of the equivalent circle diameter, whichever is greater, will be permissible in span and rise.

Table A
STEEL PIPE ARCH
2 2/3-INCH BY 1/2-INCH CORRUGATIONS
H-20 LOADING

Design Size	Span Inches	Rise Inches	Minimum Cover Inches *	Minimum Gage Required	Coated Thickness Inches	Equivalent Diameter Full Circle Pipe Inches
1	17	13	12	16	0.064	15
2	21	15	12	16	0.064	18
3	28	20	12	16	0.064	24
4	35	24	12	16	0.064	30
5	42	29	12	14	0.079	36
6	49	33	12	14	0.079	42
7	57	38	12	12	0.109	48
8	64	43	12	12	0.109	54
9	71	47	12	10	0.138	60

* The fill heights for all sizes of pipe arch are limited to a maximum of seven (7) feet.

Table B
STEEL PIPE ARCH
3-INCH BY 1-INCH CORRUGATIONS
H-20 LOADING

Design Size	Span Inches	Rise Inches	Minimum Cover Inches *	Minimum Gage Required	Coated Thickness Inches	Equivalent Diameter Full Circle Pipe Inches
7	53	41	12	14	0.079	48
8	60	46	12	14	0.079	54
9	66	51	12	14	0.079	60
10	73	55	12	14	0.079	66
11	81	59	12	14	0.079	72
12	87	63	12	14	0.079	78
13	95	67	12	12	0.109	84
14	103	71	18	12	0.109	90
15	112	75	18	12	0.109	96
16	117	79	18	12	0.109	102
17	128	83	24	10	0.138	108
18	137	87	24	10	0.138	114
19	142	91	24	10	0.138	120

*The fill heights for all sizes of pipe arch are limited to a maximum of ten (10) feet.

Table C
STEEL PIPE ARCH
5-INCH BY 1-INCH CORRUGATIONS
H-20 LOADING

Design Size	Span Inches	Rise Inches	Minimum Cover Inches *	Minimum Gage Required	Coated Thickness Inches	Equivalent Diameter Full Circle Pipe Inches
11	81	59	12	12	0.109	72
12	87	63	12	12	0.109	78
13	95	67	12	12	0.109	84
14	103	71	18	12	0.109	90
15	112	75	18	12	0.109	96
16	117	79	18	12	0.109	102
17	128	83	24	10	0.138	108
18	137	87	24	10	0.138	114
19	142	91	24	10	0.138	120

*The fill heights for all sizes of pipe arch are limited to a maximum of ten (10) feet.

Table D
ALUMINUM PIPE ARCH
2 2/3-INCH BY 1/2-INCH CORRUGATIONS
H-20 LOADING

Design Size	Span Inches	Rise Inches	Minimum Cover Inches *	Minimum Gage Required	Sheet Thickness Inches	Equivalent Diameter Full Circle Pipe Inches
1	17	13	12	16	0.060	15
2	21	15	12	16	0.060	18
3	28	20	12	14	0.075	24
4	35	24	12	14	0.075	30
5	42	29	18	12	0.105	36
6	49	33	18	12	0.105	42
7	57	38	18	10	0.135	48
8	64	43	18	10	0.135	54
9	71	47	18	8	0.164	60

*The fill heights for all sizes of pipe arch are limited to a maximum of seven (7) feet.

VIIIHC-5 Coupling Bands

Except as otherwise herein, coupling bands and other hardware for galvanized or aluminized steel pipe shall conform to the requirements of AASHTO M36 for steel pipe and AASHTO M196 for aluminum pipe. Field joints for each type of corrugated metal pipe shall maintain pipe alignment during construction and prevent infiltration of side material during the life of the installation.

Coupling bands shall be not more than three nominal sheet thicknesses lighter than the thickness of the pipe to be connected and in no case lighter than 0.052 inch for steel or 0.048 for aluminum/

Coupling bands shall be made of the same base metal and coating as the pipe.

Coupling bands shall lap equally on each of the pipes being connected to form a tightly closed joint after installation.

Coupling bands with annular corrugations shall be used only with pipe with annular corrugations, or helical pipe in which the ends have been rerolled to form annular corrugations. The corrugations in the band shall have the same dimensions as the corrugations in the pipe end, or may be a special design to engage only the first or second corrugation from the end of each pipe. The band may also include a U-shaped channel to accommodate upturned flanges on the pipe.

Helical pipe without annular end corrugations will be permitted only when it is necessary to join a new pipe to an existing pipe having helical end corrugations. Pipe furnished with new helical end corrugations shall be field joined with either helically corrugated bands or with bands with projections (dimples).

Coupling bands with projections (dimples) may be used with pipe having either annular or helical corrugations. The bands shall be formed with the projections in annular rows with one projection for each corrugation of helical pipe. Bands 10-1/2 or 12 inches wide shall have two (2) annular rows of projections and bands 16-1/4 or 22 inches wide shall have four (4) rows of projections.

The coupling bands width shall not be less than as shown in Table E. The bands shall be connected in a manner approved by the Engineer with suitable galvanized devices such as angles, integrally or separately formed and attached flanges, bolted with galvanized bolts and nuts; bars and straps; wedge lock and straps or lugs. Other types of coupling systems designated in AASHTO M36 may be used, when authorized by the Engineer.

Table E
COUPLING BAND WIDTH REQUIREMENTS

Nominal Corrugation Size* Inches	Nominal Pipe Inside Diameter** Inches	Annular Corrugated Bands	Coupling Band Width, in., min. Helically Corrugated Bands	Bands With Projections
2 2/3 by 1/2	12 to 36	7	12	10 1/2
	42 to 72	10 1/2	12	10 1/2
	78 to 84***	10 1/2	12	16 1/4
3 by 1	36 to 72	12	14	10 1/2
	78 to 120	12	14	16 1/4
5 by 1	36 to 72	20	22	12
	78 to 120	20	22	22

* For helically corrugated pipe with rerolled ends, the nominal size refers to the dimensions of the end corrugations in the pipe.

** Equivalent circular diameter for Type II pipe.

*** Diameter through 120 in. for annular corrugated bands used on rerolled ends of helically corrugated pipe.

The minimum diameter of bolts for coupling bands shall be 3/8 inch for pipe diameters 18 inches and less and 1/2 inch for pipe diameters 21 inches and greater. Bands 12 inches wide or less will have a minimum of two (2) bolts, and bands greater than 12 inches wide shall have a minimum of three (3) bolts.

Galvanized bolts, nuts, washers, angles and other hardware shall be galvanized in accordance with TxDOT Item 445, "Galvanizing".

VIII BC-6 Designation of Type

The types of pipe will be indicated on the plans by the following descriptions:

Pipe Type: CMP or CMP ARCH

Type of Material: (Galvanized Steel, Aluminum Coated or Aluminum)

Pipe Coating: (Bituminous Coated or Polymer Coated)

Special Requirements: (Paved Invert or Smooth Lining)

Pipe Size: (Diameter or Design No.)

When designated as Corrugated metal pipe without a type or coating designation, the Contractor may furnish any of the above types.

VIII BC-7 Protective Coating

(1) Bituminous Coated. Bituminous coated pipe or pipe arch shall conform to this specification both as to base metal and fabrication, and shall be coated inside and out with a bituminous coating meeting the requirements herein and in AASHTO M190. The pipe shall be uniformly coated inside and out to a minimum thickness of 0.05 inch, measures on the crests of the corrugations.

When specified as smooth lining, the pipe shall receive additional bituminous material applied to the full inner circumference, to form a smooth lining, with a minimum thickness of one-eighth of an inch above the crest of the corrugations.

The bituminous coating shall tightly adhere to the metal; shall not chip off in handling; and shall protect the pipe from deterioration as evidenced by samples prepared from the coating material successfully meeting the Shock Test and Flow test in accordance with TxDOT Test Method Tex-522-C.

(2) Paved Invert. When a paved invert is specified, the pipe or pipe arch, in addition to the fully coated treatment described above, shall receive additional bituminous material, of the same specification as above, applied to the bottom quarter of the interior surface to form a smooth pavement with a minimum thickness of one-eighth of an inch above the interior crests of the corrugations.

VIII BC-8 Construction Methods

The location of private driveway and side road pipe shall be construction at locations shown on the plans or as directed by the Engineer.

Corrugated metal pipe shall be installed in accordance with the plans and requirements herein.

(1) **Excavation.** All excavation shall be in accordance with the requirements of "Structural Excavation and Backfill", except where tunneling or jacking methods are shown on the plans or permitted by the Engineer.

(2) **Shaping and Bedding.** All shaping and bedding shall be in accordance with "Structural Excavation and Backfill".

Cement stabilized materials for bedding or backfill will not be permitted to come into contact with any uncoated aluminum or aluminized pipe surface.

(3) **Laying Pipe.** Unless otherwise authorized by the Engineer, the laying of pipes on the bedding shall be started at the outlet end, the separate sections firmly joined together, outside laps of annular joints pointing upstream and longitudinal laps on the sides. Any metal in joints which is not protected by galvanizing or aluminizing shall be coated with a suitable asphaltum paint. Proper facilities shall be provided for hoisting and lowering sections of pipe into the trench without damaging the pipe or disturbing the bedding and the sides of the trench. Any pipe which is not in alignment or which shows any undue settlement after laying shall be taken up and relaid without extra compensation.

Multiple installation of corrugated metal pipe and pipe arches shall be laid with the center lines of individual barrels parallel. Unless otherwise indicated on the plans, the following clear distances between outer surfaces of adjacent pipes shall be maintained:

Diameter of Pipe	Clear Distance Between Pipes Full Circle and Pipe Arch	Pipe Arch Design No.
18"	1'-2"	2
24"	1'-5"	3
30"	1'-8"	4
36"	1'-11"	5
42"	2'-2"	6
48"	2'-5"	7
54"	2'-10"	8
60"-84"	3'-2"	9
90"-120"	3'-5"	10 & over

(4) **Culvert Connections.** Where new structures are constructed as extensions to structures in place or are jointed to existing structures, the construction shall include all work necessary to provide a proper connection between the new structure and the existing structure as indicated on the plans, including coating of the connection with bituminous material when required.

(5) **Reuse of Existing Appurtenances.** When existing appurtenances are specified on the plans for reuse, the portion to be reused shall be severed from the existing culvert and moved to the new position previously prepared, by approved methods.

Connections shall conform to the requirements for joining sections of pipes as indicated herein or as shown on the plans. Any headwalls and any aprons or pipe attached to the headwall that are damaged during moving operations shall be restored to their original condition at the Contractor's expense. The Contractor, if he so desires, may remove and dispose of the existing headwalls and aprons and construct new headwalls at his own expense, in accordance with the pertinent specifications and design indicated on the plans or as furnished by the engineer.

(6) **Sewer Connections and Stub Ends.** Connections of pipe sewer to existing sewers or sewer appurtenances shall be as shown on the plans or as directed by the Engineer. Portions of aluminum pipe that are to be in contact with concrete or metal other than aluminum shall be insulated from these materials by a coating of bituminous material meeting the performance requirements previously set forth. The coating applied to the pipe or pipe arch to provide an insulation between the aluminum and other material shall extend a minimum distance of one (1) foot beyond the area of contact. The bottom of the existing structure shall be mortared or concreted if necessary, to eliminate any drainage pockets created by the new connection. Where the sewer is connected into existing structures to remain in service, any damage to the existing structure resulting from making the connection shall be restored by the Contractor to the satisfaction of the Engineer. Stub ends, for connections to future work not shown on the plans, shall be sealed by installing watertight plugs into the free end of the pipe.

(7) **Backfilling.** Backfilling for the metal pipe structure is a critical phase of the construction and shall be in accordance with "Structural Excavation and Backfill". Special emphasis is placed upon the need for obtaining uniform backfill material and uniform compacted density throughout the length of the structure so that equal pressure will be provided. Care is to be taken to insure proper backfill under the structure.

(8) **Protection of Pipe.** Unless otherwise shown on the plans or permitted in writing by the Engineer, no heavy earth moving equipment will be permitted to haul over the structure until a minimum of four (4) feet of compacted fill (permanent or temporary) has been placed over the top of the structure.

Prior to adding each new layer of loose backfill material, until a minimum of twelve (12) inches of cover is obtained, an inspection will be made of the inside periphery of the structure for local or

unequal deformation caused by improper construction methods. Evidence of such will be reason for such corrective measures as may be directed by the Engineer.

Pipe damaged by the Contractor shall be removed and replaced by the Contractor at no additional cost to the Owner.

VIII BD HEADWALLS AND WINGWALLS**VIII BD-1 Description**

This Item shall governs for the materials, construction, furnishing and placing of headwalls and wingwalls at the locations shown, and in accordance with the details shown on the plans and with this Item. Unless otherwise shown on the plans, the Contractor has the option of furnishing cast-in-place or precast headwalls and wingwalls, hereinafter described as concrete units.

VIII BD-2 General

Concrete units shall be of the types shown on the plans and designated by letters or by numbers to indicate the particular design of each.

VIII BD-3 Materials

All materials shall conform to the pertinent items as follows:

- Item "Concrete Structures"
- Item "Concrete for Structures"
- Item "Reinforcing Steel"

Unless otherwise shown on the plans, concrete for cast-in-place and precast concrete units shall be Class A.

VIII BD-4 Forms

Forms for cast-in-place units shall comply with Item "Concrete Structures" and forms for precast concrete units shall comply with TxDOT Item 424, "Precast Concrete Structures (Fabrication)".

VIII BD-5 Marking

The following information shall be clearly marked on each section of precast unit prior to leaving the casting yard:

- (1) The date of manufacture.
- (2) The name or trademark of the manufacturer.
- (3) The type and size designation.

VIIIBD-6 Storage and Shipment

Precast units shall be stored on level blocking in a manner acceptable to the Engineer. No loads shall be placed on the precast concrete units until design strength is reached. Shipment of acceptable units may be made when the design strength requirements have been met.

VIIIBD-7 Rejection

Precast units may be rejected for nonconformity with any of the specification requirements and individual concrete units may also be rejected for any of the following reasons:

- (1) Fractures or cracks passing through the wall.
- (2) Surface defects indicating honeycombed or open texture.

All rejected units shall be plainly marked by the Engineer and shall be replaced by the Contractor with acceptable units meeting the requirements herein. Rejected units shall be removed immediately from the site of the work.

VIIIBD-8 Repairs

Occasional imperfections in manufacture or accidental damage during handling may be repaired and will be acceptable if, in the opinion of the Engineer, the repairs are sound and properly finished and cured and the repaired units conform with the requirements herein.

VIIIBD-9 Construction Methods

Construction of cast-in-place concrete units and jobsite precast units shall conform to the construction methods of Item "Concrete Structures". Plant precast units shall conform to TxDOT Item 424, "Precast Concrete Structures (Fabrication)".

All excavation shall be in accordance with the requirements of Item "Structural Excavation and Backfill". Precast units shall be bedded on foundations of firm and stable material accurately shaped to conform to their bases.

The Contractor shall provide adequate means to lift and place the precast concrete units. Lifting holes may be formed during production, or punched through the fresh concrete immediately after stripping forms; however, care shall be taken not to damage the unit by spalling large areas. All lifting holes shall be repaired as outlined above.

Connections to new or existing structures shall be made in accordance with the details shown on the plans. jointing material shall be in accordance with Item "Reinforced Concrete Pipe", or as shown on the plans.

VIIIBE SAFETY END TREATMENT**VIIIBE-1 Description**

This Item shall govern for the materials, construction, furnishing and placing of Safety End Treatments (SETs) for drainage structures at the locations shown, and in accordance with the details shown on the plans and this Item.

VIIIBE-2 Materials

All materials shall conform to the pertinent requirements of the following items:

- Item "Concrete Structures"
- Item "Concrete for Structures"
- Item "Riprap"
- Item "Reinforcing Steel"
- Item "Galvanizing"
- Item "Corrugated Metal Pipe"
- Item "Precast Concrete Pipe"

Concrete for cast-in-place SET units and precast SET units shall be Class A, unless otherwise shown on the plans.

When required, concrete riprap aprons and concrete collars shall be Class B, unless otherwise shown on the plans.

Galvanized steel for Prefabricated Metal End Sections shall conform to the requirements of Item "Corrugated Metal Pipe".

When pipe runners are required, they shall conform to the requirements of ASTM A53 (Type E or S, Gr. B), ASTM A500 (Gr. B) or API5LX52, unless otherwise shown on the plans. When plates and angles are required, they shall conform to the requirements of ASTM A36. When bolts and nuts are required, they shall conform to the requirements of ASTM A307. All pipe, plates, angles, nuts and bolts shall be galvanized in accordance with Item "Galvanizing".

VIIIBE-3 Types

(1) **Type L SET (Type I)** shall consist of reinforced concrete wingwalls and pipe runners, when required. These installations are intended for small and intermediate size box culverts, large size pipe culverts and suitable multiple box or multiple (intermediate or large size) pipe culverts as shown on the plans.

(2) **Type II.** SET (Type II) shall consist of one of the following:

- (a) Corrugated metal Pipe (CMP) or Reinforced Concrete Pipe (RCP) mitered to the proper slope, as shown on the plans, concrete riprap aprons and pipe runners, when required.
- (b) Precast SET units, concrete riprap aprons, if required, and pipe runners, when required.

Unless otherwise shown on the plans, when RCP is specified for the pipe structure, the Contractor shall have the option of providing Precast SET units in place of mitered RCP.

These installations are intended for small size pipe culverts and multiple (small size) pipe culverts as shown on the plans.

VIII BE-4 Designations

The types of Safety End Treatments will be indicated on the plans by the following descriptions:

(1) **SET (Type I).**

Height: (H = Feet)

Orientation: (Parallel or Cross) Orientation will only be shown when safety pipe runners are required.

(2) **SET (Type II).**

Pipe Size: (Diameter or Design)

Pipe Material: (RCP or CMP)

Orientation: (Parallel or Cross) Orientation will only be shown when safety runners are required.

VIII BE-5 Construction Methods

Safety End Treatments shall be constructed in accordance with the details shown on the plans and in accordance with the construction methods required by pertinent items.

Cast-in-place SET units and job site precast SET units shall be constructed in accordance with Item "Concrete Structures". Plant precast SET units shall conform to TxDOT Item 424, "Precast Concrete Structures (Fabrication)".

Damaged galvanizing shall be repaired by the Contractor in accordance with Item "Galvanizing".

Any required structural excavation shall be in accordance with Item "Structural Excavation and Backfill".

XII. EXCAVATING, TRENCHING AND SHORING SAFETY

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XII. EXCAVATING, TRENCHING AND SHORING SAFETY**XIIA. GENERAL**

Safety on all job sites shall be of paramount importance. These requirements are in conformance with legislation of the Legislature of the State of Texas as House Bill No. 662 and No. 665 and are in conformance with existing Occupational Safety and Health Administration standards, 29 CFR 1926/1910. These requirements shall govern if there exists any conflicts with other requirements of this set of standards and Specifications for this project. Payment of these safety requirements shall be made presented in the Proposal.

XIIB. DEFINITIONS

The following definitions shall be applicable to this Specification section.

- A) "Accepted Engineering Requirements (or practices)" - Those requirements or practices which are compatible with standards required by a registered architect, a Registered Professional Engineer, or other duly licensed or recognized authority.
- B) "Angle of Repose" - The greatest angle above the horizontal plane at which a material will lie without sliding.
- C) "Bank" - A mass of soil rising above a digging level.
- D) "Belled excavation" - A part of a shaft or footing excavation, usually near the bottom and bell-shaped; i.e. an enlargement of the cross section above.
- E) "Braces (Trench)" - The horizontal members of the shoring system whose ends bear against the uprights or stringers.
- F) "Excavation" - Any manmade cavity or depression in the earth's surface, including sides, walls, or faces, formed by earth removal and producing unsupported earth conditions by reasons of the excavation. If installed forms or similar structures reduce the depth-to-width relationship, an excavation may become a trench.
- G) "Hard Compact Soil" - Any earth materials not classified as running or unstable.
- H) "Kickouts" - Accidental release or failure of a shoring or brace.
- I) "Sheet Pile" - A pile, or sheeting, that may form one of a continuous interlocking line, or a row of timber, concrete, or steel piles, driven in close contact to provide a tight wall to resist the lateral pressure of water, adjacent earth, or other materials.

- J) "Sides", "Walls", or "Faces" - The vertical or inclined earth surfaces formed as a result of excavation work.
- K) "Slope" - The angle with the horizontal at which a particular earth material will stand indefinitely without movement.
- L) "Stringers" (Wales) - The horizontal members of a shoring system whose sides bear against the uprights or earth.
- M) "Trench" - A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.
- N) "Trench Jack" -Screw or hydraulic type jacks used as cross bracing in a trench shoring system.
- O) "Trench Shield" - A shoring system composed of steel plates and bracing, welded or bolted together, which support the walls of a trench from the ground level to the trench bottom and which can be moved along as work progresses.
- P) "Unstable Soil" - Earth material, other than running, that because of its nature or the influence of related conditions, cannot be depended upon to remain in place without extra support, such as would be furnished by a system of shoring.
- Q) "Uprights" - The vertical members of a shoring system.

XIIC. GENERAL PROTECTION REQUIREMENTS

- A) All employees shall be protected with personal protective equipment for the protection of the head, eyes, respiratory organs, hands, feet, and other parts of the body. (O.S.H.A. approved.)
- B) Employees exposed to vehicular traffic shall be provided with and shall be instructed to wearing warning vests marked or made of reflectorized or high visibility material.
- C) Employees subjected to hazardous dusts, gases, fumes, mists, or atmospheres deficient in oxygen, shall be protected with approved respiratory protection. (O.S.H.A. approved).
- D) No person shall be permitted under loads handled by power shovels, derricks, or hoists. To avoid any spillage, employees shall be required to stand away from any vehicle being loaded.

- E) Daily inspections of excavations shall be made by a competent person. If evidence of possible cave-ins or slides is apparent, all work in the excavation shall cease until the necessary precautions have been taken to safeguard the employees.

XI.D. SPECIFIC EXCAVATION REQUIREMENTS

- A) Prior to opening an excavation, effort shall be made to determine whether underground installations; i.e. sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.
- B) Trees, boulders, and other surface encumbrances, located so as to create a hazard to employees involved in excavation work or in the vicinity thereof at any time during operations, shall be removed or made safe before excavating is begun.
- C) The walls and faces of all excavations in which employees are exposed to danger from moving ground shall be guarded by a shoring system, sloping of the ground, or some other equivalent means.
- D) Excavations shall be inspected by a competent person after every rainstorm or other hazard-increasing occurrence, and the protection against slides and cave-ins shall be increased if necessary.
- E) The determination of the angle of repose and design of the supporting system shall be based on careful evaluation of pertinent factors such as: depth of cut; possible variation in water content of the material while the excavation is open; anticipated changes in materials from exposure to air, sun, water, or freezing; loading imposed by structures, equipment, overlying material, or stored material; and vibration from equipment, blasting, traffic or other sources.
- F) Supporting systems; i.e. piling, cribbing, shoring, etc., shall be designed by a qualified person and meet accepted engineering requirements. When tie rods are used to restrain the top of sheeting or other retaining systems, the rods shall be securely anchored well back of the angle of repose. When tight sheeting or sheet piling is used, full loading due to ground water table shall be assumed, unless prevented by weep holes or drains or other means. Additional stringers, ties, and bracing shall be provided to allow for any necessary temporary removal of individual supports.

- G) All slopes shall be excavated to at least the angle of repose except for areas where solid rock allows for line drilling or presplitting.
- H) The angle of repose shall be flattened when an excavation has water conditions, silty materials, loose boulders, and areas where erosion, deep frost action, and slide planes appear.
- I) In excavations which employees may be required to enter, excavated or other material shall be effectively stored and retained at least two (2) feet or more from the edge of the excavation.
- J) Sides, slopes, and faces of all excavations shall meet accepted engineering requirements by scaling, benching, barricading, rock bolting, wire meshing, or other equally effective means. Special attention shall be given to slopes which may be adversely affected by weather or moisture content.
- K) Support systems shall be planned and designed by a qualified person when excavation is in excess of twenty (20) feet in depth, adjacent to structures or improvements, or subject to vibration or ground water.
- L) Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition, and timbers shall be sound, free from large or loose knots, and of proper dimensions.
- M) Special precautions shall be taken in sloping or shoring the sides of excavations adjacent to a previously backfilled excavation or a fill, particularly when the separation is less than the depth of the excavation. Particular attention also shall be paid to joints and seams of material comprising a face and the slope of such seams and joints.
- N) Except in hard rock, excavations below the level of the base of footing of any foundation or retaining wall shall not be permitted, unless the wall is underpinned and all other precautions are taken to insure the stability of the adjacent walls for the protection of employees involved in excavation work or in the vicinity thereof.
- O) If the stability of adjoining buildings or walls is endangered by excavations, shoring or bracing, underpinning shall be provided as necessary to insure safety. Such shoring, bracing, or underpinning shall be inspected daily or more often, as conditions warrant, by a competent person and the protection effectively maintained.

- P) Diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water shall not be allowed to accumulate in an excavation.
- Q) If it is necessary to place or operate power shovels, derricks, trucks, material, or other heavy objects on a level above and near an excavation, the sides of the excavation shall be sheet-piled, shored, and braced as necessary to resist the extra pressure due to such superimposed loads.
- R) Blasting and the use of explosives shall be performed in accordance with all local, state and federal regulations. Such use shall be in particular accordance with O.S.H.A. standards as described in 29 CFR 1926/1910, subpart U, 1926.900 to 1926.914.
- S) When mobile equipment is utilized or allowed adjacent to excavations, substantial stop logs or barricades shall be installed. If possible, the grade should be away from the excavation.
- T) Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary wells, pits, shafts, etc., shall be backfilled.
- U) If possible, dust conditions shall be kept to a minimum by the use of water, salt, calcium chloride, oil, or other means.
- V) In locations where oxygen deficiency or gaseous conditions are possible, air in the excavation shall be tested. Controls, as set forth by O.S.H.A., shall be established to assure acceptable atmospheric conditions. When flammable gases are present, adequate ventilation shall be provided or sources of ignition shall be eliminated. Attended emergency rescue equipment, such as breathing apparatus, a safety harness and line, basket stretcher, etc., shall be readily available where adverse atmospheric conditions may exist or develop in an excavation.
- W) Where employees or equipment are required or permitted to cross over excavations, walkways or bridges with standard guardrails shall be provided.
- X) Where ramps are used for employees or equipment, they shall be designed and constructed by qualified persons in accordance with accepted engineering requirements.

- Y) All ladders used on excavation operations shall be in accordance with O.S.H.A. standards.

XIII. SPECIFIC TRENCHING REQUIREMENTS

- A) Banks more than five (5) feet high shall be shored, laid back to a stable slope, or some other equivalent means of protection shall be provided where employees may be exposed to moving ground or cave-ins. Refer to Table P-1 as a guide in sloping of banks. Trenches less than five (5) feet in depth shall also be effectively protected when examination of the ground indicates hazardous ground movement may be expected.
- B) Sides of trenches in unstable or soft material, five (5) feet or more in depth, shall be shored, sheeted, braced, sloped, or otherwise supported by means of sufficient strength to protect the employees working within them. See tables P-1 and P-2.
- C) Sides of trenches in hard or compact soil, including embankments, shall be shored or otherwise supported when the trench is more than five (5) feet in depth and eight (8) feet or more in length. In lieu of shoring, the sides of the trench above the five (5) foot level may be sloped to preclude collapse, but shall not be steeper than a one (1) foot rise to each one-half (1/2) foot horizontal. When the outside diameter of a pipe is greater than six (6) feet, a bench of four (4) foot minimum shall be provided at the toe of the sloped portion.
- D) Materials used for sheeting and sheet piling, bracing, shoring, and underpinning, shall be in good serviceable condition, and timbers used shall be sound and free from large or loose knots, and shall be designed and installed so as to be effective to the bottom of the excavation.
- E) Additional precautions by way of shoring shall be taken to prevent slides or cave-ins when excavations or trenches are made in locations adjacent to backfilled excavations, or where excavations are subjected to vibrations from railroad or highway traffic, the operation of machinery, or any other source.
- F) Employees entering bell-bottom pier holes shall be protected by the installation of a removable-type casing of sufficient strength to resist shifting of the surrounding earth. Such temporary protection shall be provided for the full depth of that part of each pier hole which is above the bell. A lifeline, suitable for instant rescue and securely fastened to a shoulder harness, shall be worn by each employee entering the shafts. This lifeline shall be individually manned and separate from any line used to remove materials excavated from the bell footing.

- G) The minimum requirements for trench timbering shall be in accordance with Table P-2. Braces and diagonal shores in a wood shoring system shall not be subjected to compressive stress in excess of values given by the following formula:

$$S = 13 - 20L/D$$

Maximum Ratio $L/D = 50$

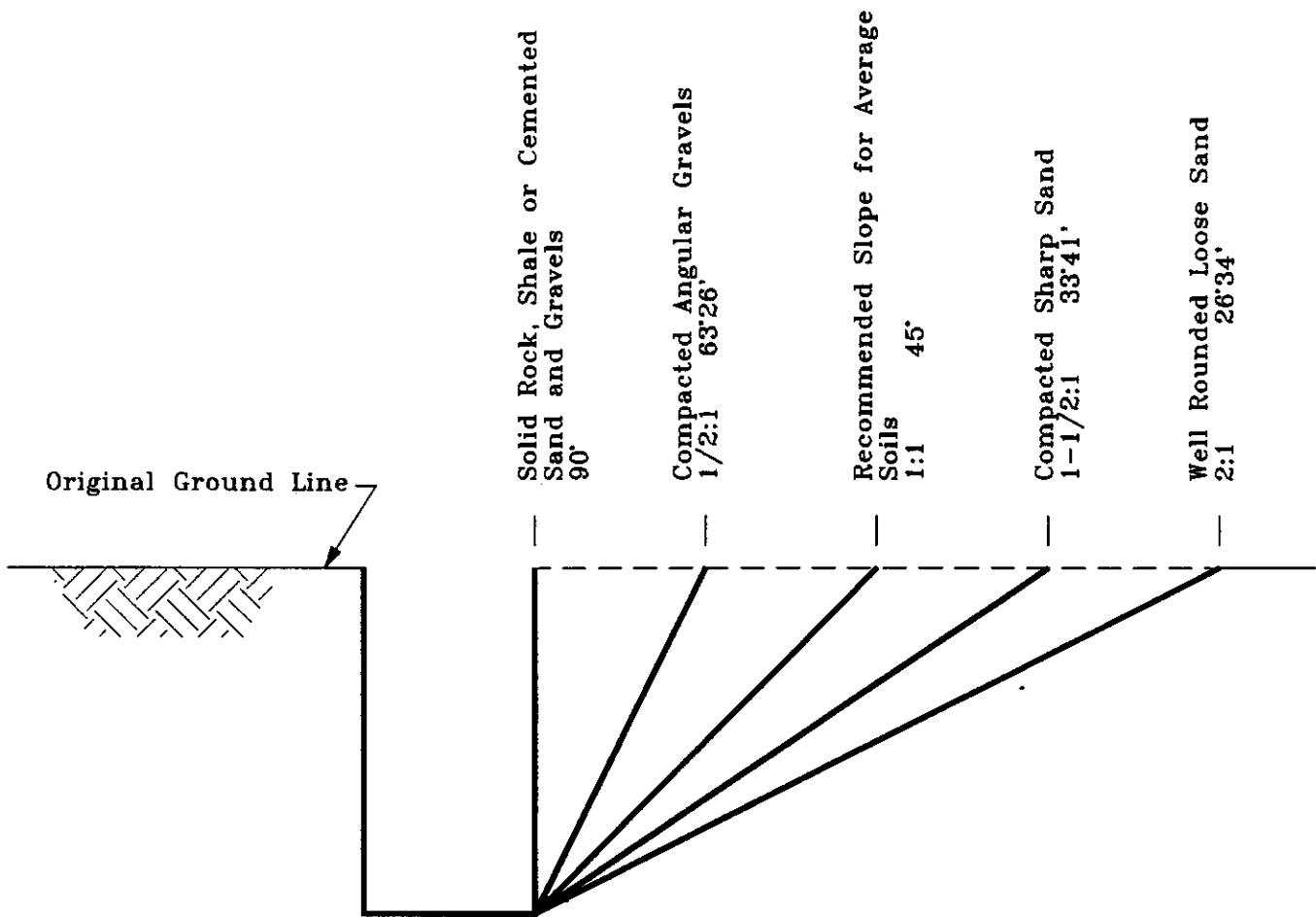
Where:

L = Length, unsupported, in inches.

D = Least side of the timber in inches.

S = Allowable stress in pounds per square inch of cross-section

- H) When employees are required to be in trenches four (4) feet deep or more, an adequate means of exit, such as a ladder or steps, shall be provided and located so as to require no more than twenty-five (25) feet of lateral travel.
- I) Bracing or shoring of trenches shall be carried along with the excavation.
- J) Cross braces or trench jacks shall be placed in true horizontal position, be spaced vertically, and be secured to prevent sliding, falling, or kickouts.
- K) Portable trench boxes or sliding trench shields may be used for the protection of personnel in lieu of a shoring system or sloping. Where such trench boxes or shields are used, they shall be designed, constructed, and maintained in a manner which will provide protection equal to or greater than the sheeting or shoring required for the trench.
- L) Backfilling and removal of trench supports shall progress together from the bottom of the trench. Jacks or braces shall be released slowly and, in unstable soil, ropes shall be used to pull out the jacks or braces from above after employees have cleared the trench.



NOTE: Clays, Silts, Loams or Non-Homogenous Soils Require Shoring and Bracing

The Presence of Ground Water Requires Special Treatment

TABLE P-1

APPROXIMATE ANGLE OF REPOSE

(FOR SLOPING SIDES OF EXCAVATION)

SIZE & SPACING OF MEMBERS														
DEPTH OF TRENCH	KIND OR CONDITION OF EARTH	UPRIGHTS		STRINGERS		CROSS BRACES: WIDTH OF TRENCH						MAXIMUM SPACING		
		MINIMUM DIMENSION	MAXIMUM SPACING	MINIMUM DIMENSION	MAXIMUM SPACING	UP TO 3 FT.	3 TO 6 FT.	6 TO 9 FT.	9 TO 12 FT.	12 TO 15 FT.	VERTICAL	HORIZONTAL		
FEET		INCHES	FEET	INCHES		FEET	INCHES	INCHES	INCHES	INCHES	INCHES	FEET	FEET	
5 to 10														
	HARD, COMPACT	3 x 4 or 2 x 6	6	-	-	2 x 6	4 x 4	4 x 6	6 x 6	6 x 8	4		6	
	LIKELY TO CRACK	3 x 4 or 2 x 6	3	4 x 6	4	2 x 6	4 x 4	4 x 6	6 x 6	6 x 8	4		6	
	SOFT, SANDY or FILLED	3 x 4 or 2 x 6	CLOSE SHEETING	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4		6	
10 TO 15	HYDROSTATIC PRESSURE	3 x 4 or 2 x 6	CLOSE SHEETING	6 x 8	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4		6	
	HARD, COMPACT	3 x 4 or 2 x 6	4	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4		6	
	LIKELY TO CRACK	3 x 4 or 2 x 6	2	4 x 6	4	4 x 4	4 x 6	6 x 6	6 x 8	8 x 8	4		6	
	SOFT, SANDY or FILLED	3 x 4 or 2 x 6	CLOSE SHEETING	4 x 6	4	4 x 6	6 x 6	6 x 8	8 x 8	8 x 10	-		6	
15 TO 20	HYDROSTATIC PRESSURE	3 x 6	CLOSE SHEETING	8 x 10	4	4 x 6	6 x 6	6 x 8	8 x 8	8 x 10	4		6	
	ALL KINDS OR CONDITIONS	3 x 6	CLOSE SHEETING	6 x 8	4	4 x 12	8 x 8	8 x 10	10 x 10	10 x 12	4		6	
OVER 20	ALL KINDS OR CONDITIONS	3 x 6	CLOSE SHEETING	6 x 8	4	4 x 12	8 x 8	8 x 10	10 x 10	10 x 12	4		6	

NOTE: Trench jacks may be used in lieu of, or in combination with, cross braces. Shoring is not required in solid rock, hard shale, or hard slag. Where desirable, steel sheet piling and bracing of equal strength may be substituted for wood.

TABLE P - 2 TRENCH SHORING - Minimum Requirements

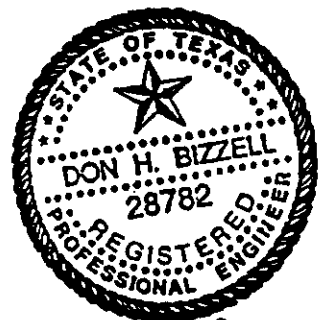
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 644

PROPOSAL & BID SCHEDULE

Date: 10/28/97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

P R O P O S A L

Job Description: JARRELL RECOVERY PROJECT

Proposal Date: 10/28/1997
Time: 11:00

From: AUSTIN BRIDGE & ROAD, INC.

Bid Item Number	Bid Item Description	Quantity UM	Unit Price	Total Price
100	ROADWAY EXCAVATION	65543.0000 SY	1.40	91760.20
200	SUBGRADE PREPARATION	69944.0000 SY	1.00	69944.00
300	REWORKING BASE MATERIAL	37610.0000 SY	0.78	29335.80
400	BASE MATERIAL	61002.0000 SY	6.25	381262.50
500	ASPHALTIC CONCRETE PAVEMENT 1.5"	60861.0000 SY	2.40	146066.40
600	ROADSIDE DITCH	20581.0000 LF	1.00	20581.00
700	PAVED DRIVEWAY	42.0000 EA	1200.00	50400.00
800	METAL BEAM GUARD FENCE	1275.5000 LF	16.00	20408.00
900	TERMINAL ANCHOR SECTION	35.0000 EA	321.00	11235.00
1000	CULVERT MODIFICATION LOCATION NO 1	1.0000 LS	3000.00	3000.00
1100	CULVERT MODIFICATION LOCATION NO 2	1.0000 LS	15000.00	15000.00
1200	CULVERT MODIFICATION LOCATION NO 3	1.0000 LS	3000.00	3000.00
1300	CULVERT MODIFICATION LOCATION NO 4	1.0000 LS	12000.00	12000.00
1400	CULVERT MODIFICATION LOCATION #5	1.0000 LS	3000.00	3000.00
1500	CULVERT MODIFICATION LOCATION NO 6	1.0000 LS	3000.00	3000.00
1600	CULVERT MODIFICATION LOCATION NO 7	1.0000 LS	3000.00	3000.00
1700	CULVERT MODIFICATION LOCATION NO 8	1.0000 LS	3000.00	3000.00
1800	CULVERT MODIFICATION LOCATION NO 9	1.0000 LS	3000.00	3000.00
1900	CULVERT MODIFICATION LOCATION NO 10	1.0000 LS	3000.00	3000.00
2000	CULVERT MODIFICATION LOCATION NO 11	1.0000 LS	3000.00	3000.00
2100	CULVERT MODIFICATION LOCATION NO 12	1.0000 LS	3000.00	3000.00
2200	CULVERT MODIFICATION LOCATION NO 13	1.0000 LS	3000.00	3000.00
2300	CULVERT MODIFICATION LOCATION NO 14	1.0000 LS	3000.00	3000.00
2400	CULVERT MODIFICATION LOCATION NO 15	1.0000 LS	3400.00	3400.00
2500	CULVERT MODIFICATION LOCATION NO 16	1.0000 LS	3400.00	3400.00
2600	CULVERT MODIFICATION LOCATION NO 17	1.0000 LS	3400.00	3400.00
2700	CULVERT MODIFICATION LOCATION NO 18	1.0000 LS	3000.00	3000.00
2800	CULVERT MODIFICATION LOCATION NO 19	1.0000 LS	3000.00	3000.00

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P R O P O S A L

Job Description: JARRELL RECOVERY PROJECT

Proposal Date: 10/28/1997
Time: 11:00

From: AUSTIN BRIDGE & ROAD, INC.

Bid Item Number	Bid Item Description	Quantity UM	Unit Price	Total Price
2900	CULVERT MODIFICATION LOCATION NO 20	1.0000 LS	3400.00	3400.00
3000	CULVERT MODIFICATION LOCATION NO 21	1.0000 LS	2500.00	2500.00
3100	CULVERT MODIFICATION LOCATION NO 22	1.0000 LS	3100.00	3100.00
3200	CULVERT MODIFICATION LOCATION NO 23	1.0000 LS	3100.00	3100.00
3300	CULVERT MODIFICATION LOCATION NO 24	1.0000 LS	39000.00	39000.00
3400	CULVERT MODIFICATION LOCATION NO 25	1.0000 LS	3200.00	3200.00
3500	CULVERT MODIFICATION LOCATION NO 26	1.0000 LS	3200.00	3200.00
3600	CULVERT MODIFICATION LOCATION NO 27	1.0000 LS	3100.00	3100.00
3700	CULVERT MODIFICATION LOCATION NO 28	1.0000 LS	33000.00	33000.00
3800	CULVERT MODIFICATION LOCATION NO 29	1.0000 LS	3000.00	3000.00
3900	CULVERT MODIFICATION LOCATION NO 30	1.0000 LS	39000.00	39000.00
4000	CULVERT MODIFICATION LOCATION NO 31	1.0000 LS	21000.00	21000.00
4100	CULVERT MODIFICATION LOCATION NO 32	1.0000 LS	3000.00	3000.00
4200	CULVERT MODIFICATION LOCATION NO 33	1.0000 LS	3000.00	3000.00
4300	CULVERT MODIFICATION LOCATION NO 34	1.0000 LS	3000.00	3000.00
4400	CULVERT MODIFICATION LOCATION NO 35	1.0000 LS	3000.00	3000.00
4500	CULVERT MODIFICATION LOCATION NO 36	1.0000 LS	12000.00	12000.00
4600	CULVERT MODIFICATION LOCATION NO 37	1.0000 LS	3150.00	3150.00
4700	CULVERT MODIFICATION LOCATION NO 38	1.0000 LS	2900.00	2900.00
4800	CULVERT MODIFICATION LOCATION NO 39	1.0000 LS	2900.00	2900.00
4900	CULVERT MODIFICATION LOCATION NO 40	1.0000 LS	3100.00	3100.00
5000	CULVERT MODIFICATION LOCATION NO 41	1.0000 LS	17000.00	17000.00
5100	CULVERT MODIFICATION LOCATION NO 42	1.0000 LS	1000.00	1000.00
5200	CULVERT MODIFICATION LOCATION NO 43	1.0000 LS	3000.00	3000.00
5300	CULVERT MODIFICATION LOCATION NO 44	1.0000 LS	3000.00	3000.00
5400	CULVERT MODIFICATION LOCATION NO 45 (deleted by addendum #1)	1.0000 LS	0.00	0.00
5500	CULVERT MODIFICATION LOCATION NO 46	1.0000 LS	15000.00	15000.00

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P R O P O S A L

Job Description: JARRELL RECOVERY PROJECT

Proposal Date: 10/28/1997
Time: 11:00

From: AUSTIN BRIDGE & ROAD, INC.

Bid Item Number	Bid Item Description	Quantity UM	Unit Price	Total Price
5600	CULVERT MODIFICATION LOCATION NO 47	1.0000 LS	3000.00	3000.00
5700	CULVERT MODIFICATION LOCATION NO 48	1.0000 LS	2800.00	2800.00
5800	CULVERT MODIFICATION LOCATION NO 49	1.0000 LS	2900.00	2900.00
5900	CULVERT MODIFICATION LOCATION NO 50	1.0000 LS	3000.00	3000.00
6000	CULVERT MODIFICATION LOCATION NO 51	1.0000 LS	2800.00	2800.00
6100	CULVERT MODIFICATION LOCATION NO 52	1.0000 LS	12500.00	12500.00
6200	CULVERT MODIFICATION LOCATION NO 53	1.0000 LS	3000.00	3000.00
6300	CULVERT MODIFICATION LOCATION NO 54	1.0000 LS	2900.00	2900.00
6400	CULVERT MODIFICATION LOCATION NO 55	1.0000 LS	2150.00	2150.00
6500	CULVERT MODIFICATION LOCATION NO 56	1.0000 LS	3100.00	3100.00
6600	CULVERT MODIFICATION LOCATION NO 57	1.0000 LS	3000.00	3000.00
6700	CULVERT MODIFICATION LOCATION NO 58	1.0000 LS	3100.00	3100.00
6800	SILT FENCE	18760.0000 LF	1.30	24388.00
6900	ROCK BERM	1458.0000 LF	7.80	11372.40
7000	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 2	570.0000 SF	3.00	1710.00
7100	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 4	570.0000 SF	3.00	1710.00
7200	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 24	570.0000 SF	3.00	1710.00
7300	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 30	570.0000 SF	3.00	1710.00
7400	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 31	570.0000 SF	3.00	1710.00
7500	TRENCH & EXCAVATION SAFETY @ CULVERT LOCATION NO 52	570.0000 SF	3.00	1710.00
7600	STREET SIGNAGE	1.0000 LS	8000.00	8000.00
GRAND TOTAL				1230113.30

We certify that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out. We acknowledge and agree that the total bid amount shown will be read as its total bid and further agree that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective

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PROPOSAL

Job Description: JARRELL RECOVERY PROJECT

Proposal Date: 10/28/1997
Time: 11:00

From: AUSTIN BRIDGE & ROAD, INC.

Bid Item Number	Bid Item Description	Quantity UM	Unit Price	Total Price
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estimated quantities shown in the proposal and then totaling all of the extended amounts.

SIGNED: 

LEE SOLIS

TITLE : ESTIMATING MANAGER


DATE : 10/20/97

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: AUSTIN BRIDGE & ROAD, INC.
 By (Name & Title): LEE SOLIS ESTIMATING MGR.
 (Signature): 
 Mailing Address: 8906 WALL STREET
SUITE 403
AUSTIN, TX 78754
 Telephone Number: (512) 835-1608

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

**ANNUAL WRITTEN CONSENT OF THE SOLE DIRECTOR
OF AUSTIN BRIDGE & ROAD, INC.**

The undersigned, as sole director of Austin Bridge & Road, Inc., a Delaware corporation (the "Company"), does by this writing consent to take the following actions and adopt the following resolutions:

1. **RESOLVED**, that the acts of the Director and Officers of the Company from March 1, 1995 to this date are hereby ratified and approved.
2. **RESOLVED**, that the following persons be and are hereby elected officers of the Company effective this day:

President & Assistant Secretary	Ronald J. Gafford
Vice President & Assistant Secretary	Gary D. Atwood
Vice President	Roger C. Bailey
Vice President	William J. Neese, Jr.
Secretary	Alan P. Stakem
Treasurer & Assistant Secretary	James E. Schranz

3. **RESOLVED**, that Arthur Andersen & Company shall audit the books and financial statements of the Company for the year ending December 31, 1996.
4. **RESOLVED**, that the following persons be and are hereby authorized to execute contracts and surety bonds on behalf of the Company from this date until the next Annual Written Consent of the Sole Director:

Gary D. Atwood	William J. Neese, Jr.
Roger C. Bailey	James E. Schranz
Ronald J. Gafford	Alan P. Stakem

5. **RESOLVED**, that the following persons are authorized to execute subcontracts on behalf of the Company from this day until the next Annual Written Consent of the Sole Director:

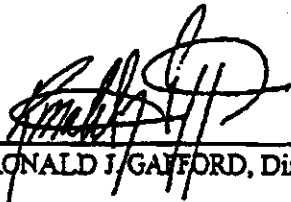
Gary D. Atwood	William J. Neese, Jr.
Roger C. Bailey	James E. Schranz
Ronald J. Gafford	Alan P. Stakem

6. **FURTHER RESOLVED**, that the following persons are authorized to submit proposals on behalf of the Company from this date until the next Annual Written Consent of the Sole Director:

Gary D. Atwood	Ronald J. Gafford
Roger C. Bailey	William J. Neese, Jr.
Jerry W. Barnes	James E. Schranz
John B. Clark	Lee Solis
Michael D. Ducote	Alan P. Stakem

I direct that this consent be filed with the minutes of the proceedings of the Board of Directors of the Company.

Dated as of the 4th day of March, 1996.



RONALD J. GAYFORD, Director

Contractor Information

Company Information

Company Name: Austin Bridge & Road
 Contact Person: Lee Solis
 Address: 8906 Wall Street #403
Austin, TX 78754
 Phone: 835-1608 x 104 Fax: 835-4792

I. Please list all services or products provided by your company:

Services/Products	Years Experience
<u>Asphalt Production & Installation</u>	<u>25</u>
<u>Bridge Construction</u>	<u>72</u>
<u>Utility Construction</u>	<u>25</u>
<u>Concrete Structures</u>	<u>25</u>
<u>Excavation</u>	<u>25</u>
<u>Flex Base</u>	<u>25</u>

II. Please briefly explain the experience your company has in the construction industry:

Company Experience	Semiconductor Industry Experience
<u>Same as above</u>	

III. Please list all license your company holds including license numbers:

License held by your company	Type of work it qualifies you for	License Number
<u>TxDot License</u>	<u>Heavy Highway</u>	<u>1-7523057556-601</u>

IV. Bonding Agent

Name Hess, Egan, Hagerly and L'Hommedieu Inc.
 Address 5530 Wisconsin Avenue, Chevy Chase, Maryland, 20815
 Phone (301) 654-3600
 Contact Name Mr. George Hencink
 How long has your firm been affiliated with the above bonding company? 40 years
 Indicate company's single project bond limits \$ \$300 Million +
\$1 Billion
 Total bonding capacity \$ _____
 Value of work presently bonded \$ \$100 Million

V. Bonding Company

Name The Insurance Company Of The State Of Pennsylvania
 Address 1999 Bryan Street, Suite 1700, Dallas TX, 75201
 Phone (214) 220-6000
 Contact Name Jim Dervin, Jeff McIntosh
 How long has your firm been affiliated with the above bonding agent? 40 years
 Financial statement: Attach a copy of your most recent financial statement

VI. Is this firm qualified as:

MBE? ☐ yes ☒ noWBE? ☐ yes ☒ noSmall business? ☐ yes ☒ noDisadvantaged business? ☐ yes ☒ no

VII. Subcontract trade(s) or material items furnished:

HM&C material, concrete structures, bridge construction, excavation
and site utilities

VIII. If a supplier, what is firm's relationship with manufacturer's representative? (explain) _____
NA

IX. Insurance: Indicate best rating for affording companies:

General Liabilities \$2 million Auto insurance \$1 million
 Workmen's comp \$1 million Excess coverage \$100 million
 Current experience modification rate (EMR)? 0.38

Insurance Agents:

Name See Attached Phone _____
 Name _____ Phone _____

Safety: Does your firm have a written safety program? ☒ yes ☐ no

Does your firm have an orientation program for new hires? ☒ yes ☐ no

In the previous three years, has your firm been cited for a serious (as defined by O.S.H.A) violation?

☐ yes ☒ no, If yes, please explain: _____

X. Please attach a list of four of your most relevant projects:

Project & location TxDot Projects
 Architect na Owner TxDot
 Contract Amount \$20 mill/year Date Completed _____
 Contact & phone number for reference John Roberts 388-3885

Project & location The City Of Austin
 Architect _____ Owner _____
 Contract Amount \$5 mill/year Date Completed _____
 Contact & phone number for reference Sondra Creighton 440-0655

Project & location Travis County
 Architect _____ Owner _____
 Contract Amount \$2 mill/year Date Completed _____
 Contact & phone number for reference Paul Franks 473-9383

Project & location Austin Commercial
 Architect _____ Owner _____
 Contract Amount \$300,000/year Date Completed _____
 Contact & phone number for reference Alex Gregg 320-5656

AUSTIN INDUSTRIES, INC.

UMBRELLA SCHEDULE

1 OCTOBER 1995-1996

<u>LIMIT</u>	<u>LAYER</u>	<u>COMPANY / POLICY #</u>
\$30,000,000	\$30,000,000 XS PRIMARY	ZURICH INSURANCE CO. AUO 8365765
\$40,000,000	\$10,000,000 XS \$30,000,000 XS PRIMARY	AETNA CASUALTY & SURETY 64XN25157654SCA
\$55,000,000	\$15,000,000 XS \$40,000,000 XS PRIMARY	ROYAL INDEMNITY RHA009548
\$65,000,000	\$10,000,000 XS \$55,000,000 XS PRIMARY	RELIANCE INSURANCE OF ILLINOIS NEA0101648
\$80,000,000	\$15,000,000 XS \$65,000,000 XS PRIMARY	AGRICULTURAL INSURANCE EXC8727829
\$100,000,000	\$20,000,000 XS \$80,000,000 XS PRIMARY	TEXAS PACIFIC INDEMNITY CO. (96) 7928-61-09

The above policies are "following form" excess of primary umbrella policy except for terms, conditions, exclusions, etc. indigenous to each excess carrier and their policy form.

All policies are "occurrence form".

SPECIMEN
FOR INFORMATION ONLY

ACORD 25-9 CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)

02/16/96

INSURER
BRITISH AMERICAN INSURANCE CO.
(214) 539-4887 (800) 964-4242
3535 TRAVIS, SUITE 300
DALLAS, TEXAS 75204-1466

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY
A BRITISH AMERICAN INSURANCE COMPANY
COMPANY
B
COMPANY
C
COMPANY
D

INSURED
AUSTIN BRIDGE & ROAD, INC.
7800 SHOAL CREEK #142-S
AUSTIN, TEXAS 78757

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> OWNERS & CONTRACTORS PROT	CGL-0104296	10/01/95	10/01/96	GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPROP AGG \$ 2,000,000 PERSONAL & ADV INJURY \$ 1,000,000 EACH OCCURRENCE \$ 1,000,000 FIRE DAMAGE (Any one fire) \$ 100,000 MED EXP (Any one person) \$ 10,000
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	CAL-0104296	10/01/95	10/01/96	COMBINED SINGLE LIMIT \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EACH ACCIDENT \$ AGGREGATE \$
	EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM				EACH OCCURRENCE \$ AGGREGATE \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY THE PROPRIETARY/ PARTNERS/EXECUTIVE OFFICERS ARE: <input checked="" type="checkbox"/> INCL EXCL	WC-0104296	10/01/95	10/01/96	<input checked="" type="checkbox"/> WC STATU- TORY LIMITS <input type="checkbox"/> OTH- ER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATION/VEHICLES/SPECIAL ITEMS

RE: Contractor prequalification for Samsung Semiconductor Project, Austin, Texas

CERTIFICATE HOLDER

INDUSTRIAL DESIGN CORPORATION
ATTN: GEORGE HENCINSKI
9020 CAPITAL OF TEXAS NORTH
BUILDING 1, SUITE 170
AUSTIN, TEXAS 78758

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY ITS AGENTS OR REPRESENTATIVES.
AUTHORIZED REPRESENTATIVE *Laura Knight*

IND. CERTIFICATE OF INSURANCE

DATE (MM/DD/YY)
02/16/96

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY
A SEE ATTACHMENTCOMPANY
BCOMPANY
CCOMPANY
DINSURED
INDUSTRIAL DESIGN CORPORATION
365-9800
ONE GALLERIA TOWER
13355 NOEL ROAD, SUITE 400
DALLAS, TEXAS 75240-6612INSURED
AUSTIN BRIDGE & ROAD, INC.
7800 SHOAL CREEK, #142-S
AUSTIN, TEXAS 78757

(512) 451-4082

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input checked="" type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR <input type="checkbox"/> OWNERS & CONTRACTORS PROT				GENERAL AGGREGATE \$ PRODUCTS - COM/OP AGG \$ PERSONAL & ADV INJURY \$ EACH OCCURRENCE \$ FIRE DAMAGE (Any one fire) \$ MED EXP (Any one person) \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EACH ACCIDENT \$ AGGREGATE \$
A	EXCESS LIABILITY <input checked="" type="checkbox"/> UMBRELLA FORM OTHER THAN UMBRELLA FORM	SEE ATTACHMENT	10/01/95	10/01/96	EACH OCCURRENCE \$ 100,000,000 AGGREGATE \$ 100,000,000 \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE <input type="checkbox"/> INCL <input type="checkbox"/> EXCL				STATUTORY LIMITS EACH ACCIDENT \$ DISEASE - POLICY LIMIT \$ DISEASE - EACH EMPLOYEE \$
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

RE: Contractor prequalification for Samsung Semiconductor Project, Austin, Texas

CERTIFICATE HOLDER

INDUSTRIAL DESIGN CORPORATION
ATTN: GEORGE HENCINSKI
9020 CAPITAL OF TEXAS HIGHWAY NORTH
BUILDING 1, SUITE 170
AUSTIN, TEXAS 78758

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Charles W. McIntire

ACORD 27-S (1/95)

BACORD CORPORATION

XI. Please list three of your most significant projects currently under construction:*

Project & location Parmer Lane Phase 1
 Architect _____ Owner TxDot
 Contract Amount \$3 million Date Completed under construction
 Contact & phone number for reference John Roberts 388-3885

Project & location Parmer Lane Phase 2
 Architect _____ Owner TxDot
 Contract Amount \$4 million Date Completed under construction
 Contact & phone number for reference John Roberts 388-3885

Project & location Congress Avenue Phase 2
 Architect _____ Owner The City Of Austin
 Contract Amount \$400,000 Date Completed under construction
 Contact & phone number for reference Sondra Creighton 440-0655

* Semiconductor projects preferred

AIU Insurance Company
American Home Assurance Company
Granite State Insurance Company
The Insurance Company of the State of Pennsylvania
National Union Fire Insurance Company of Pittsburgh, Pa.
New Hampshire Insurance Company



Worldwide
Bonding

VOL 0093 PAGE 441

American International Companies

Principal Bond Office
70 Pine Street, New York, N.Y. 10270

BID BOND (AIA 310)

KNOW ALL MEN BY THESE PRESENTS:

That AUSTIN BRIDGE & ROAD, INC., as Principal, and
AMERICAN HOME ASSURANCE COMPANY, as Surety, are held and firmly bound
unto Williamson County, as Obligor, in the sum of
Five Percent of the Greatest Amount Bid Dollars
(\$ 5% GAB), for the payment of which sum, well and truly to be made, the Principal and Surety bind themselves, their
heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Jarrell Tornado Recovery Project

NOW, THEREFORE, if the Obligor shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligor in
accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with
good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in
the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the
Principal shall pay to the Obligor the difference not to exceed the penalty hereof between the amount specified in said bid and such
larger amount for which the Obligor may in good faith contract with another party to perform the Work covered by said bid, then this
obligation shall be null and void, otherwise to remain in full force and effect.

Signed, sealed and dated October 28, 1997

[Signature]
(Witness)

AUSTIN BRIDGE & ROAD, INC.

(Principal)

(Seal)

By [Signature] ESTIMATING MANAGER
(Title)

AMERICAN HOME ASSURANCE COMPANY

(Surety)

Bond No. AIA 310=274

By [Signature] 661
Attorney-In-Fact

American Home Assurance Company
National Union Fire Insurance Company of Pittsburgh, Pa.
 Principal Bond Office: 70 Pine Street, New York, N.Y. 10270

POWER OF ATTORNEYNo. 09-B-50561**KNOW ALL MEN BY THESE PRESENTS:**

That American Home Assurance Company, a New York corporation, and National Union Fire Insurance Company of Pittsburgh, Pa., a Pennsylvania corporation, does each hereby appoint

---Robert C. Siddons, Bettye Ann Rogers, Robert C. Fricke, Linda Couey: of Austin, Texas---

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa. have each executed these presents

this 29 day of April, 1993.

Mark E. Reagan
 Mark E. Reagan, Senior Vice President

STATE OF NEW YORK)
 COUNTY OF NEW YORK)ss.

On this 29 day of April, 1993.
 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

Joseph B. Nozzolio

JOSEPH B. NOZZOLIO
 Notary Public, State of New York
 No. 01-NO4652754
 Qualified in Westchester County
 Term Expires Jan. 31, 1994

CERTIFICATE

Excerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa. on May 18, 1976:

"RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

"RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance or other contract of indemnity or writing obligatory in the nature thereof;

"RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

I, Elizabeth M. Tuck, Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, Pa. do hereby certify that the foregoing excerpts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney are in full force and effect.

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IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation

this 28th day of October, 1997.

Elizabeth M. Tuck
 Elizabeth M. Tuck, Secretary

Bay
maintenance
co., Inc.

County Road Reconstruction

JARRELL TORNADO RECOVERY PROJECT

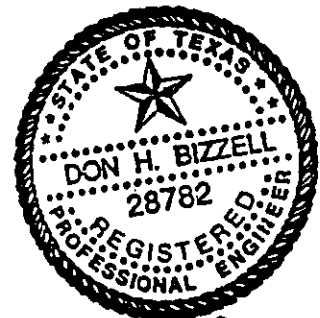
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 663

PROPOSAL & BID SCHEDULE

Date: Oct 28, 1997

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for 5% SAT dollars (\$), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor:

Bay Maintenance Co. Inc

By (Name & Title):

Valentin J Gomez, Jr

(Signature):

Valentin J Gomez Jr

Mailing Address:

PO Box 2859

Horseshoe Bay Tx 78657

Telephone Number:

830-598-2535

CONTRACTOR'S LOCAL OPPORTUNITY PLAN

The Bay Maintenance Co agrees to implement the following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses within the (City/County) of Williamson.

- To ascertain from the Locality's TCDP program official the exact boundaries of the project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- To attempt to recruit from within the city 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 and servicing 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.
- 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.
- To insert this plan in all bid documents and to require all bidders on subcontracts to submit an affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- To insure that subcontracts (greater than \$10,000), which are typically let on a negotiated rather than a bid basis in areas other than the covered project area, are also let on a negotiated basis, whenever feasible, in a covered project area.
- To formally contact unions, subcontractors, and trade associations to secure their cooperation in this effort.
- To insure that all appropriate project area business concerns are notified of pending subcontractual opportunities.
- To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this plan.
- To maintain records concerning the amount and number of contracts, subcontracts, and purchases which contribute to objectives.
- To maintain records of all projected work force needs for all phases of the project by occupation, trade, skill level, and number of positions and to update these projections based on the extent to which hiring meets these Local Opportunity objectives.

As officers and representatives of Bay Maintenance Co (name of company), we the undersigned have read and fully agree to this Plan, and become a party to the full implementation of the program and its provisions.

Valerie Ray J.
Signature

V. P.

Title

Oct 28, 1977
Date

AMERICAN NATIONAL FIRE INSURANCE COMPANY

NEW YORK, NEW YORK

BOND NO.

KNOW ALL MEN BY THESE PRESENTS, that we, BAY MAINTENANCE COMPANY, INC.

HORSESHOE BAY BOX 8859

HORSESHOE BAY, TX 78654

as principal, and the American National Fire Insurance Company, a corporation existing under the laws of the State of New York, having its principal place of business at 580 Walnut Street, Cincinnati, Ohio, as surety, are held and firmly bound unto, COUNTY OF WILLIAMSON

as obligee, in the penal sum of FIVE PERCENT GREATEST AMOUNT BID -----

DOLLARS (\$ 5% GAB), lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED, sealed, and dated this 28TH day of OCTOBER 1997

WHEREAS, the said principal herewith submitting proposal for

COUNTY ROAD RECONSTRUCTION - JARREL TORNADO RECOVERY
TCDP #716307

NOW, THEREFORE, the condition of this obligation is such that, if the said principal shall be awarded the said contract, and shall within SIXTY (60) days after receiving notice of such award enter into a contract and give bond for the faithful performance of the contract, then this obligation shall be null and void otherwise the principal and surety will pay unto the obligee the difference in money between the amount of the principal's bid and the amount for which the obligee may legally contract with another party to perform the work, if the latter amount be in excess of the former; but in no event shall the liability hereunder exceed the penal sum hereof.

BAY MAINTENANCE COMPANY, INC.

BY: 

Principal

AMERICAN NATIONAL FIRE INSURANCE COMPANY

By 

GARY W. WHEATLEY

Attorney-in-Fact

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AMERICAN NATIONAL FIRE INSURANCE COMPANY

New York, New York

Administrative Office: 580 WALNUT STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than

No. 0 15264

One

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the AMERICAN NATIONAL FIRE INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of New York, does hereby nominate, constitute and appoint the person or persons named below its true and lawful attorney-in-fact, for it and in its name, place and stead to execute in behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
GARY W. WHEATLEY	OF SAN ANTONIO, TEXAS	UNLIMITED

This Power of Attorney revokes all previous powers issued in behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the AMERICAN NATIONAL FIRE INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 23rd day of June, 1993

Attest

AMERICAN NATIONAL FIRE INSURANCE COMPANY

STATE OF OHIO, COUNTY OF HAMILTON — ss:

On this 23rd day of June, 1993, before me personally appeared GARY T. DUNBAR, to me known, being duly sworn, deposes and says that he resided in Cincinnati, Ohio, that he is the President of the Bond Division of American National Fire Insurance Company, the Company described in and which executed the above instrument; that he knows the seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of American National Fire Insurance Company by unanimous written consent dated March 1, 1993.

RESOLVED: That the Division President, the several Division Vice Presidents and Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-In-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract or suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, RONALD C. HAYES, Assistant Secretary of American National Fire Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of March 1, 1993 have not been revoked and are now in full force and effect.

Signed and sealed this 28TH day of OCTOBER, 19 97

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Bid Date: 10/28/97 11:00 AM

Bid Loc.: WILLIAMSON CO. COURTHOUSE, 2nd FL., GEORGETOWN, TX

Entity: WILLIAMSON CO. - CO. RD. RECONSTRUCTION JARRELL TORNADO RECOVERY

Descr. 1: PROJECT, T.C.D.P. CONTRACT NO. 716307

BIDDER: BAY MAINTENANCE COMPANY, INC.

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT BID	TOTAL AMOUNT
1	ROADWAY EXCAV	SY	65543	1.95	127,808.85
2	SUBGRADE PREPARATION	SY	69944	0.60	41,966.40
3	REWORK BASE MATERIAL	SY	37610	1.00	37,610.00
4	BASE MATERIAL	SY	61002	5.00	305,010.00
5	ASPH CONC PVMNT	SY	60861	3.00	182,583.00
6	ROADSIDE PITCH	LF	20581	1.00	20,581.00
7	PAVED DRIVEWAY	EA	42	1000.74	42,031.08
8	METAL BEAM GUARD FENCE	LF	1275.5	17.25	22,002.38
9	TERMINAL ANCHOR SECTION	EA	35	345.00	12,075.00
10	CULVERT MODIFICATION LOCATION NO. 1	LS	1	1189.75	1,189.75
11	CULVERT MODIFICATION LOCATION NO. 2	LS	1	14029.95	14,029.95
12	CULVERT MODIFICATION LOCATION NO. 3	LS	1	830.35	830.35
13	CULVERT MODIFICATION LOCATION NO. 4	LS	1	8000.60	8,000.60
14	CULVERT MODIFICATION LOCATION NO. 5	LS	1	830.35	830.35
15	CULVERT MODIFICATION LOCATION NO. 6	LS	1	775.10	775.10
16	CULVERT MODIFICATION LOCATION NO. 7	LS	1	775.10	775.10
17	CULVERT MODIFICATION LOCATION NO. 8	LS	1	775.10	775.10
18	CULVERT MODIFICATION LOCATION NO. 9	LS	1	775.10	775.10
19	CULVERT MODIFICATION LOCATION NO. 10	LS	1	775.10	775.10
20	CULVERT MODIFICATION LOCATION NO. 11	LS	1	775.10	775.10
21	CULVERT MODIFICATION LOCATION NO. 12	LS	1	862.50	862.50
22	CULVERT MODIFICATION LOCATION NO. 13	LS	1	775.10	775.10
23	CULVERT MODIFICATION LOCATION NO. 14	LS	1	775.10	775.10
24	CULVERT MODIFICATION LOCATION NO. 15	LS	1	772.80	772.80
25	CULVERT MODIFICATION LOCATION NO. 16	LS	1	772.85	772.85
26	CULVERT MODIFICATION LOCATION NO. 17	LS	1	772.85	772.85
27	CULVERT MODIFICATION LOCATION NO. 18	LS	1	772.85	772.85
28	CULVERT MODIFICATION LOCATION NO. 19	LS	1	772.85	772.85
29	CULVERT MODIFICATION LOCATION NO. 20	LS	1	1023.50	1,023.50
30	CULVERT MODIFICATION LOCATION NO. 21	LS	1	1155.75	1,155.75
31	CULVERT MODIFICATION LOCATION NO. 22	LS	1	775.10	775.10
32	CULVERT MODIFICATION LOCATION NO. 23	LS	1	1243.15	1,243.15
33	CULVERT MODIFICATION LOCATION NO. 24	LS	1	30900.70	30,900.70
34	CULVERT MODIFICATION LOCATION NO. 25	LS	1	772.85	772.85
35	CULVERT MODIFICATION LOCATION NO. 26	LS	1	968.30	968.30
36	CULVERT MODIFICATION LOCATION NO. 27	LS	1	690.00	690.00
37	CULVERT MODIFICATION LOCATION NO. 28	LS	1	26000.83	26,000.83
38	CULVERT MODIFICATION LOCATION NO. 29	LS	1	903.90	903.90
39	CULVERT MODIFICATION LOCATION NO. 30	LS	1	34000.45	34,000.45
40	CULVERT MODIFICATION LOCATION NO. 31	LS	1	26100.05	26,100.05
41	CULVERT MODIFICATION LOCATION NO. 32	LS	1	765.90	765.90
42	CULVERT MODIFICATION LOCATION NO. 33	LS	1	775.10	775.10
43	CULVERT MODIFICATION LOCATION NO. 34	LS	1	916.55	916.55
44	CULVERT MODIFICATION LOCATION NO. 35	LS	1	916.55	916.55
45	CULVERT MODIFICATION LOCATION NO. 36	LS	1	8000.20	8,000.20
46	CULVERT MODIFICATION LOCATION NO. 37	LS	1	1052.25	1,052.25
47	CULVERT MODIFICATION LOCATION NO. 38	LS	1	891.25	891.25
48	CULVERT MODIFICATION LOCATION NO. 39	LS	1	891.25	891.25
49	CULVERT MODIFICATION LOCATION NO. 40	LS	1	1344.35	1,344.35

Bid Date: 10/28/97 11:00 AM

Bid Loc.: WILLIAMSON CO. COURTHOUSE, 2nd FL., GEORGETOWN, TX

Entity: WILLIAMSON CO. - CO. RD. RECONSTRUCTION JARRELL TORNADO RECOVERY

Descr. 1: PROJECT, T.C.D.P. CONTRACT NO. 716307

BIDDER: BAY MAINTENANCE COMPANY, INC.

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT BID	TOTAL AMOUNT
50	CULVERT MODIFICATION LOCATION NO. 41	LS	1	12000.45	12,000.45
51	CULVERT MODIFICATION LOCATION NO. 42	LS	1	916.55	916.55
52	CULVERT MODIFICATION LOCATION NO. 43	LS	1	916.55	916.55
53	CULVERT MODIFICATION LOCATION NO. 44	LS	1	916.55	916.55
delete	CULVERT MODIFICATION LOCATION NO. 45	LS	0	NB	NB
55	CULVERT MODIFICATION LOCATION NO. 46	LS	1	13000.40	13,000.40
56	CULVERT MODIFICATION LOCATION NO. 47	LS	1	891.25	891.25
57	CULVERT MODIFICATION LOCATION NO. 48	LS	1	772.85	772.85
58	CULVERT MODIFICATION LOCATION NO. 49	LS	1	891.25	891.25
59	CULVERT MODIFICATION LOCATION NO. 50	LS	1	891.25	891.25
60	CULVERT MODIFICATION LOCATION NO. 51	LS	1	772.85	772.85
61	CULVERT MODIFICATION LOCATION NO. 52	LS	1	7900.20	7,900.20
62	CULVERT MODIFICATION LOCATION NO. 53	LS	1	891.25	891.25
63	CULVERT MODIFICATION LOCATION NO. 54	LS	1	775.10	775.10
64	CULVERT MODIFICATION LOCATION NO. 55	LS	1	1261.55	1,261.55
65	CULVERT MODIFICATION LOCATION NO. 56	LS	1	1327.10	1,327.10
66	CULVERT MODIFICATION LOCATION NO. 57	LS	1	999.35	999.35
67	CULVERT MODIFICATION LOCATION NO. 58	LS	1	967.15	967.15
68	SILT FENCT	LF	18760	1.08	20,260.80
69	ROCK BERM	LF	1458	8.00	11,664.00
70	TRENCH & EXCAV SAFETY CULV LOC NO. 2	SF	570	2.00	1,140.00
71	TRENCH & EXCAV SAFETY CULV LOC NO. 4	SF	532	2.00	1,064.00
72	TRENCH & EXCAV SAFETY CULV LOC NO. 24	SF	512	2.00	1,024.00
73	TRENCH & EXCAV SAFETY CULV LOC NO. 30	SF	570	2.00	1,140.00
74	TRENCH & EXCAV SAFETY CULV LOC NO. 31	SF	264	2.00	528.00
75	TRENCH & EXCAV SAFETY CULV LOC NO. 52	SF	494	2.00	988.00
76	STREET SIGNAGE	LS	1	10000.50	10,000.50
					1,061,465.14

BAY MAINTENANCE COMPANY, INC. certifies that the unit prices shown on this complete computer print-out for and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated these unit prices and no other information from this print-out. BAY MAINTENANCE COMPANY, INC. acknowledges total bid amount shown will be read as its total bid and further agrees that the official total bid amount determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities in the proposal and then totaling all of the extended amounts.

Signed: Valentin J. J. Jr.Title: Vice-PresidentDate: Oct 28, 1997RECD ADDA: Oct 24, 1997 #1

670

"QUALIFICATIONS REQUIRED OF BIDDER"

16-Oct-97

Name of Bidder: BAY MAINTENANCE COMPANY, INC. Date Organized: 1977
 Address: P.O. Box 8859 Horseshoe Bay, Tx 78654 Date Incorporated: 1977

Number of years in contracting business under present name: 19 years

CONTRACTS ON HAND:

PROJECT:	FM 2244	IH 410	FM 436	POPGUN/LP 410 SEWER
LOCATION:	TRAVIS CO	BEXAR CO	BELL CO	SAN ANTONIO
OWNER:	TXDOT	TXDOT	TXDOT	S.A.W.S.
AMOUNT:	\$3,519,000	\$1,503,300	\$1,897,000	\$1,568,492
REPRSNTVE:	RUSSEL LENZ	DALE STEIN	JAMES COWN	JIM OVERBY
PHONE:	512-327-3425	210-615-6022	817-939-3778	210-828-3520
EST CMPL:	JUN 98	NOV 97	DEC 97	OCT 97

PROJECT:	INKS LAKE ST. PARK KATY CROSSING SEC 3	IH 10	SH 95
LOCATION:	INKS LAKE GEORGETOWN	KENDALL CO	WILLIAMSON CO
OWNER:	TX PARK & WILDLIFE KENNEDY PROPERTIES	TXDOT	TXDOT
AMOUNT:	\$1,568,000	\$598,000	\$2,865,777
REPRSNTVE:	DAVE DISCIND	JIM COULTER	DAVE HANSON
PHONE:	512-329-5002	512-218-4404	210-257-8444
EST CMPL:	NOV 97	NOV 97	NOV 97

PROJECT:	STREET IMPROVEMENTS	US 281	SH 36	RM 2222
LOCATION:	MINERAL WELLS	ERATH CO	HAMILTON CO	TRAVIS CO
OWNER:	CITY MINERAL WELLS	TXDOT	TXDOT	TXDOT
AMOUNT:	\$1,082,000	\$1,072,643	\$1,247,918	\$1,681,000
REPRSNTVE:	TINA HANSON	MARC MCENDREE	ROBBY HARRIS	JOHN ROBERTS
PHONE:	817-354-0189	817-965-3511	817-865-7115	512-832-7000
EST CMPL:	FEB 98	DEC 97	NOV 97	JUN 98

PROJECT:	OAKDALE DRIVE	US 87	US 84	DOWNTOWN STORM SEWER
LOCATION:	CITY SUNSET VALLEY	MCCULLOCH CO	COLEMAN	CITY OF KERRVILLE
OWNER:	CITY SUNSET VALLEY	TXDOT	TXDOT	CITY OF KERRVILLE
AMOUNT:	\$379,000	\$458,000	\$232,000	\$400,000
REPRSNTVE:	CHIEN LEE	BRYAN RASCHKE	BRYAN RASCHKE	CHRIS HARDER
PHONE:	512-467-9793	915-643-2591	915-643-2591	830-792-8325
EST CMPL:	DEC 97	JAN 98	DEC 97	JAN 98

PROJECT:	1997 WATER IMPROV
LOCATION:	CITY GRANITE SHOALS
OWNER:	CITY GRANITE SHOALS
AMOUNT:	\$177,000
REPRSNTVE:	PAUL DENHAM
PHONE:	210-734-5351
EST CMPL:	JAN 98

Type of work performed by your company: Underground Utilities and Heavy Highway

Have you ever failed to complete any work awarded to you? NO

Have you ever defaulted on a contract? NO

NOT COMPLETED

1	PROJECT:	ZARZAMORA ST	SP 421	SEWER RELIEF	CULEBRA RD
2	LOCATION:	BEXAR CO.	BEXAR CO	KATY STREET	BEXAR CO
3	OWNER:	TX D.O.T.	TXDOT	NEW BRAUNFELS UTIL.	TXDOT
4	AMOUNT:	\$1,798,175	\$1,264,000	\$70,000	\$330,000
5	REPRSNTVE:	DAVID BALLI	DALE STEIN	WESLEY HAMFF	DALE STEIN
6	PHONE:	210-532-5201	210-629-6022	210-629-8417	210-629-6022
7	DATE CMPL:	MAR 96	MAR 96	MAY 96	MAY 96
8	PROJECT:	US 377	HAMILTON AIRPORT	SH 22	VARGAS/PARKER
9	LOCATION:	BROWN CO	CITY OF HAMILTON	BOSQUE CO	CITY OF AUSTIN
10	OWNER:	TXDOT	CITY OF HAMILTON	TXDOT	CITY OF AUSTIN
11	AMOUNT:	\$747,479	\$2,224,000	\$178,662	\$1,899,000
12	REPRSNTVE:	BRYAN RASCHKE	LARRY VALDEZ	ROBBY HARRIS	CLAYTON CRAIG
13	PHONE:	915-643-2591	806-747-0161	817-865-7115	512-441-8785
14	DATE CMPL:	MAY 96	JUL 96	JUL 96	AUG 96
15	PROJECT:	HUEBNER RD	WATER LINE	SANITARY SEWER	US 190
16	LOCATION:	BEXAR CO	CITY OF BURNET	CITY OF LAMPASAS	CORYELL CO
17	OWNER:	TXDOT	CITY OF BURNET	CITY OF LAMPASAS	TXDOT
18	AMOUNT:	\$1,358,000	\$215,050	\$216,240	\$539,956
19	REPRSNTVE:	DALE STEIN	STEVE YOUNG	OTTO WEIDERHOLD	ROBBY HARRIS
20	PHONE:	210-629-6022	512-328-6736	817-554-5959	817-865-7115
21	DATE CMPL:	AUG 96	JUL 96	SEP 96	SEP 96
22	PROJECT:	SH 29	SPICEWOOD SPRINGS	KATY CROSSING	SANITAR SEWER
23	LOCATION:	BURNET CO.	WILLIAMSON CO	GEORGETOWN	CITY OF TAYLOR
24	OWNER:	TXDOT	TXDOT	KENNEDY PROPERTIES	CITY OF TAYLOR
25	AMOUNT:	\$1,692,155	\$1,184,889	\$1,517,000	\$250,000
26	REPRSNTVE:	GREG HALEY	JOHN ROBERTS	STEVE KALLMAN	BOB THONHOFF
27	PHONE:	512-756-2316	512-832-7000	512-218-4404	512-328-6736
28	DATE CMPL:	DEC 96	JAN 97	DEC 96	NOV 96
29	PROJECT:	SANITARY SEWER	US 377	FM 2243	BU 377H
30	LOCATION:	CITY OF KILLEEN	BROWN CO	WILLIAMSON CO	HOOD CO
31	OWNER:	CITY OF KILLEEN	TXDOT	TXDOT	TXDOT
32	AMOUNT:	\$283,000	\$1,207,500	\$273,100	\$213,614
33	REPRSNTVE:	OTTO WEIDERHOLD	BRYAN RASCHKE	JAMES KLOTZ	MARC MCENDREE
34	PHONE:	817-554-5959	915-643-2591	512-863-2842	817-965-3511
35	DATE CMPL:	FEB 97	JAN 97	NOV 96	MAY 97
36	PROJECT:	SH 108	SANITARY SEWER	FM 1431	1996 CDBG WATER
37	LOCATION:	ERATH CO	CITY OF SAN SABA	BURNET CO	CITY OF BURNET
38	OWNER:	TXDOT	CITY OF SAN SABA	TXDOT	CITY OF BURNET
39	AMOUNT:	\$2,862,982	\$235,500	\$135,824	\$126,015
40	REPRSNTVE:	MARC MCENDREE	PAUL BOEDEKER	GREG HALEY	JUNE LYKES
41	PHONE:	817-965-3511	512-454-8716	512-756-2316	817-772-9222
42	DATE CMPL:	MAY 97	MAR 97	MAY 97	MAY 97
43	PROJECT:	SH 119	FM 1660	CS (CITY OF TAYLOR)	KATY CROSSING SEC 2
44	LOCATION:	WILSON CO	WILLIAMSON CO	WILLIAMSON	GEORGETOWN
45	OWNER:	TXDOT	TXDOT	TXDOT	KENNEDY PROPERTIES
46	AMOUNT:	\$917,962	\$250,481	\$188,722	\$609,562
47	REPRSNTVE:	KEN DAVENPORT	JAMES KLOTZ	JAMES KLOTZ	JIM COULTER
48	PHONE:	210-216-7010	512-863-2842	512-863-2842	512-218-4404
49	DATE CMPL:	SEP 97	SEP 97	SEP 97	SEP 97

PROJECT: 1996 STREET REHAV
 LOCATION: CITY OF ROCKDALE
 OWNER: CITY OF ROCKDALE
 AMOUNT: \$209,554
 REPRSNTVE: ED MCDOW
 PHONE: 409-764-7640
 DATE CMPL: JUL 97

RESUMES OF PRINCIPAL MEMBERS OF YOUR ORGANIZATION, INCLUDING OFFICERS AS WELL AS
 PROPOSED SUPERINTENDENT FOR THE PROJECT:

FRANK DAN KING - OVER 20 YEARS EXPERIENCE IN ROAD CONSTRUCTION
 (PRESIDENT) AND UNDERGROUND UTILITY CONSTRUCTION

RICHARD MAYNARD - OVER 20 YEARS OF SUPERVISION OF ROAD CONSTRUCTION
 (V.P.) AND UNDERGROUND UTILITY CONSTRUCTION

VALENTIN GOMEZ - OVER 10 YEARS OF CONSTRUCTION MANAGEMENT AND
 (V.P.) ESTIMATING

BOB BENDER - OVER 20 YEARS OF SUPERVISION OF ROAD CONSTRUCTION
 (V.P.) AND UNDERGROUND UTILITY CONSTRUCTION

Credit Available: \$1,000,000.00 Bank Reference: Cattlemans National Bank

The undersigned hereby authorizes and requests any person, firm, or corporation to
 furnish any information requested by the Williamson Co - City of Janel
 in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 28 day of Oct, 19 97

By: (signature) Valentin Gomez Title: Vice-president

(print name): Valentin J. Gomez, Jr.

County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

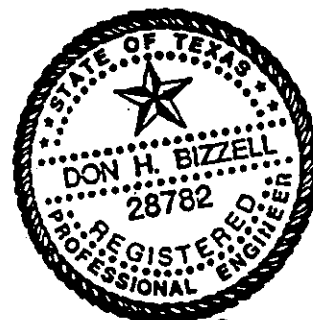
Bunnis
Construction
Inc.

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 674

PROPOSAL & BID SCHEDULE

Date: 10/28/97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of County Road Reconstruction, **JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard:		
		<u>TWO DOLLARS AND EIGHTEEN CENTS</u>	<u>2.18</u>	<u>\$ 142,883.74</u>
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard:		
		<u>NO DOLLARS AND SIXTY CENTS</u>	<u>\$ 0.60</u>	<u>\$ 41,966.40</u>
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard:		
		<u>NO DOLLARS AND NINETY CENTS</u>	<u>0.90</u>	<u>\$ 33,849.00</u>
4.	61,002 s.y.	Base Material, complete in place, per square yard:		
		<u>THREE DOLLARS AND FORTY CENTS</u>	<u>\$ 3.40</u>	<u>\$ 207,406.80</u>
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard:		
		<u>TWO DOLLARS AND SEVENTY CENTS</u>	<u>\$ 2.70</u>	<u>\$ 164,324.70</u>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot:			
		ONE DOLLAR AND TWENTY CENTS	\$ 1.20		\$ 24,697.20
7.	42 ea.	Paved Driveway, complete in place, per each:			
		TWO HUNDRED DOLLARS AND NO CENTS	\$ 200.00		\$ 8,400.00
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot:			
		TWELVE DOLLARS AND TWENTY CENTS	\$ 12.20		\$ 15,561.10
9.	35 ea.	Terminal Anchor Section, complete in place, per each:			
		ONE HUNDRED SEVENTY FIVE DOLLARS AND NO CENTS	\$ 175.00		\$ 6,125.00
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED NINETY DOLLARS AND NO CENTS	\$ 1,890.00		\$ 1,890.00
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum:			
		FIVE THOUSAND SIX HUNDRED EIGHTY DOLLARS AND NO CENTS	\$ 5,680.00		\$ 5,680.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum:			
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00					
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum:			
FOUR THOUSAND DOLLARS AND NO CENTS \$ 4,000.00 \$ 4,000.00					
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum:			
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00					
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum:			
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00					
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum:			
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00					
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum:			
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00					

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS	\$1,800.00	\$1,800.00	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum:		
ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$ 1,800.00 \$ 1,800.00				
6				680

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
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30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum:			
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ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$1,800.00 \$1,800.00

31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum:			
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ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$1,800.00 \$1,800.00

32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum:			
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THREE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$3,800.00 \$3,800.00

33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum:			
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TWENTY THREE THOUSAND NINE HUNDRED DOLLARS AND NO CENTS \$23,900.00 \$23,900.00

34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum:			
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ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO CENTS \$1,800.00 \$1,800.00

35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum:			
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ONE THOUSAND NINE HUNDRED DOLLARS AND NO CENTS \$1,900.00 \$1,900.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$ 1,800.00	\$ 1,800.00
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum: EIGHTEEN THOUSAND, THREE HUNDRED DOLLARS AND NO/CENTS		\$ 18,300.00	\$ 18,300.00
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum: ONE THOUSAND, EIGHT HUNDRED DOLLARS AND NO/CENTS		\$ 1,800.00	\$ 1,800.00
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum: THIRTY FOUR THOUSAND, SIX HUNDRED DOLLARS AND NO/CENTS		\$ 34,600.00	\$ 34,600.00
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum: EIGHTEEN THOUSAND, SIX HUNDRED DOLLARS AND NO/CENTS		\$ 18,600.00	\$ 18,600.00
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum: ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS		\$ 1,900.00	\$ 1,900.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum: FOUR THOUSAND FOUR HUNDRED DOLLARS AND NO/CENTS		\$4,400.00	\$4,400.00
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum: ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS		\$1,900.00	\$1,900.00
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum: ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS		\$1,900.00	\$1,900.00
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum: TEN THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$10,800.00	\$10,800.00
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum: ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS		\$1,800.00	\$1,800.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
54.	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:			
			\$		\$ OMIT
55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum:			
		FIVE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS	\$ 5,800.00	\$ 5,800.00	
56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum:			
		ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS	\$ 1,900.00	\$ 1,900.00	
57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum:			
		TWO THOUSAND DOLLARS AND NO/CENTS	\$ 2,000.00	\$ 2,000.00	
58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum:			
		ONE THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS	\$ 1,800.00	\$ 1,800.00	
59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum:			
		ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS	\$ 1,900.00	\$ 1,900.00	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum: TWO THOUSAND ONE HUNDRED DOLLARS AND NO/CENTS	\$ 2,100.00	\$ 2,100.00
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum: SIX THOUSAND SEVEN HUNDRED DOLLARS AND NO/CENTS	\$ 6,700.00	\$ 6,700.00
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum: TWO THOUSAND DOLLARS AND NO/CENTS	\$ 2,000.00	\$ 2,000.00
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum: TWO THOUSAND DOLLARS AND NO/CENTS	\$ 2,000.00	\$ 2,000.00
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum: TWO THOUSAND EIGHT HUNDRED DOLLARS AND NO/CENTS	\$ 2,800.00	\$ 2,800.00
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum: TWO THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS	\$ 2,900.00	\$ 2,900.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum: TWO THOUSAND FOUR HUNDRED DOLLARS AND NO/CENTS	\$ 2,400.00	\$ 2,400.00
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum: ONE THOUSAND NINE HUNDRED DOLLARS AND NO/CENTS	\$ 1,900.00	\$ 1,900.00
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot: ONE DOLLAR AND TWENTY SEVEN CENTS	\$ 1.27	\$ 23,825.20
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot: EIGHT DOLLARS AND SEVENTY FIVE CENTS	\$ 8.75	\$ 12,757.50
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 1,710.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 1,596.00
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 1,536.00
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 1,710.00
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 792.00
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot: THREE DOLLARS AND NO CENTS	\$ 3.00	\$ 1,482.00

76.

1 l.s.

Street Signage, complete in place, per
lump sum:

NINE THOUSAND SIX
HUNDRED DOLLARS AND NO CENTS \$ 9,600.00 \$ 9,600.00

TOTAL BID:

\$ 923,992.64

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

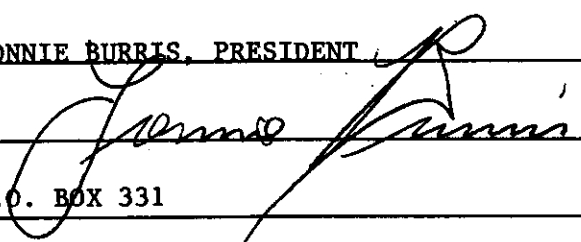
The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: BURRIS CONSTRUCTION, INC.

By (Name & Title): LONNIE BURRIS, PRESIDENT

(Signature): 

Mailing Address: P.O. BOX 331

GEORGETOWN, TX 78627

Telephone Number: 512-869-2043 FAX: 512-863-2591

Bond No. BD34665

BID BOND (5%)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,
BURRIS CONSTRUCTION, INC. as Principal, and COMMERCIAL INDEMNITY INSURANCE
COMPANY
 as Surety, are hereby held and firmly bound unto WILLIAMSON COUNTY
 as OWNER in the penal sum of FIVE (5%) PERCENT OF AMOUNT BID
 for the payment of which, well and truly to be made, we hereby jointly and severally bind
 ourselves, successors and assigns.

Signed this 23RD day of OCTOBER, 19 97. The Condition of the above obligation is
 such that whereas the Principal has submitted to WILLIAMSON COUNTY a certain BID,
 attached hereto and hereby made a part hereof to enter into a contract in writing, for the
JARRELL TORNADO RECOVERY PROJECT, JOB # 18464

NOW THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract
 in the Form of Contract attached hereto (properly completed in accordance with
 said BID) and shall furnish a BOND for his faithful performance of said contract,
 and for the payment of all persons performing labor or furnishing materials in
 connection therewith, and shall in all other respects perform the agreement
 created by the acceptance of said BID, then this obligation shall be void, otherwise
 the same shall remain in force and effect; it being expressly understood and agreed
 that the liability of the Surety for any and all claims hereunder shall in no event
 exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

BURRIS CONSTRUCTION, INC.

James J. Burris (L.S.)
Principal

COMMERCIAL INDEMNITY INSURANCE COMPANY
Surety

By: *W. T. Ragdale*
W. T. RAGSDALE, ATTORNEY IN FACT



IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Commercial Indemnity Insurance Company

P.O. Box 67

Austin, Texas 78741

**COMMERCIAL
INDEMNITY INSURANCE CO.**

BD34665

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the Commercial Indemnity Insurance Company, a Corporation duly organized and existing under the laws of the State of Texas, having its principal office in Austin, Texas, pursuant to the following resolution, adopted by the Board of Directors of the said Company on the 12th day of May, 1996, to wit:

"Resolved, that any officer of the Company shall have authority to make, execute and deliver a Power of Attorney constituting as Attorney-In-Fact, such persons, firms, or corporations as may be selected from time to time.

Be It Further Resolved, that the signature of any officer and the Seal of the Company may be affixed to any such Power of Attorney or any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such powers so executed and certified by facsimile signature or facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached." Commercial Indemnity Insurance Company does hereby make, constitute and appoint:

W.T. Ragsdale

State of Texas its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf, and its act and deed, as follows:

The Obligation of the Company shall not exceed one million (\$1,000,000.00) Dollars.

And to bind Commercial Indemnity Insurance company thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officer of the Commercial Indemnity Insurance Company, and all the acts of said Attorney(s) pursuant to the authority herein given, are hereby ratified and confirmed.

IN WITNESS WHEREOF, the Commercial Indemnity Insurance Company has caused these presents to be signed by any officer of the Company and its Corporate Seal to be hereto affixed.



State of Texas

County of Travis

Rudy Herzog
Rudy Herzog, President

On this 12th day of May, in the year 1996, before me Shannon McBride, a notary public, personally appeared Rudy Herzog, personally know to me to be the person who executed the within instrument as President, on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

Shannon McBride



Commission Expires 5-20-98

Shannon McBride, Notary Public

CERTIFICATE

I, the undersigned, Secretary of Commercial Indemnity Insurance Company, DO HEREBY CERTIFY that the foregoing and attached Power of Attorney and Certificate of Authority remains in full force and has not been revoked:

Signed and Sealed a the said Company at Austin, Texas dated this 23rd day of October, 1997.



Paul Cameron
Paul Cameron, Secretary

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COMMERCIAL INDEMNITY

Insurance Company
(formerly Commercial Lloyd's Insurance Company)

IMPORTANT NOTICE

To obtain information or make a complaint:

You may contact **Rudy Herzog**, President of Operations, whose **direct dial number is 512-444-7776**. You may also **fax** us information at **512-440-0989**. You may also **call** Commercial Indemnity Insurance Company's **toll-free** telephone number for information or to make a complaint at:

1-800-234-8046

You may also **write** to Commercial Indemnity Insurance Company : 1507 South IH-35, Austin, Texas 78741.

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

You may also write the Texas Department of Insurance: P.O. Box 149104, Austin, Texas 78714-9104, Fax 512-475-1771.

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning your premium or about a claim you should contact the company first. If the dispute is not resolved you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY: This notice is for information only and does not become a part of condition of the attached document.

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 he desires.

Name of Bidder: Burris Construction, Inc.
 Address: 2508 Williams Drive, Suite 104
Georgetown, TX 78628

Date Organized: 8/1/1988 Date Incorporated: 8/1/1988
 Number of Years in contracting business under present name: 9 Years

CONTRACTS ON HAND:

Contracts	Dollar Amount	Completion Date
See Attached		

Type of work performed by your company: Civil Site Construction
 Have you ever failed to complete any work awarded to you? No
 Have you ever defaulted on a contract? No

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

Project	Dollar Amount	Mo/Yr Completed
See Attached		

Major equipment available for this contract:

See Attached

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

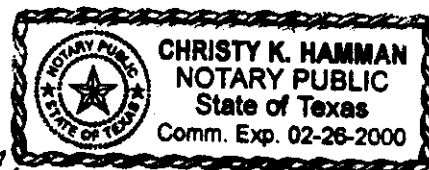
Credit available: \$ 100,000.00 Bank reference: Hartland Bank- Georgetown
Mr. Ray Armour

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 28th day of October 1997

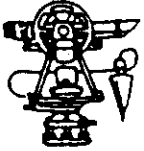
by: *Lonnie Burris* Lonnie Burris, President
 (Signature) (Title)

2-93



Christy K. Hamman

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**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

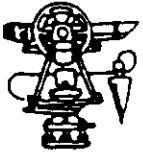
LONNIE BURRIS, P.E.

JOB STATUS REPORT

September 1997

BURRIS CONSTRUCTION, INC.
 2508 Williams Drive
 Georgetown, Texas 78628
 (512) 869-2043

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
001	McLane Trucking Corporate Headquarters Temple, Texas	\$312,958.00	9/30/90	Lee Lewis Company Gary Townsend 806-745-9705
002	Grace Episcopal Church Georgetown, Texas	\$36,000.00	12/31/89	J.K. Richardson Co. Larry Richardson 512-863-0523
003	First Baptist Church Liberty Hill, Texas	\$8,500.00	6/30/89	C.C.A., Inc. Mike Cunningham 512-863-2131
004	Luby's Cafeteria #1 Killeen, Texas	\$188,238.50	7/31/90	Evergreen Construction Russell Garner 512-346-3285
005& 012	Travis County Correctional Center Del Valle, Texas	\$227,538.00	3/31/91	Cadence Group Thomas Kemp 512-328-1411
006	McLane-Western Distribution Center Longmont, CO	\$610,208.00	12/31/90	McLane Company Willis Russell 817-778-7500

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331

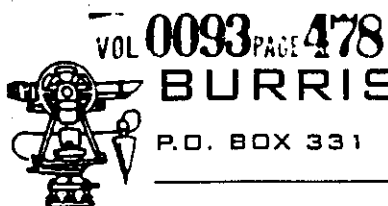
GEORGETOWN, TX 78627

512-869-2043

FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
007	Gary Job Corp San Marcos, Texas	\$266,125.00	9/30/90	J.K. Richardson Co. Larry Richardson 512-863-0523
008& 009	Private Mini Storage Warehouse Austin, Texas	\$177,621.00	9/30/90	Bartlette Cocke Co. Darrell White 512-451-8522
010& 011 013	Lake Creek Festival & Presidio Theater Austin, Texas	\$1,283,168.00	3/31/91	American Constructors Marty Burger 512-250-1824
014	Austin American Statesman Austin, Texas	\$712,505.00	9/30/91	American Constructors Tom Peoples 512-477-1087
015	Rollins Truck Leasing Facility Austin, Texas	\$181,190.00	3/31/91	Reed Properties Jerry Reed Weldon Rasco 512-472-5911
016	Highland Lakes Medical Center Burnet, Texas	\$141,570.50	2/20/92	Cadence Group Thomas Kemp 512-328-1411
017	DPS-Additions & Renovations Austin, Texas	\$248,815.00	9/30/92	Templeton Const. Co. Gary McClure 915-653-6904
018	St. Andrews Presbyterian Church Austin, Texas	\$70,345.00	2/29/92	Perry & Perry Builders Collier Perry 512-446-2752



BURRIS CONSTRUCTION, INC.

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB#	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
19	Dave Transportation Austin, Texas	\$292,740.00	9/30/91	Reed Properties Jerry Reed 512-472-5911
020	Gattis Elementary School Round Rock, Texas	\$446,641.76	10/31/92	Silverton Const. Co. Robert Ferrell 512-441-1900
021	Southern Union Gas Austin, Texas	\$235,429.00	2/29/92	Reed Properties Jerry Reed 512-472-5911
022	Austin Convention Austin, Texas	\$500,147.00	1/31/93	Spaw-Glass Inc. Kenneth Cousins Jerome Milan 512-472-3211
023	Balcones Research Ctr. New Warehouse Austin, Texas	\$109,014.00	10/31/92	American Constructors Tom Peoples 512-477-1087
024	U.S. Rentals Job Cedar Park, Texas	\$10,640.00	2/29/92	U.S. Rentals, Inc. Randy Jones 512-335-0061
025	Texas Ready Mix Austin, Texas	\$10,935.00	5/18/92	Texas Ready Mix Kenneth Cook 512-444-2424
026	Austin Diagnostic Clinic Austin, Texas	\$48,462.00	12/31/92	Pepper-Lawson Buddy Goodson 713-371-3100

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB#	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
028	Joe George Residence Austin, Texas	\$3,827.00	7/31/92	Burris Construction, Inc. Lonnie Burris 512-869-2043
029	Wolfe Nursery Austin, Texas	\$125,400.00	12/31/92	Rawlins Construction, Inc. Brad Tracy 214-526-2696
030	St. Elmo Service Center Austin, Texas	\$208,890.00	5/31/93	Tecom Construction, Inc. Mitchell Gershen 512-345-3584
030-1	St. Elmo Change Order Austin, Texas	\$119,358.00	8/31/93	Tecom Construction, Inc. Mitchell Gershen 512-345-3584
031-049	Bastrop Co. Roads & Bridges	\$290,499.00	4/30/93	Hunter Associates, Inc. Paul Boedeker 512-454-8716
050	Foley's Highland Mall Austin, Texas	\$327,417.00	12/31/92	Gamma Construction Co. Keith Williams 713-963-0086
051	TSM Manchaca @ William Cannon Austin, Texas	\$444,660.91	9/30/93	City of Austin Leo Sanchez Pat Webb 512-441-8785
052	Austin American Statesman Austin, Texas	\$31,052.00	4/30/93	American Constructors Tom Peoples 512-477-1087

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB#	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
053	Camp Mabry Starc Command Austin, Texas	\$514,420.00	12/31/94	The Cadence Group Thomas Kemp 512-328-1411
054	McMorris Ford Austin, Texas	\$626,082.00	5/31/94	Teal Construction, Inc. Tom Cloninger 713-465-8306
055	ACC-Pinnacle Austin, Texas	\$244,001.00	8/31/93	Burris Construction, Inc. Lonnie Burris 512-869-2043
056	Quartz Glass Austin, Texas	\$237,161.00	5/31/94	Austin Rio Construction Co. Trey Wattinger 512-282-5406
057	Amey-Hyltin-Manor Austin, Texas	\$104,900.00	11/30/93	Bailey Elliott Const., Inc. Bailey Elliott 512-327-3951
058	Fredricksburg Elementary School Fredricksburg, Texas	\$268,442.00	12/31/94	Baird/Williams Const. Inc. Marcus Schneider 817-773-3499
059	Luby's #1-San Marcos San Marcos, Texas	\$194,743.00	5/31/94	K-W Const., Inc. David Hornberger 512-353-5900
060	Hamilton Pool Bridge Austin, Texas	\$443,504.00	5/31/94	Burris Construction, Inc. Lonnie Burris 512-869-2043

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB#	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
061	Motorola Parking Garage Austin, Texas	\$627,656.00	5/31/94	American Constructors Marty Burger 512-385-2026
062	AASF Airport Austin, Texas	\$72,600.00	10/31/93	Burris Construction, Inc. Lonnie Burris 512-869-2043
063	Tim Harris House Georgetown, Texas	\$16,360.00	11/30/93	Burris Construction, Inc. Lonnie Burris 512-869-2043
065	San Marcos Int. School San Marcos, Texas	\$517,650.00	10/31/94	Austin Rio Construction, Inc. Trey Wattinger 512-282-5406
066	Leander Jr. High School Leander, Texas	\$322,796.00	6/30/95	BFW Construction, Inc. Bobby Whatley 817-778-8941
067	Laredo State University Laredo, Texas	\$1,622,295.00	9/30/95	Flintco, Inc. Kent Thompson Don O'Haver
068	Horizon Savings Austin, Texas	\$127,841.00	9/30/94	Austin Canyon Corp. Mark Klein 512-327-3135
069	AMD Tunnel Austin, Texas	\$200,701.00	6/30/94	Austin Rio Construction, Inc. Trey Wattinger 512-282-5406

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331

GEORGETOWN, TX 78627

512-869-2043

FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
070	Outback Steakhouse Austin, Texas	\$40,000.00	5/30/94	Gamma Construction, Inc. Keith Williams 713-963-0086
071	AMD Parking Lot Austin, Texas	\$279,000.00	6/30/94	American Constructors Tim Cahalan 512-385-2026
072	AMD Modular Bldg. Austin, Texas	\$57,499.00	6/30/94	American Constructors Tim Cahalan 512-385-2026
073	AMD RODI Austin, Texas	\$431,122.00	6/30/94	American Constructors Marty Burger 512-385-2026
074	North Austin Police Austin, Texas	\$193,788.70	3/31/95	O'Neal Construction Ken Haulotte 512-452-8184
075	Killeen Ellison 9th Grade Center Killeen, Texas	\$886,000.00	7/31/94	Burris Construction, Inc. Lonnie Burris 512-869-2043
076	Pflugerville Elem. School Pflugerville, Texas	\$236,000.00	3/31/95	Dal-Mac Construction, Inc. Roy Thomas 512-794-8685
077	Capital City Container Austin, Texas	\$381,500.00	3/31/95	Dal-Mac Construction, Inc. John Straub 512-794-8685
078	Austin Area Federal Teacher's Credit Union Austin, Texas	\$263,784.00	3/31/95	Flynn Construction Co. Keith Pool 512-440-7643



BURRIS CONSTRUCTION, INC.

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

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LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
079	TSM:MLK @ Guadalupe Austin, Texas	\$817,570.41	6/30/95	Burris Construction, Inc. Lonnie Burris 512-869-2043
080	Williamson County Unified Facilities Georgetown, Texas	\$532,357.00	6/30/95	Burris Construction, Inc. Lonnie Burris 512-869-2043
081	Kerr County Law Enforcement Facility Kerrville, Texas	\$329,000.00	12/31/94	Pack Brothers Sam Pack 210-493-3090
082	Leander ISD Playground And Sidewalk Improve. Leander, Texas	\$113,979.00	7/31/95	Burris Construction, Inc. Lonnie Burris 512-869-2043
083	Central Transportation Austin, Texas	\$258,500.00	7/31/95	Larry Nelson Company Larry Nelson 512-306-0030
084	TSM: Rutland @ Parkfield Rutland @ Lamar Austin, Texas	\$945,847.50	7/31/95	Burris Construction, Inc. Lonnie Burris 512-869-2043
085	Walnut Creek Business Park Austin, Texas	\$638,000.00	7/31/95	C.F. Jordan Construction Co. Jeff Hagar 512-328-1177
086	F.W. Olin Bldg. Austin, Texas	\$37,000.00	4/30/95	Austin Rio Construction Trey Wattinger 512-282-5406
087	Austin Sports Austin, Texas	\$394,000.00	7/31/95	Terracom Construction Chris Castellaw 800-759-7243

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BURRIS CONSTRUCTION, INC.

P.O. BOX 331

GEORGETOWN, TX 78627

512-869-2043

FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
088	Henna Chevrolet Austin, Texas	\$187,450.00	7/31/95	Bailey Elliott Construction Scott Wilson 512-327-3951
089	Thrifty Call Austin, Texas	\$108,100.00	7/31/95	Akin McComb Keith McComb 512-385-5555
090	Round Rock Middle School Round Rock, Texas	\$711,733.00	6/30/96	SpawGlass Contractors, Inc. Joel Stone 512-388-0943
091	Texas Rehab Austin, Texas	\$409,000.00	7/31/95	Akin McComb Keith McComb 512-385-5555
092	Applied Materials Austin, Texas	\$481,145.00	6/30/96	Faulkner Construction Co. Mike Mason 512-448-9800
093	K-Eye Television Austin, Texas	\$137,019.00	10/31/96	O'Neal Construction Ken Haulotte 512-452-8184
094	Cypress Semiconductor Austin, Texas	\$207,550.00	1/31/96	Faulkner Construction John Dunn 512-448-9800
095	Travelers Inn Austin, Texas	\$190,000.00	5/31/96	West-Cal Construction David Schultze 714-256-2078
096	Bastrop ISD Bastrop, Texas	\$895,502.00	4/30/96	Burris Construction, Inc. Lonnie Burris 512-869-2043

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
097	St. Edward's University Austin, Texas	\$519,920.00	9/30/96	Austin Canyon Mike Nazar 512-327-3135
098	Giddings ISD School Giddings, Texas	\$469,000.00	4/30/97	Gaeke Construction Bob Gaeke 409-542-2943
099	Office Depot Austin, Texas	\$201,453.00	7/31/96	U.S. Builders John Elliott 713-526-1987
100	Dupont Photomasks Round Rock, Texas	\$125,490.00	7/31/97	McComb Construction Chris Higgs 512-385-5555
101	Sumner Suites Hotel Austin, Texas	\$233,450.00	2/28/97	Moore & Associates, Inc. Dick Armstrong 615-230-6866
102	Lowe's Building Supply San Marcos, Texas	\$802,400.00	2/28/97	EMJ Corporation Brad Jamieson 214-580-1210
103	Park Place Living Center Georgetown, Texas	\$201,000.00	4/30/97	Charles Leland Construction Charles Greive 512-467-8817
104	Public Storage Hwy 183 Austin, Texas	\$201,000.00	5/31/97	Mike Carter Construction Chris Castellaw 512-323-2808
105	U.T. Parking Facility Austin, Texas	\$375,000.00	-----	SpawGlass Contractors, Inc. Jim Jones 512-719-5251



BURRIS CONSTRUCTION, INC.

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LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
106	New Veteran's Affairs Annex Austin, Texas	\$353,800.00	-----	Hilman Constructors, Inc. Ed Lowenburg 512-339-9913
107	DPS Crime Records Austin, Texas	\$69,500.00	8/31/97	Browning Construction Russell Garner 512-335-7696
108	Great Oaks Elem. Round Rock, Texas	\$231,500.00	-----	Tecom Construction, Inc. Scott Badgett 512-323-0471
109	Public Storage Demo. Austin, Texas	\$13,000.00	10/31/96	Mike Carter Construction Chris Castellaw 512-323-2808
110	Hays Hills Baptist Hays, Texas	\$15,672.00	11/30/96	Hays Hills Baptist Church Joe Chesney 512-440-1717
111	Pflugerville Elem. Pflugerville, Texas	\$64,000.00	-----	America's Contracting Ed Talley 210-980-2555
112	Del Valle I.S.D Parking Lot Del Valle, Texas	\$4,325.00	11/30/96	Burris Construction, Inc. Lonnie Burris 512-869-2043
113	Austin Christian Faith Center Austin, Texas	\$712,200.00	-----	Drymalla Construction Earl Pitchford 409-732-5731
114	Jack Hays High School Kyle, Texas	\$198,300.00	-----	American Constructors Mark Gray 512-328-2026



BURRIS CONSTRUCTION, INC.

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LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
115	American Bandstand Austin, Texas	\$140,000.00	8/31/97	Pinnacle Construction John Conaway 512-448-4838
116	Capital Area Food Bank Austin, Texas	\$245,000.00	-----	Faulkner Construction Dwayne Dow 512-448-9800
117	Commerce Ctr. Austin, Texas	\$1,204,000.00	-----	Cadence-McShane Greg Marwill 512-328-1411
118	Waterford Center Austin, Texas	\$116,000.00	-----	E.E. Reed Doug Peterson 512-306-8888
119	Camp Mabry Parking Lot Austin, Texas	\$37,500.00	-----	Oakview Construction Mark Stanek 402-330-7475
120	National Inst. Austin, Texas	\$823,954.00	-----	White Construction Greg Jenkins 512-345-2562
121	Cinemark Theater Pflugerville, Texas	\$544,000.00	-----	Dal-Mac Construction John Straub 512-794-8685
122	Dupont World HQ Round Rock, Texas	\$156,136.00	-----	McComb Construction Chris Higgs 512-385-5555
123	Public Storage West 6th St. Austin, Tx	\$201,000.00	-----	Mike Carter Construction Chris Castellaw 512-454-4583

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BURRIS CONSTRUCTION, INC.

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
124	G.H.S. Ninth Grade Center Georgetown, Texas	\$740,870.00	-----	BFW Construction Co. Marty Massey 512-868-2114
125	Beck Associates Austin, Texas	\$104,700.00	-----	Rizzo Construction 512-328-4690
126	Austin Foam Plastics Pflugerville, Texas	\$257,000.00	-----	Central Texas Tiltwall Gerry Tucker 512-251-0992
127	Studio Plus Hotel Austin, Texas	\$146,145.00	-----	MW Builders, Inc. Leonard Greco 817-778-4241
128	Hancock Center Austin, Texas	\$585,000.00	-----	C.A. Walker Construction Gena Snelling 713-956-7070
129	National Inst. Parking Garage Austin, Texas	\$226,528.00	-----	White Construction Greg Jenkins 512-345-2562
130	Embassy Suites Austin, Texas	184,192.00	-----	Tribble & Stephens Bart Dansby 713-465-8550
131	Wingate Inn Austin, Tx	\$96,000.00	-----	PAM Construction Jose Mercado 512-928-9820
132	Temple Elem. School Temple, Texas	\$259,000.00	-----	BFW Construction Co. John Potts 254-778-8941

**BURRIS CONSTRUCTION, INC.**

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

JOB #	JOB NAME	CONTRACT	COMPLETION	GENERAL CONTRACTOR
133	Southwestern Bell Service Operation Ctr.	\$107,700.00	-----	Central Texas Tiltwall Gerry Tucker 512-251-0992
TOTAL		<u>\$34,919,228.28</u>		



BURRIS CONSTRUCTION, INC.

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

REFERENCES

The following is a partial list of jobs that Burris Construction has completed or is currently working to complete. As evidenced in this report, we have ample experience and an outstanding track record working with many major contractors on jobs in this contract range.

Job Name	Contract	Date	General Contractor	Telephone
U.T. Parking Facility	\$375,242	Current	SpawGlass Contractors	512-719-5251
Commerce Center	\$1,204,000	Current	Cadence-McShane	512-328-1411
National Instruments	\$823,954	Current	White Construction	512-345-2562
Capital Area Food Bank	\$245,000	Current	Faulkner Construction	512-448-9800
Austin Christian Faith Ctr.	\$712,200	Current	Drymalla Construction	409-732-5731
New Veteran's Affairs	\$386,800	Current	Hilman Constructors	512-339-9913
Lowe's San Marcos	\$802,400	Current	EMJ Corporation	972-580-1210
Round Rock Middle School	\$682,200	9/30/96	SpawGlass Contractors	512-719-5251
Applied Materials	\$369,000	7/31/96	Faulkner Construction	512-448-9800
BISD Transportation	\$893,000	7/31/96	Burris Construction	512-869-2043
Williamson Cty. Unified	\$532,357	4/30/96	Burris Construction	512-869-2043
Texas Rehab.	\$409,000	3/31/96	Akin McComb	512-385-5555
Laredo State University	\$1,622,295	9/30/95	Flintco, Inc.	210-650-3128

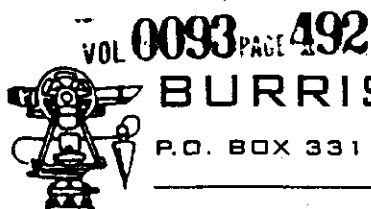


EQUIPMENT SCHEDULE

September 1997

BURRIS CONSTRUCTION, INC.
2508 Williams Drive
Georgetown, Texas 78628
(512) 869-2043

YEAR	MODEL	DESCRIPTION	SERIAL #	VALUE
1995	Cat 973	Track Loader	86G-01545	\$200,000.00
1988	Cat 973	Track Loader	86G-534	\$115,000.00
1990	Cat 963	Track Loader	21Z3306	\$110,000.00
1993	Cat 416B	Loader / Backhoe	8SG3047	\$34,500.00
1995	Cat 416B	Loader / Backhoe	8SG08609	\$33,000.00
1993	Cat 140G	Motor Grader	72V15258	\$160,000.00
1994	Cat 140 G	Motor Grader	72V16610	\$160,000.00
1995	Cat 140G	Motor Grader	72V16857	\$167,700.00
1993	Cat 120 G	Motor Grader	87V9637	\$107,500.00
1993	Cat 563	Vibratory Compactor	8XF-755	\$67,500.00
1994	Volvo	Wheel Loader L70B	10552	\$94,000.00



BURRIS CONSTRUCTION, INC.

P.O. BOX 331 GEORGETOWN, TX 78627 512-869-2043 FAX 512-863-2591

LONNIE BURRIS, P.E.

Continued

<u>YEAR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>SERIAL #</u>	<u>VALUE</u>
1994	Ingersoll Rand SD70D	Vibratory Compacter	5783	\$53,500.00
1996	Ingersoll Rand SD100F	Padfoot Vibratory	145703	\$78,600.00
1996	Case 1845C	UniLoader	JAF0194500	\$30,000.00
1993	Case 1845C	UniLoader	JAF0103710	\$14,000.00
1994	UB104	Breaker	0442	\$13,500.00
1989	Ford	Dump Truck	1FDYS90L3KVA16058	\$35,000.00
1979	GMC	Service Truck	T16DA9V603641	\$18,000.00
1990	GMC	Water Truck/2000 Gal.	1GDM7HIJ9L607267	\$30,000.00
1982	Ford	Water Truck / 2000 Gal.	FDWR7OU4CVA27393	\$17,000.00
1965	Chevrolet	Water Truck	127235	\$10,000.00
1996	Chevrolet	Suburban	3GNFK16RXTG164251	\$36,000.00
1995	Chevrolet	Pickup Truck	2GCEK19K5S1191853	\$25,000.00
1993	Chevrolet	Pickup Truck	1GCEC142XPZ214494	\$15,000.00
1968	Ohio	Van	AIHV1889-R	\$2,000.00
1973	Trailmobile	Van	K63674	\$3,000.00

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BURRIS CONSTRUCTION, INC.

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LONNIE BURRIS, P.E.

Continued

<u>YEAR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>SERIAL #</u>	<u>VALUE</u>
1994	Traileze	25T Trailer	1DA12RM49RP011339	\$18,000.00
1980	International	Dump Truck	DF257JGB31961	\$15,000.00
1994	Wells Cargo	Trailer	1WC200E28R2024354	\$1,500.00
1994	GMC	3/4 T. P/U	1GTGK29K4RE507217	\$10,000.00
1997	Chevy	Pick-up	2GCEK19R9V1194949	\$28,500.00
1997	Chevy	Pick-up	2GCEK19R0V1263530	\$27,600.00
TOTAL				<u><u>\$1,730,400.00</u></u>



BURRIS CONSTRUCTION, INC.

P. O. Box 331
Georgetown, Texas 78627

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(512) 869-2043

LONNIE BURRIS, P.E.

RESUME

OF

LONNIE BURRIS
301 RICHLAND LANE
GEORGETOWN, TEXAS 78628
(512) 863-8856

PERSONAL DATA:

Date of Birth: May 13, 1939
Sex: Male
Height: 6'0"
Weight: 190 lbs.
Health: Excellent

EDUCATION:

B.S. in Civil Engineering, University of Missouri
School of Mines and Metallurgy, 1962

SUMMARY OF EXPERIENCE:

Ranger Excavating, Inc.
Austin, Texas
Executive Vice-President/Chief Estimator
1984 - 1988

Over 30 years of progressively responsible experience in engineering, project construction, administration and general management in the field of Petro-Chem, Marine and Civil engineering and construction. Responsibilities have included project engineering, chief estimator, contract negotiations, safety coordinator, on-site project management and multi-project management. Other areas of experience include cost administration and contract sales.

TECHNICAL SOCIETIES:

Associate Member American Society of Civil Engineers

REGISTRATION: (Professional Engineer)

State of Missouri, 1967
State of Texas, 1974

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MARECON, INC., HOUSTON (1982 - 1984)CONSTRUCTION MANAGER

Responsible for management and administration of the Petro-Chem, Marine-Civil Division. This includes seeking prospective clients, estimating, project planning and coordination, project cost, scheduling and budgeting, project performance and client liaison.

CLEARWATER CONSTRUCTORS, INC., AUSTIN, TEXAS (1979 - 1982)MULTI-PROJECT MANAGER

Responsible for project management and administration of multi-phase highway and heavy civil construction projects.

Responsible for Espada Aquaduct, San Antonio, Texas for Corps of Engineers. Contract price \$3,138,000. Project included concrete drop structure, 5,000 CY; channel excavation, 332,000 CY; rip rap 3,000 CY; miscellaneous appurtenances and site work.

I-10 Greens Bayou, Houston, Texas - Contract price \$6,400,000. Work consisted of bridges, grading, underground, base and paving.

I-10 Carpenter Bayou, Houston, Texas - Contract price \$3,950,000. Work consisted of bridge, grading, retaining walls and underground.

Other duties included:

Seeking new contracts in industrial and petro-chemical plants. Directing company safety program. Responsible for finishing and selling U.S. Highway 290 project in Houston, Texas. Contract price \$4,217,000 and U.S. Highway 288 in Houston, Texas, contract price \$6,800,000.

COASTAL CONTRACTORS, INC. AND MARTIN CONSTRUCTION, INC., HOUSTON, TEXAS (1975-1979)PROJECT MANAGER

Responsible for overall supervision of all projects. Projects included \$3,000,000 contract with Shell Chemical/Deer Park Facility ethylene glycol plant, \$2,500,000 contract with Atlantic Richfield, Pasadena (15" steamline relocation); \$1,000,000 contract with Exxon Baytown (400' flare stack) plus numerous other fee based contracts with these companies.

Supervised the estimating and proposal cost, scheduling, material personnel and equipment required on all projects. Designed and incorporated the project control procedures including code of accounts, scheduling, cost reports, purchasing procedures and on-site construction. Annual volume of contracts to \$10,000,000. Other types of work included underground utilities, paving, streets, structural concrete and site work.

DAHLSTROM CORPORATION, DALLAS, TEXAS (1970 - 1975)SUPERINTENDENT/PROJECT MANAGER

Project Superintendent on State Highway 183 in Dallas County, Irving, Texas. Contract price was \$7,300,000. Responsible for complete on-site project management of this 7 mile section of freeway. Project included grading, bridges, concrete paving, asphalt paving and drainage. Programmed and planned production schedules, equipment, personnel, materials and supplies. Supervised all other project supervision and hourly workers which amounted to fifty to seventy people.

January 15, 1972 until May 30, 1973 served as Project Manager of I-610 in Houston, Texas. Contract price \$6,857,536. Responsible for complete on-site project management of this 3 mile section of I-610 Loop, 10 lane freeway around the City of Houston. The progress and performance of the project was a direct result of my engineering and management abilities. Directed the total work force of as many as 200 hourly workers, 6 supervisors, as well as over 50 pieces of major equipment and supporting equipment. Coordinated 10 subcontractors on the project. Made detailed cost analysis and production studies in order to increase efficiency on the job. Project included grading, drainage, cement stabilized base, concrete paving, asphalt paving and bridges.

May 30, 1973 until January 15, 1974, Project Manager on I-45 in Houston, Texas. The company had a \$4,400,000 subcontract on this \$15,000,000 interchange project. Responsible for complete on-site project management of the company's portion of this interchange and rebuilding section of the freeway. Project included grading, drainage, base, concrete paving, and asphalt paving. Coordinated 5 supervisors. Directed over 30 major pieces of equipment. Made detailed cost analysis and production studies. Represented the company in all meetings and dealings with the contracting agency, contractor.

January 15, 1974 until October 30, 1975 served as Project Manager and estimating engineering, working in the home office. Designed plant, did shop drawings, and falsework plans. Scheduled projects of CPM estimated cost and take-off quantities on highways, locks, dams, powerhouses and bridges. Analyzed cost and production data on current projects and for future estimating purposes. Made final cost analysis and pricing of projects being bid. Negotiated prices of materials and supplies for projects the company was interested in bidding and made engineering evaluations of materials, equipment, products, and personnel.

R.B. POTASHNICK, CAPE GIRARDEAU, MISSOURI (1962 - 1970)

Worked for Potashnick during summers and entered full time employment with Potashnick in July, 1962. During the following 8 years was assigned as a Project Engineer on major highway projects and a major earthfill dam. Projects assigned were from \$3,000,000 to \$13,000,000

RESUME: LONNIE BURRIS

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R.B. POTASHNICK, CAPE GIRARDEAU, MISSOURI (1962 - 1970) - (CON'T)

contracts. Also assigned to the estimating department and worked as estimating engineer for one year. The last 3 years with Potashnick were served as Assistant to the President and Chief Estimator.

In this capacity, duties included control of final cost analysis for pricing of projects to be bid, projects ranged from \$1,000,000 to \$20,000,000. Finalized pay quantities and negotiated claims with owners. Planned and designed plant, equipment, personnel, materials, and subcontractors for project. Acted as EEO officer for the company.

Professional and Character References

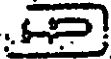
John J. Leguay
BEGHTEL
P.O. Box 2166
Houston, Texas 77001
(713) 235-2398

Dana Osborne
C.O.D. Concrete
9500 Harwin
Houston, Texas
(713) 783-4761

Keith M. Allen, Area Engineer
San Antonio Area Office, Fort Worth District
ARMY CORPS OF ENGINEERS
P.O. Box 9265
San Antonio, Texas 78204
(512) 229-4615

Maurice Clark, Vice-President
DAHLSTROM CORPORATION
P.O. Drawer 61168
DFW Airport, Texas 75261
(512) 295-6306

W.B. (Buddy) Bean, President
BAYTEX CONSTRUCTION COMPANY
7501 Bayway Drive
Baytown, Texas 77520
(713) 424-1812



**Hensel Phelps
Construction Co.**

P.O. Box 0
420 Sixth Avenue
Greeley, Colorado 80632
(303) 352-6565

January 20, 1982

TO WHOM IT MAY CONCERN:

Subject: Lonnie Burris

Lonnie Burris was employed by our subsidiary, Clearwater Constructors, in Austin, Texas, from November 27, 1978, through September 6, 1981, as a project manager. As a project manager, he was responsible for the following projects:

1. Espada Aquaduct, San Antonio, Texas: this was a Corp of Engineer project of approximately three million dollars. The project included eight thousand yards of heavy concrete and over three hundred thousand yards of excavation.
2. Texas State Highway I-10 Green Bayou, Houston, Texas. This was a 6.4 million dollar highway bridge structure, complete with grading, and paving.
3. Texas State Highway I-10 Carpenter Bayou, Houston Texas. This was a four million dollar bridge and retaining wall contract.
4. Lonnie did final clean-up and selling of two other Texas highway projects in the Houston area for Clearwater.

As a project manager he was totally responsible to see that work was completed within budget and schedule.

If you have any further questions about Lonnie, you may call me at the phone number above.

Sincerely,

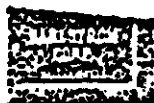
HENSEL PHELPS CONSTRUCTION CO.


Robert G. Tointon
President

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DAHLSTROM CORPORATION



January 15, 1982

To Whom It May Concern:

Mr. Lonnie Burris was employed by Dahlstrom Corporation from June 30, 1970 to October 30, 1974.

During his tenure with this company he was Project Manager of a seven mile section of freeway on State Highway 123 in Dallas County from June 30, 1970 to January 15, 1972. This contract was for \$7,300,000. From January 15, 1972 to May 30, 1973 he was Project Manager of a three mile section of freeway on Interstate 610 in Houston, Texas. This contract was for \$6,257,350. From May 30, 1973 to January 15, 1974 he was Project Manager of a four mile section of freeway on Interstate 45 in Houston, Texas. This was a subcontract for \$4,400,000 of a \$15,000,000 contract. All of these projects included intricate sections of urban freeway design with construction including earthwork, base materials, culvert structures, concrete and steel bridge structures, and concrete and asphalt pavements. Mr. Burris directed the total work force for these projects.

In addition to the above, Mr. Burris was an Estimating Engineer for this company from January 15, 1974 to October 30, 1974. He made detailed analysis of costs of highways, airports, and dams and priced projects being bid by this company.

I do not hesitate to recommend Mr. Burris for any position he may choose in the field of construction as above outlined.

Very truly yours,

DAHLSTROM CORPORATION

Maurice H. Clark
Vice President

MHC:cda

RESUME

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BRADLEY KIRK BURRIS
12915 Irongate Ave.
Austin, TX 78727
(512) 873-9360

OBJECTIVE: A position which will utilize acquired skills, intelligence and leadership experience.

EDUCATION:

1982-1986 Southeast Missouri State University,
Cape Girardeau, Missouri
Emphasis on Civil Engineering

1981-1982 University of Texas, Austin, Texas
Emphasis on Engineering

1981 Georgetown High School, Georgetown, Texas
Graduated Top 10% of class. Scholastic Scholarship to the
University of Texas.
Emphasis on Math and Science

D.O.B.: August 4, 1963

EXPERIENCE:

5/90-1992 **BURRIS CONSTRUCTION, INC.**, Georgetown, Texas
Project Manager/Superintendent
Responsibilities include: Job organization, scheduling,
management, selling, estimating, payroll, Safety Program
Road Excavation, commercial site excavation and concrete,
asphalt.

1/89 to 5/90 **THE R.E. HABLE COMPANY**, Corsicana, Texas
Project Engineer
Responsibilities included: Plan manipulation and evaluation,
surveying, quantity control, cost control, horizontal
alignment, vertical curves, highway deviation control, 12
miles highway 75 north of Sherman, Texas into Oklahoma with
5 bridge structures and numerous box culverts and RCP.

5/88 to 1/89 **LEE LEWIS GENERAL CONTRACTORS**, Lubbock, Texas
Project Engineer
Responsibilities included: Layout, quality control, cost
control in concrete, plan evaluation, trouble shooting, two
story pour-in place building.

5/86 to 5/88 **SPAN-GLASS CONSTRUCTION, INC.**, Austin, Texas
Field Engineer
Responsibilities included: Building layout, surveying,
blueprint reading and evaluation, estimating and trouble
shooting, eleven story pour-in place building.

EXPERIENCE:

1982 - 1986

RED K TRANSPORT, Cape Girardeau, MO

Shop Manager

Responsibilities included: Billing, delegating work over the road driving, inventory control wholesale buying and selling, customer relations, repairing van and flat bed trailers.

1982 - 1986

BURRIS RECONDITIONING

Owner

Responsibilities included: Reconditioning cars and semi-trucks for resale, billing, accounts receivable, customer relations and sales.

SKILLS:

Surveying Equipment

Transit

Carpenters Level

Builders Level

EDM Total Station

Scientific Calculators

Computer Operations

Project Supervision

Project Management

Communications

Estimating

Scheduling & Organizing

Sales

Drafting

Mathematics

Typing

Blueprint Comprehension

Copiers

Heavy Construction Machinery

BRIAN D. WALKER
11316 Jollyville Road #1008
Austin, Texas 78759
(512)342-0530

OBJECTIVE: To secure a field supervisory position with a professional contractor that will enable personal growth and career advancement.

EMPLOYMENT HISTORY: XIT PAVING & CONSTRUCTION, INC.
P.O. Box 475337
Garland, Texas 75047
July 1994 to Present

Projects: City of Garland - Capital Improvements
First Street/Kingsley Road
\$6.3 Million
Project Manager/Project Superintendent

Valley Ranch Subdivision
\$750,000.00
Grade Foreman/Steel Foreman

R. F. CONTRACTORS
11733 Neering
Dallas, Texas 75218
January 1994 to June 1994

Projects: Denver Sports Retail Store
\$700,000.00
Concrete Superintendent

Memphis Sports Retail Store
\$500,000.00
Concrete Superintendent

ASPHALT PAVING CO.
14802 W. 44th Avenue
Golden, Colorado 80402
December 1989 to December 1993

Projects: Colorado Department of Transportation
High Occupancy Vehicle Lanes/Interstate 25
\$5,000,000.00
Assistant Field Superintendent

Colorado Department of Transportation
Interstate 70 Overlay
\$1,344,082.00
Project Superintendent

Stapleton International Airport
Taxiway W
\$265,620.00
Project Superintendent

AUSTIN BRIDGE & ROAD INC.
 11143 Goodnight Lane
 Dallas, Texas 75229-4412
 April 1987 to October 1989
 April 1987 to November 1988

Projects: Loop I-20/I-35 Interchange
 \$75,000,000.00
 Chief Field Engineer

AUSTIN COMMERCIAL INC.
 3535 Travis Street Suite 300
 Dallas, Texas 75204
 October 1983 to February 1985

Projects: Interfirst Plaza
 \$250,000,000.00
 Chief Field Engineer

Las Colinas Regent Inn
 \$30,023,126.00
 Engineer Crew Chief

MARTIN K. EBY CONSTRUCTION CO., INC.
 610 N. Main
 Wichita, Kansas 67023
 November 1988 to April 1989
 February 1985 to April 1987
 April 1980 to October 1983

Projects: Overton Lock & Dam Joint Venture
 \$108,036,421.00
 Field Engineer

Loop 820/I-35 Interchange
 \$75,000,000.00
 Assistant Superintendent

Arlington Water Treatment Plant Expansion
 \$4,386,075.00
 Field Engineer

Dallas 96" Water Main
 \$4,636,449.00
 Field Engineer

EDUCATION:

Northwest Kansas Area Vocational School
 Goodland, Kansas
 Drafting & Surveying
 Graduated 1980

Goodland High School
 Goodland, Kansas
 Graduated 1978



P.O. Box 495337 • Garland, Texas 75049
JUNE 26, 1996

To Whom it May Concern:

Brian Walker has been employed by XIT Paving and Construction, Inc. since July of 1994. We initially hired Brian to oversee the forms, grade, and steel for our concrete paving operation. Having exhibited organizational skills above and beyond the criteria for this job classification we immediately moved him up to manage our 6.5 million project for the City of Garland, which began December of 1994.

Brian has successfully managed this project from the ground up and has coordinated the subcontractors and suppliers as well as maintaining the project schedules and pay estimates. He has also been our liason between XIT and the City of Garland.

Brian's honesty, integrity and diligence are above reproach and replacing him will be next to impossible.

Sincerely,
XIT PAVING AND CONSTRUCTION, INC.

A handwritten signature in cursive script, appearing to read "Lawrence H. McSpadden".

Lawrence H. McSpadden
President

LHM/clb

725

William J. Taparauskas III

3007 Sana Loma Drive
Georgetown, Texas 78628
512-863-6966

PROFILE

Young and confident engineer with excellent technical background and proven record of achievement. Effective thinker with good interpersonal skills, supported by experience in Project Management, Engineering Design and Testing, Construction Estimating, and Geotechnical Interpretation.

EDUCATION

The University of Texas, Austin.

Bachelor of Science, Civil Engineering -122 Hours
Geotechnical and Geological Sub-coursework.
Twelve Hours of Spanish.

EXPERIENCE**Project Manager. Burris Construction, Inc. Georgetown, Texas.**

Complete project management - estimating, bidding, scheduling and critical path tracking, tabulating bids, coordinating subcontractors, writing and reviewing contracts, change orders, job cost tracking and review, software implementation, public relations, etc.

Laboratory Manager / Staff Engineer. Trinity Engineering. Austin, Texas.

Completed design / testing / final report of \$200K Level III Inspection and lead paint abatement program for The Department of Defense at Fort Hood, Texas. Highly commended by the Primary Contractor and Trinity Executives.

Trained extensively in construction / field operations and testing: Nuclear densities (soils, subgrade, base material, asphalt, etc.), moisture-density relations, plasticity determination, concrete testing and inspection (slump, compressive strength, flexural strength), permeabilities (to qualify landfill liners), and structural steel inspection (rebar, beams, drilled piers).

Completed \$150K design and testing program on the largest soil-cement project in the United States. (LCRA Wirtz Dam - Marble Falls, Texas) Coordinating test procedures, analysis of data and reporting. Highly commended at each meeting with LCRA for staying within budget and significance of results. Designated as Safety Coordinator for Trinity Engineering. Started to implement training program and company policy.

Scored higher than any employee or employee-owner on company wide colleague evaluation. (work ethic, personality, performance, etc.)

November 1994 through October 1995

continued

726

Junior Project Engineer. ORYX Energy Company. Houston, Texas.

Supervised and coordinated workover operations of aging oil wells. Included re-design of sub-surface gas lift valves, organization of drilling contractors, and selection / command of field crews. Increased production 50% in three wells. Assisted in dynamometer testing of producing wells. Compiled data to predict future flow rates.

Created well log database instrumental in development of several drilling sites. Responsible for interpreting database information and constructing structural maps (contour and isopach) for planning and prospectus.

May 1991 / 1992 through September 1991 / 1992 (Summer Intern)

Field Trainee. ORYX Energy Company. Houston, Texas.

Acquired experience in daily operations of oil field production. Including : Personal Data Computer, training seminars (Gas Measurement, H2S Safety), and roustabout work.

May 1990 through September 1990 (Summer Intern)

Bill Tap Construction Company. College Station, Texas.

Served as construction assistant for two summers. Gained experience in all aspects of residential and commercial construction. (Metal and wood framing, drywall, plumbing, electrical, slab pours, etc.)

Advanced to Assistant Superintendent and learned basic estimating and bidding. Supervised remodel jobs and reported on progress, also tracking other jobs for efficiency.

June 1986 through September 1989

SKILLS

Proficient in DOS, Windows, Lotus, Excel, Word Perfect, Delta Graph, and FORTRAN.

AWARDS

Texas Exes Scholarship (1989)

UT College of Engineering Academic Scholarship (1990-1993)

National Merit Commended Student (1989)

10th Place in National Constitution Competition in Washington, D.C. (1989)

Tau of the Month (Oct. 1992, Jan. 1993, Nov. 1993)

ACTIVITIES

Society of Petroleum Engineers Member

Elected Student Delegate to SPE Technical Conference (1992)

MENSA Member

AISD Mentor Program Member

Texas Crew Rowing Team (1989-1991)

Charter Member and Founding Father of Alpha Tau Omega Honorary Fraternity

Coach and Player on Four Intramural Championship teams (1990-1992)

Coach and Player on current softball team

County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

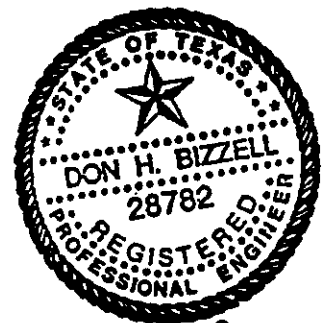
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 728

CONTROL:
PROJECT: JARRELL TORNADO
HIGHWAY: VARIOUS
COUNTY: WILLIAMSON

CAPITAL EXCAVATION CO.

ITEM CODE							ITEM
ALT ITEM DESC. S.P.				UNIT OF	APPROX.	UNIT BID	SEQUENCE
NO.	NO.	CODE	NO.	MEASURE	QUANTITIES	PRICE	NO.
BID ITEM DESCRIPTION						AMOUNT	
			CULVERT MODIFICATION LOCATION NO. 34	LS	1.000	2,500.000	43
			CULVERT MODIFICATION LOCATION NO. 35	LS	1.000	2,500.000	44
			CULVERT MODIFICATION LOCATION NO. 36	LS	1.000	16,000.000	45
			CULVERT MODIFICATION LOCATION NO. 37	LS	1.000	2,700.000	46
			CULVERT MODIFICATION LOCATION NO. 38	LS	1.000	2,500.000	47
			CULVERT MODIFICATION LOCATION NO. 39	LS	1.000	2,500.000	48
			CULVERT MODIFICATION LOCATION NO. 40	LS	1.000	2,400.000	49
			CULVERT MODIFICATION LOCATION NO. 41	LS	1.000	21,000.000	50
			CULVERT MODIFICATION LOCATION NO. 42	LS	1.000	2,600.000	51
			CULVERT MODIFICATION LOCATION NO. 43	LS	1.000	2,500.000	52
			CULVERT MODIFICATION LOCATION NO. 44	LS	1.000	2,500.000	53
			CULVERT MODIFICATION LOCATION NO. 45	LS	1.000	0.000	54
			CULVERT MODIFICATION LOCATION NO. 46	LS	1.000	17,000.000	55
			CULVERT MODIFICATION LOCATION NO. 47	LS	1.000	2,600.000	56
			CULVERT MODIFICATION LOCATION NO. 48	LS	1.000	2,500.000	57
			CULVERT MODIFICATION LOCATION NO. 49	LS	1.000	2,500.000	58
			CULVERT MODIFICATION LOCATION NO. 50	LS	1.000	2,600.000	59
			CULVERT MODIFICATION LOCATION NO. 51	LS	1.000	2,500.000	60
			CULVERT MODIFICATION LOCATION NO. 52	LS	1.000	16,000.000	61
			CULVERT MODIFICATION LOCATION NO. 53	LS	1.000	2,600.000	62
			CULVERT MODIFICATION LOCATION NO. 54	LS	1.000	2,600.000	63
			CULVERT MODIFICATION LOCATION NO. 55	LS	1.000	2,900.000	64
			CULVERT MODIFICATION LOCATION NO. 56	LS	1.000	2,900.000	65
			CULVERT MODIFICATION LOCATION NO. 57	LS	1.000	2,500.000	66
			CULVERT MODIFICATION LOCATION NO. 58	LS	1.000	2,700.000	67
			SILT FENCE	LF	18,760.000	1.200	68
			ROCK BERM	LF	1,458.000	9.000	69
			TRENCH EXCAVATION SAFETY @ CULV. 2	SF	570.000	3.100	70
			TRENCH EXCAVATION SAFETY @ CULV. 4	SF	532.000	3.300	71
			TRENCH EXCAVATION SAFETY @ CULV. 24	SF	512.000	3.450	72
			TRENCH EXCAVATION SAFETY @ CULV. 30	SF	570.000	3.100	73
			TRENCH EXCAVATION SAFETY @ CULV. 31	SF	264.000	6.700	74
			TRENCH EXCAVATION SAFETY @ CULV. 52	SF	494.000	3.580	75
			STREET SIGNAGE	LS	1.000	9,200.000	76

Total Bid Amount: \$1,327,446.52

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$_____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor:

CAPITAL EXCAVATION Co.

By (Name & Title):

JAMES E. BRADLEY

(Signature):

James E. Bradley

Mailing Address:

P.O. Box 1301

Austin, TX 78767

Telephone Number:

512-440-1717

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

PROPOSAL & BID SCHEDULE

Date: 10-28-97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

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 he desires.

Name of Bidder:

CAPITAL EXCAVATION Co.

Address:

P.O. Box 1301

Auburn, TX 76767

Date Organized:

1985

Date Incorporated:

1985

Number of Years in contracting business under present name:

12 yrs

CONTRACTS ON HAND:

Contracts	Dollar Amount	Completion Date
FM 2304	4 mil	7/98
COUNTRY CLUB DR	1.6 mil	5/98
US 290	6.2	5/99

Type of work performed by your company:

Highways

Have you ever failed to complete any work awarded to you?

No

Have you ever defaulted on a contract?

No

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

Project	Dollar Amount	Mo/Yr Completed
S. Congress Av.	3.5 mil	10/97
SH 79	1.7 mil	9/97

Major equipment available for this contract:

AS NEEDED

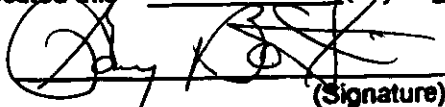
Attach resume(s) for the principal member(s) of your organization, including the officers as well as the proposed superintendent for the project.

Credit available: \$ _____ Bank reference: _____

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 28th day of OCT. 19 97

by:



(Signature)

Vice President

(Title)

734

MCQUEARY
HENRY
BOWLES
TROY

McQueary Henry Bowles Troy, L.L.P.
Insurance & Bonds
4006 Belt Line Road
Suite 115
Dallas, Texas 75244
972-788-0121
Fax: 972-788-0198

VOL 0093 PAGE 515

RELIANCE NATIONAL INDEMNITY COMPANY
PHILADELPHIA, PENNSYLVANIARELIANCE INSURANCE COMPANY
PHILADELPHIA, PENNSYLVANIA

BID BOND

Bond No. _____

Approved by the American Institute of Architects, A.I.A. Document No. A310, February 1970 Edition

KNOW ALL MEN BY THESE PRESENTS, that we CAPITAL EXCAVATION COMPANY
3901 S. LAMAR, SUITE 260
AUSTIN, TEXAS 78704

as Principal, hereinafter called the Principal, and RELIANCE NATIONAL INDEMNITY COMPANY, a Wisconsin corporation, and RELIANCE INSURANCE COMPANY, a Pennsylvania corporation, as Sureties, hereinafter called the Sureties, are held and firmly bound unto

Williamson County, Texas

as Oblige, hereinafter called the Oblige, in the sum of

FIVE PERCENT (5%)

Dollars (\$)),

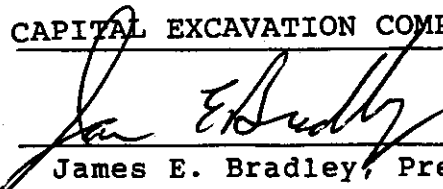
for the payment of which sum well and truly to be made, the said Principal and the said Sureties, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. The combined aggregate liability of the Sureties shall be limited to the above stated sum.

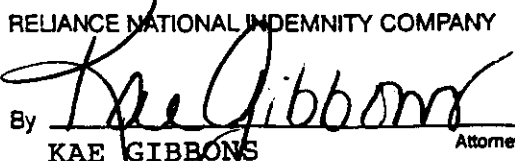

WHEREAS, the Principal has submitted a bid for
County Road Reconstruction
Jarrell Tornado Recovery Project

NOW, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter into a Contract with the Oblige in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient sureties for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 27 day of October A.D., 1997



WitnessCAPITAL EXCAVATION COMPANY (Seal)


James E. Bradley, President TitleRELIANCE NATIONAL INDEMNITY COMPANY

By KAE GIBBONS Attorney-in-factRELIANCE INSURANCE COMPANY

By KAE GIBBONS Attorney-in-fact

IMPORTANT NOTICE

TO OBTAIN INFORMATION OR MAKE A COMPLAINT:

**YOU MAY CONTACT THE TEXAS DEPARTMENT OF INSURANCE
TO OBTAIN INFORMATION ON COMPANIES, COVERAGE'S,
RIGHTS OR COMPLAINTS AT:**

1-800-252-3439

YOU MAY WRITE THE TEXAS DEPARTMENT OF INSURANCE:

**P. O. BOX 149104
AUSTIN, TEXAS 78714-9104
FAX #512-475-1771**

PREMIUM OR CLAIM DISPUTES:

**SHOULD YOU HAVE A DISPUTE CONCERNING YOUR PREMIUM
OR ABOUT A CLAIM, YOU SHOULD CONTACT THE AGENT OR
COMPANY FIRST. IF THE DISPUTE IS NOT RESOLVED, YOU
MAY CONTACT THE TEXAS DEPARTMENT OF INSURANCE.**

ATTACH THIS NOTICE TO YOUR POLICY:

**THIS NOTICE IS FOR INFORMATION ONLY AND DOES NOT
BECOME A PART OR CONDITION OF THE ATTACHED
DOCUMENT.**

ELIANCE SURETY COMPANY
UNITED PACIFIC INSURANCE COMPANY

RELIANCE INSURANCE COMPANY
RELIANCE NATIONAL INDEMNITY COMPANY

ADMINISTRATIVE OFFICE, PHILADELPHIA, PENNSYLVANIA

POWER OF ATTORNEY

NOW ALL MEN BY THESE PRESENTS, that RELIANCE SURETY COMPANY is a corporation duly organized under the laws of the State of Delaware, and that RELIANCE INSURANCE COMPANY and UNITED PACIFIC INSURANCE COMPANY, are corporations duly organized under the laws of the Commonwealth of Pennsylvania and that RELIANCE NATIONAL INDEMNITY COMPANY is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called "the Companies") and that the Companies by virtue of signature and seals do hereby make, constitute and appoint John D. Fulkerson, Kae Gibbons, Dennis Dowd, Bill Henry, Doyle Hix., of Dallas, Texas their true and lawful attorney(s)-in-Fact, to make, execute, seal and deliver for and on their behalf, and as their act and deed any and all bonds and undertakings of suretyship and to bind the Companies thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of the Companies and sealed and attested by one other of such officers, and hereby ratifies and confirms all that their said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by the authority of Article VII of the By-Laws of RELIANCE SURETY COMPANY, RELIANCE INSURANCE COMPANY, UNITED PACIFIC INSURANCE COMPANY, and RELIANCE NATIONAL INDEMNITY COMPANY which provisions are now in full force and effect, reading as follows:

ARTICLE VII - EXECUTION OF BONDS AND UNDERTAKINGS

1. The Board of Directors, the President, the Chairman of the Board, any Senior Vice President, any Vice President or Assistant Vice President or other officer designated by the Board of Directors shall have power and authority to (a) appoint Attorney(s)-in-Fact and to authorize them to execute on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and (b) to remove any such Attorney(s)-in-Fact at any time and revoke the power and authority given to them.
2. Attorney(s)-in-Fact shall have power and authority, subject to the terms and limitations of the Power of Attorney issued to them, to execute deliver on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof. The corporate seal is not necessary for the validity of any bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.
3. Attorney(s)-in-Fact shall have power and authority to execute affidavits required to be attached to bonds, recognizances, contracts of indemnity or other conditional or obligatory undertakings and they shall also have power and authority to certify the financial statement of the Company and to comply of the By-Laws of the Company or any article or section thereof.

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the Executive and Finance Committees of the Boards of Directors of Reliance Insurance Company, United Pacific Insurance Company and Reliance National Indemnity Company by Unanimous Consent dated as of February 28, 1994 and by the Executive and Financial Committees of the Board of Directors of Reliance Surety Company by Unanimous Consent dated as of March 31, 1994.

"Resolved that the signatures of such directors and officers and the seal of the Company may be affixed to any such Power of Attorney or any certificates relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such Power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company, in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, the Companies have caused these presents to be signed and their corporate seals to be hereto affixed, this August 15, 1995.



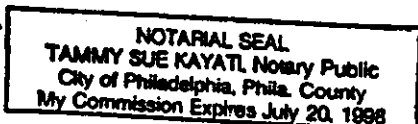
RELIANCE SURETY COMPANY
RELIANCE INSURANCE COMPANY
UNITED PACIFIC INSURANCE COMPANY
RELIANCE NATIONAL INDEMNITY COMPANY

Charles B. Schmalz

STATE OF Pennsylvania
COUNTY OF Philadelphia } ss.

On this, August 15, 1995, before me, Tammy Sue Kayati, personally appeared Charles B. Schmalz, who acknowledged himself to be the Executive Vice President of the Reliance Surety Company, and the Vice President of Reliance Insurance Company, United Pacific Insurance Company, and Reliance National Indemnity Company and that as such, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the corporation by himself as its duly authorized officer.

In witness whereof, I hereunto set my hand and official seal.



Tammy Sue Kayati
Notary Public in and for the State of Pennsylvania
Residing at Philadelphia

I, Anita Zippert, Secretary of RELIANCE SURETY COMPANY, RELIANCE INSURANCE COMPANY, UNITED PACIFIC INSURANCE COMPANY, and RELIANCE NATIONAL INDEMNITY COMPANY do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 27 day of October 1997.



Secretary

County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

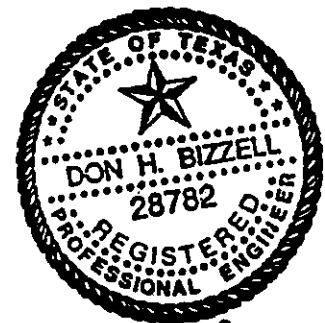
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 739

PROPOSAL & BID SCHEDULE

Date: 10-28-1997

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of County Road Reconstruction, **JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard:			
			\$		\$
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard:			
			\$		\$
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard:			
			\$		\$
4.	61,002 s.y.	Base Material, complete in place, per square yard:			
			\$		\$
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard:			
			\$		\$

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
-------------	-----------------------	--------------------------------------	------	------	-------

6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot:			
----	-------------	---	--	--	--

\$

\$

7.	42 ea.	Paved Deiveway, complete in place, per each:			
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8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot:			
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9.	35 ea.	Terminal Anchor Section, complete in place, per each:			
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10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum:			
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11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum:			
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<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum:			
			\$		\$
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum:			
			\$		\$
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum:			
			\$		\$
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum:			
			\$		\$
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum:			
			\$		\$
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum:			
			\$		\$

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum:			
			\$	\$	
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum:			
			\$	\$	
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum:			
			\$	\$	
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum:			
			\$	\$	
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum:			
			\$	\$	
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum:	\$	\$
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum:	\$	\$
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum:	\$	\$
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum:	\$	\$
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum:	\$	\$
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum:	\$	\$

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum:			
			\$	\$	
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum:			
			\$	\$	
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum:			
			\$	\$	
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum:			
			\$	\$	
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum:			
			\$	\$	
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum:			
			\$	\$	
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum:			
			\$	\$	
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum:			
			\$	\$	
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum:			
			\$	\$	
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum:			
			\$	\$	
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum:			
			\$	\$	
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum:			
			\$	\$	
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum:			
			\$	\$	
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum:			
			\$	\$	
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum:			
			\$	\$	
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum:			
			\$	\$	
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum:			
			\$	\$	
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum:			
			\$	\$	
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum:			
			\$	\$	
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum:			
			\$	\$	
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
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54	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:		
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ITEM DELETED - ADDENDUM No. 1

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55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum:		
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56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum:		
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57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum:		
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58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum:		
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59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum:		
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<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum:			
			\$	\$	
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum:			
			\$	\$	
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum:			
			\$	\$	
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum:			
			\$	\$	
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum:			
			\$	\$	
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum:	\$	\$
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum:	\$	\$
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot:	\$	\$
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot:	\$	\$
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot:	\$	\$

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot:	\$	\$
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot:	\$	\$
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot:	\$	\$
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot:	\$	\$
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot:	\$	\$

76. 1 l.s. Street Signage, complete in place, per lump sum:

\$ \$

TOTAL BID:


\$ 767,558³⁰

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for BID BOND ATTACHED dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: GAREY CONSTRUCTION Co., INC.
 By (Name & Title): RICHARD CONE ; VICE PRESIDENT
 (Signature): 
 Mailing Address: 11607 NO. LAMAR BLVD.
AUSTIN, TX. 78753
 Telephone Number: 512 - 837 - 5916

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

28-Oct-97

10:07 AM

COUNTY: Williamson Jarrell Tornado Recovery Project

TYPE: REHABILITATION OF EXISTING ROADWAY

TIME FOR COMPLETION: 120 CAL. DAYS

GUARANTY: 5% Bid Bond

BIDS RECEIVED UNTIL: 11:00 AM October 28, 1997

BIDS WILL BE OPENED: Comm. Court 2nd Floor Williamson Co. Courthouse

ITEM NO.	DESCRIPTION	UOM	QUANTITY	UNIT BID	EXTENSION
1.00	Roadway Excav.	SY	65,543.000	0.350	22,940.05
2.00	Subgr. Prep.	SY	69,944.000	0.600	41,966.40
3.00	Rework Base (Type D)	SY	37,610.000	0.500	18,805.00
4.00	Base Material (CIP) All Depths	SY	61,002.000	4.200	256,208.40
5.00	Hot Mix (CIP) 1.5"	SY	60,861.000	2.150	130,851.15
6.00	Roadside Ditch (CIP)	LF	20,581.000	1.300	26,755.30
7.00	Paved Driveways	EA	42.000	445.000	18,690.00
8.00	Metal Beam G.F.	LF	1,275.500	11.000	14,030.50
9.00	Term. Anch Sec.	EA	35.000	285.000	9,975.00
10.00	Culv. Mod. Loc. No. 1 (C I P)	LS	1.000	968.000	968.00
11.00	Culv. Mod. Loc. No. 2 (C I P)	LS	1.000	6,500.000	6,500.00
12.00	Culv. Mod. Loc. No. 3 (C I P)	LS	1.000	832.000	832.00
13.00	Culv. Mod. Loc. No. 4 (C I P)	LS	1.000	9,500.000	9,500.00
14.00	Culv. Mod. Loc. No. 5 (C I P)	LS	1.000	832.000	832.00
15.00	Culv. Mod. Loc. No. 6 (C I P)	LS	1.000	817.000	817.00
16.00	Culv. Mod. Loc. No. 7 (C I P)	LS	1.000	817.000	817.00
17.00	Culv. Mod. Loc. No. 8 (C I P)	LS	1.000	817.000	817.00
18.00	Culv. Mod. Loc. No. 9 (C I P)	LS	1.000	817.000	817.00
19.00	Culv. Mod. Loc. No. 10 (C I P)	LS	1.000	817.000	817.00
20.00	Culv. Mod. Loc. No. 11 (C I P)	LS	1.000	817.000	817.00
21.00	Culv. Mod. Loc. No. 12 (C I P)	LS	1.000	1,043.000	1,043.00
22.00	Culv. Mod. Loc. No. 13 (C I P)	LS	1.000	817.000	817.00
23.00	Culv. Mod. Loc. No. 14 (C I P)	LS	1.000	817.000	817.00
24.00	Culv. Mod. Loc. No. 15 (C I P)	LS	1.000	765.000	765.00
25.00	Culv. Mod. Loc. No. 16 (C I P)	LS	1.000	732.000	732.00
26.00	Culv. Mod. Loc. No. 17 (C I P)	LS	1.000	732.000	732.00
27.00	Culv. Mod. Loc. No. 18 (C I P)	LS	1.000	732.000	732.00
28.00	Culv. Mod. Loc. No. 19 (C I P)	LS	1.000	732.000	732.00
29.00	Culv. Mod. Loc. No. 20 (C I P)	LS	1.000	1,058.000	1,058.00
30.00	Culv. Mod. Loc. No. 21 (C I P)	LS	1.000	1,173.000	1,173.00
31.00	Culv. Mod. Loc. No. 22 (C I P)	LS	1.000	817.000	817.00
32.00	Culv. Mod. Loc. No. 23 (C I P)	LS	1.000	1,224.000	1,224.00
33.00	Culv. Mod. Loc. No. 24 (C I P)	LS	1.000	27,000.000	27,000.00
34.00	Culv. Mod. Loc. No. 25 (C I P)	LS	1.000	732.000	732.00
35.00	Culv. Mod. Loc. No. 26 (C I P)	LS	1.000	985.000	985.00
36.00	Culv. Mod. Loc. No. 27 (C I P)	LS	1.000	693.000	693.00
37.00	Culv. Mod. Loc. No. 28 (C I P)	LS	1.000	18,500.000	18,500.00
38.00	Culv. Mod. Loc. No. 29 (C I P)	LS	1.000	929.000	929.00
39.00	Culv. Mod. Loc. No. 30 (C I P)	LS	1.000	31,500.000	31,500.00
40.00	Culv. Mod. Loc. No. 31 (C I P)	LS	1.000	18,000.000	18,000.00
41.00	Culv. Mod. Loc. No. 32 (C I P)	LS	1.000	759.000	759.00
42.00	Culv. Mod. Loc. No. 33 (C I P)	LS	1.000	817.000	817.00
43.00	Culv. Mod. Loc. No. 34 (C I P)	LS	1.000	865.000	865.00
44.00	Culv. Mod. Loc. No. 35 (C I P)	LS	1.000	865.000	865.00
45.00	Culv. Mod. Loc. No. 36 (C I P)	LS	1.000	4,300.000	4,300.00
46.00	Culv. Mod. Loc. No. 37 (C I P)	LS	1.000	1,058.000	1,058.00
47.00	Culv. Mod. Loc. No. 38 (C I P)	LS	1.000	843.000	843.00
48.00	Culv. Mod. Loc. No. 39 (C I P)	LS	1.000	843.000	843.00
49.00	Culv. Mod. Loc. No. 40 (C I P)	LS	1.000	1,287.000	1,287.00

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50.00	Culv. Mod. Loc. No. 41 (C I P)	LS	1.000	13,500.000	13,500.00
51.00	Culv. Mod. Loc. No. 42 (C I P)	LS	1.000	865.000	865.00
52.00	Culv. Mod. Loc. No. 43 (C I P)	LS	1.000	865.000	865.00
53.00	Culv. Mod. Loc. No. 44 (C I P)	LS	1.000	865.000	865.00
54.00	ITEM DELETED PER ADDENDUM No.1	LS	1.000	0.000	0.00
55.00	Culv. Mod. Loc. No. 46 (C I P)	LS	1.000	7,550.000	7,550.00
56.00	Culv. Mod. Loc. No. 47 (C I P)	LS	1.000	843.000	843.00
57.00	Culv. Mod. Loc. No. 48 (C I P)	LS	1.000	732.000	732.00
58.00	Culv. Mod. Loc. No. 49 (C I P)	LS	1.000	843.000	843.00
59.00	Culv. Mod. Loc. No. 50 (C I P)	LS	1.000	843.000	843.00
60.00	Culv. Mod. Loc. No. 51 (C I P)	LS	1.000	732.000	732.00
61.00	Culv. Mod. Loc. No. 52 (C I P)	LS	1.000	6,500.000	6,500.00
62.00	Culv. Mod. Loc. No. 53 (C I P)	LS	1.000	843.000	843.00
63.00	Culv. Mod. Loc. No. 54 (C I P)	LS	1.000	817.000	817.00
64.00	Culv. Mod. Loc. No. 55 (C I P)	LS	1.000	1,190.000	1,190.00
65.00	Culv. Mod. Loc. No. 56 (C I P)	LS	1.000	1,197.000	1,197.00
66.00	Culv. Mod. Loc. No. 57 (C I P)	LS	1.000	1,037.000	1,037.00
67.00	Culv. Mod. Loc. No. 58 (C I P)	LS	1.000	1,009.000	1,009.00
68.00	Silt Fence (CIP)	LF	18,760.000	1.150	21,574.00
69.00	Rock Berm (CIP)	LF	1,458.000	8.000	11,664.00
70.00	Trench Excav. Safety at No. 2 Culv.	SF	570.000	0.500	285.00
71.00	Trench Excav. Safety at No. 4 Culv.	SF	532.000	0.500	266.00
72.00	Trench Excav. Safety at No. 24 Culv.	SF	512.000	0.500	256.00
73.00	Trench Excav. Safety at No. 30 Culv.	SF	570.000	0.500	285.00
74.00	Trench Excav. Safety at No. 31 Culv.	SF	264.000	0.500	132.00
75.00	Trench Excav. Safety at No. 52 Culv.	SF	494.000	0.500	247.00
76.00	Street Signage	LS	1.000	8,244.500	8,244.50

TOTAL BID: \$767,558.30

Garey Construction Co., Inc.

Austin Tx.

11607 Lamar Blvd. 78753

By: 

Title / Name: V. PRES., RICHARD L. COLE

Fidelity and Guaranty Insurance Underwriters, Inc.Baltimore, Maryland
A Stock Company**Bid Bond**

Bond Number

Know All Men By These Presents:

That ...Garey Construction Company, Inc.,.....
 ofAustin, TX.....
, as Principal, and the other undersigned, as Surety, are
 held and firmly bound unto Williamson Co. Commissioner's Court.....

 as Oblige, in the full and just sum of ..5% of bid by Principal.....
 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.

Whereas, the said Principal is herewith submitting its proposal for the Jarrell Tornado Recovery
 Project, Texas Community Development Prog. Contract #716307.

The Condition Of This Obligation is such that if the aforesaid Principal shall be awarded the contract the said
 Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the
 performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will
 pay unto the Oblige the difference in money between the amount of the bid of the said Principal and the amount for which the
 Oblige legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event
 shall liability hereunder exceed the penal sum hereof.

Signed, sealed and delivered ..10/28/97.....
 (Date)

Larry H. Harbig

Rose Marie Briskie

Garey Construction Company, Inc. (Seal)

[Signature] (Seal)
 Fidelity and Guaranty Insurance Underwriters, Inc.
 (a Wisconsin Corporation)

John W. Wagner
 John W. Wagner

Attorney-in-fact

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Fidelity and Guaranty Insurance Underwriters, Inc.**Power of Attorney**

No. 359

Know all men by these presents: That Fidelity and Guaranty Insurance Underwriters, Inc., a corporation organized and existing under the laws of the State of Wisconsin and having its principal office at the City of Baltimore, in the State of Maryland, does hereby constitute and appoint William H. Pitts, Jr., Norman P. Rolling, John W. Wagner, James O. Schnell and Rose Marie Boriskie

of the City of Austin, State of Texas its true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety to, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons; guaranteeing the performance of contracts; and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, the said Fidelity and Guaranty Insurance Underwriters, Inc. has caused this instrument to be sealed with its corporate seal, duly attested by the signatures of its Vice President and Assistant Secretary, this 1st day of October, A.D. 19 94



Fidelity and Guaranty Insurance Underwriters, Inc.

(Signed)

By

(Signed)

By

Vice President

Assistant Secretary

State of Maryland)

Baltimore City)

SS.

On this 1st day of October, A.D. 19 94

before me personally came John A. Huss, Vice President of Fidelity and Guaranty Insurance Underwriters, Inc. and Thomas J. Fitzgerald, Assistant Secretary of said Company, with both of whom I am personally acquainted, who being by me severally duly sworn, said, that they, the said John A. Huss and Thomas J. Fitzgerald were respectively the Vice President and the Assistant Secretary of the said Fidelity and Guaranty Insurance Underwriters, Inc., the corporation described in and which executed the foregoing Power of Attorney, that they each knew the seal of said corporation; that the seal affixed to said Power of Attorney was such corporate seal, that it was so affixed by order of the Board of Directors of said corporation, and that they signed their names thereto by like order as Vice President and Assistant Secretary, respectively, of the Company.

My Commission expires the 11th day of March, 19 95

(Signed)

By

Notary Public

This Power of Attorney is granted under and by authority of the following Resolutions adopted by the Board of Directors of the Fidelity and Guaranty Insurance Underwriters, Inc. on September 24, 1992:

Resolved, that in connection with the fidelity and surety insurance business of the Company, all bonds, undertakings, contracts and other instruments relating to said business may be signed, executed, and acknowledged by persons or entities appointed as Attorney(s)-in-Fact pursuant to a Power of Attorney issued in accordance with these resolutions. Said Power(s) of Attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman, or the President, or an Executive Vice President, or a Senior Vice President, or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the foregoing officers and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Attorney(s)-in-Fact for purposes only of executing in and attesting bonds and undertakings and other writings obligatory in the nature thereof, and, unless subsequently revoked and subject to any limitations set forth therein, any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is validly attached.

Resolved, That Attorney(s)-in-Fact shall have the power and authority, unless subsequently revoked and, in any case, subject to the terms and limitations of the Power of Attorney issued to them, to execute and deliver on behalf of the Company and to attach the seal of the Company to any and all bonds and undertakings, and other writings obligatory in the nature thereof, and any such instrument executed by such Attorney(s)-in-Fact shall be as binding upon the Company as if signed by an Executive Officer and sealed and attested to by the Secretary of the Company.

I, Thomas J. Fitzgerald, an Assistant Secretary of the Fidelity and Guaranty Insurance Underwriters, Inc., do hereby certify that the foregoing are true excerpts from the Resolutions of the said Company as adopted by its Board of Directors on September 24, 1992 and that these Resolutions are in full force and effect.

I, the undersigned Assistant Secretary of the Fidelity and Guaranty Insurance Underwriters, Inc. do hereby certify that the foregoing Power of Attorney is in full force and effect and has not been revoked.

In Testimony Whereof, I have hereunto set my hand and the seal of the Fidelity and Guaranty Insurance Underwriters, Inc. on this 28th day of October, 19 94



Assistant Secretary

760

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 he desires.

Name of Bidder: Garey Construction Company, Inc.
 Address: 11607 North Lamar Blvd.
Austin, TX 78753

Date Organized: 1977 Date Incorporated: 6-26-80
 Number of Years in contracting business under present name: 20 Years

CONTRACTS ON HAND:

Contracts	Dollar Amount	Completion Date
- SEE ATTACHED -		

Type of work performed by your company: Street, Road & Highway Construction
 Have you ever failed to complete any work awarded to you? No
 Have you ever defaulted on a contract? No

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

Project	Dollar Amount	Mo/Yr Completed
TXDOT FM 1660-Williamson Co.	\$1,343,078	7-97
TXDOT SH 35-Matagorda Co.	6,942,507	3-97
TXDOT FM 3481-Bell Co.	3,514,031	7-97
Williamson Co. - Inner Loop	195,000	5-96

Major equipment available for this contract:

CAT 963 Track Loader, CAT 613 Scrapers, CAT 140G Motor Graders
Ingersol Rand Vibratory Compactors, Pneumatic Compactors, Track Excavator,
Backhoe, Rubber Tire Loader, Water Truck

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

Credit available: \$ 600,000.00 Bank reference: Chris Koop
Nations Bank - P.O.Box 908 - Austin, TX

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Williamson Co. Commissioners Court in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 27th day of Oct., 19 97.

by: Richard L. Cove (Signature) Vice President (Title)

ATTACHMENTS A & B INCLUDED

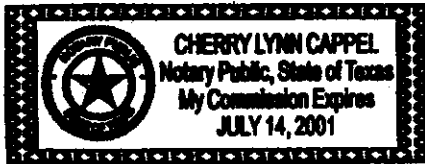
THE STATE OF TEXAS §

COUNTY OF TRAVIS §

This instrument was acknowledged before me on this 27th day of October, 1997 by RICHARD L. CONE, Vice President of Garey Construction Company, Inc., for the purposes and consideration therein expressed and in the capacity therein stated and on behalf of said entity.

MY COMMISSION EXPIRES:

Cherry Lynn Cappel
NOTARY PUBLIC STATE OF TEXAS



ATTACHMENT B

CONTRACTS ON HAND:

<u>CONTRACTS</u>	<u>DOLLAR AMOUNT</u>	<u>COMPLETION DATE</u>
TXDOT - FM 2305/Bell Co.	\$5,537,526	Dec., '97
TXDOT - SH 53/Bell Co.	855,485	Dec., '97
TXDOT - FM 2555/Navarro Co.	1,071,304	Nov., '97
TXDOT - SH 154/Wood Co.	4,603,014	June, '98
TXDOT - SH 111/Jackson Co.	1,630,374	Mar., '98
TXDOT - FM 1807/Johnson Co.	1,180,011	May, '98
TXDOT - SH 19/Rains Co.	3,414,707	Sept., '98

County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

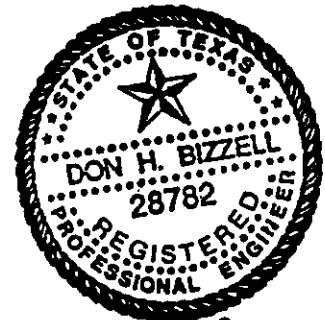
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 764

PROPOSAL & BID SCHEDULE

Date: 10/28/97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of County Road Reconstruction, **JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1. 10/24/97

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST TOTAL
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard: <u>One dollar and Fifty three Cents</u>	\$ 1.53	\$ 100,280.79
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard: <u>Sixty nine Cents</u>	\$ 0.69	\$ 48,261.36
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard: <u>Thirty Eight Cents</u>	\$ 0.38	\$ 14,291.80
4.	61,002 s.y.	Base Material, complete in place, per square yard: <u>Six dollars and Ten Cents</u>	\$ 6.10	\$ 372,112.20
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard: <u>Two dollars and ninety Five Cents</u>	\$ 2.95	\$ 179,539.95

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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot:		
		<u>One dollar and Ninety Two Cents</u>	<u>\$ 1.92</u>	<u>\$ 39,515.52</u>
7.	42 ea.	Paved Driveway, complete in place, per each:		
		<u>Six hundred and Forty Four dollars</u>	<u>\$ 1,044.00</u>	<u>\$ 27,048.00</u>
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot:		
		<u>Fourteen dollars and Thirty Cents.</u>	<u>\$ 14.30</u>	<u>\$ 18,239.65</u>
9.	35 ea.	Terminal Anchor Section, complete in place, per each:		
		<u>Three hundred Eighty Five dollars</u>	<u>\$ 385.00</u>	<u>\$ 13,475.00</u>
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum:		
		<u>Three Thousand Four Hundred Twenty Six dollars</u>	<u>\$ 3,426.00</u>	<u>\$ 3,426.00</u>
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum:		
		<u>Fifteen thousand, Two hundred Fifty Four dollars</u>	<u>\$ 15,254.00</u>	<u>\$ 15,254.00</u>

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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum: <i>One Thousand nine Hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum: <i>Ten Thousand SIX hundred ninety Eight dollars</i>		<i>\$ 10,698.00</i>	<i>\$ 10,698.00</i>
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum: <i>One Thousand nine Hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum: <i>One Thousand nine hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum: <i>One Thousand Nine Hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum: <i>One Thousand Nine Hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>

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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>
					769
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		<u>\$ 1,900.00</u>	<u>\$ 1,900.00</u>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum: <u>Two Thousand One Hundred</u> <u>Ten Dollars</u>		\$ 2,110.00	\$ 2,110.00
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum: <u>Nineteen Hundred</u>		\$ 1,900.00	\$ 1,900.00
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum: <u>Nineteen Hundred</u>		\$ 1,900.00	\$ 1,900.00
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum: <u>Nineteen Hundred</u>		\$ 1,900.00	\$ 1,900.00
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum: <u>Nineteen Hundred</u>		\$ 1,900.00	\$ 1,900.00
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum: <u>Nineteen Hundred</u>		\$ 1,900.00	\$ 1,900.00

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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum: <i>Two Thousand Five Hundred Twenty-four</i>		<i>\$ 2,524.00</i>	<i>2,524.00</i>
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum: <i>Nineteen Hundred</i>		<i>\$ 1,900.00</i>	<i>1,900.00</i>
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum: <i>Two Thousand Five Hundred Ninety Six</i>		<i>\$ 2,596.00</i>	<i>2,596.00</i>
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum: <i>Thirty-two Thousand Eight hundred Ten</i>		<i>\$ 32,810.00</i>	<i>32,810.00</i>
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum: <i>Nineteen Hundred</i>		<i>\$ 1,900.00</i>	<i>1,900.00</i>
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum: <i>Three Thousand Two Hundred Eighty</i>		<i>\$ 3,280.00</i>	<i>3,280.00</i>

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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum:			
		<i>Nineteen Hundred</i>		<i>\$ 1,900.⁰⁰</i>	<i>\$ 1,900.⁰⁰</i>
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum:			
		<i>thirty thousand</i> <i>One Hundred Fifty</i>		<i>\$ 30,150.⁰⁰</i>	<i>\$ 30,150.⁰⁰</i>
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum:			
		<i>two thousand</i> <i>Eight Hundred</i>		<i>\$ 2,800.⁰⁰</i>	<i>\$ 2,800.⁰⁰</i>
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum:			
		<i>forty six thousand</i> <i>Nine Hundred forty-</i> <i>eight.</i>		<i>\$ 46,948.⁰⁰</i>	<i>\$ 46,948.⁰⁰</i>
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum:			
		<i>Twenty six thousand</i> <i>two hundred and four</i> <i>dollars</i>		<i>\$ 26,204.⁰⁰</i>	<i>\$ 26,204.⁰⁰</i>
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum:			
		<i>Two thousand five</i> <i>hundred and eight</i> <i>8 dollars.</i>		<i>\$ 2,508.⁰⁰</i>	<i>\$ 2,508.⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		\$ 1,900. ⁰⁰	\$ 1,900. ⁰⁰
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		\$ 1,900. ⁰⁰	\$ 1,900. ⁰⁰
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		\$ 1,900. ⁰⁰	\$ 1,900. ⁰⁰
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum:			
		<u>Eight thousand Three hundred forty</u>		\$ 8,340. ⁰⁰	\$ 8,340. ⁰⁰
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		\$ 1,900. ⁰⁰	\$ 1,900. ⁰⁰
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum:			
		<u>Nineteen Hundred</u>		\$ 1,900. ⁰⁰	\$ 1,900. ⁰⁰

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum: <i>One Thousand Nine hundred</i>		<i>\$ 1,900.⁰⁰</i>	<i>\$ 1,900.⁰⁰</i>
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum: <i>Three Thousand Three hundred Twenty Eight.</i>		<i>\$ 3,328.⁰⁰</i>	<i>\$ 3,328.⁰⁰</i>
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum: <i>Twelve Thousand Six hundred Sixty</i>		<i>\$ 12,660.⁰⁰</i>	<i>\$ 12,660.⁰⁰</i>
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum: <i>One Thousand Nine hundred</i>		<i>\$ 1,900.⁰⁰</i>	<i>\$ 1,900.⁰⁰</i>
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum: <i>One Thousand Nine hundred</i>		<i>\$ 1,900.⁰⁰</i>	<i>\$ 1,900.⁰⁰</i>
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum: <i>One Thousand Nine hundred</i>		<i>\$ 1,900.⁰⁰</i>	<i>\$ 1,900.⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
54.	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:			
			\$	\$	
55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum:			
		<i>Twelve thousand eight hundred eighty four dollars</i>		<i>\$ 12,884.00</i>	<i>\$ 12,884.00</i>
56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum:			
		<i>One thousand nine hundred.</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum:			
		<i>One thousand nine hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum:			
		<i>One thousand nine hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum:			
		<i>One thousand nine hundred.</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum:			
		<i>One thousand nine hundred</i>		<i>\$1,900.00</i>	<i>\$ 1,900.00</i>
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum:			
		<i>eleven thousand</i>			
		<i>two hundred eight</i>		<i>\$11,208.00</i>	<i>\$ 11,208.00</i>
		<i>dollars</i>			
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum:			
		<i>One thousand nine</i>		<i>\$1,900.00</i>	<i>\$ 1,900.00</i>
		<i>hundred.</i>			
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum:			
		<i>One thousand nine</i>		<i>\$1,900.00</i>	<i>\$ 1,900.00</i>
		<i>hundred</i>			
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum:			
		<i>three thousand three</i>			
		<i>hundred forty</i>		<i>\$3,340.00</i>	<i>\$ 3,340.00</i>
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum:			
		<i>two thousand nine</i>			
		<i>hundred and fifty</i>		<i>\$2,950.00</i>	<i>\$ 2,950.00</i>
		<i>12</i>			

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum:			
		<i>Two thousand Six hundred Twenty</i>		<i>\$ 2,620.00</i>	<i>\$ 2,620.00</i>
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum:			
		<i>One thousand nine hundred</i>		<i>\$ 1,900.00</i>	<i>\$ 1,900.00</i>
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot:			
		<i>One dollar and thirty two cents</i>		<i>\$ 1.32</i>	<i>\$ 24,763.20</i>
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot:			
		<i>Eight</i>		<i>\$ 8.00</i>	<i>\$ 11,664.00</i>
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot:			
		<i>fifty cents</i>		<i>\$.50</i>	<i>\$ 285.00</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot:		
		<u>fifty cents</u>	<u>\$.50</u>	<u>\$ 266.00</u>
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot:		
		<u>fifty cents</u>	<u>\$.50</u>	<u>\$ 256.00</u>
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot:		
		<u>fifty cents</u>	<u>\$.50</u>	<u>\$ 285.00</u>
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot:		
		<u>fifty cents</u>	<u>\$.50</u>	<u>\$ 132.00</u>
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot:		
		<u>fifty cents.</u>	<u>\$.50</u>	<u>\$ 247.00</u>

76.

1 l.s.

Street Signage, complete in place, per
lump sum:fourteen thousand \$14,000.00 \$14,000.00

TOTAL BID:

\$1,171,700.47

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

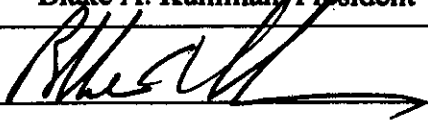
The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for bond dollars (\$), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: J.C. EVANS CONSTRUCTION CO., INC.

By (Name & Title): Blake A. Kuhlman, President

(Signature): 

Mailing Address: P.O. Box 9647
Austin, Tx 78766

Telephone Number: 512 244-1400

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

United States Fidelity and Guaranty Company
Baltimore, Maryland
A Stock Company



Bid Bond

Bond Number

Know All Men By These Presents:

ThatJ. C. Evans Construction Co., Inc.....
..... ofAustin, TX.....
....., as Principal, and United States Fidelity and Guaranty
Company, a Maryland corporation, as Surety, are held and firmly bound unto Williamson County.....
as Obligor, in the full and just sum of5% of bid by Principal.....
..... 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.

Whereas the said Principal is herewith submitting its proposal for the Jarrell County Road Reconstruction.

The Condition Of This Obligation is such that if the aforesaid Principal shall be awarded the contract the said
Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the
performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will
pay unto the Obligor the difference in money between the amount of the bid of the said Principal and the amount for which the
Obligor legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event
shall liability hereunder exceed the penal sum hereof.

Signed, sealed and delivered ..10/28/97.....
(Date)

Denise J. Smith

J. C. Evans Construction Co., Inc. (Seal)
[Signature]
UNITED STATES FIDELITY AND GUARANTY COMPANY



William H. Pitts, Jr.
William H. Pitts, Jr. Attorney-in-fact

United States Fidelity and Guaranty Company**Power of Attorney****No. 107860**

Know all men by these presents: That **United States Fidelity and Guaranty Company**, a corporation organized and existing under the laws of the State of Maryland and having its principal office at the City of Baltimore, in the State of Maryland, does hereby constitute and appoint **William H. Pitts, Jr., Norman P. Rolling, John W. Wagner, James O. Schnell and Rose Marie Boriskie**

of the City of **Austin**, State of **Texas** its true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety to, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons; guaranteeing the performance of contracts; and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, the said **United States Fidelity and Guaranty Company**, has caused this instrument to be sealed with its corporate seal, duly attested by the signatures of its Vice President and Assistant Secretary, this **21st** day of **January**, A.D. 19 **97**.

**United States Fidelity and Guaranty Company.**(Signed) By William H. Pitts, Jr. Vice President(Signed) By Thomas E. Huibregtse Assistant Secretary

State of Maryland)

SS:

Baltimore City)

On this **21st** day of **January**, A.D. 19 **97**, before me personally came **Gary A. Wilson**, Vice President of **United States Fidelity and Guaranty Company**, and **Thomas E. Huibregtse**, Assistant Secretary of said Company, with both of whom I am personally acquainted, who being by me severally duly sworn, said, that they, the said **Gary A. Wilson** and **Thomas E. Huibregtse** were respectively the Vice President and the Assistant Secretary of the said **United States Fidelity and Guaranty Company**, the corporation described in and which executed the foregoing Power of Attorney; that they each knew the seal of said corporation; that the seal affixed to said Power of Attorney was such corporate seal, that it was so affixed by order of the Board of Directors of said corporation, and that they signed their names thereto by like order as Vice President and Assistant Secretary, respectively, of the Company.

My Commission expires the **1st** day of **August**, A.D. 19 **98**.

(Signed) By Thomas E. Huibregtse Notary Public

This Power of Attorney is granted under and by authority of the following Resolutions adopted by the Board of Directors of the **United States Fidelity and Guaranty Company** on September 24, 1992:

Resolved, that in connection with the fidelity and surety insurance business of the Company, all bonds, undertakings, contracts and other instruments relating to said business may be signed, executed, and acknowledged by persons or entities appointed as Attorney(s)-in-Fact pursuant to a Power of Attorney issued in accordance with these resolutions. Said Power(s) of Attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman, or the President, or an Executive Vice President, or a Senior Vice President, or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the foregoing officers and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Attorney(s)-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and subject to any limitations set forth therein, any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is validly attached.

Resolved, That Attorney(s)-in-Fact shall have the power and authority, and, in any case, subject to the terms and limitations of the Power of Attorney issued to them, to execute and deliver on behalf of the Company and to attach the seal of the Company to any and all bonds and undertakings, and other writings obligatory in the nature thereof, and any such instrument executed by such Attorney(s)-in-Fact shall be as binding upon the Company as if signed by an Executive Officer and sealed and attested to by the Secretary of the Company.

I, **Thomas E. Huibregtse**, an Assistant Secretary of the **United States Fidelity and Guaranty Company**, do hereby certify that the foregoing are true excerpts from the Resolutions of the said Company as adopted by its Board of Directors on September 24, 1992 and that these Resolutions are in full force and effect.

I, the undersigned Assistant Secretary of the **United States Fidelity and Guaranty Company**, do hereby certify that the foregoing Power of Attorney is in full force and effect and has not been revoked.

In Testimony Whereof, I have hereunto set my hand and the seal of the **United States Fidelity and Guaranty Company**, on this **28th** day of **October**, 19 **97**


Thomas E. Huibregtse
Assistant Secretary

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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 he desires.

Name of Bidder:

J.C. EVANS CONSTRUCTION CO., INC.

Address:

P.O. Box 9647

Austin TX 78766

Date Organized:

4/1/55

Date Incorporated:

4/1/55

Number of Years in contracting business under present name:

42

CONTRACTS ON HAND:

Contracts

Dollar Amount

Completion Date

list attached

Type of work performed by your company:

General Contracting

Have you ever failed to complete any work awarded to you?

NO

Have you ever defaulted on a contract?

NO

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

Project

Dollar Amount

Mo/Yr Completed

list attached

Major equipment available for this contract:

list attached

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

Credit available: \$

Bank reference:

Nations Bank

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this

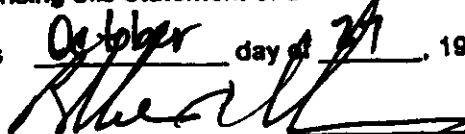
October

day of

19

97

by:



(Signature)

Blake A. Kuhlman, President

(Title)

Denise David
12/5/99

J.C. Evans Construction Company, Inc.**Blake A. Kuhlman
President and CEO**

Blake Kuhlman's business savvy led J.C. Evans from a local mom and pop shop into a solid industry giant now capturing national markets. A degreed accountant, Blake's long experience with a major Houston accounting firm and several Texas construction companies brings a competitive edge in financial management and technological innovations. J.C. Evans is the contractor of choice for clients who demand smart business from their construction company.

**Duane B. McGlaulin
Senior Vice President**

Duane McGlaulin's commitment to quality is reflected in the high standards you'll see in all of J.C. Evans' projects. With a bachelor's degree in Construction Management, and years of hands-on field supervisory experience in large scale excavation and underground utility operations, Duane has assembled a production team that knows what it takes to get the job done right. Clients who demand quality workmanship and modern technology choose J.C. Evans.

**Johnny L. Odell
Vice President, Equipment**

Johnny Odell's management skills from college and military training led him to 25 years of heavy equipment retail experience, from parts to customer service and sales. Logistic obstacles are child's play to Johnny, who ran the equipment fleet for the state's largest solid waste disposal operator and a statewide construction company before joining J.C. Evans. A well maintained, and reliably scheduled fleet is only one reason smart clients choose J.C. Evans.

**Zane Hudson
Chief Financial Officer**

Zane Hudson's commercial banking and financial regulatory experience are an integral part of J.C. Evans economic stability. As a banker, and later as CFO, Zane helped J.C. Evans add subsidiary operations to diversify and strengthen its financial position. Zane knows the financial mechanisms of large scale construction. He fills out a talented and experienced executive management team that offers its clients more than just a construction project.

John J. Migl, P.E.

Chief Estimator [Civil]

Projects in which John has been involved include:

Austin-Bergstrom Intl Airport, New Terminal Access Road

Eaton Semiconductor Site/ Building Preparation

Advanced Micro Devices Detention Facilities/ Site Preparation

State Farm Regional Office Site Preparation

Austin Diagnostic Hospital Site Preparation

Motorola, Inc., Austin, TX

-Oak Hill Facility Site Preparation

-Ed Bluestein South Parking Garage

- Village at Western Oaks Development
- Del Webb's Sun City Georgetown Subdivision Development
- Steiner Ranch Development
- Harris Branch Subdivision
- Forest Creek Development
- Southland Oaks Subdivision Development
- River Place Development
- Lake Pointe Development
- Davis Springs Development

Prior Employment

Urban Engineering Group, Inc.

[Staff Engineer]

Education

University of Texas

Bachelor of Science, Civil Engineering, 1985

Licensing and Memberships

Registered Professional Engineer, State of Texas

Licensed Texas Commission on Fire Protection

American Society of Civil Engineers

National Society of Professional Engineers

The Institute of Transportation Engineers

Austin Engineers and Contractors Association, Board of Directors

Bob Foust**Project Superintendent**

As a Project Superintendent, Bob's responsibilities include supervision and direction to the Project Crews within the civil discipline of construction. His specific duties will consist of monitoring civil crews in the planning and scheduling of the project, oversee construction techniques with focus on cost and risk, ensuring that all company policies, procedures and standards are maintained.

Excavation projects in which Bob has been involved include:

Samsung Boulevard & Pond Grading	
Samsung/ Jourdan Crossing 48" Sewerline	\$2.3M
Adessa Auto Austin Parking	\$1M
Sun City Neighborhoods 2, 3, & 8	\$21M

Motorola Oak Hill Campus
 Parking Garage Excavation
 Building J Excavation
 Bulding H Excavation

Motorola Ed Bluestien Campus	\$2.1M
Loop Road 3500'	\$700,000
Temporary Parking Lot 5 acres	\$700,000

Slaughter Lane Improvements	\$500,000
Brodie Lane Improvements	\$2.6M
Bluff Springs Road, Travis County	
McCanda Park Channel Improvement	
Stiener Ranch Boulevard	\$2.3M

Prior Employment

Lewis Contractors
 Onion Creek Sewer Force Main

Foust Excavation
 Western Oaks Section 7 & 8 Subdivision

Education

OSHA HAZCOM, OSHA Fall Protection, NUCA Excavation Training
 American Red Cross CPR & First Aid

Benny Guerrero**Project Superintendent**

Benny Guerrero began work with J.C. Evans Construction Co., Inc in 1986. He brings complete knowledge in all phases of underground utility construction, especially, crew supervision, subcontractor coordination, quality control, and safety awareness.

Underground utility projects in which Benny has been involved include:

Springdale Water 48" Transmission Main	\$5.6M
Stassney Lane Improvements, 24" WW Main	\$3.8M
Samsung/ Jourdan Crossing 48" Waterline	\$2.3M
Brentwood Subdivision Water, Wastewater, & Storm Drains	
Sun City Neighborhood 2, 3, 6, 9, 10 & 12	\$21 M
TDCJ Hondo Substance Abuse Facility Wastewater Main	
Steiner Ranch Subdivision Infrastructure	
183/ Duval Road Transmission Main	\$2.8M
Bluff Springs Road, Travis County	\$3.5M
Georgetown Wastewater Interceptor	\$2.4M
River Ridge Subdivision	
Carriage Hills Subdivision	\$2.2
Lamar/ Barton Springs Waterline	\$2.1
RR 620/ Steiner Blvd. 16" Watermain	
Mopac 48" Transmission Main	

Prior Employment

Dickihut Construction
Nuchols Crossing Subdivision

Johnny Hughes Construction
30" Waterline from Interspace Cavern to Highway 29

Education

OSHA HAZCOM, OSHA Fall Protection, NUCA Excavation Training
American Red Cross CPR & First Aid

Joe O'Bryan

Construction Technician

Projects in which Joe has been involved with at J.C. Evans as project Construction Technician include:

City of Austin

Springdale Water Transmission Main - \$5.6

Prior Employment

Bryan Construction Company

[Operator/ Assistant Estimator]

- Plantation Food Wastewater Treatment Plant - \$4M
- College Station Wastewater Treatment Plant - \$10.6M

Matous Construction Company

- Robinson Water Treatment Plant - \$6.8M
- Taylor Wastewater Treatment Plant - \$3M

MW Builders, Inc.

- City of Austin, Davis Water Treatment Plant - \$10

Psencik Construction Company

- Copperas Cove Wastewater Treatment Plant - \$8M

Red River Construction Company

- Belton Wastewater Treatment Plant - \$10M
- Duncanville Pump Station - \$8M
- Plano Pump Station - \$8M

Education

Texas A & M University, Graduate 1996

Bachelor of Science, Construction Science

OSHA HAZCOM, OSHA Fall Protection, NUCA Excavation Training
American Red Cross CPR & First Aid

Excavation/ Underground Utilities Current Projects

PROJECT	OWNER/ENGINEER	CONTRACT	EST DATE OF COMP
LAKEWAY APARTMENT SITES Phase 10 Townhomes Green Garden Homes Enclave at Treehaven Garden at Lakeside	Toll Brothers, Inc. Cook Steinman & Associates	1,400,000	02/98
PARK CENTRAL DEVELOPMENT	The Pallidium Group Baker Aiklen	1,900,000	01/98
OAK BROOK SECTION 4A	Scott Felder, LP Gray Jansing & Associates	103,410	11/97
CYPRESS CREEK WATER LINE	City of Cedar Park Turner Collie & Braden	626,666	12/97
HEB AUSTIN NO. 21 SITE	HEB Construction Group	2,507,039	04/98
MADDEN WAREHOUSE SITE	Robert Madden, Inc.	311,000	11/97
ABIA TERMINAL ACCESS ROAD	City of Austin/ NAPT	9,500,000	10/98
MOPAC WILLIAMSON CREEK LIFT STATION RELIEF MAIN	City of Austin	355,145	12/97
WILDFLOWER SECTION 2 Streets and Utilities	SVW Harris Ridge LP Gray Jansing & Associates	400,000	09/97
CHERRY CREEK 16-2 AND 17-2 STREET IMPROVEMENTS	Milburn Homes Kirkjian Engineering	259,300	10/97
LUDWIG SUBDIVISION	WPL Joint Venture Cunningham Allen Inc.	211,000	10/97
WALNUT CREEK/ HORNSBY BEND 12" SLUDGE FORCE MAIN PHS. 1	City Of Austin Camp Dresser McKee	344,000	09/97
VILLAGE AT WESTERN OAKS SECTIONS 12 AND 33	Village Joint Venture Carlson Engineering	1,900,000	10/97
VILLAGE AT WESTERN OAKS SECTIONS 18 AND 20	Village Joint Venture Carlson Engineering	718,000	10/97
VILLAS AT BARTON CREEK	Travis County MUD No. 3 Longaro & Clarke, Inc.	392,659	10/97
TRAVIS COUNTRY GREEN	By-Well/ Rathgeber Barry Campbell Engineering	1,128,194	10/97

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**JCECC
EXCAVATION/UNDERGROUND UTILITIES
CURRENT PROJECTS**

PROJECT	OWNER/ENGINEER	CONTRACT	EST DATE OF COMP
STASSNEY LANE IMPROVEMENTS	City of Austin Turner Collie & Braden	3,800,000	10/97
SUN CITY NEIGHBORHOOD 9	Del E. Webb Development	1,490,466	12/97
SPRINGDALE ROAD WATER TRANSMISSION MAIN	City of Austin	5,657,000	12/97

Excavation/ Underground Utilities Recently Completed Projects

PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
ROB ROY TRANSMISSION MAIN	Travis County WCID No. 10 Dannenbaum Engineering	767,760	08/97
RIVER PLACE SECTION. 11	First River Place Reserve Espey Houston & Associates	1,240,000	08/97
WEST PARK ESTATES	Kaufman & Broad Of Texas LTD Carter & Burgess	868,000	08/97
VILLAGE AT HEARTHSTONE	Johnson Communities, Inc. CSA Cook, Steinman & Assoc.	517,550	08/97
NORTH POINT 1 SECTIONS 1 & 2	Pacifica Houston, Inc. Espey, Huston & Assoc.	463,000	03/98
FOREST BLUFF 1C AND 1D Gas/Electric	Kaufman and Broad of Texas	545,560	09/97
EXPO BUSINESS PARK 12"	Expo Partners 1 and 2 Ltd.	21,000	06/97
OAKS AT GEORGETOWN	Carleton Construction	1,200,000	07/97
CAT HOLLOW SEC A PHASE II	Great Oaks Development Gray Jansing & Associates	1,233,526	03/97
PARMER LANE EXTENSION	State of Texas Austin Bridge & Roads	700,000	06/97
SUN CITY NEIGHBORHOOD 12, 6, 10	Del E. Webb Development	5,576,688	03/97
JOURDAN CROSSING 48" WATERLINE	Austin Jourdan Partners City of Austin	2,300,000	12/96
SAMSUNG 24" WATER MAIN	Austin Jourdan Crossing Partners Malone/ Wheeler, Inc.	46,853	06/97
VEGA AVE SOUTHWEST PKWY 16" WATER LINE	W.R. Joint Venture / City Of Austin Gebhard, Sarma Group, Inc.	325,000	05/97
SKUNK HOLLOW WW IMPROVEMENTS	W & G Partnership Malone Wheeler	89,920	05/97
RACE TRAK PETROLEUM SITE	Tri-South Construction	153,871	03/97
PARK RIDGE SECTIONS 2 AND 4	Milburn Homes, Inc. Kirkjian Engineering, Inc.	835,000	02/97
OAKBROOK SECT. 2, PHS. A Streets	Scott Felder, Homes Gray, Jansing, & Associates	393,481	02/97
J.C. Evans Construction Co., Inc.	1		10/24/97

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EXCAVATION/UNDERGROUND UTILITIES
RECENTLY COMPLETED PROJECTS

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PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
LONG CANYON III-A	Long Canyon Developers Urban Design Group	677,000	01/97
VILLAGE PARK 1 AND 2, PHASE A	Clark Wilson Homes RMD/ Randall Jones Engineering	1,001,249	01/97
STEINER RANCH 2, 3A	THL Ranch, Ltd. Murfee Engineering	716,645	03/97
LAKE POINTE PHASE 2	Bon-Terre-B Ltd. Bury and Pittman	2,512,997	03/97
STEINER RANCH 2 SEC 3B 16" & 12"	T.H.L. Ranch Limited Espey, Huston & Associates, Inc.	968,400	03/97
STEINER RANCH 2 SECTION 3B	T.H.L. Ranch, Ltd. Murfee Engineering	335,400	03/97
GAINES RANCH APARTMENTS	Larry Peel	1,091,000	04/97
STEINER RANCH 1, SECTION 4B	521 Development, Inc. Espey Houston & Associates	896,619	02/97
ESTATES OF BRENTWOOD	Rockledge, Inc. Randall Jones Engineering	1,437,604	01/97
WOODS OF BRUSHY CREEK 4	Heyl Homes, Inc Grey, Jansing & Associates	132,849	01/97
ADESA AUTO AUCTION SITE	Adesa Austin, Inc..	887,533	12/96
REATA TRAILS UNIT FOUR	Well V, Ltd. Steger & Bizzell Engineering, Inc.	1,415,200	11/96
RIVER PLACE SECTIONS 8 & 10	First River Place Reserve Limited Espey, Huston & Associates, Inc./RMD	1,158,700	11/96
HWY 290/BEN WHITE	McCarthy Brothers Construction	5,759,400	11/96
BALCONES GREENE	Centex Homes Carlson Engineering	1,245,500	9/96
SAN MARIN II APARTMENT SITE	Fairfield Development	993,000	9/96
SUN CITY NEIGHBORHOOD FOUR	Del E. Webb Development Co., L.P. Turner, Collie & Braden	3,220,800	9/96
STEINER RANCH 1 SECTION 3B	T.H.L. Ranch, Ltd. Espey, Huston & Associates	627,200	9/96
LAKE AT WELLS BRANCH SEC 1 & 2	Morrison Homes, Inc. Lockwood Engineers	1,388,000	10/96

JCECC
EXCAVATION/UNDERGROUND UTILITIES
RECENTLY COMPLETED PROJECTS

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PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
STONELAKE BLVD. & PRIVATE DR.	The Gottesman Company Consort, Inc.	538,200	9/96
SUN CITY NEIGHBORHOOD 8	Del Webb Texas., L.P. Turner, Collie & Braden	771,100	9/96
CHERRY CREEK SEC 17 PHASE I	Milburn Investments, Inc. Kurkjian Engineering	231,400	10/96
CHERRY CREEK SEC 14 PHASE III	Milburn Investments, Inc. Page Southerland Page	539,900	10/96
SAMSUNG - TEMPORARY WTR. SVC.	Hensel Phelps Construction Co. Espey, Huston & Associates, Inc.	329,822	9/96
RIATA TRACE PARKWAY	Riata Development, L.L.C.	3,765,600	11/96
WESTBANK MARKET PARKING	Barshop & Oles Company Bury & Pittman	145,000	10/96
GAINES RANCH P.U.D. Street, Water, Wastewater, Drainage	Walter Vackar Developments, Inc.	1,524,503	6/96
SOUTHLAND OAKS 3A,B,C	Scott Felder, Ltd. Carlson Engineering	3,448,100	6/96
FORT HOOD VEHICLE MAINTENANCE FACILITY	Hensel Phelps Construction Carter & Burgess, Inc.	3,211,400	6/96
RIATA TRACE	Blue Star Austin Land Development Gray Engineering	3,250,700	6/96
DAVIS SPRING SECTIONS 3B-1 & 2	Standard Pacific of Texas, Inc. Huffcut & Associates, Inc.	1,658,800	11/96
VILLAGE PARK IV PHASE B Street/Water/Wastewater/Electric	Clark Wilson Homes Randall Jones Engineering, Inc./RMD	350,100	7/96
WATER TRANSMISSION MAIN	City of Leander Jay Engineering Company, Inc.	326,100	7/96
KXAN TOWER	Stainless Inc. Lin Broadcasting (KXAN)	139,000	7/96
GAINES RANCH PONDS	Walter Vackar Developments Urban Design Group	275,200	6/96
GAINES RANCH COURTYARD	Scott Felder, L.P./Ryland Homes RMD/Carter & Burgess	554,901	7/96
STEINER RANCH 1 SECTION 3B	T.H.L. Ranch, Ltd. Espey, Huston & Associates	627,200	9/96

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PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
SUN CITY VILLAGE CENTER	Del E. Webb Development Co., L.P. White Construction/RTG Partners	1,100,000	6/96
SUN CITY - SCOTT & WHITE WW LN.	Del Webb Texas, L.P.	625,600	8/96
RILEY RANCH ADDITION	B.A.L.D. Inc. RM-KM Development	51,498	7/96
STONE OAK SECTIONS 1 & 2	Doyle Wilson Homebuilder Jadco Development, Inc.	998,400	4/96
STEINER RANCH 1 SECTION 4A	521 Development Espey, Huston & Associates	727,300	4/96
JOLLYVILLE APARTMENTS	Fairfield Development	962,700	4/96
SOUTHLAND OAKS Lift Station, Force Main	Scott Felder L.P./RMD & Co. Inc. Espey, Huston & Associates, Inc.	923,800	3/96
SUN CITY - NEIGHBORHOOD ONE AND BOULEVARDS	Del E. Webb Development Co., L.P.	4,814,900	3/96
SUN CITY - GOLF COURSE I	Del E. Webb Development Co., L.P.	1,698,100	3/96
TERRACE PUD WTR. TRANS. MAIN	W & G Partners, Ltd. Carter & Burgess	473,200	3/96
SUN CITY WATER QUALITY POND 1	Del E. Webb Development Co., L.P. Turner, Collie & Braden	61,400	3/96
CAT HOLLOW SEC A PHASE II	Great Oaks Development Gray Engineering, Inc.	750,370	3/96
ARROWHEAD APARTMENTS	Arrowhead Equities, Ltd. Jungman/Laffere Company	1,053,500	3/96
SOUTHLAND OAKS 4A	Scott Felder, L.P./Ryland Homes RMD/Carlson Engineering	1,378,300	3/96
SUN CITY ENTRY HOUSE	Del E. Webb Development Co., L.P. Turner, Collie & Braden	80,600	3/96
SUN CITY NEIGHBORHOOD THREE	Del E. Webb Development Co., L.P. Turner, Collie & Braden	2,919,400	3/96
SUN CITY SALES CENTER	Del E. Webb Development Co., L.P. White Construction/RTG Partners	1,114,700	3/96
FOOTHILLS APARTMENTS	Acacia	205,800	2/96
SUN CITY - NEIGHBORHOOD TWO	Del E. Webb Development Co., L.P.	2,378,400	12/95

PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
FORCE MAIN, SEWER AND IRRIGATION TRANSMISSION LINE	City of Georgetown	1,955,800	12/95
WASTEWATER INTERCEPTOR, FORCE MAIN & EFFLUENT IRRIGATION MAIN	City of Georgetown	2,402,500	12/95
SUN CITY - HAUL ROAD AND CLEARING	Del E. Webb Development Co., L.P.	287,900	12/95
LAKE POINTE 1A & 1B Street, Water, Wastewater ,Drainage	Bon-Terre, Ltd. Carter & Burgess, Inc.	3,797,300	11/95
WATER TRANSMISSION MAIN Phase 1	West Travis County MUD 3 & 5 Carter & Burgess, Inc.	516,900	11/95
CENTRAL PARK WET POND	West 38th Street, Ltd. Bury and Pittman	427,400	11/95
CENTURY PARK WEST APARTMENTS	Acacia	1,021,700	10/95
LAKELINE OAKS SEC 2	Scott Felder, L.P.	1,744,000	10/95
RANCH ROAD 620	Hensel Phelps Construction	3,732,300	10/95
FOREST CREEK PHASE 3	Forest Creek Properties Limited Huffcut & Associates	293,800	8/95
CANYON CREEK SEC 33	Captex Development Huffcut & Associates	480,500	8/95
CARRIAGE HILLS 2 SEC 1,2,3	Centex Homes	2,218,400	8/95
C.O.A. LANDFILL LINING	City of Austin	866,800	8/95
HARDROCK CANYON APARTMENTS	Larry Peel	316,200	8/95
CARLETON COURT APARTMENTS Dallas, Texas	Carlton Court Construction, Ltd. Huitt-Zollars, Inc.	99,600	7/95
RIVER RIDGE SECTIONS A & B	River Ridge Partners Winkley Alexander	1,211,100	7/95
BLUFF SPRINGS ROAD	Travis County	3,573,700	7/95
OAKBROOK SEC 1	RMD/Scott Felder Gray Engineering	3,510,400	6/95
ADC SITE/OFFSITE	Austin Diagnostic Clinic	4,176,300	5/95
NORWOOD LANE Detention Pond/Parking	Congress International	113,200	5/95

JCECC
EXCAVATION/UNDERGROUND UTILITIES
RECENTLY COMPLETED PROJECTS

VOL 0093 PAGE 577

PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
WOODS OF BRUSHY CREEK Section II Phase IVA	SVW Brushy Creek Limited Gray Engineering	597,900	4/95
3M PARKING LOT	3M	194,700	3/95
CRAWFORD ST. DRAINAGE Denison, Texas	Remediation Technologies	62,400	3/95
US 183/IH-35 E. TO BLESSING	City of Austin	294,700	3/95
SPECTRUM	Davis Springs Properties Huffcut and Associates	794,400	2/95
CANYON CREEK 19B	Canyon Creek Land Limited Huffcut & Assoc./Espey Huston & Assoc.	402,800	2/95
CAPROCK APARTMENTS	Larry Peel	619,700	1994
HIGH COUNTRY SECTION 3	3HC Limited PDG Engineering	809,500	12/94
OAKWOOD GLEN	Santa Fe Group Key Group Engineers	1,317,700	12/94
BANCROFT WOODS	Prewitt Coleman Investments Barry Campbell Engineering	422,300	12/94
RANCH AT CYPRESS CREEK Sections 1 & 2	Xero Development Rust Lichliter & Jameson	1,802,800	12/94
FOREST CREEK PHASE 5	Forest Creek Properties Limited Huffcut & Associates	452,400	12/94
SENNA HILLS M.U.D.	Arcadia Land Partners Gray Engineering	241,500	12/94
GREENLAWN PLACE SEC II & III	Canyon Creek Land Limited Huffcut & Associates	577,000	12/94
LAMAR/BARTON SPRINGS	City of Austin	2,152,000	11/94
DAVIS SPRINGS LIFT STATION	Davis Springs Properties Limited Carter & Burgess	983,700	11/94
US 183 FIRELINE RELOCATE	State of Texas TX DOT	100,100	11/94
NATIONAL WILDFLOWER	Austin Commercial	934,900	10/94
CAT HOLLOW SEC 5A	Cat Hollow Association	653,700	9/94
CAT HOLLOW SEC 13	Limited Partnership	622,700	9/94

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PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
CANYON CREEK 17	Canyon Creek Land Limited	819,400	8/94
DAVIS SPRINGS 3A & 5A	Std. Pacific of Texas	2,374,700	8/94
DAVIS SPRINGS 5A	Std. Pacific of Texas	898,500	8/94
DAVIS SPRINGS GAS	Std. Pacific of Texas	83,600	8/94
STATE FARM	Hensel Phelps Construction	2,667,600	8/94
PARK CREST SUBDIVISION	Bill Milburn Company	1,264,200	7/94
WELLS BRANCH PHASE P	Markborough Development	394,300	7/94
LAKELINE OAKS	RMD & Company	1,287,700	7/94
STEINER RANCH SECTION 3A	THL Ranch Limited	472,800	6/94
MOTOROLA Ed Bluestein Campus	Austin Commercial	2,180,600	6/94
PARMER LANE	Austin Bridge & Road	1,270,000	5/94
CANYON CREEK SEC 27	Blanton Company	652,200	4/94
CANYON CREEK SEC 19A	Blanton Company	689,000	1/94
TRACOR JT USE ROAD	Austin Commercial	253,400	1994
MOTOROLA CRYOGENIC TANK SCRUBBER PAD, FIRE LANE, PARKING Ed Bluestein Campus	Motorola, Inc.	125,400	1994
MOTOROLA N. PARKING LOT Ed Bluestein Campus	Motorola, Inc.	729,000	1994
MOTOROLA LOOP ROAD Ed Bluestein Campus	Motorola, Inc.	774,000	1994
MOTOROLA BONE YARD Ed Bluestein Campus	Motorola, Inc.	223,500	1994
HUTTO STREET & DRAINAGE	City of Hutto	297,400	1994
AMD 24" WATERLINE PHASE 1	Advanced Micro Devices	157,000	1994
AMD DETENTION	Advanced Micro Devices	445,200	1994
SPRINGBROOK ONE OFFSITE	AMTEX	111,000	1994
US 183 WATER/WASTEWATER Duval Road/Loop360	City of Austin	2,801,800	1994

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PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
CYPRESS MILL	Centex Real Estate	896,600	1994
SUNSET VALLEY MARKET FAIR	New Market Development	2,922,600	1993
GREAT HILLS MARKET	New Market Development	517,900	1993
WESTOVER ADDITION	City of San Marcos	1,642,600	1993
HOME DEPOT - Research Blvd.	Home Depot, Inc.	525,600	1993
GREAT HILLS PHASE 2 SEC 2	San Jacinto Savings & Loan	499,800	1993
CANYON CREEK SEC 26	The Blanton Company	713,900	1993
WOODS OF WHITESTONE	Cunningham/Graves	964,500	1993
RIDGE AT BARTON CREEK	Barton Creek Properties	877,000	1993
FOREST CREEK PHASE 1 SEC 1	Captex Development	466,500	1993
BRODIE LANE ROAD Improvements	Travis County	2,626,400	1993
SLAUGHTER LANE ROAD Improvements	Austin Bridge and Road	508,900	1993
LAKELINE BLVD.	Austin Paving	462,900	1993
WILSHIRE BOULEVARD	City of Austin	123,300	1993
CENTRAL PARK Road Improvements	American Realty	633,000	1993
FAYETTE REG. AIR CENTER	Fayette County, Texas	1,520,100	1993
STEINER BLVD.	Hughes Interest	2,391,500	1993
TEXAS SCHOOL OF THE DEAF	Silverton Construction	706,400	1993
GROVE BLVD.	City of Austin	1,081,900	1993
GROUP 2,6,7	City of Austin	665,700	Prior 1993
CENTENNIAL PARK Wastewater Improvements	City of Austin	676,900	Prior 1993
3M AUSTIN CENTER PHASE 3	3M Austin	1,042,600	Prior 1993
SOUTH BRANCH INTERCEPTOR	Circle C M.U.D. #4	1,308,300	Prior 1993
MOPAC TRANSMISSION MAIN	City of Austin	1,501,800	Prior 1993

PROJECT	OWNER/ENGINEER	CONTRACT	DATE COMP
CAMERON ACRES UTILITIES	City of Austin	649,200	Prior 1993
STEINER PHASE I SEC I Barton Creek Driving Range	Hughes Interest	1,700,900	Prior 1993
ROUND ROCK GOLF COURSE	City of Round Rock	2,505,600	Prior 1993
OAKCREEK PARKE	Benchmark Land Development	1,152,700	Prior 1993
BARTON CREEK GOLF COURSE	Barton Creek Properties	1,267,800	Prior 1993
NORTH BANK SLAUGHTER CREEK Interceptor	Circle C Development	1,489,500	Prior 1993
SLAUGHTER LANE I CASTLEWOOD	City of Austin	1,201,100	Prior 1993
PARK AT SPICEWOOD SPRINGS	Horizon Savings	738,000	Prior 1993
STEINER RANCH SEC 1A	Hughes Interest	618,100	Prior 1993
WATERFORD CENTER STREETS	Hughes Interest	620,000	Prior 1993
LEGEND OAKS SEC 4/ESCARPMENT	Realtex Funding	1,831,500	Prior 1993
FOUR POINTS	PWB Joint Venture	860,500	Prior 1993
LAKE CREEK/MACONDA	Maconda Park JV	855,300	Prior 1993
OASIS BLUFF	Travis County CIP	761,000	Prior 1993
LEGEND OAKS SEC. II	Realtex Funding	2,300,000	Prior 1993
CAT HOLLOW- O'CONNOR DR.	Parklane Development	642,000	Prior 1993
SHEPHERD MOUNTAIN	Shepard Mountain JV	1,728,000	Prior 1993
CIRCLE C ESCARPMENT	Circle C Development	1,360,900	Prior 1993
SLAUGHTER LANE	Garey Construction	1,372,000	Prior 1993
MCNEIL ESTATES	City of Austin	945,800	Prior 1993
LEGEND OAKS SEC. 4	Lichliter Jameson	701,200	Prior 1993
LAKEWOOD PARK SUBDIVISION	City of Austin	945,800	Prior 1993
CIRCLE C WEST INTERCEPTOR	Bradley Development	632,900	Prior 1993
CIRCLE C PH. B SEC. 2	Bradley Development	1,492,800	Prior 1993
SHEPHERD MOUNTAIN	Shepard Mountain JV	702,000	Prior 1993
BRAKER LANE	North Travis County	734,900	Prior 1993

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**Consolidated Financial Statements
and Other Financial Information**

**J. C. Evans Construction Co., Inc.
and Subsidiary**

*Years ended December 31, 1996 and 1995
with Report of Independent Auditors*

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Report of Independent Auditors

The Board of Directors
J. C. Evans Construction Co., Inc.

We have audited the accompanying consolidated balance sheets of J. C. Evans Construction Co., Inc. and Subsidiary as of December 31, 1996 and 1995, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the consolidated financial position of J. C. Evans Construction Co., Inc. and Subsidiary at December 31, 1996 and 1995, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with generally accepted accounting principles.

As discussed in Note 14 to the financial statements, in 1996 the Company changed its method of accounting for depreciation of property, plant and equipment.

Ernst & Young LLP

February 28, 1997

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J. C. Evans Construction Co., Inc. and Subsidiary

Consolidated Balance Sheets

	December 31	
	1996	1995
Assets		
Current assets:		
Cash	\$ 623,968	\$ 622,148
Receivables:		
Trade	13,036,753	13,469,045
Retainage	3,479,339	4,421,276
Related party	501,206	-
Other	1,342,845	1,261,546
Costs and estimated earnings in excess of billings on contracts	2,891,889	3,224,302
Prepaid expenses	198,786	102,694
Note receivable - current	12,696	-
Total current assets	22,087,482	23,101,011
Investments	35,882	62,873
Property, plant and equipment:		
Leasehold improvements	341,334	314,455
Machinery and equipment	10,788,468	10,655,270
Automobiles and trucks	1,248,748	1,247,547
Furniture and fixtures	1,304,642	1,329,136
Land and buildings	3,854,827	3,365,149
	17,538,019	16,911,557
Less accumulated depreciation and amortization	5,072,712	5,856,852
Net property, plant and equipment	12,465,307	11,054,705
Other assets:		
Related party receivables	1,263,836	-
Other receivables	108,258	425,503
Other assets	18,014	-
Total other assets	1,390,108	425,503
Total assets	\$35,978,779	\$34,644,092

	December 31	
	1996	1995
Liabilities and stockholders' equity		
Current liabilities:		
Payables:		
Trade	\$12,165,012	\$11,593,391
Retainage	1,610,982	2,318,084
Billings in excess of costs and estimated earnings on incomplete contracts	1,549,434	3,192,788
Accrued liabilities	1,073,560	1,674,798
Notes payable	2,000,000	-
Current maturities of long-term debt	2,442,239	1,548,764
Current maturities of capital lease obligations	37,507	11,340
Current deferred income tax liability	24,274	56,075
Total current liabilities	20,903,008	20,395,240
 Long-term debt, less current maturities	 8,898,153	 9,563,269
 Capital lease obligations, less current maturities	 66,945	 -
 Deferred income tax liability	 671,958	 367,258
 Unearned gain	 344,593	 -
 Stockholders' equity:		
Common Stock, no par value, 10,000,000 shares authorized, 1,050,275 shares issued and outstanding in 1996 and 1995	9,730,512	9,457,028
Retained earnings	221,773	291,009
	9,952,285	9,748,037
 Less unearned ESOP shares, 528,146 shares and 590,281 shares released in 1996 and 1995, respectively	 (4,858,163)	 (5,429,712)
Total stockholders' equity	5,094,122	4,318,325
Total liabilities and stockholders' equity	\$35,978,779	\$34,644,092

See accompanying notes.

J. C. Evans Construction Co., Inc. and Subsidiary

Consolidated Statements of Operations

	Year ended December 31	
	1996	1995
Construction revenue	\$113,173,685	\$107,992,821
Construction direct cost	(103,976,868)	(99,239,341)
Other operating revenue	3,424,423	-
Other operating direct cost	(2,734,406)	-
	<u>9,886,834</u>	<u>8,753,480</u>
Operating expense	9,806,276	8,483,657
Operating income	<u>80,558</u>	<u>269,823</u>
Equity in Rio Colorado Land and Gravel LLP	(182,385)	-
Other income	877,394	140,225
Benefit plan contributions	(945,033)	(798,655)
Loss before income taxes	<u>(169,466)</u>	<u>(388,607)</u>
Cumulative effect on prior years of change in depreciation method (Note 14)	396,542	-
Income tax benefit (expense):		
Current	(23,413)	9,112
Deferred	(272,899)	7,518
	<u>(296,312)</u>	<u>16,630</u>
Net loss	<u>\$ (69,236)</u>	<u>\$ (371,977)</u>

See accompanying notes.

J. C. Evans Construction Co., Inc.

<u>Model</u>	<u>Qty</u>
Cat 140G	9
Komatsu GD650A2	1
Cat 120	1
Cat 416	39
Case 580	38
Cat 426	1
Komatsu PC400	2
Hitachi EX400	2
Komatsu PC200	16
Takeuchi TB007	1
Case CK62	1
Komatsu PC250	1
Komatsu PC300	10
Komatsu PC210	1
Hitachi 550	1
Hitachi EX200	6
Komatsu PC220	3
Hitachi EX270	2
Hitachi EX150	2
Cat D4	6
Komatsu 155	1
Komatsu D37	1
Komatsu D65	3
Komatsu D275	1
Cat D7	2
Cat D8	2
Komatsu D355	1
Case 560	1
Case 860	5
Case 760	1
Vermeer T800HT	3
Bobcat 323	1
Ditch Witch 6510	4
Ditch Witch 3500	1
Trencor Jetco 412	1
Trencor Jetco 860	1
Ditch Witch 7610	7
Vermeer 755	2
Vermeer 555	1
Case Maxi Sneaker	1
Dump Trucks	13
Volvo A25	5
Volvo A35	2
Michigan L70	11
Komatsu WA450	1
Komatsu WA250	11
Komatsu WA320	3
Komatsu WA180	10

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<u>Model</u>	<u>Qty</u>
John Deere 544G	1
Michigan L90	4
Cat 963	3
Cat IT-18	1
Cat 928	1
Komatsu D66S	2
Cat 973	8
Komatsu WA350	1
Cat 931	1
Water Trucks	23
Cat 815	1
I/R SD40F	5
I/R SD100F	1
I/R DD90	7
I/R PT125R	2
Dresser PD784	3
Hyster Grid Roller	1
Hyster C852A	1
Ferguson 25 Ton	1
Tampo SP950	1
Case 1102	1
I/R 120R	5
Lifting Arms	5
Grapple	1
Auger Attachment	1
Broom Attachment	5
Cable Plow	1
Bedding Conveyor	2
Compactor	4
Case 1838	2
Ford Dragbox	1
Bobcat 753	2
Case Dragbox	2
Bobcat 443B	1
Bomag Recycler	1
Storage Boxes	64
D/W 8/60 Boring Unit	1
D/W JT820 Boring Unit	1
D/W JT2511 Boring Unit	1
D/w JT3510 Boring Unit	1
D/W JT920 Boring Unit	1
GMC Sarafi Cargo Van	1
Chev Suburban	2
Ford 1/2 ton P/U	2
Ford 3/4 P/U	1
Ford Crew Cabs	17
Ford Flatbeds	29
Mack Haul Truck	1
White Winch Truck	1
Freightliner	2
Fuel/Lube Trucks	11

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J. C. Evans Construction Co., Inc.

Model	Qty	
Trailers	25	
1' Buckets	66	
2' Buckets	61	
18" Buckets	23	
3' Buckets	21	
30" Bucket	1	
40" Buckets	1	
42" Bucket	6	
48" Bucket	9	
50" Bucket	2	
56" Bucket	1	
60" Bucket	1	
UB104 Hammers	4	
UB8 Hammers	2	
Teledyne 925X	3	
Allied 730	4	
Teledyne TB425	2	
NPK 4X	3	
Teledyne TB1425X	3	
NPK 16X	1	
Teledyne TB1625X	2	
Esco ES35	1	
Okada OKB8A2	2	
Teledyne TB975X	6	
E66 Rammer Hammer	3	
S26 Rammer Hammer	2	
S25 Rammer Hammer	5	
E68 Rammer Hammer	1	
Okada 305	6	
Okada OKB11A2	1	
NPK 10X	3	
1' Compaction Wheel	5	
2' Compaction Wheel	23	
36" Compaction Wheel	4	
Loader Forks	29	
JCB 580-40	1	
Auger Truck	1	
Aerial Truck	1	812
Manhole Blower	18	
Shop Fans	6	
Rammax	7	
Vermeer Trench Roller	1	
Asphalt Roller	3	
Trench Box 8X20	3	
Trench Box 4X24	1	
GME 8X10	2	
Trench Box 8X10	5	
Trench Box 4X10	1	
Trench Box 8X24	7	
Trench Box 8X16	5	
Trench Box 4X20	1	

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J. C. Evans Construction Co., Inc.

Model	Qty
Trench Box 4X16	2
8' Manguard	6
4' Manguard	1
6' Manguard	1
Bore Box 8X14	2
Sweeper	3
Brusher Chipper	2
Brush Bumer	1
Jumping Jack	14
Plate Compactor	6
Pogo Stick	6
Compressor	19
Gas Detector	8
Rescue Set Tripod	4
Lifeline/Fall Protection	9
Metal Detector	8
Cable Locator	2
Hammer Drill	14
Table Saw	1
Weed Eater	1
Generator 4000	2
Generator 3500	4
Generator 5000	2
Generator 5500	3
Generator 6000	16
Generator 1200	1
Generator 2400	3
Generator 2300	1
Generator 3600	3
Generator 2500	2
90# Jack Hammer	14
Rock Drill	8
Clay Digger	12
60# Jack Hammer	10
Chipping Hammer	20
30# Jack Hammer	1
Heaters	13
Extension Ladder	1
Pipe Laser	16
Post Hole Digger	1
24" Boring Machine	2
12" Wet Bore Machine	2
Hole Hog	2
D/W 210 Boring Machine	2
Street Plate 5X8	37
Arrow Boards	2
Pumps	46
Pressure Washer	3
Chain Saws	23
Cut-Off Saws	43
Walk Behind Saw	5

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J. C. Evans Construction Co., Inc.

<u>Model</u>	<u>Qty</u>	
Light Towers	6	
Kobota Tractor	1	
16' Utility Trailer	18	
Wells Cargo Trailers	10	
5X8 Trailers	5	
Gas Reel Trailers	6	
Reel Trailers	21	
Concrete Trowels	8	
Concrete Vibrators	3	
Power Buggy	1	
Mortar Mixer	1	
Torch Set	2	
Welders	7	
Fusion Welders	19	
Cable Extractors	3	
Office Trailers	24	
Hydro Vac	1	606
Runner Pickups	7	
Mechanics Trucks	8	
Fuel Trailers	5	
Shop Welders	8	
Shop Forklifts	2	
Shop Air Compressor	1	
Steam Cleaners	2	33
	1451	

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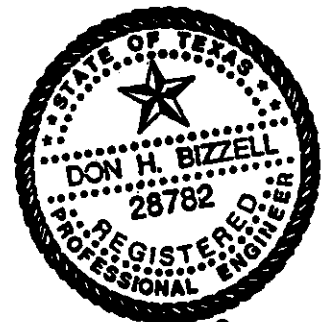
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 811

PROPOSAL & BID SCHEDULE

Date: 10/28/97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

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Proposal

10/27/97 10:31

Project: Jarrell Tornado Recovery Project

Jkl, Inc.

Bid Date: 10/28/97

Bid Time: 0:00

Estimator: Gary Dirks

Engineer/Architect:

Item	Description	Quantity	U/M	Unit Price	Total Price
01	ROADWAY EXCAVATION	65,543.00	SY	0.6000	39,325.80
02	SUBGRADE PREPARATION	69,944.00	SY	0.7500	52,458.00
03	REWORKING BASE MATERIAL	37,610.00	SY	0.7500	28,207.50
04	BASE MATERIAL	61,002.00	SY	6.2500	381,262.50
05	ASPHALTIC CONCRETE PAVEMENT 1.5"	60,861.00	SY	3.0000	182,583.00
06	ROADSIDE DITCH	20,581.00	LF	1.0000	20,581.00
07	PAVED DRIVEWAY	42.00	EA	336.0000	14,112.00
08	METAL BEAM GUARD FENCE	1,275.50	LF	15.0000	19,132.50
09	TERMINAL ANCHOR SECTION	35.00	EA	360.0000	12,600.00
10	CULVERT MODIFICATION LOCATION #1	1.00	LS	1,300.0000	1,300.00
11	CULVERT MODIFICATION LOCATION #2	1.00	LS	12,000.0000	12,000.00
12	CULVERT MODIFICATION #3	1.00	LS	600.0000	600.00
13	CULVERT MODIFICATION #4	1.00	LS	9,800.0000	9,800.00
14	CULVERT MODIFICATION #5	1.00	LS	600.0000	600.00
15	CULVERT MODIFICATION #6	1.00	LS	600.0000	600.00
16	CULVERT MODIFICATION #7	1.00	LS	650.0000	650.00
17	CULVERT MODIFICATION #8	1.00	LS	650.0000	650.00
18	CULVERT MODIFICATION #9	1.00	LS	680.0000	680.00
19	CULVERT MODIFICTION #10	1.00	LS	685.0000	685.00
20	CULVERT MODIFICATION #11	1.00	LS	700.0000	700.00
21	CULVERT MODIFICATION #12	1.00	LS	600.0000	600.00
22	CULVERT MODIFICATION #13	1.00	LS	650.0000	650.00
23	CULVERT MODIFICATION #14	1.00	LS	675.0000	675.00
24	CULVERT MODIFICATION #15	1.00	LS	1,200.0000	1,200.00
25	CULVERT MODIFICATION #16	1.00	LS	650.0000	650.00
26	CULVERT MODIFICATION #17	1.00	LS	650.0000	650.00

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JFZ

Page 2 Proposal For Jarrell Tornado Recovery Project (Continued)

Item	Description	Quantity	U/M	Unit Price	Total Price
27	CULVERT MODIFICATION #18	1.00	LS	650.0000	650.00
28	CULVERT MODIFICATION #19	1.00	LS	650.0000	650.00
29	CULVERT MODIFICATION #20	1.00	LS	800.0000	800.00
30	CULVERT MODIFICATION #21	1.00	LS	1,200.0000	1,200.00
31	CULVERT MODIFICATION #22	1.00	LS	1,200.0000	1,200.00
32	CULVERT MODIFICATION #23	1.00	LS	750.0000	750.00
33	CULVERT MODIFICATION #24	1.00	LS	25,000.0000	25,000.00
34	CULVERT MODIFICATION #25	1.00	LS	675.0000	675.00
35	CULVERT MODIFICATION #26	1.00	LS	1,400.0000	1,400.00
36	CULVERT MODIFICATION #27	1.00	LS	650.0000	650.00
37	CULVERT MODIFICATION #28	1.00	LS	26,000.0000	26,000.00
38	CULVERT MODIFICATION #29	1.00	LS	1,200.0000	1,200.00
39	CULVERT MODIFICATION #30	1.00	LS	26,000.0000	26,000.00
40	CULVERT MODIFICATION #31	1.00	LS	18,000.0000	18,000.00
41	CULVERT MODIFICATION #32	1.00	LS	1,300.0000	1,300.00
42	CULVERT MODIFICATION #33	1.00	LS	750.0000	750.00
43	CULVERT MODIFICATION #34	1.00	LS	750.0000	750.00
44	CULVERT MODIFICATION #35	1.00	LS	775.0000	775.00
45	CULVERT MODIFICATION #36	1.00	LS	9,800.0000	9,800.00
46	CULVERT MODIFICATION #37	1.00	LS	1,000.0000	1,000.00
47	CULVERT MODIFICATION #38	1.00	LS	820.0000	820.00
48	CULVERT MODIFICATION #39	1.00	LS	850.0000	850.00
49	CULVERT MODIFICATION #40	1.00	LS	1,850.0000	1,850.00
50	CULVERT MODIFICATION #41	1.00	LS	12,500.0000	12,500.00
51	CULVERT MODIFICATION #42	1.00	LS	850.0000	850.00

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RFE

Page 3 Proposal For Jarrell Tornado Recovery Project (Continued)

Item	Description	Quantity	U/M	Unit Price	Total Price
52	CULVERT MODIFICATION #43	1.00	LS	850.0000	850.00
53	CULVERT MODIFICATION #44	1.00	LS	850.0000	850.00
54	DELETED FROM PROJECT	1.00	LS	0.0000	0.00
55	CULVERT MODIFICATION #46	1.00	LS	11,000.0000	11,000.00
56	CULVERT MODIFICATION #47	1.00	LS	820.0000	820.00
57	CULVERT MODIFICATION #48	1.00	LS	790.0000	790.00
58	CULVERT MODIFICATION #49	1.00	LS	830.0000	830.00
59	CULVERT MODIFICATION #50	1.00	LS	820.0000	820.00
60	CULVERT MODIFICATION #51	1.00	LS	780.0000	780.00
61	CULVERT MODIFICATION #52	1.00	LS	7,800.0000	7,800.00
62	CULVERT MODIFICATION #53	1.00	LS	820.0000	820.00
63	CULVERT MODIFICATION #54	1.00	LS	780.0000	780.00
64	CULVERT MODIFICATION #55	1.00	LS	1,230.0000	1,230.00
65	CULVERT MODIFICATION #56	1.00	LS	1,200.0000	1,200.00
66	CULVERT MODIFICATION #57	1.00	LS	1,300.0000	1,300.00
67	CULVERT MODIFICATION #58	1.00	LS	1,000.0000	1,000.00
68	SILT FENCE	18,760.00	LF	1.2500	23,450.00
69	ROCK BERM	1,458.00	LF	9.2000	13,413.60
70	TRENCH & EXCAVATION SAFETY AT CULVERT #2	570.00	SF	1.0000	570.00
71	TRENCH & EXCAVATION SAFETY AT CULVERT #4	532.00	SF	1.0000	532.00
72	TRENCH & EXCAVATION SAFETY AT CULVERT #24	512.00	SF	1.0000	512.00
73	TRENCH & EXCAVATION SAFETY AT CULVERT #30	570.00	SF	1.0000	570.00
74	TRENCH & EXCAVATION SAFETY AT CULVERT #31	264.00	SF	2.4000	633.60
75	TRENCH & EXCAVATION SAFETY AT CULVERT #52	494.00	SF	1.1500	568.10
76	STREET SIGNAGE	1.00	LS	8,000.0000	8,000.00
					997,491.60
					815

Page 1

JKL, Inc.

10/27/97 10:30

Default Conditions

SUBMITTED BY: *JKL, Inc*


LEONARD H EKBERG
PRESIDENT

816

OK

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard:			
			\$	\$	
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard:			
			\$	\$	
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard:			
		<i>LHE</i> Zero Dollars and Seventy five Cents <i>0.25</i>			\$ 28,207.50
4.	61,002 s.y.	Base Material, complete in place, per square yard:			
		<i>LHE</i> Six Dollars and Twenty five Cents <i>6.25</i>			\$ 381,262.50
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard:			
		<i>LHE</i> Three Dollars and No Cent <i>3.00</i>			\$ 182,583.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot:		
		One Dollar and No Cents ^{LTR}	\$ 1⁰⁰	\$ 20,581⁰⁰
7.	42 ea.	Paved Driveway, complete in place, per each:		
		Three Hundred Thirty-six Dollars and No Cents ^{LTR}	\$ 336⁰⁰	\$ 14,112⁰⁰
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot:		
			\$	\$
9.	35 ea.	Terminal Anchor Section, complete in place, per each:		
			\$	\$
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum:		
			\$	\$
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum:		
			\$	\$

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum:			
			\$	\$	
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum:			
			\$	\$	
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum:			
			\$	\$	
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum:			
			\$	\$	
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum:			
			\$	\$	
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum:			
			\$	\$	
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum:			
			\$	\$	
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum:			
			\$	\$	
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum:			
			\$	\$	
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum:			
			\$	\$	
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum:			
			\$	\$	
		5			820

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum:			
			\$	\$	
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum:			
			\$	\$	
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum:			
			\$	\$	
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum:			
			\$	\$	
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum:			
			\$	\$	
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum:			
			\$	\$	
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum:			
			\$	\$	
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum:			
			\$	\$	
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum:			
			\$	\$	
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum:			
			\$	\$	
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum:			
			\$	\$	
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum:			
			\$	\$	
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum:			
			\$	\$	
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum:			
			\$	\$	
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum:			
			\$	\$	
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum:			
			\$	\$	
8					823

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum:			
			\$	\$	
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum:			
			\$	\$	
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum:			
			\$	\$	
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum:			
			\$	\$	
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum:			
			\$	\$	
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum:			
			\$	\$	
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum:			
			\$	\$	
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum:			
			\$	\$	
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum:			
			\$	\$	
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum:			
			\$	\$	
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum:			
			\$	\$	

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
54.	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:			
			\$	\$	
55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum:			
			\$	\$	
56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum:			
			\$	\$	
57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum:			
			\$	\$	
58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum:			
			\$	\$	
59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum:			
			\$	\$	
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum:			
			\$	\$	
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum:			
			\$	\$	
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum:			
			\$	\$	
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum:			
			\$	\$	
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum:			
			\$	\$	
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum:			
			\$	\$	
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot:			
			\$	\$	
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot:			
			\$	\$	
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot:			
			\$	\$	

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>UNIT</u>	<u>COST</u>	<u>TOTAL</u>
71	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot:			
			\$	\$	
72	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot:			
			\$	\$	
73	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot:			
			\$	\$	
74	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot:			
			\$	\$	
75	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot:			
			\$	\$	

1 l.s.

Street Signage, complete in place, per
lump sum:

Like
~~Nine Hundred Ninety Seven Thousand~~
~~Four Hundred Ninety-one Dollars~~

\$

\$

TOTAL BID:

\$ 997,491.60

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor:

JKL, INC.

By (Name & Title):

Leonard Ekberg President

(Signature):

Leonard Ekberg

Mailing Address:

P.O. Box 990

Buda, TX 78610

Telephone Number:

512-312-1660

COMMERCIAL INDEMNITY

Insurance Company

BID BOND

BOND NUMBER BD34681

KNOW ALL MEN BY THESE PRESENTS:

THAT JKL, Inc., P.O. Box 990, Buda, Texas 78610 as Principal, and COMMERCIAL INDEMNITY INSURANCE COMPANY, as Surety, are held and firmly bound unto County Of Williamson, Courthouse 1st Floor, Austin Avenue At Eighth Street, Georgetown, Texas 78026 as Obligee, in the full and just sum of Five (5%) Percent of the Amount Bid lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is hereby submitting its proposal for Jarrell Tornado Recovery Project, TCDP Contract #716307, Job #18464.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the aforesaid Principal shall be awarded the contract the said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise, the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event shall liability hereunder exceed the penal sum hereof.

Signed, sealed and delivered 27th day of October, 1997.

JKL, Inc.

PRINCIPAL

By *Leonard H. Ekberg* (SEAL)

COMMERCIAL INDEMNITY INSURANCE COMPANY

By *W. T. Ragsdale* (SEAL)

W. T. Ragsdale,

ATTORNEY-IN-FACT

**COMMERCIAL
INDEMNITY INSURANCE CO.**

KNOW ALL MEN BY THESE PRESENTS:

That the Commercial Indemnity Insurance Company, a Corporation duly organized and existing under the laws of the State of Texas, having its principal office in Austin, Texas, pursuant to the following resolution, adopted by the Board of Directors of the said Company on the 12th day of May, 1996, to wit:

"Resolved, that any officer of the Company shall have authority to make, execute and deliver a Power of Attorney constituting as Attorney-In-Fact, such persons, firms, or corporations as may be selected from time to time.

Be It Further Resolved, that the signature of any officer and the Seal of the Company may be affixed to any such Power of Attorney or any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such powers so executed and certified by facsimile signature or facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached." Commercial Indemnity Insurance Company does hereby make, constitute and appoint:

W. T. Ragsdale

State of Texas its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf, and its act and deed, as follows:

The Obligation of the Company shall not exceed one million (\$1,000,000.00) Dollars.

And to bind Commercial Indemnity Insurance company thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officer of the Commercial Indemnity Insurance Company, and all the acts of said Attorney(s) pursuant to the authority herein given, are hereby ratified and confirmed.

IN WITNESS WHEREOF, the Commercial Indemnity Insurance Company has caused these presents to be signed by any officer of the Company and its Corporate Seal to be hereto affixed.



State of Texas

County of Travis

Rudy Herzog
Rudy Herzog, President

On this 12th day of May, in the year 1996, before me Shannon McBride, a notary public, personally appeared Rudy Herzog, personally know to me to be the person who executed the within instrument as President, on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

Shannon McBride



Commission Expires 5-20-98

Shannon McBride, Notary Public

CERTIFICATE

I, the undersigned, Secretary of Commercial Indemnity Insurance Company, DO HEREBY CERTIFY that the foregoing and attached Power of Attorney and Certificate of Authority remains in full force and has not been revoked:

Signed and Sealed a the said Company at Austin, Texas dated this 27th day of October, 1997



Paul Cameron
Paul Cameron, Secretary

COMMERCIAL INDEMNITY

Insurance Company
(formerly Commercial Lloyd's Insurance Company)

IMPORTANT NOTICE

To obtain information or make a complaint:

You may **contact Rudy Herzog**, President of Operations, whose **direct dial number is 512-444-7776**. You may also **fax** us information at **512-440-0989**. You may also **call** Commercial Indemnity Insurance Company's **toll-free** telephone number for information or to make a complaint at:

1-800-234-8046

You may also **write** to Commercial Indemnity Insurance Company : 1507 South IH-35, Austin, Texas 78741.

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

You may also write the Texas Department of Insurance: P.O. Box 149104, Austin, Texas 78714-9104, Fax 512-475-1771.

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning your premium or about a claim you should contact the company first. If the dispute is not resolved you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY: This notice is for information only and does not become a part of condition of the attached document.

STATEMENT OF QUALIFICATIONS

All questions must be answered. This statement must be notarized Questions shall be answered on this form. Submit any additional information relative to this inquiry.

1. Name of Company

JKL, Inc.

2. Permanent mailing office address and phone number.

P.O. BOX 990

Buda, Tx.

512-312-1660 FAX 512-312-1405

3. When organized

August 20, 1993

4. If a corporation, when incorporated and names of officers.

August 20, 1993

Leonard Harold Ekberg : President\

W. G. White

Secretary\

Treasurer

5. How many years have you been engaged in contracting for business similar to this project.

Personally 13+ Years

JKL, Inc. 4 Year

6. Similar contracts on hand. (Show owner, amount of each contract and the engineer.)

Hays co. Rd. 131 Hays Co. 900,000.00

Hays co. Rd. 222 & 225 Hays Co. 1,300,000.00

Estates of Silerrado PBA 1,000,000

Texas Comm. Bank Flynn 230,000

Bastrop Parking Lot Tx-Dot 187,000

Barton Creek West Keystone 275,000

7. Type of work performed by your company

General Contracting

1) Excavation 2)Base 3) Asphalt 4) Concrete 5) Utilities

8. Have you ever failed to complete any work awarded to you? If so where and why.

NO

9. Have you ever defaulted on a contract? If so where and why?

NO

10. List any similar projects recently completed by your company, stating the approximate cost for each, the month and year completed and the engineer.

Browning-Ferris Ind: Road Extension \$100,000: Completed Sept, 1993 Contact :
Kim Barnes 512-272-4327
Browning-Ferris Cell and Liner Excavation and Installation \$ 142,000 Contact :
Kim Barnes 512-272-4327
Dove Springs: Excavation & Paving, \$68,000
Copeland Excavation & Paving : Fisher Haygood Engineer: & \$96,000 Completed
May, 1994 Contact: Tim Moltz
Browning-Ferris Ind.: Parking Lot Overlay : \$15,787 Completed April, 1994
Browning-Ferris Ind. Road Repair & Overlay: \$145,000 Completed June, 1994
Contact Person: Kim Barnes
City of Cedar Park, Bagdad Road Improvements, \$170,000 Engineer: Fisher
Haygood, Contact: Tim Moltz
City of Pflugerville 1994 Road Improvement, \$51,000, Engineer: Neptune-Wilkinson
Contact: John Bartel 512-462-3373
State Farm Site Development, General Contractor: Hillman Const., Chris Heidrick
North Town Subdivision \$ 500,000 Engineer : Carlson Engineering, Contact: Danny
Doering 512-280-5160
Super Walmart Seguin Texas \$1,120,000
University of Texas 1994 Road Project, \$250,000 A&E Services Contact:
Mark Jones, 512-471-3042
PISD FFA Project \$21,000 Contact: Randy Rose, Engineer: Jose Gil, 512-835-4203
PISD Opportunity Center Parking Lot, Engineer: Jose Gil, 512-835-4203
HEB Harker Heights, \$270,000, Contact: John Painter 713-332-6748
HEB Copperas Cove \$275,000
North Town Subdivision \$350,000 Carlson Engineer
North Town Subdivision \$160,000 Haglin Utilities
Round Rock Police Entrance Road \$58,000
Walmart Garland \$575,000
Hancock Road City of Austin \$ 450,000
City of Buda Street Rehab. \$411,000
Seton Parking Lot Improvements \$100,000
R.M. 620 475,000.00 TxDot
High Meadows Channel Imp. 95,000.00 Carlson Engineering
I.R.S Parking Lot 275,000.00 TxDot
FM 1103 Road Construction \$400,000
Jacks Pond Subdivision 450,000.00 Carlson Engineering
Hays co. Rd. 181 (Fischer Store Rd.) Hays Co. 500,000.00
Battered Womens Center \$280,000 Lozano, Ortiz, and Kent
U.T. Blacklands Parking \$212,500 A&E Services
Cedar Park Access Rd. 80,000.00 Hejl, Lee & Assoc.
River Ridge Subdivision 250,000.00 Winkley & Assoc.
Stoney Ridge Subdivision 475,000.00 Bill Gurasich

11. List percentage of contract cost which you plan to subcontract.
25%

12. List experience in construction work similar to this name of firm.
See questions # 10

13. Background and experience of the principal members of your organization which will be involved on project.

See Resume

Leonard Ekberg Project Manager for Garey Construction Co.
1985 thru 1993

Todd Kennedy Project Manager.
Supt. for BFI May 5 1991 to Sept. 1994

14. Is sufficient credit available for project?
YES

15. Give Bank reference
Norwest
CONTACT : Sean Tuggle (512)389-1200

16. List equipment that you will place on the job site to perform work under this contract.
Indicate if owned or leased.

- (2) 12G Motor Grader Own
- 140G Motor Grader Own
- 87 Ford Water Own
- (2) 416 Backhoe Own
- 950 Loader Own
- D-8 N Dozer Lease
- 80 Mack Haul Truck Own
- 563 b Roller Own
- Ingersol Rand 170 Roller Own
- (2) 1980 Chevy Water Truck Own
- 1982 Int. Service Truck Own
- 973 Loader Own
- 1980 Dodge Pickup Own
- 1992 Chevy Pickup Own
- 1993 Chevy Pickup Own
- 1995 580 SL Backhoe Own
- 1996 963 Track Loader Own
- 1987 GMC Pickup Own
- (2) 1996 Ford Pickup Own

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 he desires.

Name of Bidder: JKL Inc.

Address: P.O. Box 990
BUDA, TX. 78610

Date Organized: _____

Date Incorporated: _____

Number of Years in contracting business under present name: _____

CONTRACTS ON HAND:

Contracts	Dollar Amount	Completion Date

Type of work performed by your company: _____

Have you ever failed to complete any work awarded to you? _____

Have you ever defaulted on a contract? _____

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

Project	Dollar Amount	Mo/Yr Completed

Major equipment available for this contract: _____

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

Credit available: \$ _____ Bank reference: _____

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 28th day of October, 19 97.

by: Leonard B. Hickey

(Signature)

President

(Title)

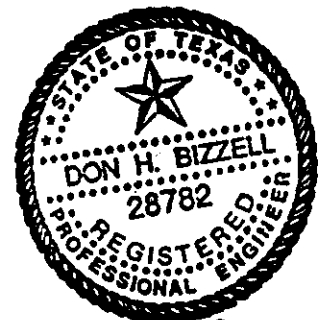
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 839

PROPOSAL & BID SCHEDULE

Date: OCT. 28, 1997

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1 BA

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

McLean Construction, Inc.
P.O. Box 10759 Killeen, Texas 76547
Office (800) 874-9486 FAX (817) 634-4694

John C. Doerfler, County Judge
Williamson County Commissioners' Court
710 Main Street
Georgetown, TX 78626

BID DATE : 28-Oct-97
TODAY'S : 28-Oct-97
BID TIME : 11:00 AM
123 : JARRELL
TIME : 120
DAMAGES : \$500.00

JARRELL TORNADO RECOVERY PROJECT

Item	Description	Quant.	Unit Price	Amount
1.	Roadway Excavation	65543 sy	3.60	\$235,954.80
2.	Subgrade Preparation	69944 sy	0.93	65,047.92
3.	Reworking Base Material	37610 sy	3.90	146,679.00
4.	Base Material	61002 sy	5.70	347,711.40
5.	Asphalt C/P 1 1/2"	60861 sy	2.70	164,324.70
6.	Roadside Ditch	20581 lf	1.40	28,813.40
7.	Paved Driveway	42 ea	221.00	9,282.00
8.	Metal Beam Guard Fence	1275.5 lf	15.10	19,260.05
9.	Terminal Anchor Section	35 EA	500.00	17,500.00
10.	Culvert Mod. Location No.1	1 l.s	1,664.00	1,664.00
11.	Culvert Mod. Location No.2	1 l.s	12,872.00	12,872.00
12.	Culvert Mod. Location No.3	1 l.s	1,535.00	1,535.00
13.	Culvert Mod. Location No.4	1 l.s	7,640.00	7,640.00
14.	Culvert Mod. Location No.5	1 l.s	1,351.00	1,351.00
15.	Culvert Mod. Location No.6	1 l.s	2,513.00	2,513.00
16.	Culvert Mod. Location No.7	1 l.s	1,316.00	1,316.00
17.	Culvert Mod. Location No.8	1 l.s	1,337.00	1,337.00
18.	Culvert Mod. Location No.9	1 l.s	1,316.00	1,316.00
19.	Culvert Mod. Location No.10	1 l.s	1,316.00	1,316.00
20.	Culvert Mod. Location No.11	1 l.s	1,316.00	1,316.00
21.	Culvert Mod. Location No.12	1 l.s	1,316.00	1,316.00
22.	Culvert Mod. Location No.13	1 l.s	1,402.00	1,402.00
23.	Culvert Mod. Location No.14	1 l.s	1,316.00	1,316.00
24.	Culvert Mod. Location No.15	1 l.s	1,427.00	1,427.00
25.	Culvert Mod. Location No.16	1 l.s	1,374.00	1,374.00
26.	Culvert Mod. Location No.17	1 l.s	1,351.00	1,351.00
27.	Culvert Mod. Location No.18	1 l.s	1,351.00	1,351.00
28.	Culvert Mod. Location No.19	1 l.s	1,351.00	1,351.00
29.	Culvert Mod. Location No.20	1 l.s	1,641.00	1,641.00
30.	Culvert Mod. Location No.21	1 l.s	2,982.00	2,982.00
31.	Culvert Mod. Location No.22	1 l.s	1,316.00	1,316.00
32.	Culvert Mod. Location No.23	1 l.s	3,099.00	3,099.00
33.	Culvert Mod. Location No.24	1 l.s	18,054.00	18,054.00
34.	Culvert Mod. Location No.25	1 l.s	1,351.00	1,351.00
35.	Culvert Mod. Location No.26	1 l.s	2,780.00	2,780.00
36.	Culvert Mod. Location No.27	1 l.s	1,353.00	1,353.00
37.	Culvert Mod. Location No.28	1 l.s	25,665.00	25,665.00
38.	Culvert Mod. Location No.29	1 l.s	1,574.00	1,574.00
39.	Culvert Mod. Location No.30	1 l.s	29,947.00	29,947.00

Item	Description	Quant.	Unit Price	Amount
40.	Culvert Mod. Location No.31	1 l.s	18,606.00	18,606.00
41.	Culvert Mod. Location No.32	1 l.s	1,413.00	1,413.00
42.	Culvert Mod. Location No.33	1 l.s	1,337.00	1,337.00
43.	Culvert Mod. Location No.34	1 l.s	1,427.00	1,427.00
44.	Culvert Mod. Location No.35	1 l.s	1,427.00	1,427.00
45.	Culvert Mod. Location No.36	1 l.s	10,627.00	10,627.00
46.	Culvert Mod. Location No.37	1 l.s	1,641.00	1,641.00
47.	Culvert Mod. Location No.38	1 l.s	1,402.00	1,402.00
48.	Culvert Mod. Location No.39	1 l.s	1,376.00	1,376.00
49.	Culvert Mod. Location No.40	1 l.s	5,491.00	5,491.00
50.	Culvert Mod. Location No.41	1 l.s	12,412.00	12,412.00
51.	Culvert Mod. Location No.42	1 l.s	1,427.00	1,427.00
52.	Culvert Mod. Location No.43	1 l.s	1,427.00	1,427.00
53.	Culvert Mod. Location No.44	1 l.s	1,456.00	1,456.00
55.	Culvert Mod. Location No.46	1 l.s	12,150.00	12,150.00
56.	Culvert Mod. Location No.47	1 l.s	1,402.00	1,402.00
57.	Culvert Mod. Location No.48	1 l.s	1,351.00	1,351.00
58.	Culvert Mod. Location No.49	1 l.s	1,376.00	1,376.00
59.	Culvert Mod. Location No.50	1 l.s	1,376.00	1,376.00
60.	Culvert Mod. Location No.51	1 l.s	1,351.00	1,351.00
61.	Culvert Mod. Location No.52	1 l.s	10,328.00	10,328.00
62.	Culvert Mod. Location No.53	1 l.s	1,376.00	1,376.00
63.	Culvert Mod. Location No.54	1 l.s	1,337.00	1,337.00
64.	Culvert Mod. Location No.55	1 l.s	3,251.00	3,251.00
65.	Culvert Mod. Location No.56	1 l.s	3,362.00	3,362.00
66.	Culvert Mod. Location No.57	1 l.s	2,669.00	2,669.00
67.	Culvert Mod. Location No.58	1 l.s	2,605.00	2,605.00
68.	Silt Fence	18760 lf	1.60	30,016.00
69.	Rock Berm	1458 lf	17.00	24,786.00
70.	Trench & Excav. Safety@2	570 sf	1.50	855.00
71.	Trench & Excav. Safety@2	532 sf	1.50	798.00
72.	Trench & Excav. Safety@2	512 sf	1.50	768.00
73.	Trench & Excav. Safety@2	570 sf	1.50	855.00
74.	Trench & Excav. Safety@2	264 sf	1.50	396.00
75.	Trench & Excav. Safety@2	494 sf	1.50	741.00
76.	Street Signage	1 ls		0.00
TOTAL				\$1,334,017.27

BID ACCEPTED:

TOTAL BID ACCEPTED: \$ _____

ACCEPTANCE RECOMMENDED:
STEGER & BIZZELL ENGINEERING, INC.

By: _____ Date: _____
Don H. Bizzell - P.E.

ACCEPTED:
John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County - OWNER

By: _____ Date: _____
John C. Doerfler

**Bid Bond
SURETY DEPARTMENT**

KNOW ALL MEN BY THESE PRESENTS,

That we,

MCLEAN CONSTRUCTION COMPANY, INC.

as Principal,
hereinafter called the Principal, and
existing under the laws of the State of CONTINENTAL CASUALTY COMPANY, a corporation created and
ILLINOIS, whose principal office is in CHICAGO
as Surety, hereinafter called the Surety, are held and firmly bound unto Williamson County

as Obligor, hereinafter called the Obligor,
in the sum of FIVE PERCENT OF THE GREATEST AMOUNT BID

Dollars (\$ 5% G.A.B.)

for the payment of which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal has submitted a bid for

NOW, THEREFORE, if the Obligor shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligor in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligor the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligor may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 28th day of October A.D. 19 97

**MCLEAN CONSTRUCTION
COMPANY, INC.**

By X [Signature] (Principal) (SEAL)

**CONTINENTAL CASUALTY
COMPANY**

By [Signature] (Surety) (SEAL)
RICHARD W. DAIKER ATTORNEY-IN-FACT

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That CONTINENTAL CASUALTY COMPANY, an Illinois corporation, NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, a Connecticut corporation, AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, a Pennsylvania corporation (herein collectively called "the CNA Surety Companies"), are duly organized and existing corporations having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signature and seals herein affixed hereby make, constitute and appoint Richard W. Daiker, James W. Leeker, James F. Mayfield, Individually

of Rockwall, Texas

their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their corporations and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Laws and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the corporations:

In Witness Whereof, the CNA Sureties Companies have caused these presents to be signed by their Group Vice President and their corporate seals to be hereto affixed on this 1st day of July, 1996.



CONTINENTAL CASUALTY COMPANY
NATIONAL FIRE INSURANCE COMPANY OF HARTFORD
AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA

M.C. Vonnahme

Group Vice President

State of Illinois, County of Cook, ss:

On this 1st day of July, 1996, before me personally came

M. C. Vonnahme, to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Darien, State of Illinois; that he is a Group Vice President of CONTINENTAL CASUALTY COMPANY, NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, and AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA described in and which executed the above instrument; that he knows the seals of said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.



My Commission Expires October 19, 1998

Linda C. Dempsey

Notary Public

CERTIFICATE

I, John M. Littler, Assistant Secretary of CONTINENTAL CASUALTY COMPANY, NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, and AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of each corporation printed on the reverse hereof are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seals of the said corporations this day of , .



CONTINENTAL CASUALTY COMPANY
NATIONAL FIRE INSURANCE COMPANY OF HARTFORD
AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA

846

John M. Littler

Assistant Secretary

III. STATEMENT OF BIDDER'S QUALIFICATIONS

1. McLean Construction, Inc.
2. P.O. Box 10759 - 4101 Trimmier Rd.
Killeen, TX 76542
3. Phone: 1-800-874-9486
1-254-634-4514
F A. X. : 1-254-634-4694
4. Incorporated in Texas in 1972
5. We have contracting as McLean Construction for 25 years.

6.	Central Texas Division Work on Hand	Amount	Est. Date of Completion
	Montaque Village (Subcon)-Cloud Const.-Prime	\$106,358.00	Oct-97
	24" Raw Waterline -City of Georgetown	235,803.00	Nov-97
	Relocate Utilities F.M. 439 - City of Belton	767,132.00	Dec-97
	Rahman Subdivision - Killeen	712,413.00	Feb-97
	West Loop Waterline PH4 - City of Georgetown	435,296.00	Feb-97

7. McLean Construction is a heavy and utility construction company. We are primarily involved in Municipal utility and subdivision construction.
- 8./9. McLean Construction has never failed to complete, and has never defaulted on a contract.

10.	Central Texas Division Completed Contracts	Amount	Date of Completion
	38th Street Interceptor- City of Killeen	\$140,960.00	Apr-97
	Mesquite West Phase 2 - Killeen	47,431.00	Jul-97
	5h Street Road (Subcon.)-Odell Geer Const -Prime	315,400.00	Aug-97
	B & M Addition - Killeen	92,000.00	Aug-97
	Walmart #31129 (Subcon)-Emerson Const.-Prime	309,785.00	Sep-97
	Faucet Subdivision Sewerline- Killeen	58,000.00	Oct-97
	12" Waterline - City of Harker Heights	220,138.00	Oct-97

11. See Attached Equipment Schedule
12. McLean Construction has built several major developments, both residential and commercial over the years. the most recent include;

Rahman Subdivision - Killeen
Walmart #31129 (Subcon)-Emerson Const.-Prime
Windfield Addition - Killeen
B & M Addition - Killeen
Regency Ridge - Killeen

13. James D. McLEAN, President
Gary McLean, Vice President

Both Jimmy and Gary McLean grew up in the plumbing and construction business. Each has over thirty years experience in all types of heavy construction.

Bruce Flanigan, Estimator and Project Manager

Bruce has over 25 years experience in utility and heavy construction.

14. Credit Available is \$ 2,000,000.00 plus
15. Our current primary bank is First National Bank, Temple
Contact Mr. Len Walker, Senior VP
16. We will provide a detailed financial statement if required.
17. The undersigned hereby authorizes and requests any person, firms or corporation to furnish any information requested by the OWNER in verification of the recitals comprising the Statement of Bidder's Qualifications.

Dated at Bell Co. this, 28th day of Oct., 1997

McLean Construction, Inc.

x [Signature]
James D. McLEAN, President

STATE OF TEXAS
COUNTY OF BELL

James D. McLEAN being duly sworn deposes and says that he is President of McLean Construction, Inc. and that the answers to the foregoing statements therein are true and correct.

Subscribed and sworn to before me this, 28th day of Oct., 1997

[Signature]
Notary Public

In and For Bell County, Texas

My Commission Expires 9-22-2001

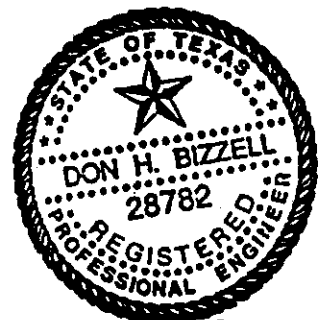
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 849

PROPOSAL & BID SCHEDULE

Date: October 28, 1997

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1 (DATED Oct. 24, 1997)

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard: No DOLLARS $\frac{1}{2}$ SEVENTY CENTS	\$.70	\$ 45,880.10
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard: No DOLLARS $\frac{1}{2}$ EIGHTY CENTS	\$.80	\$ 55,955.20
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard: ONE DOLLAR $\frac{1}{2}$ No CENTS	\$ 1.00	\$ 37,610.00
4.	61,002 s.y.	Base Material, complete in place, per square yard: FIVE $\frac{1}{2}$ FOUR CENTS	\$ 5.40	\$ 329,410.80
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard: Two DOLLARS $\frac{1}{2}$ NINETY CENTS	\$ 2.90	\$ 176,496.90

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$20,581.00</i>
7.	42 ea.	Paved Driveway, complete in place, per each: <i>NINE HUNDRED TWENTY-FIVE DOLLARS $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 925.00</i>	<i>\$38,850.00</i>
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot: <i>SIXTEEN DOLLARS $\frac{1}{2}$</i> <i>Forty CENTS</i>	<i>\$ 16.40</i>	<i>\$20,918.20</i>
9.	35 ea.	Terminal Anchor Section, complete in place, per each: <i>THREE HUNDRED EIGHTY DOLLARS $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 380.00</i>	<i>\$13,300.00</i>
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum: <i>ONE THOUSAND NINE HUNDRED NINETY DOLLARS $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$1,990.00</i>	<i>\$1,990.00</i>
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum: <i>SIX THOUSAND FIFTY SIX DOLLARS $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$6,056.00</i>	<i>\$6,056.00</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE \$ No CENTS</i>		<i>\$1,625.00</i>	<i>\$1,625.00</i>
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum: <i>FIVE THOUSAND ONE HUNDRED \$ No CENTS</i>		<i>\$5,100.00</i>	<i>\$5,100.00</i>
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS \$ No CENTS</i>		<i>\$1,625.00</i>	<i>\$1,625.00</i>
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE \$ No CENTS</i>		<i>\$1,625.00</i>	<i>\$1,625.00</i>
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE \$ No CENTS</i>		<i>\$1,625.00</i>	<i>\$1,625.00</i>
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE \$ No CENTS</i>		<i>\$1,625.00</i>	<i>\$1,625.00</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum: ONE THOUSAND SEVEN HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,725.00	\$ 1,725.00
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,625.00	\$ 1,625.00
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,625.00	\$ 1,625.00
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,625.00	\$ 1,625.00
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,625.00	\$ 1,625.00
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS, No CENTS	\$ 1,625.00	\$ 1,625.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum: <i>ONE THOUSAND SEVEN HUNDRED FIFTY DOLLARS & No CENTS</i>		\$ 1,750.00	\$ 1,750.00
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY FIVE & No CENTS</i>		\$ 1,625.00	\$ 1,625.00
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum: <i>TWO THOUSAND FOUR HUNDRED SEVENTY-FIVE DOLLARS & No CENTS</i>		\$ 2,475.00	\$ 2,475.00
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum: <i>THIRTEEN THOUSAND SEVEN HUNDRED SIXTY DOLLARS & No CENTS</i>		\$ 13,760.00	\$ 13,760.00
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 1,625.00	\$ 1,625.00
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum: <i>ONE THOUSAND EIGHT HUNDRED DOLLARS & No CENTS</i>		\$ 1,800.00	\$ 1,800.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS	\$ 1,625.00	\$ 1,625.00
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum: SIXTEEN THOUSAND SIX HUNDRED SEVENTY DOLLARS & No CENTS	\$ 16,670.00	\$ 16,670.00
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum: ONE THOUSAND SEVEN HUNDRED TWENTY-FIVE & No CENTS	\$ 1,725.00	\$ 1,725.00
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum: SEVENTEEN THOUSAND DOLLARS & No CENTS	\$ 17,000.00	\$ 17,000.00
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum: SEVENTEEN THOUSAND DOLLARS & No CENTS	\$ 17,000.00	\$ 17,000.00
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS	\$ 1,625.00	\$ 1,625.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS</i>		\$ 1,625.00	\$ 1,625.00
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS</i>		\$ 1,625.00	\$ 1,625.00
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS</i>		\$ 1,625.00	\$ 1,625.00
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum: <i>TWO THOUSAND NINE HUNDRED FIFTY DOLLARS & NO CENTS</i>		\$ 2,950.00	\$ 2,950.00
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS</i>		\$ 1,625.00	\$ 1,625.00
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS</i>		\$ 1,625.00	\$ 1,625.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 1,625.00	\$ 1,625.00
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum: <i>TWO THOUSAND FOUR HUNDRED SEVENTY-FIVE DOLLARS & No CENTS</i>		\$ 2,475.00	\$ 2,475.00
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum: <i>SEVEN THOUSAND EIGHT HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 7,825.00	\$ 7,825.00
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum: <i>ONE THOUSAND SEVEN HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 1,725.00	\$ 1,725.00
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 1,625.00	\$ 1,625.00
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>		\$ 1,625.00	\$ 1,625.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
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54.	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:		DELETE ADD. # 1	
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\$

\$

55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum: SEVEN THOUSAND EIGHT HUNDRED TWENTY-FIVE DOLLARS & No CENTS		\$ 7825.00	\$ 7825.00
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56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS		\$ 1,625.00	\$ 1,625.00
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57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS		\$ 1,625.00	\$ 1,625.00
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58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS		\$ 1,625.00	\$ 1,625.00
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59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS		\$ 1,625.00	\$ 1,625.00
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ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS	\$ 1,625.00	\$ 1,625.00
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum: FIVE THOUSAND ONE HUNDRED DOLLARS & NO CENTS	\$ 5,100.00	\$ 5,100.00
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS	\$ 1,625.00	\$ 1,625.00
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum: ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & NO CENTS	\$ 1,625.00	\$ 1,625.00
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum: TWO THOUSAND FOUR HUNDRED SEVENTY-FIVE DOLLARS & NO CENTS	\$ 2,475.00	\$ 2,475.00
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum: TWO THOUSAND FOUR HUNDRED SEVENTY-FIVE DOLLARS & NO CENTS	\$ 2,475.00	\$ 2,475.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum: <i>ONE THOUSAND SIX HUNDRED TWENTY-FIVE DOLLARS & No CENTS</i>	<i>\$ 1,625.00</i>	<i>\$ 1,625.00</i>
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot: <i>ONE DOLLAR & THIRTY-FIVE CENTS</i>	<i>\$ 1.35</i>	<i>\$ 25,326.00</i>
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot: <i>NINE DOLLARS & No CENTS</i>	<i>\$ 9.00</i>	<i>\$ 13,122.00</i>
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot: <i>ONE DOLLAR & No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 570.00</i>

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION (UNIT PRICE IN WORDS)</u>	<u>COST UNIT</u>	<u>TOTAL</u>
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 532.00</i>
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 512.00</i>
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 570.00</i>
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 264.00</i>
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot: <i>ONE DOLLAR $\frac{1}{2}$</i> <i>No CENTS</i>	<i>\$ 1.00</i>	<i>\$ 494.00</i>

76.

1 l.s.

Street Signage, complete in place, per
lump sum:THIRTEEN THOUSAND EIGHT HUNDRED
DOLLARS &
NO CENTS

\$ 13800.00

\$ 13800.00

TOTAL BID:

\$ 974,218.20

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

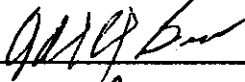
The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor: ODELL BEER CONSTRUCTION Co., Inc.

By (Name & Title): ODELL BEER, PRESIDENT

(Signature): 

Mailing Address: P.O. Box 1089
BELTON, TEXAS 76513

Telephone Number: (254) 939-0808 or (254) 699-2316

A.I.A. Document No. A-310
(February 1970 Ed.)Any correspondence in relation to this
bond should be directed to:BOND DEPT
WAUSAU INSURANCE COMPANIES
PO BOX 8017
WAUSAU WI 54402-8017
1-800-435-4401

Wausau Insurance Companies

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we, Odell Geer Construction Company, Inc.P.O. Box 1089, Belton, Tx. 76513as Principal, hereinafter called the Principal, and EMPLOYERS INSURANCE OF WAUSAU A Mutual Company, a
corporation duly organized under the laws of the State of Wisconsin as Surety, hereinafter called the Surety are held and firmly
bound unto Williamson Countyas Oblige, hereinafter called the Oblige, in the sum of Five Percent of Aggregate BidDollars (\$ 5%),for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents.WHEREAS, the Principal has submitted a bid for County Road Reconstruction, Jarrell Tornado
Recovery Project

Now, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter into a contract with the
Oblige in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or contract
documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and
material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such
bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount
specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the
work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 23th day of October A.D. 19 97

Witness

Odell Geer Construction Company, Inc.

Principal

(Seal)

By

Odell GeerTitle PresidentEMPLOYERS INSURANCE OF WAUSAU A Mutual Company

Surety

(Seal)

By

Don H. Cast

Attorney-in-Fact

866

SC0023
11-93

EMPLOYERS INSURANCE OF WAUSAU A Mutual Company
POWER OF ATTORNEY
(FOR BID BONDS ONLY)

KNOW ALL MEN BY THESE PRESENTS:
That the EMPLOYERS INSURANCE OF WAUSAU A Mutual Company, a corporation duly organized and existing under the laws of the State of Wisconsin, and having its principal office in the City of Wausau, County of Marathon, State of Wisconsin, has made, constituted and appointed, and does by these presents make, constitute and appoint DON H. CAST, JUDY CAST

its true and lawful attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, seal, acknowledge and deliver ANY AND ALL BID BONDS OR WRITTEN DOCUMENTS INVOLVING BID GUARANTEES OR IN THE NATURE THEREAFTER

and to bind the corporation thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the corporation and duly attested by its secretary hereby ratifying and confirming all that the said attorney-in-fact may do in the premises.

This power of attorney is granted pursuant to the following resolution adopted by the Board of Directors of said Company at a meeting duly called and held on the 18th day of May, 1973, which resolution is still in effect:

"RESOLVED, that the President and any Vice President — elective or appointive — of EMPLOYERS INSURANCE OF WAUSAU A Mutual Company be, and that each of them hereby is, authorized to execute powers of attorney qualifying the attorney named in the given power of attorney to execute on behalf of EMPLOYERS INSURANCE OF WAUSAU A Mutual Company bonds, undertakings and all contracts of suretyship; and that any secretary or assistant secretary be, and that each or any of them hereby is, authorized to attest the execution of any such power of attorney, and to attach thereto the seal of EMPLOYERS INSURANCE OF WAUSAU A Mutual Company."

"FURTHER RESOLVED, that the signatures of such officers and the seal of EMPLOYERS INSURANCE OF WAUSAU A Mutual Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures and facsimile seal shall be valid and binding upon the EMPLOYERS INSURANCE OF WAUSAU A Mutual Company when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached."

IN WITNESS WHEREOF, EMPLOYERS INSURANCE OF WAUSAU A Mutual Company has caused these presents to be signed by the vice president and attested by its assistant secretary, and its corporate seal to be hereto affixed this 1ST day of SEPTEMBER, 19 97.

EMPLOYERS INSURANCE OF WAUSAU A Mutual Company

By J. Stephen Ryan Vice President

Attest: R. J. Besteman Assistant Secretary

STATE OF WISCONSIN)
COUNTY OF MARATHON) ss.

On this 1ST day of SEPTEMBER, 19 97, before me personally came J. Stephen Ryan

, to me known, who being by me duly sworn, did depose and say that he is a vice president of the EMPLOYERS INSURANCE OF WAUSAU A Mutual Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal and that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year herein first above written.

Patricia A. Herdina
Patricia A. Herdina
NOTARY PUBLIC
STATE OF WISCONSIN
MY COMMISSION EXPIRES MAY 24, 1998
CERTIFICATE

STATE OF WISCONSIN)
CITY OF WAUSAU) ss.
COUNTY OF MARATHON)

I, the undersigned, assistant secretary of EMPLOYERS INSURANCE OF WAUSAU A Mutual Company, a Wisconsin corporation, do hereby certify that the foregoing and attached power of attorney, WHICH MUST CONTAIN A VALIDATING STATEMENT PRINTED IN THE MARGIN THEREOF IN RED INK, remains in full force and has not been revoked; and furthermore that the resolution of the Board of Directors set forth in the power of attorney is still in force.

Signed and sealed in the City of Wausau, Marathon County, State of Wisconsin, this 23th day of October, 19 97.

R. J. Besteman Assistant Secretary

NOTE: IF YOU HAVE ANY QUESTIONS REGARDING THE VALIDITY OR WORDING OF THIS POWER OF ATTORNEY, CALL TOLL FREE (800) 826-1661. (IN WISCONSIN, CALL (800) 472-0041)

815-4222-1 09-96

867

WARNING
THIS IS AN INVALID POWER OF ATTORNEY IF THIS STATEMENT DOES NOT APPEAR IN RED INK.

County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

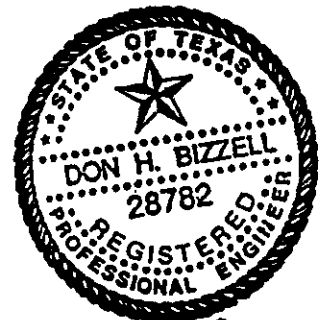
Williamson County, Texas

Funded Through A Grant From
TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS
Texas Community Development Program
Contract No. 716307

Job No. 18464

Prepared by:

Steger & Bizzell Engineering, Inc.
Consulting Engineers - Surveyors
1978 S. Austin Ave.
Georgetown, Texas 78626



Don H. Bizzell
10/6/97 868

PROPOSAL & BID SCHEDULE

Date: 10-28-97

John C. Doerfler, County Judge
Williamson County Commissioners' Court
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Honorable Judge Doerfler:

The undersigned, in compliance with your invitation for bids for construction of **County Road Reconstruction, JARRELL TORNADO RECOVERY PROJECT**, in Williamson County, Texas, having examined the plans and specifications with related documents, and having visited the site of the proposed work, hereby proposes to furnish all labor, material, apparatus, machinery, tools and supplies to construct the project in accordance with the Contract Documents within the time set forth herein and at the prices stated in the following Bid Items in the respective Proposals:

I (WE) acknowledge receipt of Addendum No. 1.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

I (WE) acknowledge receipt of Addendum No. ____.

BID SCHEDULE
County Road Reconstruction
JARRELL TORNADO RECOVERY PROJECT

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
1.	65,543 s.y.	Roadway Excavation, complete in place, per square yard: ONE DOLLAR TEN CENTS	\$ 1 ¹⁰ / ₁₀		\$ 72,097 ³⁰
2.	69,944 s.y.	Subgrade Preparation, complete in place, per square yard: ONE DOLLAR TEN CENTS	\$ 1 ¹⁰ / ₁₀		\$ 76,938 ⁴⁰
3.	37,610 s.y.	Reworking Base Material, complete in place, per square yard: ONE DOLLAR TEN CENTS	\$ 1 ¹⁰ / ₁₀		\$ 41,371 ⁰⁰
4.	61,002 s.y.	Base Material, complete in place, per square yard: FOUR DOLLARS FIFTY FIVE CENTS	\$ 4 ⁵⁵ / ₁₀₀		\$ 277,559 ¹⁰
5.	60,861 s.y.	Asphaltic Concrete Pavement, 1½" compacted thickness, complete in place, per square yard: TWO DOLLARS NINETY FIVE CENTS	\$ 2 ⁹⁵ / ₁₀₀		\$ 179,539 ⁹⁵

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
6.	20,581 l.f.	Roadside Ditch, complete in place, per linear foot: <i>ONE DOLLAR NINETY CENTS</i>	<i>\$ 1⁹⁰</i>	<i>\$ 39,103⁹⁰</i>
7.	42 ea.	Paved Deiveway, complete in place, per each: <i>FOUR HUNDRED FIFTY DOLLARS NO CENTS</i>	<i>\$ 450⁰⁰</i>	<i>\$ 18,900⁰⁰</i>
8.	1,275.5 l.f.	Metal Beam Guard Fence, complete in place, per linear foot: <i>TWELVE DOLLARS NO CENTS</i>	<i>\$ 12⁰⁰</i>	<i>\$ 15,306⁰⁰</i>
9.	35 ea.	Terminal Anchor Section, complete in place, per each: <i>THREE HUNDRED FIFTY NO CENTS</i>	<i>\$ 350⁰⁰</i>	<i>\$ 12,250⁰⁰</i>
10.	1 l.s.	Culvert Modification Location No. 1, complete in place, per lump sum: <i>SIXTEEN HUNDRED FIFTY DOLLARS NO CENTS</i>	<i>\$ 1,650⁰⁰</i>	<i>\$ 1,650⁰⁰</i>
11.	1 l.s.	Culvert Modification Location No. 2, complete in place, per lump sum: <i>TWELVE THOUSAND DOLLARS NO CENTS</i>	<i>\$ 12,000⁰⁰</i>	<i>\$ 12,000⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
12.	1 l.s.	Culvert Modification Location No. 3, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
13.	1 l.s.	Culvert Modification Location No. 4, complete in place, per lump sum: <i>EIGHTY TWO HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 8,200⁰⁰</i>	<i>\$ 8,200⁰⁰</i>
14.	1 l.s.	Culvert Modification Location No. 5, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
15.	1 l.s.	Culvert Modification Location No. 6, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
16.	1 l.s.	Culvert Modification Location No. 7, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
17.	1 l.s.	Culvert Modification Location No. 8, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
18.	1 l.s.	Culvert Modification Location No. 9, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
19.	1 l.s.	Culvert Modification Location No. 10, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
20.	1 l.s.	Culvert Modification Location No. 11, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
21.	1 l.s.	Culvert Modification Location No. 12, complete in place, per lump sum: <i>THIRTEEN HUNDRED FIFTY DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1350⁰⁰</i>	<i>\$ 1,350⁰⁰</i>
22.	1 l.s.	Culvert Modification Location No. 13, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
23.	1 l.s.	Culvert Modification Location No. 14, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
24.	1 l.s.	Culvert Modification Location No. 15, complete in place, per lump sum: <i>TWO THOUSAND DOLLARS</i> <i>NO CENTS</i>		\$ 2,000 ⁰⁰	\$ 2,000 ⁰⁰
25.	1 l.s.	Culvert Modification Location No. 16, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		\$ 1,200 ⁰⁰	\$ 1,200 ⁰⁰
26.	1 l.s.	Culvert Modification Location No. 17, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		\$ 1,200 ⁰⁰	\$ 1,200 ⁰⁰
27.	1 l.s.	Culvert Modification Location No. 18, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		\$ 1,200 ⁰⁰	\$ 1,200 ⁰⁰
28.	1 l.s.	Culvert Modification Location No. 19, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		\$ 1,200 ⁰⁰	\$ 1,200 ⁰⁰
29.	1 l.s.	Culvert Modification Location No. 20, complete in place, per lump sum: <i>THIRTEEN HUNDRED FIFTY DOLLARS</i> <i>NO CENTS</i>		\$ 1,350 ⁰⁰	\$ 1,350 ⁰⁰

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
30.	1 l.s.	Culvert Modification Location No. 21, complete in place, per lump sum: <i>SIXTEEN HUNDRED FIFTY DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,650⁰⁰</i>	<i>\$ 1,650⁰⁰</i>
31.	1 l.s.	Culvert Modification Location No. 22, complete in place, per lump sum: <i>TWELVE HUNDRED</i> <i>NO CENTS</i>	<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
32.	1 l.s.	Culvert Modification Location No. 23, complete in place, per lump sum: <i>SEVENTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,700⁰⁰</i>	<i>\$ 1,700⁰⁰</i>
33.	1 l.s.	Culvert Modification Location No. 24, complete in place, per lump sum: <i>TWENTY FIVE THOUSAND DOLLARS</i> <i>NO CENTS</i>	<i>\$ 25,000⁰⁰</i>	<i>\$ 25,000⁰⁰</i>
34.	1 l.s.	Culvert Modification Location No. 25, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
35.	1 l.s.	Culvert Modification Location No. 26, complete in place, per lump sum: <i>SIXTEEN HUNDRED FIFTY DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,650⁰⁰</i>	<i>\$ 1,650⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
36.	1 l.s.	Culvert Modification Location No. 27, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
37.	1 l.s.	Culvert Modification Location No. 28, complete in place, per lump sum: <i>TWENTY TWO THOUSAND DOLLARS</i> <i>NO CENTS</i>	<i>\$ 22,000⁰⁰</i>	<i>\$ 22,000⁰⁰</i>
38.	1 l.s.	Culvert Modification Location No. 29, complete in place, per lump sum: <i>SIXTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,600⁰⁰</i>	<i>\$ 1,600⁰⁰</i>
39.	1 l.s.	Culvert Modification Location No. 30, complete in place, per lump sum: <i>THIRTY NINE THOUSAND DOLLARS</i> <i>NO CENTS</i>	<i>\$ 39,000⁰⁰</i>	<i>\$ 39,000⁰⁰</i>
40.	1 l.s.	Culvert Modification Location No. 31, complete in place, per lump sum: <i>TWENTY THOUSAND DOLLARS</i> <i>NO CENTS</i>	<i>\$ 22,000⁰⁰</i>	<i>\$ 22,000⁰⁰</i>
41.	1 l.s.	Culvert Modification Location No. 32, complete in place, per lump sum: <i>THIRTEEN HUNDRED FIFTY DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,350⁰⁰</i>	<i>\$ 1,350⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
42.	1 l.s.	Culvert Modification Location No. 33, complete in place, per lump sum: <i>TWELVE HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,200⁰⁰</i>	<i>\$ 1,200⁰⁰</i>
43.	1 l.s.	Culvert Modification Location No. 34, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
44.	1 l.s.	Culvert Modification Location No. 35, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
45.	1 l.s.	Culvert Modification Location No. 36, complete in place, per lump sum: <i>EIGHT THOUSAND DOLLARS</i> <i>NO CENTS</i>		<i>\$ 8,000⁰⁰</i>	<i>\$ 8,000⁰⁰</i>
46.	1 l.s.	Culvert Modification Location No. 37, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
47.	1 l.s.	Culvert Modification Location No. 38, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>		<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
48.	1 l.s.	Culvert Modification Location No. 39, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
49.	1 l.s.	Culvert Modification Location No. 40, complete in place, per lump sum: <i>SIXTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,600⁰⁰</i>	<i>\$ 1,600⁰⁰</i>
50.	1 l.s.	Culvert Modification Location No. 41, complete in place, per lump sum: <i>THIRTEEN THOUSAND DOLLARS</i> <i>NO CENTS</i>	<i>\$ 13,000⁰⁰</i>	<i>\$ 13,000⁰⁰</i>
51.	1 l.s.	Culvert Modification Location No. 42, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
52.	1 l.s.	Culvert Modification Location No. 43, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
53.	1 l.s.	Culvert Modification Location No. 44, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	UNIT	COST	TOTAL
54. Add. #1	1 l.s.	Culvert Modification Location No. 45, complete in place, per lump sum:			
			\$	\$	
55.	1 l.s.	Culvert Modification Location No. 46, complete in place, per lump sum: EIGHT THOUSAND FIVE HUNDRED DOLLARS NO CENTS		\$ 8,500 ⁰⁰	\$ 8,500 ⁰⁰
56.	1 l.s.	Culvert Modification Location No. 47, complete in place, per lump sum: THIRTEEN HUNDRED DOLLARS NO CENTS		\$ 1,300 ⁰⁰	\$ 1,300 ⁰⁰
57.	1 l.s.	Culvert Modification Location No. 48, complete in place, per lump sum: THIRTEEN HUNDRED DOLLARS NO CENTS		\$ 1,300 ⁰⁰	\$ 1,300 ⁰⁰
58.	1 l.s.	Culvert Modification Location No. 49, complete in place, per lump sum: THIRTEEN HUNDRED DOLLARS NO CENTS		\$ 1,300 ⁰⁰	\$ 1,300 ⁰⁰
59.	1 l.s.	Culvert Modification Location No. 50, complete in place, per lump sum: THIRTEEN HUNDRED DOLLARS NO CENTS		\$ 1,300 ⁰⁰	\$ 1,300 ⁰⁰

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
60.	1 l.s.	Culvert Modification Location No. 51, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
61.	1 l.s.	Culvert Modification Location No. 52, complete in place, per lump sum: <i>SIXTY FIVE HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 6,500⁰⁰</i>	<i>\$ 6,500⁰⁰</i>
62.	1 l.s.	Culvert Modification Location No. 53, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
63.	1 l.s.	Culvert Modification Location No. 54, complete in place, per lump sum: <i>THIRTEEN HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 1,300⁰⁰</i>	<i>\$ 1,300⁰⁰</i>
64.	1 l.s.	Culvert Modification Location No. 55, complete in place, per lump sum: <i>TWENTY TWO HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 2,200⁰⁰</i>	<i>\$ 2,200⁰⁰</i>
65.	1 l.s.	Culvert Modification Location No. 56, complete in place, per lump sum: <i>TWENTY THREE HUNDRED DOLLARS</i> <i>NO CENTS</i>	<i>\$ 2,300⁰⁰</i>	<i>\$ 2,300⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
66.	1 l.s.	Culvert Modification Location No. 57, complete in place, per lump sum: <i>SEVENTEEN HUNDRED DOLLARS NO CENTS</i>	<i>\$ 1,700⁰⁰</i>	<i>\$ 1,700⁰⁰</i>
67.	1 l.s.	Culvert Modification Location No. 58, complete in place, per lump sum: <i>SEVENTEEN HUNDRED DOLLARS NO CENTS</i>	<i>\$ 1,700⁰⁰</i>	<i>\$ 1,700⁰⁰</i>
68.	18,760 l.f.	Silt Fence, complete in place, per linear foot: <i>ONE DOLLAR SIXTY FIVE CENTS</i>	<i>\$ 1⁶⁵</i>	<i>\$ 30,954⁰⁰</i>
69.	1,458 l.f.	Rock Berm, complete in place, per linear foot: <i>TWELVE DOLLARS NO CENTS</i>	<i>\$ 12⁰⁰</i>	<i>\$ 17,496⁰⁰</i>
70.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 2, complete in place, per square foot: <i>NO DOLLARS FIFTY</i>	<i>\$ -50</i>	<i>\$ 285⁰⁰</i>

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION (UNIT PRICE IN WORDS)	COST UNIT	TOTAL
71.	532 s.f.	Trench and Excavation Safety at Culvert Location No. 4, complete in place, per square foot: NO DOLLARS FIFTY CENTS	\$.50	\$ 266 ⁰⁰
72.	512 s.f.	Trench and Excavation Safety at Culvert Location No. 24, complete in place, per square foot: NO DOLLARS FIFTY CENTS	\$.50	\$ 256 ⁰⁰
73.	570 s.f.	Trench and Excavation Safety at Culvert Location No. 30, complete in place, per square foot: NO DOLLARS FIFTY CENTS	\$.50	\$ 285 ⁰⁰
74.	264 s.f.	Trench and Excavation Safety at Culvert Location No. 31, complete in place, per square foot: NO DOLLARS FIFTY CENTS	\$.50	\$ 132 ⁰⁰
75.	494 s.f.	Trench and Excavation Safety at Culvert Location No. 52, complete in place, per square foot: NO DOLLARS FIFTY CENTS	\$.50	\$ 247 ⁰⁰

76.

1 l.s.

Street Signage, complete in place, per
lump sum:

per

NINE THOUSAND
NO DOLLARS\$9,000⁰⁰\$9,000⁰⁰

TOTAL BID:

\$1,021,086⁶⁵
xx

The undersigned CONTRACTOR agrees and pledges to complete the work in full for the OWNER within 120 calendar days from the "Notice to Proceed". The undersigned CONTRACTOR further agrees to pay as liquidated damages, the sum of Five Hundred Dollars (\$500.00) per calendar day for which the work is not completed as provided in the General Agreement.

The undersigned further declares that he will provide all necessary tools, machinery and apparatus, do all of the work and furnish all the materials and supplies, and do everything required to carry out the above-mentioned work covered by this proposal in strict accordance with the contract documents, and the requirements pertaining thereto, for the sum or sums above set forth.

Enclosed with this proposal is a certified or cashier's check for _____ dollars (\$ _____), or acceptable bid bond in the sum of five per cent (5%) of the total bid, which it is agreed shall be retained by the OWNER as liquidated damages in the event this proposal is accepted by the OWNER and the undersigned fails to execute the conditions thereof within ten days after the date of said proposed being accepted; otherwise, said check or bond shall be returned to the undersigned CONTRACTOR upon demand.

If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned CONTRACTOR within thirty (30) days after the date of the opening of bids, or any time thereafter before this bid is withdrawn, the undersigned CONTRACTOR will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of Agreement to be attached to the specifications and bid as accepted. The undersigned CONTRACTOR hereby designates as his office to which such notice of acceptance be mailed, telegraphed or delivered:

Contractor:

ROGERS CONSTRUCTION COMPANY

By (Name & Title):

RANDALL C. ROGERS VICE PRESIDENT

(Signature):

Randall C. Rogers

Mailing Address:

P.O. DRAWER 1136

GEORGETOWN, TEXAS 78627-1136

Telephone Number:

(512) 930-1155

Bid Bond

Bond Number

Know All Men By These Presents:

That ROGERS CONSTRUCTION COMPANY
P O DRAWER 1136 of GEORGETOWN, TX
....., as Principal, and the other undersigned, as Surety, are
held and firmly bound unto WILLIAMSON CO.
.....
as Oblige, in the full and just sum of FIVE (5%) PERCENT OF THE GREATEST AMOUNT BID----
----- (5%GAB) ----- 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.

Whereas, the said Principal is herewith submitting its proposal JARRELL TORNADO RECOVERY
PROJECT

The Condition Of This Obligation is such that if the aforesaid Principal shall be awarded the contract the said
Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the
performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will
pay unto the Oblige the difference in money between the amount of the bid of the said Principal and the amount for which the
Oblige legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event
shall liability hereunder exceed the penal sum hereof.

Signed, sealed and delivered 10/28/97
(Date)

FRANK SIDDONS INSURANCE
P. O. BOX 2125
AUSTIN, TX 78768

ROGERS CONSTRUCTION COMPANY (Seal)
Randall C. Rogers (Seal)
Fidelity and Guaranty Insurance Underwriters, Inc.
(a Wisconsin Corporation)
Jinda C. Rogers
Attorney-in-fact

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Fidelity and Guaranty Insurance Underwriters, Inc.**Power of Attorney**No. 515

Know all men by these presents: That **Fidelity and Guaranty Insurance Underwriters, Inc.**, a corporation organized and existing under the laws of the State of Wisconsin and having its principal office at the City of Baltimore, in the State of Maryland, does hereby constitute and appoint **Robert C. Siddons, Steven B. Siddons, Bettye Ann Rogers, Robert C. Fricke, Linda Couey, Douglas J. Wealty and James F. Siddons**

of the City of Austin, State of Texas its true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety to, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons; guaranteeing the performance of contracts; and executing or guaranteeing bonds and undertaking required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, the said **Fidelity and Guaranty Insurance Underwriters, Inc.** has caused this instrument to be sealed with its corporate seal, duly attested by the signatures of its Vice President and Assistant Secretary, this 6th day of September, A.D. 1996.

Fidelity and Guaranty Insurance Underwriters, Inc.(Signed) By [Signature] Vice President(Signed) By [Signature] Assistant Secretary

State of Maryland)

Baltimore City)

SS:

On this 6th day of September, A.D. 1996, before me personally came Gary A. Wilson, Vice President of **Fidelity and Guaranty Insurance Underwriters, Inc.**, and Thomas J. Fitzgerald, Assistant Secretary of said Company, with both of whom I am personally acquainted, who being by me severally duly sworn, said, that they, the said Gary A. Wilson and Thomas J. Fitzgerald were respectively the Vice President and the Assistant Secretary of the said **Fidelity and Guaranty Insurance Underwriters, Inc.**, the corporation described in and which executed the foregoing Power of Attorney; that they each knew the seal of said corporation; that the seal affixed to said Power of Attorney was such corporate seal, that it was so affixed by order of the Board of Directors of said corporation, and that they signed their names thereto by like order as Vice President and Assistant Secretary, respectively, of the Company.

My Commission expires the 1st day of August, A.D. 1998.(Signed) By [Signature] Notary Public

This Power of Attorney is granted under and by authority of the following Resolutions adopted by the Board of Directors of the **Fidelity and Guaranty Insurance Underwriters, Inc.** September 24, 1992:

Resolved, that in connection with the fidelity and surety insurance business of the Company, all bonds, undertakings, contracts and other instruments relating to said business may be signed, executed, and acknowledged by persons or entities appointed as Attorney(s)-in-Fact pursuant to a Power of Attorney issued in accordance with these resolutions. Said Power(s) of Attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman, or the President, or an Executive Vice President, or a Senior Vice President, or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the foregoing officers and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Attorney(s)-in-Fact for purposes only of executing in and attesting bonds and undertakings and other writings obligatory in the nature thereof, and, unless subsequently revoked and subject to any limitations set forth therein, any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is validly attached.

Resolved, That Attorney(s)-in-Fact shall have the power and authority, unless subsequently revoked and, in any case, subject to the terms and limitations of the Power of Attorney issued to them, to execute and deliver on behalf of the Company and to attach the seal of the Company to any and all bonds and undertakings, and other writings obligatory in the nature thereof, and any such instrument executed by such Attorney(s)-in Fact shall be as binding upon the Company as if signed by an Executive Officer and sealed and attested to by the Secretary of the Company.

I, Thomas J. Fitzgerald, an Assistant Secretary of the **Fidelity and Guaranty Insurance Underwriters, Inc.**, do hereby certify that the foregoing are true excerpts from the Resolutions of the said Company as adopted by its Board of Directors on September 24, 1992 and that these Resolutions are in full force and effect.

I, the undersigned Assistant Secretary of the **Fidelity and Guaranty Insurance Underwriters, Inc.** do hereby certify that the foregoing Power of Attorney is in full force and effect and has not been revoked.

In Testimony Whereof, I have hereunto set my hand and the seal of the **Fidelity and Guaranty Insurance Underwriters, Inc.** on this 28th day of Oct, 1997.



Assistant Secretary

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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 he desires.

Name of Bidder:

ROGERS CONSTRUCTION Company

Address:

P.O. DRAWER 1136GEORGETOWN, TEXAS 78627-1136

Date Organized:

4-1-77

Date Incorporated:

4-1-77

Number of Years in contracting business under present name:

5**CONTRACTS ON HAND:**

Contracts	Dollar Amount	Completion Date
<u>Yuearb Ceramics</u>	<u>\$117,435.00</u>	
<u>San Marcos - Phase 7B</u>	<u>156,925.00</u>	<u>Dec. 97</u>
<u>Picadilly Ridge - Ph 1 - Sec. 3</u>	<u>248,827.50</u>	<u>Dec. 97</u>

Type of work performed by your company:

HEAVY/HIGHWAY - STREET & UTILITY

Have you ever failed to complete any work awarded to you?

NO

Have you ever defaulted on a contract?

NO

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

Project	Dollar Amount	Mo/Yr Completed
<u>Willow Run, Sec 7 - Ph 1, 2, 3</u>	<u>\$826,636.36</u>	<u>Sept 97</u>
<u>Picadilly Ridge - Ph 3 - Sec 1</u>	<u>388,356.60</u>	<u>Sept 97</u>
<u>Black House Creek, Ph C Sec 1</u>	<u>392,218.10</u>	<u>Aug 97</u>

Major equipment available for this contract:

See attached

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

Credit available: \$1,000,000Bank reference: FIRST TEXAS BANK - GEORGETOWN

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this 28th day of OCTOBER, 1997

by:

Raymond C. Rogers

(Signature)

VICE PRESIDENT

(Title)

EQUIPMENT LIST

EQUIP NO.	EQUIPMENT DESCRIPTION	SERIAL NO.	LICENSE NO.
M10	1994 140G MOTOR GRADER	5MDO2533	24M636
M11	1996 140H MOTOR GRADER	2ZK00829	24M721
M12	1997 140H MOTOR GRADER	2ZK2397	24M739
B11	1993 310D JD BACKHOE	T0310DA788927	24M623
B12	1994 310D JD BACKHOE	TO310DA801553	24M637
B13	1995 310D JD BACKHOE	T0310DA814582	24M727
E2	235 CAT EXCAVATOR	32K1650	
E9	1994 - PC400 LC-5 KOMATSU EXCAVATOR	A70960	
E10	1995 - PC300 LC-5 KOMATSU EXCAVATOR	A20606	
E11	1995 - PC200 LC-6 KOMATSU EXCAVATOR	A80716	
E12	1996 - PC220LC-6 KOMATSU EXCAVATOR w/ Teledyne	A82043	
E13	1996 - PC200-6 KOMATSU EXCAVATOR	91036	
S7	1983 615 CAT SCRAPER	46Z842	957M72
D61	D6 CAT DOZER	4X3987	
GR1	GRID ROLLER HYSTER		
PV1	REX PULVI-MIXER	HK292	
R1	1986 TELEDYNE HYDRAULIC BREAKER-RAM	950/87070714	
MISC1	FELCO CONVEYOR BEDDER	206	
SS1	1988 BROCE SWEEPER	T103046	24M728
F1	JOHN DEERE FORKLIFT - MODEL 380	303919	
C2	1984 GOMACO SLIP FORM CONCRETE PAVER	MC-12797-03	
AC7	185 INGERSOLL RAND AIR COMPRESSOR	85957	983M72
AC8	1996 INGERSOLL RAND MOD. P185WJD 185 CFM	263850	24M720
AC9	1996 INGERSOLL RAND MOD. P185WJD 185 CFM	263852	24M719
MC3	1990 P & H CRANE -22 TON, MOD CN122	55722	24M635
SR2	INGERSOLL RAND ROLLER - DA30	5815	
SR6	INGRAM STEEL WHEEL ROLLER	411691E104	
SR9	1996 INGERSOLL RAND SD-100D VIB COMPACTOR	144686	
SR10	1997 INGERSOLL RAND SD-100D VIB COMPACTOR	144693	
PR4	1969 INGRAM PNEUMATIC 11-5400	39973Q22	
PR5	1996 INGERSOLL RAND TIRE ROLLER	144817	24M723
PR6	1996 INGERSOLL RAND TIRE ROLLER	145210	24M722
RT2	RAMMAX P47 COMPACTOR	1654	
RT3	CP 563 COMPACTOR	DIYJOO118	
TL6	1981 - 943 CAT TRACK LOADER	31YO1219	
TL9	1990 - 973 CAT TRACK LOADER	86G01115	
TL11	1992 - 963 CAT TRACK LOADER	021Z04297	
WL8	1985 - 950B CAT WHEEL LOADER	63R03550	168M73
WL10	1994 - 936F WHEEL LOADER	8AJ1229	24M639
WL11	1994 - 950F WHEEL LOADER	08TK01166	24M638
WL13	1997 914 WHEEL LOADER	9WN891	

EQUIPMENT LIST

EQUIP NO.	EQUIPMENT DESCRIPTION	SERIAL NO.	LICENSE NO.
T3	1977 INTERNATIONAL PLATFORM TRUCK	DO502GHB21925	SRO334
T8	1979 GMC WATER TRUCK	T17DB9V579049	HC4881
T14	1973 CHEVY FLATBED FORM TRUCK	CCY333S191626	HU3524
T16	1982 CHEVY WATER TRUCK	1GBJ6D1FXCV103015	SRO335
T20	1985 KENWORTH TRACTOR TRUCK	1XKWDB9X5FS323472	2DY490
T24	1972 FORD SEWER RODDER	N80FVP39082	
T25	1988 FORD F700 WATER TRUCK	1FDPF7DH9JVA10389	HC4882
T26	1988 FORD 6 YARD DUMP TRUCK	1FDPK845AJVA28581	HC4883
T33	1991 MACK TRUCK	1M2P264C7MM008512	2DY492
T34	1991 MACK TRUCK	1M2P264C9MM008513	2DY491
T35	1994 DODGE RAM 3500 MECHANIC TRUCK	1B6MC36C8RS660353	HUO391
T36	1996 PETERBILT 330 SERVICE TRUCK	1XPNH7X8TN400947	RB4401
T37	1996 CHEVY WATER TRUCK	1GBM7H1J6TJ107561	TR9732
T38	1996 CHEVY WATER TRUCK	1GBM7H1J6TJ108497	TR9733
T39	1995 GMC MECHANIC TRUCK	1GDE6H1J6SJ526751	TU1692
TR1	2 AXLE 4 WHEEL TRAILER - SHOPMADE		06VLPG
TR2	1969 FLAT TRAILER - SHOPMADE	TR128176	
TR3	1976 MOBILE OFFICE/TRAVEL TRAILER	830A8787	
TR4	WELDER TRAILER - SHOPMADE		94M827
TR7	1982 VANCE PRESSURE CLEANER TRAILER	1134	04VDBN
TR8	1984 LINCOLN WELDER TRAILER	U90259	
TR9	1985 BRUTUS FLAT PAN TRAILER	620126851	
TR11	1986 BIG TEX MAGNUM UTILITY TRAILER	16VPB1622G1EO5289	79TRJX
TR14	1994 MAGNUM 16' UTILITY TRAILER	1VBA1628R1131240	77TRJX
TR15	SHOPMADE TESTING TRAILER		11TTJK
TR16	1985 MOBILE OFFICE	63198	46TYTZ
TR17	1997 TRAILBOSS TRAILER	1T9TP2527V118136	60VPVG
LKT1	1985 LOADKING TRAILER - 4 AXLE	1L4L54468F1013554	92909Z
LKT2	LOADKING DOLLY MODEL 60RDH	5961	
P31	1994 CHEVY SILVERADO - RED - RANCH	2GCEK19KXR1116804	GS3377
P32	1994 CHEVY SILVERADO - DK BLUE (JB)	1GCGC29K5RE147307	PY9151
P33	1994 CHEVY SILVERADO - DK BLUE (RO)	1GCGC29KXRE165317	HC4966
P34	1994 CHEVY 2500 - DK RED (JC)	1GCGC29K1RE236873	KE7515
P35	1994 FORD RANGER - WHITE	1FTCR14AXRPA89432	KR4020
P36	1995 CHEV 3/4 TON PICKUP - WHITE -SHOP	1GCGC29KOSE110431	SRO346
P37	1995 CHEV 3/4 TON PICKUP - WHITE (LL)	1GCGC29KXSE235114	PU9551
P38	1996 CHEVY 2500 - TAN (SZ)	1GCGC29RITE185640	SRO293
P39	1991 CHEVY 3/4 TON PICKUP - SILVER (TH)	1GCGC24N1ME142860	UT6183
P40	1993 CHEVY 1 TON CREW CAB PICKUP - (GA)	1GCGC33N6PJ366516	ED2553
P41	1997 CHEVY 1500 PICKUP - RED (RR)	2GCEK19R8V1125492	VF1060
CAR7	1997 CHEVY SUBURBAN	1GNFK16R5VJ347851	XFP99C

AGENDA ITEM # 22

October 28, 1997

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Consider awarding, rejecting or extending bids for courier service.

County Tax Assessor-Collector Deborah Hunt reviewed the three (3) bids and discussed their services and qualifications for the eighteen (18) departments which will participate. The service will operate on a schedule.

Moved: Commissioner Heiligenstein

Seconded: Judge Doerfler

Motion: To table one week for consideration.

Vote: Motion carried 4 - 1 with Commissioner Mehevec voting against the motion.

AGENDA ITEM # 23

October 28, 1997

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Consider entering into drainage construction and maintenance easement with Town & Country Optimist Club.

No action was taken on this agenda item.

AGENDA ITEM # 24

October 28, 1997

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Consider approving extension of earnest money contract for sale of Sutton County School land.

Moved: Judge Doerfler

Seconded: Commissioner Boatright

Motion: To approve extension of earnest money contract for sale of Sutton County School land.

Vote: Motion carried 5 - 0

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