

**COMPETITIVE SEALED PROPOSAL**



**REMOVAL, PACKAGING, TRANSPORTATION,  
AND DISPOSAL OF  
ASBESTOS-CONTAINING MATERIALS  
FROM 3530-3532 JOYCE DRIVE  
FORT WORTH, TEXAS**

**PROJECT #:  
ENV 17-02 : JOYCE DRIVE POLICE**

**December 2016**

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## 1.0 COMPETITIVE SEALED PROPOSAL

### 1.1 PROJECT DESCRIPTION

Proposal are being accepted by the City of Fort Worth for the provision of furnishing of all labor, materials and equipment necessary for the removal, packaging, transportation, and disposal of asbestos-containing materials from 3530-3532 Joyce Drive, Fort Worth, Texas.

Removal of Universal Waste: Prior to any abatement activities, the contractor will remove all universal waste items including fluorescent light bulbs, fluorescent light ballasts and mercury-containing devices. These items will be properly packaged and disposed by the contractor. The contractor will provide documentation (waste manifest, bill of lading, etc.) that the waste was properly disposed.

In the event of discovery of leaking or damaged light ballasts, those ballasts will be packaged separately in a labeled, leak-proof, DOT-approved shipping container for disposal by the contractor.

Removal of Asbestos: The scope of work includes removal and disposal of the following asbestos-containing or asbestos-contaminated materials utilizing wet methods within full, negative pressure containment equipped with HEPA ventilation from specified areas of the building located at 3530-3532 Joyce Drive, Fort Worth, Texas. All removed materials are to be disposed of as asbestos-containing material. All debris generated from removal is to be disposed of as asbestos-containing waste. The following materials are to be removed from the specified areas. The project specifications can be found in **Section 3.0**.

All asbestos related activities must be performed at a minimum in strict adherence to the Texas Asbestos Hazards and Protection Act, NESHAP, and Occupational Safety and Health Administration (OSHA) rules and regulations.

All work performed under the contract shall be in strict adherence to all applicable Federal, State and local rules and regulations.

Each provider including subcontractors shall NOT be listed on the Excluded Parties List System ([www.epls.gov](http://www.epls.gov)). Before proceeding on each project the provider including subcontractors will have to certify they are NOT on the EPLS.

### ASBESTOS ABATEMENT

#### Vacant Bank Building

Type of Asbestos-Containing Material	Location	Estimated Quantity of Asbestos-Containing Material
Mortar under ceramic tile	Small restroom	40 sq ft
Beige 12" x 12" floor tile and black mastic	North back hallway	110 sq ft
Black mastic under NON-ACM beige 12" x12" floor tile	Southwest office area	1,161 sq ft
Beige 9" x 9" floor tile and black mastic	Southwest vault area	598 sq ft
Black mastic on HVAC ductwork	South building area	1,200 linear feet
Joint compound & texture on finished sheetrock walls	South wall near vault area	300 sq ft

## Vacant Drive-Thru Building

Type of Asbestos-Containing Material	Location	Estimated Quantity of Asbestos-Containing Material
White mastic on roof drain pipe	West area	60 linear ft
Caulk on exterior windows	East & West windows	25 sq ft
Black mastic under carpet with yellow mastic and white NON-ACM 12" x 12" floor tile with yellow mastic	West area	370 sq ft
Black mastic under NON-ACM black 12" x 12" floor tile	Restrooms and Comm room	72 sq ft

The City will perform the following tasks under this contract:

- Provide Asbestos Assessment Reports and Asbestos Removal Specifications;
- Provide site contact information;
- Provide site access;
- Provide Asbestos Consultant Agency to oversee work;
- File Texas Department of State Health Services (TDSHS) Asbestos Notification;
- Pay applicable TDSHS asbestos notification fees;
- If the Provider provides its own personal sampling pumps and PCM cassettes to the City's Asbestos Consultant, the City's Consultant will perform the laboratory analysis of the PCM cassettes for OSHA monitoring.

### 1.2 GENERAL REQUIREMENTS

Proposals will be received at the **Purchasing Office**, City of Fort Worth, 1000 Throckmorton Street, Fort Worth, 76102, until **1:30 p.m., Thursday, January 5, 2017** and will be opened and publicly read aloud approximately thirty minutes later in the Council Chambers.

The project name is the **"REMOVAL, PACKAGING, TRANSPORTATION, and DISPOSAL OF ASBESTOS-CONTAINING MATERIALS FROM 3530-3532 JOYCE DRIVE, FORT WORTH, TEXAS."**

After evaluating the Proposals submitted, the City will select the Offeror that provides the Best Value to the City and enter into negotiations with that Offeror. The City may discuss with the selected Offeror options for a scope or time modification and any price change associated with such modification.

A Pre-Proposal Conference will be held from 11 a.m. to **2:00 p.m., Tuesday, December 20, 2016** at 3530-3532 Joyce Drive, Fort Worth, Texas.

The offers will be valid for **ninety (90) calendar days**.

The Proposal Documents submitted in accordance with this Request for Competitive Sealed Proposal shall remain valid for ninety (90) days after the due date.

All Providers must comply with:

- Chapter 17, "Human Relations," Article III, "Discrimination," Division 3, "Employment Practices," of

- the Code of the City of Fort Worth, prohibiting discrimination in employment practices.
- Fort Worth ordinance 20020, Business Diversity Enterprises.

Offerors must submit a bid bond with their proposal. Offeror(s) to whom an award of contract(s) is made will be required to provide Payment and Performance Bonds, as required, and provide proof of Contractors General Liability and Statutory Workers Compensation Coverage.

Proposal documents, addenda, and specifications may be obtained from the City of Fort Worth Web site at <http://www.fortworthgov.org/purchasing/> in portable document format (PDF), or may be viewed at the Environmental Management Division office at 908 Monroe Street, 7<sup>th</sup> Floor, Fort Worth, Texas 76102, during normal business hours. Contact the Project Manager, Roger Grantham, at 817-392-8592 or email [Roger.Grantham@fortworthtexas.gov](mailto:Roger.Grantham@fortworthtexas.gov) for assistance.

### **1.3 INTERPRETATION OF THE REQUEST FOR PROPOSAL**

All requests for an interpretation of the Request for Proposal must be made in writing and submitted to the Environmental Management Division, by fax, regular mail, or email, at any time up to seven (7) calendar days prior to the deadline date for submitting Proposal Packages. The person submitting the request will be responsible for its prompt delivery. No oral requests for interpretation will be answered.

The City will issue any interpretation of the Proposal Documents as a formal addendum. The City will attempt to email a copy of each addendum to each person receiving a Proposal Package, when those persons have identified themselves to the City. The City will also post addenda on the web site. The City will not be responsible for any other explanations or interpretations. It is the Provider's obligation to determine if addenda have been issued prior to the deadline for submitting the Proposal Package.

### **1.4 CONFLICTS & QUESTIONS**

Should there be conflicts between the Proposal documents and the final executed contract document; the final contract shall take precedence. Questions regarding this Request for Proposal should be directed in writing immediately to:

Roger Grantham, Environmental Supervisor  
Environmental Management Division  
City of Fort Worth  
1000 Throckmorton Street, Fort Worth, TX, 76102-6311  
Phone 817-392-8592  
Fax 817-392-6359  
[roger.grantham@fortworthtexas.gov](mailto:roger.grantham@fortworthtexas.gov)

### **1.5 HOW TO SUBMIT A PROPOSAL PACKAGE**

Each Provider must submit **ONE (1) un-bound original** of their Proposal Package to the City. [Additionally, one \(1\) electronic copy of the entire package shall be submitted on a "flash or thumb" drive.](#)

All items to complete the submittal must be included within the Proposal Package or the entire Proposal Package may be considered non-responsive and rejected. In case of ambiguity or lack of clarity, the City reserves the right to adopt the construction most advantageous to the City or to reject the Proposal Package.

**Proposal Packages must be submitted in a sealed envelope, addressed to the City of Fort Worth Purchasing**

**Division, 1000 Throckmorton Street, Fort Worth, Texas 76102. The Proposal Packages must be received by the Purchasing Division no later than 1:30 p.m. on Thursday, January 5, 2017.**

The project number must be clearly marked on the envelope and the statement "**PROPOSAL DOCUMENTS ENCLOSED, DELIVER TO PURCHASING DIVISION ONLY BEFORE 1:30 on Thursday, January 5, 2017**" placed in the lower left-hand corner of the envelope in which the documents are delivered. If the documents are placed in an envelope that is contained inside another envelope, the statement shall be placed on the outermost envelope.

Any Proposal Documents not properly marked or not received in the proper place by the proper time will be considered non-responsive.

**NO FAXED or EMAILED PROPOSALS WILL BE ACCEPTED**

#### **1.6 OPENING OF PROPOSAL**

The Document entitled "Proposal Summary" in each Proposal Package submitted will be opened and read aloud at 2:00 P.M. on **Thursday, January 5, 2017**, in the Fort Worth City Council Chambers. The Proposal Packages shall be handled so as to avoid the disclosure of the remainder of their contents to competing offerors and so as to keep such contents secret during negotiations. All Proposal Packages will be open for public inspection after the contract is awarded.

However, information in the Proposal Packages subject to the trade secrets exception of the Public Information Act under §552.110 of the Texas Government Code or the confidential information exception under §552.101 of the Texas Government Code will not be open to public inspection. It is the responsibility of the Provider to clearly mark as such any information they deem trade secret or confidential.

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## **1.7 PROPOSAL EVALUATION CRITERIA**

The City will select the most highly qualified Provider responding to the request, based upon demonstrated competence and the Proposal. The Proposal will be evaluated by qualitative measures and will be weighted as follows:

In determining the **Best Value Offeror**, the City will consider:

### **1. Proposed Price (35%)**

The lowest priced responsive will receive 35 points for this rating criteria. Higher priced proposals will receive proportionally lower scores. When compared to the lowest price, the higher priced proposal will have its score reduced by one percent (1%) for every percent it is higher than the lowest price. The score will be rounded to the nearest whole number.

### **2. Proposed Project Schedule (10%)**

For this project, the selected contractor will coordinate and work with the City Staff during the construction period.

### **3. Reputation/Experience (30%)**

Reputation and experience of the Offeror (20%) as demonstrated by listing past and current projects including references with names and current telephone numbers; and, list of subcontractors (10%) including subcontractor qualifications.

After ranking the responses to the proposal, the City shall first attempt to negotiate a contract with the selected Offeror. The City may discuss with the selected Offeror options for a scope or time modification and any price change associated with the modification.

If the City is unable to negotiate a contract with the selected Offeror, the City shall, formally and in writing, end negotiations with that Offeror and proceed to the next Offeror in the order of the selection ranking until a contract is reached or all proposals are rejected.

The City may conduct such investigations as deemed necessary to assist in the evaluation of any Proposal and to establish the responsibility, Proposal, and financial ability of the Provider, subcontractors, and other persons who are proposed to work on the project.

### **4. Minority/Women Business Enterprise (25%)**

MBE and WBE proposers, in accordance and consistent with the City's Business Diversity Enterprise (BDE) Ordinance, will receive Evaluation Preference Points to reflect the City's strong and serious consideration to use MBEs and WBEs as primes.

## **1.8 NEGOTIATION OF THE CONTRACT**

After selecting the most highly qualified Provider, the City will then attempt to negotiate with the Provider a contract. If a satisfactory contract cannot be negotiated with the most highly qualified Provider, the City shall formally end negotiations with the Provider, select the next most highly qualified Provider, and attempt to negotiate a contract with that Provider. This process shall continue until a contract is entered into, or until the City rejects all submittals and issues a new Request for Proposal based on a new scope of work. The fees under the contract must be consistent with industry standard and may not exceed any maximum provided by law.

During negotiations, the Provider will also respond to the City's Business Diversity Enterprise (BDE) Utilization Requirements as set forth in Section 2.3 of this Request for Proposals. The City will negotiate with the successful Provider any final changes to the contract and any exceptions identified in the Proposal Documents. The City is not obligated to accept any exceptions made by Provider. After the negotiations, the City will prepare and issue the contract documents with the notice of award to the successful Provider.

## **1.9 AWARD OF THE CONTRACT**

The City will send a notice of award letter to each successful Provider with three (3) sets of contract documents. The successful Providers must execute the contracts in each set and return all three sets to the City. Upon receipt of the three sets, the City will execute each set and issue one set to each Provider with a letter entitled notice to proceed. This letter authorizes work to begin and invoices to be paid.

## **1.10 RESERVATIONS**

The City reserves the right to reject any or all Proposal Packages and waive any or all formalities.

Upon acceptance of this Proposal by the City Council, the bidder is bound to execute a contract and, if the contract amount exceeds \$50,000.00, furnish acceptable Performance and/or Payment Bonds approved by the City of Fort Worth for performing and completing the Work within the time stated and for the following sum, to wit:

### **DESCRIPTION OF ITEMS**

**Base Bid for Asbestos Abatement Activities \$ \_\_\_\_\_**

The undersigned assures that its employees and applicants for employment and those of any labor organization, subcontractors or employment agency in either furnishing or referring employee applicants to the undersigned are not discriminated against as prohibited by the terms of City Ordinance 7278 as amended by City Ordinance 7400 (Fort Worth City Code Section 13A-21 through 13A-29).

Residency of Offerors: The 1985 Session of the Texas Legislature passed house Bill 620 relative to the award of contracts to non-resident bidders. The law provides that, in order to be awarded a contract as low bidder, non-resident bidders (out of state contractors whose corporate offices or principal place of business are outside of the State of Texas) that bid projects for construction, improvements, supplies or services in Texas at an amount lower than the lowest Texas resident bidder by the same amount that Texas resident bidder would be required to underbid a non-resident bidder in order to obtain a comparable contract in the state in which the non-resident's principal place of business is located. The

appropriate blanks in Section A must be filled out by all non-resident bidders in order for your bid to meet specifications.

The failure of out of state or non-resident bidders to complete the forms may disqualify that bidder. Resident bidders must check the box in Section B.

- A.     Non-resident vendors in \_\_\_\_\_ (give state), our principal place of business, are required to be \_\_\_\_ percent lower than resident bidders by state law.  
       Non-resident vendors in \_\_\_\_\_ (give state), are not required to underbid resident bidders.
- B.     Our principal place of business or corporate offices are in the State of Texas.

Within ten (10) days of receipt of notice of acceptance of this bid, the successful bidder will execute the formal contract and will deliver approved Performance and Payment Bonds for the faithful performance of this contract. The attached deposit check in the sum of Dollars (\$ \_\_\_\_\_) is to become the property of the City of Fort Worth, Texas, or the attached Bidder's Bond is to be forfeited in the event the contract and bonds are not executed within the time set forth, as liquidated damages for delay and additional work caused thereby.

MINORITY BUSINESS ENTERPRISE (MBE): **(For bids in excess of \$50,000)**

- I am aware that I must submit information concerning the MBE participation within **TWO BUSINESS DAYS** of submittal of this Proposal in order to be considered RESPONSIVE.

PROVIDER:

\_\_\_\_\_  
Company Name

BY: \_\_\_\_\_  
(print or type name of signatory)

\_\_\_\_\_  
Address

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Title (print or type)

**2.0 PROPOSAL DOCUMENTS**

**2.1 PROPOSAL DOCUMENT CHECKLIST**

All Proposal Documents, including this Checklist, must be completed in full and submitted in a sealed envelope, in the requested order, or the Proposal Package may be considered as a non-responsive submittal.

<u>Proposal Documents</u>	<u>Initial if Included</u>
1. PROPOSAL DOCUMENT CHECK LIST	_____
2. ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA	_____
3. MINORITY BUSINESS ENTERPRISES (MBE)	_____
4. PROPOSAL SUMMARY	_____
5. PROPOSAL OF PROVIDER	_____
6. LIST OF SUBCONTRACTORS	_____
7. INSURANCE CERTIFICATES	_____
8. LICENSES & CERTIFICATES	_____
9. LEGAL & COMPLIANCE HISTORY	_____
10. PERFORMANCE AND PAYMENT BONDS	_____
11. BID SECURITY	_____
12. PREVAILING WAGE RATE	_____
13. COMPLIANCE & WORKERS COMPENSATION	_____

I understand that failure to submit all of these items may cause my submittal to be considered non-responsive.

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_

**2.2 ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA**

Check if applicable \_\_\_\_\_

The undersigned acknowledges the receipt of the following addendum (a) to the Request for Proposal, and has attached all addenda following this page. (Add lines if necessary).

\_\_ Addendum Number 1 \_\_\_\_\_  
(Date received)

\_\_ Addendum Number 2 \_\_\_\_\_  
(Date received)

\_\_ Addendum Number 3 \_\_\_\_\_  
(Date received)

\_\_ Addendum Number 4 \_\_\_\_\_  
(Date received)

Check if applicable \_\_\_\_\_

The undersigned acknowledges the receipt of no addenda to the Request for Proposal.

PROVIDER:

\_\_\_\_\_  
Company Name

BY: \_\_\_\_\_  
(print or type name of signatory)

\_\_\_\_\_  
Address

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Title (print or type)

**2.3 MINORITY BUSINESS ENTERPRISE (MBE) (BEST VALUE PROPOSAL)**

**Business Diversity Enterprise Provision**

It is the policy of the City of Fort Worth, in accordance with its Business Diversity Enterprise (BDE) Ordinance, to ensure that Minority, Women and Small Business Enterprises (M/W/SBEs) have a level playing field to fairly and equitably compete for opportunities to provide goods and services to the City to the maximum extent feasible as primes and subconsultants/subcontractors.

In order to accomplish the policy objective for prime participation, the City will ensure that MBEs and WBEs, who propose as primes, and demonstrate the requisite experience and technical proficiency are given strong and serious consideration during the selection process. MBE and WBE proposers who are currently certified by the North Central Texas Regional Certification Agency (NCTRCA) and accepted by the City whose primary business address is within the City's 6-county geographic marketplace that includes the counties of Tarrant, Dallas, Denton, Johnson, Parker and Wise will receive consideration. The City's consideration will include and be reflected through the application of Evaluation Preference Points to MBEs and WBEs proposing as primes.

MBE and WBE proposers may not subcontract more than 49% of the contract value to non-MBEs/WBEs.

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Prime MBE/WBE Evaluation Criteria:

MBE and WBE proposers, in accordance and consistent with the City's Business Diversity Enterprise (BDE) Ordinance, will receive Evaluation Preference Points to reflect the City's strong and serious consideration to use MBEs and WBEs as primes.

PROVIDER:

\_\_\_\_\_ BY: \_\_\_\_\_

Company Name(print or type name of signatory)

\_\_\_\_\_

Address(Signature)

\_\_\_\_\_

City, State, Zip Title (print or type)

**2.4 PROPOSAL SUMMARY**

**TO THE CITY OF FORT WORTH:**

The undersigned hereby proposes to furnish the equipment, labor, materials, superintendence, and any other items or services necessary to perform the required asbestos abatement services as instructed by the City. The Scope of Services is outlined on the following pages of the Proposal Documents.

**JOYCE DRIVE ASBESTOS ABATEMENT**

Type of Asbestos-Containing Material	Location	Estimated Quantity of Asbestos-Containing Material
<b>Vacant Bank Building</b>		
Mortar under ceramic tile	Small restroom	40 sq ft
Beige 12" x 12" floor tile and black mastic	North back hallway	110 sq ft
Black mastic under NON-ACM beige 12" x 12" floor tile	Southwest office area	1,161 sq ft
Beige 9" x 9" floor tile and black mastic	Southwest vault area	598 sq ft
Black mastic on HVAC ductwork	South building area	1,200 linear feet
Joint compound & texture on finished sheetrock walls	South wall near vault area	300 sq ft
<b>Vacant Drive-Thru Building</b>		
White mastic on roof drain pipe	West area	60 linear ft
Caulk on exterior windows	East & West windows	25 sq ft
Black mastic under carpet with yellow mastic and white NON-ACM 12" x 12" floor tile with yellow mastic	West area	370 sq ft
Black mastic under NON-ACM black 12" x 12" floor tile	Restrooms and Comm room	72 sq ft
<b>TOTAL BASE BID</b>		<b>\$</b>

All Proposal Documents have been submitted in one sealed package.

\_\_\_\_\_ Addenda to the Request for Proposal have been received as acknowledged in Section 2.2.

This Proposal Summary and the accompanying Proposal Documents are intended to be complete and will remain valid for ninety (90) days from the date of submittal.

PROVIDER:

\_\_\_\_\_  
(Company Name)

BY: \_\_\_\_\_  
(print or type name of signatory)

(Address)

(Signature)

\_\_\_\_\_  
(City, State, Zip)

\_\_\_\_\_  
Title (print or type)

\_\_\_\_\_  
Phone)

\_\_\_\_\_  
(Email)

**2.5 PROPOSAL OF THE PROVIDER**

Provider shall provide its company name, address, telephone number(s), and email addresses for the local office as well as the headquarters.

Provider shall attach a copy of its current Statement of Qualifications (**20-page maximum, 11 pt. type minimum**). If subcontractors are to be utilized, each subcontractor must be discussed within the statement of Proposal. Within the statement of Proposal the Provider should:

- Document Provider’s experience (including references for asbestos abatement services as discussed in the following Scope of Services. This section should discuss past and current relevant jobs with special focus on LOCAL AREA work.
- Submit an organization chart depicting contact arrangement from the City to the Provider and from the Provider’s representative to other areas within the Provider. Identify key persons by name and title and describe the primary work assigned. This chart must include the individual(s) assigned to ensure the BDE plan is followed.
- Submit a brief résumé (one page maximum, 11 pt. type minimum) for the overall key personnel assigned to this project (Project Manager, Project Site Supervisors, and Asbestos Supervisors) that will PERFORM WORK under this contract. These resumes do not count as part of the overall 20-page limit for the statement of Proposal.

**2.5.1 TDSHS Notification and Project Coordination**

Contractor will be responsible for coordinating with the Environmental Management Division the start date of asbestos abatement to allow for notification to the Texas Department of State Health Services (TDSHS). The City of Fort Worth will prepare and submit the TDSHS notification and pay all TDSHS notification fees.

**INCLUDE A COPY OF THE PROPOSAL WITHIN THIS SECTION AND BOUND WITHIN THE PROPOSAL PACKAGE**

**2.6 LIST OF SUBCONTRACTORS**

Providers shall complete the following information and submit it with the Proposal Documents to permit the City of Fort Worth to more fully evaluate the submittal's quality prior to awarding the contract.

Subcontractor's Name	Subcontractor's Address	Subcontractor's Telephone No.	Subcontractor's Email	Proposed Tasks on the Project

IF NECESSARY, PROVIDE MORE SHEETS TO DESCRIBE ADDITIONAL SUBCONTRACTORS.

## 2.7 INSURANCE

**FOR PURPOSES OF THIS REQUEST FOR PROPOSAL, PLEASE ATTACH A COPY OF YOUR CURRENT INSURANCE CERTIFICATE(S) FOLLOWING THIS SECTION AND BOUND WITHIN THE PROPOSAL PACKAGE.**

The successful Provider will be required by the contract to have insurance coverage as detailed below. Prior to commencing work, the Provider shall deliver to Fort Worth certificates documenting this coverage. The City may elect to have the Provider submit its entire policy for inspection.

### **Insurance coverage and limits:**

Provider shall provide to the City certificate(s) of insurance documenting policies of the following coverage at minimum limits that are to be in effect prior to commencement of work on the contract:

1. **Commercial General Liability**
  - **\$1,000,000 each occurrence**
  - **\$2,000,000 aggregate**
  
2. **Automobile Liability**
  - **\$1,000,000 each accident, or**
  - **\$250,000 property damage / \$500,000 bodily injury per person per accident**

A commercial business auto policy shall provide coverage on "any auto," defined as autos owned, hired and non-owned during the course of this project.

3. **Worker's Compensation**
  - **Coverage A: statutory limits**
  - **Coverage B: \$100,000 each accident  
\$500,000 disease - policy limit  
\$100,000 disease - each employee**

**Waiver of Subrogation required.**

4. **Professional Liability**
  - NOT APPLICABLE FOR THIS PROJECT

Professional Liability Insurance shall be written on a project specific basis. The retroactive date shall be coincident with or prior to the date of this contract and the certificate of insurance shall state that the coverage is claims-made and the retroactive date. The insurance coverage shall be maintained for the duration of this contract and for five (5) years following completion of the contract (Tail Coverage). An annual certificate of insurance shall be submitted to the City for each year following completion of this contract.

5. **Environmental Impairment Liability and/or Pollution Liability**
  - **\$4,000,000 per occurrence.**

EIL coverage(s) must be included in policies listed in items 1 and 4 above; or, such insurance shall be provided under a separate policy or policies. Liability for damage

occurring while loading, unloading and transporting materials collected under the contract project shall be included under the Automobile Liability insurance or other policy(s).

6. **Asbestos Abatement Insurance - \$2,000,000 each occurrence with no Sunset Clause.**

Certificates of insurance evidencing that the Provider has obtained all required insurance shall be delivered to the City prior to Provider proceeding with the contract.

1. Applicable policies shall be endorsed to name the City an Additional Insured thereon, as its interests may appear. The term City shall include its employees, officers, officials, agents, and volunteers as respects the contracted services.
2. Certificate(s) of insurance shall document that insurance coverage specified according to items in section (a) above are provided under applicable policies documented thereon.
3. Any failure on part of the City to request required insurance documentation shall not constitute a waiver of the insurance requirements.
4. A minimum of thirty (30) days notice of cancellation or material change in coverage shall be provided to the City. A ten (10) days notice shall be acceptable in the event of non-payment of premium. Such terms shall be endorsed onto Provider's insurance policies. Notice shall be sent to Clarence W. Reed, PhD., City of Fort Worth – TPW, Environmental Management, 1000 Throckmorton, Fort Worth, Texas 76102.
5. Insurers for all policies must be authorized to do business in the state of Texas or be otherwise approved by the City; and, such insurers shall be acceptable to the City in terms of their financial strength and solvency.
6. Deductible limits, or self-insured retentions, affecting insurance required herein shall be acceptable to the City in its sole discretion; and, in lieu of traditional insurance, any alternative coverage maintained through insurance pools or risk retention groups must be also approved. Dedicated financial resources or letters of credit may also be acceptable to the City.
7. **Applicable policies shall each be endorsed with a waiver of subrogation in favor of the City as respects the contract.**
8. The City shall be entitled, upon its request and without incurring expense, to review the Provider's insurance policies including endorsements thereto and, at the City's discretion, the Provider may be required to provide proof of insurance premium payments.
9. The Commercial General Liability insurance policy shall have no exclusions by endorsements unless the City approves such exclusions.
10. The City shall not be responsible for the direct payment of any insurance premiums required by the contract. It is understood that insurance cost is an allowable

component of Provider's overhead.

11. All insurance required in section (a) above, except for the Professional Liability insurance policy, shall be written on an occurrence basis in order to be approved by the City.
12. Subcontractors to the Provider shall be required by the Provider to maintain the same or reasonably equivalent insurance coverage as required for the Provider. When subcontractors maintain insurance coverage, Provider shall provide City with documentation thereof on a certificate of insurance. Notwithstanding anything to the contrary contained herein, in the event a subcontractor's insurance coverage is canceled or terminated, such cancellation or termination shall not constitute a breach by Provider of the contract.

## 2.8 PROVIDER'S LICENSES & CERTIFICATES

Provider shall procure all permits and licenses, pay all charges, costs, and fees, and give all notices necessary and incident to the due and lawful prosecution of the work.

Provider should provide a copy of the appropriate certifications, registrations, and licenses and related certificates (including Subcontractors) with their submittal including but not limited to:

- TDSHS Abatement Contractor License;
- TDSHS Asbestos Transporter License; and
- TCEQ Asbestos Landfill.

(DSHS Abatement Worker and Supervisor Licenses do not need to be included within this submittal)

Provider shall provide necessary company licenses and certifications required to complete the project:

- current **Texas Sales/Use Tax Certificate**
- current Texas Secretary of State Business/Company Registration exhibiting Officers of Business/Company
- current **Certificate of Good Standing** (Texas Secretary of States' office)

Provider shall complete a **staff matrix** including the following information detailing the provider's key personnel, their qualifications, and years of experience for staff that will be providing services associated with this Solicitation.

Provider shall provide at least **four (4) project references** similar in scope and size to that of this Solicitation. Each project reference shall include the following information:

- Company's Name
- Name and Title of Contact/Project
- Email, Phone, and Address of Contact
- Contract/Project Value
- Brief Description of Service Provided

Provider shall submit the following items included in this bid submittal, in the same order as listed, following

this page, bound within the response.

**Project Schedule:** Contractors shall provide a project schedule that includes all major tasks pursuant to the Scope of Work and Specifications. The project schedule shall show all tasks in the left most columns and their duration shall be plotted horizontally versus time. A time scale shall be selected so that the complete duration of the project can be shown on paper with a maximum dimension of 11" high by 17" wide. The project schedule must be submitted with the bid. During the term of the contract the Contractor shall submit monthly project schedules showing planned work and actual work accomplished.

**Schedule of Values:** Progress Payments will only be made after completion of those tasks and/or subtasks identified on the Project Schedule and Schedule of Payments. Progress Payments will be made during the project no more frequently than once per month. A payment schedule must be submitted with the Bid showing the name of each task and/or subtask, the name of the deliverable document for each task and/or subtask, total task and/or subtask cost, planned payment dates for each task and/or subtask, and the amount that would be remaining in the contract account. Upon receipt of final project completion documentation, final project payments will be approved. Final payments will not be approved until project completion documentation has been submitted to and approved by the City of Fort Worth.

Provide an organization chart that details the communication channels between the Contractor and City of Fort Worth personnel for this contract.

**ATTACH COPIES OF CURRENT APPLICABLE LICENSES AND CERTIFICATES  
FOLLOWING THIS PAGE AND BOUND WITHIN THE PROPOSAL PACKAGE**

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## 2.9 PROVIDER'S LEGAL AND COMPLIANCE HISTORY

Provider's legal and compliance history is a critical component of this Request for Proposal. Read this section with care and respond accordingly. Failure of the Provider to provide all the information requested and to certify the report, will result in the Provider's submittal being declared non-responsive.

Provider shall attach a written report of legal action brought against Provider, Provider's officers, Provider's employees, AND Provider's proposed subcontractors relating to the protection of the environment. The terms "legal action" and "relating to the protection of the environment" are defined below.

The report shall include all legal action brought within **five (5) years of the closing date of this Request for Proposal**. The report shall detail the substance, status, and outcome of such legal action. This includes without limitation the names of the agency and/or persons bringing the action, all relevant dates, and all fines, judgments, and/or settlements. Include the following information for each case at a minimum:

- Style of Case ( X vs. Y )
- Cause Number
- Court
- Date of Disposition
- Settlement Information (as appropriate)
- Names / Addresses of all parties named
- Counsel List and phone numbers
- Judgment and Order of Judgment

"LEGAL ACTION" means: ANY enforcement action by the United States Environmental Protection Agency, the Occupational Safety and Health Administration, any other federal agency, the Texas Commission on Environmental Quality (including its predecessor agency the Texas Natural Resource Conservation Commission), the Texas Department of State Health Services (including its predecessor agency the Texas Department of Health), and any other state agency, commission or department, whether in Texas or elsewhere, when such enforcement action is a result of violations, real or alleged, of any laws, licenses, permits, judicial orders, or administrative orders, relating to the protection of the environment. In this context, enforcement action shall include without limitation, written warnings, notices of violation, consent orders or agreements, compliance orders, administrative hearings, civil litigation and criminal prosecution. Legal action also means any civil litigation brought by any person relating to the protection of the environment.

"RELATING TO THE PROTECTION OF THE ENVIRONMENT" means: requirements pertaining to the manufacture, processing, distribution, use, handling, storage, transportation, reporting, records keeping, permitting, licensing, treatment, disposal, emission, discharge, spill, release, or threatened release of hazardous materials, hazardous substances, hazardous wastes, toxic substances, petroleum, industrial waste, solid waste, pollutants or contaminants into or onto the air, surface water, drinking water, groundwater, storm water, publicly owned treatment works, or land.

THE REPORT SHALL BE SIGNED AND CERTIFIED by an authorized representative of the Provider, using the form on the following page. The top portion of the form is to be completed if a report of legal action is attached. The bottom portion of the form is to be completed if Provider has no legal action to report. **Make certain that the appropriate portion of the form is filled out and signed.**

AN AUTHORIZED REPRESENTATIVE OF THE PROVIDER shall mean:

- (1) if the Provider is a corporation: the president, secretary, or treasurer, or a vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation;
- (2) if the Provider is a partnership, a general partner; and
- (3) if the Provider is a sole proprietorship, the sole proprietor.

**INCLUDE A COPY OF THE REPORT OF LEGAL ACTION  
FOLLOWING THE CERTIFICATION PAGE AND  
BOUND WITHIN THE PROPOSAL PACKAGE**

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**Certification of Provider's Legal and Compliance History**

**Complete ONE of the Following Certifications:**

***Certification of Legal Action Report***

I certify under penalty of law that the attached Legal Action Report detailing Provider's, Provider's officers, Provider's employees, and Provider's proposed subcontractors legal and compliance history relating to the protection of the environment was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROVIDER:

\_\_\_\_\_  
Company Name

BY: \_\_\_\_\_  
(print or type name of signatory)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Title (print or type)

\_\_\_\_\_  
Date

***Certification of NO Legal Action***

I certify under penalty of law that the legal and compliance history of Provider, Provider's officers, Provider's employees, and Provider's proposed subcontractors was researched under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I hereby certify that no legal action relating to the protection of the environment was brought against Provider, Provider's officers, Provider's employees, or Provider's proposed subcontractors within the preceding five years. To the best of my knowledge and belief, this statement is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROVIDER:

\_\_\_\_\_  
Company Name

BY: \_\_\_\_\_  
(print or type name of signatory)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Title (print or type)

\_\_\_\_\_  
Date

## **2.10 PERFORMANCE AND PAYMENT BONDS**

For projects in excess of \$50,000, the successful bidder entering into a contract for the work will be required to give the City surety in a sum equal to the amount of the contract awarded. The form of the bond shall be as herein provided and the surety shall be acceptable to the City. All bonds furnished hereunder shall meet the requirements of Texas Government Code Section 2253, as amended.

In order for a surety to be acceptable to the City, the surety must (1) hold a certificate of authority from the United States Secretary of the Treasury to qualify as a surety on obligations permitted or required under federal law; or (2) have obtained reinsurance for any liability in excess of \$100,000 from a reinsurer that is authorized and admitted as a reinsurer in the State of Texas and is the holder of a certificate of authority from the United States Secretary of the Treasury to qualify as a surety on obligations permitted or required under federal law. Satisfactory proof of any such reinsurance shall be provided to the City upon request. The City, in its sole discretion, will determine the adequacy of the proof required herein.

No sureties will be accepted by the City that are at the time in default or delinquent on any bonds or which are interested in any litigation against the City. Should any surety on the contract be determined unsatisfactory at any time by the City, notice will be given to the contractor to that effect and the contractor shall immediately provide a new surety satisfactory to the City.

If the total contract price is \$50,000 or less, payment to the contractor shall be made in one lump sum. Payment shall not be made for a period of 45 calendar days from the date the work has been completed and accepted by the City.

If the contract is in excess of \$50,000, a Payment Bond shall be executed, in the amount of the contract, solely for the protection of all claimants supplying labor and materials in the prosecution of the work.

If the contract amount is in excess of \$100,000, a Performance Bond shall also be provided, in the amount of the contract, conditioned on the faithful performance of the work in accordance with the plans, specification, and contract documents. Said bond shall be solely for the protection of the City of Fort Worth.

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Bond # \_\_\_\_\_

**PERFORMANCE BOND**

**THE STATE OF TEXAS**            §  
   §            **KNOW ALL BY THESE PRESENTS:**  
**COUNTY OF TARRANT**        §

That we, \_\_\_\_\_, known as "Principal" herein and \_\_\_\_\_, a corporate surety(sureties, if more than one) duly authorized to do business in the State of Texas, known as "Surety" herein (whether one or more), are held and firmly bound unto the City of Fort Worth, a municipal corporation created pursuant to the laws of Texas, known as "City" herein, in the penal sum of, \_\_\_\_\_ Dollars ( \$ \_\_\_\_\_ ), lawful money of the United States, to be paid in Fort Worth, Tarrant County, Texas 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 Principal has entered into a certain written contract with the City awarded the \_\_\_\_\_ day of \_\_\_\_\_, **2016**, which Contract is hereby referred to and made a part hereof for all purposes as if fully set forth herein, to furnish all materials, equipment labor and other accessories defined by law, in the prosecution of the Work, including any Change Orders, as provided for in said Contract designated "**REMOVAL, PACKAGING, TRANSPORTATION, AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS FROM 3530-3532 JOYCE DRIVE ; ENV-17-01: JOYCE DRIVE POLICE**".

**NOW, THEREFORE**, the condition of this obligation is such that if the said Principal shall faithfully perform it obligations under the Contract and shall in all respects duly and faithfully perform the Work, including Change Orders, under the Contract, according to the plans, specifications, and contract documents therein referred to, and as well during any period of extension of the Contract that may be granted on the part of the City, then this obligation shall be and become null and void, otherwise to remain in full force and effect.

**PROVIDED FURTHER**, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas or the United States District Court for the Northern District of Texas, Fort Worth Division.

This bond is made and executed in compliance with the provisions of Chapter 2253 of the Texas Government Code, as amended, and all liabilities on this bond shall be determined in accordance with the provisions of said statute.

**IN WITNESS WHEREOF**, the Principal and the Surety have SIGNED and SEALED this instrument by duly authorized agents and officers on this the \_\_\_\_\_ day of \_\_\_\_\_, **2016**.

PRINCIPAL:

\_\_\_\_\_  
\_\_\_\_\_

BY: \_\_\_\_\_

Signature

ATTEST:

\_\_\_\_\_  
(Principal) Secretary

\_\_\_\_\_  
Name and Title

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Witness as to Principal

SURETY:

\_\_\_\_\_  
\_\_\_\_\_

BY: \_\_\_\_\_

Signature

\_\_\_\_\_  
Name and Title

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Witness as to Surety

Telephone Number: \_\_\_\_\_

\*Note: If signed by an officer of the Surety Company, there must be on file a certified extract from the by-laws showing that this person has authority to sign such obligation. If Surety's physical address is different from its mailing address, both must be provided. The date of the bond shall not be prior to the date the Contract is awarded.



**IN WITNESS WHEREOF**, the Principal and Surety have each SIGNED and SEALED this instrument by duly authorized agents and officers on this the \_\_\_\_ day of \_\_\_\_\_, **2016**.

PRINCIPAL:

\_\_\_\_\_  
\_\_\_\_\_

ATTEST:

BY: \_\_\_\_\_

Signature

\_\_\_\_\_  
(Principal) Secretary

\_\_\_\_\_  
Name and Title

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Witness as to Principal

SURETY:

\_\_\_\_\_  
\_\_\_\_\_

ATTEST:

BY: \_\_\_\_\_

Signature

\_\_\_\_\_  
(Surety) Secretary

\_\_\_\_\_  
Name and Title

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Witness as to Surety

Telephone Number: \_\_\_\_\_

\*Note: If signed by an officer of the Surety, there must be on file a certified extract from the bylaws showing that this person has authority to sign such obligation. If Surety's physical address is different from its mailing address, both must be provided. The date of the bond shall not be prior to the date the Contract is awarded.

**2.11 BID SECURITY**

Cashier's check or an acceptable bidder's bond payable to the City of Fort Worth, in an amount of five (5) per cent of the bid submitted [See paragraph 1 above]. The Bid Security must accompany the bid and is subject to forfeit in the event the successful bidder fails to execute the contract documents within ten (10) days after the contract has been awarded. The Bid Security shall be included in the envelope containing the bid proposal. Failure to submit the Bid Security will result in the proposal not being considered for this project. Bidder's bond will be returned if the City fails to award the contract within 90 calendar days of receipt of bids, unless the Bidder agrees to an extension. The surety must be licensed to do business in the state of Texas.

**PLEASE ATTACH BID SECURITY (CASHIER'S CHECK OR BID BOND) FOLLOWING THIS PAGE AND  
BOUND WITHIN THE PROPOSAL PACKAGE**

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**2.12 PREVAILING WAGE RATE**

A Contractor selected for this project will be required to comply with TEXAS GOVERNMENT CODE, Chapter 2258, with respect to payment of Prevailing Wage Rates for public works contracts. The current wage scale for members of the Building and Construction trade may be found at:

<http://www.texoassociation.org/Chapter/wagerates.asp>.

A worker employed on a public work by or on behalf of the City of Fort Worth shall be paid not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and not less than the general prevailing rate of per diem wages for legal holiday and overtime work. A worker is employed on a public work if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the City of Fort Worth.

The contractor who is awarded a public work contract, or a subcontractor of the contractor, shall pay not less than the prevailing wage rates to a worker employed by it in the execution of the contract. A contractor or subcontractor who violates this requirement shall pay to the City of Fort Worth, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract.

This requirement does not prohibit the contractor or subcontractor from paying an employee an amount greater than the prevailing wage rate.

The undersigned acknowledges the requirements of Chapter 2258 of the Texas Government Code, and intends to comply with same in the execution of this project.

CONTRACTOR:

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip

BY: \_\_\_\_\_  
(print or type name of signatory)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Title (print or type)

**2.13 WORKER'S COMPENSATION COMPLIANCE**

**CONTRACTOR COMPLIANCE WITH WORKER'S COMPENSATION LAW**

Pursuant to Texas Labor Code Section 406.096(a), as amended, Contractor certifies that it provides worker's compensation insurance coverage for all of its employees employed on City Project, designated

**"REMOVAL, PACKAGING, TRANSPORTATION, and DISPOSAL OF ASBESTOS-CONTAINING MATERIALS FROM 3530-3532 JOYCE DRIVE, FORT WORTH, TEXAS."**

Contractor further certifies that, pursuant to Texas Labor Code, Section 406.096(b), as amended, it will provide to City its subcontractor's certificates of compliance with worker's compensation coverage.

**CONTRACTOR:**

\_\_\_\_\_  
By: \_\_\_\_\_  
Company  
(Please Print)

\_\_\_\_\_  
Signature: \_\_\_\_\_  
Address

\_\_\_\_\_  
Title: \_\_\_\_\_  
City/State/Zip  
(Please Print)

**THE STATE OF TEXAS            §**  
**§     KNOW ALL BY THESE PRESENTS:**  
**COUNTY OF TARRANT         §**

BEFORE ME, the undersigned authority, on this day personally appeared \_\_\_\_\_, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same as the act and deed of \_\_\_\_\_ for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this \_\_\_\_ day of \_\_\_\_\_, 2016

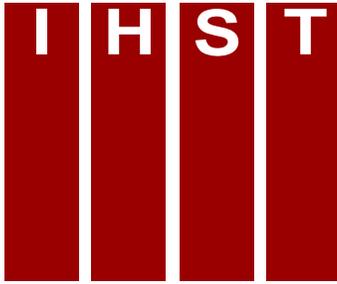
\_\_\_\_\_  
Notary Public in and for the State of Texas

### **3.0 ASBESTOS SPECIFICATIONS**

See report on following pages.

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**Industrial Hygiene and  
Safety Technology, Inc.**

---

2235 Keller Way  
Carrollton, TX 75006  
Phone: (972) 478-7415  
Fax: (972) 478-7615

<http://www.ihst.com>

---

**Leaders in  
Quality, Service  
and Innovation**



# **SPECIFICATIONS FOR ASBESTOS ABATEMENT**

*Prepared for:*  
**City of Fort Worth  
Code Compliance Department  
908 Monroe Street  
Fort Worth, Texas**

*Project:*  
**Vacant Bank & Drive-thru Buildings  
3530/3532 Joyce Drive  
Fort Worth, Texas**

**DATE: December 13, 2016**

**Specifications Prepared by:**

---

**Tracy K. Bramlett, CIH, CSP  
TDSHS LICENSE #10-5040  
Expiration: 12/31/17**

*Prepared by:*  
**Industrial Hygiene & Safety Technology, Inc.  
2235 Keller Way  
Carrollton, Texas 75006  
972-478-7415**

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Appendix B: Specification Drawings

# ASBESTOS REMOVAL

## PART 1 - GENERAL SECTION, ASBESTOS REMOVAL SPECIFICATIONS

### 1.1. SUMMARY OF THE WORK

#### 1.1.1. CONTRACT DOCUMENTS AND RELATED REQUIREMENTS:

General provisions of the contract, including general and supplementary conditions, apply to the work of this section. The contract documents show the work of the contract and related requirements and conditions impacting the project. Related requirements and conditions include applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial owner occupancy during work, coordination with other work and phasing of work. Whenever there is a conflict or overlap of the above references, the more stringent provisions apply.

#### 1.1.2. EXTENT OF WORK:

A brief summary of the extent of the work and non-binding to the contract documents is as follows:

#### BASE BID:

Removal and disposal of asbestos-containing materials (ACM) and asbestos-contaminated elements (ACE) utilizing wet methods within full, negative-pressure containments equipped with HEPA ventilation from specified areas of the buildings. The following asbestos-containing materials (ACM) will be removed at the property where applicable.

<b>Vacant Bank Building</b>		
Mortar under Ceramic Tile	Small Restroom	40 SF
Beige 12"x12" Floor Tile and Black Mastic	North Back Hallway	110 SF
Black Mastic under NON-ACM Beige 12"x12" Floor Tile	Southwest Office Area	1,161 SF
Beige 9"x9" Floor Tile and Black Mastic	Southwest Vault Area	598 SF
Black Mastic on HVAC Ductwork	South Building Area	1,200 LF
Joint Compound & Texture on Finished Sheet-rock Walls	South Wall near Vault Area	300 SF



DSHS License 10-5040 Expires 12-31-17

## ASBESTOS REMOVAL

<b>Vacant Drive-Thru Building</b>		
White Mastic on Roof Drain Pipe	West Area	60 LF
Caulk on Exterior Windows	East & West Windows	25 SF
Black Mastic underneath Carpet w/Yellow Mastic and NON-ACM White 12"x12" Floor Tile w/Yellow Mastic	West Area	370 SF
Black Mastic underneath NON-ACM Black 12"x12" Floor Tile	Restrooms & Comm Room	72 SF

The Work Area will be inclusive of the locations and the quantities noted above, in the attached drawings, and as directed by a representative of IHST. The Work may be broken down into multiple Work Areas at the discretion of the Contractor. However, the Contractor will receive no additional time to perform the work on the basis of having multiple Work Areas and associated Cleaning Sequences.

The Contractor will be responsible for the removal and disposal of the asbestos-containing material and asbestos-contaminated materials in accordance with Texas Department of State Health Services (TDSHS), OSHA 29 CFR 1926.1101, Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763, and the National Emission Standards for Hazardous Air Pollutants (NESHAP) Regulations 40 CFR Part 61.

The CONTRACTOR shall be responsible for verifying existing site conditions and determining the quantity of ACM delineated for removal prior to abatement described in these specifications and associated drawings.

### **1.1.3. TASKS:**

The work, located at the facility, is summarized briefly as follows:

The **PROJECT** requires the removal of the materials outlined in Section 1.1.2. The asbestos abatement will be performed in accordance with these specifications and procedures as outlined.

**Power and Water Connections:** The Contractor on this project will be required to furnish power generators for electricity or to get power from the utility company. The Contractor will also be required to furnish water for the project.

**Asbestos Removal within full Containment:** The Contractor will use wet methods for all removal operations. The Contractor is responsible for prompt clean-up and disposal of waste and debris contaminated with asbestos in leak tight containers. The Contractor will conduct a wet decontamination of equipment and tools before final clearance sampling in the work area.

*Gray K. Bramlett*

DSHS License 10-5040 Expires 12-31-17

## ASBESTOS REMOVAL

The Contractor will use the existing interior walls and ceilings in the buildings to provide structural support for an asbestos containment work area provided the containment remains sound and is not in danger of collapse. The Contractor should make every effort not to damage the interior walls of the building during the project.

The Contractor will establish critical barriers over all openings into the work area. ACM debris should be adequately wetted prior to establishing perimeter critical barriers. Contractor will furnish all water and electricity for the project.

The Contractor will remove the asbestos-containing material from the work area.

The full containment design must be structurally sound so that it will not collapse under negative pressure and work conditions. **A structurally unsound containment design will not be accepted.** The full containment design will consist of one (1) layer of 6-mil polyethylene sheeting for all critical barriers, floors and walls.

Two layers of polyethylene sheeting will be required on walls and floors not affected by the abatement. Polyethylene sheeting shall meet the requirements in accordance with current TDSHS rules. The Contractor must establish negative air into the containment and maintain a pressure differential of -0.02 inches of water as indicated by a working manometer.

After the ACM has been removed and the work area cleaned, a detailed visual clearance inspection will be conducted to determine if ACM or asbestos-contaminated elements (ACE) remain prior to final clearance and work completion. OSHA personnel and area monitoring will be conducted with analysis by (PCM). Final air clearance sampling will be conducted utilizing PCM.

Respiratory protection will require half-face, air-purifying respirators (APR) with NIOSH-approved P-100 (HEPA) cartridges during removal.

**The CONTRACTOR is responsible to verify site conditions and estimated quantities of ACM to be removed.**

### **1.1.4. CONTRACTORS USE OF PREMISES:**

Cooperate fully with the Owner's Representative to minimize conflicts and to facilitate Owner's safe and smooth usage of buildings. Perform the work in accordance with specifications, drawings, and phasing plan.

Use existing facilities in building strictly within the limits shown in contract documents and the approved pre-abatement plan of action. Several of the structures have asbestos containing materials in the flashing around roof penetrations. The Contractor will not be required to remove the flashing on the structures.



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### 1.2. DIFFERING SITE CONDITIONS:

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The quantities and location of ACM indicated on the drawings and the extent of work included in this section are only best estimates which can be limited by the physical constraints imposed by structural enclosures or by occupancy of the building. **The CONTRACTOR is responsible to verify site conditions and estimated quantities of ACM to be removed and determining the quantity of ACM delineated for removal prior to abatement described in these specifications and associated drawings. The Contractor by placing a bid for this project agrees with all quantity estimates and there bid reflects there price to remove all of the material at all of the structures as identified in these specifications.**

### 1.3. STOP ASBESTOS REMOVAL:

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If the Owner's Representative presents a written Stop Asbestos Removal Order, immediately stop all asbestos removal and initiate fiber reduction activities. Do not resume asbestos removal until authorized *in writing* by Owner's Representative. A Stop Asbestos Removal Order will be issued at any time the Owner or Owner's Representative determines abatement conditions are not within specifications requirements.

Stoppage will continue until conditions have been corrected. Standby time and cost required for corrective action is at Contractor's expense. The occurrence of the following events will be reported in writing to the Owner's Representative and will require the Contractor to automatically stop asbestos removal and initiate fiber reduction activities:

- A. Excessive airborne fibers outside containment area (0.01 f/cc or greater).
- B. Break in containment barriers.
- C. Loss of negative air pressure (at or above 0.01 inches of water)
- D. Serious injury within the containment area.
- E. Fire and safety emergency
- F. Respiratory system failure.
- G. Power failure.
- H. Excessive airborne fibers inside containment area (0.1 f/cc or greater when wet methods are employed).

### 1.4. CODES AND REGULATIONS:

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#### 1.4.1. GENERAL APPLICABILITY OF CODES, REGULATIONS AND STANDARDS:

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.



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## **ASBESTOS REMOVAL**

### **1.4.2. CONTRACTOR RESPONSIBILITY:**

The Asbestos Abatement Contractor will assume full responsibility and liability for the compliance with all applicable federal, state, and local regulations pertaining to work practices, hauling and disposal of ACM and ACE, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable federal, state, and local regulations. Contractor will hold the Owner and Consultants harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other on the part of himself, his employees, or his subcontractors. Contractor incurs all costs to comply with OSHA regulations.

The Abatement Contractor will determine the applicability of any process patents he/she may be employing and be responsible for paying any fees, royalties or licenses that may be required for the use of patented processes.

### **1.4.3. STATE REQUIREMENTS:**

State requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

Texas Department of State Health Services, Texas Asbestos Health Protection Act, as amended, Chapter 1954, Texas Occupations Code, effective June 1, 2003, formerly Texas Civil Statutes, Article 4477-3a.

### **1.4.4. LOCAL REQUIREMENTS:**

The Contractor is responsible to comply with all applicable local requirements regarding asbestos abatement activities.

### **1.4.5. NOTICES:**

#### **STATE OF TEXAS, TEXAS DEPARTMENT OF STATE HEALTH SERVICES**

Send Written Notification as required by the State of Texas, Texas Asbestos Health Protection Act, as amended, Chapter 1954, Texas Occupations Code, effective June 1, 2003, formerly Texas Civil Statutes, Article 4477-3a. Send at least 10 working days prior to asbestos abatement activities to the following address:

Texas Department of State Health Services  
Toxic Substances Control Division  
Asbestos Programs Branch  
P.O. Box 143538  
Austin, Texas 78714-3538  
512-834-6600 or 1-800-572-5548

The notifications must be completely filled out. In the event that a section is not applicable to the project, the section must be marked as not applicable.

Copies of the Texas Department of State Health Services and other notifications will be submitted to the Owner for the facility's records in the same time frame that notification is given to EPA, state, and local authorities. In the event of a change in the starting date the Contractor will notify regulatory agencies in accordance with the Texas Department of State Health Services (Texas Civil Statutes, Article 4477-3a, Section 12) asbestos regulations.

## **ASBESTOS REMOVAL**

### **1.4.6. PERMITS:**

The Contractor will be responsible for any permits.

### **1.4.7. LICENSES:**

Maintain current licenses as required by the Texas Department of State Health Services Rules as adopted under Texas Civil Statutes, Article 4477-3a, Section 12 for the removal, transporting, disposal or other regulated activity relative to the work of this contract.

### **1.4.8. POSTING AND FILING OF REGULATIONS:**

Maintain two (2) copies of applicable federal, state and location regulations. Post one copy of each at the job site where workers will have ready, easy and daily exposure to the text. Keep on file in Contractor's office one copy of each.

## **1.5. PROJECT COORDINATION:**

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Minimum administrative and supervisory requirements necessary for coordination of work on the project are personnel, contingency arrangements and security.

### **1.5.1. PERSONNEL:**

Administrative and Supervisory Personnel: will consist of a qualified general superintendent, and appropriate number of qualified or competent foremen to complete abatement within contract time.

Non-Supervisory Personnel: An adequate number of qualified personnel will be able to meet the schedule requirements of the project.

## **1.6. RESPIRATORY PROTECTION:**

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### **1.6.1. GENERAL:**

Provide respiratory protection in accordance with these specifications, the OSHA regulations 29 CFR 1910.1001, 29 CFR 1910.134 and 29 CFR 1926.1101, EPA regulations 40 CFR 763.120, 121, ANSI standards Z88.2-1980, CGS Pamphlet G-7 and specification G-7.1, the NIOSH and MSHA standards and the Texas Department of State Health Services Protection Rules. In case of conflict, the most stringent requirements are applicable for this project.

### **1.6.2. RESPIRATORS FOR ABATEMENT OPERATIONS:**

Where a person is or could reasonably be expected to be exposed during abatement operations to airborne asbestos above 0.1 f/cc or where ACM debris is visible, the following maximum level of respiratory protection is required:

If it is reasonably anticipated that fiber counts generated during abatement will not exceed the protection factor of a half-face respirator, and this can be verified by on-site fiber counts, a half-face respirator may be used. If verification cannot be made, a full face PAPR must be used. PAPR must be used for friable surfac-

## **ASBESTOS REMOVAL**

ing or thermal system insulation removal until fiber counts are confirmed consistently below the PEL and STEL.

Head coverings: PAPR respirators will be equipped with full facepieces. Full facepieces will be worn with either a bonnet-type disposable head cover/hood or with a full head cover/hood which is part of a fully encapsulating protective garment. Respirator straps will be located under the hoods. This allows removal of the head covering prior to showering without disturbing the respirator (which is worn into the shower).

Exemptions from maximum respiratory protection during abatement operations: When the abatement contractor has demonstrated to the Owner's satisfaction that levels of airborne asbestos fibers in the work area are consistently below 0.1 f/cc, a full facepiece or half face respirator with HEPA cartridges may be used. The Certified Industrial Hygienist will determine if a lesser form of respiratory protection may be used.

### **1.7. WORKER PROTECTION:**

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#### **1.7.1. TRAINING PRIOR TO ENGAGING IN ABATEMENT WORK:**

Train workers in accordance with OSHA 29 CFR 1926.1101 and the Texas Asbestos Health Protection Rules and this section. Workers will be trained and be knowledgeable on the following topics: Methods of recognizing ACM; health effects of asbestos exposure; effects of smoking and asbestos exposure; activities that could result in hazardous exposures; protective controls, practices and procedures to minimize exposure including engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures and waste transportation and disposal; review OSHA 29 CFR 1910.134 for respirators; medical surveillance program; review OSHA 29 CFR 1926.1101, and for air monitoring, personnel and area; review this section of the project specifications.

#### **1.7.2. MEDICAL EXAMINATIONS:**

Provide medical examinations for all workers and any other employee entering the work area per OSHA 29 CFR 1926.1101 regardless of exposure levels.

#### **1.7.3. PROTECTIVE CLOTHING:**

Provide boots, safety glasses and gloves for all workers. Equipment will meet OSHA requirements for personal protection. Provide all persons entering the work area with disposable full body coveralls, disposable head covers and rubber boots.

#### **1.7.4. ENTERING AND EXITING PROCEDURES:**

Provide worker protection per most stringent applicable requirements. Provide as a minimum the following:

Ensure that each time workers enter the work area, they remove all street clothes in the changing room of the personnel decontamination unit and put on new disposable coveralls, new head covers, and clean respirators, then proceed through shower room to equipment room, and put on work boots.

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### **1.7.5. DECONTAMINATION PROCEDURES:**

Require all workers to adhere to the following personal decontamination procedures whenever they leave the work area of a full decontamination unit:

Three-stage Wet Decontamination:

Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the work area:

1. When exiting work area, remove disposable coveralls, and all other clothes disposable head covers, and disposable footwear covers or boots in the equipment room.
2. Still wearing respirators, and completely naked proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:
  - a. Thoroughly wet body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.
  - b. With respirator still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR. Pay particular attention to clean seal between face and respirator and under straps.
  - c. Take a deep breath, hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breath.
3. Carefully wash facepiece of respirator inside and out. If using PAPR, shut down in the following sequence, first cap inlets to filter cartridges, then turn off blower unit (this sequence will help keep debris which has collected on the inlet side of filter from dislodging and contaminating the outside of the unit). Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Be extremely cautious of getting water in battery pack as this will short out and destroy battery.
4. Shower completely with soap and water. Rinse thoroughly.
5. Rinse shower room walls and floor prior to exit.
6. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

### **Air Purifying-Negative Pressure Respirators:**

Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the work area with a full face cartridge type respirator:

1. When exiting area, remove disposable coveralls, and all other clothes disposable head-covers, and disposable footwear covers or boots in the equipment room.
2. Still wearing respirators and completely naked, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator and filters to avoid asbestos filters while showering. The following procedure is required as a minimum:
  - a. Thoroughly wet body from neck down.  
Wet hair as thoroughly as possible without wetting the respirator filter if using an air purifying type respirator.

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- b. Take a deep breath, hold it and/or exhale slowly, complete wetting of hair, thoroughly wetting face, respirator and filter (air purifying respirator). While still holding breath, remove respirator and hold it away from face before starting to breath.
3. Dispose of wet filters from air purifying respirator.
4. Carefully wash facepiece of respirator inside and out.
5. Shower completely with soap and water. Rinse thoroughly.
6. Rinse shower room walls and floor prior to exit.
7. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

### **1.7.6. LIMITATIONS WITHIN WORK AREA:**

Ensure that workers do not eat, drink, smoke, chew gum or tobacco, or in any way break the protection of the respiratory protection system in the work area.

## **1.8. DECONTAMINATION FACILITIES:**

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### **1.8.1. DESCRIPTION:**

Provide each work area with separate personnel decontamination facility (PDF) and equipment decontamination facility (EDF). Ensure that the PDF is the only means of ingress and egress for the work area and that all equipment, bagged waste material and other material exit the work area only through the EDF or the PDF.

### **1.8.2. GENERAL REQUIREMENTS:**

All persons entering and exiting the work area will follow the entry and exit procedures required by the applicable regulations and these specifications. Process all equipment and material exiting the work area through the EDF or PDF and decontaminate as required by the specifications. Construct walls and ceilings of PDF and EDF airtight with at least 6 mil polyethylene sheeting and attach to existing building components or to a temporary framework. The EDF and PDF may be combined if the size of the work area will not permit both.

Use a minimum of two layers of 6-mil opaque polyethylene to cover floor under PDF. Construct doors from overlapping polyethylene sheets so that they overlap adjacent surfaces. Weight sheets at bottom so that they quickly close after release. Put arrows on sheets showing direction of overlap and travel.

### **1.8.3. TEMPORARY UTILITIES TO PDF AND EDF:**

Provide temporary water service connection to the PDF and the EDF. Provide backflow protection at the point of connection to the Owner's system.

Water supply must be properly pressured and temperature balanced at shower discharge. Provide adequate temporary electric power with ground fault protection and overhead wiring throughout the PDF and the EDF. Provide a sub-panel for all temporary power in changing room.

Provide adequate lighting to reach 50 foot candles throughout PDF and EDF.

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Provide temporary heat to maintain 70°F throughout the PDF and EDF except that the shower of the PDF will be maintained at 75°F.

### **1.8.4. DECONTAMINATION FACILITIES (DF):**

Provide a PDF consisting of serial arrangement of clean room, showers room and equipment room. Provide adequately sized DF to accommodate the number of employees scheduled for the project. The center chamber of the three chamber DF will be fitted with as many portable walk through shower stalls as necessary so that all employees will be able to go through the entire decontamination procedure within 15 minutes. Construct DF of opaque or colored polyethylene for privacy. Construct DF so that it will not allow for parallel routes of exit without showering.

## **1.9. NEGATIVE PRESSURE FILTRATION SYSTEMS:**

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The Asbestos Abatement Contractor will provide enough HEPA-filtered negative air units to completely exchange the work air four (4) times per hour. Contractor will demonstrate the number of units needed per work area for 4 room air changes by calculating the volume flow rate (cfm) delivered by each unit under 2" pressure drop across filters. Provide at least one standby unit in the event of a machine failure or emergency such as contamination in surrounding non-work area. When a pressure differential system is selected provide enough HEPA filtration units to filter and recirculate the air in the work area at a rate of four (4) room air changes per hour.

### **1.9.2. PRESSURE DIFFERENTIAL:**

Provide a fully operational negative air system within the work area continuously maintaining a pressure differential across work area enclosures of -0.02 inches of water. Demonstrate to the Owner's Representative the pressure differential by use of a pressure differential meter or a manometer, before disturbance of any asbestos containing materials. This pressure differential will be used for either negative air system or pressure differential system.

### **1.9.3. MONITORING:**

Continuously monitor and record the pressure differential between the work area and the building outside of the work area with a monitoring device incorporating a strip chart recorder. Make the strip chart record part of the project log.

### **1.9.4. TESTING THE SYSTEM:**

Test negative-pressure system before any ACM is wetted or removed. After the work area has been prepared, the decontamination facility set up, and the exhaust unit(s) installed, start the unit(s) (one at a time). Demonstrate operation and testing of negative-pressure system to the Owner's Representative.

### **1.9.5. DEMONSTRATION OF NEGATIVE AIR SYSTEM OPERATION:**

Demonstrate the operation of the negative-pressure system to the Owner's Representative to include, but not be limited to, the following:

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1. Demonstrate pressure differential system will maintain -0.02" of water.
2. Emergency shutoff will operate in case of fire.

### **1.9.6. USE OF SYSTEM DURING ABATEMENT OPERATIONS:**

Start exhaust units before beginning work (before any ACM is disturbed). After abatement work has begun, run units continuously to maintain a constant negative-pressure until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop.

Do not shut down negative air system during abatement operations procedures, unless authorized by the Owner's Representative *in writing*. The systems may be shut down daily if air monitoring in the containment shows airborne levels of less than 0.01 fibers/cc.

Start abatement work at a location farthest from the exhaust units and proceed toward them. If an electric power failure occurs, immediately stop all removal work and do not resume until power is restored and all exhaust units are operating again.

At completion of abatement work, allow exhaust units to run as specified under this section, to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the work area with clean makeup air. Units may be required to run after decontamination, if dry or only partially wetted asbestos material was encountered during any abatement work.

### **1.9.7. DISMANTLING THE SYSTEM:**

When a final inspection and the results of the final air tests indicate that the area has been decontaminated, exhaust units may be removed from the work area. Before removal from the work area, remove and properly dispose of pre-filters, and seal intake to the machine with 6-mil polyethylene to prevent environmental contamination from the pre-filters.

## **1.10. CONTAINMENT BARRIERS AND COVERINGS OF WORK AREA:**

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### **1.10.1. GENERAL:**

Seal off perimeter of work area to completely isolate abatement areas and to contain all airborne asbestos contamination created by abatement work. Cover all surfaces of the work area to protect them from cross contamination, to facilitate more efficient cleanup, and to protect the finishes from the asbestos abatement work. Should the area beyond the seal off limits become contaminated as a consequence of the work, clean those areas in accordance with procedures described in this section at no additional cost.

### **1.10.2. PREPARATION PRIOR TO SEALING OFF:**

Place all tools, staging, etc. necessary for the work in the area to be isolated prior to erection of temporary plastic sheeting enclosure. Disable ventilating systems or any other system bringing air into or out of the work area. Disable system utilizing positive means that will prevent accidental premature restarting of equipment, i.e., disconnecting wires, removing circuit breakers, lockable switch, etc.

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### **1.10.3. CONTROL ACCESS TO WORK AREA:**

Permit access to the work area only through the DF. All other means of access will be closed off and sealed and warning signs displayed on the clean side of the sealed access. Where the work area is immediately adjacent to or within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6-mil in thickness so that the work procedures are not visible to building occupants. Where the area adjacent to the work area is accessible to the public, construct a barrier of plywood or other suitable material at least eight feet (8') in height that is able to withstand the negative pressure as specified.

Post warning signs at each visual and physical barrier per OSHA requirements. Alternate method of containing the work area or different definition of the limits of seal-off from the one shown on the drawings may be submitted to the Owner's Representative for approval in accordance with this section. Do not proceed with any such alternatives without prior written approval by the Owner's.

### **1.10.4. CRITICAL BARRIERS:**

Completely separate the work area from other portions of the building, and the outside by sheet polyethylene barriers at least 6 mil in thickness and sealing with duct tape. Individually seal all ventilation openings (supply and exhaust), lighting fixtures, doorways, windows, and other openings into the work area with duct tape alone and with polyethylene sheeting at least 6-mil in thickness, taped securely in place with duct tape. Maintain seal until all work including project decontamination is completed. Take care in sealing off lighting fixtures to avoid melting or burning of sheeting. Provide sheet plastic barriers at least 6-mil in thickness as required to completely seal openings from the work area into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape or spray cement.

### **1.10.5. PRIMARY BARRIERS:**

The primary barrier of the full containment walls will consist of a minimum of Primary barriers for full containment shall consist of two (2) layers of minimum 4-mil polyethylene sheeting for the walls securely anchored from the floors to the ceiling. The containment for the removal of the linoleum flooring will require a minimum 4-mil polyethylene sheeting for the ceiling. Polyethylene sheeting shall meet ASTM requirements in accordance with TDSHS regulations. Visible openings observed along the perimeter walls and the ceiling shall be completely sealed polyethylene sheeting and the wall corners of the containment should be attached with an overlap of at least twelve inches. The primary barrier construction should form an airtight, impermeable, permanent barrier around the ACM and ACM debris to contain the release of asbestos fibers into the air.

### **1.10.6. EXTENSION OF WORK AREA:**

If the enclosure barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, then where possible, add affected area to the work area. Enclose it as required by this Section of the specification and decontaminate it as described elsewhere in this section. If contaminated area cannot be added to work area, decontamination measures will start immediately after contamination is discovered and work will stop in work area. Decontamination procedures will continue until exposure returns to background levels.

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### **1.10.7. SECONDARY BARRIERS:**

Secondary barriers should be established in areas to separate any non-related work activity from the abatement containment to prevent dust or debris from potentially contaminating fresh air (make-up air) into the containment or regulated asbestos removal area.

### **1.11. MONITORING, INSPECTION AND TESTING:**

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#### **1.11.1. GENERAL:**

Perform throughout abatement work monitoring, inspection and testing inside the work area in accordance with OSHA requirements and these specifications. I.H. Technician will continuously inspect and monitor conditions inside the work area to ensure compliance with these specifications. In addition, the I.H. will personally manage air sample collection, analysis and evaluation for personnel and work area samples to satisfy OSHA requirements. Additional inspection and testing requirements are specified in other parts of this section.

The Owner will employ a Certified Industrial Hygienist (C.I.H.) representative to perform various services on behalf of the Owner. The C.I.H. representative or representative under the direction of a C.I.H. will perform the necessary monitoring, inspection, testing and other support services to ensure that the Owner, employees and visitors will not be adversely impacted by the abatement worked, and that the abatement work proceeds in accordance with these specifications, that the abated areas or abated buildings have been successfully decontaminated. The work of the C.I.H. representative in no way relieves the abatement Contractor from his responsibility to perform his work in accordance with contract documents, to perform continuous inspection, monitoring and testing for the safety of his employees, and to perform other such services as specified in this section. The cost of the CIH representative and his services will be born by the Owner except for repeated final inspection and testing that may be required due to unsatisfactory initial results. These repeated final inspections and testing, if required, will be paid for by the Contractor.

The Asbestos Abatement Contractor may request confirmation of above results. This request must be in writing and submitted to the Owner's Representative. Cost for the confirmation of results will be born by the Contractor for both the collection and analysis of samples and for the time delay that may result for this confirmation. Confirmation sampling and analysis will be the responsibility of the Contractor with review and approval by the C.I.H.

#### **1.11.2. OUTLINE SCOPE OF SERVICES OF THE OWNER'S CONSULTANT:**

The purpose of the work of the Owner's Representative is to: assure quality, resolve problems, and prevent the spread of contamination beyond the work area. In addition, the consultants work include performance of final inspection and testing to determine whether a space or a building has been adequately decontaminated. All air monitoring is to be done utilizing PCM sampling procedures with final clearance to be performed by TEM. The Owner's Representative will perform the following tasks:

- TASK 1: Establish background levels before abatement work will start. This will include taking background samples (at least 3) and retaining samples for possible TEM analysis.

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- TASK 2: Perform continuous air monitoring, inspection and testing outside the work area during actual abatement work area. In addition, the Owner's Representative will be required to detect any faults in the work area isolation and any adverse impact of surroundings from work area activities.
- TASK 3: Perform unannounced site visits to spot check overall compliance of work with contract documents. These visits may include any inspection, monitoring and testing inside and outside the work area and all aspects of operation except personnel monitoring.
- TASK 4: Provide support to the Owner such as evaluation of submittals from the abatement contractor, resolution of unforeseen developments in abatement work, etc.
- TASK 5: Perform final inspection and testing of a decontaminated area or building at the conclusion of the abatement and cleanup work to certify compliance with Owner's decontamination standards.
- TASK 6: Issue certificate of decontamination for each area or building and a final project report.
- TASK 7: The Owner's Representative will have authority to require building materials to be removed and disposed of as ACM waste where visible ACM debris is present.

All data, inspection results and testing results generated by the Owner's Representative will be available to the Contractor for information and consideration. Contractor will provide cooperation and support to the Owner's Representative for efficient and smooth performance of their work.

Monitoring and inspection results of the Owner's Representative will be used by the Owner to issue any Stop Asbestos Removal Orders to the contractor during abatement work and to accept or reject an area or a building as decontaminated. The Owner's Representative will make available to the Contractor the plan for sample collection and analysis for continuous monitoring outside the work areas and the plan of final inspection and testing for each space or building prior to executing each plan. Plan will include location for samples, name and qualification of person taking samples, whether on site analysis and/or lab analysis will be utilized, methodology of analysis, lab information and qualifications of on-site analyst.

### **1.11.3. MONITORING, INSPECTION AND TESTING BY ABATEMENT CONTRACTOR:**

The Contractor is responsible for managing all monitoring, inspection and testing required by these specifications and the OSHA requirements.

The analytical laboratory that will be used by the Contractor to analyze the samples will be AIHA P.A.T. Accredited and Texas Department of State Health Services Licensed. Keep a daily log of personnel samples taken and analyzed and make log available to the Owner's Representative. Log will contain information on the persons sampled, the date of sample collection the time of sample start and finish, flow rate, sample volume and fibers/cc. Take and analyze personnel samples for at least 25% of the workers in each shift, but not less than two where active abatement takes place.

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### **1.11.4. ANALYSIS:**

Bulk samples (if required) will be analyzed at a laboratory that is Accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Proof of accreditation must be submitted prior to the project start date. Polarized light microscopy will be used to analyze bulk samples.

Air samples will be analyzed by an individual participating in the American Industrial Hygiene Association's (AIHA) Proficiency Analytical Testing Program.

In addition to the continuous monitoring required, the Owner's Representative will perform inspection and testing at the final stages of abatement for each work area or building as specified elsewhere in this section.

### **1.12.5. SUBMITTALS AT COMPLETION OF ABATEMENT:**

The Contractor will submit a final project report consisting of the daily log book and the documentation of events during abatement including the original disposal manifests signed by the operator of licensed landfill. The project report will include a certificate of completion, dated and signed by the Contractor. All certificates and original disposal manifests are due to the Owner's Representative office within 30 (thirty) days after completion of abatement work.

## **PART 2 - EXECUTION**

### **2.1. PREABATEMENT ACTIVITIES:**

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#### **2.1.1. PREABATEMENT MEETING:**

The Owner's Representative, upon receipt, review and substantial approval of all preabatement submittals and upon verification that all material and equipment required for the project are on site, will arrange for a preabatement meeting between the Asbestos Abatement Contractor, superintendent and foremen and the Owner's Representatives. The purpose of the meeting is discuss any aspects of the submittals needing clarification or amplification and to discuss any aspects of the project execution and the sequence of operations.

The Asbestos Abatement Contractor and his employees will be prepared to provide any supplemental evidence and information to the Owner's Representative pertaining to any aspects of the submittals or the materials and equipment. No abatement work of any kind described in the following provisions of these specifications will be initiated prior to the preabatement meeting.

#### **2.1.2. PREABATEMENT INSPECTION AND PREPARATIONS:**

Before any work begins on the containment barriers, the contractor will:

1. Conduct a space-by-space inspection with an authorized Owner's Representative, and prepare a written inventory of all existing damage in those spaces where asbestos removal work will occur. Still or video photography may be used to supplement this written damage inventory. Documents will be signed and certified as accurate by both parties.
2. Ensure that all furniture, machinery, equipment, curtains drapes, blinds and other movable objects which the contractor is bound to remove from the work area have been removed or protected.
3. Notify the Owner's Representative of systems that need to be shut down as soon as practical in advance. The Owner's Representative will coordinate shutdown with Con-

## **ASBESTOS REMOVAL**

tractor and Owner's Facility Representative. The Owner's Facility Representative will perform and monitor shutdown as required by Contractor.

- a. Shutdown and seal off all heating, cooling, ventilating or other air handling systems serving the work area. The environment of the work area will be completely isolated from all other air flows in the building. Owner's Representative will monitor shutdown.
- b. Shut down all electrical circuits which pose a potential hazard on the job. Exact electrical arrangements will be tailored to the particular space and systems involved. All electrical circuits will be turned off at the box outside the removal area, not just the wall switch. Potential for electrical shock is a major threat to life in a work area where large amounts of water will be sprayed on ceilings, conduits, lighting fixtures and other electrical items. Electrical lines which are used to power work lights and equipment will conform to all electrical safety standards and will be protected by a ground fault interrupter. The Asbestos Abatement Contractor will be responsible for all OSHA lockout/tagout requirements. A copy of the Asbestos Abatement Contractor's lockout/tagout program must be submitted for review prior to asbestos abatement operations.

### **2.1.3. PREABATEMENT CONSTRUCTION AND OPERATIONS:**

Perform all preparatory work for the first work area in accordance with the approved detailed work schedule. Execute the preparatory work in accordance with this specification.

Upon completion of all preparatory work, the Owner's Representative will inspect the work and systems to assure work is in accordance with these Specifications. The Owner's Representative may require that, upon satisfactory inspection, the Contractor's employees perform all major aspects of the approved SOP especially on worker protection, respiratory protection, contingency plans, decontamination procedures and monitoring to demonstrate satisfactory operation. The operating systems for respiratory protection and negative pressure air systems will be demonstrated for performance.

Upon satisfactory inspection of the installation and systems and satisfactory demonstration of operations the Owner's Representative will notify the Contractor to proceed with abatement work.

## **2.2. REMOVAL OF ACM AND ACE:**

---

### **2.2.1. WETTING MATERIALS:**

The Asbestos Abatement Contractor will adequately wet and remove all ACM as follows:

1. Spray wetting agent on the asbestos containing materials.
2. After wetting and removal, seal all ACM waste in leaktight two layers of 6-mil polyethylene while wet. For waste material not fitting into containers without additional breaking, put material into leaktight wrapping.
3. Label containers and wrapped material using warning labels as specified by OSHA 29 CFR 1910.1001 or 1926.1101 and the NESHAPS regulations.
4. For ACM being transported off the facility site, label ACM waste containers and wrapped material with the name of the waste generator and the location where the waste was generated.

## **ASBESTOS REMOVAL**

### **2.2.2. SITE PREPARATION:**

Erect critical barriers at all doors and windows entering the regulated areas. This project will be conducted by establishing critical barriers over all openings into the work area. A three stage wet decontamination unit will be erected for worker entrance and exit into the work area. The Contractor must establish negative air in the containment and maintain a pressure differential of -0.02 inches of water column pressure differential.

### **2.2.3. PERSONAL PROTECTION:**

One (1) layer of disposable clothing air-purifying respirators (PAPR) with NIOSH-approved HEPA cartridges shall be worn by all personnel during removal of the asbestos-containing thermal system insulation.

Provide boots, safety glasses and gloves for all workers. Equipment will meet OSHA requirements for personal protection. Provide all persons entering the work area with disposable full body coveralls, disposable head covers and rubber boots.

### **2.2.4. WHITE MASTIC ON PIPING/BLACK MASTIC ON HVAC DUCT:**

The Contractor may remove the pipe insulation and elbows in a full containment or use a glove bag. If a glovebag is used the procedures listed below will be used:

The minimum crew size for a glovebag operation is two: one member performs the actual removal with "hands in the gloves" and the second directs the spray wand at the work. It is recommended that three people be used. The third helps support the bag, makes sure tools and supplies are readily available, and is on hand in case of emergency. All crew members should be trained in the use of the glovebag.

The Contractor will erect critical barriers and establish negative air filtration. Rope off work area and place warning signs. Bring the necessary materials into the work area. Have a HEPA vacuum system available at all times. The HEPA vacuum will be used to establish negative air filtration inside of the glove bag.

Make sure that possible contaminants in the area have been cleaned with the proper methods before beginning the glovebag procedure to avoid confusion concerning the source of the material.

Wrap the adjacent pipe not to be enclosed in the glovebag with 6-mil plastic.

Cover surfaces, such as the floor and walls, near the glovebag removal site with 6-mil plastic.

Disposable clothing and full-face PAPR respirators will be worn by any person performing glovebag removal. If fiber counts generated during abatement do not exceed the protection factor of a half-face respirator during glovebag removal of TSI, and this can be verified by on-site PCM fiber counts, a half-face respirator may be used.

Wrap duct tape around the insulation where the shoulders of the glovebag will be attached.

## **ASBESTOS REMOVAL**

Put the necessary tools in the pouch of the glovebag. Slit the glovebag as necessary to fit it over the pipe from which insulation is to be removed.

Attach the glovebag to the previously applied duct tape at the shoulders. Fold the top edge of the bag between shoulders over on itself about an inch, then staple it about every two inches. Fold it again and tape the folded edge to the bag. Seal all joints with duct tape.

Prepare the opening for the spray wand. If the manufactured location is not accessible, be sure to reinforce the bag with duct tape where the slit is to be made. Slit must be covered with rubber septum-like material that will seal after the wand is removed.

Be sure the sprayer and bag are properly supported.

The glovebag will have to have a smoke test to assure that the bag is sealed. Assemble the tube and bulb. Insert the tube into the slit prepared for the spray wand. Fill the bag with smoke and gently squeeze. Watch for leaks particularly at seams, joints, corners, and arms. Seal leaks with duct tape.

Establish negative air filtration of the glovebag before any removal operations take place.

Wet the covering of the insulation, keeping it wet through the entire operation.

Remove any metal covering with the tin snips. Remove the outer covering of the insulation. This may expose wire that needs to be cut before proceeding. Be sure that sharp edges of metal and wire are folded inward to avoid puncturing the bag. It may be possible to further protect the bag by packing insulation, which has already been removed from the pipe and placed at the bottom of the bag, around sharp edged material.

Remove the insulation. If possible, remove sections as they were installed. Otherwise use the utility knife and/or the flex saw to cut out the section which is then pried off. Keep the insulation (especially newly exposed surfaces) wet during the procedure.

As pieces of insulation are removed, lower them carefully to the bottom of the bag.

Using the putty knife and the screwdriver, scrape any remaining residue from the pipe. Rinse the pipe while scraping. Clean the pipe with the scrub brush.

Wipe all cleaned surfaces with a wet rag and put the rag in the bottom of the bag.

Rinse and wipe the inside of the glovebag.

Rinse and wipe the tools, then put them in the pouch. Develop a check list to inventory tools in the glovebag.

Pull one arm out of the glovebag, inverting the glove in the process. With the other hand, place tools in the inverted glove. Grasp the remaining tools and place them in the other glove as the second arm is withdrawn.

After the bag has been collapsed and the bottom twisted off, twist the gloves between the tool and the glovebag and wrap with tape for about four inches starting at the bag. Leave a tab and cut through the tape.

## **ASBESTOS REMOVAL**

Either transfer the glove to a new bag (if work is to continue) or open the bag under water and remove the tools, making sure they are free from debris.

Remove the spray wand and insert the nozzle of the HEPA vacuum in the slit. Turn the vacuum on and run it long enough to collapse the bag.

Twist the bag and wrap it with duct tape just below the gloves and remove the HEPA vacuum nozzle.

Glovebags may only be used once and may not be moved.

When the bag is finally to be removed from the pipe, fold the dirty side inward and put it in a 6-mil disposal bag. Seal the disposal bag.

Inspect the sections of the pipe where the insulation has been removed. Remove any remaining material with a wet rag or the HEPA vacuum. Apply a coat of sealant to the pipe.

Clean up any debris or water on the floor with wet rags and/or the HEPA vacuum.

As in any asbestos related project, the work area should be kept free of debris. Any contamination should be cleaned up immediately. When the work day is complete, (or as soon as the project is complete) the work area should be cleaned using wet methods and/or a HEPA vacuum.

All glovebags should be removed from the pipes at the end of the work day (or as soon as the procedures are completed) and placed in double layer 6-mil asbestos disposal bags. Dispose of waste in accordance with regulations for asbestos waste found in these specifications.

Workers should pass through a complete decontamination facility when exiting the work area.

If the bag develops a leak, stop work inside the bag. Catch the water in a plastic disposal bag. Lift and move the bag so that water stops running out. Do not "pump" the bag in a way that would force air out. Twist the bag in the area of the puncture to form a stem, dry the surface and tape it securely closed. Clean up the contaminated water and debris from the floor immediately using wet methods and/or the HEPA vacuum. Dispose of the waste properly.

Alternate removal techniques may be used if approved by the CIH.

### **2.2.5. FLOOR TILE AND MASTIC:**

Those areas normally exposed to heavy foot traffic patterns usually have tiles adhered the tightest. As a matter of good practice in starting the tile removal, those sections which receive the least traffic should be the locations selected for starting the removal of the tile. Since tiles are normally in a 9" x 9" or 12" x 12" dimension, it should be the goal to remove individual tiles as a complete unit to the best extent possible.

Start the removal by carefully wedging the wall scraper in the seam of two adjoining tiles and gradually forcing the edge of one of the tiles up and away from the floor. Do not break off pieces of the tile but continue to force the balance of the tile up by working the scraper beneath the tile and exerting both a forward pressure and a twisting action on the blade to promote release of the tile from the adhesive and the floor.

## ASBESTOS REMOVAL

When the first tile is removed, place it, without breaking into smaller pieces, in the heavy-duty impermeable waste bag or closed impermeable container which will be used for disposal.

With the removal of the first tile accessibility of the other tiles is improved. Force the wall scraper under the exposed edge of another tile and continue to exert a prying twisting force to the scraper as it is moved under the tile until the tile released from the floor. Again, dispose of the tile, and succeeding tiles, by placing in the heavy-duty bag or closed container without additional breaking.

Some tiles will release quite easily while others require varying degrees of force. Where the adhesive is spread heavily or is quite hard, it may prove easier to force the scraper through the tightly adhered areas by striking the scraper handle with a hammer using blows of moderate force while maintaining the scraper at a 25° to 30° angle to the floor. **Caution:** Use safety goggles.

If some areas are encountered where even the technique detailed in the previous paragraph proves to be inadequate, the removal procedure can be simplified by thoroughly heating the tile(s) with a hot air blower until the heat penetrates through the tile and softens the adhesive.

**Note 1:** Handle the hot air blower, tiles, and adhesive carefully to avoid personal burns.

**Note 2:** Do not handle the heated tiles and adhesive without suitable glove protection for the hands.

As small areas of subfloor are cleared of tile, the adhesive remaining on the floor must be scraped up with the 4" hand scraper until only a thin, smooth film remains. In those area where deposits are heavy or difficult to scrape, the removal can be expedited by heating with the hot air blower prior to scraping. Deposit scrapings in a heavy-duty impermeable trash bag or closed impermeable container. Thoroughly spread approved mastic biodegradable cleaner/solvent on-to all mastic with a garden sprayer (Note: The solvent used to remove the mastic must have a flash point of >140 degrees F. Submittals for the solvent must include a Material Safety Data Sheet. Let the solution stand for at least 15 minutes. Use an industrial buffer with coarse pads to dislodge the material or a squeegee. Squeegee, or use scrapers to push material into a central location for final mopping and cleanup. Hand-scraping may be done at the Contractor's option, or as required to completely remove all material.

As indicated in previous paragraphs, tiles should be placed immediately in a waste disposal bag or closed impermeable container. Do not attempt to break tiles after they are in the bag.

When all tiles, mastic and sorbent material have been removed from the floor and placed in polyethylene waste bags at least 6-mil thick or closed containers, seal the bags securely for disposal.

"Shot blaster" or "bead blaster" machines will not be allowed to remove the floor tile and mastic.

Alternate removal techniques may be used if approved by the CIH.

## **ASBESTOS REMOVAL**

### **2.2.6 WALL JOINT COMPOUND AND TEXTURE**

The asbestos texture will be kept wet and removed by wet scraping or as intact sheetrock and ceiling tile sections utilizing hand tools and a low water volume, short distance power diffusing "Airless" sprayer. The asbestos plaster texture and texture on CMU block will be kept wet and removed utilizing hand tools and a low water volume, short distance power diffusing "Airless" sprayer.

The minimum crew size for the operation is three: one member performs the actual removal, the second directs the spray wand at the work and the third worker collects and contains the wet ACM debris generated during the work. It is recommended that four workers be utilized in the procedure. The fourth person provides support during the work, making sure tools and supplies are readily available, and is on hand in case of emergency. All crew members should be trained in the use of the wet scraping procedure.

The Contractor will erect critical barriers and establish negative air filtration. Rope off work area and place warning signs. Bring the necessary materials into the work area. Have a HEPA vacuum system available at all times. The HEPA vacuum will be used to remove debris which may settle in remote areas such as corners, cracks or crevices in the work area.

Make sure visible ACM debris and dust in the area have been wetted with amended water and cleaned with the proper methods before beginning the procedure to avoid confusion concerning the source of the material.

Cover floor with a minimum of two layers of 6 mil plastic sheeting if flooring is not being removed, and cover wall surfaces with a minimum of two layers of 4 mil plastic sheeting. The top polyethylene sheeting layer may be removed as part of the detail cleaning process after gross removal.

Hard hats, disposable clothing and full-face PAPR respirators will be worn by all persons performing the ACM removal.

Establish negative air filtration in the containment before any removal operations take place.

The containment may be smoke tested to assure the negative pressure inside the containment is adequately sealed. Assemble the smoke tube and bulb. Generate short bursts of smoke in the containment particularly at seams, joints and corners and critical barriers. Observe the direction of the smoke trail. Watch for leaks, and seal any leaks with duct tape.

Wet the plaster and surfacing material adequately to suppress any generation of airborne dust or debris, keeping it wet throughout the entire operation.

As sections of ACM are removed, keep the material wet and shovel debris carefully into the bottom of a disposal bag.

Wipe all cleaned surfaces with a wet rag and put the rag in the bottom of a 6 mil disposal bag.

Rinse and wipe the inside of the disposal bag.

Clean up any debris or water on the floor with wet rags and/or the HEPA vacuum.

## **ASBESTOS REMOVAL**

As in any asbestos related project, the work area should be kept free of debris. Any contamination should be cleaned up immediately. When the work day is complete, (or as soon as the project is complete) the work area should be cleaned using wet methods and a HEPA vacuum.

All asbestos material and associated debris should be removed and placed in double layer 6 mil asbestos disposal bags before the end of the work day. Dispose of waste in accordance with regulations for asbestos waste found in these specifications.

Workers should pass through a complete three-stage wet decontamination facility prior to exiting the building.

If a disposal bag develops a leak, stop work inside the containment. Catch the water in a plastic disposal bag. Lift and move the bag so that water stops running out. Do not "pump" the bag in a way that would force air out. Twist the bag in the area of the puncture to form a stem, dry the surface and tape it securely closed. Clean up the contaminated water and debris from the floor immediately using wet methods and the HEPA vacuum. Dispose of the waste properly.

### **2.3. DISPOSAL OF ACM AND ACE WASTE MATERIAL:**

---

#### **2.3.1. GENERAL:**

The Asbestos Abatement Contractor will dispose of friable ACM and debris which is packaged in accordance with these specifications at the approved landfill. Dispose of non-friable ACM in accordance with the applicable regulations for friable asbestos. The transporter must be licensed in accordance with the Texas Department of State Health Services Asbestos Rules and Regulations. The truck transporting the waste must have the following noted on the shipping papers, manifests and trucks:

Hazardous Material Proper Shipping Name: hazardous substance solid, N.O.S.

DOT Hazard Class: Class 9 PG. III

Identification Number: NA 2212 (friable waste)

Reportable Quantity: RQ

Name and Address of Generator

#### **2.3.2. PROCEDURES:**

Carefully load containerized waste on sealed trucks for transport. Ensure that unauthorized persons do not have access to the material outside of the work area. Take bags from the work area directly through the EDF process to a sealed truck. Double bagged material may be transported in open trucks only if they are first loaded in sealed drums. Label drums with same warning labels as bags. Dispose drums as contaminated, do not attempt to empty them for reuse.

Advise the sanitary landfill operator, at least twenty-four hours in advance of transport, of the quantity of material to be delivered. At the burial site, sealed plastic bags may be carefully

## **ASBESTOS REMOVAL**

dumped from the truck. If bags are broken or damaged, leave in the truck and decontaminate entire truck and contents using procedures set forth elsewhere in this section.

### **2.4. PROJECT DECONTAMINATION:**

---

#### **2.4.1. GENERAL:**

The entire work of project decontamination will be performed under the close supervision and monitoring of the Owner's Representative.

#### **2.4.2. WORK AREA CLEARANCE:**

Air testing and other requirements which must be met before release of Contractor and reoccupancy of the work area are specified elsewhere in this Section. Air Clearance will be performed utilizing Phase Contrast Microscopy with an airborne level of <0.01 F/cc.

#### **2.4.3. WORK DESCRIPTION:**

The work of decontamination includes the decontamination floor and air within the work area and the decontamination and removal of temporary facilities installed prior to abatement work including Primary and Critical Barrier, Decontamination Facilities (PDF and EDF) and Negative Pressure Systems.

The work of decontamination includes the cleaning, and decontamination of all surfaces (ceiling, walls, floor) of the Work Area, or equipment in the Work Area.

#### **2.4.4. PRE-DECONTAMINATION CONDITIONS:**

Before decontamination work starts, all ACM and ACE will be removed from the work area and disposed of along with any gross debris generated by the work.

At the start of work for decontamination, the following will be in place:

1. Critical barrier which forms the sole barrier between the work area and other portions of the building or the outside.
2. Critical barrier sheeting over lighting fixtures, ventilation openings, doorways, convectors, speakers and other openings.
3. Decontamination facilities for personnel and equipment in operating condition and negative pressure system in operation.

#### **2.4.5. FIRST CLEANING:**

The Asbestos Abatement Contractor will carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and a HEPA filtered vacuum. Do not perform dry dusting or dry sweeping. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces. Remove all filters in air handling system(s) and dispose of as asbestos containing waste in accordance with requirements of these specifications.

## **ASBESTOS REMOVAL**

### **2.4.6. SECOND CLEANING:**

If the Asbestos Project Manager is not satisfied with the first cleaning, the Contractor will perform a second cleaning inside containment. If the containment fails to pass final air clearance criteria, the Contractor will perform additional wet cleaning inside containment.

### **2.4.7. PRE-CLEARANCE INSPECTION AND TESTING:**

The Owner's Representative will perform a thorough and detailed visual inspection at the end of the second cleaning to determine whether there are any signs of visible ACM or dust in the work area. If the visual inspection is satisfactory, the Contractor will then encapsulate all surfaces inside the containment. Final air clearance will be performed in accordance with these Specifications.

### **2.4.8. LOCK-BACK ENCAPSULATION:**

With the express permission of the Owner's Representative, the Asbestos Abatement Contractor will perform a lock-back encapsulation of all surfaces from which ACM was removed. Execute in accordance with provisions specified elsewhere and performance requirements as specified in Paragraph 2.2.2 of this Specification. Maintain negative pressure in work area during encapsulation work.

## **2.5. FINAL AIR CLEARANCE TESTING**

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### **2.5.1. GENERAL:**

The Asbestos Abatement Contractor will notify the Owner's Representative in advance for the performance of the final visual inspection and testing. The final air clearance will be performed by the Owner's Representative starting after completion of the encapsulation of the containment and the material is dry.

### **2.5.2. FINAL TESTING:**

After a satisfactory final visual inspection and encapsulation, The Owner's Representative, will undertake the final testing. Air samples will be taken and analyzed in accordance with the procedures for PCM specified elsewhere in this section. If release criteria are not met, the contractor will repeat final cleaning and continue decontamination procedure from that point. Additional inspection and testing will be at the expense of the Contractor.

If results of PCM air samples are satisfactory, remove the critical barriers and shut down and remove HEPA units as specified under Abatement Closeout. Any small quantities of residue material found upon removal of the plastic sheeting will be removed with a HEPA filtered vacuum cleaner and localized isolation. If significant quantities, as determined by the Owner's Consultant, are found then the entire area affected will be decontaminated as specified herein for the Final Cleaning.

If release criteria are met the Contractor will perform the abatement closeout and issue the certificate of compliance in accordance with these specifications.

### **2.5.3. FINAL TESTING PROCEDURES:**

## ASBESTOS REMOVAL

**CONTRACTORS RELEASE CRITERIA:** Work in an area is complete when the work area is visually clean and airborne fiber levels have been reduced to less than 0.01 fibers/cc by PCM analysis.

**AIR MONITORING AND FINAL CLEARANCE SAMPLING:** To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to the specified level, the Owner's representative will secure samples and analyze them according to the following procedures:

1. Fibers Counted: "Fibers" referred to in this section will be either all fibers regardless of composition as counted in the NIOSH 7400 method, or asbestos fibers of any size as counted using PCM; and

### **2.5.4. SCHEDULE OF AIR SAMPLES WITH PCM:**

The Owner's Consultant will perform background, perimeter and work area samples during construction and abatement. These samples will be analyzed by PCM.

At least three (3) background samples will be taken before work begins for a baseline measurement. The Owner's Representative will sample at a rate of one sample per 1,000 sq. ft. of work area with a minimum of two area samples for small containment areas. A minimum of 1,250 liters of air will be collected for all baseline and clearance samples.

From start of actual removal of asbestos-containing materials the Owner will take the following samples on a daily basis. The number of samples may vary according to site plan and approval from the CIH.

#### **DAILY SCHEDULE OF AIR SAMPLES**

Location Sampled	Number of Samples	Analytical Method	Detection Limit Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	3	PCM	0.02	750	2-15
Outside Each Work	2-3	PCM	0.01	1,000	2-15
Outside Entrance to Decontamination Facility	1	PCM	0.01	1,000	2-15
Outside Bag-out Area	1	PCM	0.01	1,000	2-15
Output Negative Pressure System	1	PCM	0.01	1,000	2-15

If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels.

\*At a minimum, five (5) samples will be collected per containment area over the duration of work in that area each day.

### **2.5.5. LABORATORY TESTING FOR PCM:**

The services of a AIHA P.A.T. accredited testing laboratory will be employed by the Owner to perform PCM analysis of the air samples collected prior to final clearance testing. A technician will be at the job site, and samples will be analyzed on-site. A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the Owner and the

## ASBESTOS REMOVAL

Abatement Contractor. The analytical laboratory must be licensed in accordance with State of Texas Civil Statutes Article 4477-3a pg. 295.54 in addition to being AIHA P.A.T. Accredited.

### 2.5.7. FINAL AIR TESTING REQUIREMENTS:

Final air testing will be performed by Phase Contrast Microscopy (PCM). Final air testing requirements are outlined below:

In each homogeneous work area after completion of all cleaning work, a minimum of three (3) samples will be taken and analyzed as follows:

#### PHASE CONTRAST MICROSCOPY CLEARANCE CRITERIA

Location Sampled	Number of Samples	Analysis Method	Analytical Sensitivity s/mm <sup>2</sup> .	Recommended Volume (Liters)	Rate LPM
Each Work Area	3	PCM	<0.005	1,250	< 15
Work Area Blank	1	PCM	<0.005	0	Open for 30 Seconds
Outside Blank	1	PCM	<0.005	0	Open for 30 Seconds
Laboratory Blank	1	PCM	<0.005	0	Do Not Open

**Release Criteria: Decontamination of the work site is complete when every work area sample is at or below 0.01 FIBERS/CC.**

## 2.6. ABATEMENT CLOSEOUT AND CERTIFICATE OF COMPLIANCE:

### 2.6.1. COMPLETION OF ABATEMENT WORK:

The asbestos abatement contractor will seal negative air machines with 6 mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from work area. Complete asbestos abatement work upon meeting the work area clearance criteria and fulfilling the following:

Remove all equipment, materials, debris from the work site.

Dispose of all asbestos containing waste material as specified elsewhere in this section.

Repair or replace all interior finishes damaged during the course of asbestos abatement work.

Replace all asbestos containing insulation and other ACM with suitable non-asbestos material so that facility is fully functional and safe as prior to abatement if required by these specifications.

Fulfill other project closeout requirements as specified elsewhere in this section.

### 2.6.2. CERTIFICATE OF COMPLETION BY CONTRACTORS:

## **ASBESTOS REMOVAL**

The Contractor will complete and sign a "Certificate of Completion" in accordance with attachment #1 at the completion of the abatement and decontamination of a work area.

***Appendix A***  
***Attachments***

**CERTIFICATE OF COMPLETION**

PROJECT: \_\_\_\_\_ DATE \_\_\_\_\_

LOCATION: \_\_\_\_\_

1. I certify that I have personally inspected, monitored and supervised the abatement work of \_\_\_\_\_  
(Specify Work Area or Building)  
  
which took place from \_\_\_\_\_ to \_\_\_\_\_.  
(Beginning of Work) (End of Work)
2. That throughout the work all applicable regulations and the specifications were observed.
3. That any person who entered this area was protected with the appropriate clothing and respirators systems and that they followed the proper entry and exit procedures and the proper operation procedures throughout the work.
4. That all employees of the contractor engaged in this work were trained in respiratory protection, experienced with abatement work, had proper medical records and were not exposed at any time during the work to asbestos without the benefit of adequate respiratory protection.
5. That I performed and supervised all inspection and testing specified and required by applicable regulations and the specifications.
6. That the condition inside the work area were always safe and the maximum asbestos fiber count never exceeded 0.5 f/cc. Except as describe here:  
\_\_\_\_\_.
7. That the negative pressure air systems were installed and operated properly maintaining the specified negative pressure in the work area throughout the work.

\_\_\_\_\_  
CONTRACTOR/SUPERVISOR

\_\_\_\_\_  
COMPANY NAME

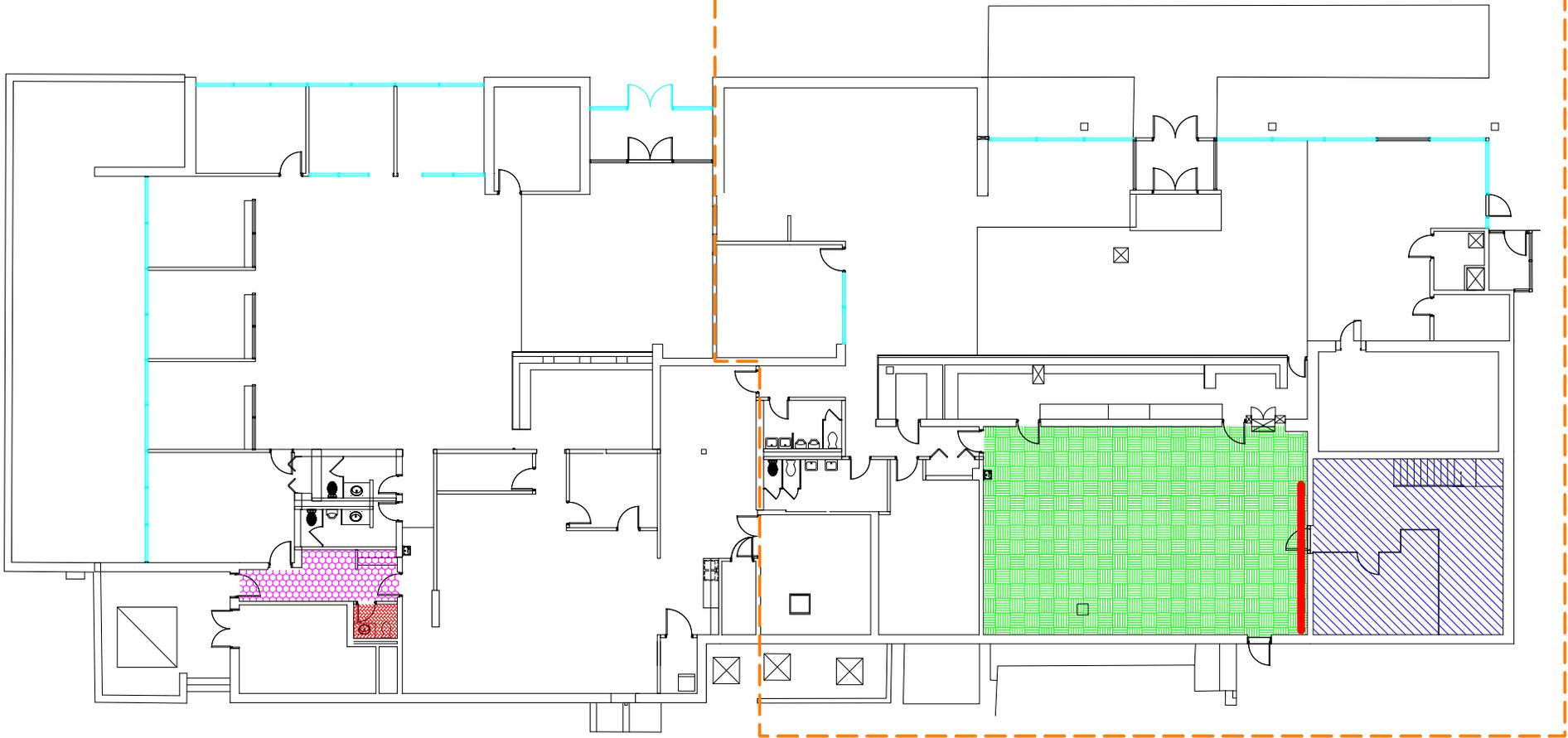
\_\_\_\_\_  
CONTRACTOR ADDRESS

**ATTACHMENT #1**

***Appendix B***  
***Specification Drawings***



**This Area has Black Mastic on HVAC Ductwork that is ACM.**



**KEY**

-  ACM Mortar (Under Ceramic Tile)
-  ACM Beige 12"x 12" Floor Tile w/ ACM Black Mastic
-  ACM Black Mastic under NON-ACM Beige 12"x12" Floor Tile
-  ACM Beige 9"x9" Floor Tile w/ ACM Black Mastic
-  ACM Joint Compound & ACM Texture (Finished Sheetrock Wall)

\*POSITIVE ASBESTOS CONTAINING MATERIAL IS CLASSIFIED AS BEING GREATER THAN 1% ASBESTOS.

*Gray K. Bremlett*

DSHS 10-5040, Expires 12/31/2017



Industrial Hygiene  
and  
Safety Technology, Inc.

DRAWING TITLE:

City of Fort Worth  
Vacant Bank Building  
3530/3532 Joyce Drive  
Fort Worth, TX 76116

JOB NUMBER:  
20274

DRAWN BY:  
K. Girton

DATE:  
12/12/2016

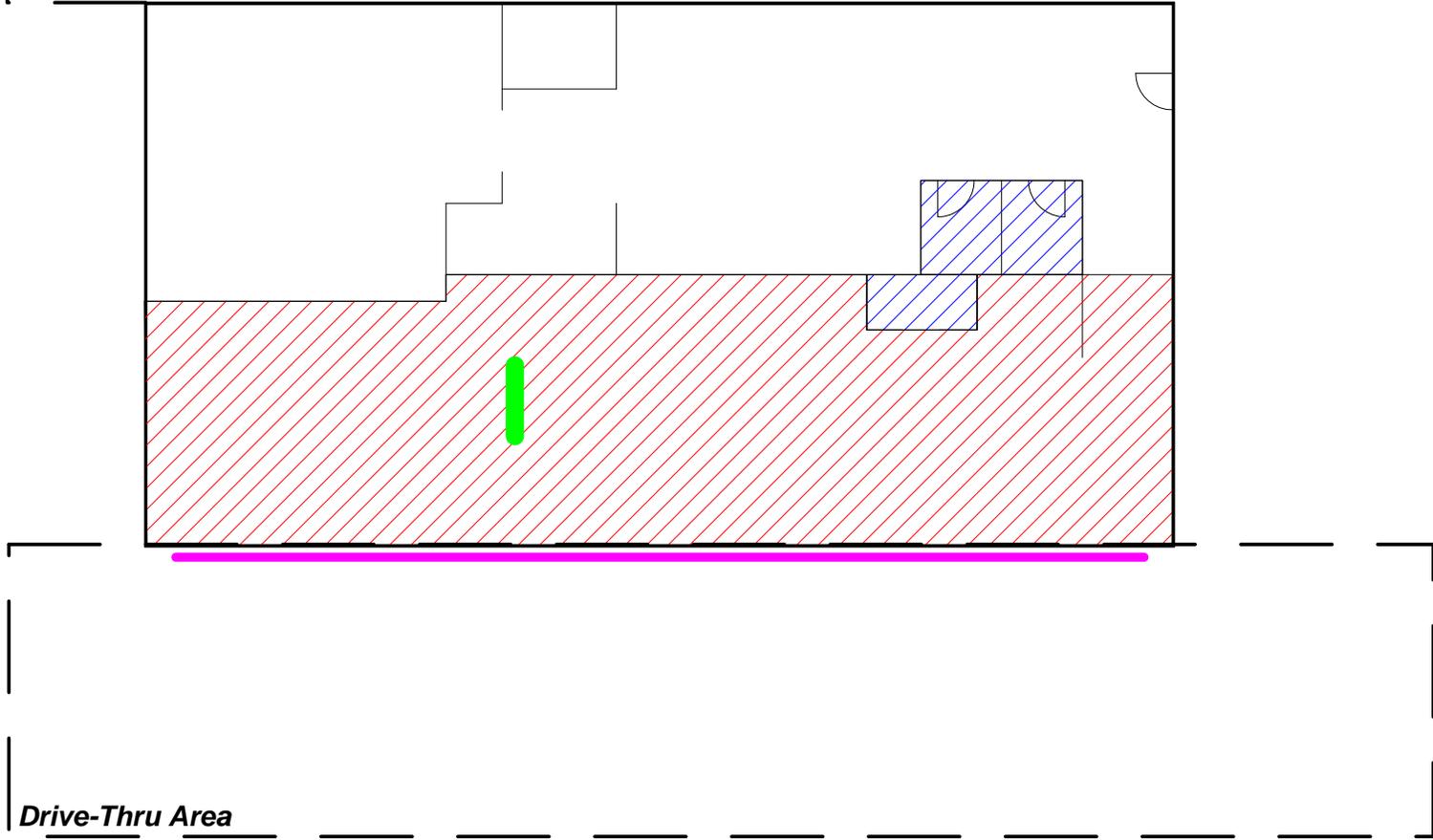
CAD File:  
Bank Building.TCW

Scale:  
None

Sheet:  
1 of 2



Drive-Thru Area



Drive-Thru Area

KEY

-  ACM Black Mastic underneath Carpet w/ Yellow Mastic and NON-ACM White 12"x12" Floor Tile w/ Yellow Mastic
-  ACM Black Mastic underneath NON-ACM Black 12"x12" Floor Tile
-  ACM White Mastic on Roof Drain Pipe
-  ACM Window Caulk

*Gray W. Bramlett*

DSHS 10-5040, Expires 12/31/2017



Industrial Hygiene  
and  
Safety Technology, Inc.

DRAWING TITLE:  
City of Fort Worth  
Vacant Bank Building  
3530/3532 Joyce Drive  
Fort Worth, TX 76116

\*POSITIVE ASBESTOS CONTAINING MATERIAL IS CLASSIFIED AS BEING GREATER THAN 1% ASBESTOS.

JOB NUMBER: 20274	DRAWN BY: K. Girton	DATE: 12/12/2016	CAD File: Bank Building.TCW	Scale: None	Sheet: 2 of 2
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