PROJECT MANUAL AND TECHNICAL SPECIFICATIONS
FOR

ENVIRONMENTAL ABATEMENT

14100 Navarre Street
Gibraltar, Michigan

Prepared by:

22725 Orchard Lake Road
Farmington, Michigan 48336

For

City of Gibraltar
29450 Munro
Gibraltar, MI 48173

October 11, 2016

TABLE OF CONTENTS

PROCUREMENT

Advertisement/Bid Invitation	Section 1.0
Instructions to Bidders	Section 2.0
Non-collusion	Section 3.0
Special Conditions	Section 4.0

CONTRACT DOCUMENTS

Insurance	Section 5.0
Bid Form	Section 6.0
Disclaimer	Section 7.0
Form of Agreement	Section 8.0
Terms and Conditions	Section 9.0

GENERAL REQUIREMENTS

Summary of Work	Section 10.0
Temporary Utilities	Section 11.0
Construction Facilities	Section 12.0
Construction Aids	Section 13.0
Temporary Barriers and Enclosures	Section 14.0

TECHNICAL SPECIFICATION

Site Preparation	Section 15.0
Mobilization/Demobilization	Section 16.0
Asbestos Abatement	Section 17.0

Appendix A Asbestos Materials Survey Report

1.0 INVITATION TO BID

ASBESTOS ABATEMENT

Bid Packets are available at:
City of Gibraltar
29450 Munro
Gibraltar, MI 48173

or for download at:
www.cityofgibraltar.net

PROPOSALS MUST BE RECEIVED BY FRIDAY, NOVEMBER 4, 2016 AT 3:00 P.M.

A mandatory bid walk is scheduled for 10:00 am local time Thursday, October 27, 2016 at 14100 Navarre Street, Gibraltar, Michigan (Project Site).

Sealed bids for asbestos abatement at 14100 Navarre Street, Gibraltar, Michigan will be publicly opened a short time thereafter. Proposals submitted by telephone, fax transmission, or email will not be accepted.

Work related to this project consists of furnishing all necessary labor, supervision, equipment, insurance and supplies for the removal of asbestos materials identified in the bid documents and specifications.

Bid security, performance bonds and labor and materials payment bonds will not be required.

Bids may be withdrawn up to the time and date of the bid opening. After the bid opining, bids may not be withdrawn for a period of 90 days thereafter. An award of the contract is anticipated within 30 days of the bid opening. Bids arriving after the scheduled bid opening date and time will not be opened nor considered by the City for this project.

The City of Gibraltar reserves the right to waive any irregularity or informality in bids, to reject any and/or all bids, in whole or in part, to select various options, or to award any contract to an entity other than the low bidder, should it be deemed in the City's best interest to do so. Past performance on City contracts will also be taken under consideration.

2.0 INSTRUCTIONS TO BIDDERS

1. **EXAMINATION OF BID DOCUMENT:** Before submitting a bid, bidders shall carefully examine the specifications and shall fully inform themselves as to all existing conditions and limitations. The bidder shall indicate in the bid the sum to cover the cost of all items included on the bid form.

2. **PREPARATION OF BID:** The bid shall be legibly prepared in ink or typed. If a unit price or extension already entered by the bidder on the Bid Document is to be altered, it shall be crossed out and the new unit price or extension entered above or below and initialed by the bidder with ink. The bid shall be legally signed and the complete address of the bidder given thereon. All bids shall be tightly sealed in an opaque envelope, properly identified and addressed to the City Clerk. Bids opened by mistake, due to improper identification, will be so documented and resealed. The City will maintain and guarantee confidentiality of the contents until the specified opening date and time.

3. **EXPLANATION TO BIDDERS:** Any explanation desired by a bidder regarding the meaning or interpretation of the Invitation for Bids (IFB) and attachments must be requested in writing, with sufficient time allowed for a reply no later than three days prior, to reach all prospective bidders before the submission of their bid. Any information given to a prospective bidder concerning the IFB will be furnished to all prospective bidders as an amendment or addendum to the IFB if such information would be prejudicial to uninformed bidders. Receipt of amendments or addenda by a bidder must be acknowledged in the bid by attachment, or by letter, telegram, or fax received before the time set for opening the bids. Oral explanation or instructions given prior to the opening will not be binding.

   Submit questions by email to: Jim Fox, Senior Project Manager
   AKT Peerless Environmental Services
   Email: foxcj@aktpeerless.com

   no later than Tuesday, November 1, 2016 to allow sufficient time to answer.

4. **WITHDRAWAL OF BIDS:** Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bid. No bid may be withdrawn for at least **90** days after bid opening.

5. **LATE BIDS:** Any bid received at the office designated herein after the exact time specified for receipt, will not be considered. (Note: The City reserves the right to consider bids that have been determined by the City to be received late due to mishandling by the City after receipt of the bid and no award has been made.)

6. **TIMETABLE:** To be determined by the City.

3.0 NON-COLLUSION AFFIDAVIT

STATE OF MICHIGAN
COUNTY OF _____

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

1. They are the _____of _____,
   (owner, partner, officer, representative. or agent)
   the bidder that has submitted the attached bid;

2. They are fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;

3. Such bid is genuine and is not a collusive or sham bid;

4. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder or person to fix the price or prices in the attached bid or of any other bidder, or, to fix any overhead, profit or cost element of the bid price or the bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Gibraltar or any person interested in the proposed contract; and,

5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

(Signed) _____

_____
Title

Subscribed and sworn to before me

this _____ day of _____, 2016. _____
Notary

My Commission Expires: _____

4.0 SPECIAL CONDITIONS

A. **CONTRACT DOCUMENTS:** These documents have been prepared to obtain a Michigan-licensed asbestos abatement contractor for the City to perform abatement services. The City reserves the right to add or subtract services outside of the basic scope of services requested.

B. **PERFORMANCE BOND:** Not required.

C. **EQUAL EMPLOYMENT OPPORTUNITY:** In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or application for employment because of race, religion, color or national origin. The Contractor shall further not discriminate against any employee or applicant to be employed in the performance of this contract with respect to his/her hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment because of age or disability, except where based on a bona-fide occupational qualification. In the event of the Contractor's non-compliance with this non-discrimination clause of this contract, the contract may be terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further City of Gibraltar contracts.

D. **ASBESTOS ABATEMENT LICENSE:** The selected Contractor will be licensed by the Michigan Department of Licensing and Regulatory Affairs (MDLARA) Asbestos Program.

E. **SUPERVISION:** The Contractor shall at all times have a supervisor at the project site able to address any problem that could arise during abatement procedures. If, in the sole discretion of the City or ENGINEER, this supervisor is determined to be ineffective or unknowledgeable of the contract documents, upon the City's request, he/she shall be removed by the Contractor and immediately replaced with an acceptable project supervisor.

5.0 INSURANCE REQUIREMENTS

The Contractor shall defend, indemnify and save harmless the City of Gibraltar, its officials, employees, departments, agents, boards, council and volunteers against and from all claims, judgments, losses, damages, demands, payments, recoveries, legal proceedings and decrees of every nature and expense to persons or property occasioned, wholly or in part by the negligent act or omissions of the Contractor, his/her agents, employees or subcontractors.

The Contractor shall furnish within five (5) days of Notice of Award, certificate(s) of insurance providing insurance coverage as follows:

(A) Workers' Compensation Insurance - Covering all persons engaged in work under this contract to the full statutory limits stipulated in the Michigan Workers' Compensation Act.

(B) Comprehensive General Liability Insurance - Including premises and operations, including XCU coverage, if the nature of the contract requires XC or U work. Product and completed operations, contractual and independent contractor's protection with limits as follows:

Bodily Injury	$1,000,000 each occurrence $2,000,000 aggregate
Property Damage or Bodily Injury/ Property Damage	$1,000,000 each occurrence $2,000,000 aggregate $2,000,000 CSL
Umbrella Coverage (Pollution Liability)	$5,000,000 each occurrence $5,000,000 aggregate

(C) Automobile Liability Insurance - Including owned, non-owned and hired motor vehicles as well as Michigan Property Protection Insurance as required by statute. Limits as follows:

Bodily Injury	$1,000,000 each occurrence $2,000,000 aggregate
Property Damage or Bodily Injury/ Property Damage	$2,000,000 each occurrence $2,000,000 aggregate $2,000,000 CSL
Umbrella Coverage (Pollution Liability)	$5,000,000 each occurrence $5,000,000 aggregate

The above requirements should not be interpreted to limit the liability of the Contractor under this contract. Proof that premium for said policy must also be furnished within five (5) days of Notice of Award, and at the beginning of each year of the contract.

All insurers shall be either licensed or authorized to do business in the State of Michigan. At a minimum, the insurer shall have a Best's rating of A.

These coverages shall protect the Contractor, its employees, agents, representatives and subcontractors against claims arising out of the work performed. The City of Gibraltar, its agents and employees shall be included as additionally insured with respect to all liability policies herein.

A thirty (30) day cancellation clause with notice to the City of Gibraltar shall be included; words modifying the cancellation clause such as "endeavor to provide notice" will be unacceptable and must be stricken.

It shall be the Contractor's responsibility to provide similar insurance for each sub-contractor or to provide evidence that each subcontractor carries such insurance in like amount prior to the time such sub-contractor proceeds to perform under this contract.

A current certificate of coverage meeting the above requirements shall be provided to the City on an annual basis through the duration of this contract term.

6.0 PROPOSAL/BID FORM

TO: CITY OF GIBRALTAR
29450 Munro
Gibraltar, Michigan 48173

Project Name: Asbestos Abatement
14100 Navarre St.
Gibraltar, Michigan

1. The undersigned, having familiarized himself/herself with the existing conditions of the project area affecting the cost of the work, and with these Contract Documents (which includes Invitation for Bids, Instructions to Bidders, the Proposal/Bid Document, Agreement, Non-Collusion Affidavit, General Specifications, Special Conditions, Terms and Conditions, Insurance Requirements, and Addenda Nos. _____, _____, _____, and _____, issued thereto, hereby proposes to furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and to perform and complete all work required for the abatement and disposal of asbestos-containing materials at the prices hereinafter set forth:

Date: _____, 2016, _____
(Name of Bidder)

Official Address:

_____ By: _____
(Signature)

_____ Title: _____

Total Bid Price: $_____

In Words: _____

7.0 DISCLAMER

1. In submitting this bid, the bidder understands that the city reserves the right to reject any and all bids. If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned within ninety days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver an agreement in the prescribed form and furnish the required bonds within ten days after the agreement is presented to him for signature.

2. Attached hereto is an affidavit in proof that the undersigned has not colluded with any person in respect to this bid or any other bid for the contract for which this bid is submitted.

Date: _____, 2016, _____
(Name of Bidder)

Official Address:

_____ By: _____
(Signature)

_____ Title: _____

(The following agreement is being included in the bid specifications for reference. The actual agreement to be entered into by the City and the winning bidder may differ slightly in its content and associated conditions.)

AGREEMENT

ASBESTOS ABATEMENT – 14100 NAVARRE STREET, GIBRALTAR, MICHIGAN

THIS AGREEMENT made and entered into this _____ day of _____, 2016, by and between _____ hereinafter called the "Contractor" and the CITY OF GIBRALTAR, hereinafter called the "Owner" or "City".

In consideration of the mutual obligations set forth below, the parties agree for themselves, their personal representatives, successors, assigns as follows:

ARTICLE I - <u>STATEMENT OF WORK:</u> The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utilities and transportation services, and perform and complete all work required for the proper removal and disposal of designated asbestos materials all in strict accordance with the terms of this Agreement. In addition, Contractor shall agree to the following special conditions:

ARTICLE II - <u>THE CONTRACT PRICE:</u> The City will pay the Contractor for performance of the contract the lump sum contract price of:

$ _____

ARTICLE III - <u>CONTRACT:</u> The executed contract documents shall consist of the following:

This Agreement,
Addenda
Invitation for Bids
Instructions to Bidders
Signed Copy of Bid
Insurance Requirements
Special Conditions
Technical Specifications
Terms and Conditions

THIS AGREEMENT, together with the other documents enumerated in this Article III, with said other documents are as fully a part of the contract as if hereto attached or herein repeated, forms the contract between the parties hereto. In the event that any provision in any component part of this contract conflicts with any provision of any other component part, the provision of the component part first enumerated in the Article III shall govern except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in three (3) original copies on the day and year first above written.

Attest:	CONTRACTOR
_____	By: _____
_____	Title: _____
Attest:	CITY OF GIBRALTAR
_____	By: _____
_____	Title: _____

9.0 TERMS AND CONDITIONS

1.00 COMPLETE CONTRACT

This bid document together with its addenda, amendments, attachments and modifications, when executed, becomes the complete contract between the parties hereto, and no verbal or oral promises or representations made in conjunction with the negotiation of this contract shall be binding on either party.

2.00 TAXES

The City of Gibraltar is exempt from all federal excise tax and state sales and use taxes. However, depending upon the situation, the vendor or contractor may not be exempt from said taxes and the City of Gibraltar is making no representation as to any such exemption.

3.00 PAYMENTS

A. Payments Processed by City

Unless otherwise specified by the City in this contract, the Contractor will be paid in not more than thirty days after receipt of a properly executed invoice, the sum stipulated herein for supplies delivered and accepted, or service rendered and accepted. The City will not process payment for invoices received in advance of work performed. Payments will be processed by the City upon receiving the original invoice from the Contractor and approval by the City Administrator. Progress payments are to be made on a monthly basis.

4.00 CHANGES AND/OR CONTRACT MODIFICATIONS

Cost as presented in the bid proposal, upon thirty (30) days written notice shall be negotiated in good faith by both parties due to additional taxes, charges, surcharges and fees imposed by governmental authorities and due to laws, rules, regulation and ordinances which are passed after the date hereof or the interpretation or enforcement of which has changed after the date hereof which have the effect of increasing the collection and/or disposal services direct cost.

The parties agree that they will negotiate in good faith to determine an equitable division of such costs insofar as they apply to the subject matter of this agreement. The Contractor shall not be entitled to any increase associated with violations of law, regulations, ordinances, or permit conditions.

5.00 LAWS, ORDINANCES AND REGULATIONS

The Contractor shall keep himself/herself fully informed of all local, state and federal laws, ordinances and regulations in any manner affecting those engaged, or employed in the work and the equipment used. Contractor and/or employees shall, at all times, serve and comply with such laws, ordinances and regulations.

Any permits, licenses, certificates or fees required for the performance of the work shall be obtained and paid for by the Contractor.

6.00 HOLD HARMLESS

The Contractor shall defend, indemnify and save harmless the City of Gibraltar, its officials, employees, departments, agents, boards, commission, council, and volunteers, against and from all claims, judgments, losses, damages, demands, payments, recoveries, legal proceedings and decrees of every nature, and expenses to persons or property occasioned, wholly or in part, by the negligent and willful acts or omissions of the Contractor, his/her agents, employees or sub-contractors.

7.00 DEFAULT

In the event there should occur any material breach or material default in the performance of any covenant or obligation of the City or the Contractor which has not been remedied within thirty (30) days after receipt of written notice from the non-breaching party specifying such breach or default (or such longer period of time as is reasonably necessary to cure any such breach or default which is not capable of being cured with thirty (30) days provided the breaching party has undertaken to cure within such thirty (30) days and proceeds diligently thereafter to cure in an expeditious manner), the non-breaching party may, if such breach or default is continuing, terminate the Agreement upon written notice to the other party. The accumulation of "cured" breaches of defaults may be considered as "just cause" for termination. In the event of a breach, even of default, or termination of the Agreement, each party shall have available all remedies in equity or at law, unless otherwise provided elsewhere in the Agreement.

Every six (6) months the Contractor's performance shall be reviewed. The performance review shall include, but not be limited to the number and type of complaints received by the City during the past six (6) months, the maintenance of the equipment, the timeliness of collections, the handling of the collection containers, and the cleanliness of the streets after collection. Should the Contractor's performance be deemed to be unsatisfactory, the City may impose additional terms and conditions to ensure compliance or terminate this Agreement.

The City may at any time, by thirty (30) days written notice to the Contractor terminate this contract and the Contractor's right to proceed with the work, for just cause, which shall include, but is not limited to the following:

- Failure to provide insurance and bonds (when called for), in the exact amounts and within the time specified or any extension thereof.
- Failure to make delivery of the supplies, or to perform the services within the time specified herein, or any extension thereof.
- The unauthorized substitution of articles for those bid and specified.
- Failure to make progress if such failure endangers performance of the contract in accordance with it terms.
- Failure to perform in compliance with any provision of the contract.

8.00 FORCE MAJEURE

Except for the payment obligations of the City hereunder, if the City or the Contractor is unable to perform, or is delayed in its performance of, any of its obligations under this Agreement by reason of any event of force majeure, such inability or delay shall be excused at any time during which compliance therewith is prevented by such event and during such period thereafter as may be reasonably necessary for the City or the Contractor to correct the adverse effect of such event or force majeure.

An event of "Force Majeure" shall mean any event or circumstance beyond the reasonable control of the affected party to the extent that they delay the City or the Contractor from performing any of its obligations (other than payment obligations) under this agreement including the following:

Acts of God, tornadoes, hurricanes, floods, sinkholes, fires, and explosions (except those caused by negligence of the Contractor, its agents, and assigns), landslides, earthquakes, epidemics, quarantine, pestilence, and extremely abnormal and excessively inclement weather; and

Acts of a public enemy, acts of war, terrorism, effects of nuclear radiation, blockages, insurrections, riots, civil disturbances, or national or international calamities.

In order to be entitled to the benefit of this section, a party claiming an event of force majeure shall be required to give prompt written notice to the other party specifying in detail the event of force majeure and shall further be required to use its best efforts to cure the event of force majeure. The parties agree that, as to this section, time is of the essence.

The City may grant such variances as are reasonably required in the event of force majeure, and will negotiate with the Contractor fees for any additional work, which the Contractor may agree to perform in such event.

9.00 ASSIGNMENT

No assignment, subletting or transfer of this Agreement or any part thereof or assignment of monies due under this contract shall be made by the Contractor without the approval of the Gibraltar City Council and written consent of the City.

10.00 STANDARD OF PERFORMANCE

Contractor guarantees the performance of the commodities, goods or services rendered herein in accordance with the accepted standards of the industry or industries concerned herein, except that if this specification calls for higher standards, then such higher standards shall be provided.

Upon notice by the City of Contractor's failure to comply with such standards or to otherwise be in default of this contract in any manner following the Notice to Proceed, Contractor shall immediately remedy said defective performance in a manner acceptable to the City and required by these documents. Should the Contractor fail to immediately correct said defective performance as required by these documents, said failure shall be considered a breach of this contract and grounds for termination of the same by the City.

In the event of any breach of this contract by Contractor, Contractor shall pay any cost to the City caused by said breach including by not limited to the replacement cost of such goods or services with another Contractor.

The City reserves the right to withhold any or all payments until any defects in performance have been satisfactorily corrected.

In the event the Contractor is in breach of this contract in any manner, and such breach has not been satisfactorily corrected, the City may bar the Contractor from being awarded any future City contracts.

All remedies available to the City herein are cumulative and the election of one remedy by the City shall not be a waiver of any other remedy available to the City.

11.00 INDEPENDENT CONTRACTOR

At all times, the Contractor, any of his/her employees, or his/her sub-contractors and their subsequent employees shall be considered independent contractors and not City employees. The Contractor shall exercise all supervisory control and general control over all workers' duties, payment of wages to Contractor's employees and the right to hire, fire and discipline their employees and workers. As an independent contractor, payment under this contract shall not be subject to any withholding for tax, social security or other purposes, nor shall the Contractor or his/her employees be entitled to sick leave, pension benefit, vacation, medical benefits, life insurance or workers' unemployment compensation or the like.

12.00 PROJECT SUPERVISOR

The Contractor shall employ an individual to act as project Supervisor. The project Supervisor shall be on site at all times during work and available to the Contractor's workers and the ENGINEER by use of a mobile telephone or other reliable means. The project Supervisor shall monitor project activities to assure regulatory and contract compliance.

13.00 MEETINGS

The Contractor shall be available to meet with the ENGINEER at a mutually agreeable time to discuss problems, issues or concerns relative to the contract. Either party may call a meeting at any time. When such a request for a meeting is made, the meeting date shall in no case exceed five working days after the request; and, if in the sole opinion of the ENGINEER, the severity of the circumstance warrants, no more than one working day. If necessary, ENGINEER shall determine if the City should be involved in the meeting.

14.00 INSPECTION OF WORK SITE

Before submitting bids for this work, the Contractor shall be responsible for examining the work site and satisfying himself/herself as to the existing conditions under which he/she will be obliged to operate, or that in any way affects the work under this contract. No allowance shall be made subsequently, in behalf of the Contractor, for any negligence on his/her part.

10.0 SUMMARY OF WORK

PART 1 GENERAL

1.01 DESCRIPTION

The subject property (Site) is the former St. Victor Catholic Church structure at 14100 Navarre Street, Gibraltar, Michigan. AKT Peerless conducted a non-invasive, pre-renovation asbestos identification survey of the Site on May 12, 2016.

1.02 SCOPE OF WORK

The scope of work for this project involves the abatement of asbestos thermal system materials and damaged floor tiles from specific areas of the Site in preparation for redevelopment/reuse. The scope of work described in the specifications includes the following:

1. Preparation of a Site Health and Safety Plan,
2. Site service, mobilization, and demobilization,
3. Remove and dispose of the following asbestos-containing materials (ACMs), listed by location, quantity and material type:
   a. Plenum tunnel (Space 18) - Approximately 500 linear feet and 20 mudded fittings of thermal system pipe insulation,
   b. Boiler room (Space 19) – 34 linear feet and 9 mudded fittings,
   c. Utility room (Space 6) – 21 linear feet and 2 mudded fittings
   d. East Entry Vestibule (Space 5) – 20 square feet broken 9" floor tiles. Note: floor mastic is non-ACM).

The location and description of subject building materials are included in AKT Peerless' Pre-renovation Asbestos and Hazardous Materials Survey report in Appendix A. Not all ACMs listed in the report are being removed.

1.03A PERFORMANCE OF WORK - GENERAL

The work shall be performed by properly trained, licensed and equipped contractor personnel.

1.03B PERFORMANCE OF WORK - SCHEDULE

The scheduling of work must adhere to local ordinances.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

--END OF SECTION--

11.0 TEMPORARY UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

Requirements for temporary utilities used on site during project activities. Costs for temporary utilities should be included in the bid for site services, unless otherwise specified.

1.02 RELATED SECTIONS

A. Section – Construction Facilities

B. Section – Temporary Barriers and Enclosures

1.03 PERFORMANCE REQUIREMENTS

A. Installation
Supply and install all temporary utilities and controls required to complete all specified activities. Temporary utilities may include electricity and water.

B. Connection
Connect or have connected all temporary utilities and controls required to complete all specified activities. Pay all initial connection fees and monthly service costs.

C. Disconnection
At the conclusion of the project, disconnect or have disconnected all temporary utilities and controls installed for completion of this project. Pay final cancellation costs, if any, and monthly service costs. Restore grounds and existing facilities to original condition.

PART 2 PRODUCTS

2.01 EQUIPMENT

Provide all necessary equipment, materials, labor, and incidentals to supply each utility. If renting equipment, pay all costs associated with rental of temporary utility equipment.

2.02 COMPONENTS

A. CONTRACTOR will be responsible to provide temporary electrical power to the job site work areas during construction.

1. Arrange for connection of temporary transformers and or electrical panels.

2. Install temporary wiring and accessories.

3. Remove temporary connection and wiring at completion of job.

B. Provide temporary telephone service to the job site during construction.

1. Provide telephones for use during construction.

2. Arrange and pay for fees and service.

PART 3 EXECUTION (NOT USED)

--END OF SECTION--

12.0 CONSTRUCTION FACILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

Requirements for temporary facilities used on site during project activities. Costs for any construction facilities should be included in the bid items for site services.

1.02 RELATED SECTIONS

Section – Temporary Utilities

1.03 PERFORMANCE REQUIREMENTS

A. Installation

Provide additional storage (as necessary) and sanitary facilities for the property. Unless otherwise specified, sanitation facilities must remain at the property until termination of the project. Connect or have connected temporary utilities necessary for operation of the construction facilities, as specified in Section - Temporary Utilities.

B. Cleanliness

All construction facilities must be kept clean, orderly, and in adequate state of repair. Adequacy of provided facilities will be determined by the ENGINEER. Dilapidated construction facilities will be immediately removed from site at the CONTRACTOR'S expense.

1.04 QUALITY ASSURANCE

A. Cross-Contamination

Instruct personnel to maintain cleanliness throughout the construction area to prevent unnecessary cross-contamination.

B. Daily Inspections

Conduct daily inspections to ensure that standards are being maintained. ENGINEER will conduct random inspections to verify "good housekeeping" procedures are being practiced.

1.05 SCHEDULING

A. Facility Inspections

Conduct daily inspections and necessary cleaning and maintenance for the facilities specified. Inadequate facilities, as determined by the ENGINEER, will be immediately removed from site at the Contractor's expense. At a minimum, sanitary facilities will be cleaned twice each month.

12.0 CONSTRUCTION FACILITIES

PART 2 PRODUCTS

2.01 EQUIPMENT

A. Sanitary Facilities

Provide and maintain temporary, portable sanitary facilities, in locations approved by the ENGINEER. Provide adequate facilities for the work force. Comply with local, state, and federal code requirements. Maintain the temporary sanitary facilities in good condition at all times and remove them when all specified activities under this Contract have been completed. Bid must include costs for (1) mobilization, (2) building rental, (3) semi-monthly cleanings, and (4) demobilization.

PART 3 EXECUTION (NOT USED)

--END OF SECTION--

13.0 CONSTRUCTION AIDS

PART 1 GENERAL

1.1 DESCRIPTION

A. CONTRACTOR shall furnish, install, and maintain as long as necessary and remove when no longer required, safe and adequate scaffolding, ladders, staging, platforms, chutes, railings, hoisting equipment, etc., as required for proper execution of the Work. All construction aids shall conform to federal, state, and local codes or laws for protection of workers and the public.

B. Storage Containers: CONTRACTOR shall provide and maintain as long as necessary and remove when no longer required, all appropriate storage containers for the purposes of equipment storage and waste disposal.

PART 2

2.1 MATERIALS

A. CONTRACTOR shall furnish all safety and control materials required during the project. Materials such as signs, placards, and banner tape will be utilized according to all applicable Federal, State, and Local regulations.

B. Plenum tunnel shall be treated as a confined space for entry purposes. CONTRACTOR shall furnish all safety and control materials required for safe entry into confined spaces.

PART 3 EXECUTION (NOT USED)

--END OF SECTION--

14.0 TEMPORARY BARRIERS AND ENCLOSURES

PART 1 GENERAL

1.01 SECTION INCLUDES

Facilities and procedures for protection of occupants or existing spaces during abatement and waste removal activities.

1.02 RELATED SECTIONS

A. Section – Temporary Utilities

B. Section – Construction Facilities

1.03 QUALITY ASSURANCE

A. Cleanliness

All construction facilities must be kept clean, orderly, and in adequate state of repair. Adequacy of provided facilities will be determined by the ENGINEER. Dilapidated construction facilities will be immediately removed from site at the CONTRACTOR'S expense.

B. Inspections

Conduct routine inspections to ensure that standards are being maintained. ENGINEER will conduct random inspections to verify "good housekeeping" procedures are being practiced.

1.04 SITE CONDITIONS

A. Temporary Barriers and Enclosures

Security of the facility must be maintained throughout construction activities.

B. Safety Provisions

Maintain all temporary facilities and barriers to provide safe working conditions and prevent unauthorized entry to the site/work areas.

C. Dust Control Measures

Provide adequate measures for dust control to minimize potential exposure to airborne particulates by on-site workers.

D. Cleaning and Waste Removal

1. Continuously maintain cleanliness and orderliness around storage areas during construction activities, to allow safe passage and proper access.

2. Collect scrap, waste, debris, and spoil in and around storage areas daily. Discard in appropriate waste receptacles.

3. Collect scrap, waste, debris, and spoil in and around construction areas weekly.

4. Remove and dispose all waste derived from on-site activities, including used PPE and general refuse.

1.05 MAINTENANCE

A. General

Maintain all storage areas, improvements, work areas, and access roads for clear passage and safe functional use.

B. Adequacy

ENGINEER will determine adequacy of maintenance at the property.

PART 2 PRODUCTS

2.01 EQUIPMENT

Provide all equipment necessary to conduct all activities specified in this section. Equipment will include, but not be limited to, caution tape, plastic sheeting, temporary shower facilities, and other related equipment.

2.02 COMPONENTS

Provide all incidental components necessary to maintain safe working conditions as specified in this section.

PART 3 EXECUTION (NOT USED)

--End of Section--

15.0 SITE PREPARATION

PART 1 GENERAL

1.01 SITE PLAN

A. CONTRACTOR shall prepare a site plan indicating the proposed location and dimensions of any area to be used for material stockpiles, employee and/or vehicle/equipment parking/storage, avenues of ingress/egress to the fenced construction area, vehicle and personnel decontamination units and primary roadways within the site used in the demolition/construction.

B. Employee Parking

CONTRACTOR employee parking shall not interfere with the progress of work. Vehicles leaving the construction site that become contaminated while within the construction site or vehicles specified by the ENGINEER shall pass through the vehicle decontamination unit.

C. Sampling and Analytical Testing

All analytical testing as required under this Section shall be paid for by the CONTRACTOR. It is the CONTRACTOR's responsibility to employ a laboratory for testing and analysis, which routinely provides analytical services acceptable to the Michigan Department of Environmental Quality.

Any confirmatory sampling/analysis necessary will be performed by the ENGINEER at ENGINEER's discretion.

1.02 AVAILABILITY AND USE OF UTILITY SERVICES

A. OWNER shall furnish electric power and water throughout the Work. CONTRACTOR shall furnish and install all temporary facilities and controls required by the Work, shall remove them from the property upon completion of the Work, and shall restore the grounds and existing facilities to their original condition.

B. Utility Services

The CONTRACTOR shall arrange for utility connections as required.

C. Meters and Temporary Connections

The CONTRACTOR, at its expense and in a manner satisfactory to the ENGINEER and OWNER, shall provide and maintain necessary temporary connections.

D. Sanitation

CONTRACTOR shall provide and maintain within the construction area minimum field-type sanitary facilities, as necessary. The sanitation facilities shall be per applicable federal, state and local regulatory requirements.

F. Telephone/Facsimile

CONTRACTOR shall make arrangements and pay all costs for telephone/facsimile facilities.

1.03 PROJECT SIGNAGE

15.0 SITE PREPARATION

A. CONTRACTOR shall post project signage as required by regulatory standard. Proper signage shall be posted throughout the Work for protection of property, workers, and other building occupants.

1.04 BARRIER AND ENCLOSURES

A. CONTRACTOR shall furnish, install, and maintain as long as necessary, adequate barriers, warning signs, or lighting at all dangerous locations throughout the Work for protection of property, workers, and other building occupants. CONTRACTOR shall remove such material when deemed no longer required. CONTRACTOR shall hold the OWNER harmless from damage or claims arising out of any injury or damage that may be sustained by any person or persons as a result of the Work under the Contract.

1.05 DECONTAMINATION

A. CONTRACTOR shall provide, operate and maintain decontamination units for personnel and equipment at the project site as approved by the ENGINEER. The decontamination unit shall serve to remove contamination from personnel and equipment before they exit a regulated work area as required by regulation.

1.06 DUST CONTROL AND AIR MONITORING

The CONTRACTOR shall provide necessary engineering controls to prevent emissions of airborne fibers, aerosol dust and other material. Emissions must be prevented from contaminating surrounding properties. If necessary, air monitoring shall be performed, at the CONTRACTORs expense, to ensure the airborne dust levels do not exceed the regulatory limit. At no time shall the concentration of aerosol dust resulting from CONTRACTOR activity exceed 10 milligrams per cubic meter (mg/m^3) for more than 5 minutes during building demolition or waste removal activities. Related dust control and monitoring are incidental to the project.

1.08 PROTECTION AND MAINTENANCE OF TRAFFIC

A. During the project, CONTRACTOR shall maintain and protect traffic on all affected roads during the construction period. Measures for the protection and diversion of traffic, including the provision of watchman and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The CONTRACTOR's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. CONTRACTOR shall investigate the adequacy of existing roads and the allowable load limits on these roads. The CONTRACTOR shall be responsible for the repair of any damage to roads caused by construction operations. The CONTRACTOR shall minimize public road impacts from construction operations. If non-contaminated soil is being trucked onto public roads, CONTRACTOR shall arrange for and supply a street-sweeper/cleaner to maintain the public road. The cleaning operation shall be conducted at least daily or as required and determined by the ENGINEER. Related street-cleaning operations are incidental to the project.

B. Haul Roads

CONTRACTOR shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with

suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The method of dust control shall be adequate to ensure safe operation at all times.

C. Barricades

CONTRACTOR shall erect and maintain temporary barricades to limit public access to the construction areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed and clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.09 TREE AND UNDERBRUSH CLEARING

CONTRACTOR shall clear and remove trees and brush in conjunction with the demolition of on-site buildings, unless otherwise indicated. To the extent feasible, trees greater than 4” in diameter and greater than 30 feet from the closest building surface shall be preserved. Trees and brush removed are not required to be disposed of off-site.

1.10 GENERAL SITE DEBRIS CLEARING

CONTRACTOR shall clear and remove all debris on the property at the direction of the ENGINEER in conjunction with the demolition of the on-site buildings. General debris removed shall be properly disposed of off-site.

1.11 CONTRACTOR'S TEMPORARY FACILITIES

A. Administrative Field Offices

CONTRACTOR shall provide and maintain separate administrative field office facilities for both themselves and the ENGINEER within the construction area at the designated site, including electrical services. No smoking is to be permitted in field office facilities.

B. Appearance of Trailers

Trailers utilized by the CONTRACTOR for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair.

C. Maintenance of Construction Area

Fencing shall be kept in a state of good repair and proper alignment. Should the CONTRACTOR elect to traverse with construction equipment or other vehicles grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the CONTRACTOR's discretion and expense.

D. Security Provisions

CONTRACTOR shall be responsible for the security of its own equipment and facilities. In addition, CONTRACTOR shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office and surrounding area. Other security items, such as lighting, shall be the responsibility of the CONTRACTOR including all related fees.

E. Storage Facilities

The CONTRACTOR shall be responsible for providing and maintaining storage facilities for decontamination water, storm water and other water generated and/or collected on site; and other project related materials and items.

1.12 CLEANUP

A. Construction debris, waste materials, packaging material and the like created by the CONTRACTOR shall be removed from the work site daily. Any dirt or mud that is tracked onto paved or surfaced roadways shall be cleaned away. Uncontaminated or decontaminated materials resulting from hazardous material or tank removal activities, which are salvageable, may be stored at the site with OWNER's approval. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.13 RESTORATION

A. Upon completion of the project and after removal of trailers, materials, and equipment from within the construction fenced area; CONTRACTOR shall restore impacts to the site caused by the demolition and removal work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

--END OF SECTION--

16.0 MOBILIZATION & DEMOBILIZATION

PART 1 GENERAL

1.01 MOBILIZATION/DEMOBILIZATION

A. Related Section – Summary of Work

B. Related Section – Bid Form

In general, this item includes the provision of labor, materials, and equipment necessary to complete the work described in this quotation document. The work item "Mobilization / Demobilization" also includes incidental items such as trash removal (site clean-up), dust controls, temporary utilities and facilities, and project administration.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 SITE ACCESS

A. CONTRACTOR shall construct as needed and maintain access roads used for construction traffic.

B. CONTRACTOR shall coordinate with OWNER to provide security items (signage, site access, etc.) as needed to prevent unauthorized access to the site.

3.02 DUST CONTROL

A. Dust generation shall be eliminated in the work area resulting setup, equipment movement, abatement, teardown or other elements of the work.

B. Dust control methods may include any or all of the following:

1. Use of High Efficiency Particulate Air (HEPA) filtration equipment;
2. Water spray (CONTRACTOR responsible for equipment used in dust control);
3. Temporary barriers;
4. Other method approved by ENGINEER.

3.03 TEMPORARY FACILITIES AND MISCELLANEOUS ITEMS

A. CONTRACTOR shall coordinate temporary electricity, water, and sewer connections with OWNER.

B. CONTRACTOR shall fully remove all temporary facilities, utilities, and other miscellaneous items upon completion of the Work, as part of equipment demobilization.

C. As part of this item, CONTRACTOR shall provide full-time, qualified supervision and field management for this project. Field supervisor shall also be responsible for worker safety meetings and implementation of safety measures.

--END OF SECTION--

17.0 ASBESTOS ABATEMENT

PART 1 GENERAL

SECTION INCLUDES

Asbestos-Containing Materials Abatement

CONTRACTOR will be required to furnish all labor, materials, services, insurance, and equipment necessary to carry out the removal and disposal of asbestos-containing materials listed in the Summary of Work section. NOTE: Plenum tunnel material quantities provided are estimates only. Bidders are cautioned to verify all material quantities.

REFERENCE STANDARDS

The publications listed below form a part of this Section to the extent referenced. The publications are referenced in the text by basic designation only.

A. American Society for Testing and Materials (ASTM)

1. ASTM E 736 (1986) Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.

2. ASTM 1368 (1990) Visual Inspection of Asbestos Abatement Projects.

B. Code of Federal Regulations (CFR)

1. CFR 29 Part 1926/1910 Construction Industry Occupational Safety and Health Standards.

2. CFR 40 Part 61 National Emissions Standards for Hazardous Air Pollutants.

3. CFR 40 Part 260 General Regulations for Hazardous Waste Management.

4. CFR 40 Part 263 Standards Applicable to Transporters of Hazardous Waste.

5. CFR 40 Part 763 Asbestos.

6. CFR 49 CFR 171 Department of Transportation Regulations to Stipulate Requirements for Containers and Procedure for Shipment of Hazardous Waste.

C. National Fire Protection Association (NFPA)

1. NFPA 10 (1988) Portable Fire Extinguishers.

2. NFPA 70 B (1990) Recommended Practice for Electrical Equipment Maintenance.

3. NFPA 90A (1989) Installation of Air Conditioning and Ventilating Systems.

4. NFPA 101 (1988) Safety to Life from Fire in Buildings and Structures.

5. NFPA 90A (1989) Installation of Air Conditioning and Ventilating Systems.

D. National Institute of Occupational Safety and Health (NIOSH)

1. NIOSH –01 Manual of analytical Methods

E. State of Michigan

1. P.A. Act 451, Michigan Natural Resources and Environmental Protection Act

2. MIOSHA Act 154 General Industry and Construction (as amended) Safety Standards.

F. United States Environmental Protection Agency (U.S. EPA)

1. U.S. EPA SW-846, Test Methods for Evaluating Solid Waste.

MEASUREMENT

A. Asbestos-Containing Materials (ACM's) Requiring Removal

The removal and disposal of friable and non-friable asbestos from the site as detailed in the Summary of Work section of these specifications will be measured for payment as a lump sum.

B. Should additional materials be identified as asbestos-containing during the abatement period, the measurement for payment will be by the unit linear foot, square foot or cubic yard.

PAYMENT

A. Removal of Asbestos Containing Materials – Base Bid

All acceptably completed work as required under this Section for the labor, materials, and incidentals necessary for removal and disposal of friable asbestos materials, non-friable asbestos materials, and asbestos-contaminated debris as specified by the ENGINEER will be paid for at a percent complete of the contract lump sum for "Removal and Disposal of Asbestos Containing Materials".

B. Removal of Asbestos Containing Materials – Additional Materials

For additional materials identified as asbestos-containing during the abatement period and deemed by ENGINEER as not part of the base bid, the measurement will be by the unit linear foot, square foot or cubic yard.

C. Grounds for Dismissal

OWNER or ENGINEER reserves the right to dismiss any personnel of the CONTRACTOR, or Subcontractor personnel if the person has been found to be grossly negligent, destructive, abusive to the OWNER's property, or incompatible with the OWNER, ENGINEER, or anyone involved with the asbestos abatement project.

DEFINITIONS

A. Friable Asbestos Containing Material

As defined in 40 CFR Part 61, Subpart M, any material containing **more than 1 percent asbestos** as determined using the method specified in 40 CFR Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

B. Nonfriable Asbestos Containing Material

As defined in 40 CFR Part 61, Subpart M, any material containing **more than 1 percent asbestos** as determined using the method specified in 40 CFR Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

C. Category I Nonfriable Asbestos Containing Material

As defined in 40 CFR Part 61, Subpart M, asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing **more than 1 percent asbestos** as determined using the method specified in 40 CFR Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

D. Category II Nonfriable Asbestos Containing Material

As defined in 40 CFR Part 61, Subpart M, any material, except Category I nonfriable ACM, containing **more than 1 percent asbestos** as determined using the methods specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

E. Asbestos Regulated Work Area

An area contained and controlled where asbestos containing materials (ACM) operations are performed and isolated by physical boundaries to prevent the spread of ACM and control access to authorized persons. Containment may consist of full containment area, single or double bulkhead containment area, mini-containment area, modified containment, glove bag, or other techniques. An outdoor regulated work area is not isolated within a containment enclosure, but is otherwise secured by means of physical barriers, boundary warning tape, and signage, etc., to control access by unauthorized persons. No person(s) shall be allowed to enter the area unless the individual has retained the proper training, has entered a medical monitoring program, and has donned the proper personal protection as suggested by the barriers.

F. Time-Weighted Average

The Time Weighted Average (TWA) is an average of airborne concentration of fibers (longer than 5 micrometers) per cubic centimeter of air based on an 8-hour exposure duration, which represents the employee's 8-hour workday as defined in Appendix A of 29 CFR Part 1926, Section 1926.58.

G. Amended Water

Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D 1331.

H. Adequately Wet

As defined in 40 CFR Part 61, Subpart M, sufficiently mix or penetrate with liquid to prevent the release of particulates from the source material. Continue wetting asbestos-containing material (ACM) if visible emissions are encountered during abatement activities. When uncertainties arise, continue wetting material until uncertainties diminish.

I. Represented Parties

17.0 ASBESTOS ABATEMENT

OWNER – City of Gibraltar

Competent Person – To Be Determined

As defined in 29 CFR Part 1926.1101, shall be experienced in administering and supervising asbestos abatement projects. A competent person should be familiar with safe and reasonable work practices, abatement methods, protective measures for personnel, inspection of asbestos abatement work areas, evaluating the adequacy of containment barriers, placement and operation of local exhaust systems, waste containment and disposal procedures, decontamination units, and site health and safety health requirements. The designated "competent person" will be responsible for compliance with applicable Federal, State, and Local requirements and for enforcing the site-specific Health and Safety Plan (HASP).

ENGINEER – AKT Peerless

The person(s) representing the property OWNER will be on site during all asbestos abatement activities. This person(s) has the authority to act on decisions regarding the asbestos abatement project and in the best interest of the property OWNER.

CONTRACTOR – To Be Determined

Company contracted or sub-contracted, on behalf of the OWNER or ENGINEER, to perform the asbestos abatement portion of the project. The CONTRACTOR is licensed within the State of Michigan to perform asbestos abatement activities and has experience with removal of the above referenced materials. The CONTRACTOR may be represented by its owner, manager, or designated Competent Person

J. Wet Removal

Thorough wetting of asbestos-containing materials (ACM) prior to removal to reduce airborne fiber concentrations through the use of a wetting agent such as amended water or removal encapsulant. When applicable, simultaneous stripping of the ACM and the use of the wetting agent should be conducted.

SUBMITTALS

A. Abatement Work Plan

Before proceeding with any removal and disposal work, submit a work plan that includes the procedures proposed for the accomplishment of all specified activities. Include methods utilized (1) isolate the work areas and (2) remove and disposal of asbestos containing materials and contaminated incidental items and fixtures. Include contact name and telephone number for the licensed disposal facility and waste hauler used for removal as well as for the treatment and disposal of the contaminated water.

The procedures shall provide for safe conduct of the work, careful removal and disposition of asbestos-containing materials, and property protection. The procedures shall provide a detailed description of the methods and equipment to be used for each operation, and the sequence of operations. The work plan shall be based on work experience, and the guidance provided in this specification.

B. Health and Safety Plan

Submit a site-specific Health and Safety Plan (HASP) before beginning removal or disposal activities. Include in the HASP required personal protective equipment, respiratory protection, asbestos regulated work area controls, and hazard communication program. Include procedures for evacuations, emergency

life-threatening and non-life threatening situations. Confined space entry procedures shall be included in the HASP.

C. Qualifications

Specify the supervisory staff qualifications and organization to include Subcontractors used for this project. Include qualifications and certifications of the designated "competent person."

D. Materials

Submit a list of data for all materials and equipment used during abatement activities. Include brand name, model, capacity, performance characteristics, and other pertinent information. Provide Safety Data Sheets (SDS) for all chemicals to be used on site.

E. Air Sampling Results

Conduct air quality monitoring during the removal event. This will be a continuous process performed by ENGINEER. Results will be provided within 24 hours of completion of each sampling event. ENGINEER will notify CONTRACTOR immediately if any airborne levels of asbestos fibers are encountered above levels established by regulation. Person(s) conducting the air monitoring and laboratory analysis will follow the NIOSH 7400 Method.

F. Waste Shipping Records

Submit waste documentation for all shipments removed from the property. Waste disposal documents will be signed by the waste acceptor from the approved landfill. Copies of waste disposal documents should be submitted to ENGINEER no later than 35 calendar days from completion of the project.

REGULATORY REQUIREMENTS

A. Permits

Obtain all necessary permits and licenses for asbestos abatement activities. Submit the completed Notification of Intent to Renovate/Demolish to the MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS – ASBESTOS PROGRAM and the MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) AIR QUALITY DIVISION, and ENGINEER at least 10 calendar days before beginning abatement activities. Conduct all abatement activities in accordance with 40 CFR Part 61, Subpart M, and state and local requirements.

B. Health and Safety Compliance

Comply with all applicable laws, ordinances, rules, regulations, and specifications. While conducting all handling, storing, transporting, and disposing activities for asbestos waste materials, comply with the applicable requirements of 29 CFR Part 1910, 29 CFR Part 1926, 40 CFR Part 61, Subpart A, and 40 CFR Part 61, Subpart M, NFPA 10, NFPA 70, NFPA 90A, NFPA 101. In case of a discrepancy between the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement as determined by the ENGINEER shall apply.

1. Air Monitoring

Conduct personal air sampling as defined by OSHA in 29 CFR Part 1926, monitoring for airborne asbestos fibers. Adhere to all Federal, state and local requirements regarding asbestos air quality.

2. Respiratory Protection Program

   Establish and implement a respiratory protection program in accordance with 29 CFR 1926, Section 1926.1101,29 CFR Part 1910, Section 1910.134. Include medical monitoring, employee training, procedures for respirator use, respirator fit-testing, routine inspection, and storage. Select and use respirators in accordance with manufacturers' recommendations, Mine Safety and Health Administration, and the National Institute for Occupational Safety and Health requirements for use in environments containing airborne asbestos fibers. These items may include but are not limited to half-face negative pressure respirators, full-face negative pressure respirators, and powered-air purifying respirators. Filters for these materials should be NIOSH approved for its intended use.

3. Training

   All employees working directly with asbestos-containing material and wastes must have successfully completed a course of asbestos training as specified by United States Environmental Protection Agency (EPA) requirements at 40 CFR Part 763, Subpart E, Appendix C, within one year prior to conducting asbestos abatement activities. Each worker must successfully complete the "Asbestos Worker" course, and on-site supervisors and technical support personnel must successfully complete the "Asbestos CONTRACTOR/Supervisor" course.

4. Medical Monitoring

   Conduct medical monitoring requirements as described in 29 CFR Part 1926, Section 1926.1101 and the requirements of the CONTRACTOR's Health and Safety Plan.

5. Personal Protective Equipment

   Provide personnel working in asbestos environments with whole body protection as required by regulatory standard. These materials shall be made available to the ENGINEER during periodic and final single-use coveralls shall be disposed as asbestos-contaminated waste upon exiting from the asbestos regulated work area.

PART 2 PRODUCTS

MATERIALS

A. Wetting Agent

   1. Amended Water

      Comply with ASTM D 1331.

   2. Removal encapsulant

      Provide a removal or penetrating encapsulant when conducting asbestos abatement activities that require a longer removal time or are subject to rapid evaporation of amended water. The removal encapsulant shall be capable of wetting the ACM and retarding fiber release during disturbance of the ACM equal to or greater than provided by amended water.

B. Strippable Coating

   Provide additional incidental items necessary to complete specified activities.

C Prefabricated Decontamination Unit(s)

Provide additional incidental items necessary to complete specified activities.

D Chemical removal encapsulant

Provide additional incidental items necessary to complete specified activities.

E. Chemical encasement materials

Provide additional incidental items necessary to complete specified activities.

F. Safety Data Sheets (for all chemicals proposed)

Provide additional incidental items necessary to complete specified activities.

G. Plastic Sheeting

Provide sheet plastic as specified herein and in the largest size necessary to minimize seams. Comply with ASTM D 4397 and NFPA 701.

H Other items

Provide additional incidental items necessary to complete specified activities.

EQUIPMENT

A. High efficiency filtered local exhaust equipment

Equipment such as Air Filtration Devices (AFD's).

B. Vacuum equipment.

All vacuum equipment shall be equipped with High Efficiency Particulate Air (HEPA) filters

C. Pressure differential monitor where containment is elected for asbestos abatement procedures.

D. Air monitoring equipment

ENGINEER will provide appropriate air monitoring equipment to evaluate concentrations of airborne asbestos fibers. ENGINEER will conduct daily air monitoring at his/her discretion.

E. Respirators

Provide respirators as specified in Part 1.08.B.2 of this Section

F. Glove Bag

Provide glove bags that comply with 29 CFR Part 1926.

G. Duct Tape and Spray Adhesive

Provide industrial grade duct tape in widths suitable for bonding sheet plastic and disposal containers specified herein. Provide industrial strength spray adhesive in aerosol cans which is specifically formulated to adhere to polyethylene sheeting.

H. Shower and Decontamination Unit

Provide a shower and decontamination unit to conform with 29 CFR Part 1926. All decontamination units will consist of a "clean room", "shower", and a "dirty room". Hot water and soap will be made available to all employees and individuals entering and exiting the regulated work area.

I. Leak-Tight Containers

Provide leak-tight disposal containers and bags for asbestos-containing materials and generated wastes as specified herein. All disposal containers shall be either pre-labeled or affixed with an OSHA warning label and affixed with a waste generator label.

J. Roll-Off Boxes/Dumpsters

Provide a six-sided roll-off box/dumpster lined with 6-mil polyethylene sheeting. The dumpster will be properly demarcated according to 29 CFR Part 1926 and MDOT regulations. The dumpster will be stored on concrete in a location provided by the OWNER and approved by ENGINEER.

K. Rental Equipment

If rental equipment must be used in the abatement areas or to transport asbestos-containing wastes, a written notification stating the intended use of the rental equipment must be provided to the rental company and a copy made available to the ENGINEER. If equipment such as scissor or man lifts are to be used during the asbestos abatement procedures proper training must be provided to all personnel using these devices. A copy of the training records should be made available to the ENGINEER.

SOURCE QUALITY CONTROL

Encapsulants shall conform to USEPA requirements, shall contain no toxic or hazardous substances or solvent, and shall meet the following requirements:

A. Requirements and Corresponding Test Standards for All Encapsulants

Requirement	Test Standard
Flame Spread – 25, Smoke Emission – 50	ASTM E 84
Combustion Toxicity	University of Pittsburg Protocol
Zero Mortality	University of Pittsburg Protocol
Life Expectancy – 20 years	ASTM C 732 (Accelerated Aging Test)
Permeability – Minimum 0.4 perms	ASTM E 96

B. Additional Requirements and Corresponding Test Standards for Bridging Encapsulant

Requirement Test Standard

Cohesion/Adhesion Test – 50 pounds of force/foot	ASTM E 736
FIRE RESISTANCE	ASTM E 119
Impact Resistance – Minimum 43 in/lb	ASTM D 2794 (Gardner Impact Test)
Flexibility – no rupture or cracking	ASTM D 522 (Mandrel Bend Test)

C. Additional Requirements and Corresponding Test Standards for Penetrating Encapsulant

Requirement	Test Standard
Cohesion/Adhesion Test – 50 pounds of force/foot	ASTM E 736
FIRE RESISTANCE	ASTM E 119
Impact Resistance – Minimum 43 in/lb	ASTM D 2794 (Gardner Impact Test)
Flexibility – no rupture or cracking	ASTM D 522 (Mandrel Bend Test)

D. Additional Requirement and Corresponding Test Standards for Lock-Down Encapsulant

Requirement	Test Standard
FIRE RESISTANCE	ASTM E 119
Bond Strength	ASTM E 736

PART 3 EXECUTION

GENERAL

Remove and dispose asbestos-containing material at an EPA approved type II landfill. Obtain all required permits and approval documents. Provide approved containers, vehicles, equipment, labor, signs, placards, labels, manifests, and other documents necessary for accomplishing the work including materials necessary for spill cleanup from removal operations.

A. Safety Guidelines

Personnel working inside and in the general vicinity of the cleanup area shall be trained and made thoroughly familiar with the safety precautions, procedures, and equipment required for controlling the potential hazards associated with this work. Personnel shall use proper protection and safety equipment during work in and around the asbestos regulated work area.

B. Controls

Areas where asbestos abatement activities are conducted should be adequately secured as specified herein.

17.0 ASBESTOS ABATEMENT

Perform work in accordance with the requirements and specifications and take direction only from the ENGINEER for this contract. Any other party that proposes to give direction to the CONTRACTOR shall be immediately referred to the ENGINEER.

D. Routine Cleaning

1. Package all loose asbestos-containing materials and debris and remove from the work area to the load-out area.

2. Vacuum work areas with HEPA vacuum or other high volume HEPA-filtered transfer equipment.

3. Inspect and maintain polyethylene and PVC in work and high traffic areas.

4. If air sample results exceed prescribed level, wipe clean containment and decontamination areas.

ABATEMENT PROCEDURES

A. Methods

Determine and implement the most efficient asbestos abatement method in conformance with this specification. Employ proper handling procedures in accordance with 29 CFR Part 1926 and 40 CFR Part 61, Subpart M, and the requirements specified herein.

B. Revised Quantities

Before the ACM or contaminated debris has been removed, verify the previously submitted quantity estimates of the asbestos-containing materials.

C. Air Monitoring

ENGINEER will perform sampling and analysis for airborne concentration of asbestos fibers in accordance with 29 CFR Part 1926 Section 1926.1101 and as specified herein.

Air sample results shall be posted at the job site and made available by ENGINEER as specified herein. The CONTRACTOR shall maintain a fiber concentration inside enclosed containment regulated work area equal to or less than 0.1 f/cc expressed as an 8 hour, TWA during asbestos abatement. If fiber concentration rises above 0.1 f/cc, Competent Person and ENGINEER will examine work procedures to determine the cause or additional protective equipment may be necessary.

Workers shall not be exposed to a short term airborne fiber concentration (STEL) in excess of 1.0 f/cc, as average over a sampling period of 30 minutes. If either an environmental concentration of 0.1 f/cc expressed as an 8-hour TWA or a personal excursion concentration of 1.0 f/cc expressed as a 30-minute sample occur inside the enclosed work area, stop work immediately, notify ENGINEER, and implement additional engineering controls and work practice controls to reduce airborne fiber levels below prescribed limits in the work area. Do not restart until authorized by ENGINEER.

Personal sampling as required by 29 CFR Part 1926 Section 1926.1101, in accordance with the NIOSH-01 Method 7400, Phase Contract Microscopy (PCM), will be conducted by ENGINEER. Maintain employee exposure reports.

For environmental and final clearance samples, ENGINEER will collect air samples with a minimum liter volume of air necessary to establish the limit of detection of the method used at 0.01 f/cc. Asbestos

fiber concentration confirmation of the total fiber concentration results of environmental, quality assurance and final air clearance samples, collected and analyzed by NIOSH-Method 7400; may be conducted.

1. Work Area and Perimeter Air Sampling

   Conduct air sampling at least once during every shift, close to the work in the containment area, outside the clean room entrance to the containment area, inside the clean room, outside the load-out unit exit, and at the exhaust discharge point of the local exhaust system.

2. Sampling – Post Final Clean-Up (Clearance Sampling)

   For final clearance samples, ENGINEER will collect samples with a minimum liter volume of air necessary to establish the limit of detection of the method at 0.01. Comply with the sampling and analytical methods provided in NIOSH-01 Method 7400 (PCM) with optional confirmation of results by NIOSH-01 Method 7402 (TEM).

3. Failure to Meet Air Quality Requirements

   If clearance sampling results fail to meet the final clean-up requirements, reclean, resample, and reanalyze until final clean-up requirements are met. Costs associated with additional samples, cleaning, and inspections will be paid by the CONTRACTOR.

D. Additional Bulk Asbestos Sampling

Bulk asbestos sampling and polarized light microscopy analysis (PLM) has been conducted for various materials located throughout the site. During removal, previously unidentified suspect asbestos-containing material may be encountered, requiring bulk sampling and analysis. Provide additional bulk sampling of materials not identified in the ENGINEER Hazardous Material Survey Report dated March 18, 2008. Personnel conducting the bulk sampling must be accredited by the State of Michigan as an Asbestos Building Inspector. Submit samples to a testing laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Copies of the laboratory reports should be made available to the ENGINEER. Should new materials found to be asbestos-containing during the abatement project the CONTRACTOR and the ENGINEER will quantify the material. The CONTRACTOR will submit a unit price and an abatement plan for removal.

E. Asbestos Abatement

Collect and place in sealed, leak-tight containers all asbestos waste, scrap, debris, bags, containers, equipment, and asbestos contaminated personal protective equipment. 6-mil, double wrapped polyethylene sheets, sealed fiberboard boxes, or other approved containers. Wet removal is required for the abatement of all ACMs. Waste within the containers must be wetted in case the container is damaged. Affix a warning label, a Department of Transportation (DOT) label, and a waste generator label on each bag. Dispose waste material at an approved, licensed asbestos landfill. For temporary storage, keep sealed impermeable containers in asbestos waste load-out unit or in a storage/transportation conveyance (dumpsters or roll-off boxes) in a manner as accepted by and in an area as assigned by the ENGINEER. Procedure for hauling and disposal asbestos-containing material shall comply with 40 CFR Part 61, Subpart M, state, regional, and local standards and specifications.

17.0 ASBESTOS ABATEMENT

F. Waste Records

Provide final completed copies of the Waste Shipment Record for shipments of all waste material as specified in 40 CFR Part 61, Subpart M, and other required state waste manifest shipment records within 35 days of delivery to the landfill.

G. Final Cleaning

Abated asbestos by collecting, packing, and storing all gross contamination in accordance with all references and specifications. Once cleaning has been completed, conduct a visual pre-inspection of the cleaned area. Prior to conducting final air clearance monitoring, conduct a final visual inspection with the ENGINEER. Final clearance air monitoring shall not begin until acceptance of this visual inspection by the ENGINEER.

Upon completion of the inspection, the CONTRACTOR and ENGINEER will sign a copy of the visual inspection sheet. Both parties will maintain a copy. A final air monitoring event will be performed to verify adequacy of clean-up. Document the results. Recleaning and follow-up inspections shall be at the CONTRACTOR's expense. If the ENGINEER determines that the abatement area does not meet final cleaning requirements, reclean as necessary and conduct additional follow-up inspection with the ENGINEER.

H. Lock Down Encapsulant

After clean-up of gross contamination and final visual inspection, but before removing plastic barriers, apply a post removal (lockdown) encapsulant to floor, walls, ceilings, and other surfaces in the removal area.

I. Letter of Completion

Upon completion of the scope of work the CONTRACTOR and ENGINEER will conduct a final visual inspection of the site to ensure all materials were removed. Additional materials and quantities identified during the asbestos abatement process will be included in the final inspection. The CONTRACTOR and ENGINEER will sign a letter of completion stating that the scope of work has been completed.

END OF SECTION

Appendix A

Asbestos Survey Report

PRE-RENOVATION ASBESTOS CONTAINING MATERIALS SURVEY

Former St. Victor Catholic Church
14100 Navarre Street, Gibraltar, Michigan

PREPARED FOR Downriver Community Conference Brownfield Consortium
15100 Northline Road
Southgate, MI 48195
2015 United States Environmental Protection Agency
Brownfield Assessment Grant
Cooperative Agreement No. BF-00E01500-0

and

City of Gibraltar
29450 Munro Avenue
Gibraltar, Michigan 48173

PROJECT # 11496f2-2-190

DATE June 1, 2016

AKTPEERLESS

PRE-RENOVATION ASBESTOS CONTAINING MATERIALS SURVEY

Former St. Victor Catholic Church
14100 Navarre Street, Gibraltar, Michigan

PREPARED FOR Downriver Community Conference Brownfield Consortium
15100 Northline Road
Southgate, MI 48195
2015 United States Environmental Protection Agency
Brownfield Assessment Grant
Cooperative Agreement No. BF-00E01500-0

and

City of Gibraltar
29450 Munro Avenue
Gibraltar, Michigan 48173

PROJECT # 11496f2-2-190

DATE June 1, 2016

Table of Contents

1.0 INTRODUCTION 1

2.0 PURPOSE 1

2.1 SCOPE OF WORK 1
2.2 CLARIFICATIONS AND EXCEPTIONS 2
2.3 BUILDING PLANS AND CONSTRUCTION SPECIFICATIONS 3
2.4 DESCRIPTION OF HOMOGENEOUS AREAS 3
2.5 DESCRIPTION OF FUNCTIONAL SPACES 3
2.6 BULK SAMPLE MATERIAL INVENTORY 4
2.7 LABORATORY ANALYTICAL PROCEDURES 5

3.0 CONCLUSIONS AND RECOMMENDATIONS 5

3.1 SUMMARY OF IDENTIFIED ASBESTOS CONTAINING MATERIALS 6

4.0 LIMITATIONS 6

5.0 SIGNATURES 7

FIGURES

Figure 1 ..... Functional Space Designations and Bulk Sample Locations

APPENDICES

Appendix A ..... Homogeneous Area Summary
Functional Space Inventory
Bulk Sample Results Summary

Appendix B ..... Bulk Sample Laboratory Reports and Chain of Custody Record

AKTPEERLESS

PRE-RENOVATION ASBESTOS CONTAINING MATERIALS SURVEY

Former St. Victor Catholic Church
14100 Navarre Street, Gibraltar, Michigan
AKT Peerless Project No. 11496f2-2-190

1.0 Introduction

The City of Gibraltar and the Downriver Community Conference Brownfield Consortium (DCCBC), the Clients, retained AKT Peerless to conduct an Asbestos Survey of the former St. Victor Catholic Church structure at 14100 Navarre Street, Gibraltar, Michigan. The DCCBC was awarded a 2015 United States Environmental Protection Agency (USEPA) Brownfield Assessment Grant to conduct environmental assessments of petroleum and hazardous substance sites. This survey was conducted as part of the Hazardous Substance Assessment Grant (BF-00E01500-0) on behalf of the Clients. A request for an Eligibility Determination for Hazardous Substances was submitted on April 22, 2016. The USEPA confirmed the property's eligibility on April 22, 2016.

AKT Peerless' scope-of-services is based on its proposals PF-19173, dated April 27, 2016 and PF-19180, dated April 29, 2016, and the terms and conditions of those agreements.

AKT Peerless prepared a Work Plan/Sampling and Analysis Plan (Work Plan/SAP) on behalf of the DCCBC and City of Gibraltar. On May 6, 2016 the Work Plan/SAP was approved by the USEPA. The survey was conducted on May 12, 2016. In completing field activities, deviations from the approved Work Plan/SAP were not made.

2.0 Purpose

The purpose of AKT Peerless' pre-renovation asbestos survey is to (a) identify and locate suspect ACM, (b) establish a sampling plan, based on homogeneous and functional areas, to sample significant sources of friable and non-friable suspect ACM, (c) quantify the amount of asbestos ACM identified at the property, and (d) prepare a final report documenting confirmed ACM and Presumed Asbestos Containing Materials (PACM) quantities, locations, and laboratory results.

2.1 Scope of Work

The scope of work for AKT Peerless' pre-renovation asbestos survey is based on the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). The purpose of ASHARA is to extend the Asbestos Hazard Emergency Response Act (AHERA) inspection and management requirements to commercial and industrial buildings. If the facility is renovated, it will be subject to Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) standards.

Survey activities were completed in accordance with the following protocol:

- The inspection was performed to determine the extent and location of suspect ACM present in the subject building. This survey was qualitative and quantitative in that an attempt was made

to locate accessible friable and non-friable ACM areas, as well as estimate the quantity of ACM. Bulk samples of suspect ACM were collected by a Michigan-accredited Asbestos Building Inspector.

- Bulk samples were collected of each homogeneous material area encountered in accordance with EPA-recommended sampling guidelines. If a suspect material was not sampled, then it was presumed asbestos-containing (PACM).
- Samples of suspect ACM were analyzed by a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited laboratory for analysis via Polarized Light Microscopy and dispersion staining (PLM) following the EPA Test Method (EPA-600/M4-82-020) and the National Institute of Standards and Technology (NIST) Bulk Asbestos Handbook.
- Laboratory analysis was performed using first positive stop analysis methodologies. First positive stop involves analyzing samples by homogeneous material groupings. Laboratory analyses proceeded sample by sample, within each homogeneous material grouping, until a sample was determined to be asbestos containing.
- Although PLM is currently the accepted and approved method for analysis, the method is limited in its ability to provide a quantitative result when asbestos represents a small fraction of the material. Current USEPA guidelines specify that when initial laboratory analysis of friable materials detects the presence of asbestos in a quantity between less than one percent (or trace) and less than ten percent, a verification analysis using the point counting analytical method may be considered. If the client does not exercise the option to conduct point counting, the material in question will be considered ACBM as identified by PLM analysis.
- Upon completion of the field inspection and receipt of laboratory data, this report was prepared and includes: (a) a general description of the suspect ACM identified and non-suspect homogeneous materials that were visually evaluated, (b) a determination of the quantity of suspect materials observed, (c) laboratory testing results, and (d) quality control measures.

2.2 Clarifications and Exceptions

AKT Peerless uses trained and licensed inspectors in attempting to locate and identify materials potentially containing asbestos. AKT Peerless conducted invasive access to identify potential asbestos materials within the subject buildings; however, there may be additional asbestos materials that were not found because they were not accessible to the inspector. Asbestos was used in a variety of building components and in many types of materials in the construction of buildings. In some of these components asbestos may be present, not as an intentional ingredient, but as a contaminant.

During execution of this survey, the work was performed using commercially reasonable best efforts consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

QUANTITIES OF IDENTIFIED ACM REPORTED IN THIS DOCUMENT ARE PROVIDED FOR REFERENCE ONLY AND SHOULD NOT BE RELIED UPON FOR ABATEMENT BIDDING PURPOSES. AKT Peerless strongly cautions against utilizing the reported material quantities without field verification. It is expected that contractors will utilize their own quantities when preparing bid pricing. Further, it should be anticipated that there will be other costs associated with the construction/asbestos abatement including engineering and testing fees. For planning purposes, AKT Peerless recommends an allowance of 20 percent for these costs.

AKT Peerless encountered the following building-specific limitations during the Asbestos Survey:

- No dismantling of electrical, mechanical, or hydraulic equipment was conducted.
- Numerous building materials were assumed asbestos-containing as destructive access was severely restricted and sampling of building materials was limited.
- The plenum tunnel is a confined space which limited access for assessment.

2.3 Building Plans and Construction Specifications

AKT Peerless was not provided with site plans, drawings, or construction specifications.

The following sections of this survey outline the approach, procedures, and methods employed by AKT Peerless to conduct the ACM Survey of the subject property.

2.4 Description of Homogeneous Areas

AKT Peerless identified Homogeneous Areas (HA) based on appearances and type of materials observed. As defined under AHERA, a homogeneous area is an area (material) that appears similar throughout in terms of its color, texture, and date of material application.

In addition, building materials suspect for asbestos content are also described based on one of three following material classifications:

Surfacing Materials

A material that is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes. Glued-on ceiling panels are interpreted by the State of Michigan as a surfacing material.

Thermal System Insulation

A material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat lost or gain, or water condensation, or for other purposes.

Miscellaneous Materials

A building material on structural components, structural members or fixtures, such as floor and ceiling panels, and does not include surfacing material or thermal system insulation.

AKT Peerless identified homogeneous suspect ACM at the subject property for sampling or that were already characterized as asbestos-containing.

Materials identified at the site are described in detail in Appendix A.

2.5 Description of Functional Spaces

During the asbestos survey, AKT Peerless identified various Functional Spaces (FS) in the building. In general, functional spaces are defined as spatially distinct units or areas within the building, which contain identifiable populations of building occupants. Functional spaces can also include storage spaces, mechanical rooms, closets and services areas, etc. However, a functional space can also be delineated based on general building layout, facility use factors, and can be assigned using various arbitrary factors that were useful in the completion of this survey.

Functional Space designations for the subject structure are listed in Appendix A.

2.6 Bulk Sample Material Inventory

Based on the homogeneous materials and functional spaces identified during this pre-renovation survey, AKT Peerless collected 35 bulk samples for analysis. Bulk sample locations are described in the Inventory Results table, included in Appendix A. In general, AKT Peerless' sampling protocol consisted of (a) wetting or misting the sample as appropriate, (b) extracting a sample with a clean knife, chisel, or coring tool and (c) placing the sample into a sealed polyethylene sample container.

The sampling protocol used to procure the appropriate number of samples for an identified homogeneous area of suspect ACM is based on sampling guidelines outlined under AHERA and is detailed as follows:

Surfacing Materials (SM)

Surfacing materials consist of building materials that have been spray-on, troweled-on, or otherwise applied to building surfaces for acoustical, fireproofing, or decorative purposes. Samples of suspect surfacing materials were collected using the following sampling guidelines:

Size of Sampling Area	USEPA Recommended Number of Samples to Collect	Minimum Number of Samples to Collect
Less than 1,000 square feet	9	3
Between 1,000 & 5,000 square feet	9	5
Greater than 5,000 square feet	9	7

Thermal System Insulation (TSI)

This category consists of insulation used to inhibit heat transfer or prevent condensation on mechanical system components. For thermal system insulation, the number of samples and the sample locations was dependent on access considerations and the likelihood of asbestos content.

Miscellaneous Materials (MM)

Miscellaneous materials consist of interior and exterior building components and are typically located on structural components, structural members, or fixtures, such as floor tiles, ceiling panels and roofing materials. Sampling of these materials was performed by delineation of homogeneous areas and functional spaces. Based on the number of different materials identified, suspect materials were analyzed based on multiple samples per material.

Assumed Asbestos Materials

- HA5 – Sink undercoat
- HA11 – Texture Plaster Ceiling
- HA14 – Electrical Panel
- HA16 – Exterior Portico Soffit Plaster
- HA18 – Roof Shingle
- HA19 – Flat Roof

2.7 Laboratory Analytical Procedures

All samples collected were submitted to APEX Research, Inc. (APEX) of Whitmore Lake, Michigan for analysis. APEX is accredited by the American Industrial Hygiene Association (AIHA) and participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Samples were submitted under chain-of-custody guidelines to ensure proper handling and delivery of the samples. The samples were analyzed using Polarized Light Microscopy (PLM) with dispersion staining in accordance with the following USEPA guidance document Determination of Asbestos in Bulk Building Materials: EPA/600/R-93/116, dated July, 1993.

The USEPA defines ACM as those materials that contain greater than one percent asbestos. Friable materials are defined as those that can be crumbled or reduced to powder by hand pressure. The National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos, dated November 1990 stipulates that any friable material identified as containing asbestos in concentrations greater than one percent must be considered ACM.

Materials containing one (1) percent or less asbestos are generally considered non-asbestos-containing and therefore are not regulated by NESHAP. The OSHA definition of ACM is similarly any material containing more than one (1) percent asbestos. However, specific work practices must be followed under OSHA regulations for materials containing less than one percent asbestos if an individual layer exceeds one percent. Under the PLM method, percentages and types of fibrous components in these samples were determined by visual estimation of the amount of fibrous materials versus the total amount of material present.

Current USEPA guidelines specify that when initial laboratory analysis of friable or non-friable materials regulated under NESHAP detects the presence of asbestos in a quantity between less than one percent (or trace) and less than ten percent, a verification analysis using the point counting analytical method should be considered or the material in question should be treated as ACBM as identified by PLM analysis. In addition, PLM has a high error rate for floor tile and additional confirmatory analyses are recommended for older floor tiles determined to be non-asbestos.

AKT Peerless utilized the “positive-stop” method of sample analyses. In this method, the analyses of a homogeneous material is stopped on a group of samples once the first positive (e.g., greater than 1% asbestos) sample is analyzed. According to the USEPA, if one sample of a homogenous material is identified to be asbestos-containing, the entire material must be considered asbestos-containing.

Based on appearances and type of materials, suspect ACMs were grouped into homogeneous areas and functional spaces as appropriate based on apparent age and similarity in texture and color. Upon completion of these activities, representative bulk samples of the suspect materials were collected.

Bulk Sample Laboratory Reports with Chain-of-Custody records for each area are presented in Appendix B.

3.0 Conclusions and Recommendations

AKT Peerless was retained to conduct a pre-renovation Asbestos Survey of the former St. Victor Catholic Church structure at 14100 Navarre Street, Gibraltar, Michigan. The following sections of this report summarize the findings of the Asbestos Survey.

3.1 Summary of Identified Asbestos Containing Materials

HA No.	Material Description	Material Location(s)	Material Class	Approx. Quantity	Friability	Comments
4	**9" Floor Tile, Tan w/Cream & Dark Brown Streaks** (Mastic is Non-ACM)	FS3, FS6	MM	350 SF	Non-friable	
5	Sink Undercoat (Assumed ACM)	FS3, FS14	MM	4 Units	Non-friable	
6	**9" Floor Tile, Reddish Brown w/White & Dark Brown Streaks** (Mastic is Non-ACM)	FS4	MM	882 SF	Non-friable	
7	**9" Floor Tile, Alternating Gray, Putty & Black** (Mastic is Non-ACM)	FS5	MM	292 SF	Non-friable	
8	Millboard Straight Pipe Insulation, 4" Diameter	FS8, FS18 (3), FS19, Reference Note (1) Below	TSI	>555 LF (Estimated)	Friable	Significant Damage FS18 = ~500 LF FS19 = 34 LF
9	Mudded Fittings on Millboard	FS8, FS18 (3), FS19, Reference Note (1) Below	TSI	40 MF (Estimated)	Friable	Significant Damage FS18 = ~20 MF FS19 = 9 MF
11	Hard Plaster Ceiling, Texture (Assumed ACM)	FS13	MM	30 SF	Non-friable	
12	9" Floor Tile, Taupe w/Cream Streaks	FS14, FS16, FS17(2)	MM	1,025 SF	Non-friable	
14	Electrical Panel (Assumed ACM)	FS19	MM	1 Unit	Non-friable	
15	Window Caulk	FSE	MM	108 SF	Non-friable	
16	South Soffit Plaster (Assumed ACM)	FSE	MM	135 SF	Non-friable	
17	Sub-floor Transite Duct, 10" Diam.	FS18	MM	1,000 SF (Estimated)	Non-friable	
18	Roof Shingle, Brown (Assumed ACM)	FSE	MM	NE	Non-friable	
19	Flat Roof (Assumed ACM)	FSE	MM	NE	Non-friable	

HA= Homogeneous Area	MM = Miscellaneous Material	(1) Material may be present above the plaster ceilings in FS7 and FS8. Quantity unknown.
FS = Functional Space	SM = Surfacing Material	(2) Material is presumed present under carpet.
SF= square feet	TSI = Thermal System Insulation	(3) Confined Space. Access limited.
NE = Not Estimated	MF = Mud Fittings	

4.0 Limitations

The information and opinions obtained in this report are for the exclusive use of the City of Gibraltar and the DCCBC. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without your written consent or as required by law or by a Court order. The information and opinions contained in the report are given in light of that assignment. The report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties who have been extended the right to rely on the contents of this report by AKT Peerless (which is expressly required prior to any third-party release), expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and the Clients.

Subject to the above and the terms and conditions, AKT Peerless accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession, but disclaims any responsibility for consequential damages. Although AKT Peerless believes that results contained herein are reliable, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive or that the information provided by the Clients, Property Owner, or third parties is complete or accurate.

5.0 Signatures

The following professional prepared this report.

James C. Fox, RPIH
Senior Environmental Consultant
AKT Peerless Environmental Services
Southeast Michigan Region
Phone: 248.615.1333
MIOSHA LARA CSHD Asbestos Inspector/Management Planner Accreditation No. A3152

Appendix A

Homogeneous Area Summary

Functional Space Inventory

Bulk Sample Results Summary

AKTPEERLESS

HOMOGENEOUS AREA SUMMARY

CLIENT: City of Gibraltar
PROJECT NO: 11496f2-2-190
PROJECT: 14100 Navarre Street
Gibraltar, Michigan

HA No.	Material Description	Material Location(s)	Material Class	Approx. Quantity	Friability
1	Hard Wall/Ceiling Plaster	FS1, FS2, FS3, FS4, FS5, FS6, FS7, FS8, FS9, FS10, FS11, FS12, FS14, FS15, FS19	MM	3,050 SF (108 SF Damage, 70 SF Significant Damage)	Non-friable
2	Building Caulk, Gray	FS1, FS2, FS3, FS4, FS5, FS6, FS7, FS8, FS9, FS14, FS15, FS17, FS19	MM	18 SF	Non-friable
3	Floor Tile Mastic, Black	FS2, FS9	MM	2850 SF	Non-friable
4	**9" Floor Tile, Tan w/Cream & Dark Brown Streaks** (Mastic is Non-ACM)	**FS3, FS6**	**MM**	**350 SF**	**Non-friable**
5	**Sink Undercoat (Assumed ACM)**	**FS3, FS14**	**MM**	**4 Units**	**Non-friable**
6	**9" Floor Tile, Reddish Brown w/White & Dark Brown Streaks** (Mastic is Non-ACM)	**FS4**	**MM**	**882 SF**	**Non-friable**
7	**9" Floor Tile, Alternating Gray, Putty & Black** (Mastic is Non-ACM)	**FS5**	**MM**	**292 SF**	**Non-friable**
8	**Millboard Straight Pipe Insulation, 4" Diameter**	**FS8, FS18 (3), FS19, Reference Note (1) Below**	**TSI**	**>555 LF (Estimated)**	**Friable**
9	**Mudded Fittings on Millboard**	**FS8, FS18 (3), FS19, Reference Note (1) Below**	**TSI**	**40 MF (Estimated)**	**Friable**
10	2'X2' Drop-in Ceiling Panel, Gray Heavy Texture	FS10, FS11, FS12, FS17	MM	270 SF	Friable
11	**Hard Plaster Ceiling, Texture (Assumed ACM)**	**FS13**	**MM**	**30 SF**	**Non-friable**
12	**9" Floor Tile, Taupe w/Cream Streaks**	**FS14, FS16, FS17(2)**	**MM**	**1,025 SF**	**Non-friable**
13	Rubber 5" Cove Base, Black	FS14, FS16	MM	35 SF	Non-friable
14	**Electrical Panel (Assumed ACM)**	**FS19**	**MM**	**1 Unit**	**Non-friable**
15	**Window Caulk**	**FSE**	**MM**	**108 SF**	**Non-friable**
16	**South Soffit Plaster (Assumed ACM)**	**FSE**	**MM**	**135 SF**	**Non-friable**
17	**Sub-floor Transite Duct, 10" Diam.**	**FS18**	**MM**	**1,000 SF (Estimated)**	**Non-friable**
18	**Roof Shingle, Brown (Assumed ACM)**	**FSE**	**MM**	**NE**	**Non-friable**
19	**Flat Roof (Assumed ACM)**	**FSE**	**MM**	**NE**	**Non-friable**
20	Drywall & Mud	FS9, FS16	MM	1,320 SF	Non-friable

HA= Homogeneous Area
FS = Functional Space
SF= square feet
NE = Not Estimated

MM = Miscellaneous Material
SM = Surfacing Material
TSI = Thermal System Insulation
Bold = Asbestos Material

(1) Material may be present above the plaster ceilings in FS7 and FS8. Quantity unknown.
(2) Material is presumed present under carpet.
(3) Confined Space. Access Limited.

Tabulated By: JCF

AKTPEERLESS

FUNCTIONAL SPACE DESIGNATIONS

CLIENT: City of Gibraltar
PROJECT NO: 11496f2-2-190
PROJECT: 14100 Navarre Street
Gibraltar, Michigan

Functional Space (FS) No.	Description	Functional Space (FS) No.	Description	Functional Space (FS) No.	Description
FS-E	Exterior	FS-1	South Entry Vestibule	FS-2	West Coat Room
FS-3	Kitchen	FS-4	Narthex/Overflow	FS-5	East Entry Vestibule & Hallway
FS-6	Utility Room	FS-7	Women's Lavatory	FS-8	Men's Lavatory
FS-9	Sanctuary	FS-10	West Storage Closet	FS-11	Private
FS-12	Face-to-Face	FS-13	Northwest Entry Vestibule	FS-14	Northwest Office
FS-15	Northwest Office Lavatory	FS-16	Hallway North of Sanctuary	FS-17	Northeast Room
FS-18	Crawl Tunnel/Air Plenum	FS-19	Boiler Room	FS-G	Garage

Tabulated By: JCF

AKTPEERLESS

LABORATORY RESULTS SUMMARY

CLIENT: City of Gibraltar
PROJECT NO: 11496f2-2-190
PROJECT: 14100 Navarre Street
Gibraltar, Michigan

HA No.	Material Description	Sample Number	Sample Location	Asbestos Content	Comments
1	Hard Wall/Ceiling Plaster	1.1	FS19, Southwest Corner (Debris)	NAD/NAD	
		1.2	FS19, Northeast Corner (Debris)	NAD/NAD	
		1.3	FS6, Southwest Corner Above Fan	NAD/NAD	
		1.4	FS7, South Wall Center at Delamination	NAD/NAD	
		1.5	FS2, Northwest Corner at Water Damage	NAD/NAD	
2	Building Caulk, Gray	2.1	FS5, South Window	CHR Trace	Non-ACM by PC
		2.2	FS9, Southwest Corner, Base of 2nd Window from South	CHR Trace	
3	Floor Tile Mastic, Black	3.1	FS2, at Entry Door	NAD	
		3.2	FS9, at Doorway to FS13	NAD	
4	**9" Floor Tile, Tan w/Cream & Dark Brown Streaks**	**4.1**	**FS3, NE Corner at Register**	**T=CHR 5%,** M=NAD	
		4.2	**FS3, North Wall at West End of Cabinet**	**T=Not Analyzed,** M=NAD	
6	**9" Floor Tile, Reddish Brown w/White & Dark Brown Streaks**	**6.1**	**FS4, East Side, at Base of Truss**	**T=CHR 5%**	Floor Mastics Throughout the Structure are Non-ACM
		6.2	**FS4, Southwest Corner**	**T=NA**	
7	**9" Floor Tile, Alternating Gray, Putty & Black**	**7.1**	**FS5, NE Corner of Hallway**	**T=CHR 5%**	Floor Mastics Throughout the Structure are Non-ACM
		7.2	**FS5, East Wall**	**T=NA**	
8	**Millboard Straight Pipe Insulation, 4" Diameter**	**8.1**	**Tunnel Below FS6**	**CHR 30%**	
		8.2	**FS19, Southwest Corner**	**NA**	
		8.3	**FS19, South Wall Center**	**NA**	
9	**Mudded Fittings on Millboard**	**9.1**	**Tunnel Below FS6**	**CHR 30%**	
		9.2	**FS19, Southwest Corner**	**NA**	
		9.3	**FS19, South Wall (Debris)**	**NA**	

Tabulated By: JCF

AKTPEERLESS

LABORATORY RESULTS SUMMARY

CLIENT: City of Gibraltar
PROJECT NO: 11496f2-2-190
PROJECT: 14100 Navarre Street
Gibraltar, Michigan

HA No.	Material Description	Sample Number	Sample Location	Asbestos Content	Comments
10	2'X2' Drop-in Ceiling Panel, Gray Heavy Texture	10.1	FS10, Southeast Corner	NAD	
		10.2	FS11, Northeast Corner	NAD	
		10.3	FS12, Northeast Corner	NAD	
12	**9" Floor Tile, Taupe w/Cream Streaks**	**12.1**	**FS14, West Carpet Edge**	**T=CHR 5%,** M=NAD	
		12.2	**FS16, East End, South Wall**	**T=NA,** M=NAD	
13	Rubber 5" Cove Base, Black	13.1	FS14, South Wall	NAD/NAD	
		13.2	FS16, Southeast Corner	NAD/NAD	
15	**Window Caulk**	**15.1**	**FSE, Window Outside of FS15**	**CHR 5%**	
		15.2	**FSE, Window Outside of FS17**	**NA**	
17	**Sub-floor Transite Duct, 10" Diam.**	**17.1**	**Tunnel Below FS6**	**CHR 25%, CRO 5%**	
		17.2	**Tunnel Below FS6**	**NA**	
20	Drywall & Mud	20.1	FS16, West End, South Wall	NAD/NAD	
		20.2	FS16, Center, Sougt Wall	NAD/NAD	
		20.3	FS16, East End, South Wall	NAD/NAD	

Notes

FS = Functional Space
SF = Square Feet
NE = Not Estimated
PC = Point Count

NAD = No Asbestos Detected
Bold = Indicates asbestos material
NA = Not Analyzed
GP=Glue Pod

CHR = Chrysotile Asbestos
CRO = Crocidolite Asbestos

Tabulated By: JCF

Appendix B

Bulk Samples Laboratory Reports and Chain of Custody Record

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 01 Cust. #: 1.1 Material: Hard Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 01a Cust. #: 1.1 Material: Mortar Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64811 - 02 Cust. #: 1.2 Material: Hard Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 02a Cust. #: 1.2 Material: Mortar Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64811 - 03 Cust. #: 1.3 Material: Hard Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 04 Cust. #: 1.4 Material: Hard Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 04a Cust. #: 1.4 Material: Mortar Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 64811 - 05 Cust. #: 1.5 Material: Hard Plaster Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 05a Cust. #: 1.5 Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 06 Cust. #: 2.1 Material: Building Caulk, Grey Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** Chrysotile - Trace POINT COUNT RESULT	Other - 100%
Lab ID #: 64811 - 07 Cust. #: 2.2 Material: Building Caulk, Grey Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** Chrysotile - Trace POINT COUNT RESULT	Other - 100%
Lab ID #: 64811 - 08 Cust. #: 3.1 Material: Mastic, Black Location: Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 09 Cust. #: 3.2 Material: Mastic, Black Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 10 Cust. #: 4.1 Material: 9" Floor Tile, Tan/Cream Location: Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%
Lab ID #: 64811 - 10a Cust. #: 4.1 Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 11 Cust. #: 4.2 Material: 9" Floor Tile, Tan/Cream Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 11a Cust. #: 4.2 Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 12 Cust. #: 6.1 Material: 9" Floor Tile, Reddish Brown Location: Appearance: black,fibrous,homogenous Layer: 1 of 2	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 12a Cust. #: 6.1 Material: 9" Floor Tile, Reddish Brown Location: Appearance: beige,fibrous,homogenous Layer: 2 of 2	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%
Lab ID #: 64811 - 13 Cust. #: 6.2 Material: 9" Floor Tile, Reddish Brown Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 14 Cust. #: 7.1 Material: 9" Floor Tile, Checked Pattern Location: Appearance: black,fibrous,homogenous Layer: 1 of 2	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 14a Cust. #: 7.1 Material: 9" Floor Tile, Checked Pattern Location: Appearance: beige,fibrous,homogenous Layer: 2 of 2	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%
Lab ID #: 64811 - 15 Cust. #: 7.2 Material: 9" Floor Tile, Checked Pattern Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 16 Cust. #: 8.1 Material: Millboard TSI Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **YES** Chrysotile - 30%	Cellulose - 50% Other - 20%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 17 Cust. #: 8.2 Material: Millboard TSI Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 18 Cust. #: 8.3 Material: Millboard TSI Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 19 Cust. #: 9.1 Material: Mud Fittings Location: Appearance: white,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **YES** Chrysotile - 30%	Other - 70%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 20 Cust. #: 9.2 Material: Mud Fittings Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 21 Cust. #: 9.3 Material: Mud Fittings Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 22 Cust. #: 10.1 Material: 2'x2' Ceiling Panel Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Mineral Wool - 40% Other - 40%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 23 Cust. #: 10.2 Material: 2'x2' Ceiling Panel Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Mineral Wool - 40% Other - 40%
Lab ID #: 64811 - 24 Cust. #: 10.3 Material: 2'x2' Ceiling Panel Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Mineral Wool - 40% Other - 40%
Lab ID #: 64811 - 25 Cust. #: 12.1 Material: 9" Floor Tile, Taupe Location: Appearance: grey,fibrous,homogenous Layer: 1 of 3	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 25a Cust. #: 12.1 Material: Mastic Location: Appearance: black,fibrous,homogenous Layer: 2 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 25b Cust. #: 12.1 Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 26 Cust. #: 12.2 Material: 9" Floor Tile, Taupe Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 26a Cust. #: 12.2 Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 27 Cust. #: 13.1 Material: Cove Base, Black Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 27a Cust. #: 13.1 Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 28 Cust. #: 13.2 Material: Cove Base, Black Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 28a Cust. #: 13.2 Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: 64811 - 29 Cust. #: 15.1 Material: Window Caulk Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **YES** Chrysotile - 5%	Other - 95%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 30 Cust. #: 15.2 Material: Window Caulk Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 64811 - 31 Cust. #: 17.1 Material: Transite Duct Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **YES** Chrysotile - 25% Crocidolite - 5%	Other - 70%
Lab ID #: 64811 - 32 Cust. #: 17.2 Material: Transite Duct Location: Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 33 Cust. #: 20.1 Material: Drywall/Mud Location: Appearance: grey,fibrous,homogenous Layer: 1 of 1	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64811 - 34 Cust. #: 20.2 Material: Drywall Location: Appearance: grey,fibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64811 - 34a Cust. #: 20.2 Material: Mud Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 14100 Navarre
Project #: 11496F2-2

Report To:
Jim Fox
AKT Peerless
22725 Orchard Lake Rd.
Farmington, MI 48336

ARI Report # 16-64811
Date Collected: 05/12/16
Date Received: 05/16/16
Date Analyzed: 05/19/16
Date Reported: 05/19/16

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 64811 - 35 Cust. #: 20.3 Material: Drywall Location: Appearance: grey,fibrous,homogenous Layer: 1 of 2	Asbestos Present: **NO** No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 64811 - 35a Cust. #: 20.3 Material: Mud Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: **NO** No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.

NVLAP Lab Code 102118-0

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449-9990, Fax (734) 449-9991

Apex # **64811**

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991.
www.apex-research-inc.com. Email: Bob.Letarte@apexresearchlab.com

AKT PEERLESS
22725 Orchard Lake Road
Farmington, MI 48336
P (248) 615-1333 F (248) 615-1334

Customer Name: _____
Address: _____
City, St., Zip: _____
Phone: 248.302.3571 Fax: _____

Date of Survey: 5/12/16
Project: 14100 Navarre
Project # 11496f2-2
Contact Person: Jim Fox
Email: foxcj@aktpeerless.com

***Terms and conditions on the other side.*

Lab Use Only
Log-In: ____
Report: ____
Fax: ____
Verbal: ____
Email: ____

Turn Around Times: (Circle One)

Rush — 24 hour
48 hour — 72 hour
Other: _____ — TTP yes / no (Test Till Positive)

Asbestos: Bulk X Wipe ____ Point Count <5% PCM ____
Lead: Bulk ____ Wipe ____ Air ____ Paint ____ Soil ____
Mold: Bulk ____ Tape ____ BioSIS ____ Other ____ Viable ____
TEM: Bulk/NOP ____ AHERA ____ EPA Level II ____ Other ____

Lab ID		Customer ID #	Material/Location	Volume	Area	Results
	1	1.1	Hard Plaster			
	2	1.2	↓			
	3	1.3	↓			
	4	1.4	↓			
	5	1.5	↓			
	6	2.1	Building Caulk, Gray			
	7	2.2	" " "			
	8	3.1	Mastic, Black			
	9	3.2	" "			
	10	4.1	9" Floor Tile, Tan w/Cream			
	11	4.2	" " "			

RECEIVED
MAY 18 2016
800
APEX RESEARCH

Relinquished By: [signature]
Date: 5/16/16

Received By: [signature]
Date:

Relinquished By:
Date:

Relinquished By:
Date:

Revision Date: June/2011

(6481)

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991.
www.apex-research-inc.com. Email: Bob.Letarte@apexresearchlab.com

AKT PEERLESS
22725 Orchard Lake Road
Farmington, MI 48336
P (248) 615-1333 F (248) 615-1334

Customer Name: _____
Address: _____
City, St., Zip: _____
Phone: 248.302.3571 Fax: _____

Date of Survey: 5/12/16
Project: 14100 Navarre
Project # 11496f2-2
Contact Person: Jim Fox
Email: foxej@aktpeerless.com

Terms and conditions on the other side.

Lab Use Only
Log-In: ____
Report: ____
Fax: ____
Verbal: ____
Email: ____

Turn Around Times: (Circle One)

Rush 24 hour
48 hour 72 hour
Other: _____ TTP yes / no (Test Till Positive)

Asbestos: Bulk ✓ Wipe ____ Point Count <5% PCM ____
Lead: Bulk ____ Wipe ____ Air ____ Paint ____ Soil ____
Mold: Bulk ____ Tape ____ BioSIS ____ Other ____ Viable ____
TEM: Bulk/NOP ____ AHERA ____ EPA Level II ____ Other ____

Lab ID		Customer ID #	Material/Location	Volume	Area	Results
	12	6.1	9" Floor Tile, Reddish Brown			
	13	6.2	" " "			
	14	7.1	9" Floor Tile, Checked Pattern			
	15	7.2	" " " "			
	16	8.1	Millboard TSI			
	17	8.2	↓ ↓			
	18	8.3				
	19	9.1	Mud Fittings			
	20	9.2	↓ ↓			
	21	9.3				
	22	10.1	2'x2' Ceiling Panel			

RECEIVED MAY 16 2016 APEX RESEARCH

Relinquished By: James C Fox
Date: 5/16/16
Received By: _____
Date: _____
Relinquished By: _____
Date: _____
Relinquished By: _____
Date: _____

Revision Date: June/2011

64811

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991.
www.apex-research-inc.com. Email: Bob.Letarte@apexresearchlab.com

AKT PEERLESS
22725 Orchard Lake Road
Farmington, MI 48336
P (248) 615-1333 F (248) 615-1334

Customer Name: _____
Address: _____
City, St., Zip: _____
Phone: _____ Fax: _____

Date of Survey: 5/12/16
Project: 14100 Navarre
Project # 11496f2-2
Contact Person: Jim Fox
Email: foxcj@aktpeerless.com

Lab Use Only
Log-In: ____
Report: ____
Fax: ____
Verbal: ____
Email: ____

Turn Around Times: (Circle One)

Rush — 24 hour
48 hour — 72 hour
Other: _____ — TTP yes / no (Test Till Positive)

Terms and conditions on the other side.

Asbestos: Bulk ✓ Wipe ____ Point Count <5% PCM ____
Lead: Bulk ____ Wipe ____ Air ____ Paint ____ Soil ____
Mold: Bulk ____ Tape ____ BioSIS ____ Other ____ Viable ____
TEM: Bulk/NOP ____ AHERA ____ EPA Level II ____ Other ____

Lab ID		Customer ID #	Material/Location	Volume	Area	Results
	23	10.2	2'x2' Ceiling Panel			
	24	10.3	" " "			
	25	12.1	9" Floor Tile, Taupe			
	26	12.2	" " "			
	27	13.1	Cove Base, Black			
	28	13.2	" " "			
	29	15.1	Window Caulk			
	30	15.2	" "			
	31	17.1	Transite Duct			
	32	17.2	" "			
	33	20.1	Drywall & Mud			

Relinquished By: James C Fox
Date: 5/16/16
Received By: _____
Date: _____
Relinquished By: _____
Date: _____
Relinquished By: _____
Date: _____

RECEIVED
MAY 16 2016
APEX RESEARCH

Revision Date: June/2011

64811

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991.
www.apex-research-inc.com. Email: Bob.Letarte@apexresearchlab.com

AKT PEERLESS
22725 Orchard Lake Road
Farmington, MI 48336
P (248) 615-1333 F (248) 615-1334

Customer Name: _____
Address: _____
City, St., Zip: _____
Phone: _____ Fax: _____

Date of Survey: 5/12/16
Project: 14100 Navarre
Project # 11496F2-2
Contact Person: Jim Fox
Email: foxcj@aktpeerless.com

Terms and conditions on the other side.

Lab Use Only
Log-In: ____
Report: ____
Fax: ____
Verbal: ____
Email: ____

Turn Around Times: (Circle One)

Rush 24 hour
48 hour 72 hour
Other: _____ TTP yes / no (Test Till Positive)

Asbestos: Bulk ✓ Wipe ____ Point Count <5% PCM ____
Lead: Bulk ____ Wipe ____ Air ____ Paint ____ Soil ____
Mold: Bulk ____ Tape ____ BioSIS ____ Other ____ Viable ____
TEM: Bulk/NOP ____ AHERA ____ EPA Level II ____ Other ____

Lab ID		Customer ID #	Material/Location	Volume	Area	Results
	34	20.2	Drywall & Mud			
	35	20.3	" "			

RECEIVED
MAY 16 2016
APEX RESEARCH

Relinquished By: James C Fox
Date: 5/16/16

Received By: _____
Date: _____

Relinquished By: _____
Date: _____

Relinquished By: _____
Date: _____

Revision Date: June/2011