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ASBESTOS INVESTIGATION REPORT
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND, IN
JANUARY 10, 1991
ATEC PROJECT NO. 21-09340

DEPARTMENT OF ECONOMIC DEVELOPMENT
COUNTY-CITY BUILDING
SOUTH BEND, IN 46601

ATTENTION: MR. K.C. POCIUS

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ASBESTOS INVESTIGATION REPORT

Prepared For:

Department of Economic Development
County-City Building
South Bend, IN 46601

Attention: Mr. K.C. Pocius

Conducted and Prepared By:

ATEC Environmental Consultants
5150 E. 65th St.
Indianapolis, IN 46220

Timothy L. Hogan
Project Manager
Industrial Hygiene Division

Martin E. Upchurch
Industrial Hygienist
Industrial Hygiene Division

Brent Crowthers
Industrial Hygiene Technician
Industrial Hygiene Division

Richard A. Griffith, AVP, CIH, CHMM
Manager
Industrial Hygiene Division

ATEC Environmental Consultants
Division of ATEC Associates, Inc.
5150 East 65th Street
Indianapolis, Indiana 46220-4871
[317] 849-4990, FAX # [317] 849-4278

January 10, 1991

Mr. K.C. Pocius
Department of Economic
Development
County-City Building
South Bend, IN 46601

Re: Asbestos Investigation
Studebaker Corridor Project
South Bend, IN
ATEC Project No. 21-09340

Dear Mr. Pocius:

ATEC Environmental Consultants is pleased to submit the enclosed asbestos investigation report for the 20 buildings located on the 13 lots of the Studebaker Corridor Project in South Bend, IN.

If you have any questions or comments regarding this report, please do not hesitate to contact us. We trust that this report meets your needs. It has been a pleasure working with you on this project.

Very truly yours,
ATEC Environmental Consultants

Timothy L. Hogan (gpk)

Timothy L. Hogan
Project Manager
Industrial Hygiene Division

Richard A. Griffith

Richard A Griffith, AVP, CIH, CHMM
Manager
Industrial Hygiene Division

TLH:RAG/kmw

DEFINITIONS

This report may contain abbreviations and terms that may not be familiar to the reader. These terms are defined below:

Action Level: An airborne concentration of asbestos of .1 fiber per cubic centimeter of air (.1 f/cc) or at which engineering controls or corrective action must be administered as defined by OSHA.

AHERA: Asbestos Hazard Emergency Response Act. Regulated by the EPA.

"Asbestos Management System" Reports:

1) Results of Bulk Sampling - Laboratory results of individual locations and contents.

2) Property Detail Report - Estimated costs of abatement.

3) Property Summary Report - Estimated costs of abatement for an entire facility.

F/cc: Fibers per cubic centimeter of air.

Homogeneous Area: Any ACM that is uniform in texture and color and/or identical in any other respect.

Lath: Metal or wood backing for plaster.

NESHAPS: National Emission Standard for Hazardous Air Pollutants.

NIOSH: National Institute for Occupational Safety and Health.

OSHA: Occupational Safety and Health Administration - governmental agency over worker safety and health.

Permissible Exposure Limit (PEL): The employees' permitted exposure to any material listed in Table Z-1, Z-2 or Z-3 of OSHA regulation CFR 1910.1000 Air Contaminants.

USEPA: United States Environmental Protection Agency.

EXECUTIVE SUMMARY

From November 27, 1990, through December 7, 1990, ATEC Environmental Consultants performed an asbestos bulk sample survey at the 20 buildings located on Lots 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 17 and 20 of the Studebaker Corridor Project in South Bend, IN. Of the 220 samples obtained from various building materials, 113 were found to contain asbestos. (An additional 10 samples were collected solely for quality control reasons. These QC samples were randomly split from those samples taken from suspect materials in the field.)

The following paragraphs indicate ACMs identified during this survey. All other materials sampled during this survey can be considered non-ACMs. Any suspect material encountered at a later date that was not covered in this survey should be considered to be an ACM until future testing proves otherwise.

Lot 1: Studebaker/Avanti Building

1. Pipe coverings (other than those which are obviously fiberglass)
2. Pipe fitting insulation throughout the building
3. Boiler gasket material and boiler insulation (materials are assumed to be ACMs until future sampling proves otherwise)
4. The two types of floor tile located in the first-floor restroom in the northeast corner of the building
5. Linoleum located in the area of Column R-6 on the first floor
6. Built-up asphalt roofing material
7. Roof flashing

Lot 3: Glo-Worm Building

1. Floor tile (9"x9") located underneath 12"x12" floor tile in the north end of the building
2. Floor tile (12"x12") located on top of the 9"x9" floor tile in the north end of the building
3. Linoleum underneath the carpet in the bar area
4. Roof flashing
5. Built-up asphalt roofing material

Lot 4: My Brothers Place Building

1. Pipe fitting insulation
2. Pipe covering
3. Floor tile in Area 2 (see Figure 4A) on the first floor
4. Floor tile in Area 5 (see Figure 4A) on the first floor
5. Linoleum in Area 6 (see Figure 4A) in the northeast corner of the first floor
6. Transite siding shingles
7. Roof flashing

Lot 5: Barb 'N' Joe's Bar & Grill Building

1. Paper-like duct insulation in the basement
2. Floor tile (all types in building)
3. Linoleum in kitchen area of the second floor
4. Built-up asphalt roof material

Lot 6: South Bend Foundry (5 Buildings)

1. Duct insulation above the old oven in the northeast end (Area 3) of Building 5
2. Transite walls in Building 5 between Areas 1 and 2 (see Figure 6F)
3. Transite ceiling in Area 5 (see Figure 6F) of Building 5
4. Roofing shingles (dark reddish-brown) on top of Building 1
5. Shingles (gray-colored) on the floor of Building 4
6. Built-up asphalt roof material on Buildings 1, 3, 4 and 5
7. Roof flashings on Buildings 1, 3, 4 and 5

Lot 7: Campbell's Container Building

1. Floor tile in the front office area
2. Built-up asphalt roof material

Lot 8: Building at 224 W. Garst

1. Asbestos paper material in the housing of the overhead heating unit
2. Roof flashing around the built-up asphalt roof material
3. Built-up asphalt roof material on the west side of the building

Lot 10: South Bend Foundry (2 Buildings)

1. Mag block pipe covering on the first floor of Building 1
2. Built-up asphalt roof material and roof flashing on Building 2
3. Built-up asphalt roof material and roof flashing on Building 1 (Due to the lack of access to the roof of Building 1, the built-up asphalt roof material and roof flashing on Building 1 are also assumed to be asbestos-containing)

Lot 13: Harper's Bar Building

1. Linoleum (both top and bottom layers) in the bar area on the west end of the building
2. Linoleum in the men's restroom in the south end of the building

Lot 17: Portage Oil Building

1. Floor tile in Areas 1 and 2 (see Figure 17A)
2. Built-up asphalt roof material
3. Roof flashing

Lot 17: Rhodes Bakery Building

1. Plaster over the cork material in the walk-in cooler areas of the first and second floors
2. Pipe covering (other than those that are clearly fiberglass)
3. Pipe fitting insulation throughout the building
4. Boiler cover in the boiler room
5. Tank covers on the first and second floors
6. Boiler stack insulation in the boiler room on the first floor
7. TSI Debris scattered throughout the entire boiler room
8. Floor tile (9"x9" red) in the office area in the northeast corner of the first floor
9. Floor tile (9"x9" gray) in the office area in the northeast corner of the first floor
10. Transite cooling tower on the roof
11. Roof flashing
12. Cork mastic (black) on the cork insulation material inside the plaster walls of the walk-in cooler areas on the first and second floors

Lot 20: Southern Hotel Building

1. Pipe covering throughout the building
2. Pipe fitting insulation throughout the building
3. Boiler stack insulation above the old boiler in the boiler room
4. Boiler door gasket on the newer boiler on the south side of the boiler room in the basement
5. All floor tile in the building
6. Built-up asphalt roof material
7. Roof flashing

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1.0 INTRODUCTION

The purpose of this investigation was to identify, locate and sample accessible materials found in the 20 buildings located on Lots 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 17 and 20 of the Studebaker Corridor Project South Bend, IN, that were suspected of containing more than 1% asbestos. These buildings are scheduled to be demolished at some point in the future.

The investigation took place at the request of Mr. K.C. Pocius, of the Department of Economic Development for the City of South Bend, and was conducted between November 27, 1990, and December 7, 1990. The friability of the ACMs identified during this survey was not determined at this time. All asbestos-containing non-roofing materials will have to be removed prior to demolition. Asbestos-containing roofing materials (ACRMs) do not need to be removed prior to demolition if non-friability can be demonstrated. Friability tests should be performed on the ACRMs just before demolition takes place (cold weather can often cause a material to break - indicating friability - that might not ordinarily crack during warm weather).

Asbestos is a naturally occurring fibrous mineral that has many beneficial properties. It is resistant to acids and heat, and does not conduct electricity or heat well. It is because of these features that it was widely used in buildings constructed prior to 1975. Asbestos was used in over 3,000 types of construction materials. The following paragraphs describe building materials observed at this site that commonly contain asbestos and therefore were considered suspect asbestos-containing materials (ACMs).

1.1 COMMON SUSPECTED ASBESTOS-CONTAINING MATERIALS

1.1.1 Surfacing Materials

The most common type of suspect surfacing materials are spray-applied materials used for fireproofing and insulation. Insulating materials are generally fluffy, but can also be cementitious. Both types of materials are made of a mineral wool base, with tiny glass beads mixed in. They may also contain a binding material and up to 95% asbestos. Asbestos can also be found in plasters where a binding material was required in the underlying "brown coat" layer or in the finish coat when a smooth finish was desired.

The friability of these materials on building surfaces (walls, ceilings, wide flange beams or other structural members) is determined by touch. If the material can be reduced to powder by hand or other mechanical pressure, it is considered friable.

1.1.2 Thermal System Insulation

All thermal system insulation is considered suspect unless it can be unambiguously identified as non-asbestos. For example, fibrous glass insulation has a characteristic color and

texture. Rubber and styrofoam can also be distinguished from other types of insulation by their color and texture.

1.1.2.1 Pipe Covering

Pipe covering (pipe insulation) is a major suspect for asbestos content in buildings built before 1971. It has also been found in buildings constructed as late as 1975.

1.1.2.2 Pipe Fitting Insulation

Pipe fitting insulation (pipe joint compound) is another major source of asbestos in many structures built prior to 1982. Although the use of asbestos in this type of material was banned in 1975, some "left-over" materials remained and may have been used by the owner for repair of damaged fittings. Pipe fitting insulation or compound is used to insulate elbows, tees, valves and steam traps, and may have been used to repair minor damage in pipe coverings. In many cases, pipe fitting insulation types appear identical, but examination under the microscope will allow determination of content.

1.1.2.3 Pressure Vessel and Boiler Stack Insulation

Asbestos is a common component of boiler and pressure vessel insulation. Older boilers are more likely to be insulated with ACM. Pressure vessels (such as feedwater tanks) are often insulated with fibrous glass on the sides and ACM on the ends of the tank. Asbestos insulation may also have been troweled onto tank surfaces near drain valves, sight glasses and temperature or pressure gauges.

1.1.2.4 Air Handler Ductwork

Asbestos is often used in this application by troweling on a "skim coat" of asbestos mud over fibrous glass or mineral wool duct insulation. The system is then covered with a canvas material.

1.1.3 Miscellaneous Materials

1.1.3.1 Ceiling Tile

Approximately 2% of all ceiling tile manufactured before 1975 contains asbestos. The tiles are usually friable, even if they are in good condition, because they can be crushed by hand pressure.

1.1.3.2 Floor Tile, Linoleum and Floor Tile Mastic

Due to the excellent durability of asbestos, it was commonly used as a component of floor tile and linoleum. In this application, the asbestos is tightly bound to the vinyl substrate of the tile or linoleum. Under normal wear, floor tile and linoleum are not considered friable. The mastic

adhesive also commonly contains asbestos, however it is usually encapsulated by the floor tile or linoleum.

1.1.3.3 Loose Fill Attic Insulation

Some loose fill insulations may contain asbestos fibers. The majority of loose fill insulation is fibrous glass or rock wool.

1.1.3.4 Roofing Materials

Roofing materials often contain asbestos fibers, which have been added to the roofing materials as binding agents for strength. This is most common in built-up roofs where asbestos-containing felts are used. Certain types of older roof shingles have also been known to contain asbestos.

1.1.3.5 Transite

Transite wallboard, if present, will also be sampled and inventoried. This material may be located on interior walls and exterior walls and soffitts. Induced draft towers may have siding, louvers and splash guards manufactured from transite hardboard, which may contain 30-80% asbestos.

1.1.3.6 Wallboard

Some types of wallboard can contain asbestos. This is not common, but can be found in older installations. Drywall spackling occasionally contains asbestos fibers.

1.2 REGULATORY STANDARDS

Airborne levels of asbestos fibers are regulated by the Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency (USEPA). These governmental agencies have promulgated standards for permissible airborne concentrations of asbestos fibers and specific requirements for repair and abatement. The laws are designed to protect the worker (OSHA), school building occupants (USEPA) and the general environment (USEPA).

OSHA has had an asbestos standard since 1971, primarily directed toward industrial applications (29 CFR 1910.1001). In response to the growing asbestos abatement industry and the additional concern regarding asbestos exposure, a standard for the construction industry (29 CFR 1926.58) became effective on July 21, 1986. These standards specifically outline asbestos removal procedures, respirator selection and fit testing, air sampling, the analysis of asbestos air samples and employee protection from exposure to airborne asbestos fibers.

The standards include a time-weighted average (TWA) permissible exposure limit (PEL) of 0.2 fibers per cubic centimeter of air (f/cc), an eight-hour TWA action level of 0.1 f/cc, and a

short-term exposure limit (STEL) of 1.0 f/cc. Concentrations above these levels require specific employer-initiated activities such as instituting a respiratory protection program and medical surveillance for exposed employees.

The USEPA has also published a "visible emissions" standard under the National Standard for Hazardous Air Pollutants (NESHAPS, 40 CFR 61.140). This standard also regulates specific procedures for land disposal of ACMs.

In addition, the Indiana Air Pollution Control Board and the Indiana Department of Environmental Management have established regulations covering training, permit notification and work practice requirements (ie., the disposal of ACM) for asbestos abatement work performed in the state of Indiana.

1.3 HEALTH EFFECTS

Asbestos causes asbestosis, lung cancer and mesothelioma.

The onset of asbestosis has been linked to the concentration of the asbestos dust, the type of asbestos fiber in the dust, and the length of exposure. It is a progressive disease that may develop fully 20 to 30 years after the first exposure. It is characterized by scarring of the lungs, and will significantly decrease the ability of the lungs to exchange air.

Mesothelioma, or cancer of the lining of the lung or chest cavity, may occur without evidence of asbestosis. Mesothelioma may occur after a short, intensive exposure to asbestos fibers. People exposed to industrial concentrations of asbestos are at a risk five times greater than the general public of developing lung cancer.

1.4 INVESTIGATION PROCEDURES (GENERAL)

The site was inspected for the presence of material that may contain more than 1% asbestos. These materials were then described and categorized in a homogeneous area (HA).

A homogeneous area (HA) consists of all observed material found in various locations in a building that are identical in color, appearance, texture and date of installation. The HA can only be described within a single building (i.e., red floor tile in two buildings on the same campus, even if installed on the same day, make up two different HAs).

ACMs are divided into three main types: Surfacing Materials, Thermal System Insulation and Miscellaneous Materials. A minimum number of samples should be taken from each HA, depending on the category that the HA falls into and the amount of material present.

1.5 CHOOSING SAMPLE LOCATIONS

Samples of suspect materials were collected in a randomly distributed manner sufficient to determine whether the materials were ACMs or not. Bulk samples were not collected from any homogeneous area where the inspector determined that the material was a non-ACM (such as thermal system insulation that was obviously fibrous glass, foam glass or rubber).

1.6 SAMPLING METHODS

The bulk samples were obtained with a custom-made stainless steel coring tool designed to make clean cores into friable material to avoid creating excessive dust. The area was pre-wetted to reduce fiber generation during the sampling process. The coring tool was utilized, rather than scratching a sample from the surface of suspected materials, in an effort to obtain a sample that was representative of all layers of the material.

Samples of materials such as ceiling tile, wallboard, floor tile, etc., are generally obtained with a utility knife. Frequently, a small, broken piece of these materials can be found and used as a sample.

ATEC's sampling procedure utilizes pre-printed adhesive-backed sample identification tags printed in triplicate. One label with the sample number was placed on the sample vial. Another sample number was placed on the facility map or blueprint. The third label was placed on the bulk sampling sheet. Information about the sample, including the sample type, location and condition, were noted on the sheet as each sample was collected.

Identification tags marked with the corresponding sample number were used to indicate sample sites. Color photographs were taken of each sample location. These tags were left in place in boiler rooms, crawl spaces and other non-public areas, but were normally removed from public areas.

1.7 BULK SAMPLE ANALYSIS

All bulk samples were analyzed at ATEC's laboratory by polarized light microscopy, utilizing dispersion staining. This type of analysis requires the microscopist to take a portion of the bulk sample and treat it with an oil of specific refractive index. This prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light.

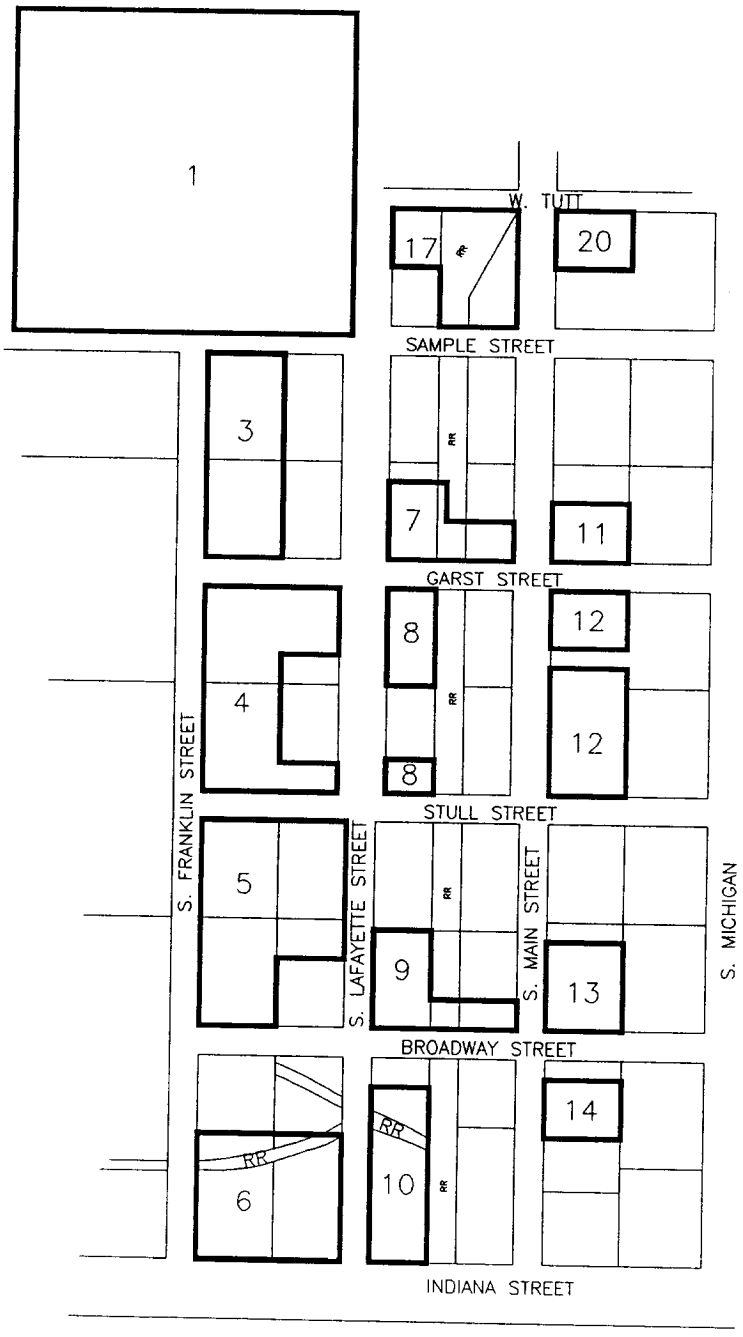
Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. According to OSHA and EPA regulations, any material that contains more than 1% of any type of asbestos is considered an ACM.

2.0 SITE DESCRIPTION

The survey area encompasses portions of 15 blocks of a mixed commercial, industrial and residential area of South Bend, IN, as shown in Figure A on the following page. A railroad right-of-way extends north and south through the survey site. Each portion of the site has been addressed as a separate lot, in an attempt to simplify the information presented in this report and to better address specific concerns with regard to the survey site.

On a few of the lots, more than one building was inspected for asbestos. Only those buildings pre-determined by the City of South Bend were included in this survey. The following is a list of lot numbers and the buildings that were inspected on each lot:

LOT	BUILDINGS SURVEYED
LOT 1	Studebaker/Avanti Building (765 S. Lafayette)
LOT 3	Glo-Worm Building (322 W. Sample)
LOT 4	My Brothers Place Building (1110 S. Franklin)
LOT 5	Barb 'N' Joe's Bar & Grill Building (1314 S. Franklin)
LOT 6	South Bend Foundry - 5 Buildings (Indiana Street & S. Franklin)
LOT 7	Campbell's Container Building (1013-1023 S. Main) Building at 215 W. Garst
LOT 8	Building at 224 W. Garst
LOT 9	Butches Bar & Grill Building (1321 S. Main)
LOT 10	South Bend Foundry - 2 Buildings (Indiana Street & S. Lafayette)
LOT 12	Service Station Building (1130 S. Main)
LOT 13	Harper's Bar Building (1304 S. Main)
LOT 17	Portage Oil Building (802 S. Lafayette) Rhodes Bakery Building (825 S. Main)
LOT 20	Southern Hotel Building (802 S. Main)



SITE PLAN
STUDEBAKER CORRIDOR
SOUTH BEND, INDIANA

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	A

ATEC

3.0 LOT 1

The Studebaker/Avanti Building, which is located at 765 S. Lafayette (Photograph A-1), is situated on Studebaker Corridor Project Lot 1 (see Figure A). The building has four floors and covers approximately 982,400 square feet.

This building was constructed of red brick exterior walls, with wallboard and brick interior walls. The roof was constructed of a built-up asphalt material. The majority of the floors and ceilings are wood or concrete. There is a small boiler room present in the northwest corner of the building. Some of the piping system is insulated with mag block and layered paper materials.

Eleven of the 14 samples collected from the Studebaker/Avanti Building contained asbestos. One additional sample was collected solely for quality control (QC) reasons. This QC sample was randomly split from another sample taken from a suspect material in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 3.7.

3.1 RESULTS - THERMAL SYSTEM INSULATION

3.1.1 Material Type No. 1: Pipe Covering

Four samples were obtained from the two different types of pipe covering located throughout the building (mag block pipe covering - HA 6, layered paper pipe covering - HA 7). All four samples of pipe covering (Photograph B-2) contained amosite and chrysotile asbestos in concentrations ranging from 5-80%, therefore all pipe coverings other than those which are obviously fiberglass should be considered to be an ACM. The ACM pipe coverings have begun to delaminate (Photograph B-2) and fall off (Photograph B-3). (Figures 1A, 1B and 1C)

3.1.2 Material Type No. 2: Pipe Fitting Insulation

One sample was taken from the pipe fitting insulation (HA 8) located throughout the building. The sample contained 30-40% chrysotile asbestos. (Figures 1A, 1B and 1C, Photograph B-4)

3.1.3 Material Type No. 3: Boiler Gaskets

No samples were obtained from the boiler gasket material (HA 13) located inside the boiler doors of the boiler room, due to the inaccessibility of the material at the time of the survey. This material should therefore be assumed to be an ACM until future sampling proves otherwise.

3.1.4 Material Type No. 4: Boiler Insulation

No samples were obtained from the boiler insulation (HA 14), due to the inaccessibility of the material at the time of the survey. This material should therefore be assumed to be an ACM until future sampling proves otherwise.

3.2 RESULTS - MISCELLANEOUS MATERIALS

3.2.1 Material Type No. 5: Floor Tile

Four samples (including one QC sample) were obtained from the various types of floor tile (HAs 1, 2 and 3) present in the office and restroom areas of the building. Only two types of floor tile were found to contain asbestos. Both ACM floor tiles (HAs 4 and 5) are located in the first-floor restroom in the northeast corner of the building. (Figure 1A, Photograph A-2)

3.2.2 Material Type No. 6: Linoleum

One sample was taken from the linoleum (HA 9) located in the area at column R-6 of the first floor. The sample contained 20-30% chrysotile asbestos. (Figure 1A, Photograph A-3)

3.2.3 Material Type No. 7: Dropped-Ceiling Tile

One sample was collected from each of the two types of dropped-ceiling tile (HAs 2 and 3) located in the building. Both samples tested negative for asbestos. (Figure 1A)

3.2.4 Material Type No. 8: Built-Up Asphalt Roof Material

One sample each was taken from the older and newer sections of built-up asphalt roof material (HAs 10 and 12). Both samples tested positive for asbestos. (Figure 1E, Photographs A-4 and B-1)

3.2.5 Material Type No. 9: Roof Flashing

One sample was obtained from the roof flashing material (HA 11). The sample contained 15-20% chrysotile asbestos. (Figure 1E, Photographs A-4 and B-1)

3.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023701 FT

023701 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
DCT	=	Dropped Ceiling Tile
FT	=	Floor Tile
Linoleum	=	Linoleum Floor Covering
PC 5"-8"	=	Pipe Covering (5"-8" Outside Diameter)
PF 5"-8"	=	Pipe Fitting (5"-8" Outside Diameter)
Roof Flash	=	Roofing Flashing on Penetrations

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 1 / Lot 1

CLIENT: SOUTHBEND / City of South Bend

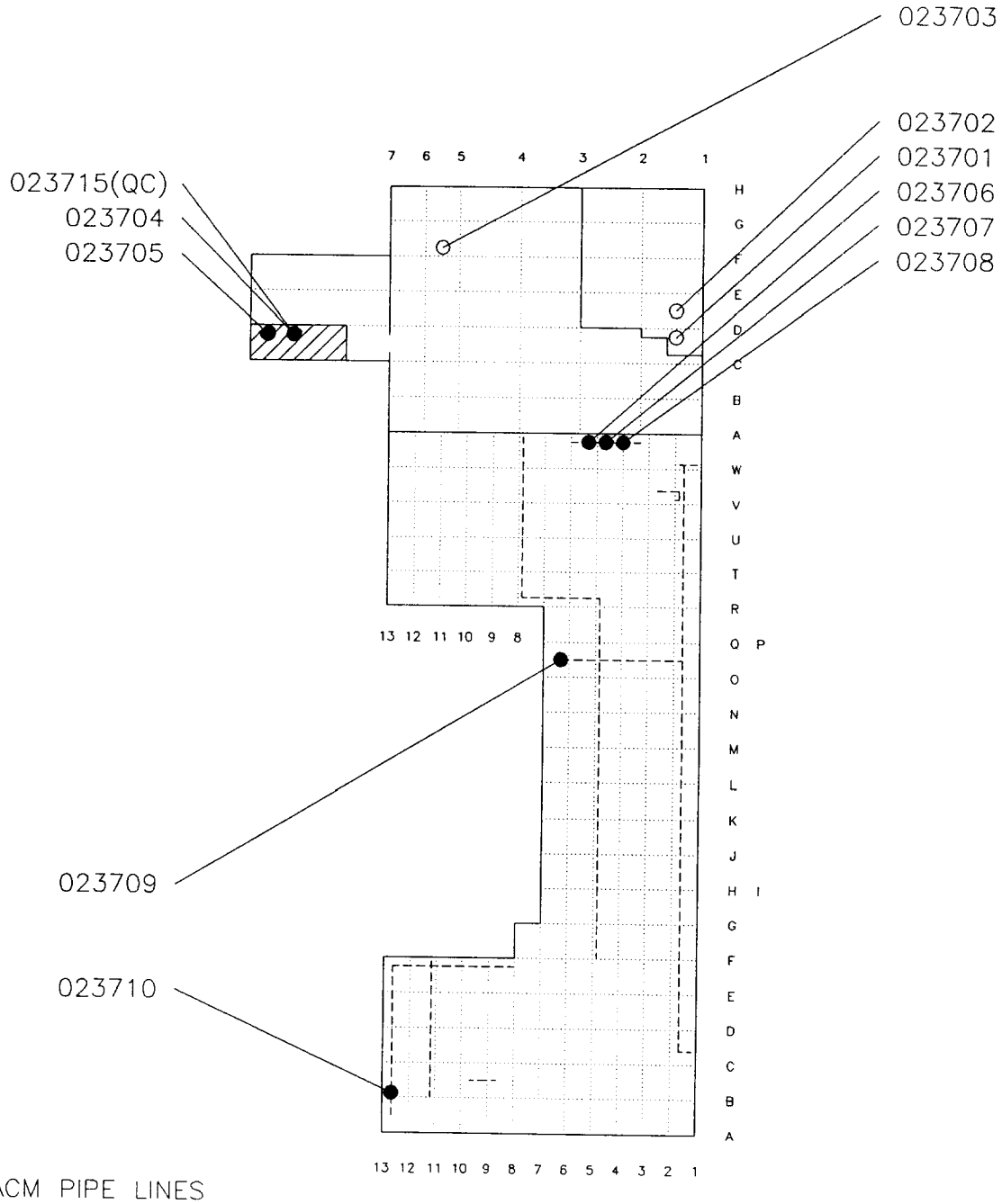
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 1												
023701	FT	1	1	ID: FIG 1A # : 1	Studabaker/Avanti Office area at Column D-1.5	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3
023702	DCT	1	2	ID: FIG 1A # : 1	Studabaker/Avanti Office area at Column D-1.5	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	40-50 10-15
023703	DCT	1	3	ID: FIG 1A # : 1	Studabaker/Avanti Office mezzanine at Column F-5	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	30-40 30-40
023704	FT	1	4	ID: FIG 1A # : 1	Studabaker/Avanti Ladies Restroom North east end	N/A	144 SF	#1: 144 #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023705	FT	1	5	ID: FIG 1A # : 1	Studabaker/Avanti Ladies Restroom North east end	N/A	144 SF	#1: 144 #2: -- #3: --	Chrysotile	20-30	Cellulose	5-10
023706	PC 5"-8"	1	6	ID: FIG 1A # : 1	Studabaker/Avanti Column AX - 5	N/A	2452 LF	#1: 2452 #2: -- #3: --	Amosite	70-80	NOF	
023707	PC 5"-8"	1	7	ID: FIG 1A # : 1	Studabaker/Avanti Column AX - 5	N/A	20 LF	#1: 20 #2: -- #3: --	Chrysotile	30-40	Cellulose	5-10
023708	PF 5"-8"	1	8	ID: FIG 1A # : 1	Studabaker/Avanti Column AX - 5	N/A	100 Each	#1: 100 #2: -- #3: --	Chrysotile	30-40	NOF	
023709	LINOLEUM		9	ID: FIG 1A # : 1	Studabaker/Avanti Restroom at Column R-6	N/A	192 SF	#1: 192 #2: -- #3: --	Chrysotile	20-30	Cellulose	15-20
023710	PC 5"-8"	1	6	ID: FIG 1A # : 1	Studabaker/Avanti Column C-14	N/A	NA	#1: -- #2: -- #3: --	Amosite	60-70	Cellulose	2-3
023711	PC 5"-8"	1	6	ID: FIG 1D # : 4	Studabaker/Avanti Column D-1	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose	60-70
023712	BU ROOF	1	10	ID: FIG 1E # : 5	Studabaker/Avanti Roof, north end Next to indoor stairs	N/A	112500 SF	#1: 112500 #2: -- #3: --	Chrysotile	20-30	NOF	

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 1 / Lot 1

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority		Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 1													
023713	ROOF FLASH	1	11	ID: FIG 1E # : 5	Studabaker/Avanti Roof, north end Next to indoor stairs	N/A	2110 LF	#1: #2: #3:	2110 -- --	Chrysotile	15-20	Cellulose	5-10
023714	BU ROOF	1	12	ID: FIG 1A # : 1	Studabaker/Avanti Roof, north end Next to indoor stairs	N/A	105 SF	#1: #2: #3:	105 -- --	Chrysotile	5-10	Cellulose Glass Fibr	5-10 2-3
023715	FT	1	4	ID: FIG 1A # : 1	Studabaker/Avanti Quality control sample of #023704	N/A	NA	#1: #2: #3:	-- -- --	Chrysotile	3-5	NOF	

3.4 SAMPLING DETAIL FIGURES



----- ACM PIPE LINES

ACM FLOOR TILE

● INDICATES SAMPLE CONTAINS ASBESTOS

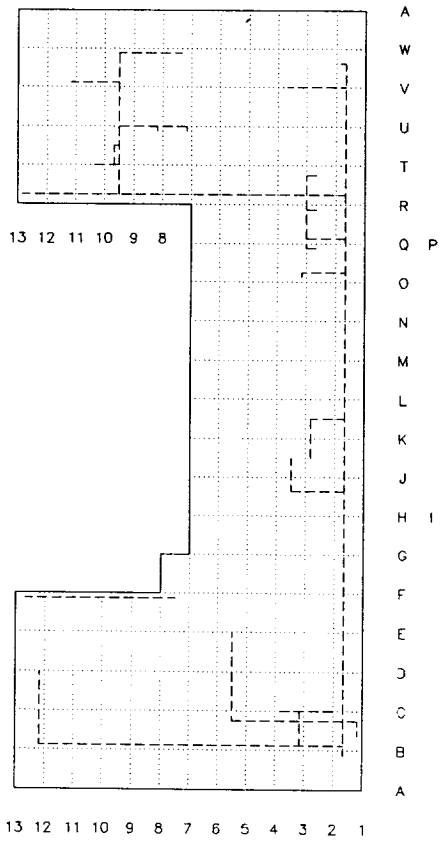
○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
765 S. LAFAYETTE, FIRST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	1A

ATEC



-----ACM PIPE LINES

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

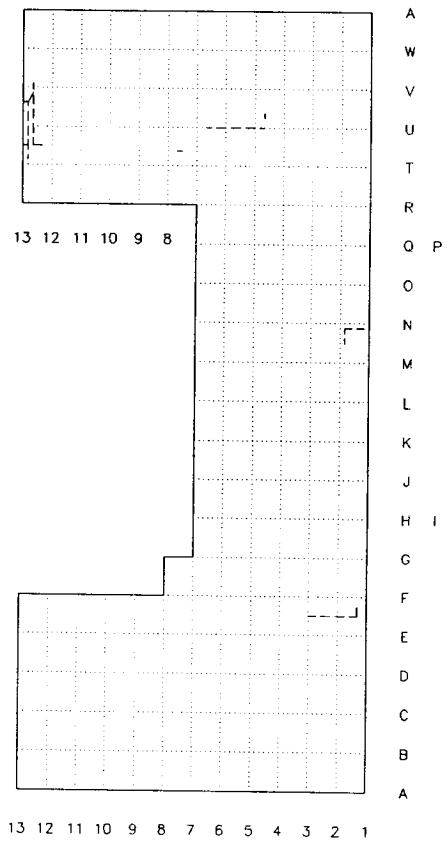
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
765 S. LAFAYETTE, SECOND FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	1B

ATEC

2D



-----ACM PIPE LINES

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

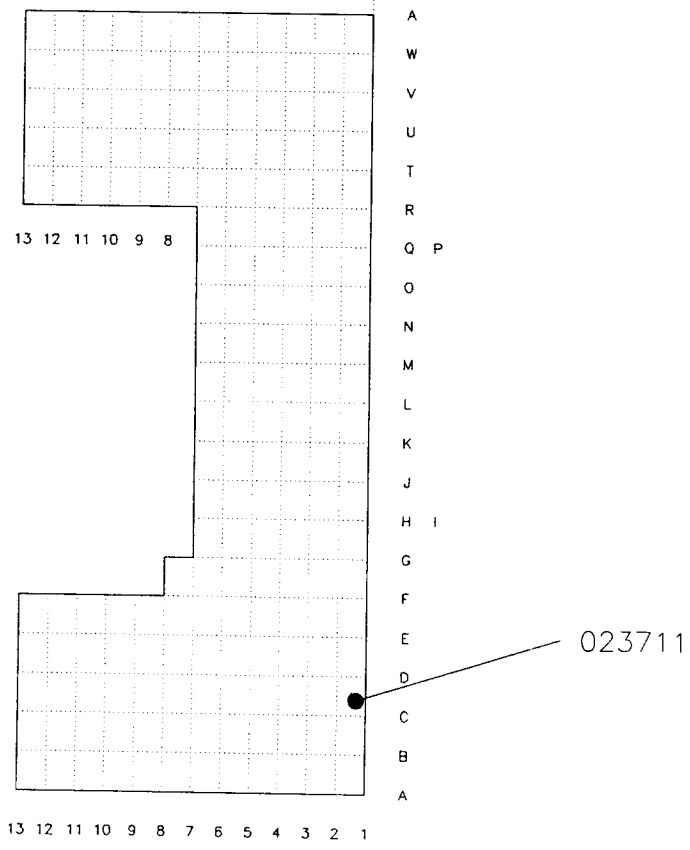
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
765 S. LAFAYETTE, THIRD FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	1C

ATEC

2E



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

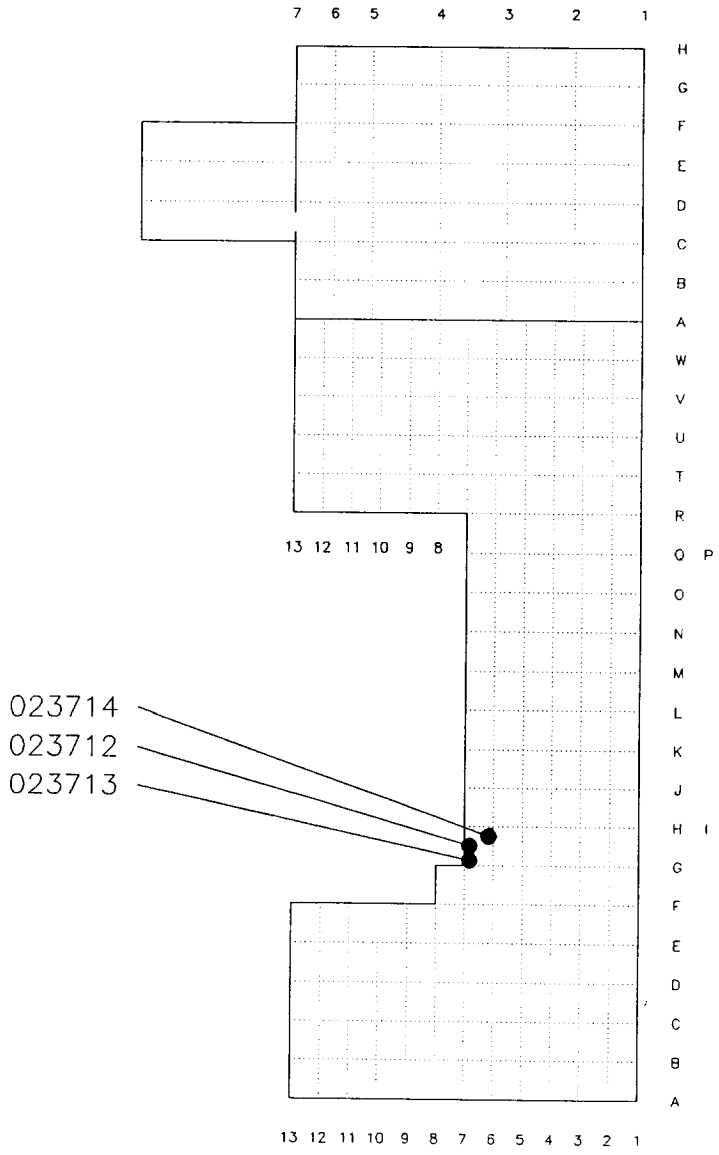
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
765 S. LAFAYETTE, FOURTH FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	1D

ATEC

2C



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

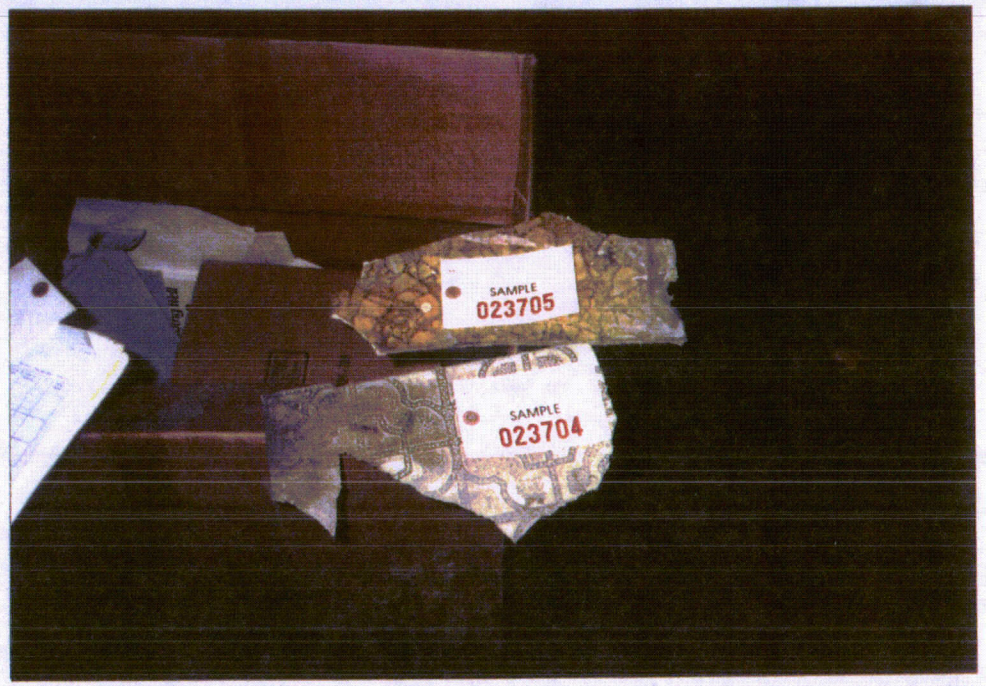
ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
765 S. LAFAYETTE, ROOF
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	1E

ATEC

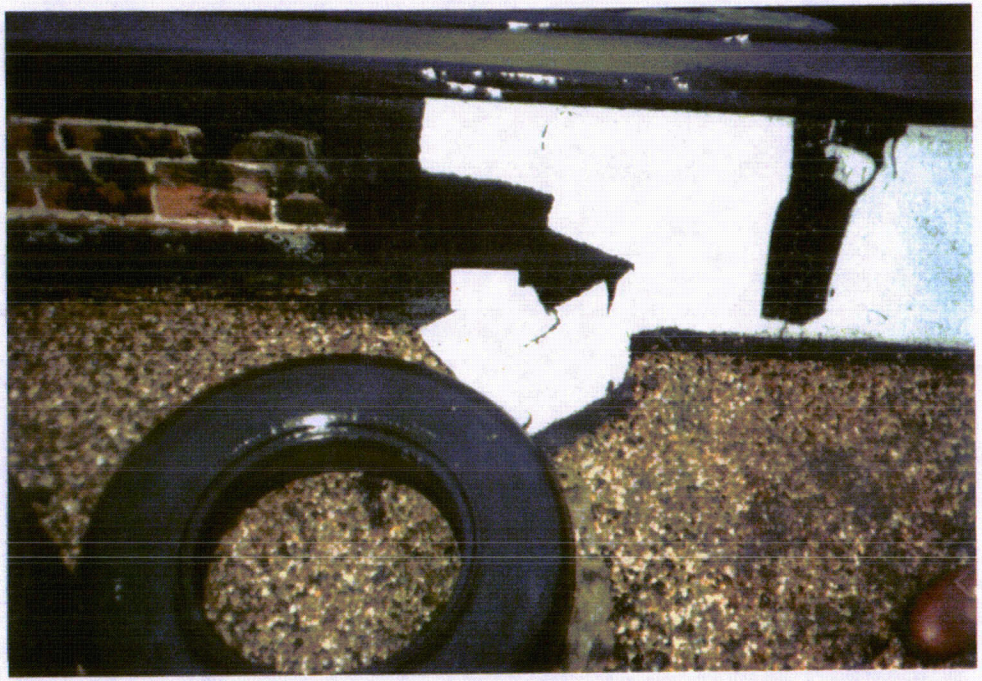
3.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1



2 A

3



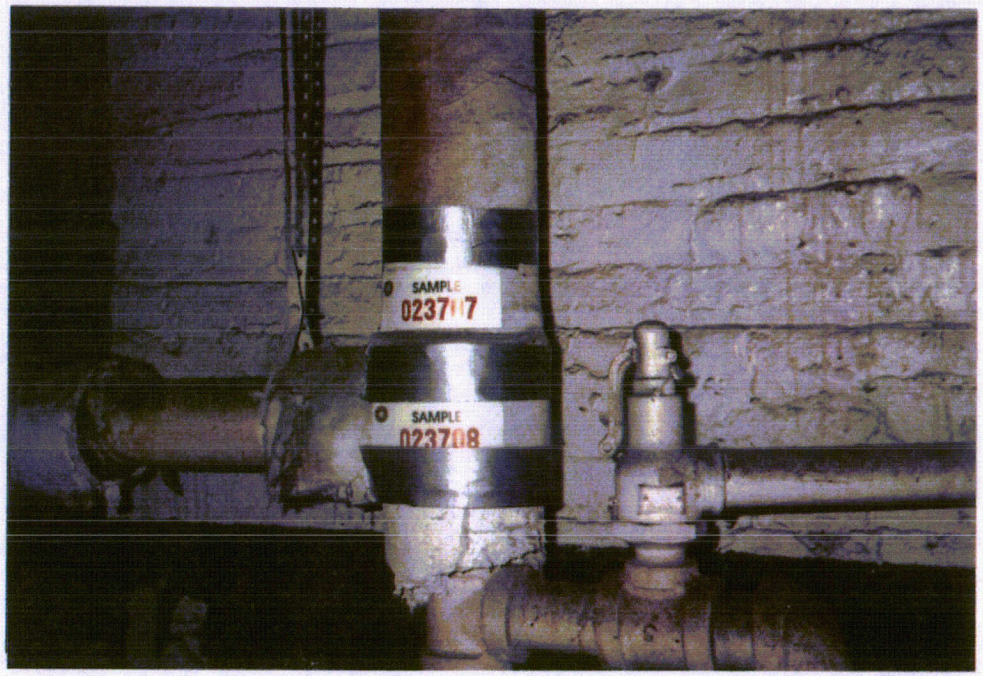
4

1

2

B

3



4

3.6 SUMMARY REPORT

SAMPLED MATERIALS - PROJECT/SITE SUMMARY REPORT for 21-09340 / Lot 1

City of South Bend
Project/Site: 21-09340/LOT 1
Lot 1
765 S. Lafayette
South Bend, IN 46601

Size: 38750 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	112605 SF	$ 563025.00	112605 SF	$ 563025.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	288 SF	$ 576.00	288 SF	$ 576.00	0 SF	$ 0.00	0 SF	$ 0.00
LINOLEUM	192 SF	$ 768.00	192 SF	$ 768.00	0 SF	$ 0.00	0 SF	$ 0.00
PC 5"-8"	2472 LF	$ 32136.00	2472 LF	$ 32136.00	0 LF	$ 0.00	0 LF	$ 0.00
PF 5"-8"	100 Each	$ 2000.00	100 Each	$ 2000.00	0 Each	$ 0.00	0 Each	$ 0.00
ROOF FLASH	2110 LF	$ 10550.00	2110 LF	$ 10550.00	0 LF	$ 0.00	0 LF	$ 0.00
		$ 609055.00		$ 609055.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

3.7 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Studebaker/Avanti Building
765 S. Lafayette

ATEC Project No. 21-09340

November 27, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile - Office Area at Column D-1.5	N
2	Dropped-Ceiling Tile - Office Area at Column D-1.5	N
3	Dropped-Ceiling Tile - Office Mezzanine at Column F-5	N
4	Floor Tile - Women's Restroom, Floor 1, NE Corner	Y
5	Floor Tile - Women's Restroom, Floor 1, NE Corner	Y
6	Pipe Covering (Paper-Type) - Throughout the Building	Y
7	Pipe Covering (Mag Block) - Throughout the Building	Y
8	Pipe Fitting Insulation - Throughout the Building	Y
9	Linoleum - Restroom at Column R-6	Y
10	Built-Up Asphalt Roof Material (Older Material)	Y
11	Roof Flashing	Y
12	Built-Up Asphalt Roofing Material (Newer Material)	Y
13	Boiler Gaskets	Y*
14	Boiler Insulation	Y*

* = Sample result is assumed, based on reasons listed in report.

4.0 LOT 3

The building located at 322 W. Sample (Figure A, Photograph C-1) was the only building on Lot 3 that was inspected for asbestos during this survey. The one-story structure is currently being utilized by the Glo-Worm establishment and covers approximately 3,000 square feet.

The building was constructed of concrete block exterior walls and a built-up asphalt roof over a concrete slab. The floors are covered with floor tile, linoleum and/or carpet. No thermal system insulation was observed in the building.

Five of the 11 samples collected from the Glo-Worm Building contained asbestos. An additional two samples were collected solely for quality control (QC) reasons. These QC samples were randomly split from those samples taken from suspect materials in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 4.6.

4.1 RESULTS - MISCELLANEOUS MATERIALS

4.1.1 Material Type No. 1: Floor Tile

One sample was taken from each type of floor tile (HAs 1, 2, 3, 4 and 5) located throughout the building. The 9"x9" floor tile (HA 4) located in the north end of the building and the 12"x12" floor tile (HA 5) located on top of the 9"x9" floor tile in the north end of the building both contained chrysotile asbestos in concentrations ranging from 3-15%. (Figure 3, Photograph C-2)

4.1.2 Material Type No. 2: Linoleum

One sample was taken from each of the two types of linoleum (HAs 7 and 8) located in the building. The linoleum located underneath the carpet in the bar area (HA 8) contained 15-20% chrysotile asbestos. (Figure 3)

4.1.3 Material Type No. 3: Dropped-Ceiling Tile

One sample was taken from the dropped-ceiling tile (HA 6) located throughout the building. The sample tested negative for asbestos. (Figure 3)

4.1.4 Material Type No. 4: Roof Shingles

One sample was obtained from the roof shingles (HA 9) located around the roof. The sample tested negative for asbestos. (Figure 3, Photograph C-3)

4.1.5 Material Type No. 5: Roof Flashing

One sample was taken from the roof flashing (HA 10). The flashing contained 30-40% chrysotile asbestos. (Figure 3, Photograph C-4)

4.1.6 Material Type No. 6: Built-Up Asphalt Roof Material

One sample was taken from the field of the built-up asphalt roof material (HA 11). The sample contained 20-30% chrysotile asbestos. (Figure 3)

4.2 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023787 FT

023787 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
DCT	=	Dropped Ceiling Tile
FT	=	Floor Tile
Linoleum	=	Linoleum Floor Covering
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 3 / Glo Worm

CLIENT: SOUTHBEND / City of South Bend

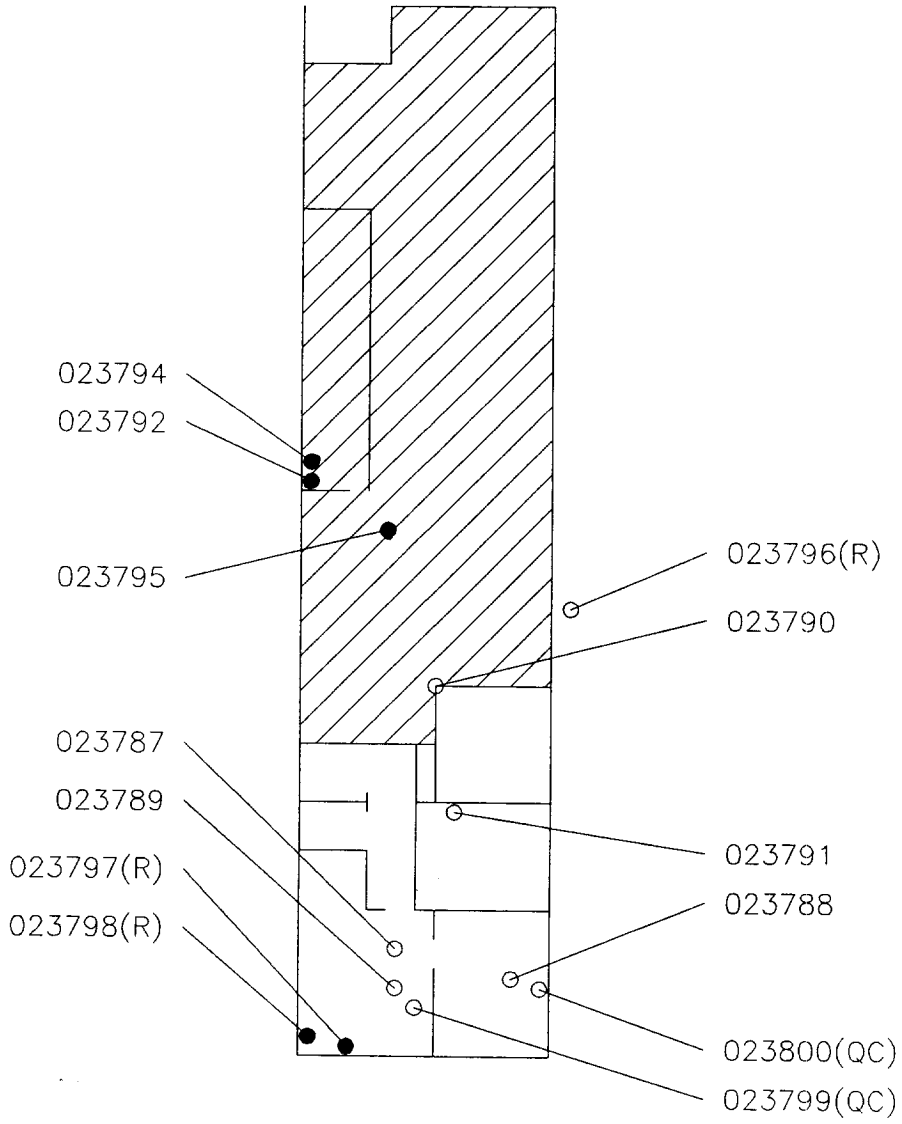
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 3												
023787	FT	GLO WORM	1	ID: FIG 3 # : 1	South end, dressing room	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2
023788	DCT	GLO WORM	6	ID: FIG 3 # : 1	S.E. corner (storage)	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	85-95
023789	LINOLEUM	GLO WORM	7	ID: FIG 3 # : 1	S.W. corner Dressing room	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2
023790	FT	GLO WORM	2	ID: FIG 3 # : 1	S.E. end of bar area North end of dance floor	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	10-15
023791	FT	GLO WORM	3	ID: FIG 3 # : 1	S.E. end of bar area South end of dance floor	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023792	FT	GLO WORM	4	ID: FIG 3 # : 1	North end of building 9"x9" under 12"x12" Bar area	N/A	1500 SF	#1: 1500 #2: -- #3: --	Chrysotile	10-15	NOF	
023794	FT	GLO WORM	5	ID: FIG 3 # : 1	North end of building 12"x12" Bar area	N/A	1500 SF	#1: 1500 #2: -- #3: --	Chrysotile	3-5	NOF	
023795	LINOLEUM	GLO WORM	8	ID: FIG 3 # : 1	West side, south end of bar Under carpet (where bar used to extend)	N/A	50 SF	#1: 50 #2: -- #3: --	Chrysotile	15-20	Cellulose	3-5
023796	SHINGLES	GLO WORM	9	ID: FIG 3 # : 1	East side over entrance	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	30-40
023797	ROOF FLASH	GLO WORM	10	ID: FIG 3 # : 1	South end of building by south edge	N/A	310 LF	#1: 310 #2: -- #3: --	Chrysotile	30-40	NOF	
023798	BU ROOF	GLO WORM	11	ID: FIG 3 # : 1	South end of building Southeast corner	N/A	3750 SF	#1: 3750 #2: -- #3: --	Chrysotile	20-30	Glass Fibr	30-40
023799	LINOLEUM	GLO WORM	7	ID: FIG 3 # : 1	Quality control sample #023789	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 3 / Glo Worm

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 3												
023800	DCT	GLO WORM	6	ID: FIG 3 # : 1	Quality control sample #023788	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	85-95

4.3 SAMPLING DETAIL FIGURES



(R) ROOF

ACM FLOOR TILE

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
322 W. SAMPLE ST.
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	3

ATEC

4.4 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1

2

C

3

4

4.5 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 3
Glo Worm
322 W. Sample
South Bend, IN 46601

Size: 3000 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	3750 SF	$ 18750.00	3750 SF	$ 18750.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	3000 SF	$ 6000.00	3000 SF	$ 6000.00	0 SF	$ 0.00	0 SF	$ 0.00
LINOLEUM	50 SF	$ 200.00	50 SF	$ 200.00	0 SF	$ 0.00	0 SF	$ 0.00
ROOF FLASH	310 LF	$ 1550.00	310 LF	$ 1550.00	0 LF	$ 0.00	0 LF	$ 0.00
		$ 26500.00		$ 26500.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

4.6 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Glo-Worm Building
322 W. Sample

ATEC Project No. 21-09340

November 30, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile - Dressing Room on South End	N
2	Floor Tile (12"x12" Black) - SE End of Bar Area	N
3	Floor Tile (12"x12") - Dance Floor	N
4	Floor Tile (9"x9") - North End of Building (Underneath 12"x12" Floor Tile)	Y
5	Floor Tile (12"x12") - On Top of 9"x9" Floor Tile in North End of Building	Y
6	Dropped-Ceiling Tile - Throughout the Building	N
7	Linoleum - SW Corner of Building	N
8	Linoleum - Below Carpet in Bar Area	Y
9	Roof Shingle	N
10	Roof Flashing	Y
11	Built-Up Asphalt Roof Material	Y

5.0 LOT 4

The building located at 1110 S. Franklin (Figure A) was the only building on Lot 4 that was inspected for asbestos during this survey. The building, which has a second-story apartment and a basement, is currently being used by the "My Brothers Place" establishment and covers approximately 2,150 square feet.

The exterior of the building has transite-shingle siding. The interior walls and ceiling are plaster, and the floors are covered with floor tile or linoleum. The roofing system consists of built-up asphalt roofing material with shingles and flashing. Some thermal systems in the basement are uninsulated.

Seven of the 18 samples collected from the My Brothers Place Building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 5.8.

5.1 RESULTS - SURFACING MATERIALS

5.1.1 Material Type No. 1: Plaster

Three random samples were obtained from the wall and ceiling plaster (HA 16) present in the building. All three samples tested negative for asbestos. (Figure 4A)

5.2 RESULTS - THERMAL SYSTEM INSULATION

5.2.1 Material Type No. 2: Pipe Fitting Insulation

One sample was taken from the pipe fitting insulation (HA 1) located in the basement. The sample contained 30-40% chrysotile asbestos. (Figure 4C, Photograph E-3)

5.2.2 Material Type No. 3: Pipe Covering

One sample was obtained from the air cell pipe covering (HA 2) located in the basement. The sample contained 70-80% chrysotile asbestos. (Figure 4C, Photograph E-4)

5.3 RESULTS - MISCELLANEOUS MATERIALS

5.3.1 Material Type No. 4: Floor Tile

One sample was taken from each of the three types of floor tile (HAs 3, 4 and 5) located in the building. The floor tile located in Area 2 on the first floor (HA 4, Photograph D-1) and the floor tile located in Area 5 on the first floor (HA 5, Photograph D-2) contained asbestos. (Figure 4A)

5.3.2 Material Type No. 5: Linoleum

One sample was taken from each of the three different types of linoleum (HAs 6, 7 and 8) located in the building. The linoleum located in Area 6 in the northeast corner of the first floor (HA 7) contained asbestos. (Figure 4A, Photograph D-3)

5.3.3 Material Type No. 6: Dropped-Ceiling Tile

One sample was taken from the dropped-ceiling tile (HA 10) located in some areas of the building. The sample tested negative for asbestos. (Figure 4A)

5.3.4 Material Type No. 7: Transite

One sample was taken from the transite siding shingles (HA 9) located on the exterior of the building. The sample contained 30-40% chrysotile asbestos. (Figure 4B, Photograph D-4)

5.3.5 Material Type No. 8: Roof Shingles

One sample was taken from each of the three different types of roof shingles (HAs 11, 12 and 13) located on the top of the building. All three samples tested negative for asbestos. (Figure 4B, Photograph E-1)

5.3.6 Material Type No. 9: Roof Flashing

One sample was taken from the roof flashing (HA 14) located around the built-up asphalt roof material. The flashing contained 2-3% chrysotile asbestos. (Figure 4B, Photograph E-2)

5.3.7 Material Type No. 10: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 15). The sample tested negative for asbestos. (Figure 4B)

5.4 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023951 FT

023951 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
DCT	=	Dropped Ceiling Tile
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
Linoleum	=	Linoleum Floor Covering
PC 5"-8"	=	Pipe Covering (5"-8" Outside Diameter)
PF 5"-8"	=	Pipe Fitting (5"-8" Outside Diameter)
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles
Transite	=	Cementitious Hardboard Material

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 4 / My Brother's Place

CLIENT: SOUTHBEND / City of South Bend

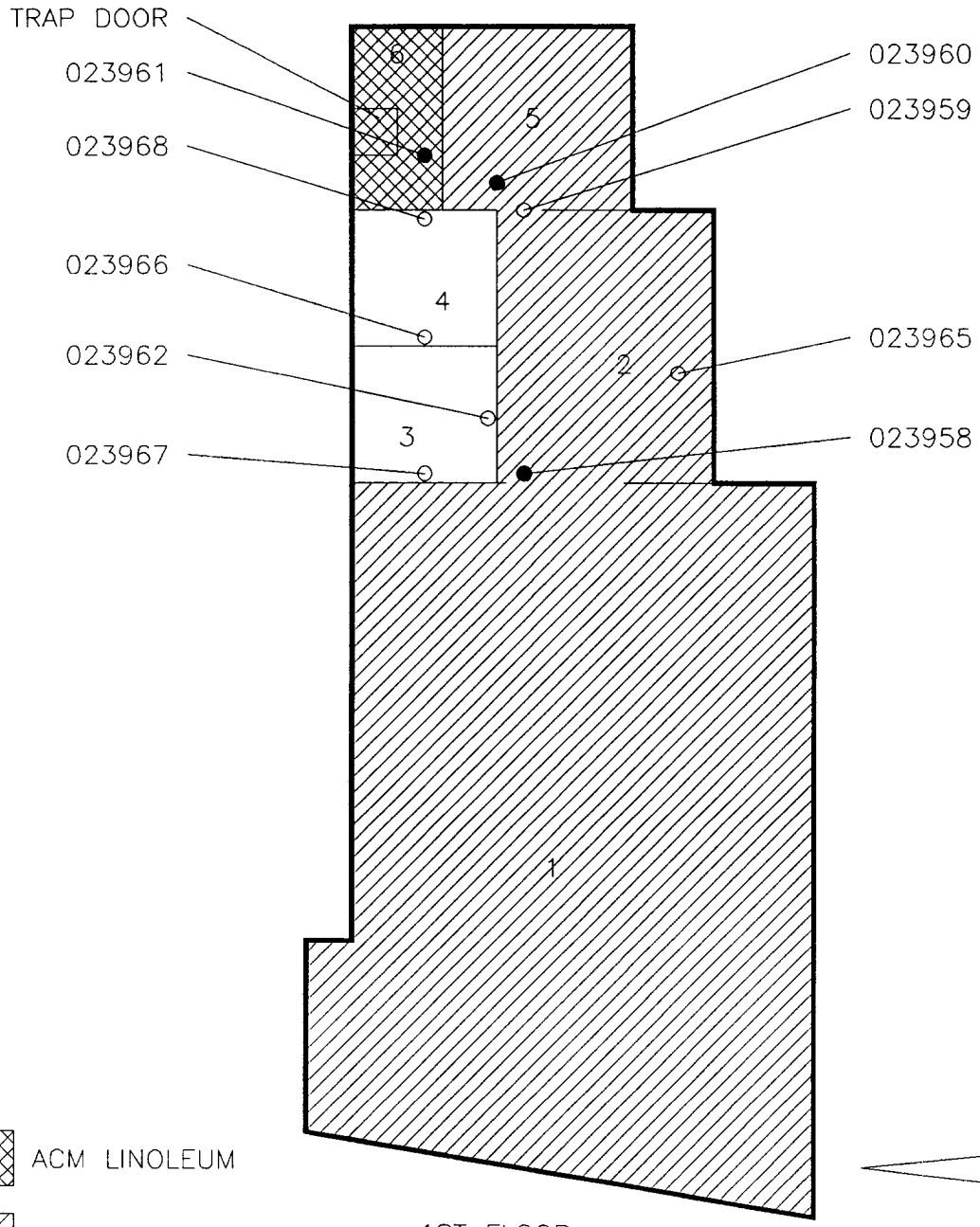
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority		Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 4													
023951	FT	MY BROTHERS PL	3	ID: FIG 4-B # : 2	Second floor apartment East end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Manmade	2-3 <1
023952	SHINGLES	MY BROTHERS PL	11	ID: FIG 4-B # : 2	Roof over second floor apart.	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023953	SHINGLES	MY BROTHERS PL	12	ID: FIG 4-B # : 2	Roof over second floor apart. Bottom layer	N/A	NA	#1: #2: #3:	-- -- --	ND		Glass Fibr	5-10
023954	SHINGLES	MY BROTHERS PL	13	ID: FIG 4-B # : 2	Roof, S.E. end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023955	ROOF FLASH	MY BROTHERS PL	14	ID: FIG 4-B # : 2	Roof, S.E. end	N/A	225 LF	#1: #2: #3:	225 -- --	Chrysotile	2-3	Cellulose	<1
023956	BU ROOF	MY BROTHERS PL	15	ID: FIG 4-B # : 2	Roof, S.E. end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023957	TRANSITE	MY BROTHERS PL	9	ID: FIG 4-B # : 2	Shingles on exterior wall S.E. end	N/A	3060 SF	#1: #2: #3:	3060 -- --	Chrysotile	30-40	NOF	
023958	FT	MY BROTHERS PL	4	ID: FIG 4-A # : 1	First floor Area 2	N/A	1055 SF	#1: #2: #3:	1055 -- --	Chrysotile	2-3	Cellulose	2-3
023959	LINOLEUM	MY BROTHERS PL	6	ID: FIG 4-A # : 1	First floor Area 5, kitchen	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	5-10
023960	FT	MY BROTHERS PL	5	ID: FIG 4-A # : 1	First floor Area 5, kitchen	N/A	120 SF	#1: #2: #3:	120 -- --	Chrysotile	5-10	NOF	
023961	LINOLEUM	MY BROTHERS PL	7	ID: FIG 4-A # : 1	Area 6, on N.E. corner of building	N/A	50 SF	#1: #2: #3:	50 -- --	Chrysotile	20-30	Cellulose	5-10
023962	LINOLEUM	MY BROTHERS PL	8	ID: FIG 4-A # : 1	Area 3, Men's restroom	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 4 / My Brother's Place

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 4												
023963	PF 5"-8"	MY BROTHERS PL	1	ID: FIG 4-C # : 3	Basement, center Mud joints	N/A	5 Each	#1: 5 #2: -- #3: --	Chrysotile	30-40	Cellulose	2-3
023964	PC 5"-8"	MY BROTHERS PL	2	ID: FIG 4-C # : 3	Basement, south end (air cell)	N/A	40 LF	#1: 40 #2: -- #3: --	Chrysotile	70-80	Cellulose	5-10
023965	DCT	MY BROTHERS PL	10	ID: FIG 4-A # : 1	Area 2	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	30-40 30-40
023966	H PLASTER	MY BROTHERS PL	16	ID: FIG 4-A # : 1	Area 4, Women's restroom	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	5-10 <1
023967	H PLASTER	MY BROTHERS PL	16	ID: FIG 4-A # : 1	Area 3, Men's restroom	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Manmade	5-10 2-3
023968	H PLASTER	MY BROTHERS PL	16	ID: FIG 4-A # : 1	Area 4, Womens restroom East wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3

5.5 SAMPLING DETAIL FIGURES



ACM LINOLEUM

ACM FLOOR TILE

1ST FLOOR

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

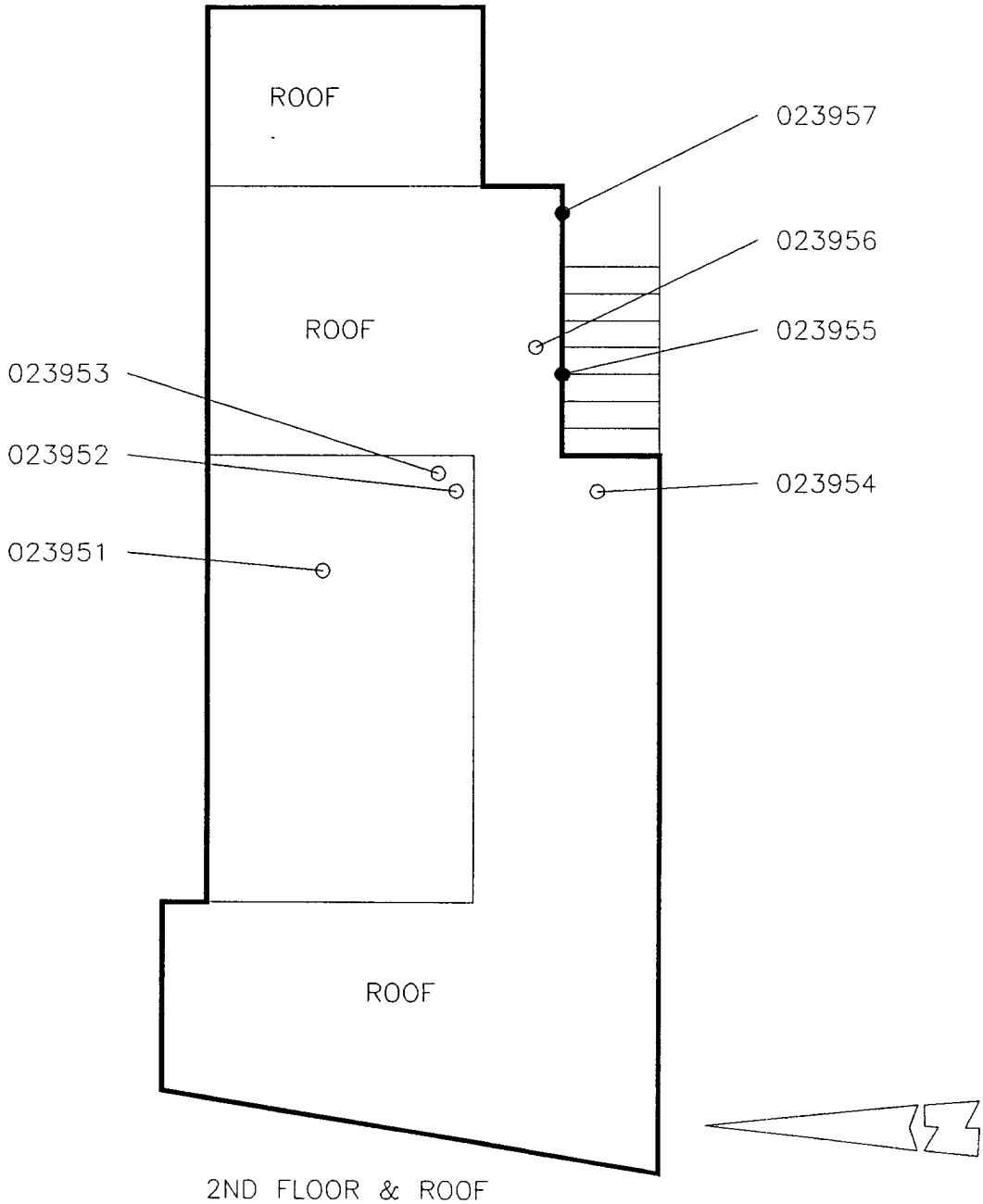
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
MY BROTHERS PLACE – 1ST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	4A

ATEC

BA



2ND FLOOR & ROOF

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

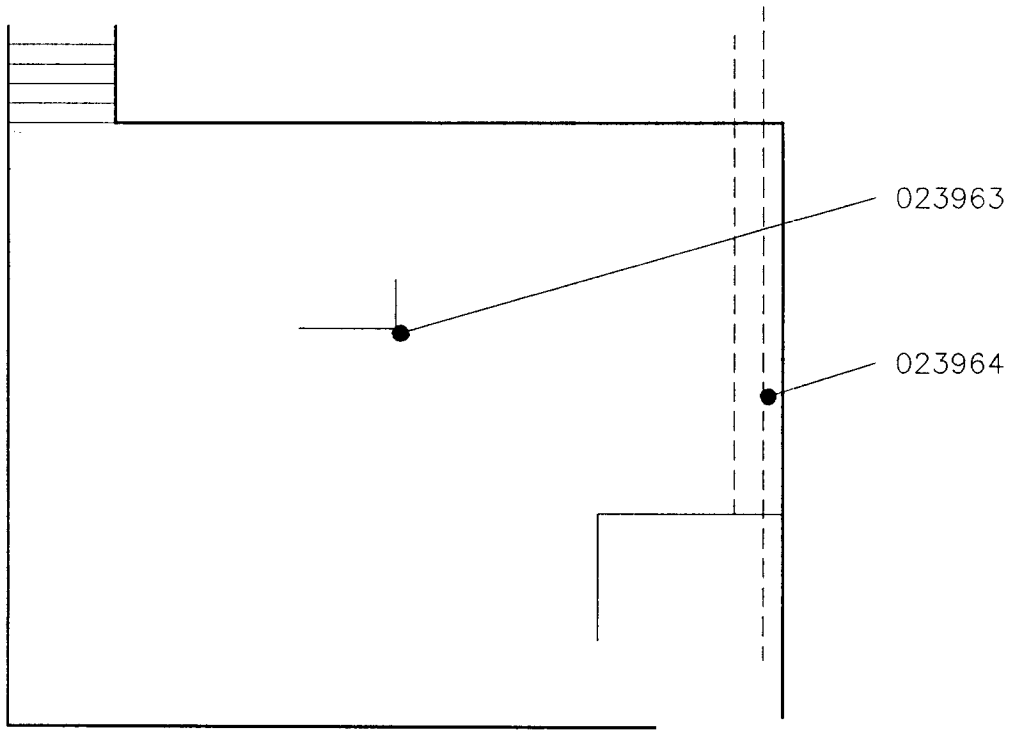
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
MY BROTHERS PLACE–2ND FLOOR & ROOF
SOUTH BEND, IN

PROJECT NO.	21–09340
SCALE	1" = 10'
FIGURE NO.	4B

ATEC

8B



---ACM PIPE INSULATION

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
MY BROTHERS PLACE – BASEMENT
SOUTH BEND, IN

PROJECT NO.	21–09340
SCALE	NONE
FIGURE NO.	4C

ATEC

8C

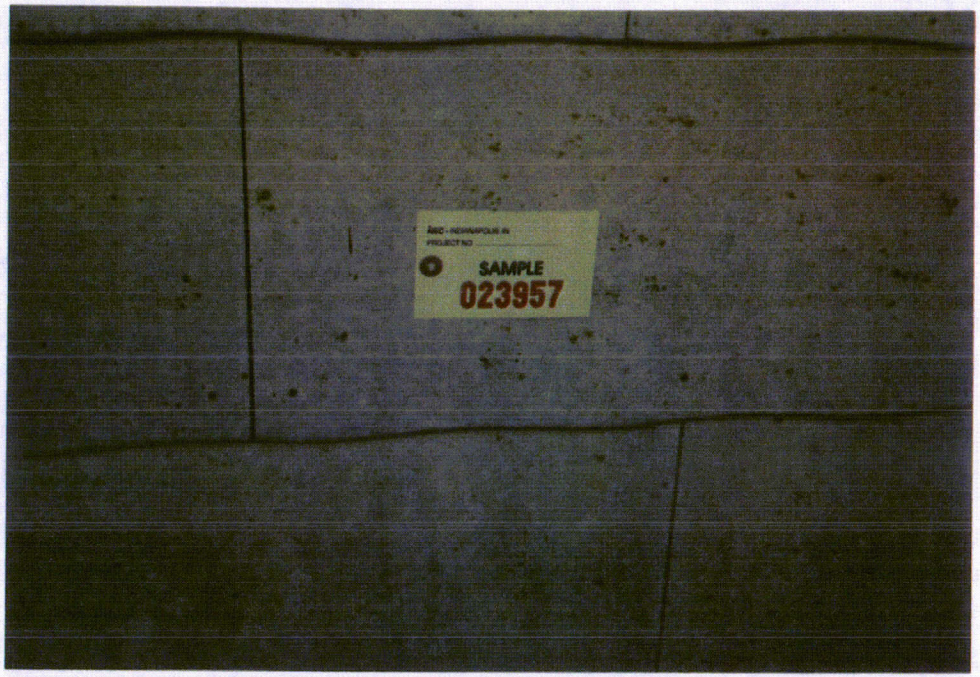
5.6 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1

2

D

3



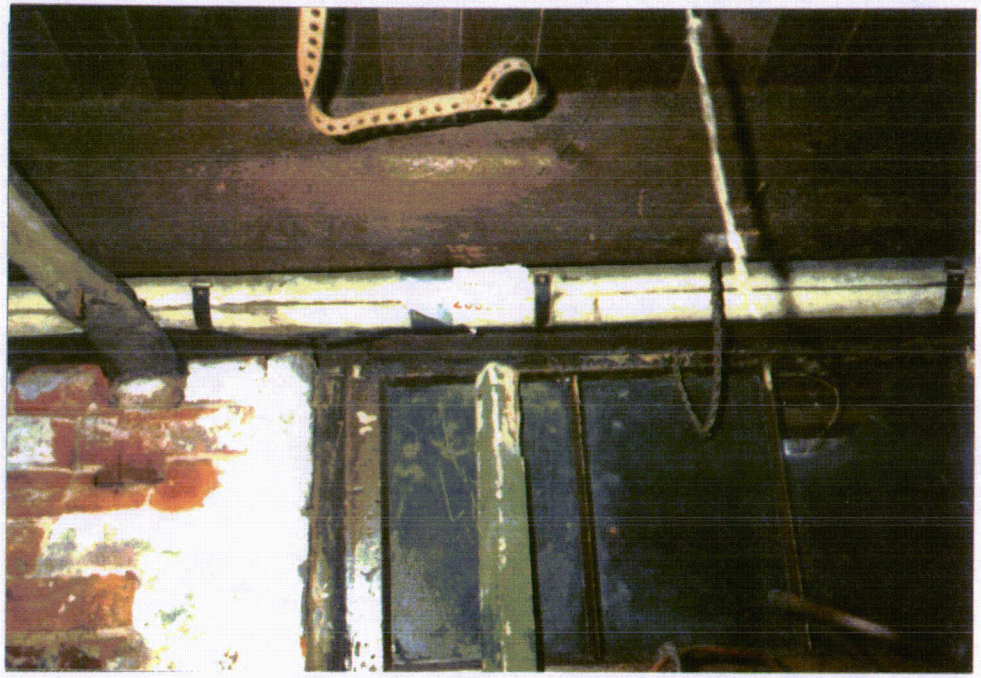
4

1

2

E

3



4

5.7 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 4
My Brother's Place
1110 S. Franklin
South Bend, IN 46601

Size: 2150 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
FT	1175 SF	$ 2350.00	1175 SF	$ 2350.00	0 SF	$ 0.00	0 SF	$ 0.00
LINOLEUM	50 SF	$ 200.00	50 SF	$ 200.00	0 SF	$ 0.00	0 SF	$ 0.00
PC 5"-8"	40 LF	$ 520.00	40 LF	$ 520.00	0 LF	$ 0.00	0 LF	$ 0.00
PF 5"-8"	5 Each	$ 100.00	5 Each	$ 100.00	0 Each	$ 0.00	0 Each	$ 0.00
ROOF FLASH	225 LF	$ 1125.00	225 LF	$ 1125.00	0 LF	$ 0.00	0 LF	$ 0.00
TRANSITE	3060 SF	$ 21420.00	3060 SF	$ 21420.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 25715.00		$ 25715.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

5.8 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

My Brothers Place Building
1110 S. Franklin

ATEC Project No. 21-09340

December 4, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Pipe Fitting Insulation - Basement	Y
2	Pipe Covering (Air Cell) - Basement	Y
3	Floor Tile - 2nd-Floor Apartment	N
4	Floor Tile - Area 2	Y
5	Floor Tile - Area 5 (Kitchen)	Y
6	Linoleum - Area 5 (Kitchen)	N
7	Linoleum - Area 6	Y
8	Linoleum - Area 3 (Men's Restroom)	N
9	Transite Shingles - Exterior of Building	Y
10	Dropped-Ceiling Tile - Area 2	N
11	Roof Shingles - Top Layer over 2nd-Floor Apartment	N
12	Roof Shingles - Bottom Layer over 2nd-Floor Apartment	N
13	Roof Shingles - Over Southeast End of Building	N
14	Roof Flashing	Y
15	Built-Up Asphalt Roof Material	N
16	Plaster - Throughout the Building	N

6.0 LOT 5

The building and small garage located at 1314 S. Franklin (Figure A) were the only buildings on Lot 5 inspected for asbestos during this survey. The building, which is currently called "Barb 'N' Joe's Bar & Grill, has a second-story apartment and a basement and covers approximately 3,250 square feet of area.

The exterior of the building has shingle siding, and the interior walls and ceilings are plaster. The floors are covered with floor tile or linoleum, and ceiling tile is present throughout most of the building. The roofing system consists of built-up asphalt roofing, flashing and roof shingles.

Seven of the 21 samples collected from the Barb 'N' Joe's Bar & Grill Building contained asbestos. An additional two samples were collected solely for quality control (QC) reasons. These QC samples were randomly split from those samples taken from suspect materials in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 6.8.

6.1 RESULTS - SURFACING MATERIALS

6.1.1 Material Type No. 1: Plaster

Three random samples were collected from wall and ceiling plaster (HA 19) located throughout the building. All three samples tested negative for asbestos content. (Figures 5A and 5C)

6.2 RESULTS - THERMAL SYSTEM INSULATION

6.2.1 Material Type No. 2: Duct Insulation

One sample was taken from the paper-like insulation (HA 1) located on the ductwork in the basement. The sample contained 60-70% chrysotile asbestos. (Figure 5C)

6.2.2 Material Type No. 3: Furnace Insulation (Oven Cover)

One sample was taken from insulation (HA 2) located on the small furnace in the basement. The sample tested negative for asbestos content. (Figure 5C)

6.2.3 Material Type No. 4: Loose-Fill Insulation

One sample was taken from the loose-fill insulation (HA 15) located above the plaster ceilings. The sample tested negative for asbestos content. (Figure 5A, Photograph G-4)

6.3 RESULTS - MISCELLANEOUS MATERIALS

6.3.1 Material Type No. 5: Floor Tile

One sample was taken from each of the four different types of floor tile (HAs 3, 4, 5 and 6) located throughout the building. All four samples tested positive for asbestos, therefore all floor tile present in the building should be considered to be an ACM. (Figure 5A, Photographs F-1, F-2, F-3 and F-4)

6.3.2 Material Type No. 6: Linoleum

One sample was taken from the linoleum (HA 7) located in the kitchen area of the second floor. The linoleum was found to contain 5-10% chrysotile asbestos. (Figure 5B, Photograph G-1)

6.3.3 Material Type No. 7: Dropped-Ceiling Tile

One sample was taken from each of the four different types of dropped-ceiling tile (HAs 8, 9, 10 and 11) located throughout the building. All four samples tested negative for asbestos. (Figures 5A and 5B)

6.3.4 Material Type No. 8: Roof and Siding Shingles

One sample was taken from each of the four types of shingles (HAs 12, 16, 17 and 18) located on the roof and exterior portion of the building and the garage at the rear of the building. All four samples tested negative for asbestos. (Figures 5A, 5B and 5D, Photograph G-2)

6.3.5 Material Type No. 9: Roof Flashing

One sample was obtained from the roof flashing (HA 14). The sample tested negative for asbestos content. (Figure 5B)

6.3.6 Material Type No. 10: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 13). The sample contained 5-10% chrysotile asbestos. (Figure 5B, Photograph G-3)

6.4 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023971 Duct Cover

023971 = Sample Number
Duct Cover = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
DCT	=	Dropped Ceiling Tile
Duct Cover	=	Air Handler Duct Insulation
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
L Insul	=	Loose-Fill Insulation
Linoleum	=	Linoleum Floor Covering
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 5 / Barb & Joe's

CLIENT: SOUTHBEND / City of South Bend

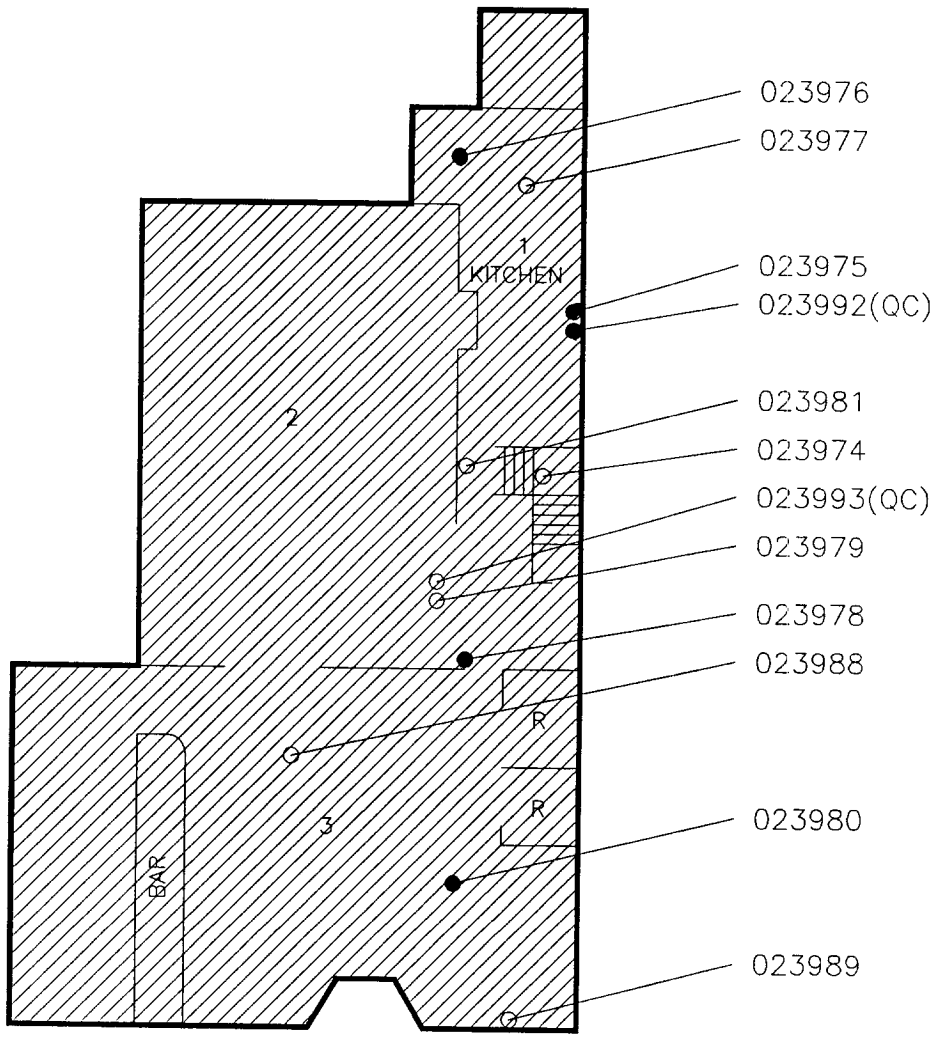
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority		Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 5													
023971	DUCT COVER	BARB & JOE'S	1	ID: FIG 5-C # : 3	Basement , Area 1 Furnace, Duct work	N/A	184 SF	#1: #2: #3:	184 -- --	Chrysotile	60-70	NOF	
023972	OVEN COVER	BARB & JOE'S	2	ID: FIG 5-C # : 3	Basement, Area 1 Furnace door	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023973	H PLASTER	BARB & JOE'S	19	ID: FIG 5-C # : 3	Basement, Area 1 Top of stair landing	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	<1 <1
023974	H PLASTER	BARB & JOE'S	19	ID: FIG 5-A # : 1	First floor Top of basement stairs	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023975	FT	BARB & JOE'S	3	ID: FIG 5-A # : 1	First floor Area 1, Kitchen	N/A	140 SF	#1: #2: #3:	140 -- --	Chrysotile	2-3	NOF	
023976	FT	BARB & JOE'S	4	ID: FIG 5-A # : 1	First floor Area 1, Kitchen	N/A	NA	#1: #2: #3:	-- -- --	Chrysotile	2-3	Cellulose	<1
023977	DCT	BARB & JOE'S	8	ID: FIG 5-A # : 1	First floor Area 1, Kitchen	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	70-80
023978	FT	BARB & JOE'S	5	ID: FIG 5-A # : 1	First floor Area 2	N/A	550 SF	#1: #2: #3:	550 -- --	Chrysotile	3-5	NOF	
023979	DCT	BARB & JOE'S	9	ID: FIG 5-A # : 1	First floor Area 2	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	30-40 30-40
023980	FT	BARB & JOE'S	6	ID: FIG 5-A # : 1	First floor Area 3, Bar area	N/A	500 SF	#1: #2: #3:	500 -- --	Chrysotile	3-5	NOF	
023981	H PLASTER	BARB & JOE'S	19	ID: FIG 5-A # : 1	First floor Top of basement stairs	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023982	LINOLEUM	BARB & JOE'S	7	ID: FIG 5-B # : 2	Second floor, Area 1, kitchen	N/A	75 SF	#1: #2: #3:	75 -- --	Chrysotile	5-10	Cellulose	20-30

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 5 / Barb & Joe's

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
	PROJECT / SITE - 21-09340 / LOT 5											
023983	DCT	BARB & JOE'S	10	ID: FIG 5-B # : 2	Second floor, Area 1, kitchen	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	60-70
023984	DCT	BARB & JOE'S	11	ID: FIG 5-B # : 2	Second floor, Area 2, restroom	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	50-60
023985	SHINGLES	BARB & JOE'S	12	ID: FIG 5-B # : 2	Second floor, Gray shingles, west end	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	5-10
023986	BU ROOF	BARB & JOE'S	13	ID: FIG 5-B # : 2	Second floor, West end above bar area	N/A	625 SF	#1: 625 #2: -- #3: --	Chrysotile	5-10	Cellulose Glass Fibr	<1 2-3
023987	ROOF FLASH	BARB & JOE'S	14	ID: FIG 5-B # : 2	Second floor, West end above bar area	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023988	L INSUL	BARB & JOE'S	15	ID: FIG 5-A # : 1	First floor Above plaster ceiling Area 3, bar area	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 80-90
023989	SHINGLES	BARB & JOE'S	16	ID: FIG 5-A # : 1	Exterior wall West end of building	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023990	SHINGLES	BARB & JOE'S	17	ID: FIG 5-D # : 4	Garage on east end of building	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 2-3
023991	SHINGLES	BARB & JOE'S	18	ID: FIG 5-D # : 4	Garage on east end of building (Light brick pattern)	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	2-3
023992	FT	BARB & JOE'S	3	ID: FIG 5-A # : 1	Quality control sample #023975	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	2-3	NOF	
023993	DCT	BARB & JOE'S	9	ID: FIG 5-A # : 1	Quality control sample #023979	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	10-15 50-60

6.5 SAMPLING DETAIL FIGURES



ACM FLOOR TILE

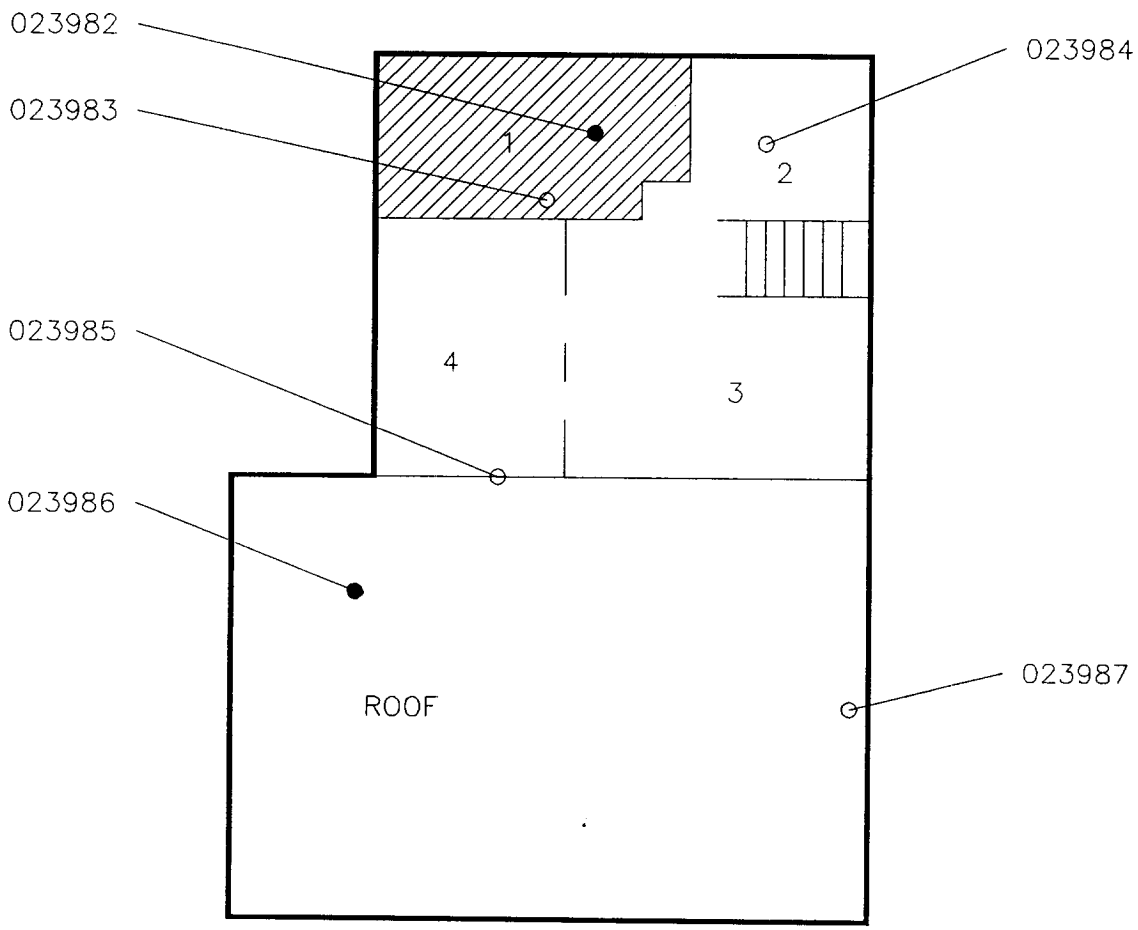
- INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
1314 S. FRANKLIN – FIRST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	5A

ATEC



ACM LINOLEUM

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

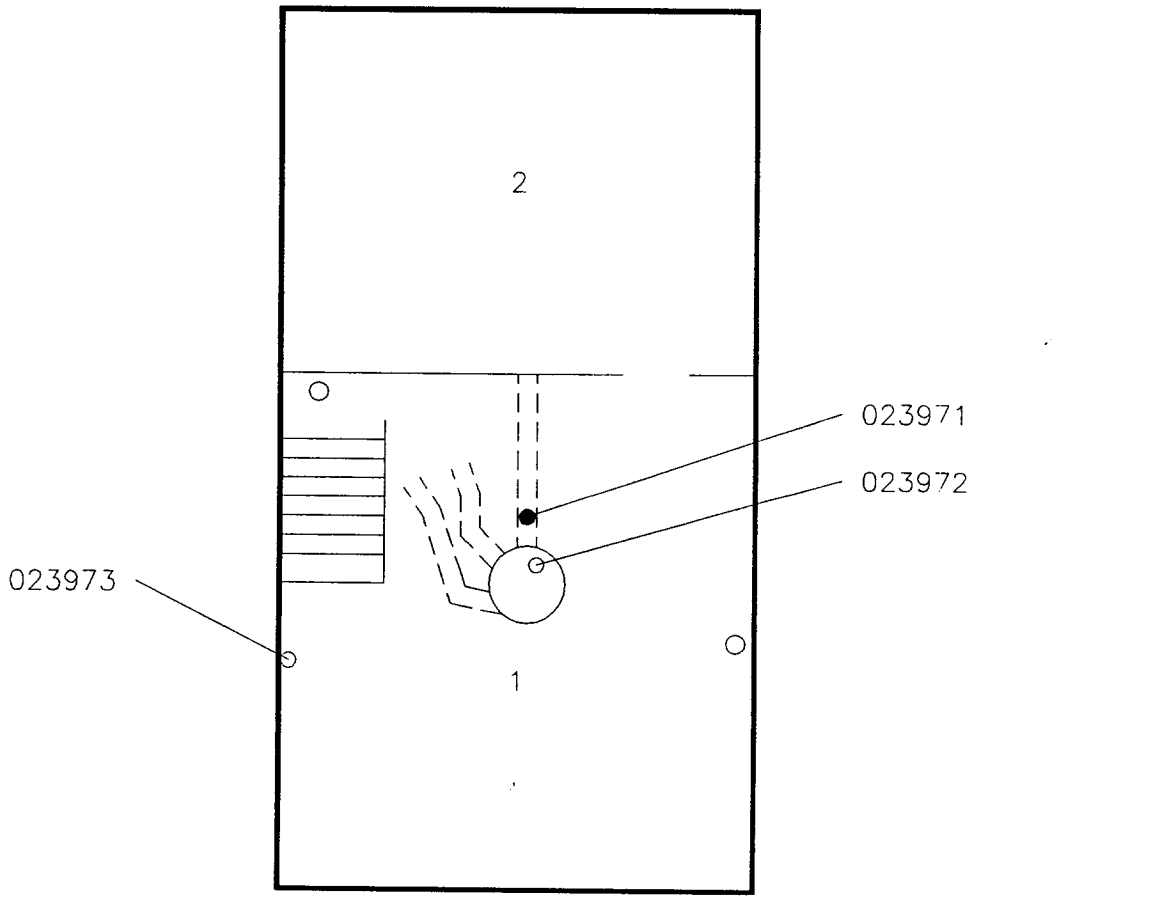
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
1314 S. FRANKLIN – SECOND FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	5B

ATEC

9B



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ⊙ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
1314 S. FRANKLIN – BASEMENT
SOUTH BEND, IN

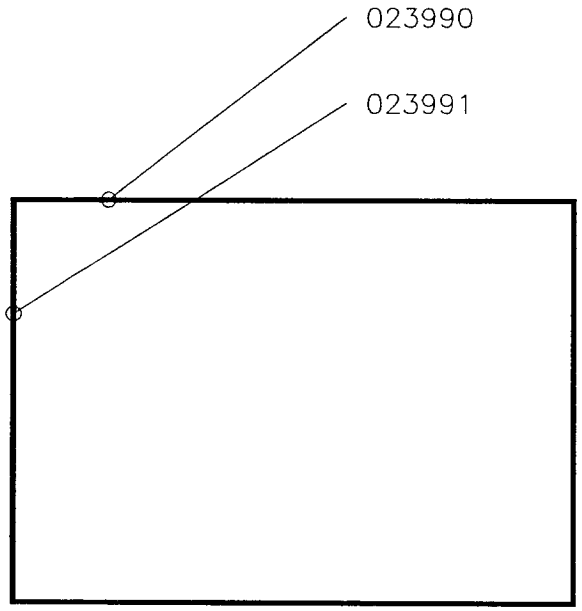
PROJECT NO.
21-09340

SCALE
1" = 10'

FIGURE NO.
5C

ATEC

9C



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
1314 S. FRANKLIN – GARAGE ROOF
SOUTH BEND, IN

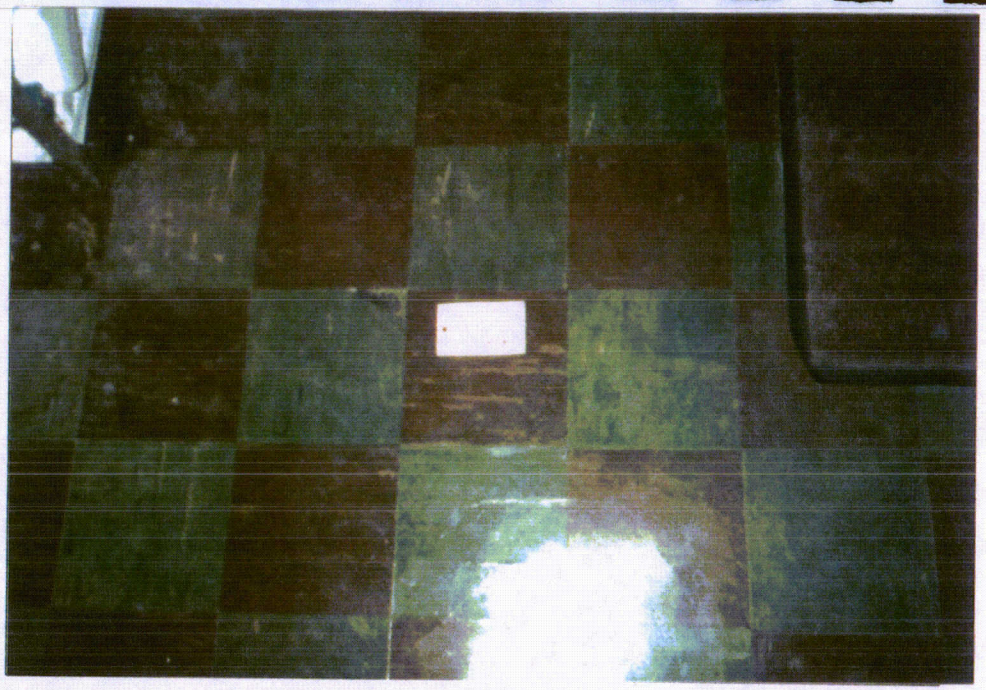
PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	5D

ATEC

9D

6.6 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1



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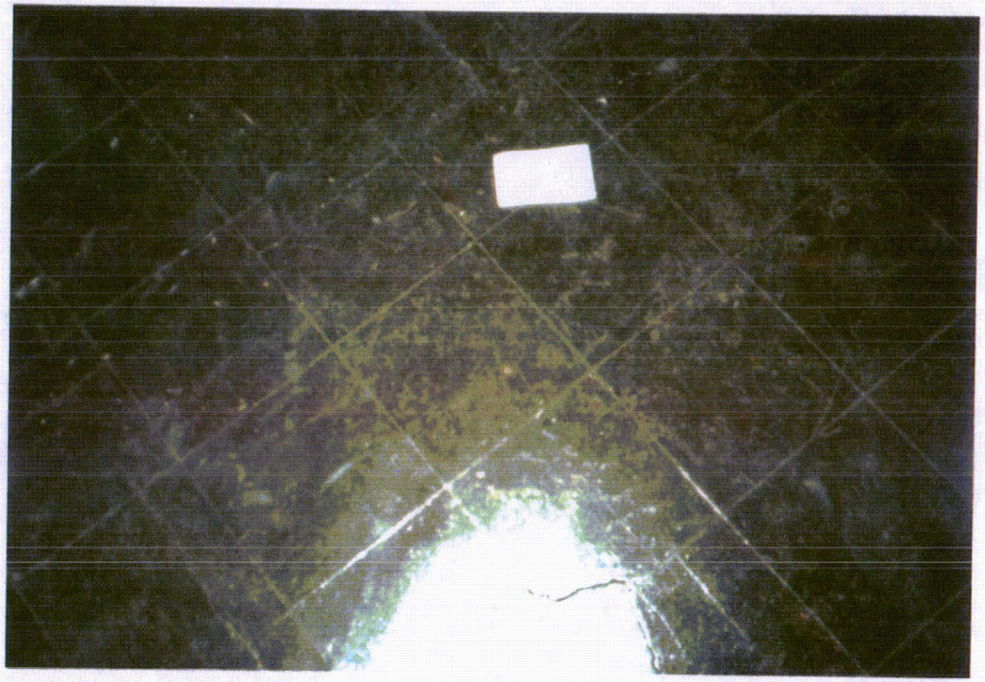

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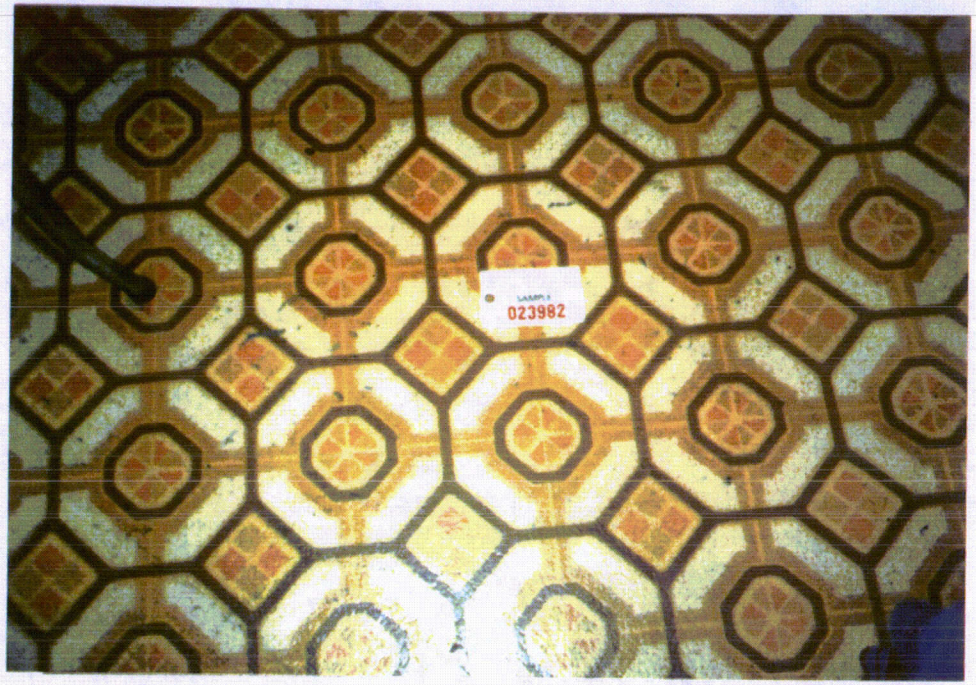

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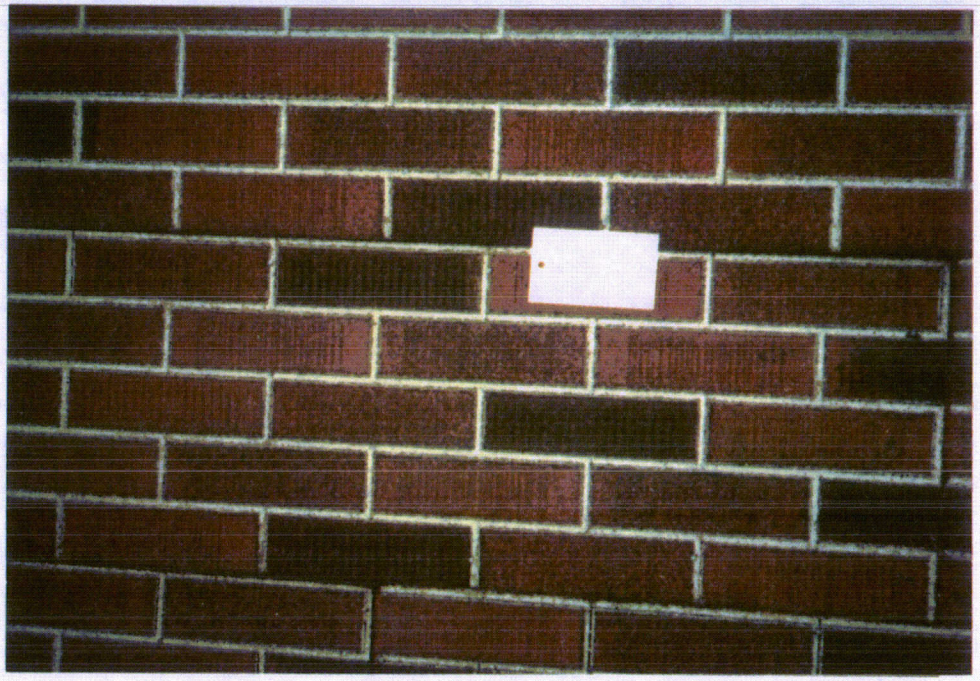

2

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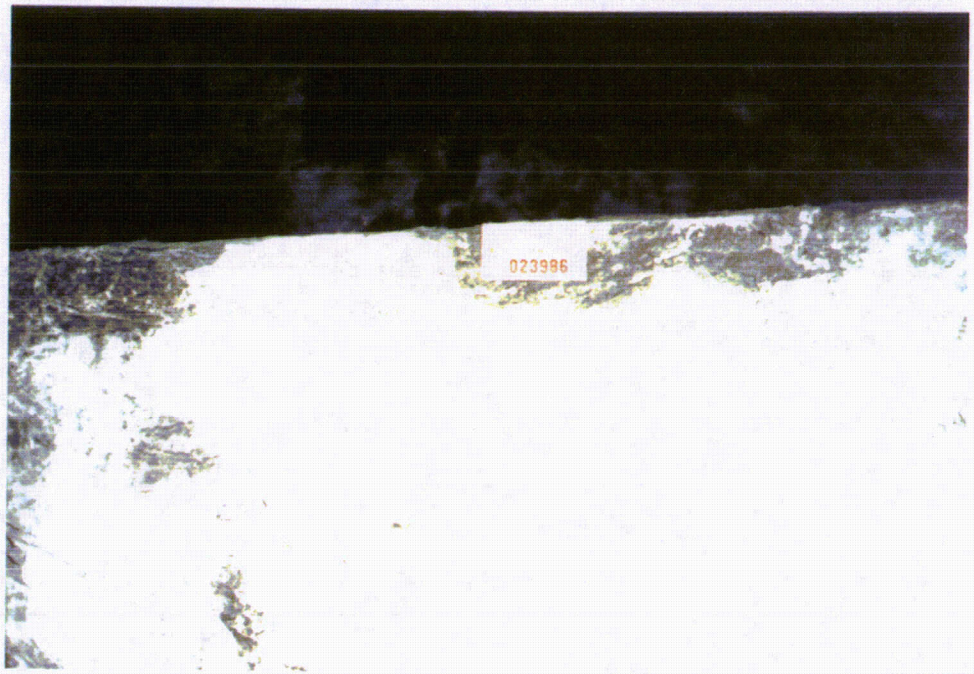

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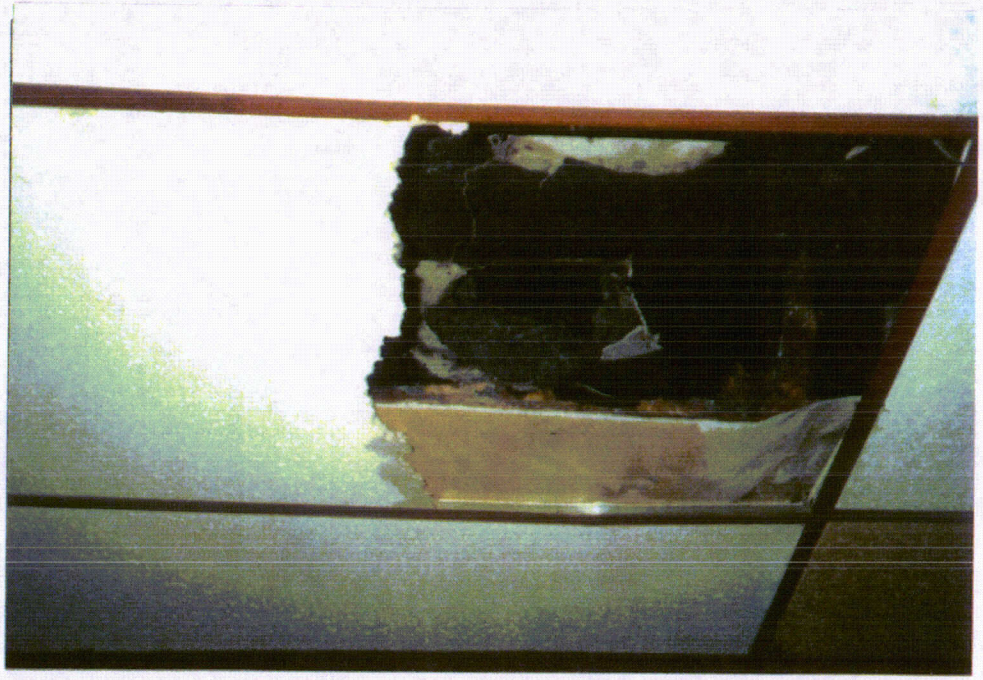


4

6.7 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 5
Barb & Joe's
South Bend, IN 46601

Size: 3250 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	625 SF	$ 3125.00	625 SF	$ 3125.00	0 SF	$ 0.00	0 SF	$ 0.00
DUCT COVER	184 SF	$ 2760.00	184 SF	$ 2760.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	1190 SF	$ 2380.00	1190 SF	$ 2380.00	0 SF	$ 0.00	0 SF	$ 0.00
LINOLEUM	75 SF	$ 300.00	75 SF	$ 300.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 8565.00		$ 8565.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

6.8 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Barb 'N' Joe's Bar & Grill Building
1314 S. Franklin

ATEC Project No. 21-09340

December 6, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Duct Insulation - Basement	Y
2	Furnace Insulation - Basement	N
3	Floor Tile (9"x9" Green) - Area 1 (Kitchen)	Y
4	Floor Tile (9"x9" Brown w/White Streaks) - Area 1	Y
5	Floor Tile - Floor 1, Area 2	Y
6	Floor Tile - Floor 1, Area 3	Y
7	Linoleum - Floor 2, Area 1	Y
8	Dropped-Ceiling Tile - Floor 1, Area 1	N
9	Dropped-Ceiling Tile - Floor 1, Area 2	N
10	Dropped-Ceiling Tile - Floor 2, Area 1	N
11	Dropped-Ceiling Tile - Floor 2, Area 2	N
12	Roof Shingles - On Floor 2 Apartment	N
13	Built-Up Asphalt Roof Material	Y
14	Roof Flashing	N
15	Loose-Fill Insulation - Above Ceilings	N
16	Shingles - Exterior of Building	N
17	Shingles - Exterior of Garage, East End	N
18	Shingles - Exterior of Garage, North End	N
19	Plaster - Throughout the Building	N

7.0 LOT 6

Five buildings on Lot 6 were inspected for asbestos during this survey. These five buildings are part of the old South Bend Foundry (Figures A and 6A).

Building 1 (Figure 6B) was constructed of wood, with a built-up and shingled roof. The floors are covered with floor tile and/or carpet, and the interior walls are plaster and wallboard. No thermal system insulation was observed in the building. The structure, which includes a basement area, covers approximately 975 square feet in area.

Building 2 (Figure 6C) is a metal building. No suspect materials were observed in Building 2, therefore no samples were taken from this structure.

Building 3 (Figure 6D) was constructed of brick, with a built-up gravel/asphalt roof. The interior walls are brick, and the floors are concrete. No thermal system insulation was observed in this building. Building 3 is a one-story structure without a basement, and covers approximately 1,500 square feet in area.

Building 4 (Figure 6E) was constructed of brick, with a built-up gravel/asphalt roof. The interior walls are brick, and the floors are concrete. No thermal system insulation was observed in the building. Building 4 is a one-story structure without a basement, and covers approximately 3,750 square feet in area.

Building 5 (Figure 6F) was constructed of brick with built-up asphalt and shingled roofs. The interior walls are brick, with the exception of the transite wall located in Area 1 (see Figure 6F). The floors are concrete and the ceilings are all open to the roof, with the exception of a transite ceiling in Area 5 (see Figure 6F). The only thermal system insulation observed is located in Area 3 (see Figure 6F). The piping system is uninsulated.

Fifteen of the 26 samples collected from the five buildings surveyed on Lot 6 contained asbestos. An additional two samples were collected solely for quality control (QC) reasons. These QC samples were randomly split from those samples taken from suspect materials in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 7.8.

7.1 RESULTS - SURFACING MATERIALS

7.1.1 Material Type No. 1: Plaster (Building 1)

Three random samples were collected from the plaster (HA 20) located throughout Building 1. All three samples tested negative for asbestos. (Figure 6B)

7.2 RESULTS - THERMAL SYSTEM INSULATION

7.2.1 Material Type No. 2: Oven Duct Insulation (Building 5)

Three samples were obtained from the duct insulation (HA 1) located above the old oven in the northeast end (Area 3) of Building 5. The duct insulation was determined to be an ACM. (Figure 6F, Photograph I-4)

7.2.2 Material Type No. 3: Loose-Fill Insulation (Building 1)

One sample was taken from the loose-fill insulation (HA 4) located above the ceiling in Building 1. The sample tested negative for asbestos. (Figure 6B)

7.3 RESULTS - MISCELLANEOUS MATERIALS

7.3.1 Material Type No. 4: Floor Tile (Building 1)

One sample was taken from the red floor tile (HA 2) located on the first floor of Building 1. The sample tested negative for asbestos. (Figure 6B)

7.3.2 Material Type No. 5: Wallboard (Building 1)

Three samples were taken from the wallboard (HA 3) located on the walls and ceiling of Building 1. All three samples tested negative for asbestos. (Figure 6B)

7.3.3 Material Type No. 6: Transite (Building 5)

One sample each was taken from the transite walls (HA 18) and transite ceiling (HA 19) located in Building 5. Both samples contained asbestos. The transite walls are located between Areas 1 and 2 (see Figure 6F), and the transite ceiling is located in Area 5 (see Figure 6F). (Photographs H-1 and H-2)

7.3.4 Material Type No. 7: Roof Shingles (Buildings 1, 4 and 5)

One sample was collected from each of the four different types of roof shingles (HAs 5, 6, 10 and 15) located in or on Buildings 1, 4 and 5. The dark reddish-brown shingle (Figure 6B, Photograph H-3) located on top of Building 1 contained 2-3% chrysotile asbestos. The gray-colored shingles (Figure 6E, Photograph H-4) located on the floor of Building 4 contained 5-10% chrysotile asbestos.

7.3.5 Material Type No. 8: Built-Up Asphalt Roof Material (Buildings 1, 3, 4 and 5)

One sample was taken from each of the six different types of built-up asphalt roof materials (HAs 7, 9, 11, 12, 14 and 16) located on Buildings 1, 3, 4 and 5 (Figures 6B, 6E and 6F). All six samples contained chrysotile asbestos in concentrations ranging from 2-10%, therefore all built-up asphalt roof

material located on Buildings 1, 3, 4 and 5 should be considered to be an ACM. (Photographs I-1 and I-2)

7.3.6 Material Type No. 9: Roof Flashing (Buildings 1, 3, 4 and 5)

Three representative samples were collected from the various types of roof flashings (HAs 8, 13 and 17) located on Buildings 1, 3, 4 and 5. Two of the three samples tested positive, therefore all roof flashing on Buildings 1, 3, 4 and 5 should be considered to be an ACM. (Figures 6A, 6B, 6C, 6D and 6F, Photograph I-3)

7.4 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023859 FT

023859 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
Duct Cover	=	Air Handler Duct Insulation
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
L Insul	=	Loose-Fill Insulation
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles
Transite	=	Cementitious Hardboard Material
Wallboard	=	Wallboard/Sheet Rock/Drywall

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 6 / South Bend Foundry - Lot 6

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 6												
023859	FT	1	2	ID: FIG 6-B # : 2	Building 1, Area #2	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	2-3 <1
023860	H PLASTER	1	20	ID: FIG 6-B # : 2	Building 1, Area 4	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Other	2-3 2-3
023861	WALLBOARD	1	3	ID: FIG 6-B # : 2	Building 1, Area 4	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	20-30
023862	H PLASTER	1	20	ID: FIG 6-B # : 2	Building 1, Area 4	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Horsehair	2-3 2-3
023863	L INSUL	1	4	ID: FIG 6-B # : 2	Building 1, Area 4	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	20-30
023864	WALLBOARD	1	3	ID: FIG 6-B # : 2	Building 1, Basement Area 2	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	20-30
023865	WALLBOARD	1	3	ID: FIG 6-B # : 2	Building 1, Basement Area 2	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	70-80
023866	H PLASTER	1	20	ID: FIG 6-B # : 2	Building 1, Basement Area 1	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2
023867	SHINGLES	1	5	ID: FIG 6-B # : 2	Building 1, Roof	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 <1
023868	SHINGLES	1	6	ID: FIG 6-B # : 2	Building 1, Roof Red shingle	N/A	240 SF	#1: 240 #2: -- #3: --	Chrysotile	2-3	Glass Fibr	5-10
023869	BU ROOF	1	7	ID: FIG 6-B # : 2	Building 1, Roof	N/A	275 SF	#1: 275 #2: -- #3: --	Chrysotile	2-3	NOF	
023870	ROOF FLASH	3	8	ID: FIG 6-D # : 4	Building 3	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3

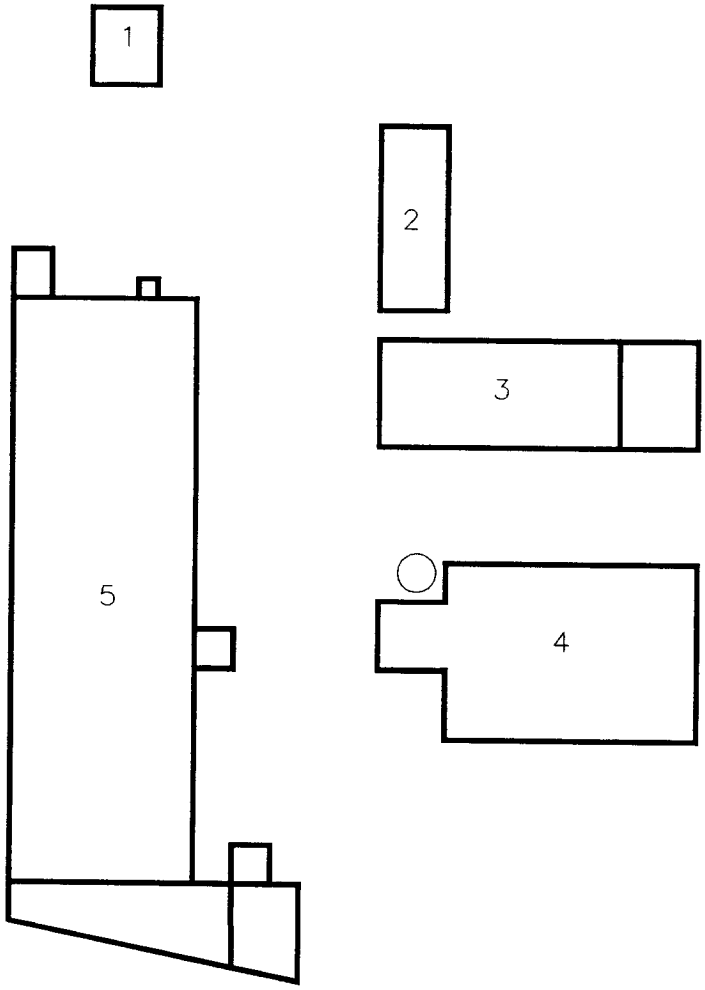
CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 6												
023871	BU ROOF	4	9	ID: FIG 6-E # : 5	Building 4, Roof East end	N/A	3750 SF	#1: 3750 #2: -- #3: --	Chrysotile	5-10	NOF	
023872	SHINGLES	4	10	ID: FIG 6-E # : 5	Building 4, On the floor East end	N/A	300 SF	#1: 300 #2: -- #3: --	Chrysotile	5-10	Cellulose	2-3
023873	TRANSITE	5	19	ID: FIG 6-F # : 6	Building 5 Area 5, Ceiling on NW corner of building	N/A	400 SF	#1: 400 #2: -- #3: --	Chrysotile	30-40	Cellulose Glass Fibr	<1 <1
023874	DUCT COVER	5	1	ID: FIG 6-F # : 6	Building 5 Area 3, N.E. end of building (old oven)	N/A	600 SF	#1: 600 #2: -- #3: --	Chrysotile	20-30	Cellulose Glass Fibr	2-3 <1
023875	DUCT COVER	5	1	ID: FIG 6-F # : 6	Building 5 Area 3, N.E. end of building (old oven)	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	30-40	NOF	
023876	DUCT COVER	5	1	ID: FIG 6-F # : 6	Building 5 Area 3, N.E. end of building (old oven)	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	10-15	Glass Fibr	20-30
023877	TRANSITE	5	18	ID: FIG 6-F # : 6	Building 5 Area 1, Wall dividing area 1&2	N/A	2400 SF	#1: 2400 #2: -- #3: --	Chrysotile	20-30	Cellulose	5-10
023878	BU ROOF	5	11	ID: FIG 6-F # : 6	Building 5 Roof over S.E. corner garage Area 6	N/A	600 SF	#1: 600 #2: -- #3: --	Chrysotile	5-10	Cellulose	2-3
023879	BU ROOF	5	12	ID: FIG 6-F # : 6	Building 5 Roof over main structure	N/A	14400 SF	#1: 14400 #2: -- #3: --	Chrysotile	2-3	NOF	
023880	ROOF FLASH	5	13	ID: FIG 6-F # : 6	Building 5 Roof over main structure	N/A	1100 LF	#1: 1100 #2: -- #3: --	Chrysotile	20-30	NOF	
023881	BU ROOF	5	14	ID: FIG 6-F # : 6	Building 5 Roof over area 7 S.W. corner	N/A	144 SF	#1: 144 #2: -- #3: --	Chrysotile	5-10	NOF	
023882	SHINGLES	5	15	ID: FIG 6-F # : 6	Building 5 Roof over area 4	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 <1

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 6												
023883	BU ROOF	5	16	ID: FIG 6-F # : 6	Building 5 Roof over area 3	N/A	4200 SF	#1: 4200 #2: -- #3: --	Chrysotile	2-3	Cellulose Glass Fibr	2-3 2-3
023884	ROOF FLASH	5	17	ID: FIG 6-F # : 6	Building 5 Roof over area 3	N/A	490 LF	#1: 490 #2: -- #3: --	Chrysotile	20-30	NOF	
023885	FT	1	2	ID: FIG 6-B # : 2	Quality control sample of #023859	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023886	WALLBOARD	1	3	ID: FIG 6-B # : 2	Quality control sample of #023865	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	70-80 <1

7.5 SAMPLING DETAIL FIGURES



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

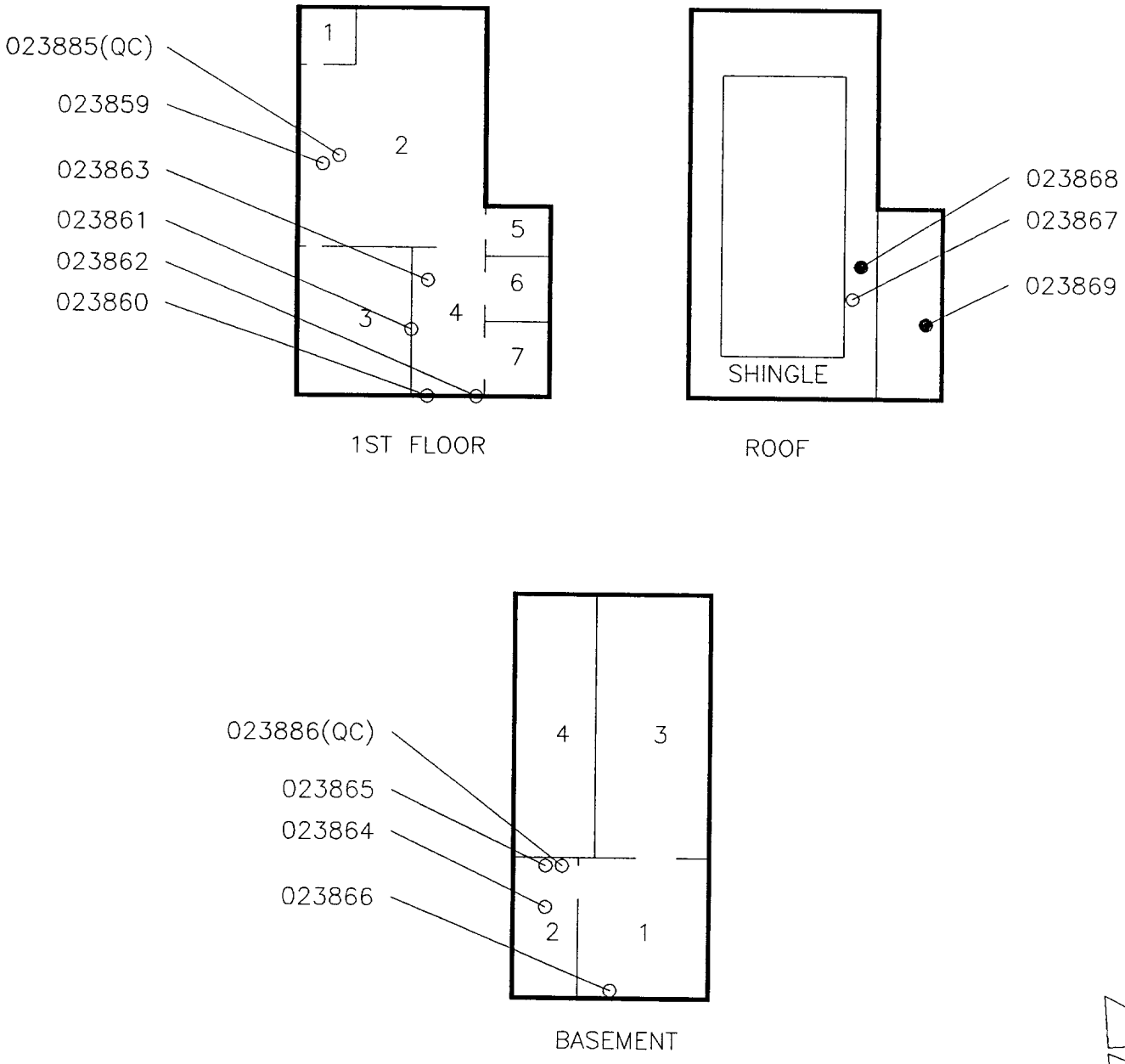
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	6A

ATEC

10A



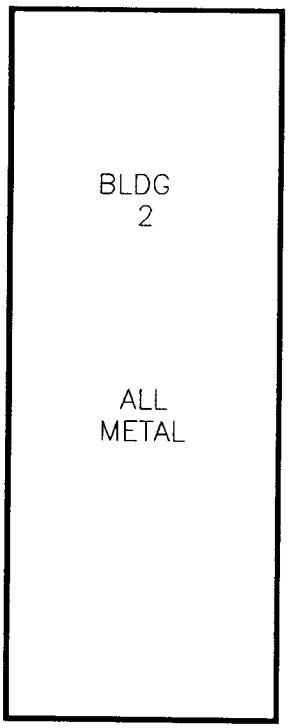
- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6 BLDG 1
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	6B

ATEC



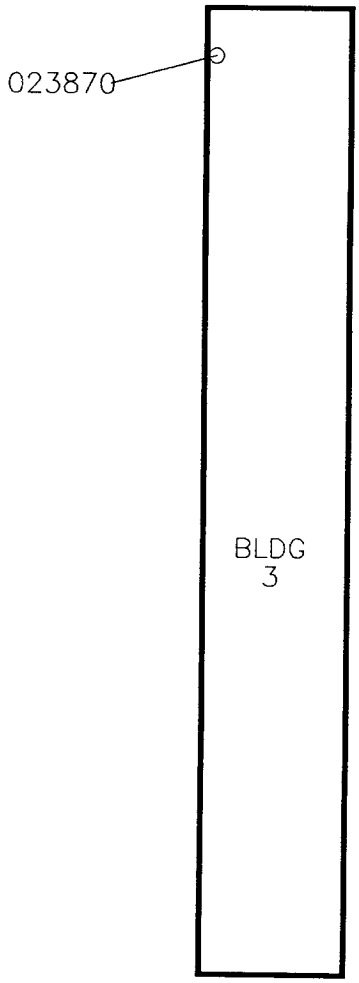
- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6 BLDG 2
SOUTH BEND, IN

PROJECT NO.	21-90340
SCALE	NONE
FIGURE NO.	6C

ATEC



● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

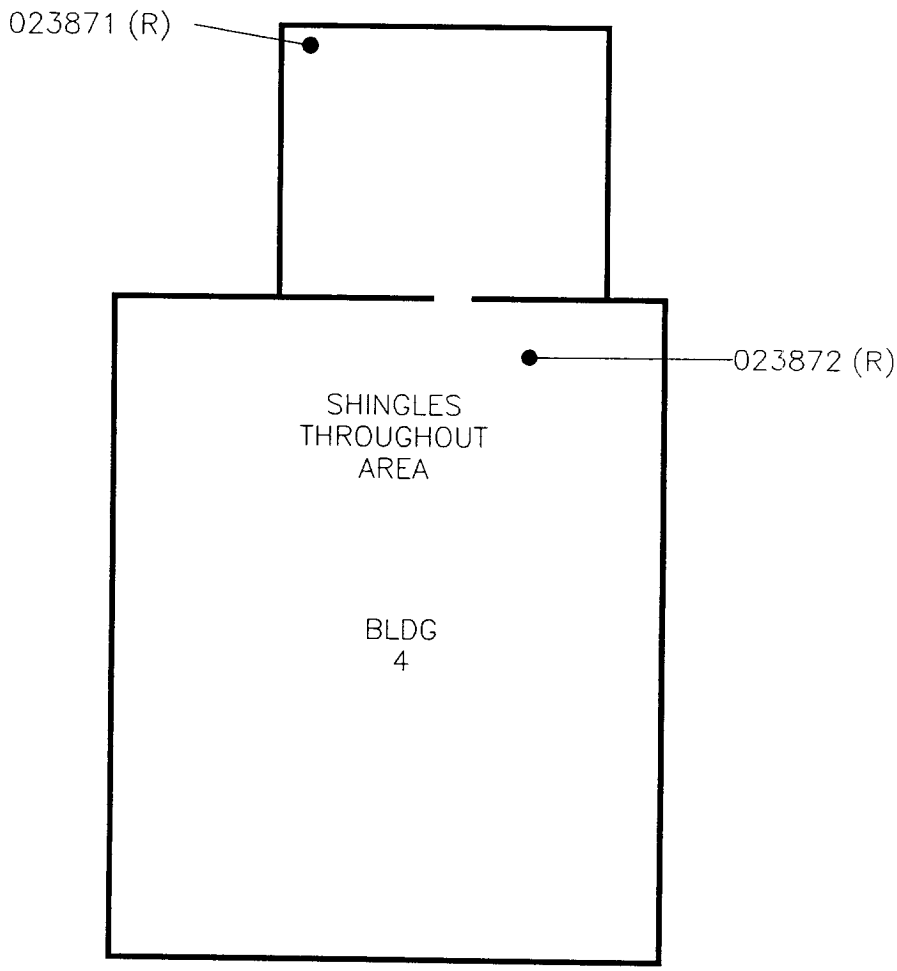
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6 BLDG 3
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 20'
FIGURE NO.	6D

ATEC

10D



(R) ROOF

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

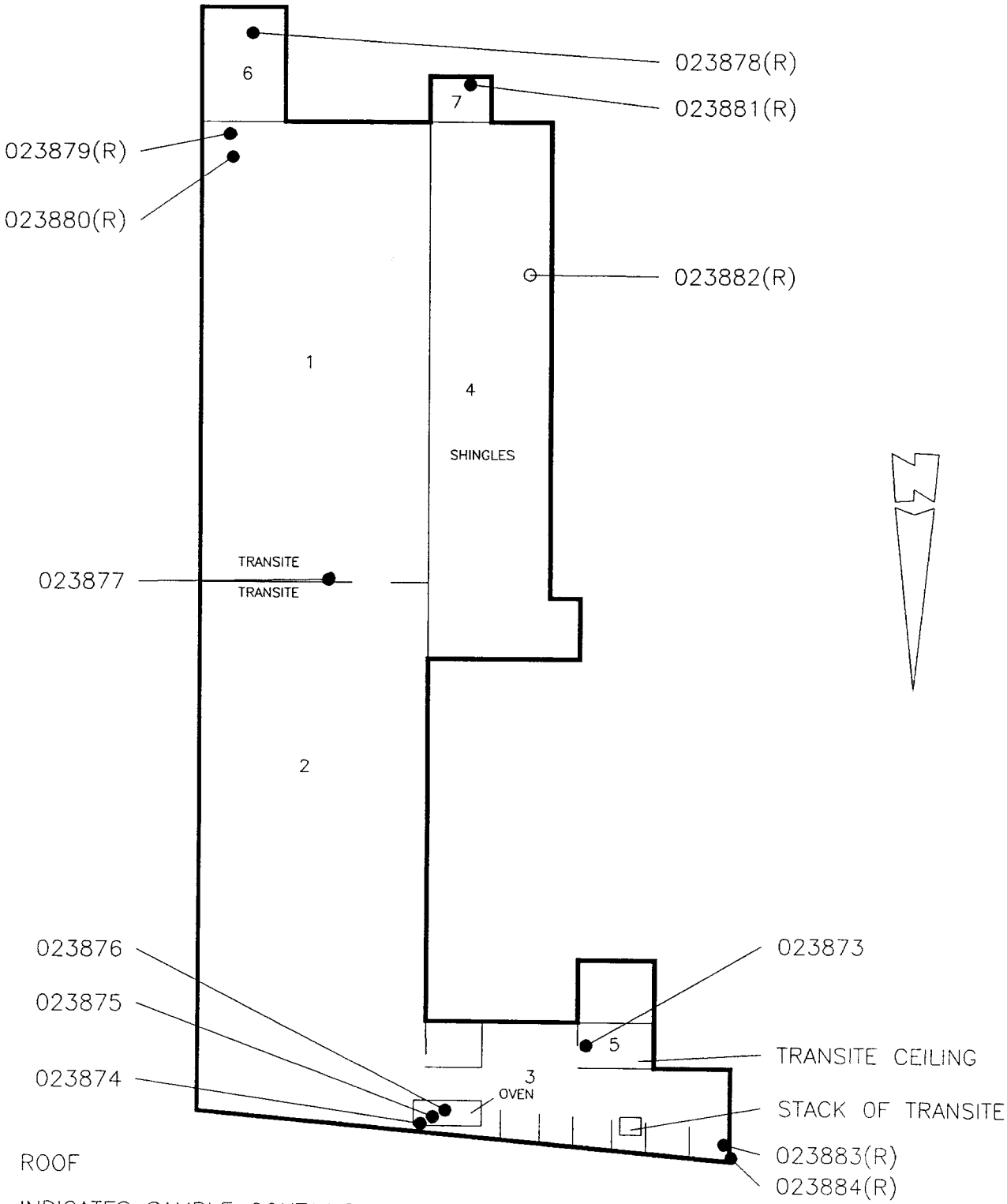
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6 BLDG 4
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	6E

ATEC

10E



(R) ROOF

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

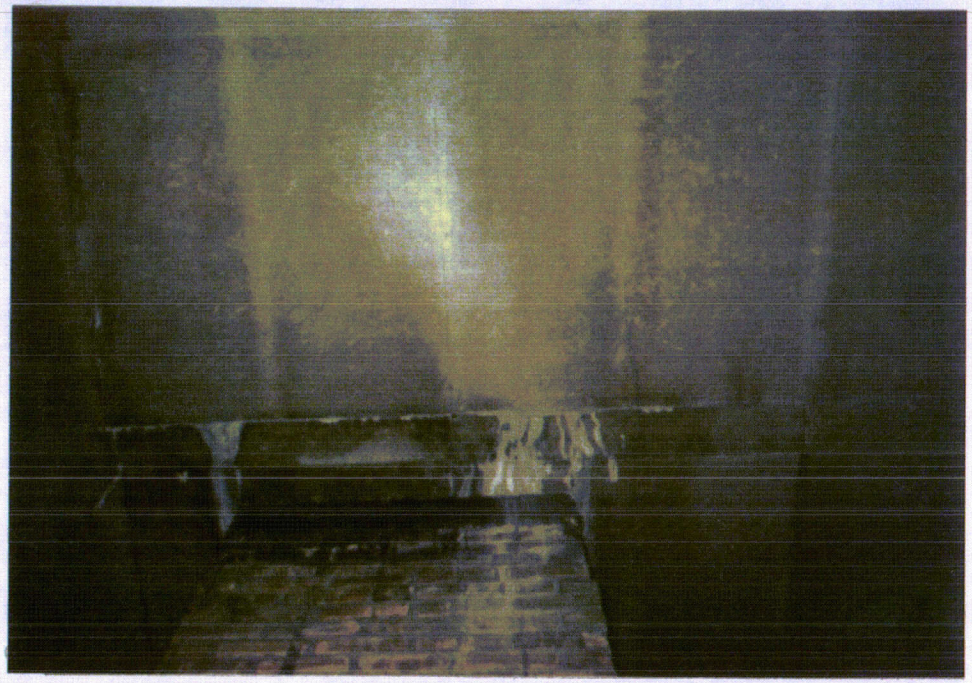
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 6 BLDG 5
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 40'
FIGURE NO.	6F

ATEC

7.6 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS



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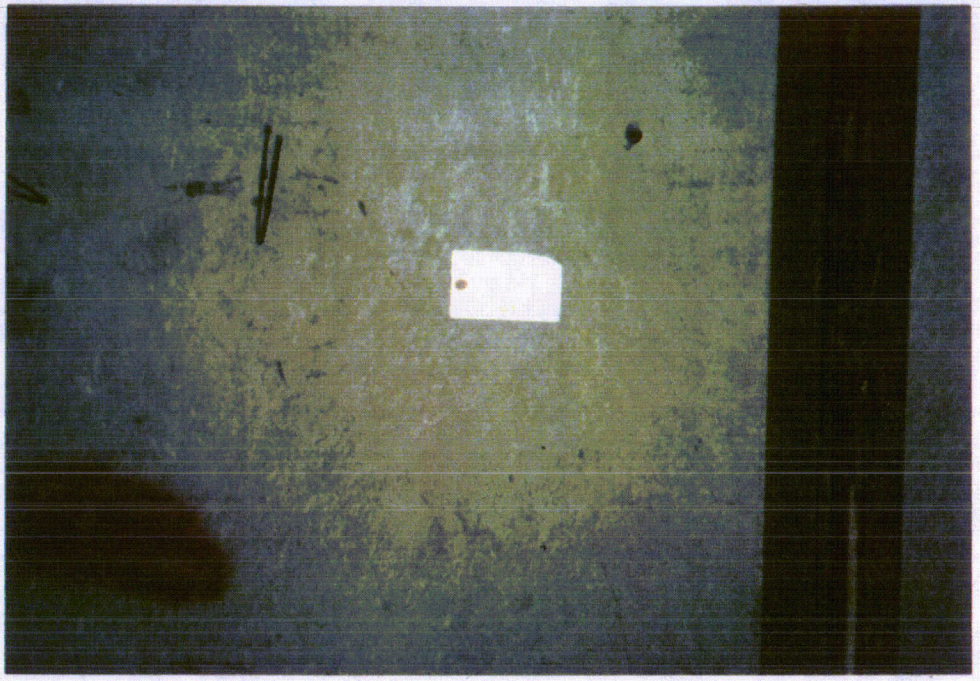

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7.7 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 6
South Bend Foundry - Lot 6
South Bend, IN 46601

Size: 30000 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	23369 SF	$ 116845.00	23369 SF	$ 116845.00	0 SF	$ 0.00	0 SF	$ 0.00
DUCT COVER	600 SF	$ 9000.00	600 SF	$ 9000.00	0 SF	$ 0.00	0 SF	$ 0.00
ROOF FLASH	1590 LF	$ 7950.00	1590 LF	$ 7950.00	0 LF	$ 0.00	0 LF	$ 0.00
SHINGLES	540 SF	$ 810.00	540 SF	$ 810.00	0 SF	$ 0.00	0 SF	$ 0.00
TRANSITE	2800 SF	$ 19600.00	2800 SF	$ 19600.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 154205.00		$ 154205.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

7.8 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

South Bend Foundry
5 Buildings on Lot 6

ATEC Project No. 21-09340

December 5, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Oven Duct Insulation - NE End (Area 3) of Building 5	Y
2	Floor Tile - Building 1	N
3	Wallboard - Building 1	N
4	Loose-Fill Insulation - Building 1	N
5	Roof Shingle (Pink) - Building 1	N
6	Roof Shingle (Red) - Building 1	Y
7	Built-Up Asphalt Roof Material - Building 1	Y
8	Roof Flashing - Buildings 3 and 4	N
9	Built-Up Asphalt Roof Material - Buildings 3 and 4	Y
10	Shingles - Floor of Building 4	Y
11	Built-Up Asphalt Roof Material - Bldg. 5 (Garage)	Y
12	Built-Up Asphalt Roof Material - Bldg. 5 (Main Area)	Y
13	Roof Flashing - Building 5	Y
14	Built-Up Asphalt Roof Material - Building 5, Above Office Area on Southwest Corner	Y
15	Roof Shingle (Green) - Building 5, Above Area 4	N
16	Built-Up Asphalt Roof Material-Bldg. 5, Above Area 3	Y
17	Roof Flashing - Building 5, Above Area 3	Y
18	Transite - Building 5, on Walls in Areas 1 and 2	Y
19	Transite - Building 5, on Ceiling in Area 5	Y
20	Plaster - Throughout Building 1	N

8.0 LOT 7

Two buildings on Lot 7 were inspected for asbestos during this survey. These buildings are located at 1013-1023 S. Main and 215 W. Garst (Figure A).

The building located at 1013-1023 S. Main is the old Campbell's Container Building (Figure 7). This single-story building was constructed of brick with a built-up gravel/asphalt roof. The interior walls and ceiling are plaster or wallboard. The floors are concrete, with floor tile located in some of the old office areas. No thermal system insulation was observed in the Campbell's Container Building.

The building located at 215 W. Garst is an all-metal building. No suspect materials were observed, therefore no samples were taken from this building.

Five of the 11 samples collected from the Campbell's Container Building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 8.7.

8.1 RESULTS - SURFACING MATERIALS

8.1.1 Material Type No. 1: Plaster

Three random samples were collected from the plaster (HA 8) located on the walls and ceilings in the old office areas. All three samples tested negative for asbestos. (Figure 7)

8.2 RESULTS - MISCELLANEOUS MATERIALS

8.2.1 Material Type No. 2: Floor Tile

Five samples were taken from the various types of floor tile (HAs 1, 2, 3 and 4) located in the old office areas. Four of the five samples contained chrysotile asbestos in concentrations greater than 1%. The asbestos-containing floor tile (Photographs J-1, J-2 and J-3) is located throughout the front office area. (Figure 7)

8.2.2 Material Type No. 3: Roof Shingles

One sample was taken from the roof shingles (HA 5) located around the raised sections of the roof. The sample tested negative for asbestos. (Figure 7, Photograph J-4)

8.2.3 Material Type No. 4: Roof Flashing

One sample was taken from the roof flashing (HA 6). The sample tested negative for asbestos. (Figure 7, Photograph K-1)

8.2.4 Material Type No. 5: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 7). The sample contained 20-30% chrysotile asbestos. (Figure 7, Photograph K-2)

8.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023776 FT

023776 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles

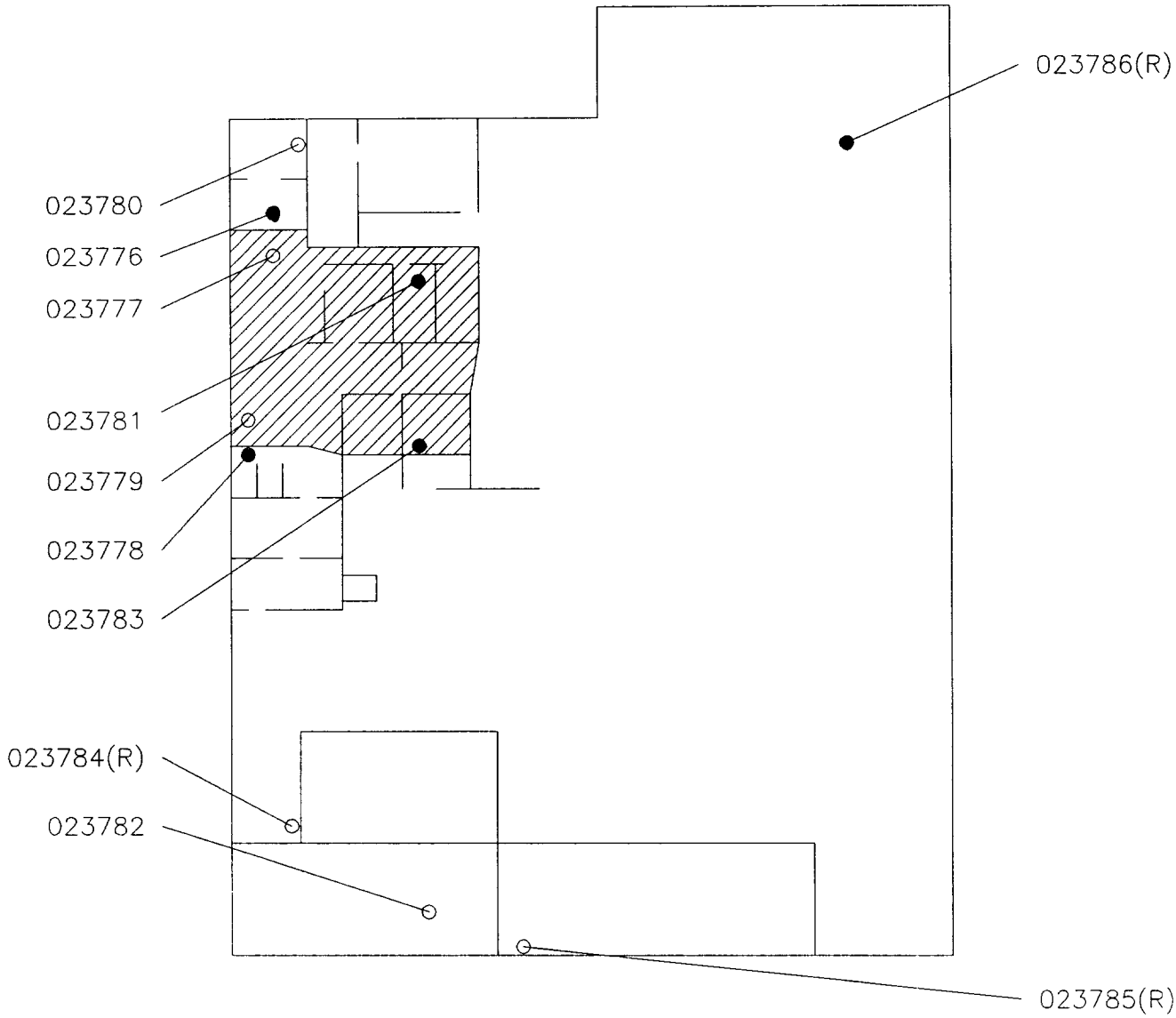
ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 7 / Campbell's Container

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 11												
023776	FT	CAMPBELL'S	1	ID: FIG 7 # : 7	Office area on S.W. corner	N/A	1500 SF	#1: 1500 #2: -- #3: --	Chrysotile	5-8		
023777	FT	CAMPBELL'S	2	ID: FIG 7 # : 7	Office area on S.W. corner	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	<1	Cellulose	2
023778	FT	CAMPBELL'S	3	ID: FIG 7 # : 7	Women's restroom in S.W. office area	N/A	40 SF	#1: 40 #2: -- #3: --	Chrysotile	2-3	Cellulose	<1
023779	H PLASTER	CAMPBELL'S	8	ID: FIG 7 # : 7	Office area on S.W. corner Lobby area	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	5-10
023780	H PLASTER	CAMPBELL'S	8	ID: FIG 7 # : 7	Office area on S.W. corner Office area	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3
023781	FT	CAMPBELL'S	1	ID: FIG 7 # : 7	N.W. corner of office Main office area	N/A	225 SF	#1: 225 #2: -- #3: --	Chrysotile	3-5	NOF	
023782	H PLASTER	CAMPBELL'S	8	ID: FIG 7 # : 7	Office area on S.E. corner of building	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3
023783	FT	CAMPBELL'S	4	ID: FIG 7 # : 7	Office area on S.W corner N.W. corner office	N/A	180 SF	#1: 180 #2: -- #3: --	Chrysotile	2-3	Cellulose	2-3
023784	SHINGLES	CAMPBELL'S	5	ID: FIG 7 # : 7	Roof S.E. corner	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023785	ROOF FLASH	CAMPBELL'S	6	ID: FIG 7 # : 7	Roof S.E. corner	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	30-40
023786	BU ROOF	CAMPBELL'S	7	ID: FIG 7 # : 7	Roof, N.W. corner	N/A	15000 SF	#1: 15000 #2: -- #3: --	Chrysotile	20-30	NOF	

8.4 SAMPLING DETAIL FIGURES



(R) ROOF

ACM FLOOR TILE

- INDICATES SAMPLE CONTAINS ASBESTOS
- INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
1013–1023 S. MAIN ST.
SOUTH BEND, IN

PROJECT NO.
21–09340

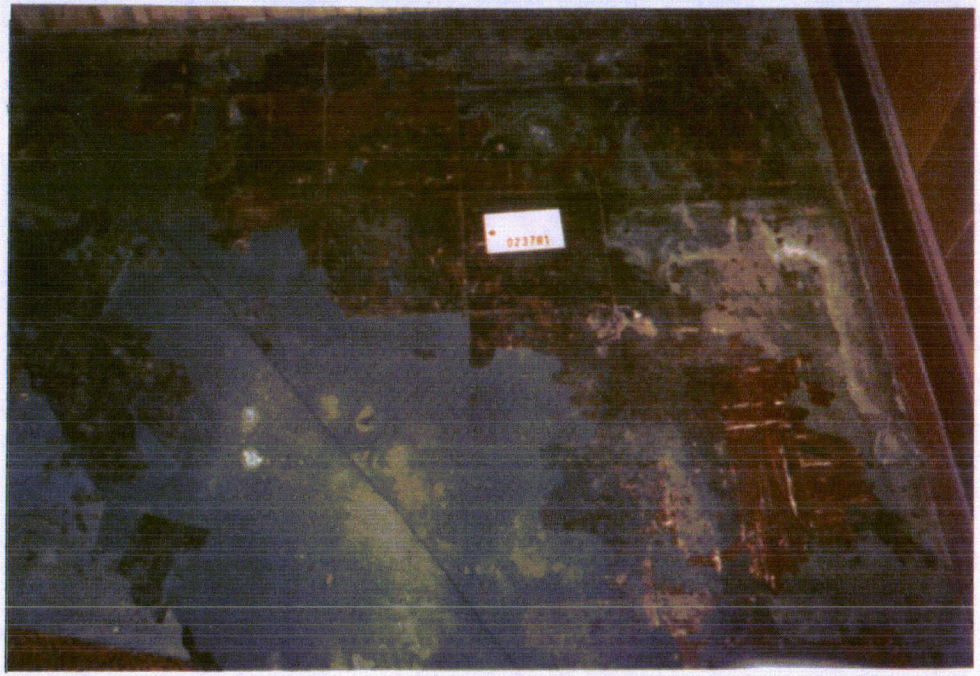
SCALE
NONE

FIGURE NO.
7

ATEC

8.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

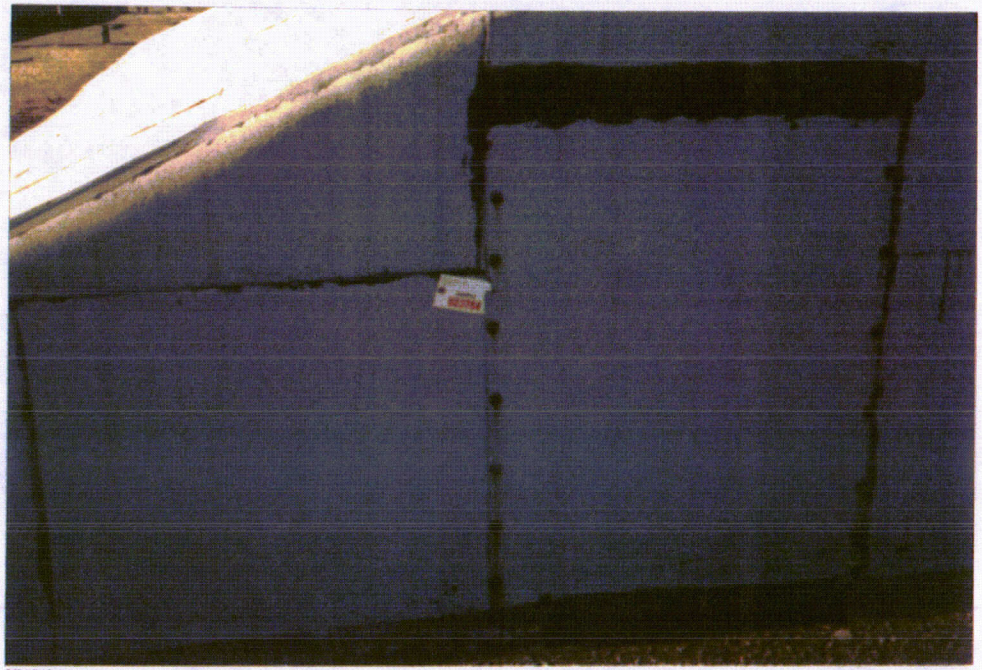
1



2

J

3



4

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K

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8.6 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 7
Campbell's Container
1013-1023 S. Main
South Bend, IN 46601

Size: 15,000 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	15000 SF	$ 75000.00	15000 SF	$ 75000.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	1945 SF	$ 3890.00	1945 SF	$ 3890.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 78890.00		$ 78890.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

8.7 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

The Campbell's Container Building
1013-1023 S. Main

ATEC Project No. 21-09340

November 30, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile (9"x9") - Southwest Corner of Building	Y
2	Floor Tile (12"x12") - Southwest Corner of Building	N
3	Floor Tile (12"x12") - Women's Restroom	Y
4	Floor Tile - Office Area in SW Corner of Building	Y
5	Roof Shingles	N
6	Roof Flashing	N
7	Built-Up Asphalt Roof Material	Y
8	Plaster - on Walls and Ceiling of Office Areas	N

9.0 LOT 8

The building located at 224 W. Garst (Figure A, Photograph L-1) was the only building on Lot 8 that was inspected for asbestos during this survey. The building, which is currently vacant, covers approximately 5,000 square feet and was constructed of brick and cinderblock, with a built-up asphalt roof. The interior walls are cinderblock and wallboard, and dropped-ceiling tiles are present in about half of the building. The piping system is uninsulated.

Three of the seven samples collected from the building located at 224 W. Garst contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 9.7.

9.1 RESULTS - THERMAL SYSTEM INSULATION

9.1.1 Material Type No. 1: Asbestos Paper

One sample was taken from the asbestos paper material (HA 7) in the housing of the overhead heating unit. The sample contained 70-80% chrysotile asbestos. (Figure 8, Photograph L-4)

9.2 RESULTS - MISCELLANEOUS MATERIALS

9.2.1 Material Type No. 2: Floor Tile

One sample was taken from each of the two different types of floor tile (HAs 1 and 2) located throughout the building. Both samples tested negative for asbestos. (Figure 8, Photographs L-1 and L-2)

9.2.2 Material Type No. 3: Dropped-Ceiling Tile

One representative sample was taken from the dropped-ceiling tile (HA 3) located throughout about half of the building. The sample tested negative for asbestos. (Figure 8)

9.2.3 Material Type No. 4: Roof Flashing

One sample was taken from the roof flashing (HA 4) located around the built-up asphalt roof material. The sample contained 30-40% chrysotile asbestos. (Figure 8)

9.2.4 Material Type No. 5: Built-Up Asphalt Roof Material

One sample each was collected from the built-up asphalt roof material on the west side (HA 5) and east side (HA 6) of the building. The sample taken from the west side (HA 5) contained 15-20% chrysotile asbestos. The sample taken from the east side (HA 6) contained less than 1% chrysotile asbestos, therefore the built-up asphalt roof material on the east side of the building can be considered a non-ACM. (Figure 8)

9.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023769 FT

023769 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

AbsPaper	=	Asbestos Paper
BU Roof	=	Built-Up Roofing Material
DCT	=	Dropped Ceiling Tile
FT	=	Floor Tile
Roof Flash	=	Roofing Flashing on Penetrations

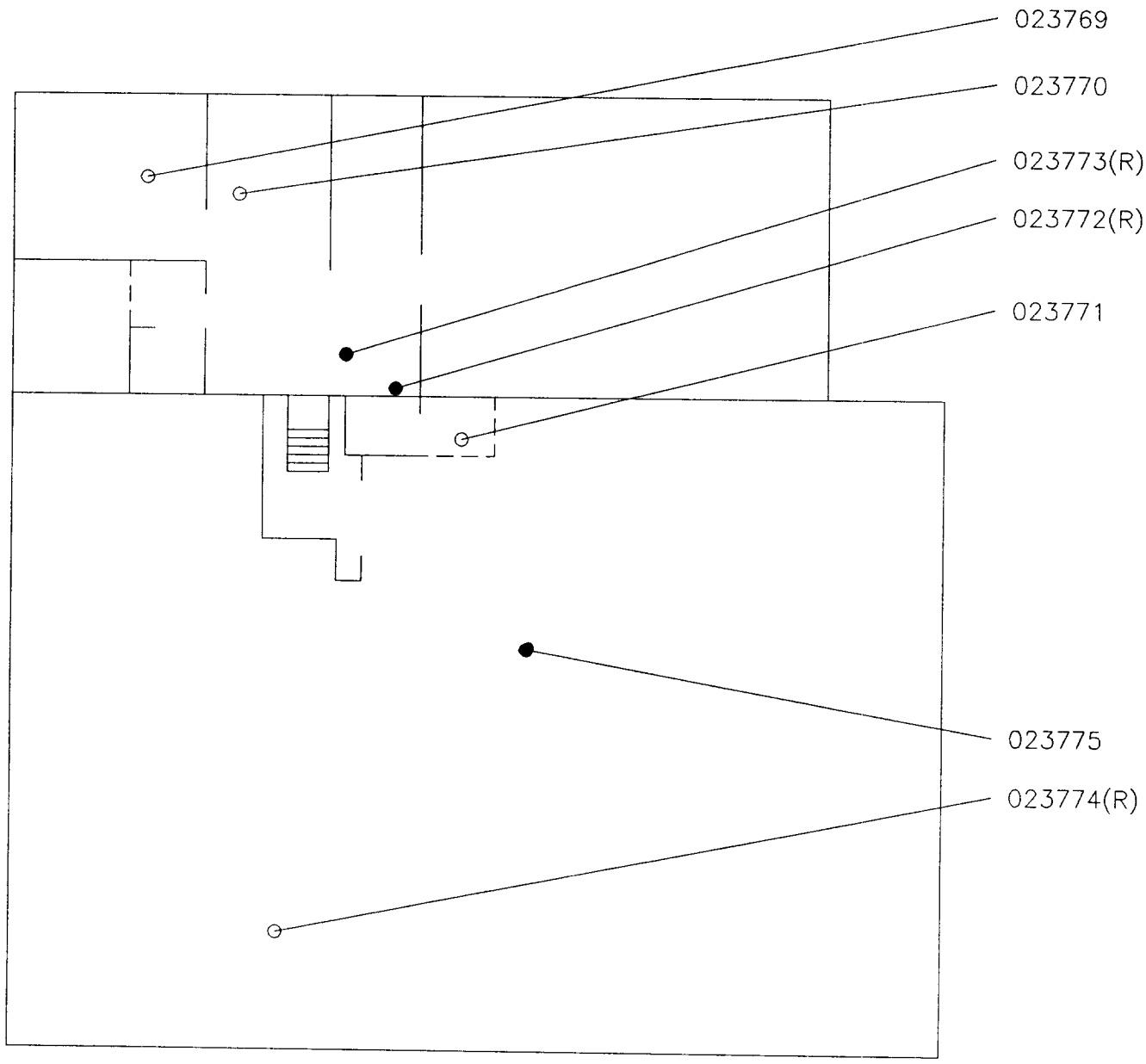
ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 8 / Vacant building

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 8												
023769	FT	VACANT BUILDING	1	ID: FIG 8 # : 1	Southwest corner of building	N/A	NA	#1: -- #2: -- #3: --	ND		NOF	
023770	DCT	VACANT BUILDING	3	ID: FIG 8 # : 1	Southwest corner of building	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	80-90
023771	FT	VACANT BUILDING	2	ID: FIG 8 # : 1	Restroom, east end of building	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	50-60
023772	ROOF FLASH	VACANT BUILDING	4	ID: FIG 8 # : 1	Roof	N/A	320 LF	#1: 320 #2: -- #3: --	Chrysotile	30-40	NOF	
023773	BU ROOF	VACANT BUILDING	5	ID: FIG 8 # : 1	Roof west end	N/A	1500 SF	#1: 1500 #2: -- #3: --	Chrysotile	15-20	Cellulose	10-15
023774	BU ROOF	VACANT BUILDING	6	ID: FIG 8 # : 1	Roof east side	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	<1	Cellulose Glass Fibr	20-30 3-5
023775	ABSPAPER	VACANT BUILDING	7	ID: FIG 8 # : 1	East end, overhead heater In the housing unit	N/A	24 SF	#1: 24 #2: -- #3: --	Chrysotile	70-80	Cellulose	5-10

9.4 SAMPLING DETAIL FIGURES



● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
224 W. GARST ST.
SOUTH BEND, IN

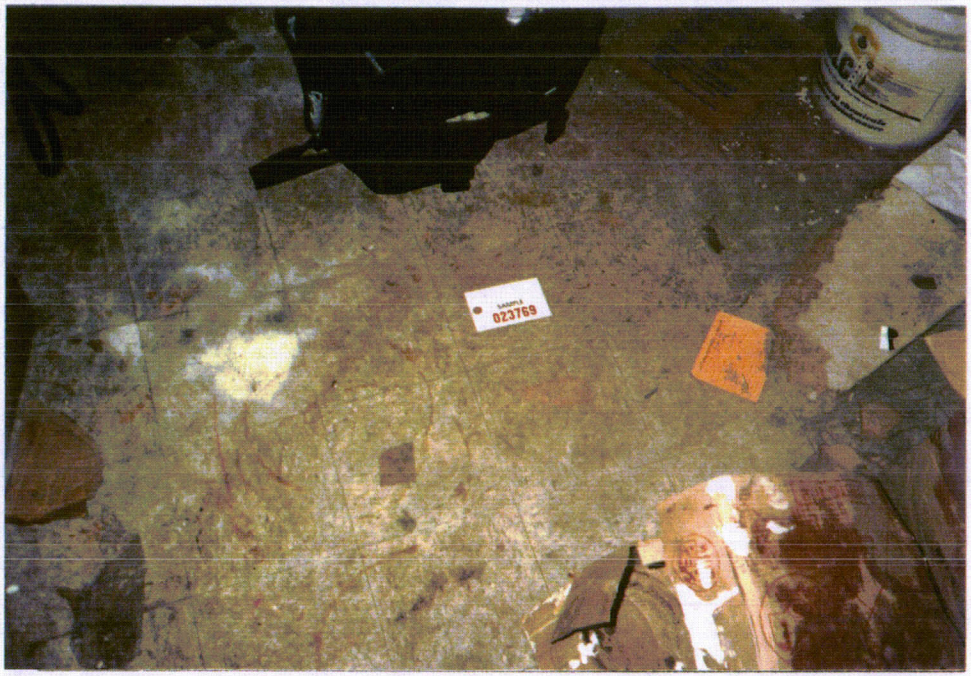
PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	8

ATEC

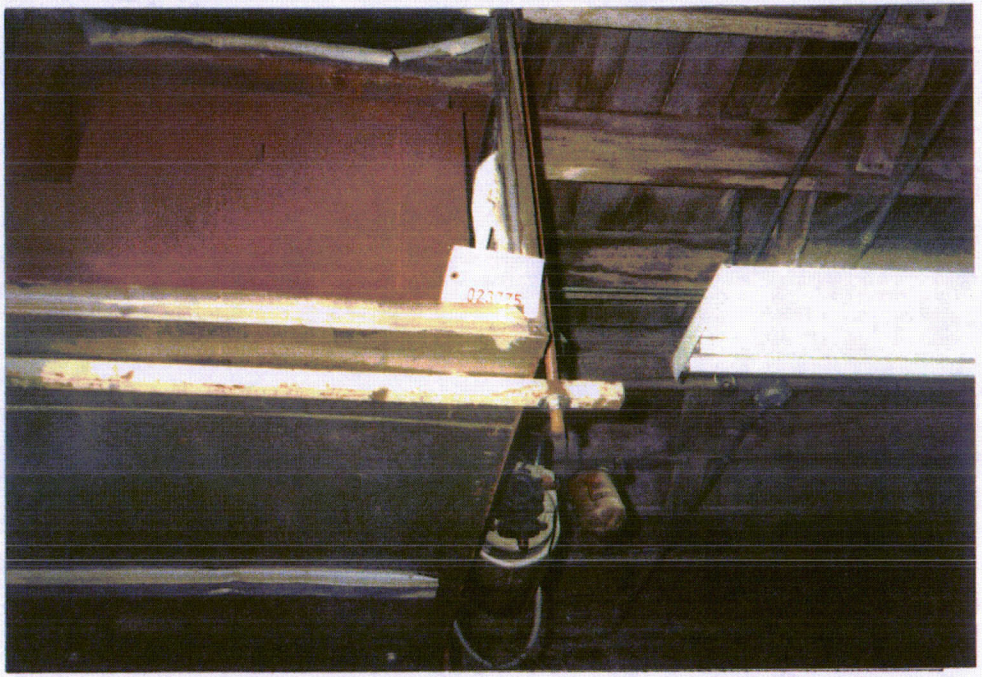
1

2

L



3



4

9.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

9.6 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 8
Vacant building
224 W. Garst
South Bend, IN 46601

Size: 5000 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
ABSPAPER	24 SF	$ 144.00	24 SF	$ 144.00	0 SF	$ 0.00	0 SF	$ 0.00
BU ROOF	1500 SF	$ 7500.00	1500 SF	$ 7500.00	0 SF	$ 0.00	0 SF	$ 0.00
ROOF FLASH	320 LF	$ 1600.00	320 LF	$ 1600.00	0 LF	$ 0.00	0 LF	$ 0.00
		$ 9244.00		$ 9244.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

9.7 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Building at 224 W. Garst

ATEC Project No. 21-09340

November 30, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile (9"x9") - West End of Building	N
2	Floor Tile - Restroom in East End of Building	N
3	Dropped-Ceiling Tile - West End of Building	N
4	Roof Flashing	Y
5	Built-Up Asphalt Roof Material - West End of Building	Y
6	Built-Up Asphalt Roof Material - East End of Building	N
7	Asbestos Paper - Inside the Housing of the Overhead Heater, East End of Building	Y

10.0 LOT 9

The building located at 1321 S. Main (Figure A) was the only building on Lot 9 that was inspected for asbestos during this survey. The building, which is currently being utilized by the "Butches Bar & Grill" establishment, has a second-story apartment and covers approximately 2,700 square feet of area.

The building's exterior walls were constructed of limestone and metal siding, and the interior walls are plaster and wallboard. The floors are covered with floor tile, linoleum and/or carpet. The roofing system consists of shingles, and the piping system is uninsulated.

At the time of the survey, the roof of the building was covered with approximately four inches of snow, making it difficult to determine the composition of the entire roof system. The roof shingles were sampled during this survey, however built-up asphalt roof material may exist in some small areas of the roof. If this is the case, the built-up asphalt roof material should be sampled prior to demolition, to determine its content.

None of the 11 samples collected from the Butches Bar & Grill Building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 10.7.

10.1 RESULTS - SURFACING MATERIALS

10.1.1 Material Type No. 1: Plaster

Three random samples were taken from the wall and ceiling plaster (HA 9) located throughout the building. All three samples tested negative for asbestos. (Figure 9A)

10.2 RESULTS - MISCELLANEOUS MATERIALS

10.2.1 Material Type No. 2: Floor Tile

One sample was taken from each of the four different types of floor tile (HAs 1, 2, 3 and 4) located on the first floor. All four samples contained less than 1% chrysotile asbestos, therefore all of the floor tile in the building can be considered to be a non-ACM. (Figure 9A, Photograph M-1)

10.2.2 Material Type No. 3: Dropped-Ceiling Tile

One sample was taken from the dropped-ceiling tile (HA 6) located in the building. The sample tested negative for asbestos. (Figure 9A, Photograph M-2)

10.2.3 Material Type No. 4: Surface-Mounted Ceiling Tile

One sample was taken from the surface-mounted ceiling tile (HA 7) located in the building. The sample tested negative for asbestos. (Figure 9B, Photograph M-3)

10.2.4 Material Type No. 5: Linoleum

One sample was taken from the linoleum (HA 5) located in the second-floor restroom. The sample tested negative for asbestos. (Figure 9B, Photograph M-4)

10.2.5 Material Type No. 6: Roof Shingles

One sample was taken from the roof shingles (HA 8). The sample tested negative for asbestos. (Figure 9B)

10.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023836 FT

023836 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

CT	=	Surface Mounted Ceiling Tile
DCT	=	Dropped Ceiling Tile
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
Linoleum	=	Linoleum Floor Covering
Shingles	=	Roofing/Siding Shingles

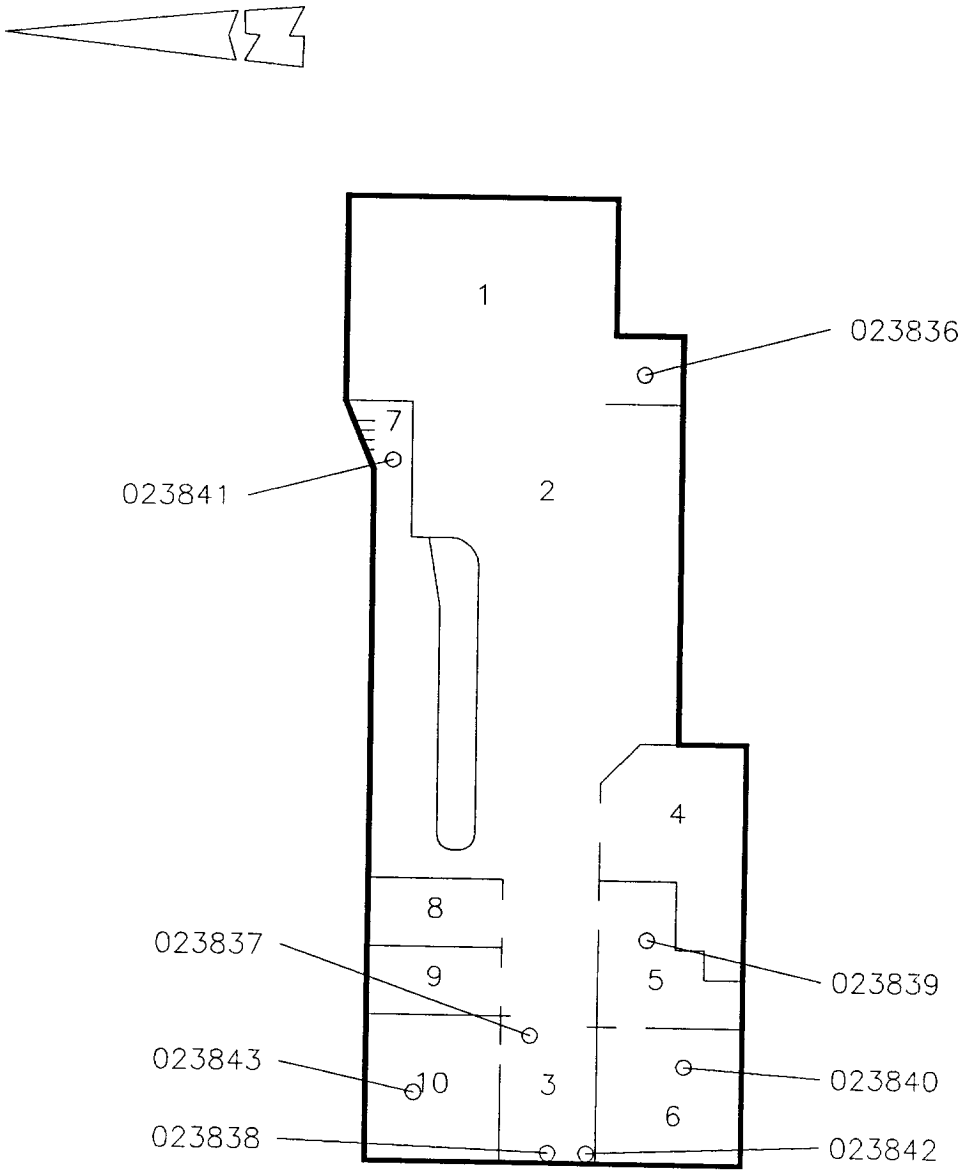
ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 9 / Butche's Bar

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.		Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 9													
023836	FT	BUTCHE'S BAR	1	ID: FIG 9-A # : 1	East end, Area 1	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	<1 <1
023837	H PLASTER	BUTCHE'S BAR	9	ID: FIG 9-A # : 1	West end, area 3 Wall plaster	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	<1 <1
023838	FT	BUTCHE'S BAR	2	ID: FIG 9-A # : 1	West end, area 3	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023839	FT	BUTCHE'S BAR	3	ID: FIG 9-A # : 1	S.W. corner of area 5	N/A	NA	#1: #2: #3:	-- -- --	Chrysotile	<1	Cellulose	2-3
023840	DCT	BUTCHE'S BAR	6	ID: FIG 9-A # : 1	S.W. corner of area 6	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	30-40 20-30
023841	FT	BUTCHE'S BAR	4	ID: FIG 9-A # : 1	Below stairwell on N.E. corner Area 7	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023842	H PLASTER	BUTCHE'S BAR	9	ID: FIG 9-A # : 1	West end next to exit Area 3 Wall plaster	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	<1 <1
023843	H PLASTER	BUTCHE'S BAR	9	ID: FIG 9-A # : 1	West end next to light fixture Area 10 Ceiling plaster	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023844	CT	BUTCHE'S BAR	7	ID: FIG 9-B # : 2	Second floor, east end Area 1	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	70-80
023845	LINOLEUM	BUTCHE'S BAR	5	ID: FIG 9-B # : 2	Second floor, west end Restroom Area 3	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	30-40
023846	SHINGLES	BUTCHE'S BAR	8	ID: FIG 9-B # : 2	Roof, west end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	2-3 2-3

10.4 SAMPLING DETAIL FIGURES



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

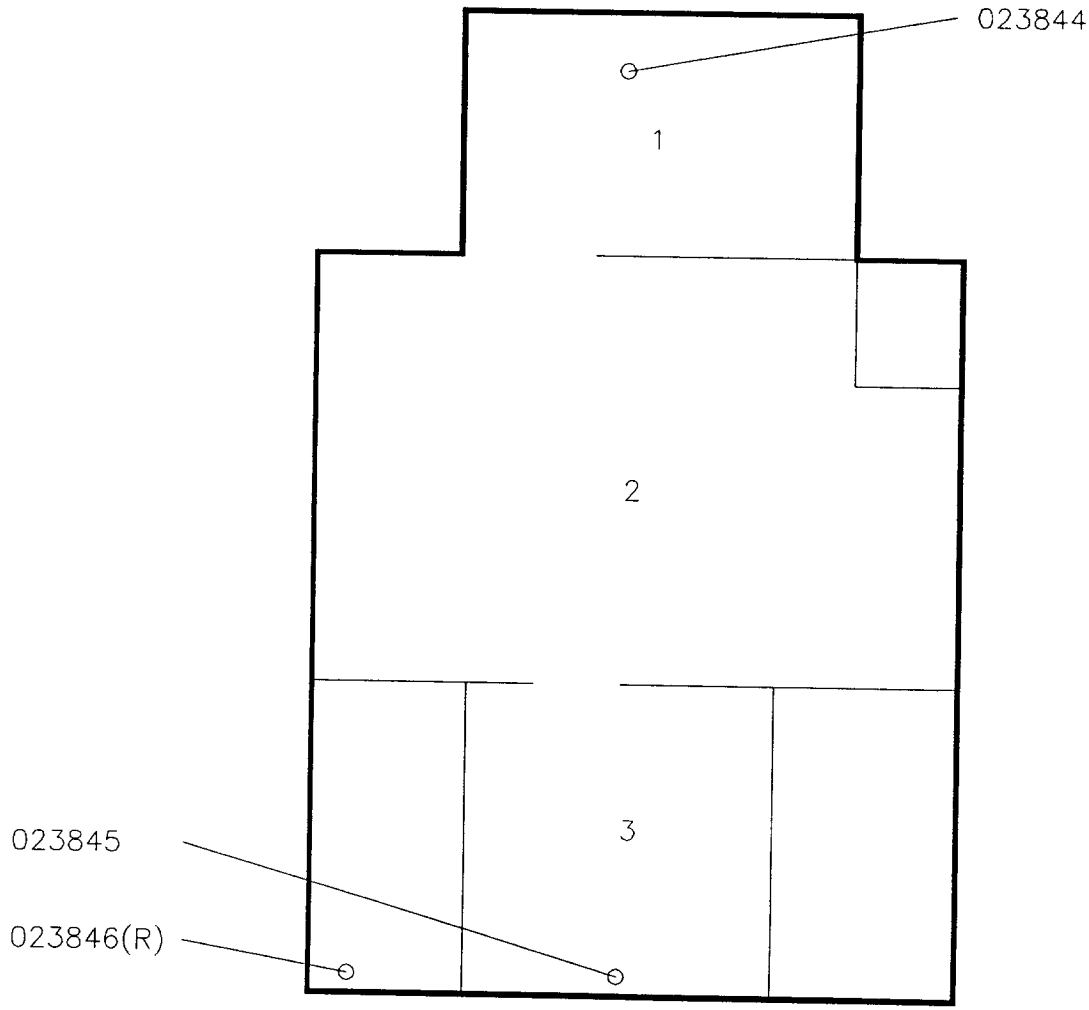
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
BUTCHES BAR/ FIRST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	9A

ATEC

13A



R = ROOF SAMPLE

● INDICATES SAMPLE CONTAINS ASBESTOS
○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
BUTCHES BAR / 2ND FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	9B

ATEC

10.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS


SAMPLE
023839
Bud
Miller
HIGH LIFE
24
12 OZ. CANS

1

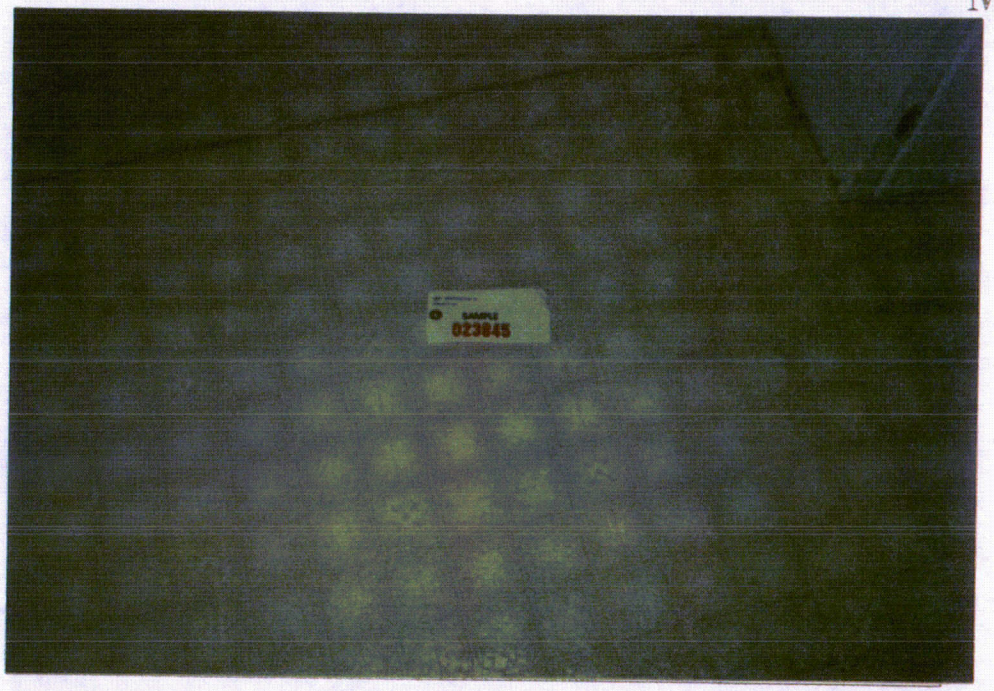

SAMPLE
023840

2

M


SAMPLE
023844

3


SAMPLE
023845

4

10.6 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 9
Butche's Bar
1323 S. Main
South Bend, IN 46601

Size: 0 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
		$ 0.00		$ 0.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

10.7 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Butches Bar & Grill Building
1321 S. Main

ATEC Project No. 21-09340

December 4, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile (Beige) - Area 1	N
2	Floor Tile (Light Red) - Area 3	N
3	Floor Tile (Tan) - Area 5	N
4	Floor Tile (Light Brown) - Area 7	N
5	Linoleum - Second Floor, Area 3	N
6	Dropped-Ceiling Tile - Area 6	N
7	Surface-Mounted Ceiling Tile - First Floor, Area 1	N
8	Roof Shingles	N
9	Wall and Ceiling Plaster - Throughout the Building	N

11.0 LOT 10

Two buildings on Lot 10 were inspected for asbestos during this survey. The two buildings are part of the old South Bend Foundry (Figure A).

Building 1 was constructed of red brick, with interior walls of plaster and brick. The two-story building covers approximately 4,700 square feet of area and is currently being used for storage purposes. The roofing system consists of a built-up asphalt material on a wood deck. The floors are wood and concrete. Approximately 20 linear feet of thermal system insulation exists on the first floor.

Building 2 is a single-story brick building that covers approximately 1,100 square feet of area. The interior walls are brick, and the floors are concrete. The roofing system consists of a built-up asphalt roof material and a shingle-covered overhang.

Three of the seven samples collected from the two buildings sampled on Lot 10 contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 11.8.

11.1 RESULTS - SURFACING MATERIALS

11.1.1 Material Type No. 1: Plaster (Building 1)

Three random samples were collected from the wall plaster (HA 5) located throughout the second floor of Building 1. All three samples tested negative for asbestos. (Figure 10B, Photograph N-1)

11.2 RESULTS - THERMAL SYSTEM INSULATION

11.2.1 Material Type No. 2: Pipe Covering (Building 1)

One sample was taken from the mag block pipe covering (HA 1) located on the first floor of Building 1. The sample contained 30-40% chrysotile asbestos. (Figure 10A, Photograph N-4)

11.3 RESULTS - MISCELLANEOUS MATERIALS

11.3.1 Material Type No. 3: Roof Shingles (Building 2)

One sample was taken from the roof shingles (HA 2) located on the overhang of Building 2. The sample tested negative for asbestos. (Figure 10C)

11.3.2 Material Type No. 4: Built-Up Asphalt Roof Material (Buildings 1 and 2)

One sample was taken from the built-up asphalt roof material (HA 3) located on Building 2. The sample contained 5-10% chrysotile asbestos. Due to the lack of access to the roof of

Building 1, the built-up asphalt roof material on Building 1 is also assumed to be asbestos-containing. (Figure 10C, Photograph N-2)

11.3.3 Material Type No. 5: Roof Flashing (Buildings 1 and 2)

One sample was taken from the roof flashing (HA 4) located on Building 2. The sample contained 20-30% chrysotile asbestos. Due to the lack of access to the roof of Building 1, the roof flashing on Building 1 is also assumed to be asbestos-containing. (Figure 10C, Photograph N-3)

11.4 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023853 FT

023853 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BU Roof	=	Built-Up Roofing Material
H Plaster	=	Hard Plaster (Ceiling or Wall)
PC 5"-8"	=	Pipe Covering (5"-8" Outside Diameter)
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles

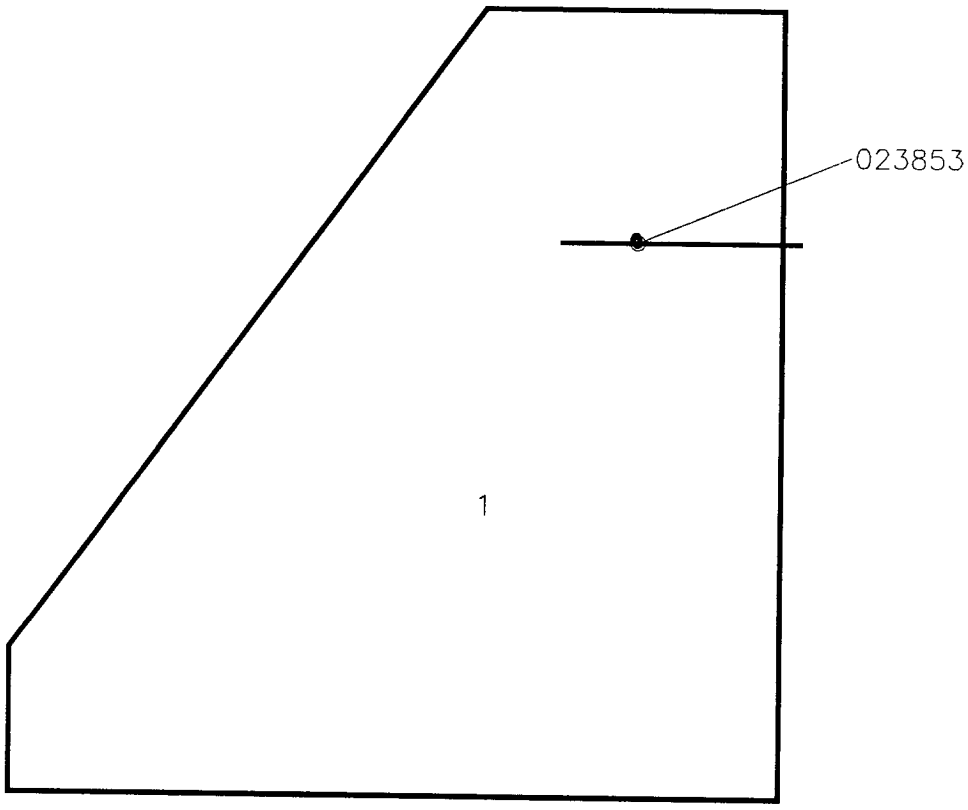
ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 10 / South Bend Foundry

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority		Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 10													
023853	PC 5"-8"	FOUNDRY	1	ID: FIG 10-A # : 1	Building 1, first floor Center	N/A	20 LF	#1: #2: #3:	20 -- --	Chrysotile	30-40	Cellulose	<1
023854	H PLASTER	FOUNDRY	5	ID: FIG 10-B # : 2	Building 1, second floor	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023855	H PLASTER	FOUNDRY	5	ID: FIG 10-B # : 2	Building 1, second floor	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023856	H PLASTER	FOUNDRY	5	ID: FIG 10-B # : 2	Building 1, second floor	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023857	SHINGLES	FOUNDRY	2	ID: FIG 10-C # : 3	Building 2, overhang West end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023858	BU ROOF	FOUNDRY	3	ID: FIG 10-C # : 3	Building 2, Roof	N/A	3225 SF	#1: #2: #3:	3225 -- --	Chrysotile	5-10	Cellulose	5-10
023858-F	ROOF FLASH	FOUNDRY	4	ID: FIG 10-C # : 3	Building 2, Roof	N/A	310 LF	#1: #2: #3:	310 -- --	Chrysotile	20-30	Glass Fibr	2-3

11.5 SAMPLING DETAIL FIGURES



1ST FLOOR

ASSUME ROOF

- INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 10 BLDG 1
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	10A

ATEC

11A

13.6 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 13
Harper's Bar
1304 S. Main
South Bend, IN 46601

Size: 900 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
LINOLEUM	1250 SF	$ 5000.00	1250 SF	$ 5000.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 5000.00		$ 5000.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

13.7 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Harper's Bar Building
1304 S. Main

ATEC Project No. 21-09340

November 28, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Linoleum - Top Layer, Bar Area, West End of Building	Y
2	Linoleum - Bottom Layer, Bar Area, West End of Bldg.	Y
3	Linoleum - Kitchen, East End of Building	N
4	Linoleum - Men's Restroom, South Side of Building	Y
5	Linoleum - Pantry North of Stairwell	N
6	Linoleum - Cellar Stairwell	N
7	Dropped-Ceiling Tile - Front Bar Area	N
8	Shingles - On Side of Building	N
9	Wall and Ceiling Plaster - Throughout the Building	N
10	Shingles - On Roof (Top Layer)	N
11	Shingles - On Roof (Bottom Layer)	N

14.0 LOT 17

Two buildings on Lot 17 were inspected for asbestos during this survey (Figure A). The buildings are located at 802 S. Lafayette (Portage Oil Building) and 825 S. Main (Rhodes Bakery Building).

14.1 PORTAGE OIL BUILDING

The building located at 802 S. Lafayette (Figure 17A) is currently being used for storage, but was previously utilized by the Portage Oil establishment. The building covers approximately 1,800 square feet. The exterior walls are covered with shingle siding, and the interior walls are plywood, wallboard or cinderblock. The ceilings were constructed of plywood and wallboard, and the concrete floors are covered with floor tile in some of the old office areas. No thermal system insulation was observed in the building.

Four of the seven samples collected from the Portage Oil Building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 14.7.

Miscellaneous Materials

14.1.1 Material Type No. 1: Floor Tile

Two samples were taken from the floor tile (HAs 1 and 2) located in Areas 1 and 2 (see Figure 17A). Both samples contained 5-10% chrysotile asbestos. (Photographs P-1 and P-2)

14.1.2 Material Type No. 2: Wallboard

One sample was taken from the wallboard (HA 4) located in the office areas. The sample tested negative for asbestos. (Figure 17A)

14.1.3 Material Type No. 3: Shingles

Two samples were taken from the shingles (HAs 3 and 5) located on the exterior walls. Both samples tested negative for asbestos. (Figure 17A, Photograph P-3)

14.1.4 Material Type No. 4: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 6). The sample contained 3-5% chrysotile asbestos. (Figure 17A, Photograph P-4)

14.1.5 Material Type No. 5: Roof Flashing

One sample was taken from the roof flashing (HA 7). The sample contained 15-20% chrysotile asbestos. (Figure 17A)

14.2 RHODES BAKERY BUILDING

The building located at 825 S. Main (Figures 17B and 17C) is currently vacant but was previously utilized by the Rhodes Bakery establishment. The two-story building covers approximately 4,600 square feet of area. The exterior walls were constructed of red brick, and the interior walls are brick, plaster or plaster over cork (in the walk-in cooler areas). Some ceiling tile is located in the office areas. The roof system consists of a built-up asphalt roof material. The pipe system is insulated with mag block, air cell and layered-paper material. The thermal system insulation located in the boiler room has been significantly disturbed. There is a transite cooling tower located on the roof.

Twenty-two of the 33 samples collected from the Rhodes Bakery Building contained asbestos. An additional two samples were collected solely for quality control (QC) reasons. These QC samples were randomly split from those samples taken from suspect materials in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 14.7.

Surfacing Materials

14.2.1 Material Type No. 1: Plaster

A total of eight samples were taken from two different types of plaster located in the building. Five of the eight samples were taken from the plaster (HA 20) located over the cork material in the walk-in cooler areas of the first and second floors (Photograph Q-1). This plaster was found to contain chrysotile asbestos in concentrations ranging from 3-10%. (Figures 17B and 17C)

The remaining three samples were taken from the plaster (HA 19) located in the office area on the northeast corner of the first floor. All three samples of this plaster tested negative for asbestos. (Figure 17B)

Thermal System Insulation

14.2.2 Material Type No. 2: Pipe Covering

Five representative samples were taken from the air cell, mag block and layered paper types of pipe covering (HAs 4, 5 and 6)

located throughout the building (Photograph R-1). Four of the five samples tested positive for chrysotile asbestos, therefore all pipe coverings other than those that are clearly fiberglass should be assumed to be asbestos-containing. Stacks of delaminated ACM pipe coverings were observed in the southeast corner of the second floor (Photograph R-2). (Figures 17B and 17C)

14.2.3 Material Type No. 3: Pipe Fitting Insulation

Three representative samples were taken from "mud-packed" pipe fitting insulation (HA 7) located throughout the building. Two of the three samples tested positive for asbestos, therefore all pipe fitting insulation should be assumed to be an ACM. (Figures 17B and 17C, Photograph R-3)

14.2.4 Material Type No. 4: Boiler Cover

One sample was taken from the boiler cover (HA 1) located in the boiler room. The sample contained 35-45% chrysotile asbestos. This boiler cover is in very poor condition and has been significantly damaged. (Figure 17B, Photograph R-4)

14.2.5 Material Type No. 5: Tank Cover

Four representative samples were collected from the covers (HA 2) of the various insulated tanks located on the first and second floors of the building. All four tank cover samples tested positive for asbestos. (Figures 17B and 17C, Photographs S-1 and S-2)

14.2.6 Material Type No. 6: Boiler Stack Insulation

One sample was taken from the boiler stack insulation (HA 3) located in the boiler room on the first floor (Area 4). The sample contained 30-40% chrysotile asbestos. The boiler stack is in very poor condition. (Figure 17B, Photograph S-3)

14.2.7 Material Type No. 7: Debris

One sample was taken from debris (HA 14) located in the boiler room. The sample contained 30-40% chrysotile asbestos. The debris has apparently accumulated from damaged and deteriorated asbestos-containing TSI present in the boiler room, and the debris is scattered throughout the entire boiler room. (Figure 17B, Photograph S-4)

Miscellaneous Materials

14.2.8 Material Type No. 8: Floor Tile

One sample was taken from each of the three different types of floor tile (HAs 8, 9 and 10) located in the office area in the northeast corner of the first floor. Two of the samples tested positive for asbestos. The 9"x9" red floor tile (HA 9) and the

9"x9" gray floor tile (HA 10) contained asbestos (Photograph Q-2). The 9"x9" tan floor tile (HA 8) is a non-ACM. (Figure 17B)

14.2.9 Material Type No. 9: Transite Cooling Tower

One sample was taken from the transite cooling tower (HA 17) located on the roof of the building. The sample contained 30-40% chrysotile asbestos and less than 1% amosite asbestos. (Figure 17C, Photograph Q-3)

14.2.10 Material Type No. 10: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 16). The sample contained less than 1% amosite asbestos, therefore this material may be considered to be a non-ACM. (Figure 17C)

14.2.11 Material Type No. 11: Roof Flashing

One sample was taken from the roof flashing (HA 15). The sample contained 5-10% chrysotile asbestos. (Figure 17C)

14.2.12 Material Type No. 12: Cork Mastic

One sample was taken from the black mastic (HA 13) located on the cork insulation material inside the plaster walls of the walk-in cooler areas on the first and second floors. The sample contained 5-10% chrysotile asbestos. (Figures 17B and 17C, Photograph Q-4)

14.2.13 Material Type No. 13: Ceiling Tile

One sample each was taken from the surface-mounted ceiling tile (HA 11) and dropped-ceiling tile (HA 12) located in the office area in the northeast corner of the first floor. Both samples tested negative for asbestos. (Figure 17B)

14.2.14 Material Type No. 14: Paper Insulation

One sample was obtained from the paper insulation (HA 18) located in the small doors of the walk-in coolers on the first floor. The sample tested negative for asbestos. (Figure 17B)

14.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023847 FT

023847 = Sample Number
FT = Type of Material Sampled

Material Abbreviation

BC	=	Boiler or Pressure Vessel Cover
BS	=	Boiler Stack Insulation
BU Roof	=	Built-Up Roofing Material
CT	=	Surface Mounted Ceiling Tile
DCT	=	Dropped Ceiling Tile
Debris	=	Suspected Asbestos Debris on a Surface
FT	=	Floor Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
Misc	=	Miscellaneous Materials (Cork Mastic Material and Paper Material)
PC 5"-8"	=	Pipe Covering (5"-8" Outside Diameter)
PC 9"-12"	=	Pipe Covering (9"-12" Outside Diameter)
PF 5"-8"	=	Pipe Fitting (5"-8" Outside Diameter)
PF 9"-12"	=	Pipe Fitting (9"-12" Outside Diameter)
Roof Flash	=	Roofing Flashing on Penetrations
Shingles	=	Roofing/Siding Shingles
TC	=	Tank Cover
Transite	=	Cementitious Hardboard Material

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 17 / Portage Oil/Rhodes Bakery

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority		Type of Asbestos	%	Other Material	%
	PROJECT / SITE - 21-09340 / LOT 17												
023801	FT	RHOADES BAKERY	8	ID: FIG 17-B # : 2	Room 1, South end	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	2-3
023802	FT	RHOADES BAKERY	9	ID: FIG 17-B # : 2	Room 1, Center of room 9"x9" red	N/A	300 SF	#1: #2: #3:	300 -- --	Chrysotile	5-10	NOF	
023803	FT	RHOADES BAKERY	10	ID: FIG 17-B # : 2	Room 1, Center of room 9"x9" gray	N/A	300 SF	#1: #2: #3:	300 -- --	Chrysotile	5-10	NOF	
023804	CT	RHOADES BAKERY	11	ID: FIG 17-B # : 2	Room 1, East side	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	70-80
023805	DCT	RHOADES BAKERY	12	ID: FIG 17-B # : 2	Room 1, South east corner	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	70-80
023806	H PLASTER	RHOADES BAKERY	19	ID: FIG 17-B # : 2	Room 1, Center	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose	<1
023807	H PLASTER	RHOADES BAKERY	19	ID: FIG 17-B # : 2	Room 1, N.W. corner	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	2-3 2-3
023808	H PLASTER	RHOADES BAKERY	19	ID: FIG 17-B # : 2	Room 1, S.W. corner	N/A	NA	#1: #2: #3:	-- -- --	ND		Cellulose Glass Fibr	<1 <1
023809	H PLASTER	RHOADES BAKERY	20	ID: FIG 17-B # : 2	Room 3, S.E. corner	N/A	3300 SF	#1: #2: #3:	3300 -- --	Chrysotile	5-10	Cellulose	<1
023810	H PLASTER	RHOADES BAKERY	20	ID: FIG 17-B # : 2	Room 3, S.E. corner	N/A	NA	#1: #2: #3:	-- -- --	Chrysotile	5-10	Cellulose	2-3
023811	H PLASTER	RHOADES BAKERY	20	ID: FIG 17-B # : 2	Room 3, Center	N/A	NA	#1: #2: #3:	-- -- --	Amosite	<1	Cellulose	<1
023812	MISC	RHOADES BAKERY	13	ID: FIG 17-B # : 2	Room 3, Center Ceiling cork Mastic material	N/A	5550	#1: #2: #3:	5550 -- --	Chrysotile	5-10	NOF	

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 17												
023813	BC	RHOADES BAKERY	1	ID: FIG 17-B # : 2	Room 4, Boiler room	N/A	400 SF	#1: 400 #2: -- #3: --	Chrysotile	35-45	NOF	
023814	TC	RHOADES BAKERY	2	ID: FIG 17-B # : 2	Room 4, Boiler room	N/A	96 SF	#1: 96 #2: -- #3: --	Chrysotile	30-40	NOF	
023815	BS	RHOADES BAKERY	3	ID: FIG 17-B # : 2	Room 4, Boiler room	N/A	800 LF	#1: 800 #2: -- #3: --	Chrysotile	30-40	NOF	
023816	DEBRIS	RHOADES BAKERY	14	ID: FIG 17-B # : 2	Room 4, Boiler room Below boiler	N/A	740 SF	#1: 740 #2: -- #3: --	Chrysotile	30-40	NOF	
023817	TC	RHOADES BAKERY	2	ID: FIG 17-B # : 2	Room 5, N.W. corner	N/A	144 SF	#1: 144 #2: -- #3: --	Chrysotile	20-30	Cellulose	20-30
023818	TC	RHOADES BAKERY	2	ID: FIG 17-B # : 2	Room 5, S.W. corner	N/A	64 SF	#1: 64 #2: -- #3: --	Chrysotile	30-40	Cellulose	30-40
023819	PC 5"-8"	RHOADES BAKERY	4	ID: FIG 17-B # : 2	Room 2, South end	N/A	1695 LF	#1: 1695 #2: -- #3: --	Chrysotile	30-40	NOF	
023820	PC 5"-8"	RHOADES BAKERY	5	ID: FIG 17-B # : 2	Room 2, South end	N/A	1002 LF	#1: 1002 #2: -- #3: --	Chrysotile	60-70	NOF	
023821	PC 5"-8"	RHOADES BAKERY	6	ID: FIG 17-C # : 3	Second floor, Room 1 N.W. corner	N/A	10 LF	#1: 10 #2: -- #3: --	Chrysotile	10-15	Cellulose	60-70
023822	PC 5"-8"	RHOADES BAKERY	6	ID: FIG 17-C # : 3	Second floor, Room 1 S.E. corner	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose Other	60-70 2-3
023823	PF 5"-8"	RHOADES BAKERY	7	ID: FIG 17-C # : 3	Second floor, Room 3 N.W. corner	N/A	173 Each	#1: 173 #2: -- #3: --	Chrysotile	30-40	NOF	
023824	ROOF FLASH	RHOADES BAKERY	15	ID: FIG 17-C # : 3	Roof on west end	N/A	600 LF	#1: 600 #2: -- #3: --	Chrysotile	5-10	Cellulose Glass Fibr	<1 20-30

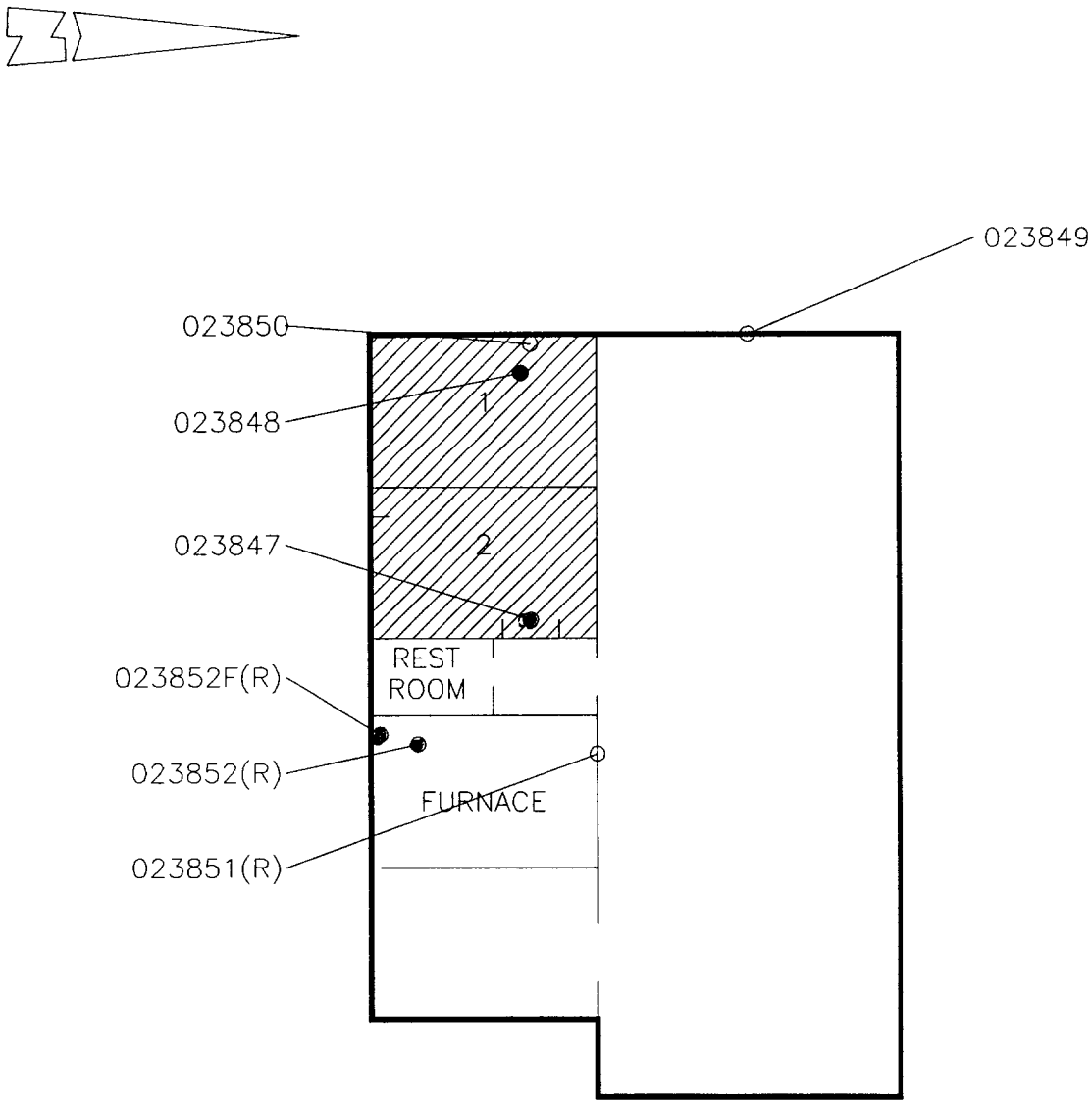
CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 17												
023825	BU ROOF	RHOADES BAKERY	16	ID: FIG 17-C # : 3	Roof on west end	N/A	NA	#1: -- #2: -- #3: --	Amosite	<1	Glass Fibr	50-60
023826	TRANSITE	RHOADES BAKERY	17	ID: FIG 17-C # : 3	Roof, N.W. corner	N/A	320 SF	#1: 320 #2: -- #3: --	Chrysotile Amosite	30-40 <1	Cellulose	5-10
023827	TC	RHOADES BAKERY	2	ID: FIG 17-C # : 3	Second floor, Room 5	N/A	96 SF	#1: 96 #2: -- #3: --	Chrysotile	15-20	Cellulose Horsehair Other	2-3 20-30 5-10
023828	PF 9"-12"	RHOADES BAKERY	7	ID: FIG 17-C # : 3	Second floor, room 5	N/A	37 Each	#1: 37 #2: -- #3: --	Chrysotile	20-30	Cellulose Horsehair	5-10 20-30
023829	PC 9"-12"	RHOADES BAKERY	6	ID: FIG 17-C # : 3	Second floor, room 5	N/A	190 LF	#1: 190 #2: -- #3: --	ND		Cellulose Horsehair	2-3 70-80
023830	H PLASTER	RHOADES BAKERY	20	ID: FIG 17-C # : 3	Second floor, Room 7	N/A	1800 SF	#1: 1800 #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023831	H PLASTER	RHOADES BAKERY	20	ID: FIG 17-C # : 3	Second floor, Room 7	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose	<1
023832	PF 5"-8"	RHOADES BAKERY	7	ID: FIG 17-B # : 2	First floor, Room 2	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	45-55
023833	MISC	RHOADES BAKERY	18	ID: FIG 17-B # : 2	First floor, Room 2 West wall, inside doors	N/A	8	#1: 8 #2: -- #3: --	ND		NOF	
023834	FT	RHOADES BAKERY	10	ID: FIG 17-B # : 2	Quality control sample of #023803	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-8	Cellulose	<1
023835	CT	RHOADES BAKERY	11	ID: FIG 17-B # : 2	Quality control sample of #023804	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	60-70
023847	FT	PORTAGE OIL	1	ID: FIG 17-A # : 1	Office area #2	N/A	150 SF	#1: 150 #2: -- #3: --	Chrysotile	5-10	Cellulose	<1

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 17												
023848	FT	PORTAGE OIL	2	ID: FIG 17-A # : 1	Office area #1 (front)	N/A	150 SF	#1: 150 #2: -- #3: --	Chrysotile	5-10	Cellulose	<1
023849	SHINGLES	PORTAGE OIL	3	ID: FIG 17-A # : 1	Exterior siding	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	20-30
023850	WALLBOARD	PORTAGE OIL	4	ID: FIG 17-A # : 1	Office area #1 (front)	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	30-40 2-3
023851	SHINGLES	PORTAGE OIL	5	ID: FIG 17-A # : 1	Roof, white shingles	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023852	BU ROOF	PORTAGE OIL	6	ID: FIG 17-A # : 1	Roof, south end	N/A	1750 SF	#1: 1750 #2: -- #3: --	Chrysotile	3-5	Cellulose Glass Fibr	3-5 3-5
023852-F	ROOF FLASH	PORTAGE OIL	7	ID: FIG 17-A # : 1	Roof, south end	N/A	240 LF	#1: 240 #2: -- #3: --	Chrysotile	15-20	NOF	

14.4 SAMPLING DETAIL FIGURES



(R) ROOF SAMPLE

ACM FLOOR TILE

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
PORTAGE OIL
SOUTH BEND, IN

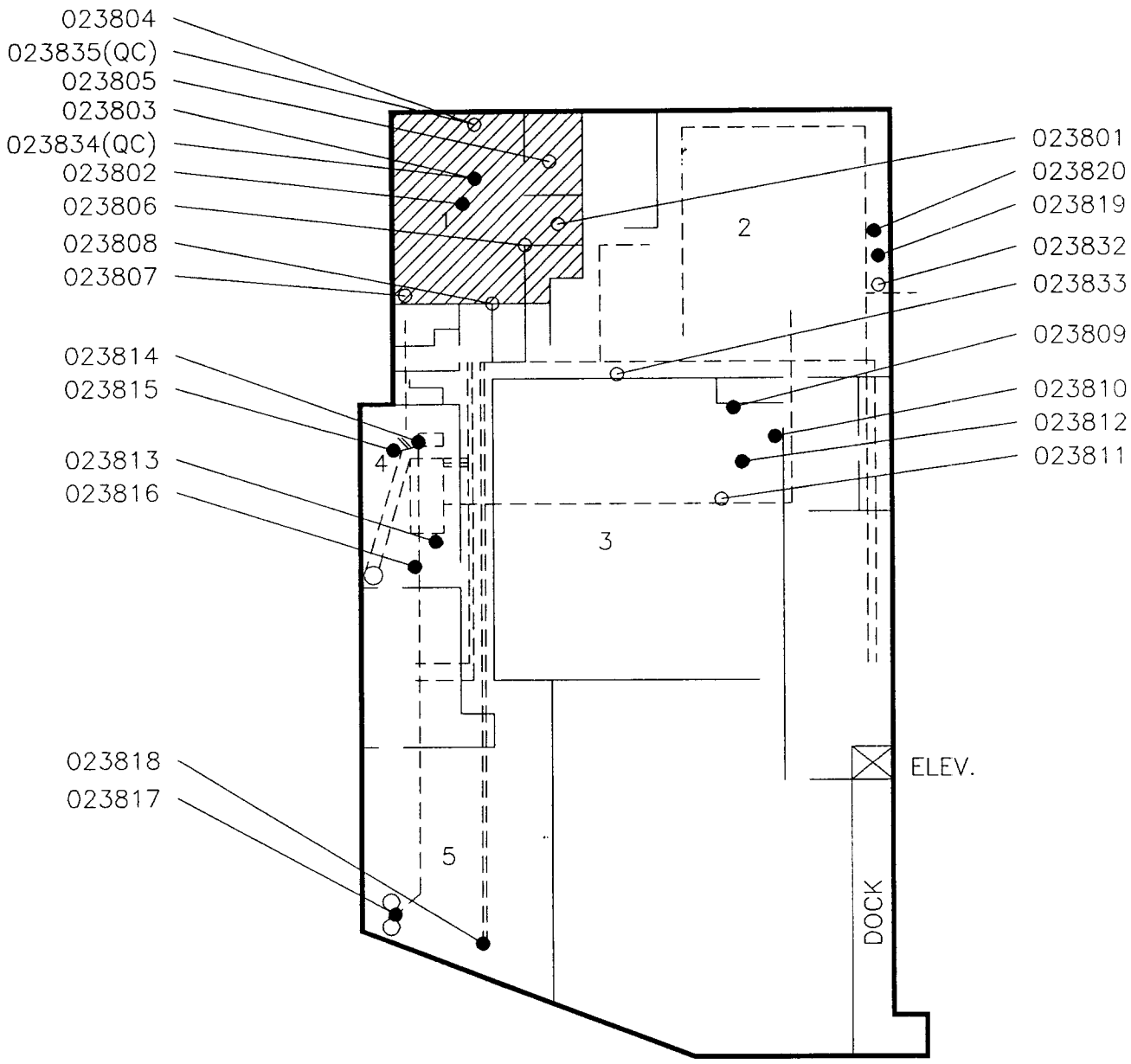
PROJECT NO.
21-09340

SCALE
1" = 10'

FIGURE NO.
17A

ATEC

12A



ACM FLOOR TILE

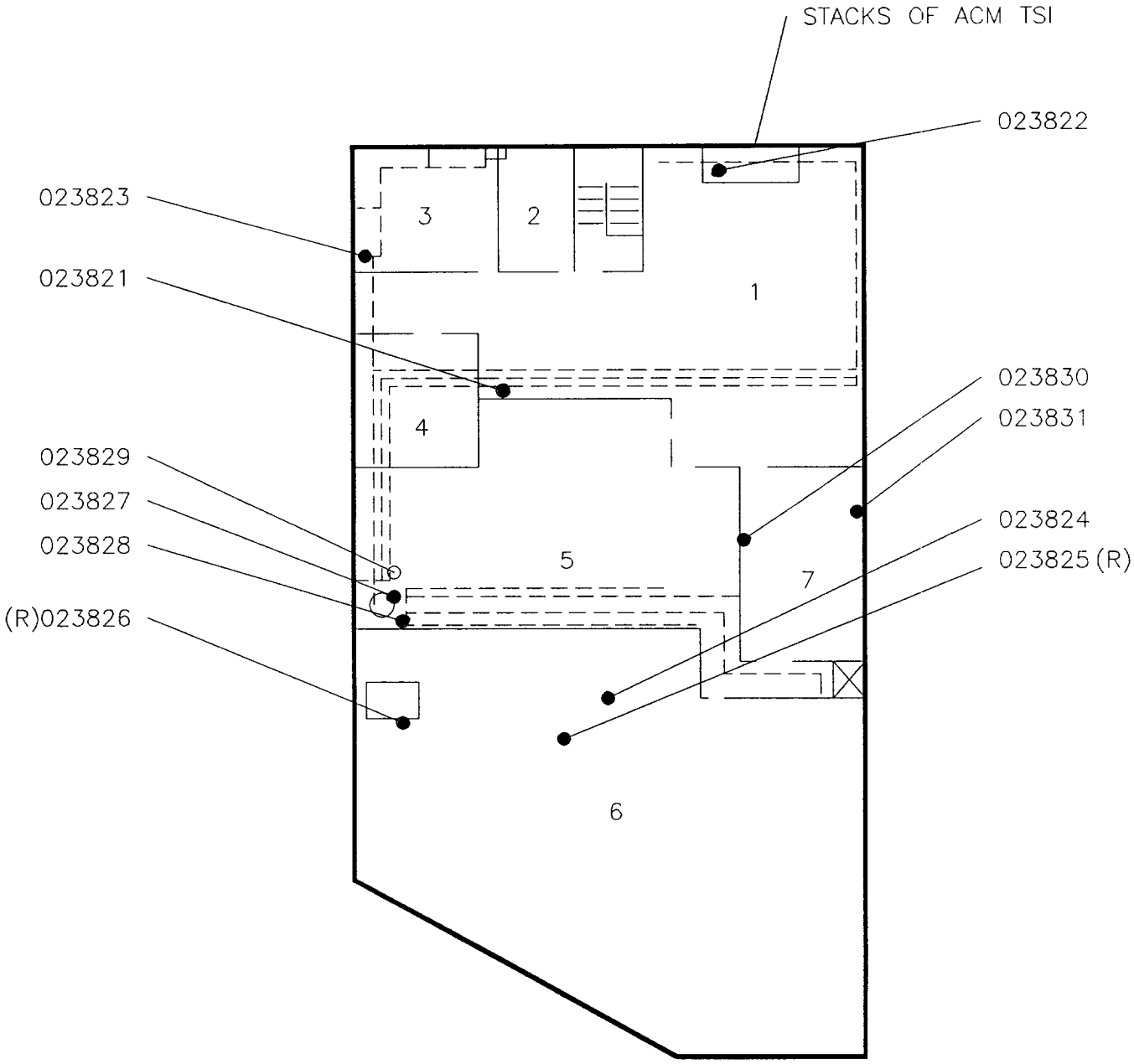
- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
RHODES BLDG. – FIRST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 20'
FIGURE NO.	17B

ATEC



(R) ROOF

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
RHODES BLDG. – SECOND FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 20'
FIGURE NO.	17C

ATEC

14B

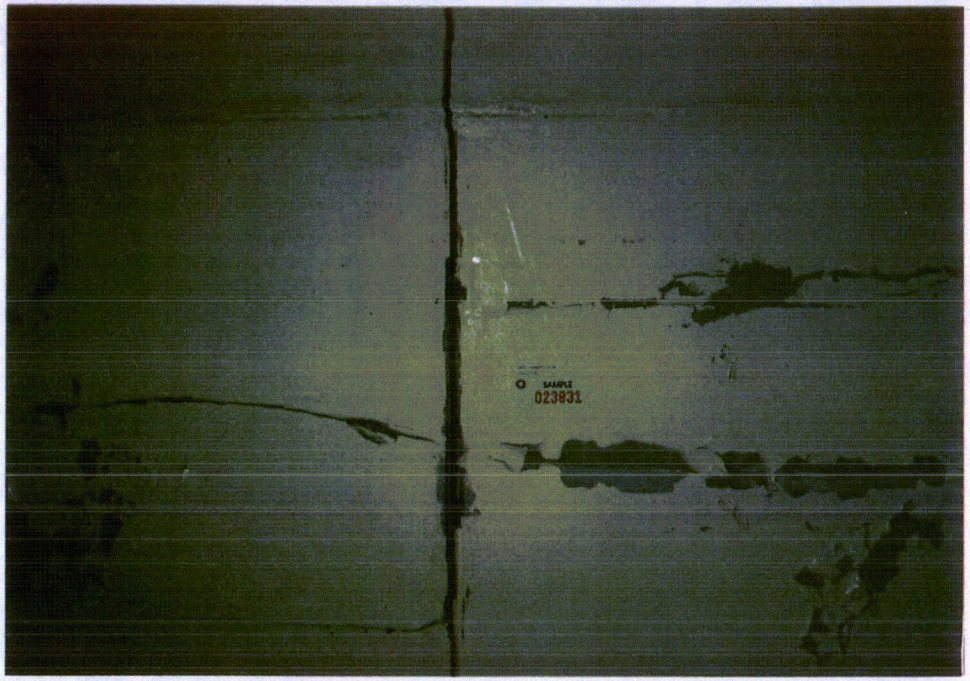
14.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1

2

3

4



1

2

3

4

1

2

R

3

4

1

2

S

3

4

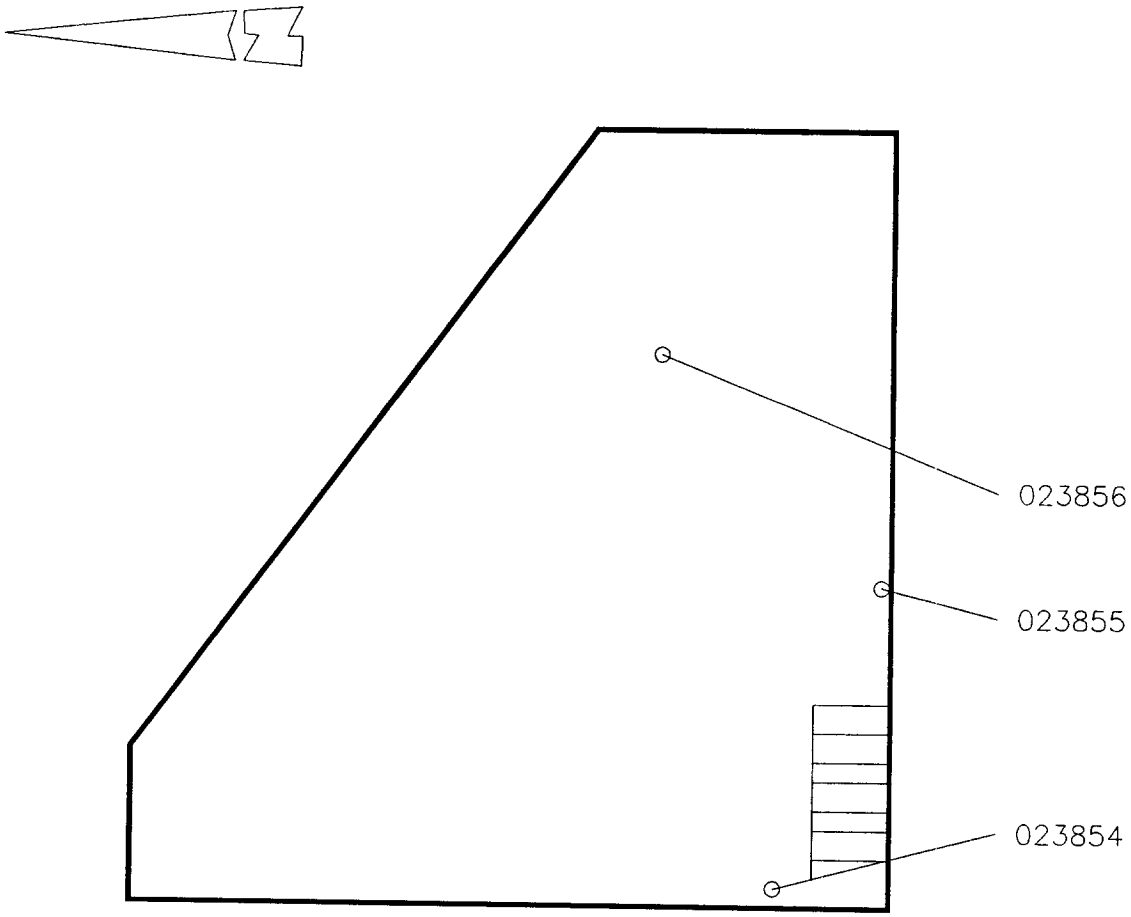
14.6 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 17
Portage Oil/Rhodes Bakery
802 S. Lafayette
South Bend, IN 46601

Size: 6400 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BC	400 SF	$ 6000.00	400 SF	$ 6000.00	0 SF	$ 0.00	0 SF	$ 0.00
BS	800 LF	$ 12000.00	800 LF	$ 12000.00	0 LF	$ 0.00	0 LF	$ 0.00
BU ROOF	1750 SF	$ 8750.00	1750 SF	$ 8750.00	0 SF	$ 0.00	0 SF	$ 0.00
DEBRIS	740 SF	$ 2220.00	740 SF	$ 2220.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	900 SF	$ 1800.00	900 SF	$ 1800.00	0 SF	$ 0.00	0 SF	$ 0.00
H PLASTER	5100 SF	$ 66300.00	5100 SF	$ 66300.00	0 SF	$ 0.00	0 SF	$ 0.00
PC 5"-8"	2707 LF	$ 35191.00	2707 LF	$ 35191.00	0 LF	$ 0.00	0 LF	$ 0.00
PF 5"-8"	173 Each	$ 3460.00	173 Each	$ 3460.00	0 Each	$ 0.00	0 Each	$ 0.00
PF 9"-12"	37 Each	$ 962.00	37 Each	$ 962.00	0 Each	$ 0.00	0 Each	$ 0.00

* Note: Abatement cost does not include replacement of materials.



2ND FLOOR

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

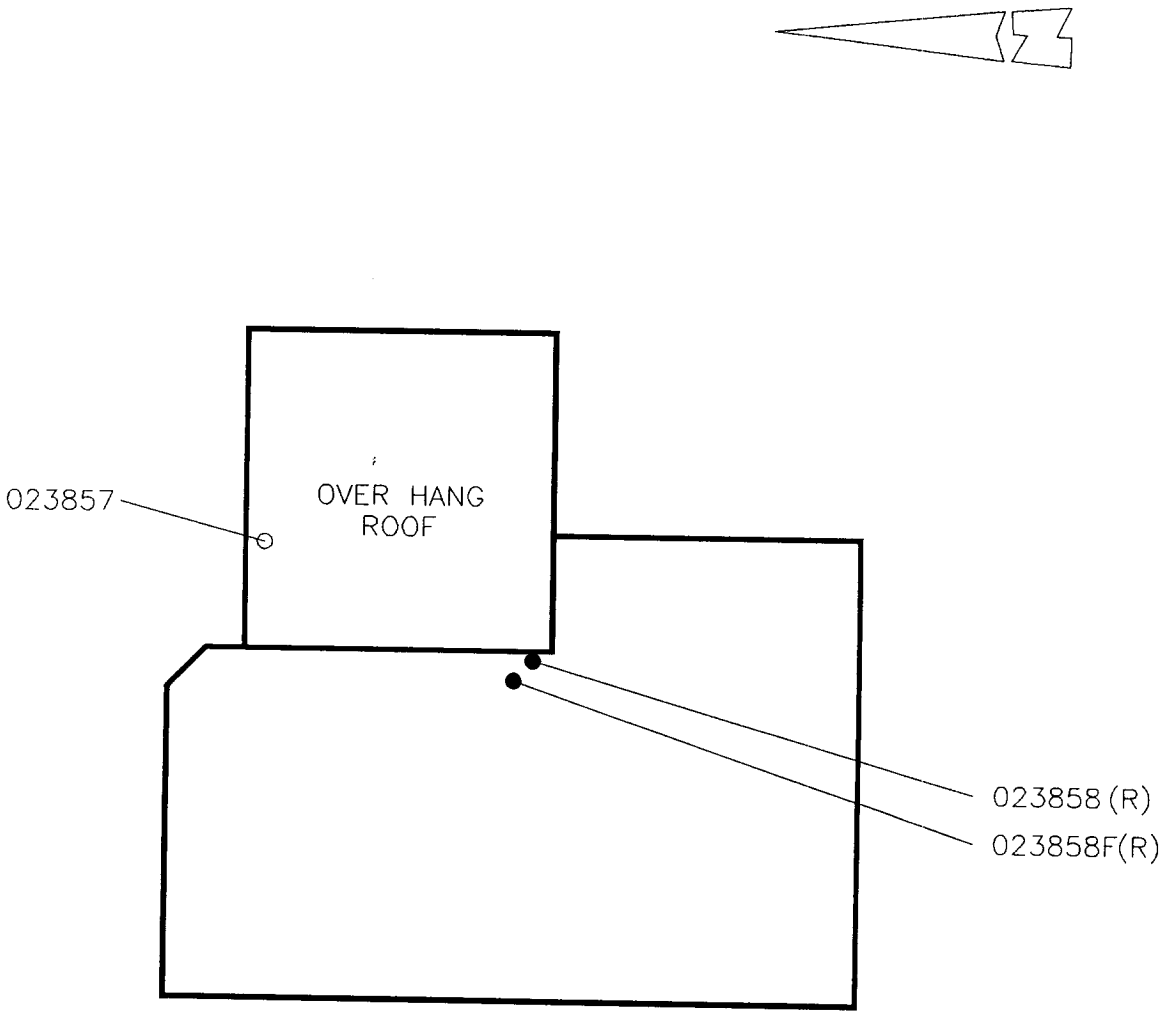
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 10 BLDG 1
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1"=10'
FIGURE NO.	10B

ATEC

11B



(R) ROOF

- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
SOUTH BEND FOUNDRY LOT 10 BLDG 2
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	10C

ATEC

11C

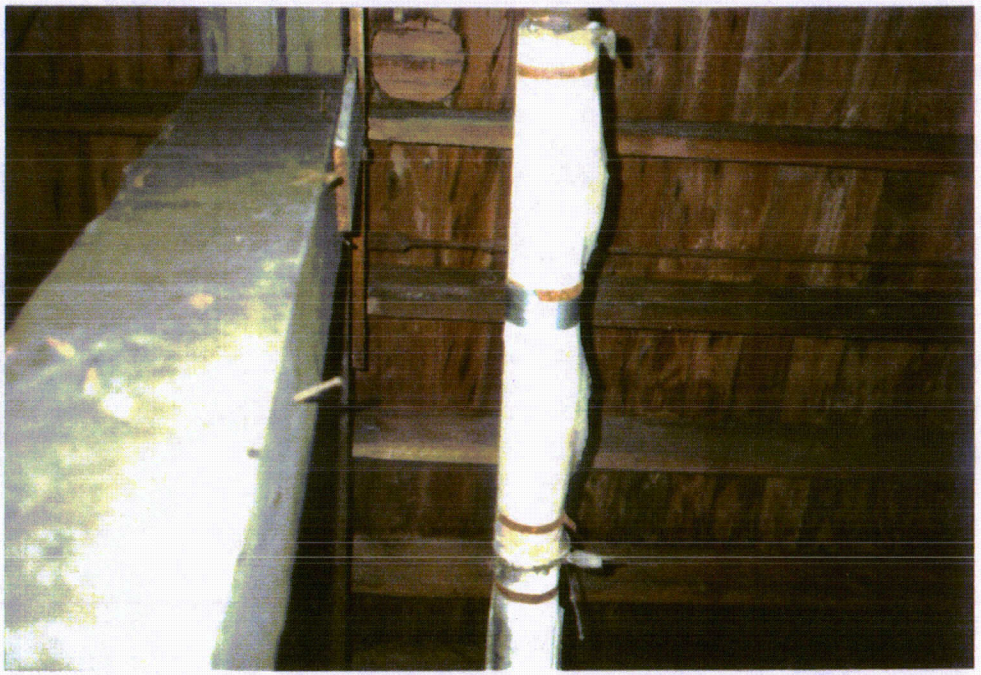
11.6 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1

2

N

3



4

11.7 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 10
South Bend Foundry
South Bend, IN 46601

Size: 5800 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BU ROOF	3225 SF	$ 16125.00	3225 SF	$ 16125.00	0 SF	$ 0.00	0 SF	$ 0.00
PC 5"-8"	20 LF	$ 260.00	20 LF	$ 260.00	0 LF	$ 0.00	0 LF	$ 0.00
ROOF FLASH	310 LF	$ 1550.00	310 LF	$ 1550.00	0 LF	$ 0.00	0 LF	$ 0.00
		$ 17935.00		$ 17935.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

11.8 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

South Bend Foundry
2 Buildings on Lot 10

ATEC Project No. 21-09340

December 5, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Pipe Covering (Mag Block) - Building 1, First Floor	Y
2	Roof Shingles - Building 2	N
3	Built-Up Asphalt Roof Material - Buildings 1 and 2	Y
4	Roof Flashing - Buildings 1 and 2	Y
5	Wall and Ceiling Plaster - Building 1, Second Floor	N

12.0 LOT 12

The building located at 1130 S. Main (Figure A) was the only building inspected for asbestos on Lot 12. This building is currently being used as a gasoline service station. The structure covers approximately 375 square feet of area and was constructed of cinderblock on a concrete slab. The interior walls are cinderblock and plywood, and fiberglass dropped-ceiling tile is present in some areas. The roof is covered with shingles. No thermal system insulation was observed in the building.

Neither of the two samples collected from the service station building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 12.5.

12.1 RESULTS - MISCELLANEOUS MATERIALS

12.1.1 Material Type No. 1: Roof Shingles

One sample was taken from each of the two different types of roof shingles (HAs 1 and 2) located on top of the main structure and overhang. Both samples tested negative for asbestos. (Figure 12)

12.2 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023969 Shingles

023969 = Sample Number
Shingles = Type of Material Sampled

Material Abbreviation

Shingles = Roofing/Siding Shingles

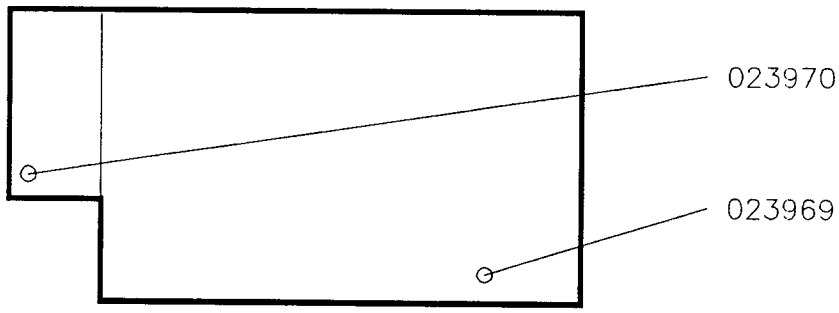
ND = None Detected
NOF = No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 12 / Service Station

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 12												
023969	SHINGLES	SERVICE STATION	1	ID: FIG 12 # : 1	East end of roof	N/A	NA	#1: -- #2: -- #3: --	ND		Glass Fibr	30-40
023970	SHINGLES	SERVICE STATION	2	ID: FIG 12 # : 1	Service station West end, overhang	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1

12.3 SAMPLING DETAIL FIGURES



- ● INDICATES SAMPLE CONTAINS ASBESTOS
- ○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR
SERVICE STATION – ROOF
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	12

ATEC

12.4 SUMMARY REPORT

12.5 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Service Station
1130 S. Main

ATEC Project No. 21-09340

December 6, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Roof Shingles (Red) - Over Main Structure	N
2	Roof Shingles - Over Front Overhang	N

13.0 LOT 13

The building located at 1304 S. Main (Figure A, Photograph O-1) was the only building on Lot 13 inspected for asbestos during this survey. The building is currently vacant, but was previously used by the "Harper's Bar" establishment. A house to the west of the building shares the same property but was not included in the scope of this project.

The structure covers approximately 900 square feet and includes a small cellar. The exterior walls are covered with green shingles and metal siding, and the interior walls are plaster. The floors are covered with linoleum, and the roof system consists of shingles. No thermal system insulation was observed, however some dropped-ceiling tile is present in the building.

Three of the 13 samples collected from the Harper's Bar Building contained asbestos. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 13.7.

13.1 RESULTS - SURFACING MATERIALS

13.1.1 Material Type No. 1: Plaster

Three random samples were collected from the wall plaster (HA 9) located throughout the building. All three samples tested negative for asbestos. (Figure 13)

13.2 RESULTS - MISCELLANEOUS MATERIALS

13.2.1 Material Type No. 2: Linoleum

One sample was taken from each of the six different types of linoleum (HAs 1, 2, 3, 4, 5 and 6) located throughout the building (Figure 13). Three of the samples tested positive for asbestos. The following types of linoleum contain asbestos:

1) Top layer of linoleum (HA 1) in the bar area on the west end of the building (Photograph O-2)
2) Bottom layer of linoleum (HA 2) in the bar area on the west end of the building (Photograph O-3)
3) Linoleum (HA 4) in the men's restroom in the south end of the building (Photograph O-4)

13.2.2 Material Type No. 3: Dropped-Ceiling Tile

One sample was taken from the dropped-ceiling tile (HA 7) located in the bar area on the west side of the building. The sample tested negative for asbestos. (Figure 13)

13.2.3 Material Type No. 4: Shingles

One sample was taken from each of the three types of shingles (HA 8, 10 and 11) located on the roof and sides of the building. All three samples tested negative for asbestos. (Figure 13)

13.3 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023716 Linoleum

023716 = Sample Number
Linoleum = Type of Material Sampled

Material Abbreviation

DCT	=	Dropped Ceiling Tile
H Plaster	=	Hard Plaster (Ceiling or Wall)
Linoleum	=	Linoleum Floor Covering
Shingles	=	Roofing/Siding Shingles

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 13 / Harper's Bar

CLIENT: SOUTHBEND / City of South Bend

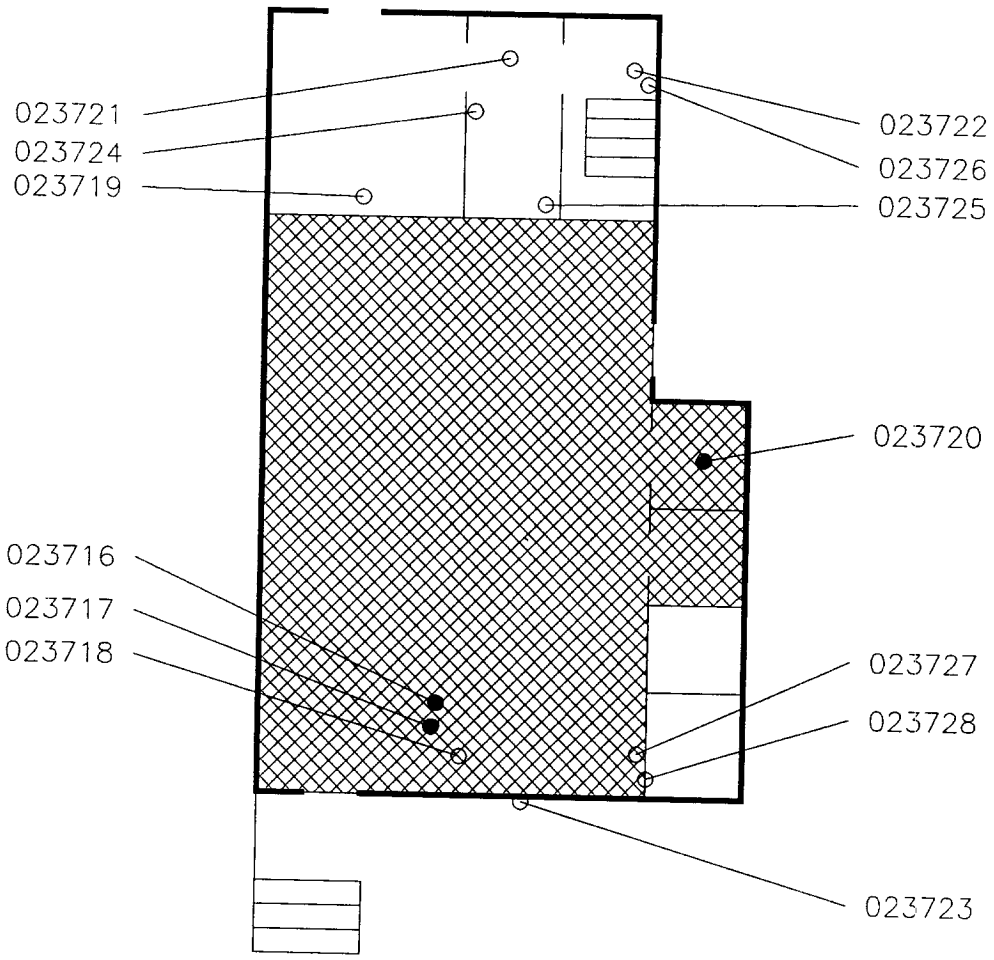
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 13												
023716	LINOLEUM	HARPER'S BAR	1	ID: FIG 13 # : 1	Bar area, west end Top layer	N/A	600 SF	#1: 600 #2: -- #3: --	Chrysotile	20-30	Cellulose Manmade	3-5 2-3
023717	LINOLEUM	HARPER'S BAR	2	ID: FIG 13 # : 1	Bar area, West end Bottom layer	N/A	600 SF	#1: 600 #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023718	DCT	HARPER'S BAR	7	ID: FIG 13 # : 1	Bar area, West end	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	70-80
023719	LINOLEUM	HARPER'S BAR	3	ID: FIG 13 # : 1	Kitchen, east end	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Manmade	20-30 3-5
023720	LINOLEUM	HARPER'S BAR	4	ID: FIG 13 # : 1	Men's restroom South side	N/A	50 SF	#1: 50 #2: -- #3: --	Chrysotile	20-30	Cellulose	5-10
023721	LINOLEUM	HARPER'S BAR	5	ID: FIG 13 # : 1	Pantry, North of stairwell	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	20-30
023722	LINOLEUM	HARPER'S BAR	6	ID: FIG 13 # : 1	Cellar stairwell	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr Manmade	20-30 2-3 2-3
023723	SHINGLES	HARPER'S BAR	8	ID: FIG 13 # : 1	Shingle exterior siding	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 5-10
023724	H PLASTER	HARPER'S BAR	9	ID: FIG 13 # : 1	Pantry, North wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	2-3 <1
023725	H PLASTER	HARPER'S BAR	9	ID: FIG 13 # : 1	Pantry, above furnace	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023726	H PLASTER	HARPER'S BAR	9	ID: FIG 13 # : 1	Cellar stairwell (exterior wall)	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Horsehair	2-3 <1
023727	SHINGLES	HARPER'S BAR	10	ID: FIG 13 # : 1	Roof field, shingles top layer	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 20-30

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 13 / Harper's Bar

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 13												
023728	SHINGLES	HARPER'S BAR	11	ID: FIG 13 # : 1	Roof field, shingles Bottom layer	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1

13.4 SAMPLING DETAIL FIGURES



ACM LINOLEUM

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
HARPERS BAR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 10'
FIGURE NO.	13

ATEC

6A

13.5 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS

1

2

0

3

4

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
ROOF FLASH	840 LF	$ 4200.00	840 LF	$ 4200.00	0 LF	$ 0.00	0 LF	$ 0.00
TC	400 SF	$ 6000.00	400 SF	$ 6000.00	0 SF	$ 0.00	0 SF	$ 0.00
TRANSITE	320 SF	$ 2240.00	320 SF	$ 2240.00	0 SF	$ 0.00	0 SF	$ 0.00
		$ 149123.00		$ 149123.00		$ 0.00		$ 0.00

* Note: Abatement cost does not include replacement of materials.

14.7 INDEX OF HOMOGENEOUS AREAS (HAs)

14.7.1 INDEX OF HOMOGENEOUS AREAS - PORTAGE OIL BUILDING

Portage Oil Building
802 S. Lafayette

ATEC Project No. 21-09340

December 5, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Floor Tile - Office Area 2	Y
2	Floor Tile - Front Office Area 1	Y
3	Shingles - On Exterior Walls	N
4	Wallboard - Office Area	N
5	Roof Shingles	N
6	Built-Up Asbestos Roof Material	Y
7	Roof Flashing	Y

14.7.2 INDEX OF HOMOGENEOUS AREAS - RHODES BAKERY BUILDING

Rhodes Bakery Building
825 S. Main

ATEC Project No. 21-09340

December 4, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Boiler Cover - Boiler Room	Y
2	Tank Covers - Boiler Room, Floor 1 & Floor 2 (Room 5)	Y
3	Boiler Stack Insulation - Boiler Room	Y
4	Pipe Covering (Air Cell) - Throughout Building	Y
5	Pipe Covering (Mag Block) - Throughout Building	Y
6	Pipe Covering (Layered Paper) - Throughout Building	Y
7	Pipe Fitting Insulation - Throughout the Building	Y
8	Floor Tile (9"x9" Tan) - Office Area on Floor 1	N
9	Floor Tile (9"x9" Red) - Office Area on Floor 1	Y
10	Floor Tile (9"x9" Gray) - Office Area on Floor 1	Y
11	Surface-Mounted Ceiling Tile - Office Area on Floor 1	N
12	Dropped-Ceiling Tile - Office Area on Floor 1	N
13	Cork Mastic - Behind Plaster Walls in Walk-In Cooler Areas on Floors 1 and 2	Y
14	Debris - Boiler Room	Y
15	Roof Flashing	Y
16	Built-Up Asphalt Roof Material	N
17	Transite Cooling Tower - On Roof	Y
18	Paper Insulation - On Doors of Walk-In Coolers	N
19	Wall & Ceiling Plaster - Office Area	N
20	Wall & Ceiling Plaster - Floor 1 (Room 3) and Floor 2 (Room 7)	Y

15.0 LOT 20

The building located at 802 S. Main (Figure A, Photograph T-1) was the only building on Lot 20 inspected for asbestos during this survey. The building is currently vacant, but was previously used by the "Southern Hotel" establishment. The structure, which has three floors and a basement, covers approximately 33,600 square feet.

The exterior walls are red brick, and the interior walls and ceiling are plaster. The roof system consists of a built-up asphalt roof. The pipe system is insulated with air cell.

Twenty-eight of the 39 samples collected from the Southern Hotel Building contained asbestos. An additional sample was collected solely for quality control (QC) reasons. This QC sample was randomly split from those samples taken from suspect materials in the field. The following narrative lists the types of suspect materials sampled during the survey. Each section references sample location diagrams and photographs of the material, and assigns numbers to the various homogeneous areas (HAs) sampled. An index of the HAs is included in Section 15.8.

15.1 RESULTS - SURFACING MATERIALS

15.1.1 Material Type No. 1: Plaster

Seven random samples were obtained from the wall and ceiling plaster (HA 25) located throughout the building. All seven samples contained less than 1% asbestos, therefore the wall and ceiling plaster can be considered to be a non-ACM. (Figures 20A, 20B, 20C and 20D)

15.2 RESULTS - THERMAL SYSTEM INSULATION

15.2.1 Material Type No. 2: Pipe Covering

Five representative samples were taken from the pipe covering (HA 1) located throughout the building. All five samples tested positive for asbestos. (Figure 20A, Photograph T-4)

15.2.2 Material Type No. 3: Pipe Fitting Insulation

Three representative samples were taken from the mud-packed pipe fitting insulation (HA 2) located throughout the building. All three samples tested positive for asbestos. (Figure 20A, Photograph T-4)

15.2.3 Material Type No. 4: Boiler Stack Insulation

One sample was taken from the boiler stack insulation (HA 3) located above the old boiler in the boiler room (Area 4 of Figure 20A) in the basement. The sample contained 30-40% chrysotile asbestos. (Photograph U-1)

15.2.4 Material Type No. 5: Boiler Door Gasket

One sample was taken from the boiler door gasket (HA 6) located on the newer boiler on the south side of the boiler room in the basement (Area 4 of Figure 20A). The sample contained 70-80% chrysotile asbestos. (Photograph U-2)

15.2.5 Material Type No. 6: Boiler Insulation

One sample each was obtained from the boiler insulation inside the door of the newer boiler (HA 4) and the boiler insulation inside the newer boiler (HA 5) on the south side of the boiler room. Both samples tested negative for asbestos. (Figure 20A, Photograph U-4)

15.3 RESULTS - MISCELLANEOUS MATERIALS

15.3.1 Material Type No. 7: Floor Tile

One sample was obtained from each of the 18 types of floor tile (HAs 7-24) located throughout the building. Due to the fact that only one of the 18 samples tested negative for asbestos, all floor tile in the Southern Hotel Building should be considered to be an ACM. (Figures 20A and 20B)

15.3.2 Material Type No. 8: Built-Up Asphalt Roof Material

One sample was taken from the built-up asphalt roof material (HA 26). The sample contained 2-3% chrysotile asbestos. (Figure 20C, Photograph T-3)

15.3.3 Material Type No. 9: Roof Flashing

One sample was taken from the built-up asphalt roof material (HA 27). The sample contained 20-30% chrysotile asbestos. (Figure 20C, Photograph T-3)

15.4 RESULTS OF BULK MATERIAL SAMPLING

ABBREVIATION KEY

Example: 023729 PC 1"-4"

023729 = Sample Number
PC 1"-4" = Type of Material Sampled

Material Abbreviation

BC	=	Boiler or Pressure Vessel Cover
BS	=	Boiler Stack Insulation
BU Roof	=	Built-Up Roofing Material
FT	=	Floor Tile
Gasket	=	Oven or Boiler Door Gasket
H Plaster	=	Hard Plaster (Ceiling or Wall)
PC 1"-4"	=	Pipe Covering (1"-4" Outside Diameter)
PC 5"-8"	=	Pipe Covering (5"-8" Outside Diameter)
PF 1"-4"	=	Pipe Fitting (1"-4" Outside Diameter)
PF 5"-8"	=	Pipe Fitting (5"-8" Outside Diameter)
Roof Flash	=	Roofing Flashing on Penetrations

ND	=	None Detected
NOF	=	No Other Fiber

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 20 / Southern Hotel

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 20												
023729	PC 1"-4"	SOUTHERN HOTEL	1	ID: FIG 20-A # : 1	Basement hallway Outside laundry room	N/A	1306 LF	#1: 1306 #2: -- #3: --	Chrysotile	60-70	Cellulose	10-15
023730	PF 1"-4"	SOUTHERN HOTEL	2	ID: FIG 20-A # : 1	Basement hallway Outside laundry room	N/A	64 Each	#1: 64 #2: -- #3: --	Chrysotile	30-40	Cellulose	5-10
023731	PC 5"-8"	SOUTHERN HOTEL	1	ID: FIG 20-A # : 1	Basement hallway Outside laundry room	N/A	84 LF	#1: 84 #2: -- #3: --	Chrysotile	60-70	Cellulose	5-10
023732	PF 5"-8"	SOUTHERN HOTEL	2	ID: FIG 20-A # : 1	Basement hallway Outside laundry room	N/A	46 Each	#1: 46 #2: -- #3: --	Chrysotile	30-40	Cellulose	5-10
023733	PF 5"-8"	SOUTHERN HOTEL	2	ID: FIG 20-A # : 1	Basement, west end	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	20-30	Cellulose	5-10
023734	PC 5"-8"	SOUTHERN HOTEL	1	ID: FIG 20-A # : 1	Basement, west end	N/A	108 LF	#1: 108 #2: -- #3: --	Chrysotile Amosite	5-10 <1	Cellulose	60-70
023735	FT	SOUTHERN HOTEL	7	ID: FIG 20-A # : 1	Basement, west end	N/A	400 SF	#1: 400 #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023736	FT	SOUTHERN HOTEL	8	ID: FIG 20-A # : 1	Basement, west end	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	10-15	Cellulose	<1
023737	BS	SOUTHERN HOTEL	3	ID: FIG 20-A # : 1	Basement, boiler room	N/A	120 LF	#1: 120 #2: -- #3: --	Chrysotile	30-40	Glass Fibr	5-10
023738	FT	SOUTHERN HOTEL	9	ID: FIG 20-A # : 1	Basement, room east of boiler room	N/A	406 SF	#1: 406 #2: -- #3: --	Chrysotile	5-10	Cellulose	<1
023739	PC 5"-8"	SOUTHERN HOTEL	1	ID: FIG 20-A # : 1	Basement, east end	N/A	96 LF	#1: 96 #2: -- #3: --	Chrysotile	60-70	Cellulose	5-10
023740	PC 5"-8"	SOUTHERN HOTEL	1	ID: FIG 20-A # : 1	Basement, boiler room	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	60-70	Cellulose Cellulose	5-10

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 20												
023741	BC	SOUTHERN HOTEL	4	ID: FIG 20-A # : 1	Basement, boiler room Material on the doors	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 30-40
023742	GASKET	SOUTHERN HOTEL	6	ID: FIG 20-A # : 1	Basement, boiler room Boiler door	N/A	24 LF	#1: 24 #2: -- #3: --	Chrysotile	70-80	Cellulose Manmade	2-3 2-3
023743	BC	SOUTHERN HOTEL	5	ID: FIG 20-A # : 1	Basement, boiler room Inside boiler	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 2-3
023744	FT	SOUTHERN HOTEL	10	ID: FIG 20-B # : 2	First floor Below stairwell, center	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	2-3 <1
023745	FT	SOUTHERN HOTEL	11	ID: FIG 20-C # : 3	Second floor, east end Room 234	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	NOF	
023746	FT	SOUTHERN HOTEL	12	ID: FIG 20-C # : 3	Second floor, east end Room 231	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Glass Fibr	2-3
023747	FT	SOUTHERN HOTEL	13	ID: FIG 20-C # : 3	Second floor, east end Room 230	N/A	3960 SF	#1: 3960 #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023748	FT	SOUTHERN HOTEL	14	ID: FIG 20-C # : 3	Second floor, east end Shower room	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	2-3	NOF	
023749	FT	SOUTHERN HOTEL	15	ID: FIG 20-C # : 3	Second floor, east end Room 226	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose	<
023750	FT	SOUTHERN HOTEL	16	ID: FIG 20-C # : 3	Second floor, east end Room 235	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose	<1
023751	FT	SOUTHERN HOTEL	17	ID: FIG 20-C # : 3	Second floor, west end Room 212	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose	<1
023752	FT	SOUTHERN HOTEL	18	ID: FIG 20-C # : 3	Second floor, west end Room 209	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	5-10	Cellulose Glass Fibr	<1 <1

CLIENT: SOUTHBEND / City of South Bend

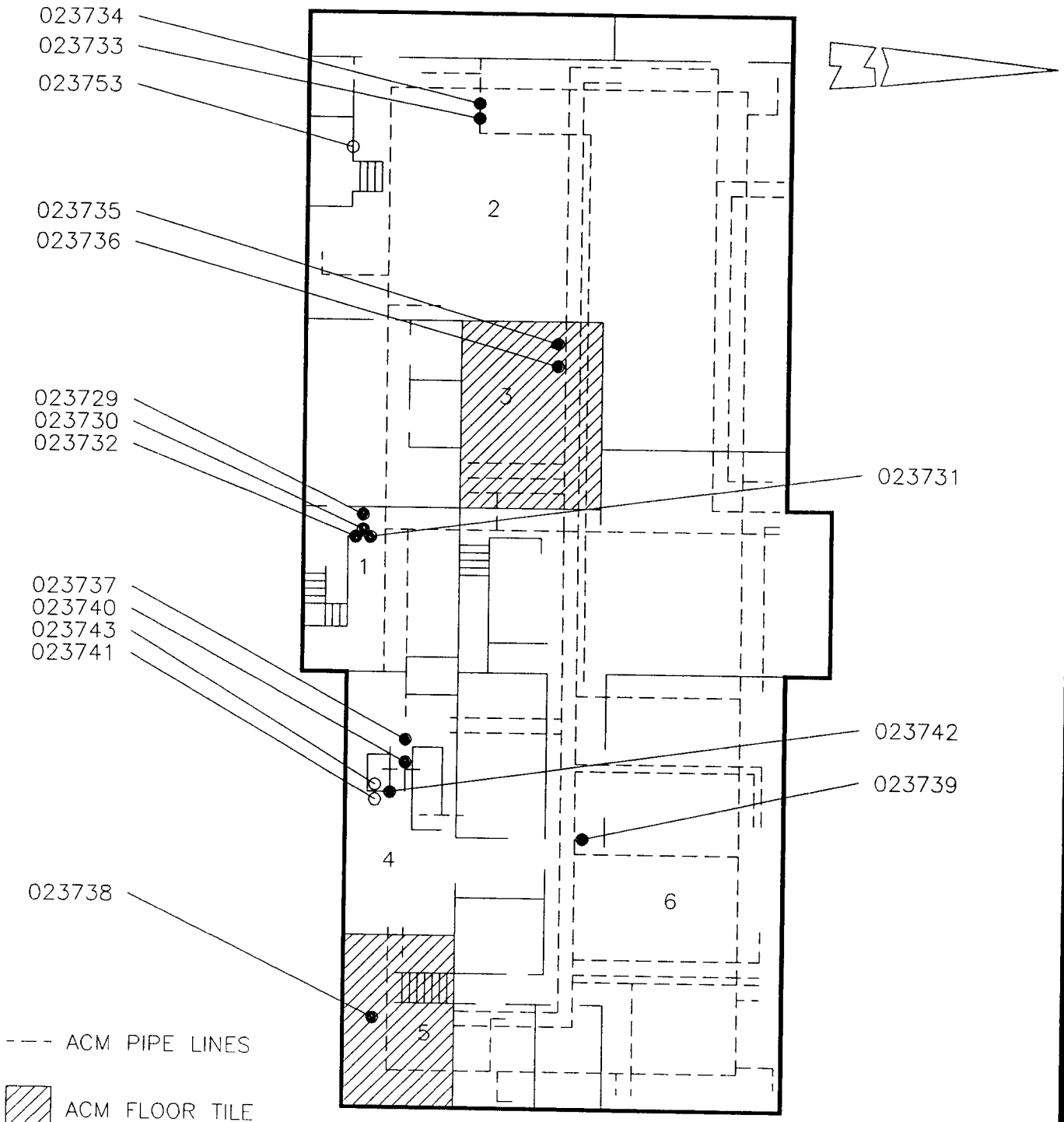
Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 20												
023753	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-A # : 1	Basement, west end By stairway	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	3-5 <1
023754	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-B # : 2	First floor, East end N.E room, west wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	<1
023755	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-B # : 2	First floor, North center room, Ceiling	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	40-50
023756	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-C # : 3	Second floor, Room 219 East wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3
023757	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-C # : 3	Second floor, East hall Ceiling	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	<1	Cellulose	2-3
023758	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-D # : 4	Third floor, room 320 North wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3
023759	H PLASTER	SOUTHERN HOTEL	25	ID: FIG 20-D # : 4	Third floor, room 329 East wall	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose Glass Fibr	<1 <1
023760	BU ROOF	SOUTHERN HOTEL	26	ID: FIG 20-C # : 3	Roof above 1st floor South side, N.E. corner	N/A	3800 SF	#1: 3800 #2: -- #3: --	Chrysotile	2-3	Cellulose	5-10
023761	ROOF FLASH	SOUTHERN HOTEL	27	ID: FIG 20-C # : 3	Roof above 1st floor N.E. corner	N/A	580 LF	#1: 580 #2: -- #3: --	Chrysotile	20-30	NOF	
023762	FT	SOUTHERN HOTEL	19	ID: FIG 20-D # : 4	Third floor, east end Room 332	N/A	6300 SF	#1: 6300 #2: -- #3: --	Chrysotile	2-3	Cellulose Glass Fibr	2-3 <1
023763	FT	SOUTHERN HOTEL	20	ID: FIG 20-D # : 4	Third floor, east end Room 326	N/A	1400 SF	#1: 1400 #2: -- #3: --	Chrysotile	5-10	NOF	
023764	FT	SOUTHERN HOTEL	21	ID: FIG 20-D # : 4	Third floor, east end Room 326	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	3-5	Cellulose	<1

LISTING OF BULK SAMPLING INFORMATION FOR SITE: LOT 20 / Southern Hotel

CLIENT: SOUTHBEND / City of South Bend

Sample #	Material Type	Building	HA#	Func. Space	Sample Location	Material Condition	Total Amt.	Priority	Type of Asbestos	%	Other Material	%
PROJECT / SITE - 21-09340 / LOT 20												
023765	FT	SOUTHERN HOTEL	22	ID: FIG 20-D # : 4	Third floor, Room 321	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	3-5	Cellulose	<1
023766	FT	SOUTHERN HOTEL	23	ID: FIG 20-D # : 4	Third floor, Room 317	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	2-3	NOF	
023767	FT	SOUTHERN HOTEL	24	ID: FIG 20-D # : 4	Third floor, Room 312	N/A	NA	#1: -- #2: -- #3: --	Chrysotile	<1	Cellulose	2-3
023768	FT	SOUTHERN HOTEL	10	ID: FIG 20-B # : 2	Quality control sample #023744	N/A	NA	#1: -- #2: -- #3: --	ND		Cellulose	2-3

15.5 SAMPLING DETAIL FIGURES



● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

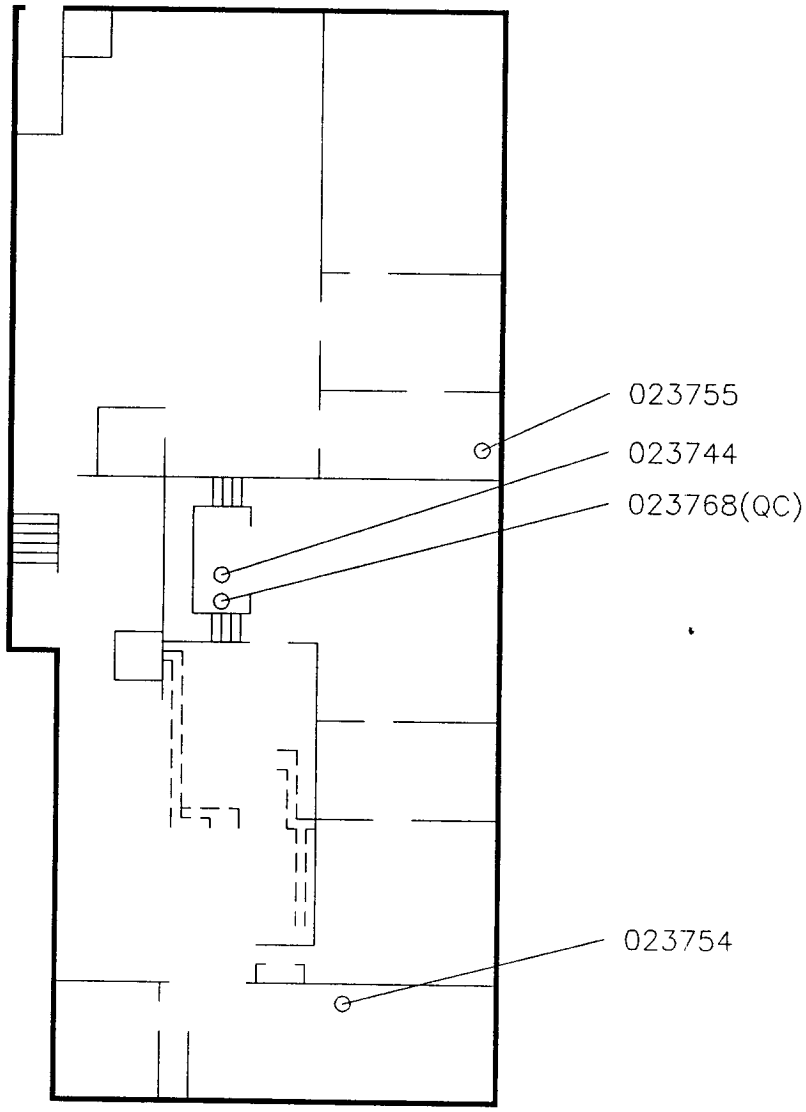
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
802 S. MAIN STREET – BASEMENT
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	1" = 20'
FIGURE NO.	20A

ATEC

7A



--- ACM PIPE LINE

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

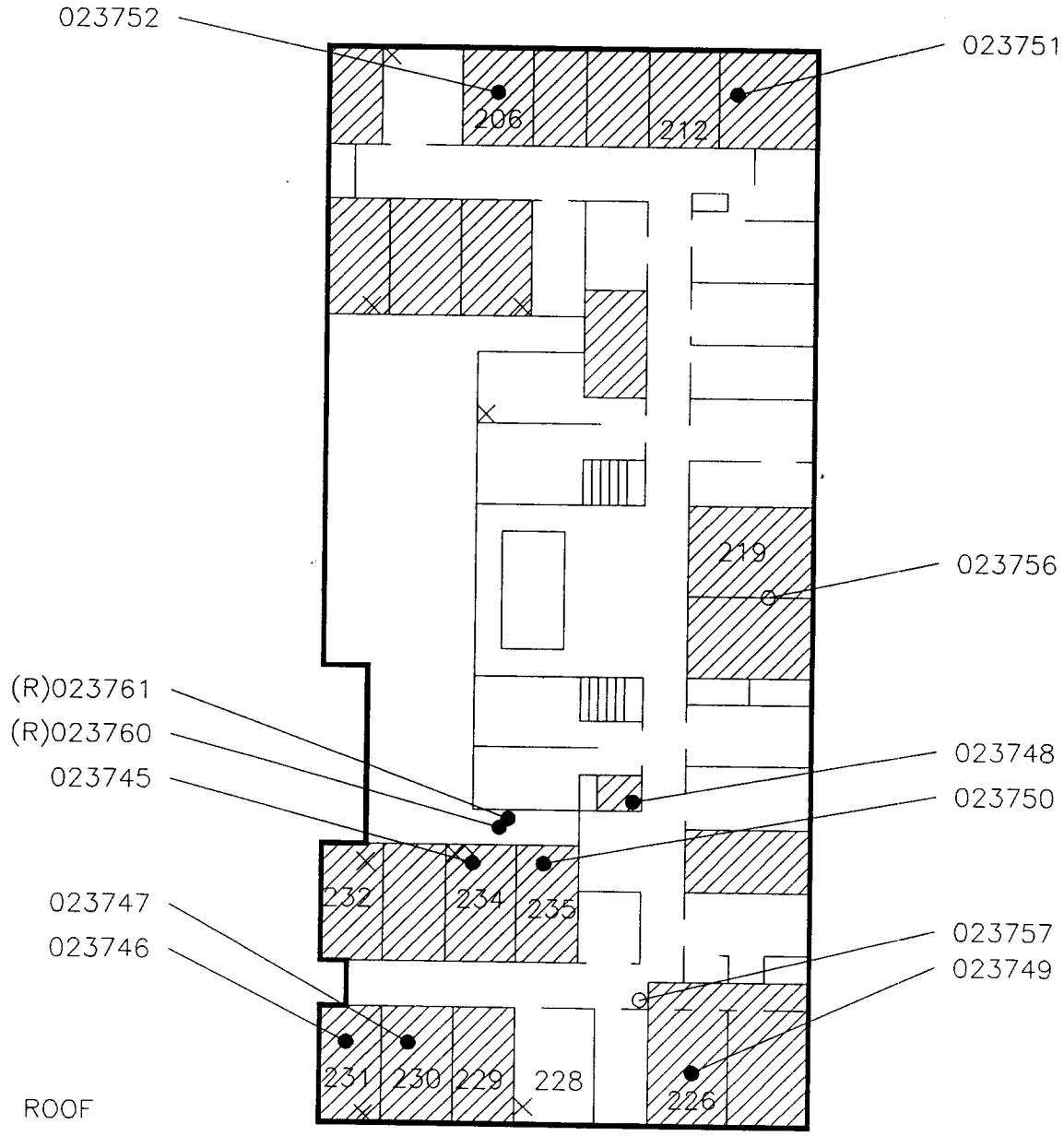
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
802 S. MAIN STREET – FIRST FLOOR
SOUTH BEND, IN

PROJECT NO.	21-09340
SCALE	NONE
FIGURE NO.	20B

ATEC

78



(R) ROOF

× ACM RISER

▨ ACM FLOOR TILE

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

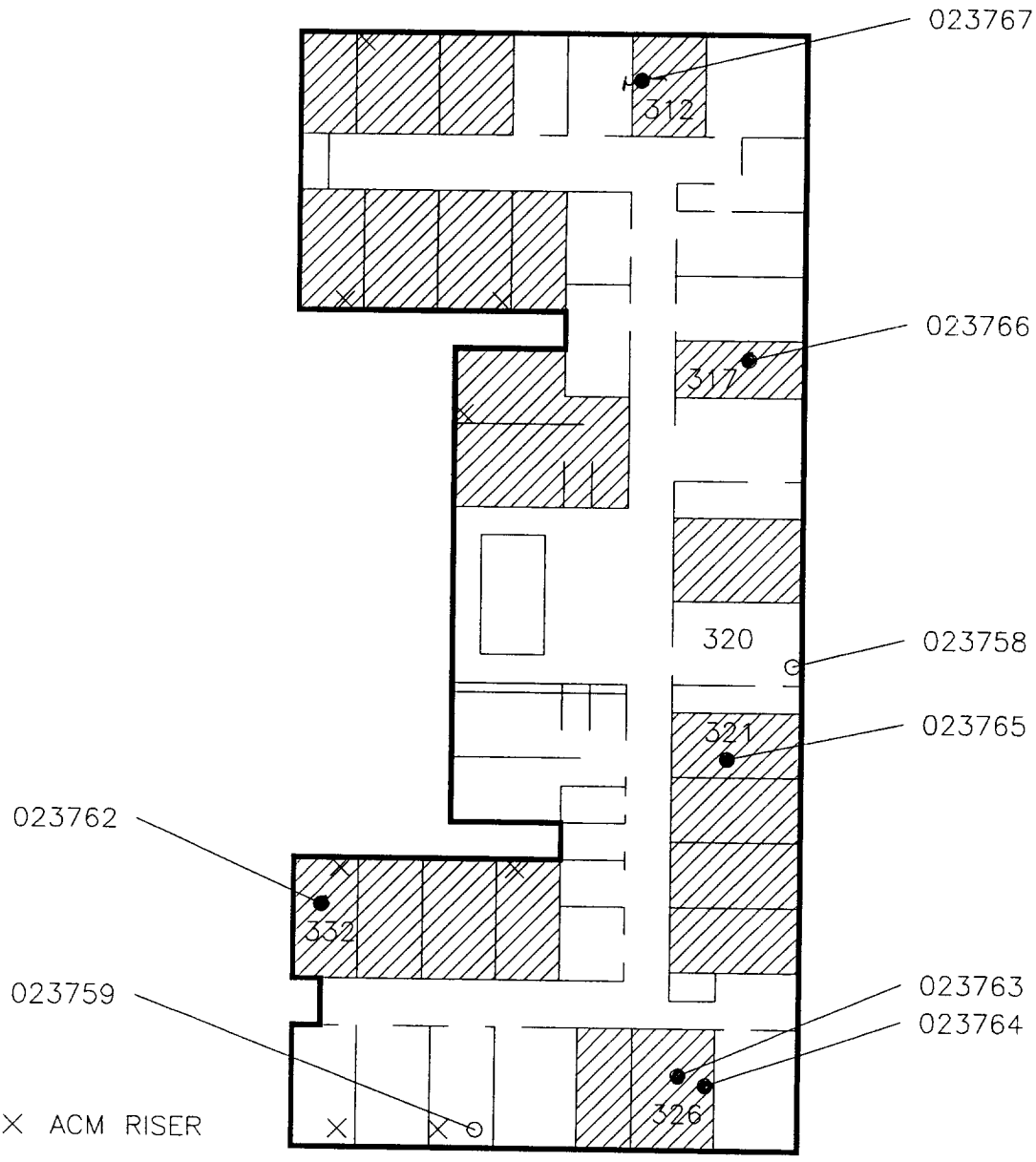
THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
802 S. MAIN STREET – SECOND FLOOR
SOUTH BEND,IN

PROJECT NO.	21–09340
SCALE	NONE
FIGURE NO.	20C

ATEC

7C



ACM FLOOR TILE

● INDICATES SAMPLE CONTAINS ASBESTOS

○ INDICATES SAMPLE WAS ANALYZED TO CONTAIN < 1% OF ASBESTOS

THIS DRAWING IS NOT TO BE USED FOR ABATEMENT PURPOSES

ASBESTOS SAMPLING PLAN
STUDEBAKER CORRIDOR PROJECT
802 S. MAIN STREET – THIRD FLOOR
SOUTH BEND,IN

PROJECT NO.	21–09340
SCALE	NONE
FIGURE NO.	20D

ATEC

15.6 PHOTOGRAPHIC DOCUMENTATION OF SAMPLING LOCATIONS


SOUTHERN
HOTEL
802

1


SAMPLE
023744

2

T


SAMPLE
023761
SAMPLE
023745

3


SAMPLE
0237130
SAMPLE
023731
SAMPLE
02373

4

1

2

U

15.7 SUMMARY REPORT

City of South Bend
Project/Site: 21-09340/LOT 20
Southern Hotel
802 S. Main
South Bend, IN 46601

Size: 0 Sq. Ft.

MATERIAL TYPE	TOTAL Amount	TOTAL Abate. Cost	PRIORITY 1 Amount	PRIORITY 1 Abate. Cost	PRIORITY 2 Amount	PRIORITY 2 Abate. Cost	PRIORITY 3 Amount	PRIORITY 3 Abate. Cost
BS	120 LF	$ 1800.00	120 LF	$ 1800.00	0 LF	$ 0.00	0 LF	$ 0.00
BU ROOF	3800 SF	$ 19000.00	3800 SF	$ 19000.00	0 SF	$ 0.00	0 SF	$ 0.00
FT	12466 SF	$ 24932.00	12466 SF	$ 24932.00	0 SF	$ 0.00	0 SF	$ 0.00
GASKET	24 LF	$ 72.00	24 LF	$ 72.00	0 LF	$ 0.00	0 LF	$ 0.00
PC 1"-4"	1306 LF	$ 11754.00	1306 LF	$ 11754.00	0 LF	$ 0.00	0 LF	$ 0.00
PC 5"-8"	288 LF	$ 3744.00	288 LF	$ 3744.00	0 LF	$ 0.00	0 LF	$ 0.00
PF 1"-4"	64 Each	$ 896.00	64 Each	$ 896.00	0 Each	$ 0.00	0 Each	$ 0.00
PF 5"-8"	46 Each	$ 920.00	46 Each	$ 920.00	0 Each	$ 0.00	0 Each	$ 0.00
ROOF FLASH	580 LF	$ 2900.00	580 LF	$ 2900.00	0 LF	$ 0.00	0 LF	$ 0.00
		$ 66018.00		$ 66018.00		$ 0.00		$ 0.00

15.8 INDEX OF HOMOGENEOUS AREAS (HAs)

INDEX OF HOMOGENEOUS AREAS

Southern Hotel Building, 802 S. Main
ATEC Project No. 21-09340
November 29, 1990

HA	MATERIAL DESCRIPTION	ACM?
1	Pipe Covering (Air Cell) - Throughout Building	Y
2	Pipe Fitting Insulation - Throughout the Building	Y
3	Boiler Stack Insulation	Y
4	Boiler Insulation - Inside Boiler Door	N
5	Boiler Insulation - Inside Boiler	N
6	Boiler Door Gasket	Y
7	Floor Tile (9"x9" Orange) - Basement	Y
8	Floor Tile (9"x9" White) - Basement	Y
9	Floor Tile (9"x9" Beige) - Basement	Y
10	Floor Tile - First Floor, Below Stairwell	Y*
11	Floor Tile - Room 234	Y
12	Floor Tile - Room 231	Y
13	Floor Tile - Room 230	Y
14	Floor Tile - East End Shower Room	Y
15	Floor Tile - Room 226	Y
16	Floor Tile - Room 235	Y
17	Floor Tile - Room 212	Y
18	Floor Tile - Room 209	Y
19	Floor Tile - Room 332	Y
20	Floor Tile (Green) - Room 326	Y
21	Floor Tile - Room 326	Y
22	Floor Tile - Room 321	Y
23	Floor Tile - Room 317	Y
24	Floor Tile - Room 312	Y*
25	Wall and Ceiling Plaster - Throughout the Building	N
26	Built-Up Asbestos Roof Material	Y
27	Roof Flashing	Y

* Because all other floor tiles contained asbestos, these tiles should also be assumed to be ACMs, even though the samples taken from these tiles tested negative or contained <1% asbestos.

16.0 CONCLUSIONS

Based on the results of the bulk sample survey conducted between November 27, 1990, and December 7, 1990, at the Studebaker Corridor Project in South Bend, IN, ACM is present in a majority of the buildings surveyed.

The following paragraphs indicate ACMs identified during this survey. All other materials sampled during this survey can be considered non-ACMs. Any suspect material encountered at a later date that was not covered in this survey should be considered to be an ACM until future testing proves otherwise.

Lot 1: Studebaker/Avanti Building

1. Pipe coverings (other than those which are obviously fiberglass)
2. Pipe fitting insulation throughout the building
3. Boiler gasket material and boiler insulation (materials are assumed to be ACMs until future sampling proves otherwise)
4. The two types of floor tile located in the first-floor restroom in the northeast corner of the building
5. Linoleum located in the area of Column R-6 on the first floor
6. Built-up asphalt roofing material
7. Roof flashing

Lot 3: Glo-Worm Building

1. Floor tile (9"x9") located underneath 12"x12" floor tile in the north end of the building
2. Floor tile (12"x12") located on top of the 9"x9" floor tile in the north end of the building
3. Linoleum underneath the carpet in the bar area
4. Roof flashing
5. Built-up asphalt roofing material

Lot 4: My Brothers Place Building

1. Pipe fitting insulation
2. Pipe covering
3. Floor tile in Area 2 (see Figure 4A) on the first floor
4. Floor tile in Area 5 (see Figure 4A) on the first floor
5. Linoleum in Area 6 (see Figure 4A) in the northeast corner of the first floor
6. Transite siding shingles
7. Roof flashing

Lot 5: Barb 'N' Joe's Bar & Grill Building

1. Paper-like duct insulation in the basement
2. Floor tile (all types in building)
3. Linoleum in kitchen area of the second floor
4. Built-up asphalt roof material

Lot 6: South Bend Foundry (5 Buildings)

1. Duct insulation above the old oven in the northeast end (Area 3) of Building 5
2. Transite walls in Building 5 between Areas 1 and 2 (see Figure 6F)
3. Transite ceiling in Area 5 (see Figure 6F) of Building 5
4. Roofing shingles (dark reddish-brown) on top of Building 1
5. Shingles (gray-colored) on the floor of Building 4
6. Built-up asphalt roof material on Buildings 1, 3, 4 and 5
7. Roof flashings on Buildings 1, 3, 4 and 5

Lot 7: Campbell's Container Building

1. Floor tile in the front office area
2. Built-up asphalt roof material

Lot 8: Building at 224 W. Garst

1. Asbestos paper material in the housing of the overhead heating unit
2. Roof flashing around the built-up asphalt roof material
3. Built-up asphalt roof material on the west side of the building

Lot 10: South Bend Foundry (2 Buildings)

1. Mag block pipe covering on the first floor of Building 1
2. Built-up asphalt roof material and roof flashing on Building 2
3. Built-up asphalt roof material and roof flashing on Building 1 (Due to the lack of access to the roof of Building 1, the built-up asphalt roof material and roof flashing on Building 1 are also assumed to be asbestos-containing)

Lot 13: Harper's Bar Building

1. Linoleum (both top and bottom layers) in the bar area on the west end of the building
2. Linoleum in the men's restroom in the south end of the building

Lot 17: Portage Oil Building

1. Floor tile in Areas 1 and 2 (see Figure 17A)
2. Built-up asphalt roof material
3. Roof flashing

Lot 17: Rhodes Bakery Building

1. Plaster over the cork material in the walk-in cooler areas of the first and second floors
2. Pipe covering (other than those that are clearly fiberglass)
3. Pipe fitting insulation throughout the building
4. Boiler cover in the boiler room
5. Tank covers on the first and second floors
6. Boiler stack insulation in the boiler room on the first floor
7. TSI Debris scattered throughout the entire boiler room
8. Floor tile (9"x9" red) in the office area in the northeast corner of the first floor

9. Floor tile (9"x9" gray) in the office area in the northeast corner of the first floor
10. Transite cooling tower on the roof
11. Roof flashing
12. Cork mastic (black) on the cork insulation material inside the plaster walls of the walk-in cooler areas on the first and second floors

Lot 20: Southern Hotel Building

1. Pipe covering throughout the building
2. Pipe fitting insulation throughout the building
3. Boiler stack insulation above the old boiler in the boiler room
4. Boiler door gasket on the newer boiler on the south side of the boiler room in the basement
5. All floor tile in the building
6. Built-up asphalt roof material
7. Roof flashing

17.0 RECOMMENDATIONS

17.1 GENERAL RECOMMENDATIONS

17.1.1 Retain a qualified industrial hygiene consultant, such as ATEC Environmental Consultants, to prepare detailed project specifications for any scheduled asbestos removal activity.

17.1.2 Retain a qualified professional asbestos abatement contractor to remove all necessary ACM in all areas to be renovated. Any damaged insulation should either be repaired or removed by the abatement contractor. Any delaminated asbestos debris should also be cleaned up and properly disposed of by the contractor.

17.1.3 Retain a qualified industrial hygiene consultant, such as ATEC Environmental Consultants, to provide air monitoring and project specification enforcement during removal activities.

17.1.4 As long as the buildings remain vacant, a Periodic Maintenance Program should be initiated to inspect and assess the condition of all remaining ACMs on a regular basis (ATEC suggests every six months). When necessary, damaged material should be repaired or removed by a licensed and qualified asbestos abatement contractor before maintenance or renovation activities disturb the ACM.

17.1.5 If the buildings become occupied at some point in the future, an Operations & Maintenance (O&M) Program should be developed and implemented until all of the identified ACM (and/or assumed ACM) is removed. The purpose of the O&M Program is to avoid ACM disturbance or damage and to establish procedures to accomplish this goal. The O&M Program should include employee awareness, visual inspections and procedures for notifying contractors who may find it necessary to work near ACM. The ACM should be inspected and reassessed periodically (ATEC

suggests every six months) to ensure that the material does not become damaged or start to deteriorate. When necessary, damaged material should be repaired or removed by a licensed and qualified asbestos abatement contractor before maintenance or renovation activities disturb the ACM. An O&M Program is a prudent alternative to ACM removal if ACM removal is not financially feasible or if further ACM is discovered and is in good condition. An excellent reference on this subject is EPA publication #560/5-85-024, obtained free by calling the EPA's Office of Toxic Substance at (202) 554-1404.

17.2 SPECIFIC RECOMMENDATIONS

17.2.1 Properly remove all ACMs from buildings prior to demolition activities.

17.2.2 Perform a friability assessment on all ACRMs just before demolition is scheduled to begin, to determine if any of the ACRMS are friable and therefore need to be removed prior to demolition.

18.0 CORPORATE SUMMARY

The following table indicates ATEC's estimated abatement costs for the individual lots surveyed during this project. These costs are estimates based on average industry costs. In large abatement projects, such as the Studebaker Corridor Project, the actual costs will be less. The time of year in which the abatement is performed will also affect the cost, since work done in the summer months will cost more than work done in the cooler months.

LOT	EST. COST	LOT	EST. COST	LOT	EST. COST
1	$ 609,055	7	$ 78,890	12	$ 0
3	$ 26,500	8	$ 9,244	13	$ 5,000
4	$ 25,715	9	$ 0	17	$ 149,123
5	$ 8,565	10	$ 17,935	20	$ 66,018
6	$ 154,205	TOTAL ESTIMATED ABATEMENT COST: $1,150,250			

19.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during ATEC's inspection of buildings located on Lots 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 17 and 20 of the Studebaker Corridor Project, located in South Bend, IN, between November 27, 1990, and December 7, 1990.

At the time of the survey, the roof of the building located at 1321 S. Main on Lot 9 was covered with approximately four inches of snow, making it difficult to determine the composition of the entire roof system. The roof shingles were sampled during this survey, however built-up asphalt roof material may exist in some small areas of the roof. If this is the case, the built-up asphalt roof material should be sampled prior to demolition, to determine its content.

This investigation was not conducted according to strict AHERA protocol, since fewer samples were collected per homogeneous area than are required by AHERA guidelines.

This report is designed to aid the building owner, architect, construction manager, general contractors and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification document.

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