Appendix H Asbestos Survey

Appendices

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Draft

September 9, 2013

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via Email

SUBJECT: Asbestos Survey for One Building Located at 1683 Sunflower Avenue, Costa Mesa, California

In response to your request, Panacea, Inc. (Panacea) conducted an asbestos survey on August 21, 22, and 26 and September 3, 4, and 6, 2013 at the above-referenced site.

1.0 OBJECTIVE

The objective of the work was to assess the likelihood that asbestos is present in suspect and readily accessible construction materials in concentrations greater than 1 percent.

2.0 GUIDELINES, TERMINOLOGY, AND EVALUATION CRITERIA

2.1 SAMPLING STRATEGY

This limited asbestos survey was performed in general accordance with standard procedures recommended by the U.S. Environmental Protection Agency (EPA) and the requirements of the State of California Division of Occupational Safety and Health (DOSH). Standard procedures for asbestos surveys do not include inspecting areas or collecting samples that would require complete destruction of walls, floors, or ceilings of a building, except in cases in which the survey is performed concurrently with demolition and renovation activities.

The sample collection strategy in this survey was based on the EPA's publication, *Guidance for Controlling Asbestos-Containing Materials in Buildings* (EPA, 1985). This document specifies the methodology for sampling of friable materials, defined by the EPA as those materials that can be crumbled, pulverized, or reduced to powder by hand pressure when dry (EPA, 1985).

In addition, samples were collected from nonfriable materials judged to potentially contain asbestos. Nonfriable asbestos-containing material (ACM) can become friable when disturbed through work practices and/or handling (EPA, 1987). Such work practices can include grinding, sanding, and handling the material during removal activities.

The EPA specifies that ACM classified as friable, or that could become friable, is to be removed prior to demolition activities (EPA, 1990). According to the EPA (1985), nonfriable ACM represents a minimal hazard to the occupants of a building as long as the material is in a generally undamaged condition and used for its intended purpose. In addition, the National

Emission Standards for Hazardous Air Pollutants (NESHAPs) and South Coast Air Quality Management District (SCAQMD) require that both friable ACM and nonfriable ACM that could become friable (greater than 1 percent asbestos) be removed prior to renovation or demolition.

2.2 DEFINITIONS AND LABORATORY ANALYTICAL METHOD

When a material is found to contain asbestos in concentrations greater than 1 percent, it is defined by the EPA as an ACM (EPA, 1987). The California Construction Safety Orders for asbestos (Article 4 of Title 8, California Code of Regulations [CCR], Section 1529 [8 CCR 1529]) also define ACM as containing greater than 1 percent asbestos (DOSH, 1996). However, Section 25919 of the California Health and Safety Code defines an asbestos-containing construction material (ACCM) as one that contains greater than 0.1 percent asbestos (California Health and Safety Code).

Under the California Health and Safety Code, asbestos notification to employees, occupants, and others working in buildings is required for materials containing greater than 0.1 percent asbestos. In addition, removal of more than 100 square feet (SF) of ACCM (less than 1 but greater than 0.1 percent asbestos) still requires a State of California-licensed asbestos abatement contractor.

Under DOSH requirements, worker/employee notification and training are required when a material contains greater than 1 percent asbestos in an area where workers/employees perform work (DOSH, 1996).

The analytical laboratory used for this project is accredited pursuant to Section 206(d) of the Toxic Substances Control Act (TSCA, 1976) to detect asbestos in bulk samples. The polarized light microscopy (PLM) method used by that laboratory has a detection limit of 1 percent. In our experience, quantification of asbestos in bulk samples at a level below 1 percent is not technically possible with a high degree of confidence when PLM is used. Therefore, a material reported to have a trace percentage (less than 1 percent) of asbestos should be treated as an ACCM (greater than 0.1 percent) due to the detection limit of the laboratory method used.

Transmission electron microscopy-quantitative (TEM-quantitative) analysis has a detection limit below 0.1 percent by weight, and it can be performed on a material for further quantification. Because the TEM-quantitative analytical cost is 20 to 30 times the PLM analytical cost, it is not typically used for the initial analysis of collected materials. Under situations where PLM reported a material containing less 1 percent asbestos and there is a significant impact on the abatement operations and/or maintenance (O&M) costs, additional TEM-quantitative analysis would be justified.

2.3 ACM CONDITIONS AND TERMINOLOGY

For purposes of discussion, the terms "undamaged" (good), "damaged," and "significantly damaged" refer to the condition of the construction materials from which the samples were collected at the time the survey was conducted. The terms are applied based on the judgment of personnel from Panacea who used the definitions in Title 40, Code of Federal Regulations (CFR), Part 763 (40 CFR 763) (EPA, 1987). The term "homogeneous area" is used herein in

general accordance with its definition by the EPA as an area of surfacing material, thermal system insulation (TSI) material, or other miscellaneous material that is uniform in color and texture.

2.4 ESTIMATED AREA COVERED AND COSTS

When a material was reported to contain asbestos, the areas that appeared to be homogeneous with that material, in the judgment of Panacea's asbestos consultant, were included in the area estimation. The estimated area covered by ACM was obtained by linearly extrapolating the plot plans prepared by Panacea. In addition, corners of floor covering and ceiling material, such as carpeting and suspended ceiling tiles, were lifted and checked for potential ACM under or above. When an underlying or overlying layer of potential ACM was observed, it was sampled and analyzed. When the sample was reported to contain asbestos, the covered areas were assumed to be ACM. These areas are included as part of the area estimates.

When applicable, our estimate of wall materials (e.g., drywall, joint compound, and plaster) is based on the actual floor area covered. The actual wall/surface area of the material can be expected to be two to five times the floor area for the following reasons:

- It is presumed that a typical building (commercial and/or residential) has approximately the same square footage for the wall area as for the floor area and that a wall has two sides.

- In buildings with smaller partitioned rooms throughout, the actual wall area would be expected to exceed at least two times the floor area.

- The ceiling area could be covered with material homogeneous to that on the wall, which would increase the overall square footage of the material.

2.5 ABATEMENT PRIORITY SYSTEM

An abatement priority system was developed and priorities were assigned to various materials reported to contain asbestos (see survey summary table). The priority system is provided for O&M purposes only. Any ACM that is friable or has a potential to become friable should be removed prior to renovating or demolishing the building. The priorities are classified as follows:

- **Priority No. 1** - ACM should be removed immediately. This priority is typically used for friable, significantly damaged ACM.

- **Priority No. 2** - ACM should be removed as soon as possible. This priority is typically used for friable and damaged or nonfriable and significantly damaged ACM.

- **Priority No. 3** - ACM should be removed for potential liability reasons but can remain in place as long as materials remain in good condition. This priority is typically used for either friable and good or nonfriable and damaged ACM.

- **Priority No. 4** - ACM judged to pose a minimal health hazard and should be managed in place as long as materials remain in good condition. This priority is typically used for nonfriable ACM in good condition.
- **Priority No. 5** - ACCM (less than 1 percent) is judged to pose a minimal health hazard and is not regulated as ACM under DOSH and EPA. Therefore, no action is recommended for the materials.

For O&M purposes, we generally recommend that Priority Nos. 1 and 2 ACM be removed as soon as possible and that Priority Nos. 3 and 4 ACM be managed in place. No action is required for Priority No. 5 ACCM, except for notification requirements (see Section 2.2). However, the client's policies may differ.

For renovation and demolition purposes, we recommend that both friable ACM and nonfriable ACM that can become friable be removed by a qualified State of California-licensed asbestos contractor prior to renovation or demolition where disturbance to ACM is likely. Although Priority No. 5 material (ACCM) is not classified as ACM, the demolition of more than 100 SF of such material still requires a State of California-licensed asbestos contractor.

3.0 ASBESTOS SURVEY RESULTS

A total of 93 bulk samples of accessible suspect materials were collected and submitted to Forensic Analytical Laboratory in Rancho Dominguez, California, for analysis using PLM. Copies of the laboratory analytical report and chain-of-custody records are attached.

Based on the scope of work, site observations, accessibility of the materials and building area, laboratory analytical results, current regulatory guidelines and laws, state-of-the-industry practices, and the professional judgment of Panacea personnel, the presence, location, and estimated quantity of identified ACM is noted below.

PRESENCE, LOCATIONS, AND QUANTITIES OF ACM

PRESENCE	LOCATION (HOMOGENEOUS AREA)	ESTIMATED QUANTITY
ACM (>1% Asbestos)		
Floor tile and black mastic, size unknown, off-white	Included Rooms 113 and 135. See Figure 1. Multiple layers of flooring material may be present in these locations.	~110 SF
Black mastic on non-ACM flooring materials	Included Rooms S105, S109, S119, T102A, and west portion of Room S102A. See Figure 1. Multiple layers of flooring material may be present in these locations.	~1,000 SF
Floor tile and black mastic, size unknown, off-white	Included Room T107A only. See Figure 1. Multiple layers of flooring material are present in this location.	~100 SF

PRESENCE	LOCATION (HOMOGENEOUS AREA)	ESTIMATED QUANTITY
Joint compound, white	Included JC on wall/ceiling systems on first floor of large office area. Actual surface areas may be 2 to 5 times the floor area. See Figure 1.	~78,000 SF
Floor tile and black mastic, size unknown, off-white	Included Room T107 only. See Figure 1. Multiple layers of flooring material are present in this location.	~660 SF
Plastic roof cement (roof mastic), black	Included PRC on penetrations and seals scattered throughout roofs and components of this building.	<2,000 SF
Floor tile and black mastic, beige	Included Room 101A only. See Figure 1.	~50 SF
Black mastic on non-ACM floor tile, beige	Included Rooms S107 and S113. See Figure 1. These materials were inaccessible and assumed to be present underneath wood flooring.	~800 SF

Notes:

"~" = approximately; "<" = less than; SF = square feet; JC = joint compound; PRC = plastic roof cement

The accompanying asbestos survey summary table presents detailed descriptions of materials sampled, sample locations, laboratory analytical results, and estimated quantities. Figures 1 to 4 depict the approximate locations where samples were collected.

4.0 CONCLUSIONS AND/OR RECOMMENDATIONS

The following conclusions/recommendations are based on the information obtained during this survey, laboratory analytical results, current regulatory guidelines and laws, state-of-the-industry practices, and the judgment of Panacea's personnel:

- There is a high likelihood that asbestos is present in concentrations greater than 1 percent in the subject building.

- The attached asbestos survey summary table presents analytical results, descriptions of materials sampled, sample locations, estimated area covered, homogeneous areas, and comments. Figures 1 to 4 depict the approximate sample locations, area designations, and homogeneous areas where applicable.

- Priority No. 1 Material – None present.

- Priority No. 2 Material – None present.

- Priority No. 3 Material – None present.

- Priority No. 4 Material – Priority No. 4 materials listed below can be managed in place as long they remain in good condition and should be removed prior to renovation or demolition:

- Floor tile and black mastic;
- Black mastic on non-ACM flooring materials;
- Joint compound; and
- Plastic roof cement (roof mastic).

- ACMs should be removed by an asbestos-licensed contractor prior to the renovation or demolition of the building. DOSH Class I, II, III, or IV asbestos work procedures should be followed for all asbestos abatement.
- All contractors and visitors working in or around the building should be notified regarding the presence, locations, and quantities of the ACMs in the building. Applicable notification laws should be followed and training provided.
- The building owner and/or property manager should obtain an "asbestos-free certification" from any contractors installing or removing building materials and should notify the maintenance staff to use only "asbestos-free" products for any repair and maintenance work.
- No judgment was made for inaccessible construction materials or materials that had not been sampled and analyzed.

5.0 LIMITATIONS

The judgments and conclusions described in this report pertain to conditions judged to be present or applicable at the time the work was performed and within the scope of work. Future conditions may differ from those described herein, and this report is not intended for use in future evaluations of the site unless an update is conducted by a Certified Asbestos Consultant (CAC).

Certain materials not sampled may contain asbestos in concentrations greater than 1 percent. These materials include concrete, electrical wrapping, materials inside electrical fixtures, brake shoes, and other building materials that may be hidden behind building components. However, these materials are judged to have a very low likelihood of containing greater than 1 percent asbestos.

The estimated areas covered for the extent of ACM noted in the summary table accompanying this report are intended for discussion and management purposes only. The actual square footage of ACM should be verified by qualified asbestos abatement contractors prior to abatement.

Although personnel who conducted the survey are certified under the Asbestos Hazard Emergency Response Act (AHERA) and an accredited laboratory performed the analysis, the asbestos survey described herein may not identify all ACM onsite. Possible reasons for this include inaccessible building features, unavailability of as-built drawings (specifying all building

materials used in the structure), practical limitations as to the number of samples that can be collected, and analytical method used (PLM). Furthermore, although a sample was collected from each material that appeared to be different (based on color and texture), homogeneity of content of similar materials cannot be guaranteed because similarity of color and texture does not assure that the same ingredients were used in their manufacturing. It is possible that of two apparently similar materials, one may contain asbestos and one may not. Therefore, additional sampling and testing may be necessary to provide a higher confidence level regarding the presence of ACM in the building.

Services performed by Panacea were conducted in a manner consistent with state-of-the-industry practices, recognizing that even the most comprehensive survey may not detect all ACM in the building. Therefore, Panacea cannot act as an insurer or certify that the site is free of asbestos.

6.0 REFERENCES

California Division of Occupational Safety and Health (DOSH), 1996, *Construction Safety Orders*: Title 8, California Code of Regulations, Section 1529.

California Health and Safety Code, Division 20, Chapter 10.4, Section 25919.

Toxic Substances Control Act (TSCA), 1976, *Asbestos Hazard Emergency Response*: Title II, Section 206, 15 United States Code 2601-2671.

U.S. Environmental Protection Agency (EPA), 1990, Federal Register, *National Emission Standards for Hazardous Air Pollutants (NESHAPs), Asbestos Revision, Final Rule*: U.S. Environmental Protection Agency, Title 40, Code of Federal Regulations, Part 61, 20 November 1990, pp. 48406 to 48433.

EPA,1987, Federal Register, *Asbestos Hazard Emergency Response Act (AHERA), Asbestos-Containing Materials in Schools, Final Rule and Notice:* U.S. Environmental Protection Agency, Title 40, Code of Federal Regulations, Part 763, 30 October 1987, pp. 41826 to 41905.

EPA, 1985, Guidance for Controlling Asbestos-Containing Materials in Buildings: Office of Pesticides and Toxic Substances, U.S. Environmental Protection Agency, Publication Number 560/5/85-024, May 1985.

If you have any questions regarding this letter report, please feel free to contact me at your convenience.

Very truly yours,
PANACEA, INC.

Steven Modtland, CAC
Certification No. 08-4373

ATTACHMENTS:

- Asbestos Survey Summary Table
- Figures 1 to 4
- Building Inspector's Certification
- Laboratory Accreditation
- Laboratory Analytical Reports and Chain-of-Custody Record
- Likelihood Statements

ATTACHMENTS

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-001 **Priority No.**	ND	Floor tile and black mastic, 1'x1', gray	First floor, western portion, Warehouse 1			
1683-B-002 **Priority No.**	ND	Floor tile and yellow mastic, size unknown, off-white	First floor, western portion, Warehouse 1, under 1683-B-001			
1683-B-003 **Priority No.**	ND	Cove base and white and brown mastic, 3", gray	First floor, western portion, Warehouse 1			
1683-B-004 **Priority No.**	ND	Cove base and brown mastic, 3", dark brown	First floor, western portion, Warehouse 1			
1683-B-005 **Priority No.**	ND	Joint compound, white	First floor, western portion, Warehouse 1			
1683-B-006 **Priority No.**	ND	Wallboard (drywall) and joint compound, white	First floor, western portion, Warehouse 1			
1683-B-007 **Priority No.**	ND	Floor tile and black mastic, 1'x1', gray	First floor, western portion, Warehouse 1			
1683-B-008 **Priority No.**	ND	Floor tile and yellow mastic, size unknown, off-white	First floor, western portion, Warehouse 1, under 1683-B-007			
1683-B-009 **Priority No.**	ND	Wallboard (drywall) and joint compound, white	First floor, eastern portion, Warehouse 1			
1683-B-010 **Priority No.**	ND	Cove base and white mastic, 3", black	First floor, eastern portion, Warehouse 1			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-011 **Priority No.**	ND	Joint compound, off-white	First floor, eastern portion, Warehouse 1			
1683-B-012 **Priority No.**	ND	Expansion joint, gray	First floor, eastern portion, Warehouse 1, between concrete walls			
1683-B-013 **Priority No.**	ND	Vinyl cover and mastic, white and yellow	First floor, eastern portion, Warehouse 1			
1683-B-014 **Priority No.**	ND	Floor tile and black mastic, 1'x1', off-white, black specks	First floor, eastern portion, Warehouse 1			
1683-B-015 **Priority No.**	ND	Floor tile and black mastic, 1'x1', off-white, black specks	First floor, eastern portion, Warehouse 1			
1683-B-016 **Priority No.**	ND	Expansion joint, gray	First floor, southwestern portion, Warehouse 1, between concrete walls			
1683-B-017 **Priority No.**	ND	Floor tile and yellow mastic, gray, black specks	First floor, Room 135			
1683-B-018 **Priority No.** 4	FT=<1% CH, MAS=5% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room 135, under 1683-B-017	~110 SF	Included Rooms 113 and 135. See Figure 1.	Nonfriable and in good condition. Multiple layers of flooring material may be present in these locations.
1683-B-019 **Priority No.**	ND	Cove base and white and brown mastic, 3", black	First floor, Room 135			
1683-B-020 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', light gray, gray specks	First floor, Room 138			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-021 **Priority No.** 4	FT=<1% CH, MAS=5% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room 113, under 1683-B-017-type FT	0	Included in 1683-B-018.	Nonfriable and in good condition.
1683-B-022 **Priority No.**	ND	Wallboard (drywall) and joint compound, white	First floor, Room 113			
1683-B-023 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', gray, black and white specks	First floor, Room S112			
1683-B-024 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', gray	First floor, Room S103			
1683-B-025 **Priority No.**	ND	HVAC duct sealant material, gray	Roof, Section #3			
1683-B-026 **Priority No.** 4	FT=ND, MAS=2% CH	Floor tile and black mastic, 1'x1', light brown, brown specks	First floor, Room T102A	~1,000 SF	Included Rooms S105, S109, S119, T102A, and west portion of Room S102A. See Figure 1.	Nonfriable and in good condition. Multiple layers of flooring material may be present in these locations.
1683-B-027 **Priority No.** 4	FT=ND, MAS=2% CH	Floor tile and black mastic, 1'x1', light brown, brown specks	First floor, Room T102A	0	Included in 1683-B-026.	Nonfriable and in good condition.
1683-B-028 **Priority No.**	ND	Linoleum and yellow and black mastic, gray, black specks	First floor, Room T103			
1683-B-029 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', tan	First floor, Room T105A			
1683-B-030 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', tan	First floor, Room T107A			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-031 **Priority No.** 4	FT=<1% CH, MAS=5% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room T107A, under 1683-B-030	~100 SF	Included Room T107A only. See Figure 1.	Nonfriable and in good condition. Multiple layers of flooring material are present in this location.
1683-B-032 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', gray, black and white specks	Mezzanine floor, Room 201B			
1683-B-033 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', gray	Mezzanine floor, Room 205B			
1683-B-034 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', black	First floor, Room S102A			
1683-B-035 **Priority No.** 4	FT=ND, MAS=3% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room S102A, under 1683-B-034	0	Included in 1683-B-026.	Nonfriable and in good condition. Multiple layers of flooring material are present in this location.
1683-B-036 **Priority No.**	ND	Carpet mastic, green	First floor, Room T102, under carpet			
1683-B-037 **Priority No.**	ND	Carpet mastic, green/yellow	First floor, Room 129, under carpet			
1683-B-038 **Priority No.** 4	<1% CH	Carpet mastic, black	First floor, Room S119, under carpet	0	Included in 1683-B-026.	Nonfriable and in good condition.
1683-B-039 **Priority No.**	ND	Ceiling tile and brown mastic, 1'x1', white, beige matrix, painted black, random crevices and holes	Mezzanine floor, Room 202B, on wall			
1683-B-040 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, painted black, directional crevices and holes	Mezzanine floor, Room 202B			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-041 **Priority No.**	ND	Joint compound, white	Mezzanine floor, Room 202B, behind outlet			
1683-B-042 **Priority No.**	ND	Cove base and white/brown mastic, 3", purple	Mezzanine floor, Room 202B			
1683-B-043 **Priority No.**	ND	Cove base and white/brown mastic, 5", black	First floor, Room S110			
1683-B-044 **Priority No.** 4	JC=2% CH, COMP=<1% CH	Joint compound, white	First floor, Room S110, behind light switch	~78,000 SF	Included JC on wall/ceiling systems on first floor of large office area. Actual surface area may be 2 to 5 times the floor area. See Figure 1.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-045 **Priority No.**	ND	Joint compound, white	First floor, Room 125			
1683-B-046 **Priority No.**	ND	Joint compound, white	First floor, Room 144, behind outlet			
1683-B-047 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, directional crevices and holes	First floor, Room 104			
1683-B-048 **Priority No.**	ND	Floor tile and yellow mastic, 1'x1', gray	First floor, Room 116			
1683-B-049 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, random crevices and holes	First floor, Room 103A			
1683-B-050 **Priority No.**	ND	Ceiling tile, 2'x4', white, gray matrix, random crevices and holes	First floor, Room M101B			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-051 **Priority No.**	ND	Ceiling tile, white, beige matrix, textured	First floor, Room 112			
1683-B-052 **Priority No.**	ND	Joint compound, white, unpainted	First floor, Room T103, above suspended CT, on ceiling			
1683-B-053 **Priority No.**	ND	HVAC duct tape, off-white	Mezzanine floor, Room 200B			
1683-B-054 **Priority No.** 4	FT=ND, MAS=5% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room S109, under carpet	0	Included in 1683-B-026.	Nonfriable and in good condition. Multiple layers of flooring material are present in this location.
1683-B-055 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, smooth texture	First floor, Room S109			
1683-B-056 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, directional crevices and holes	First floor			
1683-B-057 **Priority No.**	ND	Joint compound, white	First floor, Room T106, behind outlet			
1683-B-058 **Priority No.**	ND	Ceiling tile, 2'x4', white, beige matrix, random crevices and holes	First floor, Room T106B			
1683-B-059 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #1			
1683-B-060 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #1			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-061 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #1			
1683-B-062 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #1			
1683-B-063 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #2			
1683-B-064 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #2			
1683-B-065 **Priority No.**	ND	HVAC duct sealant material, gray	Roof, Section #2			
1683-B-066 **Priority No.**	ND	Linoleum and yellow mastic, light gray	First floor, northwestern portion, Warehouse 2			
1683-B-067 **Priority No.**	ND	Joint compound, white	First floor, northwestern portion, Warehouse 2			
1683-B-068 **Priority No.** 4	FT=2% CH, MAS=3% CH	Floor tile and black mastic, size unknown, off-white	First floor, Room T107, under carpet	~660 SF	Included Room T107 only. See Figure 1.	Nonfriable and in good condition. Multiple layers of flooring material are present in this location.
1683-B-069 **Priority No.**	ND	Plastic roof cement (roof mastic), black	Roof, Section #1			
1683-B-070 **Priority No.**	ND	Expansion joint, white, rubbery	Exterior, southern portion, between concrete walls			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-071 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #3			
1683-B-072 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #3			
1683-B-073 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #3			
1683-B-074 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #4			
1683-B-075 **Priority No.**	ND	Rolled-on roofing material, horizontal surface, light gray, black matrix	Roof, Section #4			
1683-B-076 **Priority No.**	ND	Rolled-on roofing material, vertical surface, light gray, black matrix	Roof, Section #4			
1683-B-077 **Priority No.**	ND	Plastic roof cement (roof mastic) and silver paint sealant, black	Roof, Section #4, on skylight			
1683-B-078 **Priority No.**	ND	HVAC duct tape and sealant material and plastic roof cement (roof mastic), off-white, gray, and black	Roof, Section #3			
1683-B-079 **Priority No.**	ND	Plastic roof cement (roof mastic) and silver paint sealant, black	Roof, Section #3			
1683-B-080 **Priority No.**	ND	HVAC duct sealant material, off-white	Roof, Section #1			

ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-081 **Priority No.** 4	SP=ND, DS=ND, PRC=5% CH, DT=ND	HVAC duct tape and sealant material, plastic roof cement (roof mastic), and silver paint sealant, off-white and	Roof, Section #1	<2,000 SF	Included PRC on penetrations and seals scattered throughout roofs and components of this building.	Nonfriable and in good condition.
1683-B-082 **Priority No.** 4	JC=2% CH, COMP=<1% CH	Joint compound, off-white	First floor, Room T104	0	Included in 1683-B-044.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-083 **Priority No.** 4	FT=ND, MAS=2% CH	Floor tile and black mastic, size unknown, brown	First floor, Room S105, under carpet	0	Included in 1683-B-026.	Nonfriable and in good condition. Multiple layers of flooring material are present in this location.
1683-B-084 **Priority No.**	ND	Joint compound, off-white	Mezzanine floor, Room 200B			
1683-B-085 **Priority No.**	ND	Joint compound, off-white	First floor, Room S107			
1683-B-086 **Priority No.** 4	JC=2% CH, COMP=<1% CH	Joint compound, off-white	First floor, Room S106	0	Included in 1683-B-044.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-087 **Priority No.** 4	JC=2% CH, COMP=<1% CH	Joint compound, off-white	First floor, Room S113	0	Included in 1683-B-044.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-088 **Priority No.** 4	JC=<1% CH, COMP=<1% CH	Joint compound, off-white	First floor, Room T105, behind outlet	0	Included in 1683-B-044.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-089 **Priority No.**	ND	Joint compound, off-white	First floor, Room S105, above suspended CT			
1683-B-090 **Priority No.**	ND	Joint compound, off-white	First floor, Room S109			

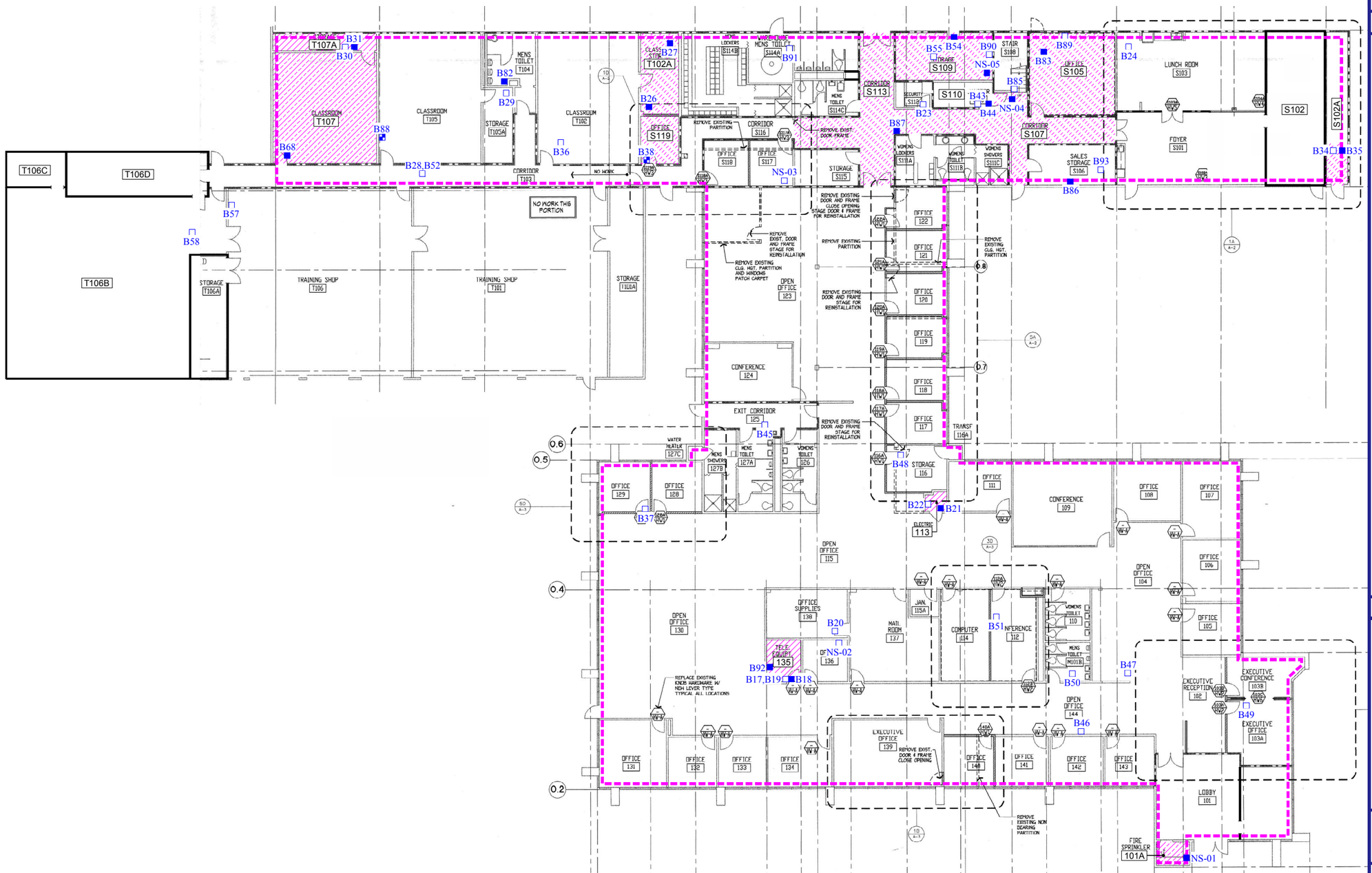
ASBESTOS SURVEY SUMMARY TABLE

Building No. 1683

Sample No.	Analytical Results	Description of Material	Sample Location	Est. Area Covered	Homogeneous Area	Additional Comments
1683-B-091 **Priority No.**	ND	Joint compound, off-white	First floor, Room S114A			
1683-B-092 **Priority No.** 4	JC=2% CH, COMP=<1% CH	Joint compound, off-white	First floor, Room 135	0	Included in 1683-B-044.	Nonfriable and in good condition. JC >= 1% CH (or <1% CH), but as a wall system composite, assumed <1% CH. Not considered as ACM under EPA, but must comply with DOSH regulations as ACM.
1683-B-093 **Priority No.**	ND	Carpet mastic and floor leveling compound, yellow and white	First floor, Room S106, under carpet			
NS-01 **Priority No.** 4	FT=2% CH, MAS=25% CH	Floor tile and black mastic, beige	First floor, Room 101A	~50 SF	Included Room 101A only. See Figure 1.	Pickering Environmental sample. Nonfriable and in good condition.
NS-02 **Priority No.**	ND	Floor tile and mastic, beige	First floor, Room 136			Pickering Environmental sample.
NS-03 **Priority No.**	ND	Floor tile and mastic, gray	First floor, Room S117			Pickering Environmental sample.
NS-04 **Priority No.** 4	FT=ND, MAS=35% CH	Floor tile and black mastic, beige	First floor, Room S107	~800 SF	Included Rooms S107 and S113. See Figure 1.	Pickering Environmental sample. Nonfriable and in good condition. These materials were inaccessible and assumed to be present underneath wood flooring.
NS-05 **Priority No.** 4	FT=ND, MAS=35% CH	Floor tile and black mastic, gray and white	First floor, Room S109	0	Included in 1683-B-054.	Pickering Environmental sample. Nonfriable and in good condition.

NOTES (where applicable):

1. This summary table is intended to be used with the figure(s) prepared by Panacea, Inc. Please refer to the figure(s) for the room or area designations.
2. Estimated area covered is intended for discussion and management purposes only. Actual square footage may vary. Other asbestos-containing materials (ACMs) may be present in inaccessible areas.
3. CH = chrysotile; AM = amosite; CR = crocidolite; AN = anthophyllite; TR = tremolite; AC = actinolite; ND = none detected; <1% = trace amount of asbestos.
4. HVAC = heating, ventilation, and air conditioning unit; FP = floor plan; OD = outside diameter; LF = linear feet; SF = square feet; "~" = approximately; "<" = less than; ">" = greater than; OH = overhang; PLM = polarized light microscopy; TEM = transmission electron microscopy; "+" = positive, "x" = times.
5. FM = flooring material; FT = floor tile; MAS = mastic; LN = linoleum; CB = cove base; CBM = cove base and mastic; SP = silver paint sealant; DS = duct sealant; RM = roofing material; PRC = plastic roof cement; FLC = floor leveling compound; CT = ceiling tile; HDW = HVAC duct wrapping material; DI = duct insulation; SFP = silver foil paper; PI = pipe insulation; DT = duct tape.
6. JC = asbestos concentration for joint compound; COMP = assumed asbestos concentrations for the composited system (walls and/or ceiling) consisting of wallboard (drywall) and joint compound. Estimated area covered for joint compound and other wall material is based on the floor area. Actual square footage of the composite wall and/or ceiling system can vary from 2 to 5 times the floor area.
7. ACM = asbestos-containing material; ACCM = asbestos-containing construction material.
8. EPA = U.S. Environmental Protection Agency; DOSH = Division of Occupational Safety and Health.



LEGEND

- Bulk Sample Location (Negative)
- Bulk Sample Location (Positive, <1% Asbestos)
- Bulk Sample Location (Positive, >1% Asbestos)
- Floor Tile and Black Mastic (>1% Asbestos)
- Floor Tile (<1% Asbestos) and Black Mastic (>1% Asbestos)
- Black Mastic (>1% Asbestos) on Flooring Materials (Negative)
- Area With Asbestos-Containing Joint Compound (>1% Asbestos). As A Composite Wall System, It Is Assumed to Contain <1% Asbestos.

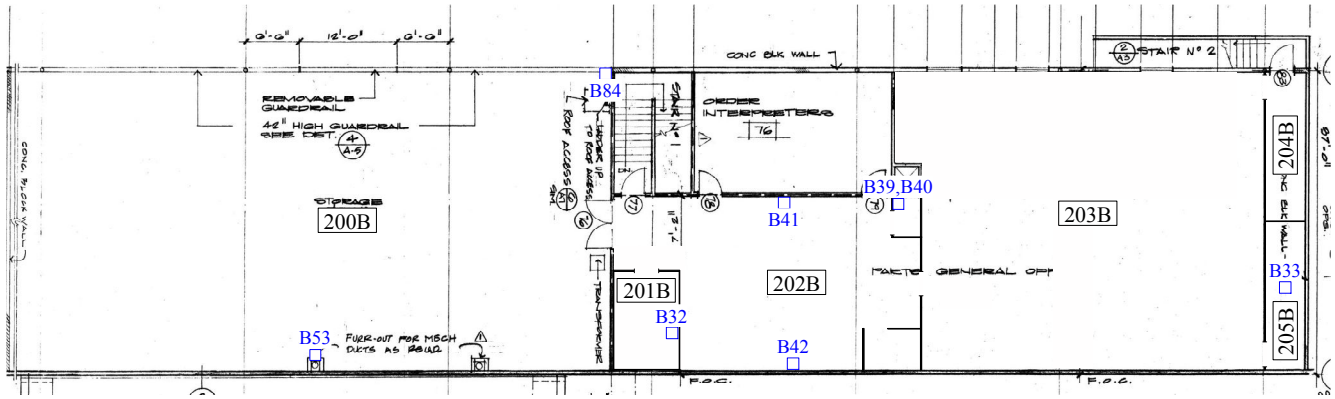
GENERAL NOTES

1. All locations are approximate. No scale or dimension is implied.
2. Base map obtained from client.
3. Room numbers or area designations are arbitrarily assigned for discussion purposes only.
4. Sample numbers are shortened for graphic presentation purposes (e.g., sample number [BLDG NO.]-B-001 is shortened to B1).
5. Other asbestos-containing materials may be present in inaccessible areas of the building.

PANACEA, INC.
Environmental Services

BULK SAMPLE LOCATIONS
LARGE OFFICE AREA - FIRST FLOOR PLAN
1683 SUNFLOWER AVENUE
COSTA MESA, CALIFORNIA

PROJECT NO. C13-798 | FIGURE 1



N

LEGEND

☐ Bulk Sample Location (Negative)

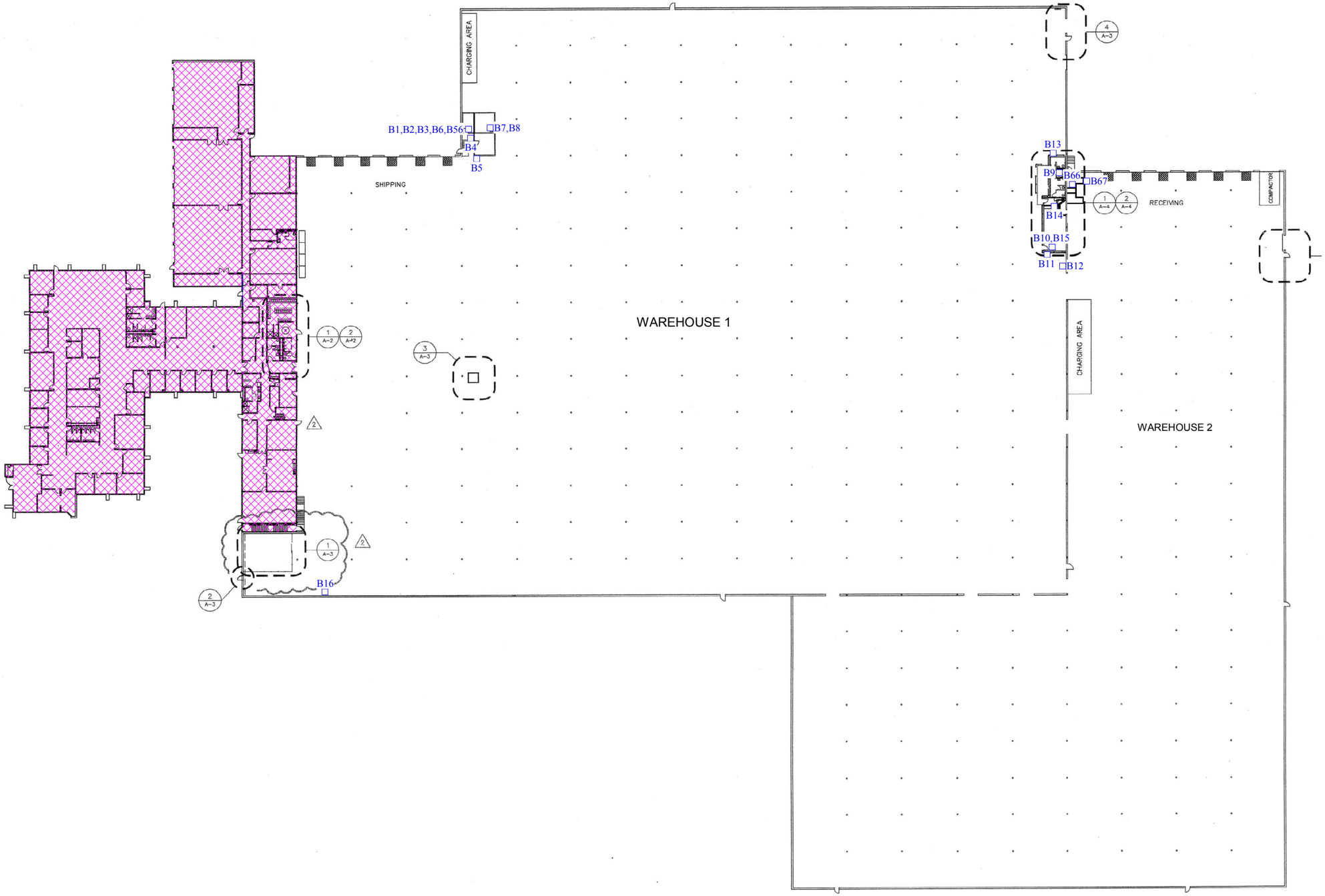
GENERAL NOTES

1. All locations are approximate. No scale or dimension is implied.
2. Base map obtained from client.
3. Room numbers or area designations are arbitrarily assigned for discussion purposes only.
4. Sample numbers are shortened for graphic presentation purposes (e.g., sample number [BLDG NO.]-B-001 is shortened to B1).
5. Other asbestos-containing materials may be present in inaccessible areas.

PANACEA, INC.
Environmental Services

BULK SAMPLE LOCATIONS
LARGE OFFICE AREA - MEZZANINE FLOOR PLAN
1683 SUNFLOWER AVENUE
COSTA MESA, CALIFORNIA

PROJECT NO. C13-798	FIGURE 2



N

LEGEND

- Bulk Sample Location (Negative)
- Portion of Building Shown on Figure 1

GENERAL NOTES

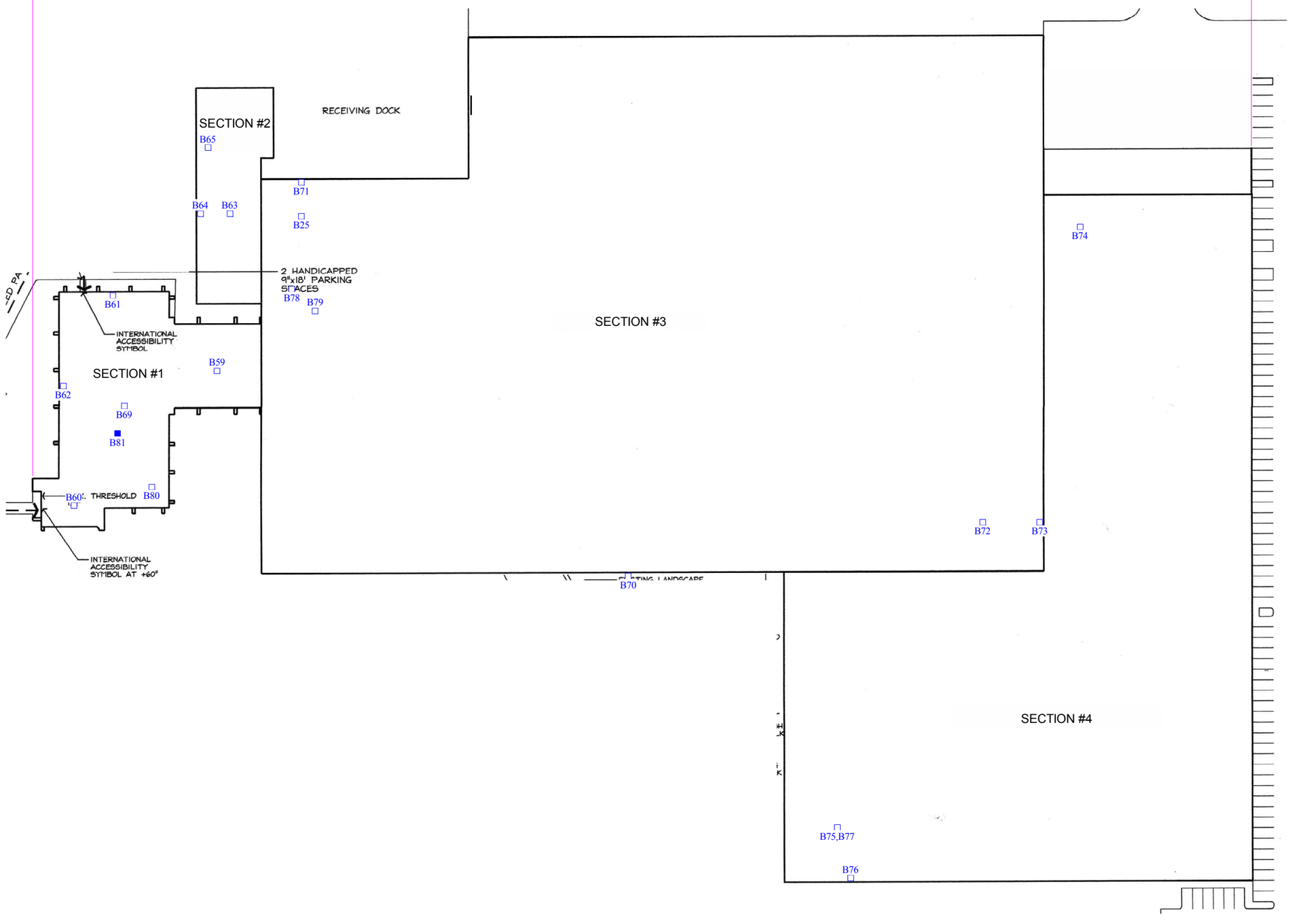
1. All locations are approximate. No scale or dimension is implied.
2. Base map obtained from client.
3. Room numbers or area designations are arbitrarily assigned for discussion purposes only.
4. Sample numbers are shortened for graphic presentation purposes (e.g., sample number [BLDG NO.]-B-001 is shortened to B1).
5. Other asbestos-containing materials may be present in inaccessible areas of the building.

PANACEA, INC.
Environmental Services

BULK SAMPLE LOCATIONS
WAREHOUSE - FLOOR PLAN
1683 SUNFLOWER AVENUE
COSTA MESA, CALIFORNIA

PROJECT NO. C13-798 | FIGURE 3

Plastic roof cement (roof mastic) observed on penetrations, seals, and components on the roofs of this building contains >1% asbestos. Assumed <2,000 SF of this material was present.



N

LEGEND

- □ Bulk Sample Location (Negative)
- ■ Bulk Sample Location (Positive, >1% Asbestos)

GENERAL NOTES

1. All locations are approximate. No scale or dimension is implied.
2. Base map obtained from client.
3. Room numbers or area designations are arbitrarily assigned for discussion purposes only.
4. Sample numbers are shortened for graphic presentation purposes (e.g., sample number [BLDG NO.]-B-001 is shortened to B1).
5. Other asbestos-containing materials may be present in inaccessible areas of the building.

PANACEA, INC.
Environmental Services

BULK SAMPLE LOCATIONS
ROOF AND EXTERIOR PLAN
1683 SUNFLOWER AVENUE
COSTA MESA, CALIFORNIA

PROJECT NO. C13-798	FIGURE 4

Likelihood Statements

Many statements have been made in this report regarding the likelihood of the occurrence of certain adverse events. The term "likelihood," as used here, pertains to chances of a match between the prediction for the event and its actual occurrence. Likelihood statements are based on the professional judgments of Panacea Inc. A prediction made for the occurrence of an event will either match the actual occurrence or not. Uncertainty about the natural processes, lack of adequate scientific understanding of the physical and chemical interactions at the site, and insufficient data and information about the specific site conditions usually preclude a perfect or 100-percent likelihood of match between predictions and actual occurrences. Therefore, where a perfect match is not possible, the likelihood statement assigns a measure for a "degree of belief" or a "betting score" for the match between the prediction for the event and the actual event outcome.

The likelihood statements can be made either qualitatively, expressed verbally, or quantitatively, expressed in percent ranges. The qualitative terms expressed verbally, however, can be approximately related to percent ranges. Panacea, Inc. has used the following approximate percent ranges for the qualitative terms used in likelihood statements:

QUALITATIVE TERM	APPROXIMATE PERCENT RANGE
Very Low	Less than 10
Low	10 to 20
Low to Moderate	20 to 40
Moderate	40 to 60
Moderate to High	60 to 80
High	80 to 90
Very High	More than 90

The following is a typical likelihood statement and its interpretation:

- Statement: Based on site conditions, data collected, and current regulatory guidelines delineating a hazardous waste, it is the judgment of Panacea, Inc. that there is a low likelihood that hazardous waste from the landfill has migrated to the site.

- Interpretation of Statement: The statement reflects an extrapolation of a discrete data set to the entire site. This statement is made within the context of regulatory guidelines delineating hazardous wastes in effect at the time the statement is made. It is important to note that these guidelines periodically change; consequently, the judgment made corresponds to the guidelines cited in the report.

An extrapolation made from a discrete data set precludes making a statement with certainty that the event has occurred (i.e., one cannot really say with 100-percent certainty that hazardous waste from the landfill has not migrated to the site). Therefore, a professional judgment is made for the event that is expressed in terms of the likelihood (less than 100 percent) that the event either has or has not occurred.

The statement given above renders a professional judgment that there is a low likelihood that the event has occurred. The above statement could also have been expressed as "there is a high likelihood that hazardous waste from the landfill has not migrated to the site."