BENCHMARK

ASBESTOS AND LEAD-BASED PAINT SURVEY

The Presidio
Bldg 228 Dry Cleaners
San Francisco, CA

Benchmark Project No: E09-694-ASU-LPI
Building Owner: State of California
Type of Structure: Dry Cleaners
Benchmark Technician: Terri MacFarlane
Site Visit Date: August 24, 2009

PREPARED FOR

Mr. David Keba
Department of Transportation-Right of Way
P. O. Box 23440
Oakland, CA 94623-044

PREPARED BY

Benchmark Environmental Engineering
3732-A Charter Park Drive
San Jose, CA 95136
800-988-7424

Terri MacFarlane
Environmental Field Service Manager

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
Background 2
Asbestos Containing Materials (ACM) 2
Lead Based Paint 2
FINDINGS AND OBSERVATIONS 3
Asbestos 3
Lead-Based Paint 4
SCOPE OF SERVICES-ASBESTOS 4
METHODOLOGY-ASBESTOS 4
General 4
Visual Inspection 4
Homogenous Material Classification 4
Sampling Procedures 4
Methods of Analysis 5
Laboratory Quality Control Program 5
Asbestos Containing Materials (ACM): 5
Asbestos Containing Construction Materials (ACCM) 6
SCOPE OF SERVICES-LEAD 7
METHODOLOGY-LEAD 7
General Reference 7
Visual Inspection 7
Sampling Process 7
Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis) 7
Quality Control Program 8
GENERAL 8
Warranty 8
APPENDIX A: Asbestos Laboratory Results and Table 1
APPENDIX B: Lead-Based Paint XRF Results 2
APPENDIX C: Certifications and Lead Hazard Evaluation Form 3
APPENDIX D: Previous Survey Information 4
APPENDIX E: Diagram 5

Benchmark Environmental Engineering was retained by Mr. David Keba of the Department of Transportation Right of Way to conduct an asbestos and lead-based paint survey at The Presidio, Bldg 228 Dry Cleaners in San Francisco, California.

Written authorization to perform this survey was received by Benchmark from Mr. Keba.

The asbestos and lead-based paint survey was conducted on August 24, 2009 and was comprised of surveying all areas of the building which will undergo demolition as part of the Department of Transportation Right of Way program.

Background

The structure located at The Presidio, Bldg 228 Dry Cleaners in San Francisco CA was previously utilized as a Dry Cleaners. The structure consists of an open warehouse area, equipment storage areas and a bathroom. A previous asbestos inspection was conducted by Versar in January 1996.

Asbestos Containing Materials (ACM)

Six (6) samples were collected of materials scheduled for disturbance and analyzed for asbestos content.

The following suspect asbestos materials were sampled by Benchmark
- Roof Shingle
- Roof Felt
- Floor tile and Mastic

The following suspect asbestos materials were sampled by Versar, Inc in January 1996:
None of these listed materials sampled with the exception of the Thermal System Insulation and Fittings contained asbestos

- *Thermal System Insulation (Pipe Wrap)*
- *Fittings*
- Plaster Walls
- Misc. Debris
- Window Putty
- Fiber Board
- Roof Shingles
- Roof Felt
- Vinyl Floor Tiles and Mastic
- Fire Doors
- Vinyl Base Coving and Mastic
- Roof Tar

Lead Based Paint

In order to determine if lead based paint is present, one hundred one (101) assays were collected using an X-RAY FLOURESCENCE (XRF) instrument. Numerous components have been identified with lead in the paint above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM.

The overall condition of the paint was in fair/poor condition. Any painted surface which has been identified as having lead in the paint at or above the DHS level of 5000 parts per million and is in fair to poor condition must be considered a Hazard. Worker protection must be implemented during all phases of the demolition. (Title 8, CCR 1532.1.)

The following table summarizes the material sampled, location, analytical results in percent of asbestos present, the friability of the material, the condition of the material, the estimated quantities of the material and the estimated removal cost.

Asbestos Samples

Material	Location	% of Asbestos	Friable\ Non-Friable	Condition	Quantities *	Removal Cost Estimate
Roofing Shingle and Felt	Roof	N/A	N/A	N/A	N/A	N/A
Floor Tiles (multi Layers) and Mastic	Entry Floor	2% Chrysotile (Tile) 5% Chrysotile (Mastic)	Non-Friable	Fair	90 SF	$300
9"x9" Floor Tiles and Mastic	Bathroom	5% Chrysotile (Tile) 2% Chrysotile (Msatic)	Non-Friable	Fair	100 SF	$300
12" x12" Floor tile and Mastic	Bathroom	<1% Chrysotile (Tile) 5% Chrysotile (Mastic)	Non-Friable	Fair	40 SF	$200
Thermal System Insulation-Pipe Wrap Versar Survey	Pipe Runs	30-35% Chrysotile	Friable	Intact	342 LF	$6,000
Fittings Versar Survey	Throughout Pipe Runs	17-35% Chrysotile	Friable	Intact	10 LF	$1,500

*This is a field estimate only and should be quantified by the contractor prior to removal

Asbestos

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%). *The Asbestos Laboratory Results can be found in Appendix A*

Lead-Based Paint

The results indicated that the following building components were above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM. Lead-Based paint, as defined by EPA/HUD, was identified on the components assayed. See Appendix B for the Preliminary XRF Readings.

Location	Component	Estimated Disposal Cost
Exterior	Window components, Fascia, Rafter Tail, Eaves, Double Door, Door jamb, Window screen	$5,000
Open Warehouse	Painted Brick, Window components, Header/Beams, Ceiling	$5,000
Equipment Room	Painted Brick, Window components, Sliding Door	$2,500
Storage #1	Painted Brick, Door components, Window components	$3,000
Bathroom:	Painted Brick, Window components, Door components	$3,000
Equipment Room #2	Painted Brick, Window components, Door Components	$2,500
Storage #2:	Painted Brick, Window components, Door	$2,500

The XRF results can be found in APPENDIX B- Lead Based Paint XRF Results Page

SCOPE OF SERVICES-ASBESTOS

Asbestos sampling was performed by a Certified Asbestos Consultant (CAC). Bulk asbestos samples obtained from the facility were analyzed in the laboratory using Polarized Light Microscopy (PLM) with dispersion staining. The Inspection, sampling, and assessment procedures were performed in accordance with the guidelines published by the EPA in 125CFR Part 763 Subpart E, October 30, 1987.

METHODOLOGY-ASBESTOS

General

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed. Materials that were similar in general appearance were grouped into homogeneous sampling areas.

Homogenous Material Classification

A preliminary walkthrough of the building was conducted to determine areas of materials that were visually similar in color, texture, and general appearance and that appeared to have been installed at the same time. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were noted.

Sampling Procedures

Following the walkthrough, the inspector collected selected samples of exposed or accessible materials identified as suspect ACM. EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Samples of surfacing material for asbestos were collected in general accordance with the EPA random sampling

protocol outlined in the EPA publication, "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials" (EPA 560/5-85-030a, October 1985). Samples of miscellaneous materials were taken as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material.

Methods of Analysis

Analysis was performed by visually observing the bulk sample and preparing slides for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (Chrysotile, Amosite, Crocidolite, Anthophyllite, and Actinolite/Tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.) and non-fibrous constituents. Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

The microscopist used a stereoscope to visually estimate relative amounts of each constituent using a stereoscope to determine the volume of each constituent in proportion to the total volume of the sample. All bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described by the interim method of the determination of asbestos in bulk insulation, Federal Register, Volume 47, No. 103, May 27, 1982. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays that result enable mineral identification. It should be noted that some ACM may not be accurately identified or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy method. Transmission Electron Microscopy (TEM) is recommended for a more definitive analysis of these materials.

Laboratory Quality Control Program

Forensic Analytical located in Hayward, California, performed the analysis. Forensic maintains an in-house quality control program. This program involves blind reanalysis of ten percent of all samples, precision and accuracy controls, and use of standard bulk reference materials.

Asbestos Containing Materials (ACM):

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%).

Removal and disposal of asbestos containing materials (ACM) must be performed in accordance with Bay Area Air Quality Management District (BAAQMD) and California-Occupational Safety and Health Administration (CAL/OSHA) notification and work practice requirements.

EPA groups asbestos containing materials (ACM) into three (3) types:

- Friable ACM – Asbestos containing materials that can reduce to powder by hand pressure such as, thermal system insulation (TSI), acoustical ceiling material.

- Category I non-friable ACM - asbestos-containing resilient floor coverings or VAT, asphalt roofing products, packings and gaskets.

- Category II non-friable ACM – any material, excluding Category I materials, that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

It is possible for any of the above types of ACM to become Regulated Asbestos Containing Materials (RACMs) under the Standard. RACMs are defined as:

- Friable ACM

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that has been or will be subjected to sanding, grinding, cutting, or abrading
- Category II non-friable ACM which has already been or is likely to become crumbled, pulverized, or reduced to powder by mechanical forces expected to act on the materials during demolition/renovation operations as covered by the Standard.

Asbestos Containing Construction Materials (ACCM)

Although the material is not considered "asbestos containing" as defined by the EPA, the material does contain asbestos and is subject to OSHA regulations pertaining to employee exposure.

Title 8 of the California Code of Regulations, CCR Section 341.6-11 defines asbestos-containing construction materials (ACCM) as construction materials having greater than one-tenth of one percent (0.1%) by weight. This applies to Cal-OSHA regulations pertaining to the protection of workmen engaged in the removal of ACCM.

ACCM must be removed using the same regulation procedures as materials containing 1% asbestos as defined by EPA 125CFR 763 and OSHA 763 and OSHA 29 CFR 1926.1101 with regard to asbestos work classifications I, II, III, and IV including negative exposure assessments (NEA) and use of regulated areas.

SCOPE OF SERVICES-LEAD

Benchmark understands the scope of work for this project to be a Lead Based Paint Inspection The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997). The Risk assessment was conducted in general accordance with Chapter 5 of the HUD Guidelines.

METHODOLOGY-LEAD

General Reference

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

A Department of Health Services Certified Lead Inspector/Risk Assessor performed the inspection. An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed.

Sampling Process

Following the walkthrough, the inspector selected sample areas of exposed or accessible materials identified as suspect Lead-Based Paint. State and Federal Guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis)

XRF instruments measure lead-in-paint by directing high energy X-rays and gamma rays into the paint, causing the lead atoms in the paint to emit X-rays which are detected by the instrument and converted to a measurement of the amount of lead in the paint. The EPA approved technology allows for measurement of X-rays without scraping or samples preparation to characterize substrate or matrix effects. The Spectrum Analyzer, Metals Analysis Probe (MAP 4) is combined with a microprocessor system that enables field-testing with a high degree of quality control and speed. Sample locations, descriptions, conditions, and measurement results are automatically recorded by the instrument and easily downloaded to a PC or laptop.

All results were compared to the State and Federal Guidelines:
1.0 mg/cm^2 = XRF-Lead-based Paint

The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997).

All building components identified on the site inspection that may contain lead-based paint/coating were targeted for testing (interior and/or exterior walls, doors and all associated components).

The testing and sampling protocol was comprised of testing with an X-Ray Fluorescence (XRF) analyzer. The XRF instrument is set with a unique identification number, which lists the building components.

Quality Control Program

Benchmark Environmental Engineering utilizes only DHS approved inspectors, which are certified to use radioactive instruments. The MAP 4 Spectrum Analyzer has on-board calibration routines, which continuously operate, and self-correct to minimized sampling error. This is known as substrate correcting software.

GENERAL

Warranty

Benchmark warrants that the findings contained herein have been prepared with the level of care and skill exercised by experienced and knowledgeable environmental consultants who are appropriately licensed or otherwise trained to perform asbestos assessments pursuant to the scope of work required on this project.

The survey included inspection of accessible materials such as above or behind suspended ceilings or other non-permanent structures. Benchmark did not inspect or sample inaccessible areas such as behind walls or within ductwork and did not dismantle any part of the structure to survey inaccessible areas. Inaccessible materials that are visible to Benchmark's inspectors shall be assumed asbestos containing or lead-based paint containing.

APPENDIX A: Asbestos Laboratory Results and Table

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Benchmark Environmental
Project Manager
3732-A Charter Park Drive

San Jose, CA 95136

Client ID: 3565
Report Number: B127577
Date Received: 08/26/09
Date Analyzed: 08/28/09
Date Printed: 08/28/09
First Reported: 08/28/09

Job ID/Site: E09-694 - Building 228, Presidio, San Francisco

Date(s) Collected: 08/24/2009

FALI Job ID: 3565
Total Samples Submitted: 6
Total Samples Analyzed: 6

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
694-8-24-1B	10897798						
Layer: Black Tar Stones			ND				
Layer: Black Felt			ND				
Layer: Black Tar Stones			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Felt			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (45 %)	Fibrous Glass (20 %)						
Comment: Bulk complex sample.							
694-8-24-2B	10897799						
Layer: Stones			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Felt			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (40 %)	Fibrous Glass (35 %)						
694-8-24-3B	10897800						
Layer: Off-White Tile			ND				
Layer: Yellow Mastic			ND				
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic		Chrysotile	5 %				
Layer: Green Tile		Chrysotile	5 %				
Layer: Black Mastic		Chrysotile	5 %				
Layer: Grey Tile		Chrysotile	5 %				
Layer: Black Mastic			ND				
Total Composite Values of Fibrous Components:		Asbestos (3%)					
Cellulose (Trace)							
Comment: Bulk complex sample.							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127577
Date Printed: 08/28/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
694-8-24-4B	10897801						
Layer: Off-White Tile			**ND**				
Layer: Yellow Mastic			**ND**				
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Layer: Grey Tile		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components:		Asbestos (2%)					
Cellulose (Trace)							
Comment: Bulk complex sample.							
694-8-24-5B	10897802						
Layer: Brown Tile		Chrysotile	**5 %**				
Layer: Black Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components:		Asbestos (5%)					
Cellulose (Trace)							
Comment: Bulk complex sample.							
694-8-24-6B	10897803						
Layer: Beige Tile		Chrysotile	**Trace**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components:		Asbestos (Trace)					
Cellulose (Trace)							
Comment: Bulk complex sample.							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

BENCHMARK
3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 1 of ____

Project #: E09-694 Date: 08/24/09 Technician: G / Teri

Project Address: Building 228, Presidio, SF Francisco

Client Name: ____ Company: ____

Sample Number	Location	Homogenous Group or Measurement	Material or Component	Results To Be Reported As
694-8.24.13	Roof	1	Roof shingle + Felt Paper	
2B	Roof	↓	↓ ↓	
3B	Building Entry Floor Tile	2	FT/mastic	
4B	↓ ↓	↓	↓	
5B	Bathroom Area	3	9"x9" FT/mastic	
6B	↓ ↓	↓	12"x12" FT/mastic	

Circle Project Type	Circle Type of Analysis	Circle Turnaround Time
Asbestos (Survey/Sample Collection)	PLM/Bulk (EPA 600)	Same Day/Rush
Lead-Based Paint	EPA SW 846-7420 FLAA	24 Hour
Risk Assessment (Lead)	Dust Wipe, Soil, Paint Chip Ghost Wipes	48 Hour
Clearance Lead	GFAA Water (lead)	72 Hour
Mold/Fungus (Baseline)	Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)	5 Day
Sewage Screen (Baseline)	Direct Microscopic Exam (Tape/Swab)	Other: ____
Sewage Screen (Post-Remediation)	Other: ____	
Other: ____		

Relinquished By: Gerardo Received By: [illegible] 9am Date/Time: 8/26/09

APPENDIX B: Lead-Based Paint XRF Results

Walls are referenced as A, B, D and D

Wall A is the street side of the residence

Walls B, C, and D are numbered clockwise.

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Calibrations, Exterior, and Common											
Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
375	Calibration	*	*	*	*	*	0.929	0.932	Inconclusive	24-Aug-09	02:18P
376	Calibration	*	*	*	*	*	0.892	0.897	Inconclusive	24-Aug-09	02:19P
377	Calibration	*	*	*	*	*	0.992	0.955	Inconclusive	24-Aug-09	02:20P
378	Calibration	*	*	*	*	*	1	0.967	Inconclusive	24-Aug-09	02:21P
379	Calibration	*	*	*	*	*	1.018	0.848	Inconclusive	24-Aug-09	02:22P
380	Calibration	*	*	*	*	*	1.027	1.023	Inconclusive	24-Aug-09	02:23P
381	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	02:24P
382	Exterior	Window Sill	A	Wood	Fair	White/Off White	14.579	1.193	XRF Positive	24-Aug-09	02:26P
383	Exterior	Window Frame	A	Wood	Fair	White/Off White	8.024	1.172	XRF Positive	24-Aug-09	02:26P
384	Exterior	Window Sash	A	Wood	Fair	White/Off White	12.664	1.746	XRF Positive	24-Aug-09	02:26P
385	Exterior	Fascia	A	Wood	Fair	White/Off White	22.633	2.191	XRF Positive	24-Aug-09	02:27P
386	Exterior	Rafter Tail	A	Wood	Poor	White/Off White	3.943	1.204	XRF Positive	24-Aug-09	02:27P
387	Exterior	Eaves	A	Wood	Poor	White/Off White	10.184	1.275	XRF Positive	24-Aug-09	02:27P
388	Exterior	Window Screen	A	Metal	Intact	White/Off White	0.433	0.47	Negative	24-Aug-09	02:27P
389	Exterior	Window Sill	B	Wood	Intact	White/Off White	7.394	3.619	XRF Positive	24-Aug-09	02:28P
390	Exterior	Window Frame	B	Wood	Intact	White/Off White	5.598	1.748	XRF Positive	24-Aug-09	02:28P
391	Exterior	Window Sash	B	Wood	Fair	White/Off White	7.642	1.761	XRF Positive	24-Aug-09	02:28P
392	Exterior	Window Sill	C	Wood	Fair	White/Off White	6.553	1.855	XRF Positive	24-Aug-09	02:29P
393	Exterior	Window Frame	C	Wood	Fair	White/Off White	3.054	1.099	XRF Positive	24-Aug-09	02:29P
394	Exterior	Window Sash	C	Wood	Fair	White/Off White	3.105	1.515	XRF Positive	24-Aug-09	02:29P
395	Exterior	Double Door	C	Wood	Fair	White/Off White	3.655	1.465	XRF Positive	24-Aug-09	02:29P
396	Exterior	Door Jamb	C	Wood	Fair	White/Off White	8.479	2.463	XRF Positive	24-Aug-09	02:30P
397	Exterior	Fascia	C	Wood	Fair	White/Off White	9.284	2.406	XRF Positive	24-Aug-09	02:30P
398	Exterior	Eaves	C	Wood	Poor	White/Off White	10.476	1.096	XRF Positive	24-Aug-09	02:30P
399	Exterior	Rafter Tail	C	Wood	Poor	White/Off White	13.959	1.723	XRF Positive	24-Aug-09	02:30P
400	Exterior	Paneling	D	Wood	Poor	White/Off White	0.091	0.168	Negative	24-Aug-09	02:31P
401	Exterior	Window Sill	D	Wood	Poor	White/Off White	18.171	1.563	XRF Positive	24-Aug-09	02:31P
402	Exterior	Window Frame	D	Wood	Poor	White/Off White	10.204	1.245	XRF Positive	24-Aug-09	02:31P
403	Exterior	Window Sash	D	Wood	Poor	White/Off White	6.69	0.539	XRF Positive	24-Aug-09	02:31P
404	Exterior	Eaves	D	Wood	Fair	White/Off White	9.153	1.72	XRF Positive	24-Aug-09	02:32P
405	Exterior	Rafter Tail	D	Wood	Poor	White/Off White	17.41	2.135	XRF Positive	24-Aug-09	02:32P
406	Exterior	Window Screen	D	Metal	Intact	White/Off White	17.819	2.415	XRF Positive	24-Aug-09	02:32P
407	Open Warehouse	Painted Brick	A	Tile/Masonry	Intact	White/Off White	25.627	1.099	XRF Positive	24-Aug-09	02:44P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
408	Open Warehouse	Window Frame	A	Wood	Fair	White/Off White	28.81	-0.257	XRF Positive	24-Aug-09	02:44P
409	Open Warehouse	Window Sash	A	Wood	Fair	White/Off White	18.075	0.063	XRF Positive	24-Aug-09	02:44P
410	Open Warehouse	Window Sill	B	Wood	Fair	White/Off White	21.051	1.496	XRF Positive	24-Aug-09	02:44P
411	Open Warehouse	Painted Brick	B	Tile/Masonry	Intact	White/Off White	3.231	1.316	XRF Positive	24-Aug-09	02:45P
412	Open Warehouse	Window Sash	B	Wood	Fair	White/Off White	19.221	0.764	XRF Positive	24-Aug-09	02:45P
413	Open Warehouse	Window Frame	B	Wood	Fair	White/Off White	18.547	1.168	XRF Positive	24-Aug-09	02:45P
414	Open Warehouse	Painted Brick	C	Tile/Masonry	Intact	Red/Pink	0.007	-0.197	Negative	24-Aug-09	02:45P
415	Open Warehouse	Painted Brick	C	Tile/Masonry	Intact	Red/Pink	-0.246	-0.058	Negative	24-Aug-09	02:46P
416	Open Warehouse	Painted Brick	D	Tile/Masonry	Intact	White/Off White	22.347	1.285	XRF Positive	24-Aug-09	02:46P
417	Open Warehouse	Header/Beam	D	Wood	Fair	White/Off White	24.351	0.675	XRF Positive	24-Aug-09	02:46P
418	Open Warehouse	Ceiling	A	Wood	Intact	White/Off White	2.804	0.685	XRF Positive	24-Aug-09	02:47P
419	Equipment Room	Painted Brick	A	Tile/Masonry	Intact	Gray	-0.024	-0.365	Negative	24-Aug-09	02:47P
420	Equipment Room	Painted Brick	B	Tile/Masonry	Poor	White/Off White	26.743	2.716	XRF Positive	24-Aug-09	02:47P
421	Equipment Room	Window Sash	B	Wood	Fair	White/Off White	18.471	0.87	XRF Positive	24-Aug-09	02:47P
422	Equipment Room	Window Frame	B	Wood	Fair	White/Off White	19.75	2.009	XRF Positive	24-Aug-09	02:47P
423	Equipment Room	Window Sill	B	Wood	Fair	White/Off White	11.905	1.344	XRF Positive	24-Aug-09	02:48P
424	Equipment Room	Painted Brick	C	Tile/Masonry	Poor	White/Off White	0.126	-0.266	Negative	24-Aug-09	02:48P
425	Equipment Room	Painted Brick	D	Tile/Masonry	Intact	Gray	0.147	-0.066	Negative	24-Aug-09	02:48P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
426	Equipment Room	Sliding Door	D	Metal	Fair	Red/Pink	3.77	3.628	XRF Positive	24-Aug-09	02:49P
427	Equipment Room	Header/Beam	D	Metal	Intact	Red/Pink	0.119	0.699	Negative	24-Aug-09	02:49P
428	Storage #1	Painted Brick	A	Tile/Masonry	Fair	White/Off White	8.993	0.987	XRF Positive	24-Aug-09	02:49P
429	Storage #1	Painted Brick	B	Tile/Masonry	Intact	White/Off White	4.987	0.463	XRF Positive	24-Aug-09	02:50P
430	Storage #1	Door Casing	B	Wood	Fair	White/Off White	3.925	0.503	XRF Positive	24-Aug-09	02:50P
431	Storage #1	Door Jamb	B	Wood	Fair	White/Off White	17.752	1.309	XRF Positive	24-Aug-09	02:50P
432	Storage #1	Door	B	Wood	Fair	White/Off White	2.709	1.041	XRF Positive	24-Aug-09	02:50P
433	Storage #1	Painted Brick	C	Tile/Masonry	Fair	White/Off White	3.984	1.798	XRF Positive	24-Aug-09	02:50P
434	Storage #1	Window Sash	C	Wood	Fair	White/Off White	9.257	2.212	XRF Positive	24-Aug-09	02:50P
435	Storage #1	Window Sill	C	Wood	Fair	White/Off White	4.1	0.584	XRF Positive	24-Aug-09	02:50P
436	Storage #1	Window Frame	C	Wood	Fair	White/Off White	3.086	0.008	XRF Positive	24-Aug-09	02:51P
438	Storage #1	Double Door	C	Wood	Fair	Gray	1.699	0.049	XRF Positive	24-Aug-09	02:52P
439	Storage #1	Painted Brick	D	Tile/Masonry	Poor	White/Off White	13.709	1.242	XRF Positive	24-Aug-09	02:52P
440	Bath #1	Painted Brick	A	Tile/Masonry	Fair	White/Off White	16.946	0.131	XRF Positive	24-Aug-09	02:52P
441	Bath #1	Painted Brick	B	Tile/Masonry	Fair	White/Off White	16.132	0.154	XRF Positive	24-Aug-09	02:52P
442	Bath #1	Window Sill	B	Wood	Fair	White/Off White	1.799	0.7	XRF Positive	24-Aug-09	02:53P
443	Bath #1	Window Frame	B	Wood	Fair	White/Off White	3.241	0.803	XRF Positive	24-Aug-09	02:53P
444	Bath #1	Window Sash	B	Wood	Fair	White/Off White	10.164	3.484	XRF Positive	24-Aug-09	02:53P
445	Bath #1	Painted Brick	C	Tile/Masonry	Fair	White/Off White	1.99	0.072	XRF Positive	24-Aug-09	02:53P
446	Bath #1	Painted Brick	D	Tile/Masonry	Fair	White/Off White	2.211	0.227	XRF Positive	24-Aug-09	02:53P
447	Bath #1	Door Casing	D	Wood	Fair	White/Off White	15.838	1.605	XRF Positive	24-Aug-09	02:54P
448	Bath #1	Door Jamb	D	Wood	Fair	White/Off White	19.031	1.221	XRF Positive	24-Aug-09	02:54P
449	Bath #1	Door	D	Wood	Fair	White/Off White	2.955	0.49	XRF Positive	24-Aug-09	02:54P
450	Equipment Room #2	Painted Brick	A	Tile/Masonry	Fair	Gray	-0.301	0.073	Negative	24-Aug-09	02:55P
451	Equipment Room #2	Painted Brick	B	Tile/Masonry	Fair	Gray	5.811	0.039	XRF Positive	24-Aug-09	02:55P
452	Equipment Room #2	Painted Brick	C	Tile/Masonry	Fair	Gray	10.668	0.907	XRF Positive	24-Aug-09	02:55P
453	Equipment Room #2	Window Sash	C	Wood	Fair	White/Off White	11.958	2.812	XRF Positive	24-Aug-09	02:55P
454	Equipment Room #2	Window Sill	C	Wood	Fair	White/Off White	13.89	2.272	XRF Positive	24-Aug-09	02:55P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 228
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
455	Equipment Room #2	Window Frame	C	Wood	Fair	White/Off White	17.431	3.734	XRF Positive	24-Aug-09	02:56P
456	Equipment Room #2	Painted Brick	D	Tile/Masonry	Fair	Gray	8.151	-0.07	XRF Positive	24-Aug-09	02:56P
457	Equipment Room #2	Door	D	Wood	Fair	White/Off White	1.653	1.299	XRF Positive	24-Aug-09	02:56P
458	Equipment Room #2	Door Casing	D	Wood	Fair	Black	18.202	1.348	XRF Positive	24-Aug-09	02:56P
459	Equipment Room #2	Door Jamb	D	Wood	Fair	Black	19.183	1.253	XRF Positive	24-Aug-09	02:57P
460	Storage #2	Painted Brick	A	Tile/Masonry	Intact	White/Off White	20.631	0.151	XRF Positive	24-Aug-09	02:58P
461	Storage #2	Door Jamb	A	Wood	Intact	White/Off White	12.119	0.654	XRF Positive	24-Aug-09	02:58P
462	Storage #2	Door	A	Wood	Intact	White/Off White	0.134	0.175	Negative	24-Aug-09	02:58P
463	Storage #2	Painted Brick	B	Tile/Masonry	Fair	White/Off White	18.255	0.91	XRF Positive	24-Aug-09	02:58P
464	Storage #2	Painted Brick	C	Tile/Masonry	Fair	White/Off White	26.504	1.531	XRF Positive	24-Aug-09	02:59P
465	Storage #2	Window Sill	C	Wood	Intact	White/Off White	22.509	0.603	XRF Positive	24-Aug-09	02:59P
466	Storage #2	Window Sash	C	Wood	Fair	White/Off White	20.969	1.223	XRF Positive	24-Aug-09	02:59P
467	Storage #2	Window Frame	C	Wood	Fair	White/Off White	19.372	0.384	XRF Positive	24-Aug-09	02:59P
468	Storage #2	Painted Brick	D	Tile/Masonry	Fair	White/Off White	27.629	0.748	XRF Positive	24-Aug-09	02:59P
469	Storage #2	Door	D	Wood	Fair	White/Off White	2.514	0.694	XRF Positive	24-Aug-09	02:59P
470	Storage #2	Stair Tread	A	Concrete	Fair	Yellow/Orange	0.089	0.436	Negative	24-Aug-09	03:00P
471	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	03:00P
472	Calibration	*	*	*	*	*	1.009	0.949	Inconclusive	24-Aug-09	03:08P
473	Calibration	*	*	*	*	*	0.906	0.775	Inconclusive	24-Aug-09	03:09P
474	Calibration	*	*	*	*	*	1.031	0.915	Inconclusive	24-Aug-09	03:09P
475	Calibration	*	*	*	*	*	0.953	0.891	Inconclusive	24-Aug-09	03:10P
476	Calibration	*	*	*	*	*	0.944	0.93	Inconclusive	24-Aug-09	03:11P

APPENDIX C: Certifications and Lead Hazard Evaluation Form

State of California Department of Public Health

Lead-Related Construction Certificate	Certificate Type	Expiration Date
	Inspector/Assessor	08/28/2010

Terri A. MacFarlane ID # 5666

State of California—Health and Human Ser Agency

California Department of Public Health

LEAD HAZARD EVALUATION REPORT E09-694

Section 1 — Date of Lead Hazard Evaluation 8/24/09

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

[X] Lead inspection [ ] Risk assessment [ ] Clearance inspection [ ] Other (specify)

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address (number, street, apartment (if applicable))	City	County	Zip Code
THE PRESIDIO - BLDG. 228	SAN FRANCISCO	SAN FRANCISCO	94623

Construction date (year) of structure	Type of structure		Children living in structure?
1909	[ ] Multi-unit building [ ] Single family dwelling	[ ] School or daycare [X] Other MILITARY UNIT	[ ] Yes [X] No [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
DAVE KOBA - CAL - TRANS	510-286-5497

Address (number, street, apartment (if applicable))	City	State	Zip Code
P.O. BOX 23440	OAKLAND	CA	94623

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

[ ] No lead-based paint detected [ ] Intact lead-based paint detected [X] Deteriorated lead-based paint detected

[ ] No lead hazards detected [ ] Lead-contaminated dust found [ ] Lead-contaminated soil found [ ] Other

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Terri MacFarlane	(800) 988-7424

Address (number, street, apartment (if applicable))	City	State	Zip Code
3732 Charter Park Dr Ste A	San Jose	CA	95136

CDPH certification number	Signature	Date
5666		9/24/09

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

MAP 4 M4-1433 M4-1365

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

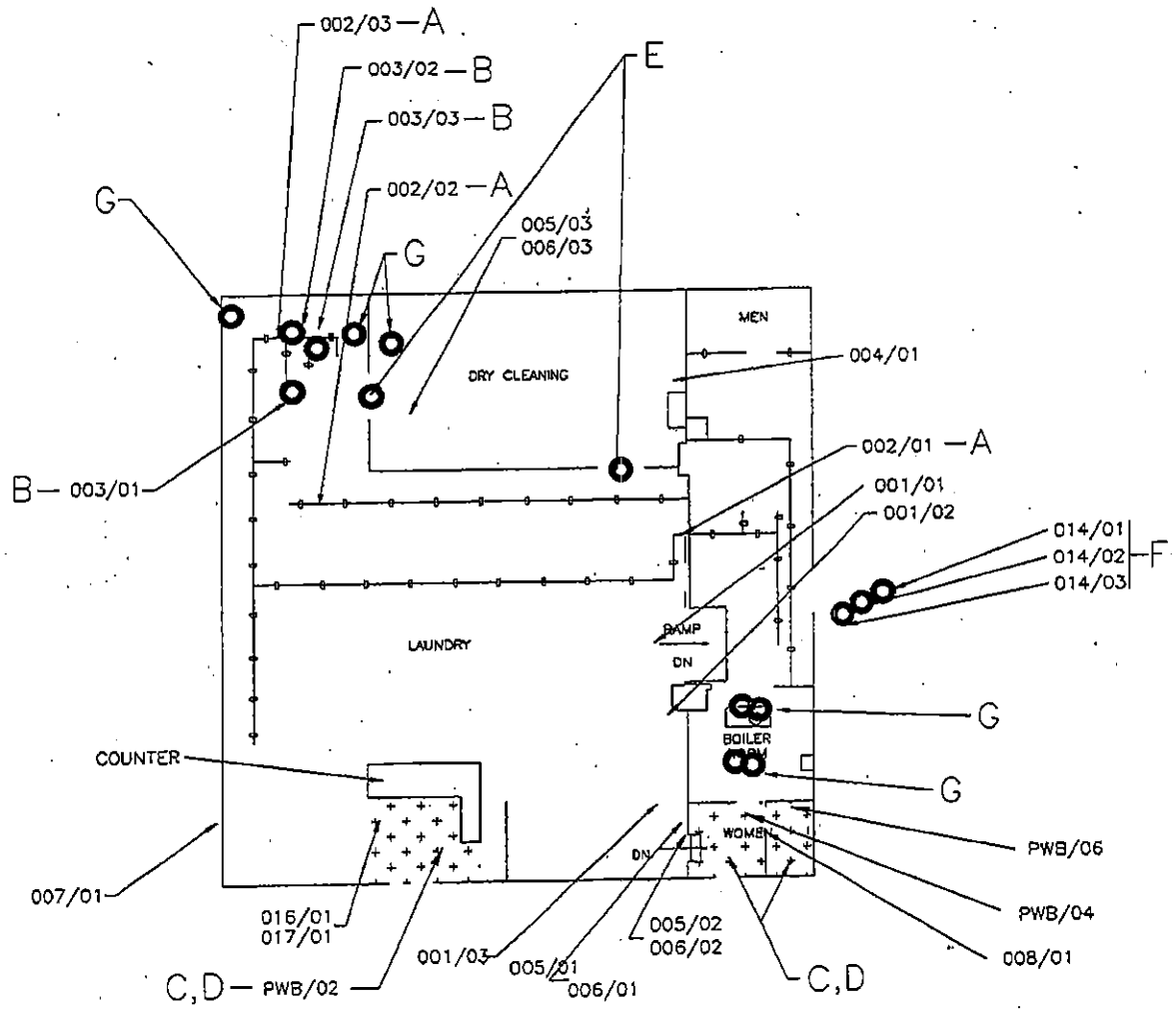
Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)

APPENDIX E: Diagram



FIRST FLOOR
SCALE: 1/16" = 1'-0"

BENCHMARK

ASBESTOS AND LEAD-BASED PAINT SURVEY

The Presidio
Bldg 106 G. P. Headquarters Building
San Francisco, CA

Benchmark Project No: E09-693-ASU-LPI
Building Owner: State of California
Type of Structure: Headquarters Building
Benchmark Technician: Terri MacFarlane
Site Visit Date: August 24, 2009

PREPARED FOR

Mr. David Keba
Department of Transportation-Right of Way
P. O. Box 23440
Oakland, CA 94623-044

PREPARED BY

Benchmark Environmental Engineering
3732-A Charter Park Drive
San Jose, CA 95136
800-988-7424

Terri MacFarlane
Environmental Field Service Manager

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
Background 2
Asbestos Containing Materials (ACM) 2
Lead Based Paint 2
FINDINGS AND OBSERVATIONS 3
Asbestos 3
Lead-Based Paint 4
SCOPE OF SERVICES-ASBESTOS 4
METHODOLOGY-ASBESTOS 4
General 4
Visual Inspection 4
Homogenous Material Classification 4
Sampling Procedures 4
Methods of Analysis 5
Laboratory Quality Control Program 5
Asbestos Containing Materials (ACM): 5
Asbestos Containing Construction Materials (ACCM) 6
SCOPE OF SERVICES-LEAD 7
METHODOLOGY-LEAD 7
General Reference 7
Visual Inspection 7
Sampling Process 7
Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis) 7
Quality Control Program 8
GENERAL 8
Warranty 8
APPENDIX A: Asbestos Laboratory Results and Table 1
APPENDIX B: Lead-Based Paint XRF Results 2
APPENDIX C: Certifications and Lead Hazard Evaluation Form 3
APPENDIX D: Previous Survey Information 4
APPENDIX E: Diagram 5

Benchmark Environmental Engineering was retained by Mr. David Keba of the Department of Transportation Right of Way to conduct an asbestos and lead-based paint survey at The Presidio, Bldg 106 G. P. Headquarters Building in San Francisco, California.

Written authorization to perform this survey was received by Benchmark from Mr. Keba.

The asbestos and lead-based paint survey was conducted on August 24, 2009 and was comprised of surveying all areas of the building which will undergo demolition as part of the Department of Transportation Right of Way program.

Background

The structure located at The Presidio, Bldg 106 G. P. Headquarters Building in San Francisco CA was previously utilized as an administrative building. The structure consists of 3 levels. The basement is utilized for storage and consists of a number of offices/storage rooms. The ground level floor consists of numerous offices, bathroom and a galley. The 2nd floor consists of numerous offices and a galley/break room. A previous asbestos inspection was conducted by Versar in October 1995.

Benchmark understands that this structure *will not* be undergoing demolition activities.

Asbestos Containing Materials (ACM)

Eighteen (18) samples were collected of materials scheduled for disturbance and analyzed for asbestos content.

The following suspect asbestos materials were sampled by Benchmark

- Resilient Sheet Flooring (variety of colors throughout) and Mastic
- 12" x12" beige speckled floor tile and Mastic
- Ceiling tile Mastic
- Carpet Jute Back
- Floor Leveling (variety of colors)

The following suspect asbestos materials were sampled by Versar, Inc in October 1995:
None of these listed materials sampled contained asbestos

- Vinyl Floor Tile and Mastic
- Vinyl Base Coving and Mastic
- Carpet Mastic
- Wall Plaster
- Window Putty
- Ceiling Tile (Lay in and glued)
- Asphalt Roof Shingles
- Mineral Roll Roofing
- Felt Paper
- Grout

Lead Based Paint

In order to determine if lead based paint is present, three hundred seventy-three (373) assays were collected using an X-RAY FLOURESCENCE (XRF) instrument. Numerous components have been identified with lead in the paint above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM.

The overall condition of the paint was in intact/good condition. Any painted surface which has been identified as having lead in the paint at or above the DHS level of 5000 parts per million and is in fair to poor condition must be considered a Hazard. Worker protection must be implemented during all phases of the demolition. (Title 8, CCR 1532.1.)

FINDINGS AND OBSERVATIONS

The following table summarizes the material sampled, location, analytical results in percent of asbestos present, the friability of the material, the condition of the material, the estimated quantities of the material and the estimated removal cost.

Asbestos Samples

Material	Location	% of Asbestos	Friable\ Non-Friable	Condition	Quantities *	Removal Cost Estimate
Resilient Sheet Flooring and Mastic (Gray)	Bathrooms	N/A	N/A	N/A	N/A	N/A
Resilient Sheet Flooring (beige)	Galley/Break Rooms	N/A	N/A	N/A	N/A	N/A
12" x 12" beige speckled floor tile and Mastic	Basement-Storage #1	5% Chrysotile (Tile) 2% Chrysotile (Msatic)	Non-Friable	Fair	200 SF	$600
Ceiling Tile Mastic	Basement Storage #1 (ceiling and walls)	2% Chrysotile	Non-Friable	Intact	800 SF	$3,000
Resilient Sheet Flooring (gray) and Mastic	Basement Office/Storage #2	5% Chrysotile (Tile) 10% Chrysotile (Msatic)	Non-Friable	Intact	100 SF	$300
Resilient Sheet Flooring (White and Mastic	Basement Office/Storage #3	N/A	N/A	N/A	N/A	N/A
Jute Back	Basement Office/Storage #3	N/A	N/A	N/A	N/A	N/A
Floor Leveling (Gray)	Basement Storage #2	N/A	N/A	N/A	N/A	N/A
Floor Leveling (Beige)	Basement Hall	N/A	N/A	N/A	N/A	N/A
Floor Leveling (lt gray)	Basement Room #101	N/A	N/A	N/A	N/A	N/A

*This is a field estimate only and should be quantified by the contractor prior to removal

Asbestos

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%). *The Asbestos Laboratory Results can be found in Appendix A*

Lead-Based Paint

The results indicated that the following building components were above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM. Lead-Based paint, as defined by EPA/HUD, was identified on the components assayed. See Appendix B for the Preliminary XRF Readings.

Location	Component	Estimated Disposal Cost
Exterior	Window components, Door Components, Painted Brick	N/A-No Demolition
Basement Stairwell	Walls, Door jamb, Door casing, Baseboard, Ceiling	N/A-No Demolition
Basement	Siding, Doors, Double doors, Door jambs, Window components, Ceilings	N/A-No Demolition
Ground Level	Window components, Baseboards, Chair Rail, Door components, Transom, Walls, Painted Brick	N/A-No Demolition
Stairwell to 2nd Floor	Walls, Window components, Chair rail, Baseboard	N/A-No Demolition
2nd Floor	Walls, Chair rail, Baseboards, Door components, Transom, Post/Column, Ceiling molding, Window components	N/A-No Demolition

The XRF results can be found in APPENDIX B- Lead Based Paint XRF Results Page

SCOPE OF SERVICES-ASBESTOS

Asbestos sampling was performed by a Certified Asbestos Consultant (CAC). Bulk asbestos samples obtained from the facility were analyzed in the laboratory using Polarized Light Microscopy (PLM) with dispersion staining. The Inspection, sampling, and assessment procedures were performed in accordance with the guidelines published by the EPA in 125CFR Part 763 Subpart E, October 30, 1987.

METHODOLOGY-ASBESTOS

General

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed. Materials that were similar in general appearance were grouped into homogeneous sampling areas.

Homogenous Material Classification

A preliminary walkthrough of the building was conducted to determine areas of materials that were visually similar in color, texture, and general appearance and that appeared to have been installed at the same time. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were noted.

Sampling Procedures

Following the walkthrough, the inspector collected selected samples of exposed or accessible materials identified as suspect ACM. EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Samples of surfacing material for asbestos were collected in general accordance with the EPA random sampling protocol outlined in the EPA publication, "Asbestos in Buildings: Simplified Sampling Scheme for Friable

Surfacing Materials" (EPA 560/5-85-030a, October 1985). Samples of miscellaneous materials were taken as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material.

Methods of Analysis

Analysis was performed by visually observing the bulk sample and preparing slides for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (Chrysotile, Amosite, Crocidolite, Anthophyllite, and Actinolite/Tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.) and non-fibrous constituents. Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

The microscopist used a stereoscope to visually estimate relative amounts of each constituent using a stereoscope to determine the volume of each constituent in proportion to the total volume of the sample. All bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described by the interim method of the determination of asbestos in bulk insulation, Federal Register, Volume 47, No. 103, May 27, 1982. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays that result enable mineral identification. It should be noted that some ACM may not be accurately identified or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy method. Transmission Electron Microscopy (TEM) is recommended for a more definitive analysis of these materials.

Laboratory Quality Control Program

Forensic Analytical located in Hayward, California, performed the analysis. Forensic maintains an in-house quality control program. This program involves blind reanalysis of ten percent of all samples, precision and accuracy controls, and use of standard bulk reference materials.

Asbestos Containing Materials (ACM):

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%).

Removal and disposal of asbestos containing materials (ACM) must be performed in accordance with Bay Area Air Quality Management District (BAAQMD) and California-Occupational Safety and Health Administration (CAL/OSHA) notification and work practice requirements.

EPA groups asbestos containing materials (ACM) into three (3) types:

- Friable ACM – Asbestos containing materials that can reduce to powder by hand pressure such as, thermal system insulation (TSI), acoustical ceiling material.

- Category I non-friable ACM - asbestos-containing resilient floor coverings or VAT, asphalt roofing products, packings and gaskets.

- Category II non-friable ACM – any material, excluding Category I materials, that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

It is possible for any of the above types of ACM to become Regulated Asbestos Containing Materials (RACMs) under the Standard. RACMs are defined as:

- Friable ACM

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that has been or will be subjected to sanding, grinding, cutting, or abrading
- Category II non-friable ACM which has already been or is likely to become crumbled, pulverized, or reduced to powder by mechanical forces expected to act on the materials during demolition/renovation operations as covered by the Standard.

Asbestos Containing Construction Materials (ACCM)

Although the material is not considered "asbestos containing" as defined by the EPA, the material does contain asbestos and is subject to OSHA regulations pertaining to employee exposure.

Title 8 of the California Code of Regulations, CCR Section 341.6-11 defines asbestos-containing construction materials (ACCM) as construction materials having greater than one-tenth of one percent (0.1%) by weight. This applies to Cal-OSHA regulations pertaining to the protection of workmen engaged in the removal of ACCM.

ACCM must be removed using the same regulation procedures as materials containing 1% asbestos as defined by EPA 125CFR 763 and OSHA 763 and OSHA 29 CFR 1926.1101 with regard to asbestos work classifications I, II, III, and IV including negative exposure assessments (NEA) and use of regulated areas.

SCOPE OF SERVICES-LEAD

Benchmark understands the scope of work for this project to be a Lead Based Paint Inspection The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997). The Risk assessment was conducted in general accordance with Chapter 5 of the HUD Guidelines.

METHODOLOGY-LEAD

General Reference

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

A Department of Health Services Certified Lead Inspector/Risk Assessor performed the inspection. An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed.

Sampling Process

Following the walkthrough, the inspector selected sample areas of exposed or accessible materials identified as suspect Lead-Based Paint. State and Federal Guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis)

XRF instruments measure lead-in-paint by directing high energy X-rays and gamma rays into the paint, causing the lead atoms in the paint to emit X-rays which are detected by the instrument and converted to a measurement of the amount of lead in the paint. The EPA approved technology allows for measurement of X-rays without scraping or samples preparation to characterize substrate or matrix effects. The Spectrum Analyzer, Metals Analysis Probe (MAP 4) is combined with a microprocessor system that enables field-testing with a high degree of quality control and speed. Sample locations, descriptions, conditions, and measurement results are automatically recorded by the instrument and easily downloaded to a PC or laptop.

All results were compared to the State and Federal Guidelines:
1.0 mg/cm^2 = XRF-Lead-based Paint

The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997).

All building components identified on the site inspection that may contain lead-based paint/coating were targeted for testing (interior and/or exterior walls, doors and all associated components).

The testing and sampling protocol was comprised of testing with an X-Ray Fluorescence (XRF) analyzer. The XRF instrument is set with a unique identification number, which lists the building components.

Quality Control Program

Benchmark Environmental Engineering utilizes only DHS approved inspectors, which are certified to use radioactive instruments. The MAP 4 Spectrum Analyzer has on-board calibration routines, which continuously operate, and self-correct to minimized sampling error. This is known as substrate correcting software.

GENERAL

Warranty

Benchmark warrants that the findings contained herein have been prepared with the level of care and skill exercised by experienced and knowledgeable environmental consultants who are appropriately licensed or otherwise trained to perform asbestos assessments pursuant to the scope of work required on this project.

The survey included inspection of accessible materials such as above or behind suspended ceilings or other non-permanent structures. Benchmark did not inspect or sample inaccessible areas such as behind walls or within ductwork and did not dismantle any part of the structure to survey inaccessible areas. Inaccessible materials that are visible to Benchmark's inspectors shall be assumed asbestos containing or lead-based paint containing.

APPENDIX A: Asbestos Laboratory Results and Table

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Benchmark Environmental
Project Manager
3732-A Charter Park Drive

San Jose, CA 95136

Client ID: 3565
Report Number: B127578
Date Received: 08/26/09
Date Analyzed: 09/01/09
Date Printed: 09/01/09
First Reported: 09/01/09

Job ID/Site: E09-693 - Presidio Bldg 106, San Francisco

Date(s) Collected: 08/24/2009

FALI Job ID: 3565
Total Samples Submitted: 18
Total Samples Analyzed: 18

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-1B	10897806						
Layer: Grey Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Layer: White Mastic			ND				
Total Composite Values of Fibrous Components: Asbestos (ND)							
Cellulose (20 %)							
693-8-24-2B	10897807						
Layer: Grey Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Layer: White Mastic			ND				
Total Composite Values of Fibrous Components: Asbestos (ND)							
Cellulose (20 %)							
693-8-24-3B	10897808						
Layer: Beige Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Total Composite Values of Fibrous Components: Asbestos (ND)							
Cellulose (20 %)							
693-8-24-4B	10897809						
Layer: Beige Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Total Composite Values of Fibrous Components: Asbestos (ND)							
Cellulose (20 %)							
693-8-24-5B	10897810						
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic		Chrysotile	5 %				
Total Composite Values of Fibrous Components: Asbestos (2%)							
Cellulose (Trace) Talc (5 %)							
693-8-24-6B	10897811						
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic		Chrysotile	5 %				
Total Composite Values of Fibrous Components: Asbestos (2%)							
Cellulose (Trace) Talc (5 %)							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127578
Date Printed: 09/01/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-7B	10897812						
Layer: Brown Mastic		Chrysotile	2 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace)							
693-8-24-8B	10897813						
Layer: Brown Mastic		Chrysotile	2 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace)							
693-8-24-9B	10897814						
Layer: Grey Paint			ND				
Layer: Black Tile		Chrysotile	5 %				
Layer: Black Mastic		Chrysotile	10 %				
Total Composite Values of Fibrous Components: Asbestos (5%) Cellulose (Trace)							
693-8-24-10B	10897815						
Layer: Grey Paint			ND				
Layer: Black Tile		Chrysotile	5 %				
Layer: Black Mastic		Chrysotile	10 %				
Total Composite Values of Fibrous Components: Asbestos (5%) Cellulose (Trace)							
693-8-24-11B	10897816						
Layer: White Paint			ND				
Layer: Brown Sheet Flooring			ND				
Layer: Tan Woven Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (15 %)							
693-8-24-12B	10897817						
Layer: White Paint			ND				
Layer: Brown Sheet Flooring			ND				
Layer: Tan Woven Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (15 %)							
693-8-24-13B	10897818						
Layer: Grey Non-Fibrous Material			ND				
Layer: Black Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-14B	10897819						
Layer: Grey Non-Fibrous Material			ND				
Layer: Black Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127578
Date Printed: 09/01/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-15B	10897820						
Layer: Beige Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-16B	10897821						
Layer: Beige Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-17B	10897822						
Layer: Grey Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-18B	10897823						
Layer: Grey Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

BENCHMARK

3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 1 of 2

Project #: 809-693 Date: 8/24/09 Technician: T. MACFARLANE

Project Address: PRESIDIO BLDG 106 SAN FRANCISCO

Client Name: DAVE KEPPA Company: CAL-TRANS RIGHT OF WAY

Sample Number	Location	Homogenous Group or Measurement	Material or Component	Results To Be Reported As
693-8-24-1B	WOMEN'S BATHROOM	1	RESILIENT SHEET FLOORING - GRAY MARBLE	
2B	MEN'S BATHROOM	1	1	
3B	1ST FLOOR GALLEY	2	RESILIENT SHEET FLOORING, BEIGE MARBLE	
4B	2ND FLOOR GALLEY	1	1	
5B	BASEMENT #1 STORAGE, SERVER RM	3	12 x 12 beige speckled FT & MASTIC	
6B	BASEMENT #1 STORAGE, DOOR TO OFC	1	1	
7B	BASEMENT #1 STORAGE WALL, EAST	4	WALL/CEILING MASTIC	
8B	BASEMENT #1 STORAGE CEILING	1	1	
9B	BASEMENT, #2 STORAGE, DOOR	5	RESILIENT SHEET FLOORING - GRAY	

Circle Project Type:	Circle Type of Analysis	Circle Turnaround Time
Asbestos (Survey/Sample Collection)	PLM/Bulk (EPA 600)	*Same Day/Rush*
Lead-Based Paint	EPA SW 846-7420 FLAA	24 Hour
Risk Assessment (Lead)	Dust Wipe, Soil, Paint Chip *Ghost Wipes*	48 Hour
Clearance Lead	GFAA Water (lead)	72 Hour
Mold/Fungus (Baseline)	Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)	5 Day
Sewage Screen (Baseline)	Direct Microscopic Exam (Tape/Swab)	Other:
Sewage Screen (Post-Remediation)	Other:	
Other:		

Relinquished By: T. MACFARLANE Received By: [illegible] 950am Date/Time: 8/26/09

BENCHMARK
3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 2 of 2

Project #: 689-693 Date: _____ Technician: _____

Project Address: BLDG 100

Client Name: _____ Company: _____

Sample Number	*Location*	*Homogenous Group or Measurement*	*Material or Component*	*Results To Be Reported As*
693-8-24-10B	#2 BASEMENT, STORAGE	5	RSF BRM	
11B	#3 OFFICE/STORAGE, WINDOW	6	RESILIENT SHEET FLOORING - WITH TAN W/ JUTE BACK	
12B	#3 OFFICE/STORAGE, DOOR	1	1	
13B	#3 OFFICE/STORAGE, CENTER FLOOR	7	FLOOR LEVELING GRAY	
14B	#2 OFFICE/STORAGE, DOOR TO HALL	1	1	
15B	#3 STORAGE, DOOR TO HALL	8	FLOOR LEVELING - BEIGE	
16B	#3 STORAGE, CENTER FLOOR	1	1	
17B	ROOM 101 closet	9	Floor levelge gray	
18B	ROOM 101 CENTER FLOOR	1	1	

Circle Project Type
Asbestos (Survey/Sample Collection)
~~Lead-Based Paint~~
Risk Assessment (Lead)
Clearance Lead
Mold/Fungus (Baseline)
Sewage Screen (Baseline)
Sewage Screen (Post-Remediation)
Other: _____

Circle Type of Analysis
PLM/Bulk (EPA 600)
EPA SW 846-7420 FLAA
Dust Wipe, Soil, Paint Chip *Ghost Wipes*
GFAA Water (lead)
Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)
Direct Microscopic Exam (Tape/Swab)
Other: _____

Circle Turnaround Time
Same Day/Rush
24 Hour
48 Hour
72 Hour
5 Day
Other: _____

Relinquished By: T. MacFarlane Received By: [illegible] 8/26 950am Date/Time: 8/26/09

APPENDIX B: Lead-Based Paint XRF Results

Walls are referenced as A, B, D and D

Wall A is the street side of the residence

Walls B, C, and D are numbered clockwise

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Calibrations, Basement and Exterior

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
2	Calibration	*	*	*	*	*	1.008	0.996	Inconclusive	24-Aug-09	09:41A
3	Calibration	*	*	*	*	*	1.174	0.86	XRF Positive	24-Aug-09	09:45A
4	Calibration	*	*	*	*	*	0.961	0.955	Inconclusive	24-Aug-09	09:46A
5	Calibration	*	*	*	*	*	0.943	0.884	Inconclusive	24-Aug-09	09:47A
6	Calibration	*	*	*	*	*	0.99	0.937	Inconclusive	24-Aug-09	09:48A
7	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	09:50A
8	Stairwell	Wall	A	Plaster	Intact	White/Off White	21.855	-0.164	XRF Positive	24-Aug-09	10:23A
9	Stairwell	Door Casing	A	Wood	Intact	White/Off White	23.885	-0.317	XRF Positive	24-Aug-09	10:23A
10	Stairwell	Door Jamb	A	Wood	Intact	White/Off White	16.096	0.108	XRF Positive	24-Aug-09	10:23A
11	Stairwell	Door	A	Wood	Intact	White/Off White	-0.566	0	Negative	24-Aug-09	10:23A
12	Stairwell	Wall	B	Plaster	Intact	White/Off White	21.332	0.628	XRF Positive	24-Aug-09	10:23A
13	Stairwell	Stair Handrail	B	Wood	Intact	White/Off White	-0.907	0.255	Negative	24-Aug-09	10:23A
14	Stairwell	Baseboard	B	Wood	Intact	White/Off White	20.694	0.59	XRF Positive	24-Aug-09	10:24A
15	Stairwell	Wall	C	Plaster	Intact	White/Off White	21.283	-0.499	XRF Positive	24-Aug-09	10:24A
16	Stairwell	Window Sash	C	Wood	Intact	White/Off White	23.959	-0.088	XRF Positive	24-Aug-09	10:24A
17	Stairwell	Window Frame	C	Wood	Intact	White/Off White	26.572	-0.537	XRF Positive	24-Aug-09	10:24A
18	Stairwell	Ceiling	C	Plaster	Intact	White/Off White	12.735	-0.041	XRF Positive	24-Aug-09	10:24A
19	Stairwell	Wall	D	Plaster	Intact	White/Off White	18.892	0.257	XRF Positive	24-Aug-09	10:24A
20	Stairwell	Newell Post	D	Wood	Intact	White/Off White	-1.318	-0.118	Negative	24-Aug-09	10:25A
21	Stairwell	Door Casing	D	Metal	Intact	White/Off White	-0.247	0.531	Negative	24-Aug-09	10:25A
22	Stairwell	Door Jamb	D	Metal	Intact	White/Off White	-0.606	0.428	Negative	24-Aug-09	10:25A
23	Stairwell	Door	D	Wood	Intact	White/Off White	-0.375	0.19	Negative	24-Aug-09	10:26A
24	Hallway	Wall	A	Plaster	Fair	White/Off White	25.216	-0.082	XRF Positive	24-Aug-09	10:31A
25	Hallway	Door Casing	A	Wood	Fair	White/Off White	23.461	0.415	XRF Positive	24-Aug-09	10:32A
26	Hallway	Door Jamb	A	Wood	Intact	White/Off White	-0.27	0.041	Negative	24-Aug-09	10:32A
27	Hallway	Double Door	B	Wood	Stain Varnish	Brown/Beige	0.048	-0.008	Negative	24-Aug-09	10:32A
28	Hallway	Wall	B	Plaster	Fair	White/Off White	21.219	-0.2	XRF Positive	24-Aug-09	10:32A
29	Hallway	Siding	A	Wood	Intact	White/Off White	7.505	-0.128	XRF Positive	24-Aug-09	10:33A
30	Hallway	Closet Door	B	Wood	Intact	White/Off White	-0.021	-0.435	Negative	24-Aug-09	10:33A
31	Hallway	Door Jamb	B	Wood	Intact	White/Off White	0.21	-0.162	Negative	24-Aug-09	10:33A
32	Hallway	Door	B	Metal	Fair	White/Off White	0.448	0.681	Negative	24-Aug-09	10:33A
33	Hallway	Door	B	Metal	Fair	White/Off White	-0.585	0.597	Negative	24-Aug-09	10:33A
34	Hallway	Wall	C	Plaster	Intact	White/Off White	0.024	0.133	Negative	24-Aug-09	10:34A
35	Hallway	Door	C	Wood	Intact	White/Off White	11.857	-0.041	XRF Positive	24-Aug-09	10:34A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
36	Hallway	Siding	C	Wood	Intact	White/Off White	-0.068	0.02	Negative	24-Aug-09	10:34A
37	Hallway	Wall	D	Plaster	Intact	White/Off White	20.761	-0.251	XRF Positive	24-Aug-09	10:34A
38	Hallway	Ceiling	D	Plaster	Fair	White/Off White	28.986	0.39	XRF Positive	24-Aug-09	10:35A
39	Hallway	Double Door	D	Wood	Intact	White/Off White	17.322	-0.135	XRF Positive	24-Aug-09	10:35A
40	Hallway	Door Jamb	D	Wood	Intact	White/Off White	16.501	-0.009	XRF Positive	24-Aug-09	10:35A
41	Room 101	Wall	A	Plaster	Intact	White/Off White	30.829	0.648	XRF Positive	24-Aug-09	10:36A
42	Room 101	Window Sash	A	Wood	Intact	White/Off White	1.784	0.022	XRF Positive	24-Aug-09	10:36A
43	Room 101	Window Frame	A	Wood	Intact	White/Off White	19.13	0.712	XRF Positive	24-Aug-09	10:36A
44	Room 101	Wall	B	Plaster	Fair	White/Off White	30.03	0.394	XRF Positive	24-Aug-09	10:36A
45	Room 101	Double Door	B	Wood	Intact	White/Off White	21.554	0.177	XRF Positive	24-Aug-09	10:36A
46	Room 101	Door Jamb	B	Wood	Intact	Red/Pink	17.949	0.431	XRF Positive	24-Aug-09	10:37A
47	Room 101	Wall	C	Plaster	Fair	White/Off White	1.539	-0.035	XRF Positive	24-Aug-09	10:37A
48	Room 101	Ceiling	B	Plaster	Fair	White/Off White	19.587	1.108	XRF Positive	24-Aug-09	10:37A
49	Room 101	Post/Column	B	Metal	Intact	White/Off White	26.247	2.489	XRF Positive	24-Aug-09	10:37A
50	Room 101	Door	C	Wood	Stain Varnish	Brown/Beige	-0.217	-0.035	Negative	24-Aug-09	10:37A
51	Closet	Wall	A	Plaster	Fair	White/Off White	0.062	0.196	Negative	24-Aug-09	10:38A
52	Closet	Door Jamb	A	Wood	Intact	White/Off White	0.584	0.201	Negative	24-Aug-09	10:38A
53	Closet	Door	A	Wood	Stain Varnish	Brown/Beige	0.116	0.125	Negative	24-Aug-09	10:39A
54	Closet	Wall	B	Concrete	Intact	White/Off White	-0.633	-0.196	Negative	24-Aug-09	10:39A
55	Closet	Wall	C	Plaster	Fair	White/Off White	29.576	-0.153	XRF Positive	24-Aug-09	10:39A
56	Closet	Ceiling	C	Plaster	Fair	White/Off White	0.712	0.624	Negative	24-Aug-09	10:39A
57	Closet	Ceiling	C	Plaster	Fair	White/Off White	28.183	0.433	XRF Positive	24-Aug-09	10:40A
58	Room 101	Wall	D	Plaster	Fair	White/Off White	0.212	-0.123	Negative	24-Aug-09	10:40A
59	Room 101	Floor	D	Concrete	Poor	Gray	0.111	0.117	Negative	24-Aug-09	10:40A
60	Storage #1	Wall	A	Wood	Fair	White/Off White	0.669	-0.007	Negative	24-Aug-09	10:41A
61	Storage #1	Wall	B	Wood	Fair	White/Off White	-0.167	0.092	Negative	24-Aug-09	10:42A
62	Storage #1	Wall	C	Wood	Fair	White/Off White	0.579	0.124	Negative	24-Aug-09	10:43A
63	Storage #1	Door Jamb	C	Wood	Intact	White/Off White	20.616	-0.337	XRF Positive	24-Aug-09	10:43A
64	Storage #1	Door	C	Wood	Stain Varnish	Brown/Beige	0.411	-0.163	Negative	24-Aug-09	10:44A
65	Storage #1	Wall	D	Wood	Fair	White/Off White	-0.82	0.092	Negative	24-Aug-09	10:44A
66	Closet	Wall	A	Concrete	Intact	White/Off White	12.74	0.374	XRF Positive	24-Aug-09	10:44A
67	Closet	Wall	B	Wood	Intact	White/Off White	0.179	-0.319	Negative	24-Aug-09	10:44A
68	Closet	Door Jamb	B	Wood	Intact	White/Off White	0.065	-0.097	Negative	24-Aug-09	10:45A
69	Closet	Wall	C	Concrete	Intact	White/Off White	0.136	-0.574	Negative	24-Aug-09	10:45A
70	Closet	Wall	D	Concrete	Fair	White/Off White	14.26	0.719	XRF Positive	24-Aug-09	10:45A
71	Closet	Ceiling	D	Concrete	Fair	White/Off White	10.984	0.838	XRF Positive	24-Aug-09	10:46A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
72	Storage #1	Ceiling	D	Wood	Fair	White/Off White	0.152	0.083	Negative	24-Aug-09	10:47A
73	Office #1	Wall	A	Wood	Intact	White/Off White	0.372	0.288	Negative	24-Aug-09	10:47A
74	Office #1	Wall	B	Wood	Intact	White/Off White	0.588	0.197	Negative	24-Aug-09	10:48A
75	Office #1	Wall	C	Wood	Intact	White/Off White	0.003	0.02	Negative	24-Aug-09	10:48A
76	Office #1	Wall	D	Wood	Intact	White/Off White	-0.246	-0.267	Negative	24-Aug-09	10:49A
77	Office #1	Ceiling	D	Plaster	Intact	White/Off White	-0.229	0.112	Negative	24-Aug-09	10:49A
78	Storage #4	Wall	A	Wood	Intact	White/Off White	-0.666	0.522	Negative	24-Aug-09	10:50A
79	Storage #4	Window Sash	A	Wood	Intact	White/Off White	-0.236	-0.215	Negative	24-Aug-09	10:50A
80	*Storage #4*	*Window Frame*	*A*	*Wood*	*Intact*	*White/Off White*	*11.765*	*0.573*	*XRF Positive*	*24-Aug-09*	*10:50A*
81	Storage #4	Wall	B	Wood	Intact	White/Off White	-0.439	-0.259	Negative	24-Aug-09	10:50A
82	Storage #4	Door Jamb	B	Wood	Intact	White/Off White	0.234	-0.003	Negative	24-Aug-09	10:51A
83	Storage #4	Door	B	Wood	Stain Varnish	Brown/Beige	-0.63	-0.025	Negative	24-Aug-09	10:51A
84	Storage #4	Wall	C	Wood	Intact	White/Off White	-0.37	-0.232	Negative	24-Aug-09	10:51A
85	*Storage #4*	*Wall*	*D*	*Wood*	*Intact*	*White/Off White*	*1.283*	*0.254*	*XRF Positive*	*24-Aug-09*	*10:51A*
86	Storage #4	Ceiling	D	Sheetrk	Intact	White/Off White	-0.589	0.277	Negative	24-Aug-09	10:52A
87	Storage #5	Wall	A	Plaster	Intact	White/Off White	-0.457	0.177	Negative	24-Aug-09	10:53A
88	Storage #5	Wall	B	Concrete	Intact	White/Off White	-0.369	0.023	Negative	24-Aug-09	10:53A
89	Storage #5	Wall	C	Plaster	Intact	White/Off White	-0.439	0.063	Negative	24-Aug-09	10:54A
90	Storage #5	Cabinets	C	Wood	Intact	White/Off White	0.197	-0.596	Negative	24-Aug-09	10:54A
91	Storage #5	Wall	D	Plaster	Intact	White/Off White	-0.528	-0.002	Negative	24-Aug-09	10:54A
92	Storage #5	Door Jamb	D	Wood	Intact	White/Off White	0.425	-0.316	Negative	24-Aug-09	10:54A
93	Storage #5	Door	D	Wood	Stain Varnish	Brown/Beige	-0.747	-0.36	Negative	24-Aug-09	10:55A
94	Storage #5	Ceiling	D	Plaster	Intact	White/Off White	-0.522	0.168	Negative	24-Aug-09	10:55A
95	Storage #3	Siding	A	Wood	Intact	White/Off White	0.118	0.198	Negative	24-Aug-09	10:56A
96	*Storage #3*	*Door Casing*	*A*	*Wood*	*Intact*	*White/Off White*	*1.835*	*0.307*	*XRF Positive*	*24-Aug-09*	*10:56A*
97	*Storage #3*	*Door*	*A*	*Wood*	*Fair*	*White/Off White*	*9.765*	*1.763*	*XRF Positive*	*24-Aug-09*	*10:56A*
98	*Storage #3*	*Door Jamb*	*A*	*Wood*	*Intact*	*White/Off White*	*1.85*	*0.112*	*XRF Positive*	*24-Aug-09*	*10:56A*
99	Storage #3	Wall	B	Concrete	Intact	White/Off White	-0.2	0.175	Negative	24-Aug-09	10:57A
100	Storage #3	Wall	C	Concrete	Fair	White/Off White	-1.231	-0.667	Negative	24-Aug-09	10:57A
101	Storage #3	Wall	D	Concrete	Intact	White/Off White	-0.312	0.25	Negative	24-Aug-09	10:57A
102	Storage #3	Ceiling	D	Plaster	Fair	White/Off White	-0.284	-0.173	Negative	24-Aug-09	10:58A
103	Office #2	Wall	A	Plaster	Intact	Purple/Violet	-0.02	-0.075	Negative	24-Aug-09	10:59A
104	Office #2	Door Casing	A	Wood	Intact	White/Off White	0.176	0.046	Negative	24-Aug-09	11:00A
105	Office #2	Door Jamb	A	Wood	Intact	White/Off White	0.338	0.056	Negative	24-Aug-09	11:00A
106	Office #2	Door	A	Wood	Intact	White/Off White	-0.281	0.03	Negative	24-Aug-09	11:00A
107	Office #2	Wall	B	Concrete	Intact	White/Off White	0.266	-0.394	Negative	24-Aug-09	11:00A

BENCHMARK

ASBESTOS AND LEAD-BASED PAINT SURVEY

The Presidio
Bldg 106 G. P. Headquarters Building
San Francisco, CA

Benchmark Project No: E09-693-ASU-LPI
Building Owner: State of California
Type of Structure: Headquarters Building
Benchmark Technician: Terri MacFarlane
Site Visit Date: August 24, 2009

PREPARED FOR

Mr. David Keba
Department of Transportation-Right of Way
P. O. Box 23440
Oakland, CA 94623-044

PREPARED BY

Benchmark Environmental Engineering
3732-A Charter Park Drive
San Jose, CA 95136
800-988-7424

Terri MacFarlane
Environmental Field Service Manager

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
Background 2
Asbestos Containing Materials (ACM) 2
Lead Based Paint 2
FINDINGS AND OBSERVATIONS 3
Asbestos 3
Lead-Based Paint 4
SCOPE OF SERVICES-ASBESTOS 4
METHODOLOGY-ASBESTOS 4
General 4
Visual Inspection 4
Homogenous Material Classification 4
Sampling Procedures 4
Methods of Analysis 5
Laboratory Quality Control Program 5
Asbestos Containing Materials (ACM): 5
Asbestos Containing Construction Materials (ACCM) 6
SCOPE OF SERVICES-LEAD 7
METHODOLOGY-LEAD 7
General Reference 7
Visual Inspection 7
Sampling Process 7
Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis) 7
Quality Control Program 8
GENERAL 8
Warranty 8
APPENDIX A: Asbestos Laboratory Results and Table 1
APPENDIX B: Lead-Based Paint XRF Results 2
APPENDIX C: Certifications and Lead Hazard Evaluation Form 3
APPENDIX D: Previous Survey Information 4
APPENDIX E: Diagram 5

Benchmark Environmental Engineering was retained by Mr. David Keba of the Department of Transportation Right of Way to conduct an asbestos and lead-based paint survey at The Presidio, Bldg 106 G. P. Headquarters Building in San Francisco, California.

Written authorization to perform this survey was received by Benchmark from Mr. Keba.

The asbestos and lead-based paint survey was conducted on August 24, 2009 and was comprised of surveying all areas of the building which will undergo demolition as part of the Department of Transportation Right of Way program.

Background

The structure located at The Presidio, Bldg 106 G. P. Headquarters Building in San Francisco CA was previously utilized as an administrative building. The structure consists of 3 levels. The basement is utilized for storage and consists of a number of offices/storage rooms. The ground level floor consists of numerous offices, bathroom and a galley. The 2nd floor consists of numerous offices and a galley/break room. A previous asbestos inspection was conducted by Versar in October 1995.

Benchmark understands that this structure *will not* be undergoing demolition activities.

Asbestos Containing Materials (ACM)

Eighteen (18) samples were collected of materials scheduled for disturbance and analyzed for asbestos content.

The following suspect asbestos materials were sampled by Benchmark

- Resilient Sheet Flooring (variety of colors throughout) and Mastic
- 12" x12" beige speckled floor tile and Mastic
- Ceiling tile Mastic
- Carpet Jute Back
- Floor Leveling (variety of colors)

The following suspect asbestos materials were sampled by Versar, Inc in October 1995:
None of these listed materials sampled contained asbestos

- Vinyl Floor Tile and Mastic
- Vinyl Base Coving and Mastic
- Carpet Mastic
- Wall Plaster
- Window Putty
- Ceiling Tile (Lay in and glued)
- Asphalt Roof Shingles
- Mineral Roll Roofing
- Felt Paper
- Grout

Lead Based Paint

In order to determine if lead based paint is present, three hundred seventy-three (373) assays were collected using an X-RAY FLOURESCENCE (XRF) instrument. Numerous components have been identified with lead in the paint above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM.

The overall condition of the paint was in intact/good condition. Any painted surface which has been identified as having lead in the paint at or above the DHS level of 5000 parts per million and is in fair to poor condition must be considered a Hazard. Worker protection must be implemented during all phases of the demolition. (Title 8, CCR 1532.1.)

FINDINGS AND OBSERVATIONS

The following table summarizes the material sampled, location, analytical results in percent of asbestos present, the friability of the material, the condition of the material, the estimated quantities of the material and the estimated removal cost.

Asbestos Samples

Material	Location	% of Asbestos	Friable\ Non-Friable	Condition	Quantities *	Removal Cost Estimate
Resilient Sheet Flooring and Mastic (Gray)	Bathrooms	N/A	N/A	N/A	N/A	N/A
Resilient Sheet Flooring (beige)	Galley/Break Rooms	N/A	N/A	N/A	N/A	N/A
12" x 12" beige speckled floor tile and Mastic	Basement-Storage #1	5% Chrysotile (Tile) 2% Chrysotile (Msatic)	Non-Friable	Fair	200 SF	$600
Ceiling Tile Mastic	Basement Storage #1 (ceiling and walls)	2% Chrysotile	Non-Friable	Intact	800 SF	$3,000
Resilient Sheet Flooring (gray) and Mastic	Basement Office/Storage #2	5% Chrysotile (Tile) 10% Chrysotile (Msatic)	Non-Friable	Intact	100 SF	$300
Resilient Sheet Flooring (White and Mastic	Basement Office/Storage #3	N/A	N/A	N/A	N/A	N/A
Jute Back	Basement Office/Storage #3	N/A	N/A	N/A	N/A	N/A
Floor Leveling (Gray)	Basement Storage #2	N/A	N/A	N/A	N/A	N/A
Floor Leveling (Beige)	Basement Hall	N/A	N/A	N/A	N/A	N/A
Floor Leveling (lt gray)	Basement Room #101	N/A	N/A	N/A	N/A	N/A

*This is a field estimate only and should be quantified by the contractor prior to removal

Asbestos

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%). *The Asbestos Laboratory Results can be found in Appendix A*

Lead-Based Paint

The results indicated that the following building components were above the EPA and DHS level of 1.0 mg/cm^2 or 5000 PPM. Lead-Based paint, as defined by EPA/HUD, was identified on the components assayed. See Appendix B for the Preliminary XRF Readings.

Location	Component	Estimated Disposal Cost
Exterior	Window components, Door Components, Painted Brick	N/A-No Demolition
Basement Stairwell	Walls, Door jamb, Door casing, Baseboard, Ceiling	N/A-No Demolition
Basement	Siding, Doors, Double doors, Door jambs, Window components, Ceilings	N/A-No Demolition
Ground Level	Window components, Baseboards, Chair Rail, Door components, Transom, Walls, Painted Brick	N/A-No Demolition
Stairwell to 2nd Floor	Walls, Window components, Chair rail, Baseboard	N/A-No Demolition
2nd Floor	Walls, Chair rail, Baseboards, Door components, Transom, Post/Column, Ceiling molding, Window components	N/A-No Demolition

The XRF results can be found in APPENDIX B- Lead Based Paint XRF Results Page

SCOPE OF SERVICES-ASBESTOS

Asbestos sampling was performed by a Certified Asbestos Consultant (CAC). Bulk asbestos samples obtained from the facility were analyzed in the laboratory using Polarized Light Microscopy (PLM) with dispersion staining. The Inspection, sampling, and assessment procedures were performed in accordance with the guidelines published by the EPA in 125CFR Part 763 Subpart E, October 30, 1987.

METHODOLOGY-ASBESTOS

General

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed. Materials that were similar in general appearance were grouped into homogeneous sampling areas.

Homogenous Material Classification

A preliminary walkthrough of the building was conducted to determine areas of materials that were visually similar in color, texture, and general appearance and that appeared to have been installed at the same time. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were noted.

Sampling Procedures

Following the walkthrough, the inspector collected selected samples of exposed or accessible materials identified as suspect ACM. EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Samples of surfacing material for asbestos were collected in general accordance with the EPA random sampling protocol outlined in the EPA publication, "Asbestos in Buildings: Simplified Sampling Scheme for Friable

Surfacing Materials" (EPA 560/5-85-030a, October 1985). Samples of miscellaneous materials were taken as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material.

Methods of Analysis

Analysis was performed by visually observing the bulk sample and preparing slides for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (Chrysotile, Amosite, Crocidolite, Anthophyllite, and Actinolite/Tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.) and non-fibrous constituents. Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

The microscopist used a stereoscope to visually estimate relative amounts of each constituent using a stereoscope to determine the volume of each constituent in proportion to the total volume of the sample. All bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described by the interim method of the determination of asbestos in bulk insulation, Federal Register, Volume 47, No. 103, May 27, 1982. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays that result enable mineral identification. It should be noted that some ACM may not be accurately identified or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy method. Transmission Electron Microscopy (TEM) is recommended for a more definitive analysis of these materials.

Laboratory Quality Control Program

Forensic Analytical located in Hayward, California, performed the analysis. Forensic maintains an in-house quality control program. This program involves blind reanalysis of ten percent of all samples, precision and accuracy controls, and use of standard bulk reference materials.

Asbestos Containing Materials (ACM):

A material is considered by the EPA to be asbestos-containing if at least one sample collected from the area shows asbestos present in an amount greater than one percent (> 1%).

Removal and disposal of asbestos containing materials (ACM) must be performed in accordance with Bay Area Air Quality Management District (BAAQMD) and California-Occupational Safety and Health Administration (CAL/OSHA) notification and work practice requirements.

EPA groups asbestos containing materials (ACM) into three (3) types:

- Friable ACM – Asbestos containing materials that can reduce to powder by hand pressure such as, thermal system insulation (TSI), acoustical ceiling material.
- Category I non-friable ACM - asbestos-containing resilient floor coverings or VAT, asphalt roofing products, packings and gaskets.
- Category II non-friable ACM – any material, excluding Category I materials, that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

It is possible for any of the above types of ACM to become Regulated Asbestos Containing Materials (RACMs) under the Standard. RACMs are defined as:

- Friable ACM

- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that has been or will be subjected to sanding, grinding, cutting, or abrading
- Category II non-friable ACM which has already been or is likely to become crumbled, pulverized, or reduced to powder by mechanical forces expected to act on the materials during demolition/renovation operations as covered by the Standard.

Asbestos Containing Construction Materials (ACCM)

Although the material is not considered "asbestos containing" as defined by the EPA, the material does contain asbestos and is subject to OSHA regulations pertaining to employee exposure.

Title 8 of the California Code of Regulations, CCR Section 341.6-11 defines asbestos-containing construction materials (ACCM) as construction materials having greater than one-tenth of one percent (0.1%) by weight. This applies to Cal-OSHA regulations pertaining to the protection of workmen engaged in the removal of ACCM.

ACCM must be removed using the same regulation procedures as materials containing 1% asbestos as defined by EPA 125CFR 763 and OSHA 763 and OSHA 29 CFR 1926.1101 with regard to asbestos work classifications I, II, III, and IV including negative exposure assessments (NEA) and use of regulated areas.

SCOPE OF SERVICES-LEAD

Benchmark understands the scope of work for this project to be a Lead Based Paint Inspection The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997). The Risk assessment was conducted in general accordance with Chapter 5 of the HUD Guidelines.

METHODOLOGY-LEAD

General Reference

The survey consisted of three major activities: visual inspection, sampling, and analysis. Although these activities are listed separately, they are integrated tasks.

Visual Inspection

A Department of Health Services Certified Lead Inspector/Risk Assessor performed the inspection. An initial building walkthrough was conducted to determine the presence of suspect materials that were accessible or exposed.

Sampling Process

Following the walkthrough, the inspector selected sample areas of exposed or accessible materials identified as suspect Lead-Based Paint. State and Federal Guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Sampling Procedures Lead-Based Paint Inspection (X-Ray Fluorescence (XRF) Analysis)

XRF instruments measure lead-in-paint by directing high energy X-rays and gamma rays into the paint, causing the lead atoms in the paint to emit X-rays which are detected by the instrument and converted to a measurement of the amount of lead in the paint. The EPA approved technology allows for measurement of X-rays without scraping or samples preparation to characterize substrate or matrix effects. The Spectrum Analyzer, Metals Analysis Probe (MAP 4) is combined with a microprocessor system that enables field-testing with a high degree of quality control and speed. Sample locations, descriptions, conditions, and measurement results are automatically recorded by the instrument and easily downloaded to a PC or laptop.

All results were compared to the State and Federal Guidelines:
1.0 mg/cm^2 = XRF-Lead-based Paint

The lead-based paint inspection was conducted in general accordance with Title 17 of the California Code of Regulations (CCR), Division 1, Chapter 8 and United States Department of Housing and Urban Development (HUD) document entitled Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, published June 1995 (Revised 1997).

All building components identified on the site inspection that may contain lead-based paint/coating were targeted for testing (interior and/or exterior walls, doors and all associated components).

The testing and sampling protocol was comprised of testing with an X-Ray Fluorescence (XRF) analyzer. The XRF instrument is set with a unique identification number, which lists the building components.

Quality Control Program

Benchmark Environmental Engineering utilizes only DHS approved inspectors, which are certified to use radioactive instruments. The MAP 4 Spectrum Analyzer has on-board calibration routines, which continuously operate, and self-correct to minimized sampling error. This is known as substrate correcting software.

GENERAL

Warranty

Benchmark warrants that the findings contained herein have been prepared with the level of care and skill exercised by experienced and knowledgeable environmental consultants who are appropriately licensed or otherwise trained to perform asbestos assessments pursuant to the scope of work required on this project.

The survey included inspection of accessible materials such as above or behind suspended ceilings or other non-permanent structures. Benchmark did not inspect or sample inaccessible areas such as behind walls or within ductwork and did not dismantle any part of the structure to survey inaccessible areas. Inaccessible materials that are visible to Benchmark's inspectors shall be assumed asbestos containing or lead-based paint containing.

APPENDIX A: Asbestos Laboratory Results and Table

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Benchmark Environmental
Project Manager
3732-A Charter Park Drive

San Jose, CA 95136

Client ID: 3565
Report Number: B127578
Date Received: 08/26/09
Date Analyzed: 09/01/09
Date Printed: 09/01/09
First Reported: 09/01/09

Job ID/Site: E09-693 - Presidio Bldg 106, San Francisco

Date(s) Collected: 08/24/2009

FALI Job ID: 3565
Total Samples Submitted: 18
Total Samples Analyzed: 18

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-1B	10897806						
Layer: Grey Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Layer: White Mastic			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (20 %)							
693-8-24-2B	10897807						
Layer: Grey Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Layer: White Mastic			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (20 %)							
693-8-24-3B	10897808						
Layer: Beige Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (20 %)							
693-8-24-4B	10897809						
Layer: Beige Sheet Flooring			ND				
Layer: Tan Woven Backing			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (20 %)							
693-8-24-5B	10897810						
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic		Chrysotile	5 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace) Talc (5 %)							
693-8-24-6B	10897811						
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic		Chrysotile	5 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace) Talc (5 %)							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127578
Date Printed: 09/01/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-7B	10897812						
Layer: Brown Mastic		Chrysotile	2 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace)							
693-8-24-8B	10897813						
Layer: Brown Mastic		Chrysotile	2 %				
Total Composite Values of Fibrous Components: Asbestos (2%) Cellulose (Trace)							
693-8-24-9B	10897814						
Layer: Grey Paint			ND				
Layer: Black Tile		Chrysotile	5 %				
Layer: Black Mastic		Chrysotile	10 %				
Total Composite Values of Fibrous Components: Asbestos (5%) Cellulose (Trace)							
693-8-24-10B	10897815						
Layer: Grey Paint			ND				
Layer: Black Tile		Chrysotile	5 %				
Layer: Black Mastic		Chrysotile	10 %				
Total Composite Values of Fibrous Components: Asbestos (5%) Cellulose (Trace)							
693-8-24-11B	10897816						
Layer: White Paint			ND				
Layer: Brown Sheet Flooring			ND				
Layer: Tan Woven Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (15 %)							
693-8-24-12B	10897817						
Layer: White Paint			ND				
Layer: Brown Sheet Flooring			ND				
Layer: Tan Woven Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (15 %)							
693-8-24-13B	10897818						
Layer: Grey Non-Fibrous Material			ND				
Layer: Black Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-14B	10897819						
Layer: Grey Non-Fibrous Material			ND				
Layer: Black Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Client Name: Benchmark Environmental

Report Number: B127578
Date Printed: 09/01/09

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
693-8-24-15B	10897820						
Layer: Beige Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-16B	10897821						
Layer: Beige Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-17B	10897822						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							
693-8-24-18B	10897823						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: Asbestos (ND) Cellulose (Trace)							

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

BENCHMARK
3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 1 of 2

Project #: 809-693 Date: 8/24/09 Technician: T. MACFARLANE

Project Address: PRESIDIO BLDG 106 SAN FRANCISCO

Client Name: DAVE KERR Company: CAL-TRANS RIGHT OF WAY

Sample Number	Location	Homogenous Group or Measurement	Material or Component	Results To Be Reported As
693-8-24-1B	WOMEN'S BATHROOM	1	RESILIENT SHEET FLOORING - GRAY MARBLE	
2B	MEN'S BATHROOM	1	1	
3B	1ST FLOOR GALLEY	2	RESILIENT SHEET FLOORING, BEIGE MARBLED	
4B	2ND FLOOR GALLEY	1	1	
5B	BASEMENT #1 STORAGE & SERVER RM	3	12 X 12 WEDGE SPECKLED PT & MASTIC	
6B	BASEMENT #1 STORAGE, DOOR TO OFC	1	1	
7B	BASEMENT #1 STORAGE WALL, EAST	4	WALL/CEILING MASTIC	
8B	BASEMENT #1 STORAGE CEILING	1	1	
9B	BASEMENT, #2 STORAGE & DOOR	5	RESILIENT SHEET FLOORING - GRAY	

Circle Project Type:
Asbestos (Survey/Sample Collection)
Lead-Based Paint
Risk Assessment (Lead)
Clearance Lead
Mold/Fungus (Baseline)
Sewage Screen (Baseline)
Sewage Screen (Post-Remediation)
Other: _____

Circle Type of Analysis:
PLM/Bulk (EPA 600)
EPA SW 846-7420 FLAA
Dust Wipe, Soil, Paint Chip *Ghost Wipes*
GFAA Water (lead)
Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)
Direct Microscopic Exam (Tape/Swab)
Other: _____

Circle Turnaround Time
Same Day/Rush
24 Hour
48 Hour
72 Hour
5 Day
Other: _____

Relinquished By: T. MACFARLANE Received By: [illegible] 950am Date/Time: 8/26/09

BENCHMARK

3732 Charter Park Drive, Ste. A San Jose CA 95136
408-448-7594 408-448-3849 (fax)

BULK CHAIN OF CUSTODY

Please Include Sample Locations On Laboratory Report

Page: 2 of 2

Project #: 609-693 Date: _____ Technician: _____

Project Address: BLDG 106

Client Name: _____ Company: _____

Sample Number	*Location*	*Homogenous Group or Measurement*	*Material or Component*	*Results To Be Reported As*
693-8-24-10B	BASEMENT, #2 STORAGE	5	RSF BRM	
11B	#3 OFFICE/STORAGE, WINDOW	6	RESILIENT SHEET FLOORING - WHITE W/ LINES BACK	
12B	#3 OFFICE/STORAGE, DOOR	1	1	
13B	#2 OFFICE/STORAGE, CENTER FLOOR	7	FLOOR LEVELING GRAY	
14B	#2 OFFICE/STORAGE, DOOR TO HALL	1	1	
15B	#3 STORAGE, DOOR TO HALL	8	FLOOR LEVELING - BEIGE	
16B	#3 STORAGE, CENTER FLOOR	1	1	
17B	ROOM 101 closet	9	Floor levelge gray	
18B	ROOM 101 CENTER FLOOR	1	1	

Circle Project Type	Circle Type of Analysis	Circle Turnaround Time
Asbestos (Survey/Sample Collection)	PLM/Bulk (EPA 600)	*Same Day/Rush*
~~Lead-Based Paint~~	EPA SW 846-7420 FLAA	24 Hour
Risk Assessment (Lead)	Dust Wipe, Soil, Paint Chip *Ghost Wipes*	48 Hour
Clearance Lead	GFAA Water (lead)	72 Hour
Mold/Fungus (Baseline)	Qualitative (MUG) E.Coli/Coliforms (Soil/Swab)	5 Day
Sewage Screen (Baseline)	Direct Microscopic Exam (Tape/Swab)	Other: _____
Sewage Screen (Post-Remediation)	Other: _____	
Other: _____		

Relinquished By: T. McFarlane Received By: [illegible] UPS 950am Date/Time: 8/26/09

APPENDIX B: Lead-Based Paint XRF Results

Walls are referenced as A, B, D and D

Wall A is the street side of the residence

Walls B, C, and D are numbered clockwise

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Calibrations, Basement and Exterior											
Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
2	Calibration	*	*	*	*	*	1.008	0.996	Inconclusive	24-Aug-09	09:41A
3	Calibration	*	*	*	*	*	1.174	0.86	XRF Positive	24-Aug-09	09:45A
4	Calibration	*	*	*	*	*	0.961	0.955	Inconclusive	24-Aug-09	09:46A
5	Calibration	*	*	*	*	*	0.943	0.884	Inconclusive	24-Aug-09	09:47A
6	Calibration	*	*	*	*	*	0.99	0.937	Inconclusive	24-Aug-09	09:48A
7	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	09:50A
8	Stairwell	Wall	A	Plaster	Intact	White/Off White	21.855	-0.164	XRF Positive	24-Aug-09	10:23A
9	Stairwell	Door Casing	A	Wood	Intact	White/Off White	23.885	-0.317	XRF Positive	24-Aug-09	10:23A
10	Stairwell	Door Jamb	A	Wood	Intact	White/Off White	16.096	0.108	XRF Positive	24-Aug-09	10:23A
11	Stairwell	Door	A	Wood	Intact	White/Off White	-0.566	0	Negative	24-Aug-09	10:23A
12	Stairwell	Wall	B	Plaster	Intact	White/Off White	21.332	0.628	XRF Positive	24-Aug-09	10:23A
13	Stairwell	Stair Handrail	B	Wood	Intact	White/Off White	-0.907	0.255	Negative	24-Aug-09	10:23A
14	Stairwell	Baseboard	B	Wood	Intact	White/Off White	20.694	0.59	XRF Positive	24-Aug-09	10:24A
15	Stairwell	Wall	C	Plaster	Intact	White/Off White	21.283	-0.499	XRF Positive	24-Aug-09	10:24A
16	Stairwell	Window Sash	C	Wood	Intact	White/Off White	23.959	-0.088	XRF Positive	24-Aug-09	10:24A
17	Stairwell	Window Frame	C	Wood	Intact	White/Off White	26.572	-0.537	XRF Positive	24-Aug-09	10:24A
18	Stairwell	Ceiling	C	Plaster	Intact	White/Off White	12.735	-0.041	XRF Positive	24-Aug-09	10:24A
19	Stairwell	Wall	D	Plaster	Intact	White/Off White	18.892	0.257	XRF Positive	24-Aug-09	10:24A
20	Stairwell	Newell Post	D	Wood	Intact	White/Off White	-1.318	-0.118	Negative	24-Aug-09	10:25A
21	Stairwell	Door Casing	D	Metal	Intact	White/Off White	-0.247	0.531	Negative	24-Aug-09	10:25A
22	Stairwell	Door Jamb	D	Metal	Intact	White/Off White	-0.606	0.428	Negative	24-Aug-09	10:25A
23	Stairwell	Door	D	Wood	Intact	White/Off White	-0.375	0.19	Negative	24-Aug-09	10:26A
24	Hallway	Wall	A	Plaster	Fair	White/Off White	25.216	-0.082	XRF Positive	24-Aug-09	10:31A
25	Hallway	Door Casing	A	Wood	Fair	White/Off White	23.461	0.415	XRF Positive	24-Aug-09	10:32A
26	Hallway	Door Jamb	A	Wood	Intact	White/Off White	-0.27	0.041	Negative	24-Aug-09	10:32A
27	Hallway	Double Door	B	Wood	Stain Varnish	Brown/Beige	0.048	-0.008	Negative	24-Aug-09	10:32A
28	Hallway	Wall	B	Plaster	Fair	White/Off White	21.219	-0.2	XRF Positive	24-Aug-09	10:32A
29	Hallway	Siding	A	Wood	Intact	White/Off White	7.505	-0.128	XRF Positive	24-Aug-09	10:33A
30	Hallway	Closet Door	B	Wood	Intact	White/Off White	-0.021	-0.435	Negative	24-Aug-09	10:33A
31	Hallway	Door Jamb	B	Wood	Intact	White/Off White	0.21	-0.162	Negative	24-Aug-09	10:33A
32	Hallway	Door	B	Metal	Fair	White/Off White	0.448	0.681	Negative	24-Aug-09	10:33A
33	Hallway	Door	B	Metal	Fair	White/Off White	-0.585	0.597	Negative	24-Aug-09	10:33A
34	Hallway	Wall	C	Plaster	Intact	White/Off White	0.024	0.133	Negative	24-Aug-09	10:34A
35	Hallway	Door	C	Wood	Intact	White/Off White	11.857	-0.041	XRF Positive	24-Aug-09	10:34A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
36	Hallway	Siding	C	Wood	Intact	White/Off White	-0.068	0.02	Negative	24-Aug-09	10:34A
37	Hallway	Wall	D	Plaster	Intact	White/Off White	20.761	-0.251	XRF Positive	24-Aug-09	10:34A
38	Hallway	Ceiling	D	Plaster	Fair	White/Off White	28.986	0.39	XRF Positive	24-Aug-09	10:35A
39	Hallway	Double Door	D	Wood	Intact	White/Off White	17.322	-0.135	XRF Positive	24-Aug-09	10:35A
40	Hallway	Door Jamb	D	Wood	Intact	White/Off White	16.501	-0.009	XRF Positive	24-Aug-09	10:35A
41	Room 101	Wall	A	Plaster	Intact	White/Off White	30.829	0.648	XRF Positive	24-Aug-09	10:36A
42	Room 101	Window Sash	A	Wood	Intact	White/Off White	1.784	0.022	XRF Positive	24-Aug-09	10:36A
43	Room 101	Window Frame	A	Wood	Intact	White/Off White	19.13	0.712	XRF Positive	24-Aug-09	10:36A
44	Room 101	Wall	B	Plaster	Fair	White/Off White	30.03	0.394	XRF Positive	24-Aug-09	10:36A
45	Room 101	Double Door	B	Wood	Intact	White/Off White	21.554	0.177	XRF Positive	24-Aug-09	10:36A
46	Room 101	Door Jamb	B	Wood	Intact	Red/Pink	17.949	0.431	XRF Positive	24-Aug-09	10:37A
47	Room 101	Wall	C	Plaster	Fair	White/Off White	1.539	-0.035	XRF Positive	24-Aug-09	10:37A
48	Room 101	Ceiling	B	Plaster	Fair	White/Off White	19.587	1.108	XRF Positive	24-Aug-09	10:37A
49	Room 101	Post/Column	B	Metal	Intact	White/Off White	26.247	2.489	XRF Positive	24-Aug-09	10:37A
50	Room 101	Door	C	Wood	Stain Varnish	Brown/Beige	-0.217	-0.035	Negative	24-Aug-09	10:37A
51	Closet	Wall	A	Plaster	Fair	White/Off White	0.062	0.196	Negative	24-Aug-09	10:38A
52	Closet	Door Jamb	A	Wood	Intact	White/Off White	0.584	0.201	Negative	24-Aug-09	10:38A
53	Closet	Door	A	Wood	Stain Varnish	Brown/Beige	0.116	0.125	Negative	24-Aug-09	10:39A
54	Closet	Wall	B	Concrete	Intact	White/Off White	-0.633	-0.196	Negative	24-Aug-09	10:39A
55	Closet	Wall	C	Plaster	Fair	White/Off White	29.576	-0.153	XRF Positive	24-Aug-09	10:39A
56	Closet	Ceiling	C	Plaster	Fair	White/Off White	0.712	0.624	Negative	24-Aug-09	10:39A
57	Closet	Ceiling	C	Plaster	Fair	White/Off White	28.183	0.433	XRF Positive	24-Aug-09	10:40A
58	Room 101	Wall	D	Plaster	Fair	White/Off White	0.212	-0.123	Negative	24-Aug-09	10:40A
59	Room 101	Floor	D	Concrete	Poor	Gray	0.111	0.117	Negative	24-Aug-09	10:40A
60	Storage #1	Wall	A	Wood	Fair	White/Off White	0.669	-0.007	Negative	24-Aug-09	10:41A
61	Storage #1	Wall	B	Wood	Fair	White/Off White	-0.167	0.092	Negative	24-Aug-09	10:42A
62	Storage #1	Wall	C	Wood	Fair	White/Off White	0.579	0.124	Negative	24-Aug-09	10:43A
63	Storage #1	Door Jamb	C	Wood	Intact	White/Off White	20.616	-0.337	XRF Positive	24-Aug-09	10:43A
64	Storage #1	Door	C	Wood	Stain Varnish	Brown/Beige	0.411	-0.163	Negative	24-Aug-09	10:44A
65	Storage #1	Wall	D	Wood	Fair	White/Off White	-0.82	0.092	Negative	24-Aug-09	10:44A
66	Closet	Wall	A	Concrete	Intact	White/Off White	12.74	0.374	XRF Positive	24-Aug-09	10:44A
67	Closet	Wall	B	Wood	Intact	White/Off White	0.179	-0.319	Negative	24-Aug-09	10:44A
68	Closet	Door Jamb	B	Wood	Intact	White/Off White	0.065	-0.097	Negative	24-Aug-09	10:45A
69	Closet	Wall	C	Concrete	Intact	White/Off White	0.136	-0.574	Negative	24-Aug-09	10:45A
70	Closet	Wall	D	Concrete	Fair	White/Off White	14.26	0.719	XRF Positive	24-Aug-09	10:45A
71	Closet	Ceiling	D	Concrete	Fair	White/Off White	10.984	0.838	XRF Positive	24-Aug-09	10:46A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
72	Storage #1	Ceiling	D	Wood	Fair	White/Off White	0.152	0.083	Negative	24-Aug-09	10:47A
73	Office #1	Wall	A	Wood	Intact	White/Off White	0.372	0.288	Negative	24-Aug-09	10:47A
74	Office #1	Wall	B	Wood	Intact	White/Off White	0.588	0.197	Negative	24-Aug-09	10:48A
75	Office #1	Wall	C	Wood	Intact	White/Off White	0.003	0.02	Negative	24-Aug-09	10:48A
76	Office #1	Wall	D	Wood	Intact	White/Off White	-0.246	-0.267	Negative	24-Aug-09	10:49A
77	Office #1	Ceiling	D	Plaster	Intact	White/Off White	-0.229	0.112	Negative	24-Aug-09	10:49A
78	Storage #4	Wall	A	Wood	Intact	White/Off White	-0.666	0.522	Negative	24-Aug-09	10:50A
79	Storage #4	Window Sash	A	Wood	Intact	White/Off White	-0.236	-0.215	Negative	24-Aug-09	10:50A
80	*Storage #4*	*Window Frame*	*A*	*Wood*	*Intact*	*White/Off White*	*11.765*	*0.573*	*XRF Positive*	*24-Aug-09*	*10:50A*
81	Storage #4	Wall	B	Wood	Intact	White/Off White	-0.439	-0.259	Negative	24-Aug-09	10:50A
82	Storage #4	Door Jamb	B	Wood	Intact	White/Off White	0.234	-0.003	Negative	24-Aug-09	10:51A
83	Storage #4	Door	B	Wood	Stain Varnish	Brown/Beige	-0.63	-0.025	Negative	24-Aug-09	10:51A
84	Storage #4	Wall	C	Wood	Intact	White/Off White	-0.37	-0.232	Negative	24-Aug-09	10:51A
85	*Storage #4*	*Wall*	*D*	*Wood*	*Intact*	*White/Off White*	*1.283*	*0.254*	*XRF Positive*	*24-Aug-09*	*10:51A*
86	Storage #4	Ceiling	D	Sheetrk	Intact	White/Off White	-0.589	0.277	Negative	24-Aug-09	10:52A
87	Storage #5	Wall	A	Plaster	Intact	White/Off White	-0.457	0.177	Negative	24-Aug-09	10:53A
88	Storage #5	Wall	B	Concrete	Intact	White/Off White	-0.369	0.023	Negative	24-Aug-09	10:53A
89	Storage #5	Wall	C	Plaster	Intact	White/Off White	-0.439	0.063	Negative	24-Aug-09	10:54A
90	Storage #5	Cabinets	C	Wood	Intact	White/Off White	0.197	-0.596	Negative	24-Aug-09	10:54A
91	Storage #5	Wall	D	Plaster	Intact	White/Off White	-0.528	-0.002	Negative	24-Aug-09	10:54A
92	Storage #5	Door Jamb	D	Wood	Intact	White/Off White	0.425	-0.316	Negative	24-Aug-09	10:54A
93	Storage #5	Door	D	Wood	Stain Varnish	Brown/Beige	-0.747	-0.36	Negative	24-Aug-09	10:55A
94	Storage #5	Ceiling	D	Plaster	Intact	White/Off White	-0.522	0.168	Negative	24-Aug-09	10:55A
95	Storage #3	Siding	A	Wood	Intact	White/Off White	0.118	0.198	Negative	24-Aug-09	10:56A
96	*Storage #3*	*Door Casing*	*A*	*Wood*	*Intact*	*White/Off White*	*1.835*	*0.307*	*XRF Positive*	*24-Aug-09*	*10:56A*
97	*Storage #3*	*Door*	*A*	*Wood*	*Fair*	*White/Off White*	*9.765*	*1.763*	*XRF Positive*	*24-Aug-09*	*10:56A*
98	*Storage #3*	*Door Jamb*	*A*	*Wood*	*Intact*	*White/Off White*	*1.85*	*0.112*	*XRF Positive*	*24-Aug-09*	*10:56A*
99	Storage #3	Wall	B	Concrete	Intact	White/Off White	-0.2	0.175	Negative	24-Aug-09	10:57A
100	Storage #3	Wall	C	Concrete	Fair	White/Off White	-1.231	-0.667	Negative	24-Aug-09	10:57A
101	Storage #3	Wall	D	Concrete	Intact	White/Off White	-0.312	0.25	Negative	24-Aug-09	10:57A
102	Storage #3	Ceiling	D	Plaster	Fair	White/Off White	-0.284	-0.173	Negative	24-Aug-09	10:58A
103	Office #2	Wall	A	Plaster	Intact	Purple/Violet	-0.02	-0.075	Negative	24-Aug-09	10:59A
104	Office #2	Door Casing	A	Wood	Intact	White/Off White	0.176	0.046	Negative	24-Aug-09	11:00A
105	Office #2	Door Jamb	A	Wood	Intact	White/Off White	0.338	0.056	Negative	24-Aug-09	11:00A
106	Office #2	Door	A	Wood	Intact	White/Off White	-0.281	0.03	Negative	24-Aug-09	11:00A
107	Office #2	Wall	B	Concrete	Intact	White/Off White	0.266	-0.394	Negative	24-Aug-09	11:00A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
108	Office #2	Wall	C	Concrete	Intact	White/Off White	0.328	-0.355	Negative	24-Aug-09	11:01A
109	Office #2	Window Sash	C	Wood	Intact	White/Off White	16.664	0.513	XRF Positive	24-Aug-09	11:01A
110	Office #2	Window Frame	C	Wood	Intact	White/Off White	15.667	0.57	XRF Positive	24-Aug-09	11:01A
111	Office #2	Wall	D	Concrete	Intact	White/Off White	-0.084	-0.293	Negative	24-Aug-09	11:01A
112	Office #2	Ceiling	D	Plaster	Fair	White/Off White	-0.334	-0.011	Negative	24-Aug-09	11:02A
113	Closet	Wall	A	Plaster	Intact	White/Off White	-0.195	0.318	Negative	24-Aug-09	11:02A
114	Closet	Wall	B	Concrete	Intact	White/Off White	-0.488	0.287	Negative	24-Aug-09	11:03A
115	Closet	Wall	C	Concrete	Intact	White/Off White	-0.484	0.081	Negative	24-Aug-09	11:03A
116	Closet	Wall	D	Plaster	Intact	White/Off White	-0.255	0.04	Negative	24-Aug-09	11:03A
117	Closet	Door Jamb	D	Wood	Intact	White/Off White	0.255	-0.16	Negative	24-Aug-09	11:03A
118	Closet	Door	D	Metal	Fair	White/Off White	0.453	0.64	Negative	24-Aug-09	11:04A
119	Closet	Ceiling	D	Plaster	Intact	White/Off White	-0.652	-0.031	Negative	24-Aug-09	11:04A
120	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	11:05A
121	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	12:12P
122	Exterior	Window Sill	A	Wood	Fair	White/Off White	2.053	0.203	XRF Positive	24-Aug-09	12:12P
123	Exterior	Window Sash	A	Wood	Fair	White/Off White	4.958	0.238	XRF Positive	24-Aug-09	12:13P
124	Exterior	Window Frame	A	Wood	Intact	White/Off White	9.834	0.339	XRF Positive	24-Aug-09	12:13P
125	Exterior	Post/Column	A	Wood	Intact	White/Off White	7.635	1.107	XRF Positive	24-Aug-09	12:13P
126	Exterior	Floor	A	Wood	Intact	Gray	0.163	0.138	Negative	24-Aug-09	12:13P
127	Exterior	Shelf	A	Wood	Intact	White/Off White	0.211	0.038	Negative	24-Aug-09	12:14P
128	Exterior	Door	A	Wood	Intact	White/Off White	-0.038	0.4	Negative	24-Aug-09	12:14P
129	Exterior	Window Frame	A	Wood	Intact	White/Off White	16.108	0.368	XRF Positive	24-Aug-09	12:14P
130	Exterior	Door Jamb	A	Wood	Intact	White/Off White	-0.263	-0.014	Negative	24-Aug-09	12:14P
131	Exterior	Safety Rail	A	Metal	Fair	Black	0.667	1.18	Negative	24-Aug-09	12:15P
132	Exterior	Window Sill	B	Wood	Intact	White/Off White	8.517	0.338	XRF Positive	24-Aug-09	12:16P
133	Exterior	Window Sash	B	Wood	Intact	White/Off White	18.945	1.266	XRF Positive	24-Aug-09	12:16P
134	Exterior	Window Frame	B	Wood	Intact	White/Off White	10.963	0.989	XRF Positive	24-Aug-09	12:16P
135	Exterior	Siding	B	Wood	Fair	White/Off White	7.972	0.929	XRF Positive	24-Aug-09	12:17P
136	Exterior	Door	B	Wood	Intact	White/Off White	0.29	0.127	Negative	24-Aug-09	12:17P
137	Exterior	Door Jamb	B	Wood	Intact	White/Off White	-0.369	0.312	Negative	24-Aug-09	12:17P
138	Exterior	Siding	C	Wood	Intact	White/Off White	-0.583	0.167	Negative	24-Aug-09	12:17P
139	Exterior	Window Sill	C	Wood	Intact	White/Off White	7.146	0.57	XRF Positive	24-Aug-09	12:18P
140	Exterior	Window Frame	C	Wood	Intact	White/Off White	7.121	0.336	XRF Positive	24-Aug-09	12:18P
141	Exterior	Window Sash	C	Wood	Intact	White/Off White	15.929	1.051	XRF Positive	24-Aug-09	12:18P
142	Exterior	Double Door	C	Wood	Intact	Gray	17.071	1.193	XRF Positive	24-Aug-09	12:18P
143	Exterior	Window Frame	C	Wood	Intact	Gray	6.793	0.254	XRF Positive	24-Aug-09	12:19P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
144	Exterior	Painted Brick	C	Tile/Masonry	Intact	Gray	6.41	0.43	XRF Positive	24-Aug-09	12:19P
145	Exterior	Window Sill	D	Wood	Intact	White/Off White	12.253	1.019	XRF Positive	24-Aug-09	12:20P
146	Exterior	Window Frame	D	Wood	Intact	White/Off White	15.238	1.697	XRF Positive	24-Aug-09	12:20P
147	Exterior	Window Sash	D	Wood	Intact	White/Off White	17.966	1.708	XRF Positive	24-Aug-09	12:20P
148	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	12:20P
149	Calibration	*	*	*	*	*	0.972	0.854	Inconclusive	24-Aug-09	02:13P
150	Calibration	*	*	*	*	*	1.067	0.85	Inconclusive	24-Aug-09	02:14P
151	Calibration	*	*	*	*	*	0.996	0.859	Inconclusive	24-Aug-09	02:15P
152	Calibration	*	*	*	*	*	0.982	0.903	Inconclusive	24-Aug-09	02:16P
153	Calibration	*	*	*	*	*	0.971	0.923	Inconclusive	24-Aug-09	02:17P
1st Floor (Interior)											
Data ID #	**Room Type**	**Component**	**Wall #**	**Substrate**	**Condition**	**Color**	**K-Shell**	**L-Shell**	**Result**	**Date**	**Time**
155	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	11:05A
156	Office #1	Wall	A	Sheetrk	Intact	White/Off White	-0.03	0.174	Negative	24-Aug-09	11:12A
157	Office #1	Baseboard	A	Wood	Intact	White/Off White	-0.327	-0.042	Negative	24-Aug-09	11:12A
158	Office #1	Door	A	Wood	Intact	White/Off White	0.107	-0.145	Negative	24-Aug-09	11:13A
159	Office #1	Wall	B	Sheetrk	Intact	White/Off White	17.72	0.397	XRF Positive	24-Aug-09	11:13A
160	Office #1	Baseboard	B	Wood	Intact	White/Off White	-0.21	-0.161	Negative	24-Aug-09	11:13A
161	Office #1	Wall	C	Sheetrk	Intact	White/Off White	-0.009	0.185	Negative	24-Aug-09	11:13A
162	Office #1	Wall	D	Plaster	Intact	White/Off White	17.26	0.388	XRF Positive	24-Aug-09	11:14A
163	Office #1	Window Sill	D	Wood	Intact	White/Off White	24.903	-0.108	XRF Positive	24-Aug-09	11:14A
164	Office #1	Window Frame	D	Wood	Intact	White/Off White	20.848	0.993	XRF Positive	24-Aug-09	11:14A
165	Office #1	Window Sash	D	Wood	Intact	White/Off White	22.949	0.867	XRF Positive	24-Aug-09	11:14A
166	Office #1	Chair Rail	D	Wood	Intact	White/Off White	1.949	0.342	XRF Positive	24-Aug-09	11:14A
167	Office #2	Wall	A	Sheetrk	Intact	White/Off White	-0.213	0.063	Negative	24-Aug-09	11:15A
168	Office #2	Door	A	Wood	Intact	White/Off White	-1.112	0.743	Negative	24-Aug-09	11:15A
169	Office #2	Wall	B	Plaster	Intact	White/Off White	22.63	0.471	XRF Positive	24-Aug-09	11:16A
170	Office #2	Wall	C	Plaster	Intact	White/Off White	17.459	-0.283	XRF Positive	24-Aug-09	11:16A
171	Office #2	Chair Rail	C	Wood	Intact	White/Off White	2.102	0.255	XRF Positive	24-Aug-09	11:16A
172	Office #2	Window Sill	C	Wood	Intact	White/Off White	27.643	-0.176	XRF Positive	24-Aug-09	11:16A
173	Office #2	Window Frame	C	Wood	Intact	White/Off White	18.043	0.609	XRF Positive	24-Aug-09	11:16A
174	Office #2	Window Sash	C	Wood	Intact	White/Off White	21.152	0.021	XRF Positive	24-Aug-09	11:16A
175	Office #2	Wall	C	Plaster	Intact	White/Off White	19.95	0.025	XRF Positive	24-Aug-09	11:16A
176	Office #2	Baseboard	D	Wood	Intact	White/Off White	22.423	0.258	XRF Positive	24-Aug-09	11:17A
177	Office #3	Wall	A	Plaster	Intact	White/Off White	16.712	-0.476	XRF Positive	24-Aug-09	11:17A
178	Office #3	Window Sill	A	Wood	Intact	White/Off White	26.024	0.174	XRF Positive	24-Aug-09	11:18A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
179	Office #3	Window Frame	A	Wood	Intact	White/Off White	19.162	0.466	XRF Positive	24-Aug-09	11:18A
180	Office #3	Window Sash	A	Wood	Intact	White/Off White	22.515	0.13	XRF Positive	24-Aug-09	11:18A
181	Office #3	Wall	A	Plaster	Intact	White/Off White	0.036	-0.23	Negative	24-Aug-09	11:18A
182	Office #3	Chair Rail	B	Wood	Intact	White/Off White	-0.141	-0.027	Negative	24-Aug-09	11:18A
183	Office #3	Wall	C	Sheetrk	Intact	White/Off White	-0.335	0.223	Negative	24-Aug-09	11:19A
184	Office #3	Wall	C	Plaster	Intact	White/Off White	18.367	-0.338	XRF Positive	24-Aug-09	11:19A
185	Foyer	Wall	A	Plaster	Intact	White/Off White	19.319	0.098	XRF Positive	24-Aug-09	11:20A
186	Foyer	Door Casing	A	Wood	Intact	White/Off White	23.34	0.12	XRF Positive	24-Aug-09	11:20A
187	Foyer	Window Frame	A	Wood	Intact	White/Off White	2.065	0.075	XRF Positive	24-Aug-09	11:20A
188	Foyer	Door	A	Wood	Intact	White/Off White	-0.745	0.553	Negative	24-Aug-09	11:21A
189	Foyer	Wall	B	Plaster	Intact	White/Off White	19.624	-0.147	XRF Positive	24-Aug-09	11:21A
190	Foyer	Chair Rail	B	Wood	Intact	White/Off White	1.528	0.334	XRF Positive	24-Aug-09	11:21A
191	Foyer	Baseboard	B	Wood	Intact	White/Off White	21.801	0.464	XRF Positive	24-Aug-09	11:21A
192	Foyer	Floor	B	Wood	Stain Varnish	Brown/Beige	-0.985	-0.207	Negative	24-Aug-09	11:21A
193	Foyer	Wall	C	Plaster	Intact	White/Off White	22.544	-0.577	XRF Positive	24-Aug-09	11:22A
194	Foyer	Wall	D	Plaster	Intact	White/Off White	20.094	0.042	XRF Positive	24-Aug-09	11:22A
195	Hallway	Wall	A	Plaster	Intact	White/Off White	20.98	0.922	XRF Positive	24-Aug-09	11:22A
196	Hallway	Chair Rail	A	Wood	Intact	White/Off White	21.941	-0.239	XRF Positive	24-Aug-09	11:22A
197	Hallway	Baseboard	A	Wood	Intact	White/Off White	22.608	0.156	XRF Positive	24-Aug-09	11:22A
198	Hallway	Floor	A	Wood	Stain Varnish	Brown/Beige	0.111	-0.033	Negative	24-Aug-09	11:22A
199	Hallway	Door Casing	A	Wood	Intact	White/Off White	21.697	0.972	XRF Positive	24-Aug-09	11:23A
200	Hallway	Door Jamb	A	Wood	Intact	White/Off White	17.384	0.458	XRF Positive	24-Aug-09	11:23A
201	Hallway	Door	A	Wood	Intact	White/Off White	24.736	0.44	XRF Positive	24-Aug-09	11:23A
202	Hallway	Wall	B	Plaster	Intact	White/Off White	22.293	0.588	XRF Positive	24-Aug-09	11:23A
203	Hallway	Wall	C	Plaster	Intact	White/Off White	19.323	-0.392	XRF Positive	24-Aug-09	11:23A
204	Hallway	Wall	D	Plaster	Intact	White/Off White	-0.315	0.078	Negative	24-Aug-09	11:23A
205	Men's Bath	Wall	A	Plaster	Intact	White/Off White	22.41	-0.425	XRF Positive	24-Aug-09	11:24A
206	Men's Bath	Window Sill	A	Wood	Intact	White/Off White	25.315	-0.055	XRF Positive	24-Aug-09	11:24A
207	Men's Bath	Window Sash	A	Wood	Intact	White/Off White	21.301	0.425	XRF Positive	24-Aug-09	11:24A
208	Men's Bath	Window Frame	A	Wood	Intact	White/Off White	21.775	0.577	XRF Positive	24-Aug-09	11:25A
209	Men's Bath	Wall	B	Plaster	Intact	White/Off White	0.295	-0.093	Negative	24-Aug-09	11:25A
210	Men's Bath	Wall	C	Plaster	Intact	White/Off White	23.856	-0.386	XRF Positive	24-Aug-09	11:25A
211	Men's Bath	Baseboard	C	Wood	Intact	White/Off White	27	-0.267	XRF Positive	24-Aug-09	11:25A
212	Men's Bath	Door Casing	C	Wood	Intact	White/Off White	23.263	0.027	XRF Positive	24-Aug-09	11:25A
213	Men's Bath	Door	C	Wood	Intact	White/Off White	23.794	0.559	XRF Positive	24-Aug-09	11:25A
214	Men's Bath	Transom	C	Wood	Intact	White/Off White	14.478	0.562	XRF Positive	24-Aug-09	11:26A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
215	Men's Bath	Door Jamb	C	Wood	Intact	White/Off White	18.047	0.573	XRF Positive	24-Aug-09	11:26A
216	Men's Bath	Wall	D	Plaster	Intact	White/Off White	2.218	0.364	XRF Positive	24-Aug-09	11:26A
217	Office #4	Wall	A	Plaster	Intact	White/Off White	16.283	0.195	XRF Positive	24-Aug-09	11:27A
218	Office #4	Window Sill	A	Wood	Intact	White/Off White	22.273	0.517	XRF Positive	24-Aug-09	11:27A
219	Office #4	Window Frame	A	Wood	Intact	White/Off White	19.258	0.34	XRF Positive	24-Aug-09	11:27A
220	Office #4	Window Sash	A	Wood	Intact	White/Off White	19.695	0.804	XRF Positive	24-Aug-09	11:27A
221	Office #4	Wall	B	Plaster	Intact	White/Off White	19.611	-0.691	XRF Positive	24-Aug-09	11:28A
222	Office #4	Wall	C	Plaster	Intact	White/Off White	0.227	-0.632	Negative	24-Aug-09	11:28A
223	Office #4	Baseboard	C	Wood	Intact	White/Off White	1.631	0.184	XRF Positive	24-Aug-09	11:28A
224	Office #4	Door Casing	C	Wood	Intact	White/Off White	21.843	-0.445	XRF Positive	24-Aug-09	11:28A
225	Office #4	Door Jamb	C	Wood	Intact	White/Off White	15.846	0.257	XRF Positive	24-Aug-09	11:28A
226	Office #4	Door	C	Wood	Intact	White/Off White	-0.712	0.257	Negative	24-Aug-09	11:29A
227	Office #4	Transom	C	Wood	Intact	White/Off White	18.349	0.755	XRF Positive	24-Aug-09	11:29A
228	Office #4	Wall	D	Plaster	Intact	White/Off White	0.137	0.148	Negative	24-Aug-09	11:29A
229	Office #4	Baseboard	B	Wood	Intact	White/Off White	3.211	-0.043	XRF Positive	24-Aug-09	11:29A
230	Women's Bath	Wall	A	Plaster	Intact	White/Off White	14.008	-0.507	XRF Positive	24-Aug-09	11:30A
231	Women's Bath	Chair Rail	A	Wood	Intact	White/Off White	6.977	0.006	XRF Positive	24-Aug-09	11:30A
232	Women's Bath	Baseboard	A	Wood	Intact	White/Off White	16.466	0.09	XRF Positive	24-Aug-09	11:30A
233	Women's Bath	Door Casing	A	Wood	Intact	White/Off White	23.332	-0.029	XRF Positive	24-Aug-09	11:30A
234	Women's Bath	Door	A	Wood	Intact	White/Off White	17.723	0.455	XRF Positive	24-Aug-09	11:30A
235	Women's Bath	Door	A	Wood	Intact	White/Off White	-0.557	-0.068	Negative	24-Aug-09	11:31A
236	Women's Bath	Transom	A	Wood	Intact	White/Off White	10.393	0.417	XRF Positive	24-Aug-09	11:31A
237	Women's Bath	Wall	B	Plaster	Intact	White/Off White	23.398	0.592	XRF Positive	24-Aug-09	11:31A
238	Women's Bath	Wall	C	Plaster	Intact	White/Off White	20.095	0.495	XRF Positive	24-Aug-09	11:31A
239	Women's Bath	Window Sill	C	Wood	Intact	White/Off White	21.98	0.178	XRF Positive	24-Aug-09	11:31A
240	Women's Bath	Window Frame	C	Wood	Intact	White/Off White	19.779	0.64	XRF Positive	24-Aug-09	11:31A
241	Women's Bath	Window Sash	C	Wood	Intact	White/Off White	22.683	0.223	XRF Positive	24-Aug-09	11:31A
242	Women's Bath	Wall	D	Plaster	Intact	White/Off White	0	0.456	Negative	24-Aug-09	11:32A
243	Office #5	Wall	A	Plaster	Intact	White/Off White	-0.659	0.113	Negative	24-Aug-09	11:33A
244	Office #5	Wall	B	Plaster	Intact	White/Off White	13.865	0.09	XRF Positive	24-Aug-09	11:33A
245	Office #5	Window Sill	B	Wood	Intact	White/Off White	16.851	0.36	XRF Positive	24-Aug-09	11:34A
246	Office #5	Window Frame	B	Wood	Intact	White/Off White	22.274	-0.006	XRF Positive	24-Aug-09	11:34A
247	Office #5	Window Sash	B	Wood	Intact	White/Off White	18.087	0.764	XRF Positive	24-Aug-09	11:34A
248	Office #5	Wall	C	Plaster	Intact	White/Off White	0.167	-0.121	Negative	24-Aug-09	11:34A
249	Office #5	Door Jamb	C	Wood	Intact	White/Off White	11.443	0.306	XRF Positive	24-Aug-09	11:34A
250	Office #5	Door Casing	C	Wood	Intact	White/Off White	21.256	0.313	XRF Positive	24-Aug-09	11:35A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
251	Office #5	Baseboard	C	Wood	Intact	White/Off White	-0.482	0.005	Negative	24-Aug-09	11:35A
252	Office #5	Transom	C	Wood	Intact	White/Off White	14.34	-0.26	XRF Positive	24-Aug-09	11:35A
253	Office #5	Wall	D	Plaster	Intact	White/Off White	11.152	0.252	XRF Positive	24-Aug-09	11:35A
254	Office #5	Door	D	Wood	Intact	White/Off White	0.586	0.089	Negative	24-Aug-09	11:35A
255	Office #6	Wall	A	Plaster	Intact	White/Off White	15.074	0.24	XRF Positive	24-Aug-09	11:36A
256	Office #6	Window Sill	A	Wood	Intact	White/Off White	23.653	0.178	XRF Positive	24-Aug-09	11:36A
257	Office #6	Window Frame	A	Wood	Intact	White/Off White	16.116	0.541	XRF Positive	24-Aug-09	11:36A
258	Office #6	Window Sash	A	Wood	Intact	White/Off White	0.331	0.019	Negative	24-Aug-09	11:37A
259	Office #6	Wall	B	Plaster	Intact	White/Off White	10.893	0.376	XRF Positive	24-Aug-09	11:37A
260	Office #6	Window Sash	B	Wood	Intact	White/Off White	17.434	0.462	XRF Positive	24-Aug-09	11:37A
261	Office #6	Wall	C	Plaster	Intact	White/Off White	-0.45	0.35	Negative	24-Aug-09	11:37A
262	Office #6	Wall	D	Plaster	Intact	White/Off White	-0.475	0.258	Negative	24-Aug-09	11:37A
263	Office #6	Baseboard	D	Wood	Intact	White/Off White	-0.333	0.35	Negative	24-Aug-09	11:38A
264	Office #6	Baseboard	A	Wood	Intact	White/Off White	1.612	0.134	XRF Positive	24-Aug-09	11:38A
265	Office #7	Wall	A	Plaster	Intact	White/Off White	19.289	0.38	XRF Positive	24-Aug-09	11:39A
266	Office #7	Wall	B	Plaster	Intact	White/Off White	-0.161	0.502	Negative	24-Aug-09	11:39A
267	Office #7	Door Jamb	B	Wood	Intact	White/Off White	17.056	0.617	XRF Positive	24-Aug-09	11:39A
268	Office #7	Door	B	Wood	Intact	White/Off White	-0.096	-0.298	Negative	24-Aug-09	11:39A
269	Office #7	Wall	C	Plaster	Intact	White/Off White	-1.021	-0.105	Negative	24-Aug-09	11:40A
270	Office #7	Window Sill	C	Wood	Intact	White/Off White	7.262	0.103	XRF Positive	24-Aug-09	11:40A
271	Office #7	Window Frame	C	Wood	Intact	White/Off White	19.984	-0.262	XRF Positive	24-Aug-09	11:40A
272	Office #7	Window Sash	C	Wood	Intact	White/Off White	16.725	0.461	XRF Positive	24-Aug-09	11:40A
273	Office #7	Wall	D	Plaster	Intact	White/Off White	0.192	0.32	Negative	24-Aug-09	11:40A
274	Office #7	Baseboard	D	Wood	Intact	White/Off White	0.025	0.094	Negative	24-Aug-09	11:41A
275	Office #8	Painted Brick	A	Tile/Masonry	Intact	White/Off White	0.57	0.084	Negative	24-Aug-09	11:42A
276	Office #8	Door Jamb	A	Wood	Intact	White/Off White	14.968	0.032	XRF Positive	24-Aug-09	11:43A
277	Office #8	Transom	A	Wood	Intact	White/Off White	13.911	0.029	XRF Positive	24-Aug-09	11:43A
279	Office #8	Wall	B	Plaster	Intact	White/Off White	0.632	-0.322	Negative	24-Aug-09	11:43A
280	Office #8	Door Casing	B	Wood	Intact	White/Off White	-0.1	-0.334	Negative	24-Aug-09	11:44A
281	Office #8	Door	B	Wood	Intact	White/Off White	-0.334	0.085	Negative	24-Aug-09	11:44A
282	Office #8	Wall	C	Plaster	Intact	White/Off White	0.639	-0.172	Negative	24-Aug-09	11:45A
283	Office #8	Window Frame	C	Wood	Intact	White/Off White	5.254	0.173	XRF Positive	24-Aug-09	11:45A
284	Office #8	Window Sash	C	Wood	Intact	White/Off White	21.197	0.971	XRF Positive	24-Aug-09	11:45A
285	Office #8	Window Sill	C	Wood	Intact	White/Off White	2.284	-0.254	XRF Positive	24-Aug-09	11:45A
286	Office #8	Wall	D	Plaster	Intact	White/Off White	-1.195	0.263	Negative	24-Aug-09	11:46A
287	Galley	Painted Brick	A	Tile/Masonry	Intact	White/Off White	1.349	-0.07	XRF Positive	24-Aug-09	11:46A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
288	Galley	Window Sash	A	Wood	Intact	White/Off White	11.565	0.913	XRF Positive	24-Aug-09	11:47A
289	Galley	Window Sill	A	Wood	Intact	White/Off White	17.037	-0.993	XRF Positive	24-Aug-09	11:47A
290	Galley	Window Frame	A	Wood	Intact	White/Off White	9.332	-0.24	XRF Positive	24-Aug-09	11:47A
291	Galley	Wall	B	Plaster	Intact	White/Off White	0.185	0.249	Negative	24-Aug-09	11:47A
292	Galley	Door Jamb	B	Wood	Intact	White/Off White	0.321	0.025	Negative	24-Aug-09	11:47A
293	Galley	Wall	C	Plaster	Intact	White/Off White	1.376	-0.169	XRF Positive	24-Aug-09	11:48A
294	Galley	Wall	D	Plaster	Intact	White/Off White	1.08	-0.024	XRF Positive	24-Aug-09	11:49A
295	Galley	Baseboard	D	Wood	Intact	White/Off White	1.313	0.136	XRF Positive	24-Aug-09	11:50A
296	Stairwell	Wall	B	Plaster	Intact	White/Off White	18.442	-1.063	XRF Positive	24-Aug-09	11:51A
297	Stairwell	Newell Post	B	Wood	Intact	White/Off White	-0.046	-0.193	Negative	24-Aug-09	11:52A
298	Stairwell	Stair Handrail	B	Wood	Intact	White/Off White	0	0.039	Negative	24-Aug-09	11:52A
299	Stairwell	Wall	C	Plaster	Intact	White/Off White	20.241	-0.008	XRF Positive	24-Aug-09	11:52A
300	Stairwell	Baseboard	C	Wood	Intact	White/Off White	21.083	0.769	XRF Positive	24-Aug-09	11:52A
301	Stairwell	Window Sill	C	Wood	Intact	White/Off White	22.927	0.657	XRF Positive	24-Aug-09	11:53A
302	Stairwell	Window Frame	C	Wood	Intact	White/Off White	18.73	0.551	XRF Positive	24-Aug-09	11:53A
303	Stairwell	Window Sash	C	Wood	Intact	White/Off White	21.281	0.388	XRF Positive	24-Aug-09	11:53A
304	Stairwell	Wall	D	Plaster	Intact	White/Off White	21.142	0.191	XRF Positive	24-Aug-09	11:53A
305	Stairwell	Chair Rail	D	Wood	Intact	White/Off White	1.487	-0.09	XRF Positive	24-Aug-09	11:53A
306	Stairwell	Safety Rail	C	Wood	Intact	White/Off White	-0.052	0.099	Negative	24-Aug-09	11:54A
307	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	11:54A
2nd Floor (Interior)											
Data ID #	**Room Type**	**Component**	**Wall #**	**Substrate**	**Condition**	**Color**	**K-Shell**	**L-Shell**	**Result**	**Date**	**Time**
309	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	11:54A
310	Hallway	Wall	A	Plaster	Intact	White/Off White	20.13	0.146	XRF Positive	24-Aug-09	11:54A
311	Hallway	Chair Rail	A	Wood	Intact	White/Off White	17.966	-0.268	XRF Positive	24-Aug-09	11:54A
312	Hallway	Baseboard	A	Wood	Intact	White/Off White	14.709	1.823	XRF Positive	24-Aug-09	11:54A
313	Hallway	Floor	A	Wood	Stain Varnish	Brown/Beige	-0.62	-0.146	Negative	24-Aug-09	11:55A
314	Hallway	Door	A	Wood	Intact	White/Off White	-0.024	0.429	Negative	24-Aug-09	11:55A
315	Hallway	Door Jamb	A	Wood	Intact	White/Off White	16.383	0.289	XRF Positive	24-Aug-09	11:55A
316	Hallway	Transom	A	Wood	Intact	White/Off White	13.396	0.633	XRF Positive	24-Aug-09	11:55A
317	Hallway	Wall	B	Plaster	Intact	White/Off White	22.224	0.01	XRF Positive	24-Aug-09	11:55A
318	Hallway	Wall	C	Plaster	Intact	White/Off White	20.253	0.387	XRF Positive	24-Aug-09	11:55A
319	Hallway	Wall	D	Plaster	Intact	White/Off White	18.572	-0.745	XRF Positive	24-Aug-09	11:56A
320	Office #1	Wall	A	Plaster	Intact	White/Off White	19.983	0.515	XRF Positive	24-Aug-09	11:58A
321	Office #1	Baseboard	A	Wood	Intact	White/Off White	24.808	0.199	XRF Positive	24-Aug-09	11:58A
322	Office #1	Door Casing	A	Wood	Intact	White/Off White	23.99	0.695	XRF Positive	24-Aug-09	11:58A

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
323	Office #1	Door Jamb	A	Wood	Intact	White/Off White	14.41	0.067	XRF Positive	24-Aug-09	11:58A
324	Office #1	Transom	A	Wood	Intact	White/Off White	18.239	0.877	XRF Positive	24-Aug-09	11:59A
325	Office #1	Door	A	Wood	Intact	White/Off White	12.015	0.209	XRF Positive	24-Aug-09	11:59A
326	Office #1	Wall	B	Plaster	Intact	White/Off White	18.251	0.136	XRF Positive	24-Aug-09	11:59A
327	Office #1	Wall	C	Plaster	Intact	White/Off White	19.758	-0.588	XRF Positive	24-Aug-09	11:59A
328	Office #1	Window Frame	C	Wood	Intact	White/Off White	23.825	-0.104	XRF Positive	24-Aug-09	11:59A
329	Office #1	Window Sill	C	Wood	Intact	White/Off White	19.603	0.981	XRF Positive	24-Aug-09	11:59A
330	Office #1	Window Sash	C	Wood	Intact	White/Off White	2.852	-0.296	XRF Positive	24-Aug-09	11:59A
331	Office #1	Wall	D	Plaster	Intact	White/Off White	-0.065	0.38	Negative	24-Aug-09	11:59A
332	Office #2	Wall	A	Plaster	Intact	White/Off White	-0.553	0.318	Negative	24-Aug-09	12:00P
333	Office #2	Wall	A	Plaster	Intact	White/Off White	18.747	-0.69	XRF Positive	24-Aug-09	12:00P
334	Office #2	Door Casing	A	Wood	Intact	White/Off White	22.464	1.112	XRF Positive	24-Aug-09	12:00P
335	Office #2	Transom	B	Wood	Intact	White/Off White	18.975	0.948	XRF Positive	24-Aug-09	12:00P
336	Office #2	Door	B	Wood	Intact	Red/Pink	0.156	-0.156	Negative	24-Aug-09	12:01P
337	Office #2	Wall	C	Plaster	Intact	White/Off White	-0.224	0.282	Negative	24-Aug-09	12:01P
338	Office #2	Wall	D	Plaster	Intact	White/Off White	19.246	0.025	XRF Positive	24-Aug-09	12:01P
339	Office #2	Chair Rail	D	Wood	Intact	White/Off White	17.194	0.817	XRF Positive	24-Aug-09	12:01P
340	Office #2	Baseboard	D	Wood	Intact	White/Off White	23.818	0.497	XRF Positive	24-Aug-09	12:01P
341	Office #2	Window Sill	D	Wood	Intact	White/Off White	26.821	0.455	XRF Positive	24-Aug-09	12:01P
342	Office #2	Window Frame	D	Wood	Intact	White/Off White	17.603	0.921	XRF Positive	24-Aug-09	12:02P
343	Office #2	Window Sash	D	Wood	Intact	White/Off White	22.106	0.816	XRF Positive	24-Aug-09	12:02P
344	Galley	Wall	A	Plaster	Intact	White/Off White	0.318	-0.406	Negative	24-Aug-09	12:02P
345	Galley	Wainscot	A	Wood	Intact	White/Off White	0.227	-0.267	Negative	24-Aug-09	12:02P
346	Galley	Window Sill	A	Wood	Intact	White/Off White	2.648	0.792	XRF Positive	24-Aug-09	12:03P
347	Galley	Window Frame	A	Wood	Intact	White/Off White	2.958	0.524	XRF Positive	24-Aug-09	12:03P
348	Galley	Window Sash	A	Wood	Intact	White/Off White	-0.372	0.277	Negative	24-Aug-09	12:03P
349	Galley	Post/Column	A	Wood	Intact	White/Off White	20.246	-0.538	XRF Positive	24-Aug-09	12:03P
350	Galley	Ceiling Molding	A	Wood	Intact	White/Off White	7.986	-0.317	XRF Positive	24-Aug-09	12:03P
351	Galley	Painted Brick	B	Tile/Masonry	Intact	White/Off White	0.131	-0.378	Negative	24-Aug-09	12:03P
352	Galley	Painted Brick	C	Tile/Masonry	Intact	White/Off White	-1.089	-0.613	Negative	24-Aug-09	12:04P
353	Galley	Window Sash	C	Wood	Intact	White/Off White	0.45	-0.052	Negative	24-Aug-09	12:04P
354	Galley	Painted Brick	D	Tile/Masonry	Intact	White/Off White	0.244	-0.188	Negative	24-Aug-09	12:05P
355	Office #3	Wall	A	Plaster	Intact	White/Off White	-0.338	0.153	Negative	24-Aug-09	12:05P
356	Office #3	Wall	B	Plaster	Intact	White/Off White	15.882	0.291	XRF Positive	24-Aug-09	12:06P
357	Office #3	Window Sill	B	Wood	Intact	White/Off White	18.743	0.457	XRF Positive	24-Aug-09	12:06P
358	Office #3	Window Frame	B	Wood	Intact	White/Off White	19.901	0.528	XRF Positive	24-Aug-09	12:06P

Dept. Of Transportation
David Keba
Oakland, CA

XRF Spread Sheet

The Presidio
Bldg 106
San Francisco

Data ID #	Room Type	Component	Wall #	Substrate	Condition	Color	K-Shell	L-Shell	Result	Date	Time
359	Office #3	Window Sash	B	Wood	Intact	White/Off White	22.385	1.441	XRF Positive	24-Aug-09	12:06P
360	Office #3	Baseboard	B	Wood	Intact	White/Off White	22.214	0.05	XRF Positive	24-Aug-09	12:06P
361	Office #3	Wall	D	Plaster	Intact	White/Off White	18.652	0.289	XRF Positive	24-Aug-09	12:06P
362	Office #3	Wall	D	Plaster	Intact	White/Off White	17.747	0.364	XRF Positive	24-Aug-09	12:07P
363	Office #3	Wall	D	Plaster	Intact	White/Off White	19.839	1.666	XRF Positive	24-Aug-09	12:07P
364	Office #3	Chair Rail	D	Wood	Intact	White/Off White	22.56	0.374	XRF Positive	24-Aug-09	12:07P
365	Office #4	Wall	A	Plaster	Intact	White/Off White	19.54	1.109	XRF Positive	24-Aug-09	12:09P
366	Office #4	Window Sill	A	Wood	Intact	White/Off White	20.117	0.319	XRF Positive	24-Aug-09	12:09P
367	Office #4	Window Frame	A	Wood	Intact	White/Off White	18.046	0.234	XRF Positive	24-Aug-09	12:09P
368	Office #4	Window Sash	A	Wood	Intact	White/Off White	19.907	1.116	XRF Positive	24-Aug-09	12:09P
369	Office #4	Baseboard	A	Wood	Intact	White/Off White	21.047	1.222	XRF Positive	24-Aug-09	12:09P
370	Office #4	Wall	B	Plaster	Intact	White/Off White	16.812	0.828	XRF Positive	24-Aug-09	12:09P
371	Office #4	Wall	C	Plaster	Intact	White/Off White	0.012	0.294	Negative	24-Aug-09	12:10P
372	Office #4	Wall	D	Plaster	Intact	White/Off White	-0.023	-0.015	Negative	24-Aug-09	12:10P
373	Calibration	*	*	*	*	*	0	0	Uknown	24-Aug-09	12:11P

APPENDIX C: Certifications and Lead Hazard Evaluation Form

State of California Department of Public Health

Lead-Related Construction Certificate	Certificate Type	Expiration Date
	Inspector/Assessor	08/28/2010

Terri A. MacFarlane ID #: 5666

LEAD HAZARD EVALUATION REPORT E09-693

Section 1 — Date of Lead Hazard Evaluation 8/24/09

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

- [x] Lead Inspection
- [ ] Risk assessment
- [ ] Clearance Inspection
- [ ] Other (specify)

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address (number, street, apartment (if applicable))	City	County	Zip Code
THE PRESIDIO - BLDG 100	SAN FRANCISCO	SAN FRANCISCO	94623

Construction date (year) of structure	Type of structure	Children living in structure?
1909	[ ] Multi-unit building [ ] School or daycare [ ] Single family dwelling [x] Other MILITARY	[ ] Yes [x] No [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
DAVE KEBA - CAL-TRANS	510-286-5497

Address (number, street, apartment (if applicable))	City	State	Zip Code
P.O. BOX 23440	OAKLAND	CA	94623

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

- [ ] No lead-based paint detected
- [ ] Intact lead-based paint detected
- [x] Deteriorated lead-based paint detected
- [ ] No lead hazards detected
- [ ] Lead-contaminated dust found
- [ ] Lead-contaminated soil found
- [ ] Other

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Terri MacFarlane	(800) 988-7424

Address (number, street, apartment (if applicable))	City	State	Zip Code
3732 Charter Park Dr Ste A	San Jose	CA	95136

CDPH certification number	Signature	Date
5666	[signature]	9/24/09

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

MAP 4 M4-1433 M4-1365

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

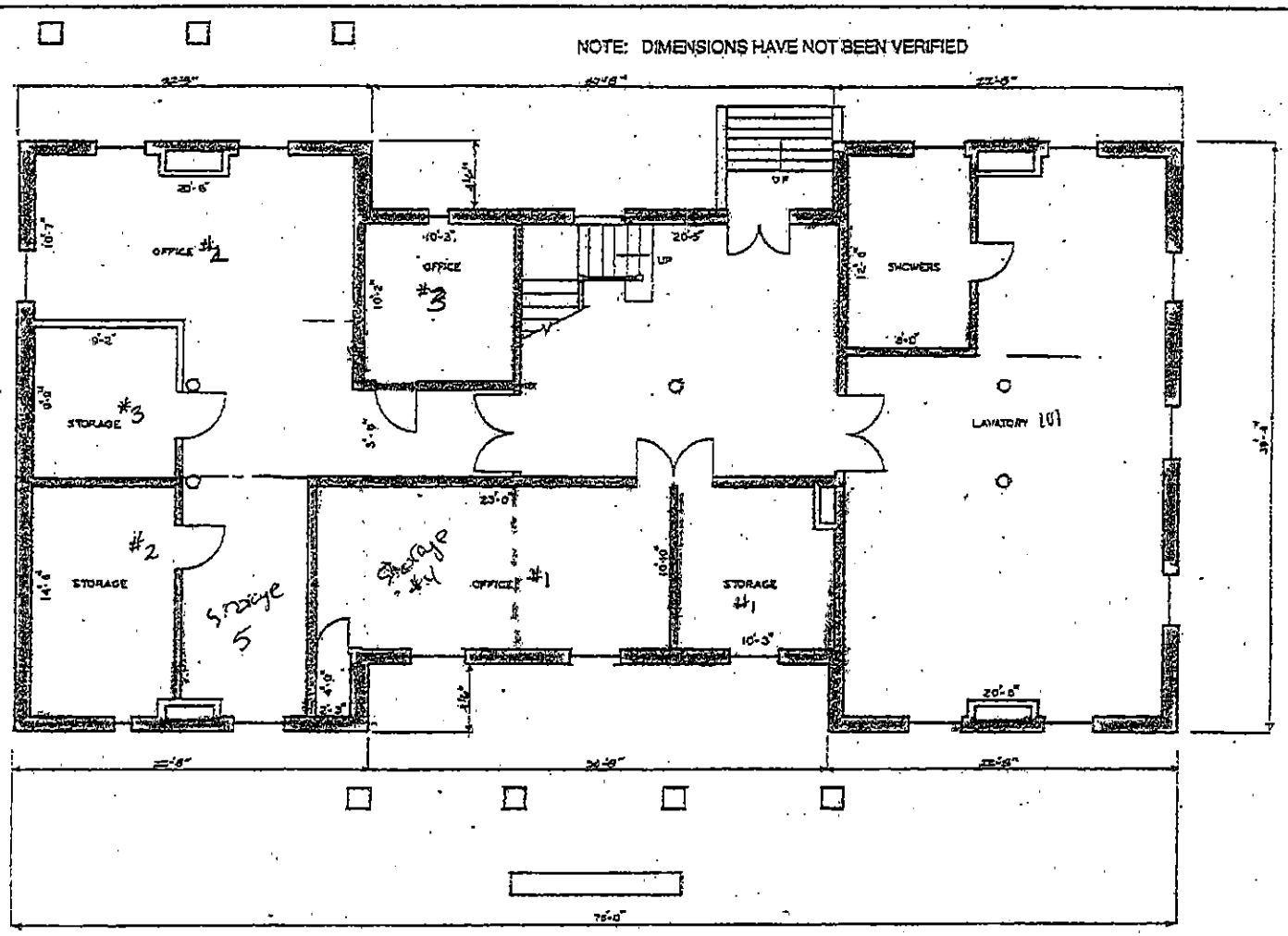
Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

APPENDIX E: Diagram

basement

BUILDING 106



SCALE IN FEET

BASEMENT

original 1907 plan

c.1939 QMForm

post 1940

CURRENT REPAIR NEEDS (ICAP MAINTENANCE FEATURES)

Exterior

4110 Masonry infilled openings at basement need minor pointing work. Repoint masonry.

Interior

4210 Plaster walls have some cracks, holes and efflorescence. Patch and paint.

4220 Suspended ceiling is stained. Replace ceiling.

4236 Painted concrete floor in men's toilet is worn. Repaint floor.

4251 Broken wood frames. Replace with new.

Life Safety/Egress

4773 Interior stair railings - non-compliant heights, missing handrails, no returns. Provide new compliant rails.

4712 Entire stair is non-compliant. 2' landing, threshold too high and rise/run is too steep. Remove existing stair, excavate and provide new stair and landing.

4731 There is no fire alarm system in the building. Provide a complete fire alarm system with pull stations, horns and strobes.

4733 There are no smoke detectors in the building. Provide smoke detectors.

Disabled Access

4711 Existing cased openings and doors are too narrow. Enlarge openings to 36" wide.

4713 Knob locksets are non-compliant for disabled access; lever handled hardware is required. Replace knob locksets with lever handled hardware.

4773 No disabled access between floors. Provide 3-stop elevator.

4774 Toilet room fixtures are not disabled accessible. Install disabled accessible fixtures and partitions.

Mechanical/Electrical

5834 Fluorescent fixtures are missing lenses. Provide new lenses.

5838 Undisciplined wiring. Secure communication wires to adjacent wall.

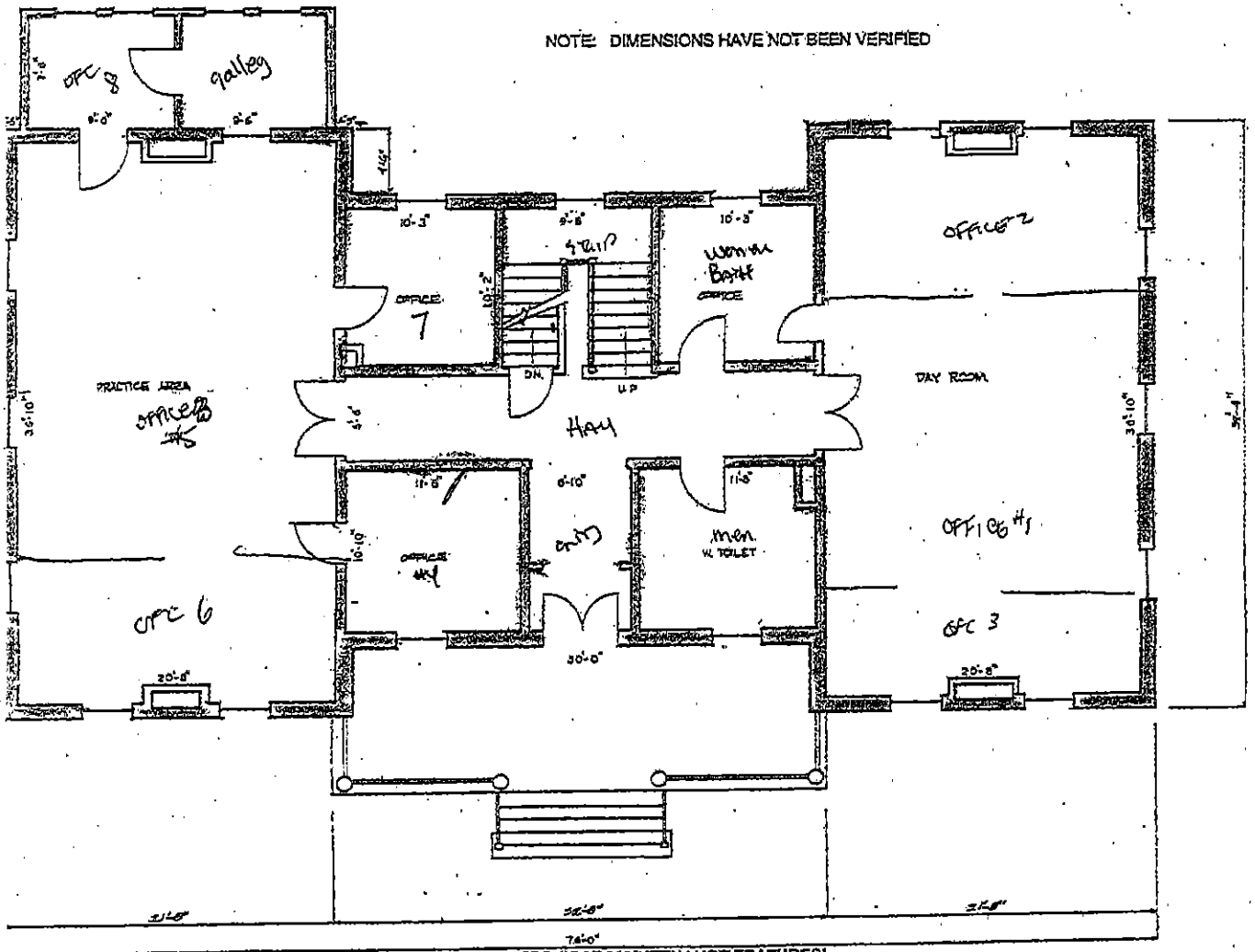
CEILING HEIGHT

REHABILITATION GUID
PRESIDIO OF SA
NPS CX-2000-0-

BASEMEN

Sheet 1 of 3

NOTE: DIMENSIONS HAVE NOT BEEN VERIFIED



BUILDING 106 - First Floor

SCALE IN FEET

GROUND FLOOR

original 1907 plans

c1939 QM forms

post - 1940

CEILING HEIGHT: ±11'-2"

CURRENT REPAIR NEEDS (ICAP MAINTENANCE FEATURES)

...in sealing and steel beam is Remove concrete, sandblast ...aint beam and patch concrete.

...m is missing from window. new trim.

...indow sash glazing has been ...over in women's toilet. Remove ...ace glazing with obscure glass.

...seen at enclosed porch is Clean rust off and paint.

...wood columns on porch are Patch column splits.

Interior

4210 Plaster walls are cracked and broken. Remove plaster and install drywall.

4210 Plaster walls have some cracks, holes and efflorescence. Patch and paint.

4210 Abandoned pipe is protruding from lath and plaster wall. Cut pipe back within wall and patch hole.

4230 Wood strip flooring is worn in the women's toilet room. Refinish wood floor.

4244 Transom glazing have been painted. Remove paint.

4251 1x8 wood door casing gouged and scratched. Replace with new.

Life Safety/Egress

4273 Interior stair railings - non-compliant heights, missing handrails, no returns. Provide new compliant rails.

4712 Galvanized pipe railings for stair are mounted too low and openings exceed 4" max allowed. Provide new railing.

4713 Pair of entry doors swing inward. Rehang existing doors to swing outward and provide new hardware.

4731 There is no fire alarm system in the building. Provide a complete fire alarm system with pull stations, horns and strobes.

4733 There are no smoke detectors in the building. Provide smoke detectors.

Disabled Access

4711 Existing cased openings and doors are too narrow. Enlarge openings to 36" wide.

4712 Concrete entry porch is not disabled accessible. Install concrete ramp - suggested location at south end of porch.

4712 Concrete threshold at main entry has 3 1/2" rise, 1/2" max is allowed. Install wood frame ramp.

4713 Knob locksets are non-compliant for disabled access; lever handled hardware is required. Replace knob locksets with lever handled hardware.

4772 Threshold is more than the 1/2" max allowed. Remove and provide metal threshold.

4773 No disabled access bathroom floors. Provide 3-stop elevator.

4774 Toilet room fixtures are not disabled accessible. Install disabled accessible fixtures and partitions.

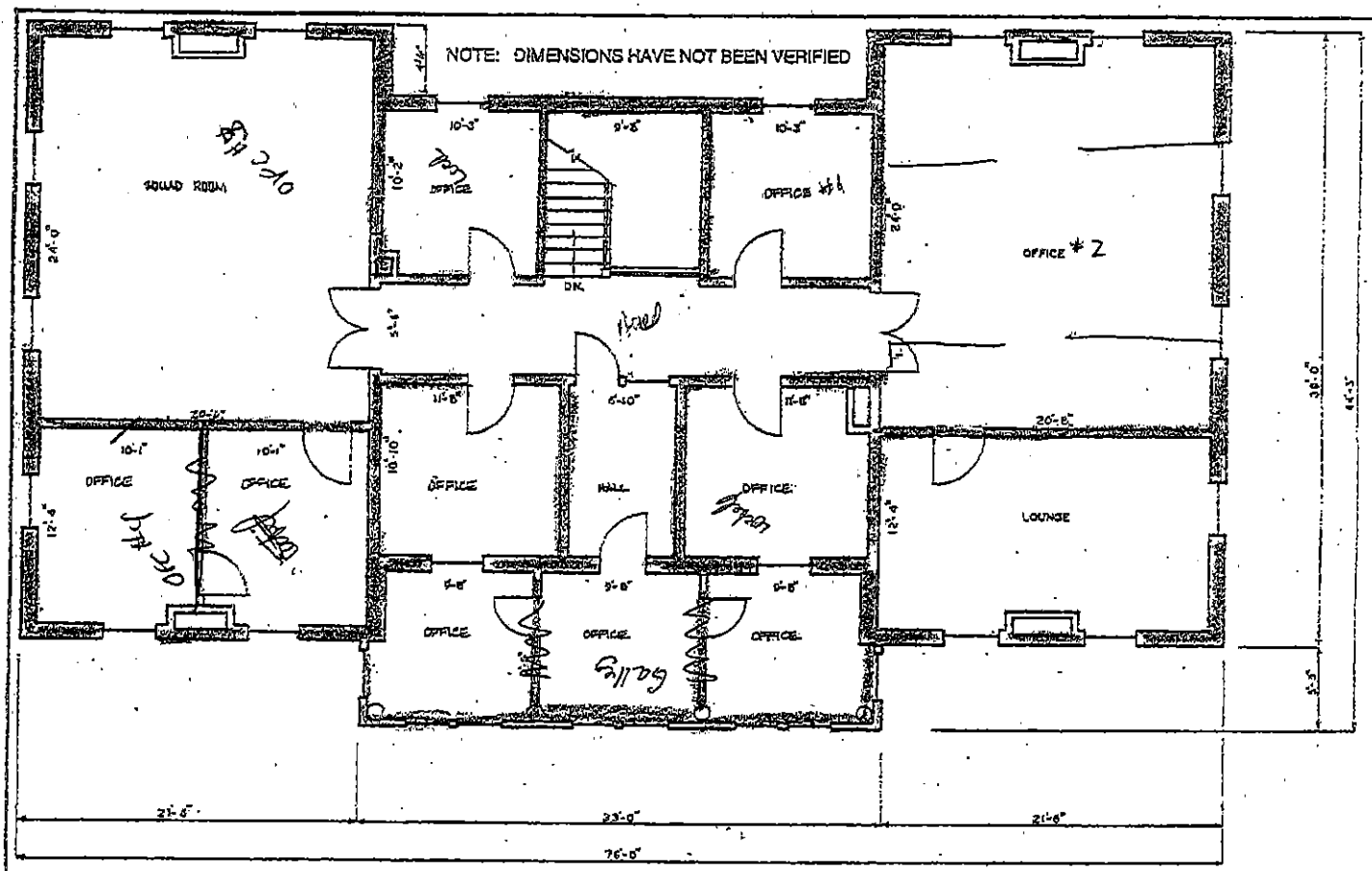
Mechanical/Electrical

5835 Undisciplined wiring. Secure communication wires to adjacent wall.

REHABILITATION GUIDELINES BUILDING 106
PRESIDIO OF SAN FRANCISCO
NPS CX-2000-0-0030 W.O. 14

FIRST FLOOR PLAN

Sheet 2 of 3 January 1993



BUILDING 106 -

SCALE IN FEET

2ND Floor

original 1907 plans

c 1939 GM forms

post 1958

CURRENT REPAIR NEEDS (ICAP MAINTENANCE FEATURES)

Exterior

None Noted

Interior

4210 Plaster walls have some cracks, holes and efflorescence. Patch and paint.

4215 Wainscot is scratched. Remove wood paneled wainscot and patch plaster walls.

4220 Exposed rafters at enclosed porch. Install gypsum board in ceiling.

4220 Suspended ceiling is broken at steam pipes. Replace ceiling.

4243 Window sill and apron is deteriorated. Replace in kind.

4244 Transom glazing have been painted. Remove paint.

4252 No ceiling insulation present in enclosed porch - exposed rafters. Provide insulation.

4560 Wood baseboard is missing at hot water pipe and rear. Provide baseboard to enclose hot water pipe.

Life Safety/Egress

4723 Interior stair railings - non-compliant heights, missing handrails, no returns. Provide new compliant rails.

4711 There is no second means of egress from the second floor. Provide interior or exterior exit stair.

4731 There is no fire alarm system in the building. Provide a complete fire alarm system with pull stations, horns and strobes.

4733 There are no smoke detectors in the building. Provide smoke detectors.

Disabled Access

4711 Existing cased openings and doors are too narrow. Enlarge openings to 36" wide.

4713 Knob locksets are non-compliant for disabled access, lever handled hardware is required. Replace knob lockset with lever handled hardware.

4773 Floor level change of 10"+/- at doorway of enclosed porch, 1/2" max allowed. Raise floor to flush with adjacent construction. New floor on wood sleepers.

4775 No disabled access between floors. Provide 3-stop elevator.

4775 The drinking fountain is not disabled accessible. Replace drinking fountain with accessible fountain.

Mechanical/Electrical

5832 Panelboard cover plate is missing. Provide cover plate.

5836 Undisciplined wiring. Secure communication wires to adjacent wall.

CEILING HEIGHT

REHABILITATION GUIDE
PRESIDIO OF SA
NPS GX-2000-0-

SECOND FL

Sheet 3 of 2

PROJECT MEMORANDUM

Doyle Drive Replacement Project

Date: July 28, 2009

To: John Karn, Arup PB Joint Venture Project Manager
Meg Scantlebury, Caltrans
Dana McGowen, Jones & Stokes Associates

From Alexandra Srebro, Arup PB Joint Venture
Frank Greguras, Geotechnical Task Manager for Arup PB Joint Venture

Subject: Logging of Test Pits Adjacent to Building 228

Introduction

On May 19, 2009, three test pits were excavated adjacent to Building 228 in the Presidio as part of the Doyle Drive Replacement Project. Building 228 is located on Halleck Street, about 130 feet south of Gorgas Avenue.

The purpose of the test pits was to examine the soils adjacent to and below the current foundation of Building 228 and adjacent retaining wall. This data will be used in the preparation of a Historic Structure Report, which will include a vibration analysis and stabilization recommendations for Building 228.

Scope

The scope of this assignment includes:

- Document the soils that occur within the three test pits adjacent to Building 228 through logging, in-situ testing with a pocket penetrometer, and photographs.

Observations – Test Pits

Upon arrival at the site, three test pits had already been excavated adjacent to and near Building 228.

Test Pit 1 is located northeast of Building 228 at the east end of the retaining wall that separates the building from a parking lot, as shown on Figure 1. The depth of the pit varies from very shallow (<1 ft) to approximately 4 ft at the retaining wall. The test pit excavation location and subsurface conditions are shown in Photographs 1 through 3. The uppermost layer of soil is a Silty Sand with Gravel extending to a depth of 0.75 ft and is brown, loose, and dry. The next soil layer is a Sandy Silt with Gravel and extends to a depth of 3.5 ft. It is brown, loose, and moist. The next soil layer, which extends to the bottom of the test pit is a greenish-blue, soft,

wet Fat Clay. Pocket penetrometer testing in this layer measured an undrained shear strength of 1,500 to 1,750 psf. The observed subsurface conditions were logged and are presented in TP-1 (Figure 2).

Test Pit 2 is located against the northeast corner of Building 228 (see Figure 1). The depth of the pit varied from 1 ft to 5 ft. The test pit excavation location and subsurface conditions are shown in Photographs 4 through 6. The uppermost soil layer is an orange-brown, loose, dry Poorly Graded Sand with Gravel. This layer varies in depth from 0.5 to 1.0 ft. The next layer is a brown, loose to medium dense, moist Silty Sand. This layer extends to a depth of approximately1.5 ft. The third soil layer is a dark brown, soft to medium stiff, moist Sandy Clay. This layer extends to 4 ft. Pocket penetrometer testing in this layer measured an undrained shear strength of 750 to 1,000 psf. The next soil layer is a greenish gray, soft, wet Fat Clay. This layer extends to the water table at a depth of 4.5 ft. Below the water level, the foundation of Building 228 extends to a depth of approximately 5 ft. However, this was difficult to determine due to the limited size of the test pit. The observed subsurface conditions were logged and are presented in TP-2 (Figure 3).

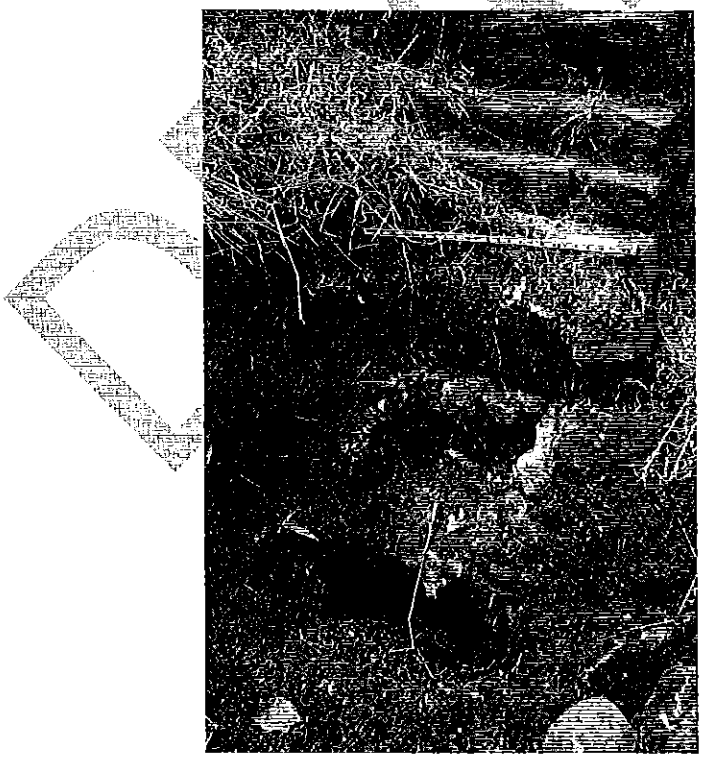
Test Pit 3 is located against the west side of Building 228 (see Figure 1). The depth of the pit varies from 2 ft to 3.5 ft. The test pit excavation location and subsurface conditions are shown in Photographs 7 through 9. The uppermost layer of soil is a brown, soft, moist Sandy Silt. It extends to a depth of 1.5 ft. Below this layer, there is a thin layer (<0.5 ft) of black, soft Sandy Silt. The next layer is an orange-brown, dense, moist Clayey Sand with Gravel. This layer extends to the bottom of the test pit. The observed subsurface conditions were logged and are presented in TP-3 (Figure 4).

DRAFT

PHOTOGRAPHS

DRAFT

Photograph 1. Test Pit 1 located at east end of retaining wall.

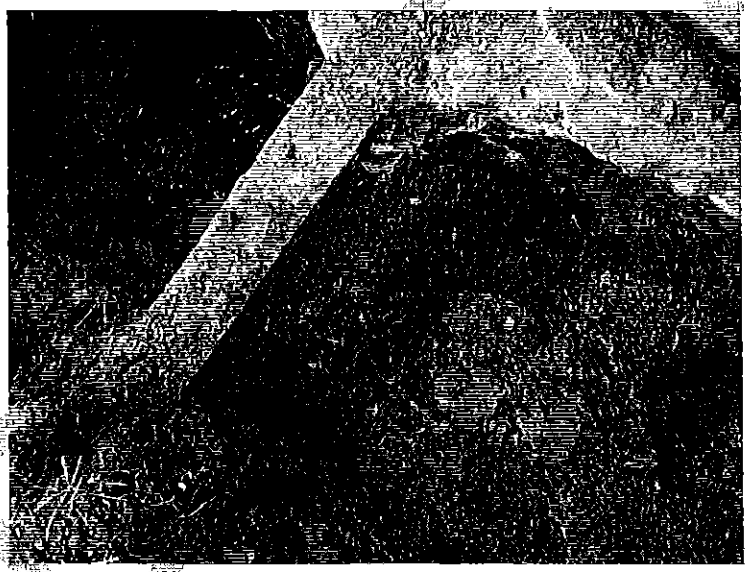


Photograph 2. Close up of Test Pit 1 with retaining wall in background.

Photograph 3. Soft fat clay and water observed at the bottom of Test Pit 1.

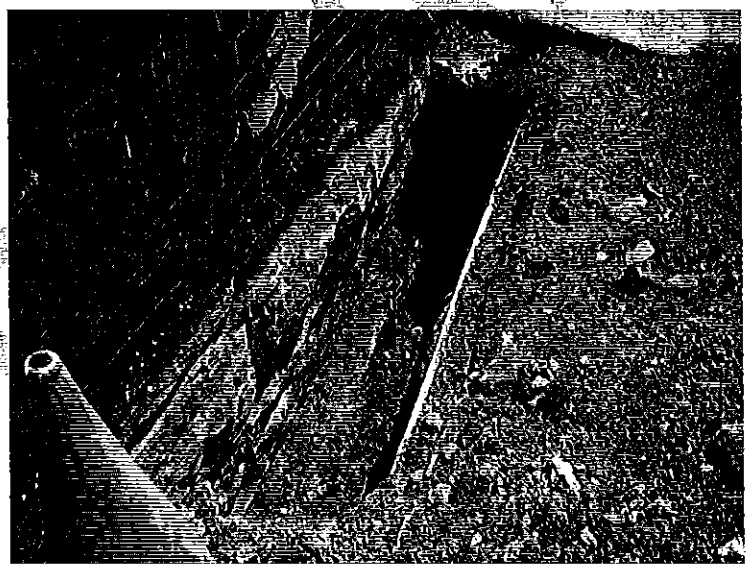
Photograph 4. Test Pit 2 at the northeast corner of Building 228.

Photograph 5. Close up of Test Pit 2 excavation.

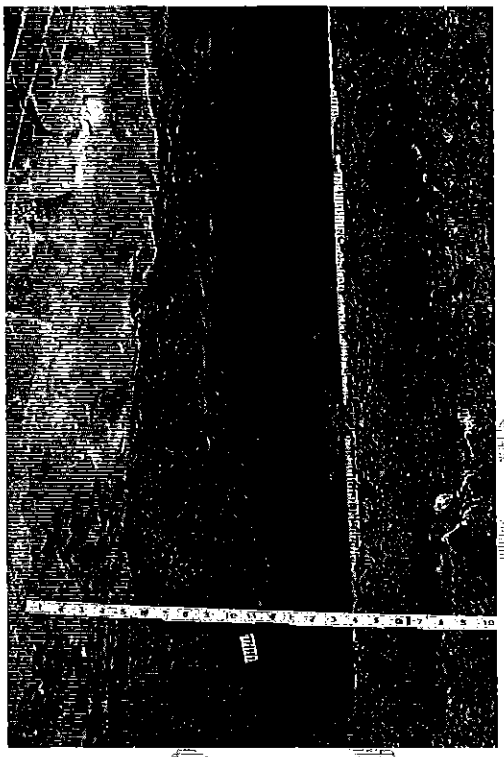


Photograph 6. Metal beam and clayey soils excavated from the base of TP-2 excavation.

Photograph 7. Test Pit 3 on west side of Building 228 along Halleck St.



Photograph 8. Test Pit 3 excavation, building foundation, and stair-stepped crack through brick and along mortar joints of Building 228.

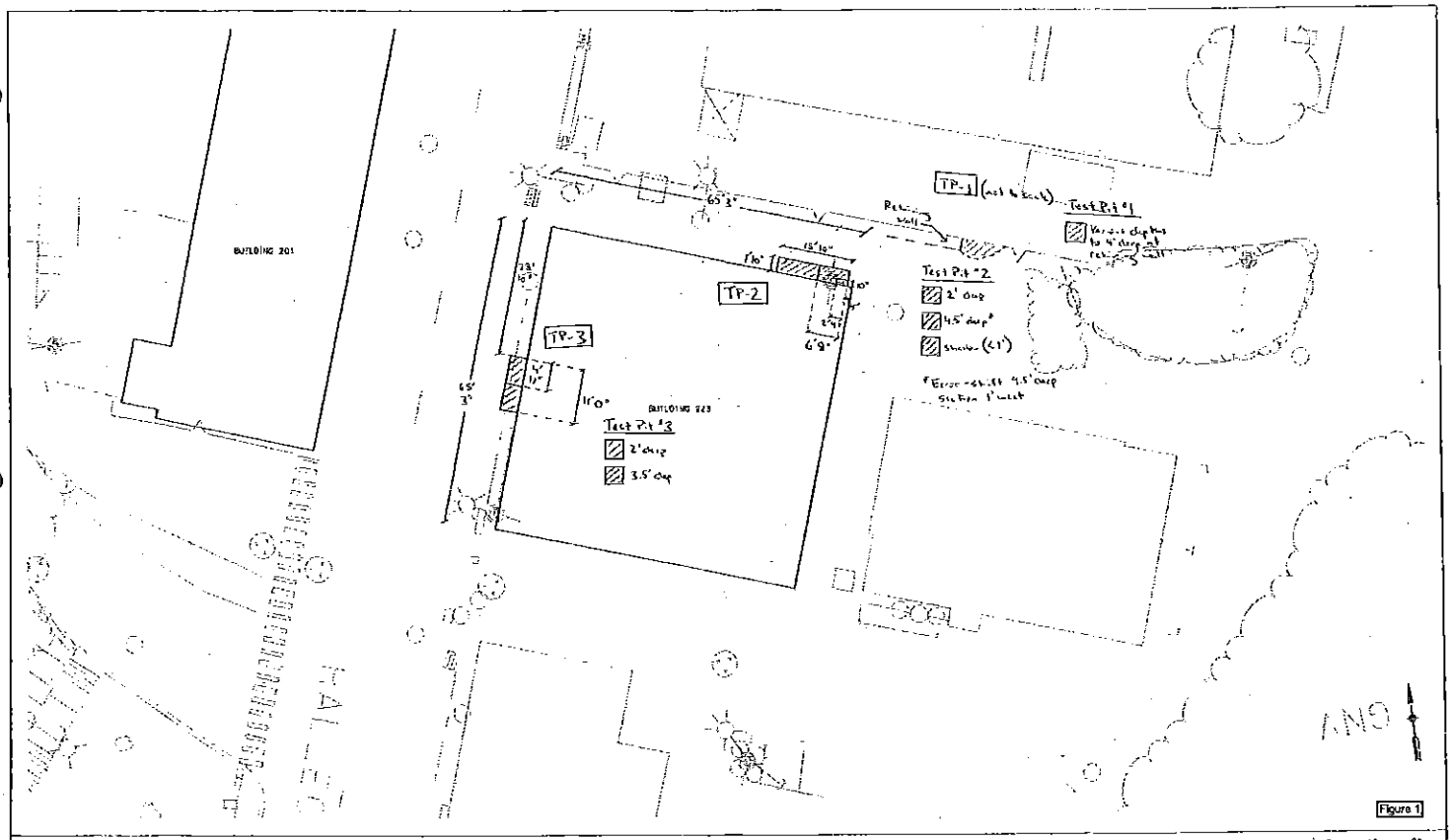


Photograph 9. Close up of Test Pit 3 excavation.

DRAFT

FIGURES

DRAFT



ARUP PB joint venture

Caltrans

DOYLE DRIVE REPLACEMENT PROJECT

Building 228 Location Plan

0 10 20 FEET

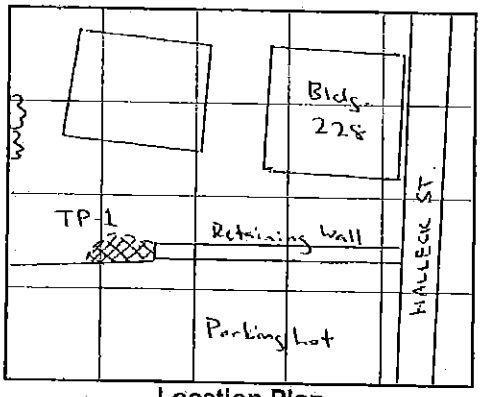
A. Stevens 5-19-09

LOG OF TEST PIT

Figure 2

Project: Doyle Drive
Job No.: 131558
Date: 5-19-09

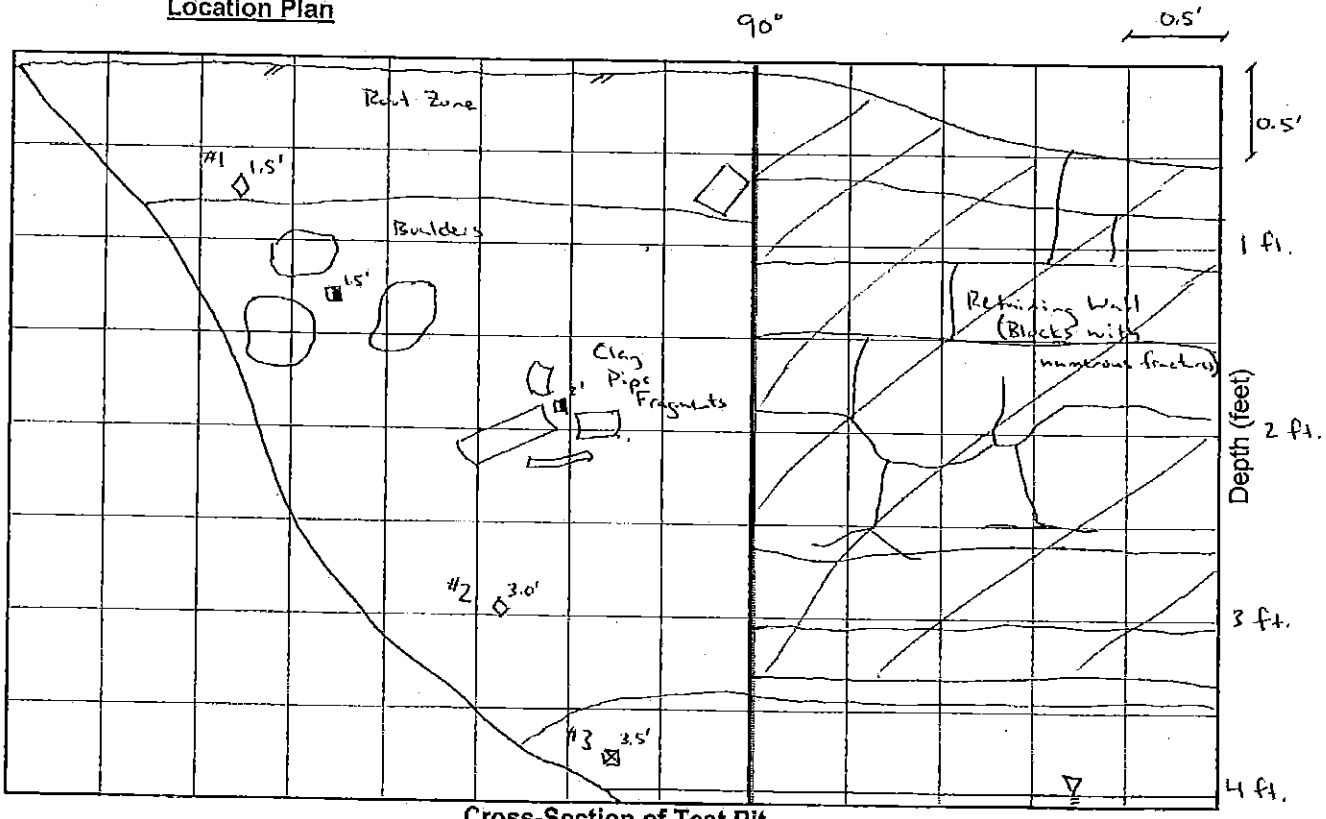
Test Pit ID: TP-1
Logged By: A. Sresro
Equipment: none



Location Plan

Legend

- ⊕ 4,500 — Pocket Penetrometer Location (S_u in psf)
- Δ 4,500 — Torvane Location (S_u in psf)
- ⊠ 3.5' — Tube Sample Location (Depth in feet)
- ◇ 3.5' — Grab Sample Location (Depth in feet)
- ◨ 3.5' — Bulk Sample Location (Depth in feet)



Cross-Section of Test Pit

Unit Desciptions

1) SILTY SAND WITH GRAVEL (SM), brown, loose, fine to coarse, gravel is fine to coarse and angular, with roots - dry. [FILL]

2.) SANDY SILT WITH GRAVEL (ML), brown, loose, fine to coarse, gravel is fine to coarse and angular, trace roots - moist [FILL]

3.) FAT CLAY (CH), greenish blue, fissured, soft, iron-oxide mottling - wet [FILL]
PP = 1.5-1.75 tons/ft²

*Bulk samples taken of boulders and clay pipe fragments.

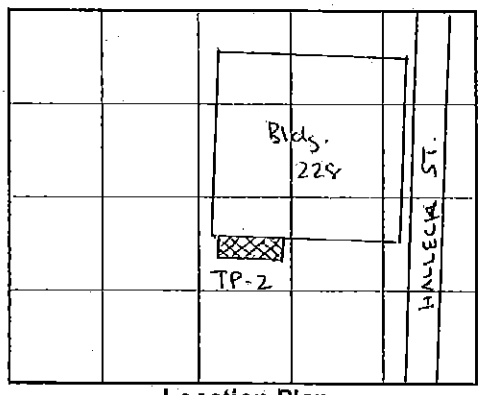
ARUP PB joint venture

W:\Infrastructure\Geotech\Field Forms\Test Pit Log.xls[Sheet1]

LOG OF TEST PIT

Figure 3

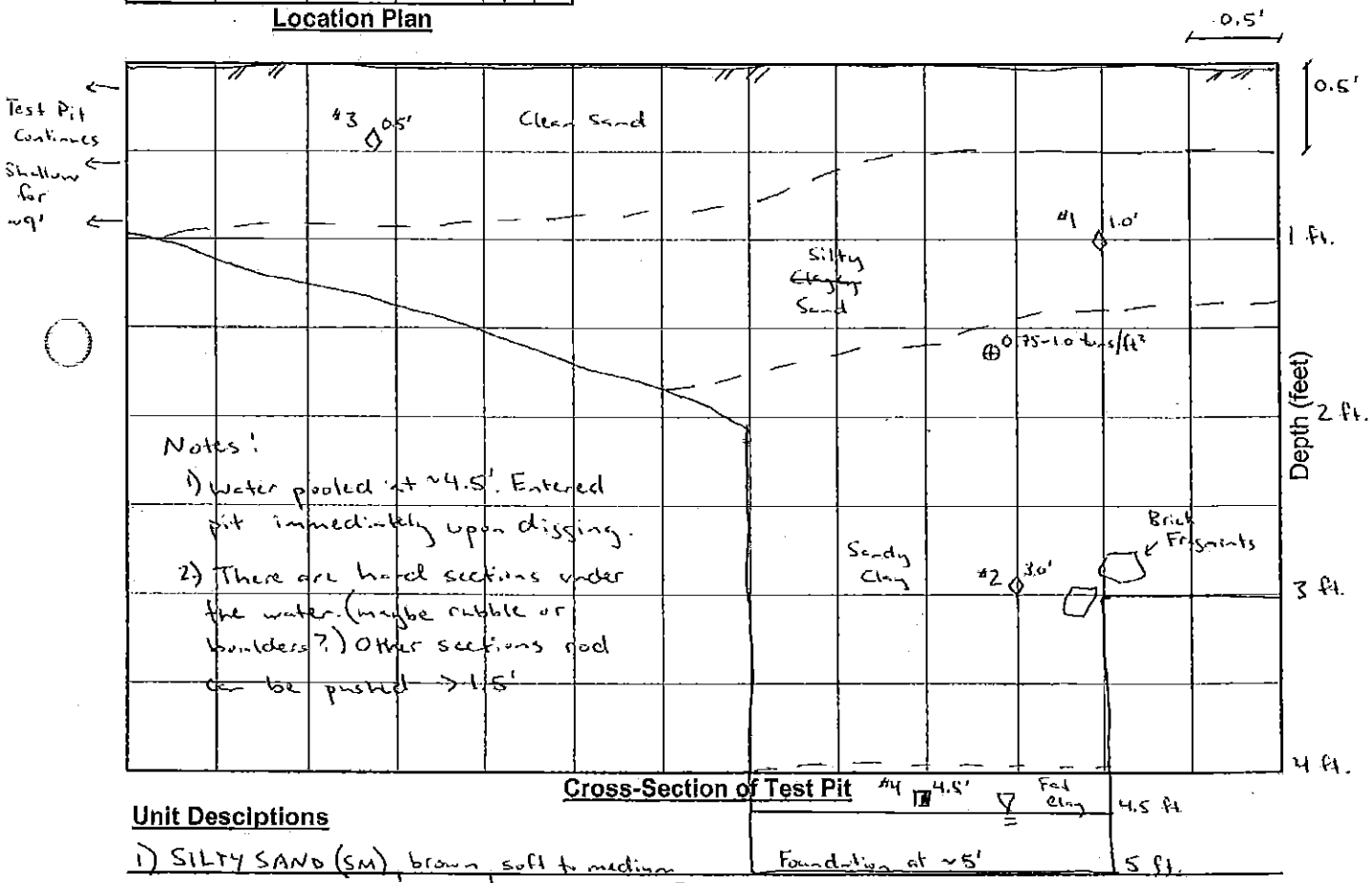
Project:	Doyle Drive	Test Pit ID:	TP-2
Job No.:	131558	Logged By:	A. Srebro
Date:	5-19-09	Equipment:	none



Location Plan

Legend

- ⊕4,500 Pocket Penetrometer Location (S_u in psf)
- Δ4,500 Torvane Location (S_u in psf)
- ⊠3.5' Tube Sample Location (Depth in feet)
- ◇3.5' Grab Sample Location (Depth in feet)
- ◨3.5' Bulk Sample Location (Depth in feet)



Cross-Section of Test Pit

Unit Desciptions

1) SILTY SAND (SM), brown, soft to medium dense, with gravel, trace roots - moist [FILL]

2) SANDY CLAY (CL), dark brown with black and orange mottles, soft to medium dense, sand is fine to coarse - moist [FILL]

3) POORLY GRADED SAND WITH GRAVEL (SP), orange brown, loose, sand is fine to medium, gravel is fine to medium and angular, with roots - dry [FILL]

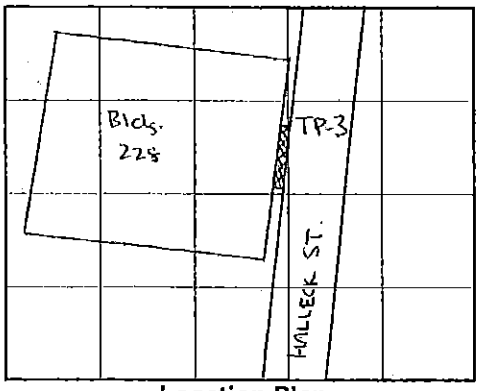
4) FAT CLAY (CH), greenish gray with bright blue-green mottles, soft, slight VOC odor - wet [FILL]

ARUP PB joint venture

LOG OF TEST PIT

Figure 4

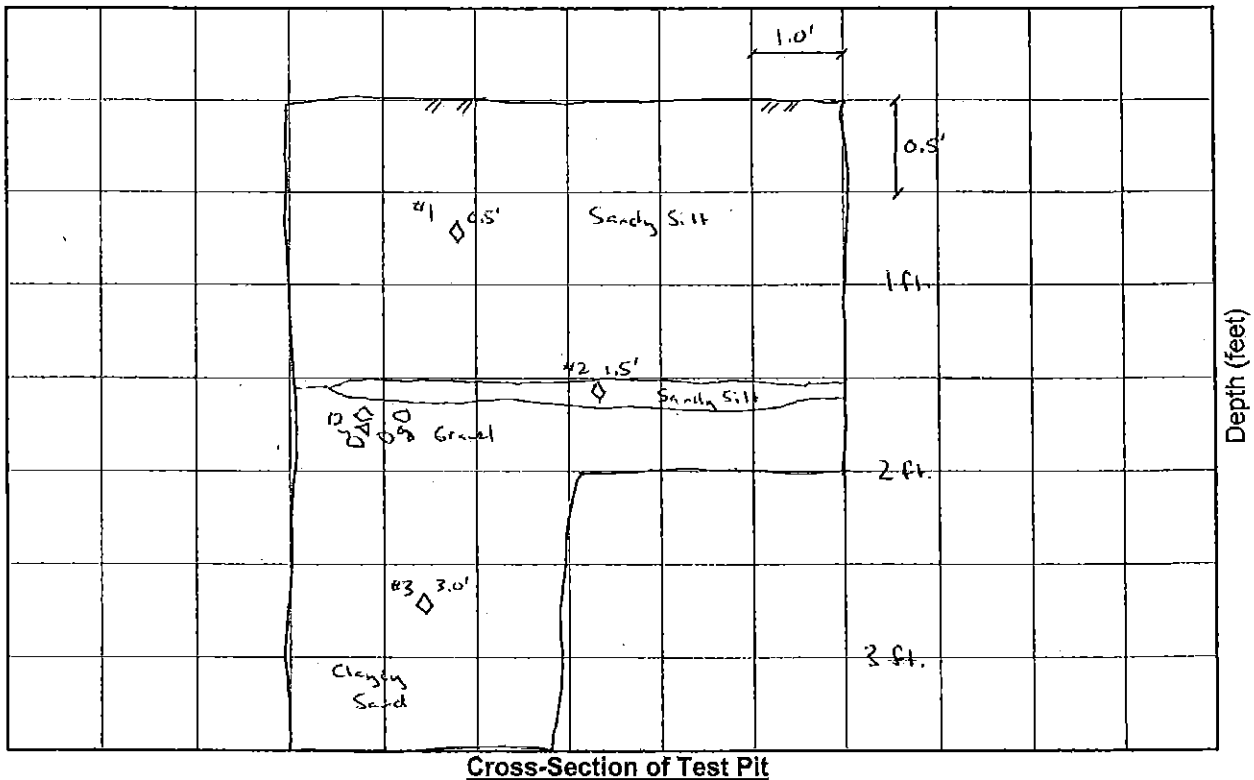
Project:	Doyle Drive	Test Pit ID:	TP-3
Job No.:	131558	Logged By:	A. Srebro
Date:	5-19-09	Equipment:	none



Location Plan

Legend

- ⊕ 4,500 Pocket Penetrometer Location (S_u in psf)
- Δ 4,600 Torvane Location (S_u in psf)
- ⊠ 3.5' Tube Sample Location (Depth in feet)
- ◇ 3.5' Grab Sample Location (Depth in feet)
- ◨ 3.5' Bulk Sample Location (Depth in feet)



Cross-Section of Test Pit

Unit Desciptions

1) SANDY SILT (ML), brown, soft, sand is fine, trace angular medium gravel-moist. [FILL]
2) SANDY SILT (ML), black, soft, sand is fine, trace angular medium gravel-moist [FILL]
3) CLAYEY SAND WITH GRAVEL (SC), orange brown, dense, fine to coarse, gravel is fine to coarse and angular-moist [FILL]

ARUP PB joint venture