LaCroix Davis LLC

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 18

COPY

California State Board of Equalization Building Assessment

450 N Street
Sacramento, California

Preliminary Interim Report, Rev. 1

Project No. 2372-572

Prepared for:
State of California Department of General Services
707 Third Street, 3-305
Sacramento, California 95605

Prepared by:
Chris Corpuz, MS, CIH
Senior Manager
LaCroix Davis LLC

Report Date:
December 26, 2008

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 18

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **I**

1.0 BACKGROUND **1**

1.1 PROJECT TEAM 1

2.0 HISTORICAL INFORMATION/DOCUMENT REVIEW **1**

2.1 INTERVIEWS 2
2.2 BUILDING-RELATED DOCUMENTS 4
2.3 DGS MAINTENANCE WORK ORDERS 5

3.0 ELEVATOR SHAFT INSPECTION **5**

4.0 BUILDING CORE INVESTIGATION **7**

5.0 WATER DAMAGE ASSESSMENT **13**

6.0 EXPOSURE POTENTIAL AND MANAGEMENT **15**

6.1 NORMALLY OCCUPIED 15
6.2 OCCASIONALLY ACCESSED 17
6.3 MAINTENANCE AREAS 17
6.4 INACCESSIBLE AREAS 18

7.0 FUTURE ACTIVITIES **19**

8.0 LIMITATIONS AND QUALIFICATIONS **20**

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 18

LIST OF FIGURES

Figure 2.1 Preliminary Timeline of Selected Events at Board of Equalization Building (1990 through 2008)
Figure 3.1 Preliminary Location Plan of Elevator Cars*
Figure 4.1 Typical Location of Building Core Rooms Located below Floor M*
Figure 4.2 Typical Destructive Testing Locations*
Figure 4.3 Preliminary Elevator Shaft Wall Detail*
Figure 4.4 Preliminary Core Room Investigation Summary*
Figure 4.5 Preliminary Sample Location Plan Floor 11
Figure 4.6 Preliminary Sample Location Plan Floor 22
Figure 4.7 Preliminary Sample Location Plan Floor 23
Figure 4.8 Preliminary Sample Location Plan Floor 24
Figure 5.1 Preliminary Investigation Grid Layout*

LIST OF TABLES

Table 2.1 Preliminary Interview Summary*
Table 3.1 Preliminary Elevator Shaft Inspection Summary*
Table 3.2 Preliminary Elevator Shaft Inspection Summary by Elevator Car
Table 4.1 Preliminary Sample Collection Summary
Table 4.2 Preliminary Sample Results Summary
Table 5.1 Preliminary BOE Water Damage Assessment Summary by Floor
Table 5.2 Inaccessible Rooms/Spaces

APPENDICES

Appendix A DGS Maintenance Work Order Tables
Appendix B Laboratory Reports
Appendix C LCD Photographs

PLANS

Preliminary WDA Floor Plans (one roll)

* appears in text of report, all other figures and tables appear at the end of the report

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 18

Executive Summary

On July 2, 2008, LaCroix Davis LLC (LCD) was contracted by the State of California, Department of General Services (DGS), Real Estate Services, Project Management Branch (RES, PMB) to provide building and environmental forensic services at the Board of Equalization (BOE) building located at 450 N Street, Sacramento, California.

The scope of the services for the BOE building is fivefold: 1) to review historic records of water damage, and to interview building engineers and other building service personnel; 2) to conduct a water-damage potential (WDP) survey of specified building systems in floors 1 – 24; 3) to conduct an inspection for visible mold growth in the building elevators; 4) to provide emergency response to water-related events and/or complaints; and 5) to maintain open communication with RES, PMB and other affected parties by attending the weekly coordination meetings, as necessary. A final report was to be issued based on the accumulated data.

The scope of services was subsequently modified to include destructive testing on Floors 22, 23, 24, and 11 of the building. Break rooms were not included as part of the LCD investigation because they are part of an ongoing investigation being performed by BioMax and HTI.

Historic Records Review
LCD staff reviewed more than 3,000 pages of building related historical documents that were focused on the management and assessment of BOE building between the dates 1994 - 2008. LCD's document review focused on the following issues: water intrusion, fungal growth, other consultant's reports, building system failure, indoor air quality, and HTI/BioMax remediation reports.

Interviews
LCD staff performed nine (9) interviews between July and September 2008 with key personnel involved in the management (DGS) and assessment (HTI, BioMax and DGS) of BOE building. The interviews resulted in the identification of multiple areas of significant water intrusion, fungal related problems and other areas that LCD focused on during the investigation.

Elevator Shaft Inspections
The elevator shaft inspections were performed by multiple LCD staff during the off hours of August 11 - 20, 2008. The primary purpose of the elevator shaft inspections was to visually determine the presence or absence of visible fungal growth and signs of water intrusion on the interior walls of the elevator pits and shafts.

Building Core Investigation
The building core investigation was comprised of two components: 1) a visual survey of the rooms and spaces (e.g., fire sprinkler riser cabinets, elevator lobbies) associated with the building core throughout the building; and 2) the destructive testing on four unoccupied floors of the building.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 18

1) Visual Survey of Building Core

Fire Sprinkler Riser (FSR) Cabinets

Of the twenty-four (24) FSRs (one on each floor) that were investigated, four (4) contained what appeared to be visible mold growth (VMG), typically located around the bottom of the cabinet, and nine (9) FSRs showed signs of water staining.

Janitor Rooms

Twenty-four (24) janitor rooms (one on each floor) were investigated. Six (6) of the janitor rooms contained what appeared to be VMG in the space above the hard ceiling. Eleven (11) of the janitor rooms had signs of water staining above and/or below the hard ceiling. In addition to the possible VMG and water staining, there is evidence of corrosion and on-going repairs of the pipe fittings located above the ceiling.

Storage Rooms

One hundred seven (107) building core storage rooms were investigated. Four (4) of the storage rooms (in areas above the hard ceiling) showed signs of what appeared to be VMG. Two (2) of the storage rooms (in areas below the hard ceiling) showed areas of water-damaged paint and what appeared to VMG.

Restrooms

The area above the hard ceiling was investigated in forty-eight (48) restrooms. Seven (7) of the restrooms in the above ceiling area showed signs of what appeared to be VMG.

2) Destructive Testing in Building Core

Floor 22

Destructive testing on Floor 22 included thirty-two (32) inspection locations. A total of two (2) bulk samples and nine (9) tape lift surface samples were collected during the destructive testing of Floor 22. Mold growth was detected in some of these samples. Most of the mold detected inside the northeast walls of the men's restroom appears to be associated with a leaking water fountain in the north hallway of this floor.

Floor 23

Destructive testing on Floor 23 included thirty-two (32) inspection locations. A total of six (6) bulk samples and six (6) tape lift surface samples were collected during the destructive testing of Floor 23. Mold growth was detected in some of the samples.

Floor 24

Destructive testing on Floor 24 included fifteen (15) inspection locations. A total of ten (10) tape lift surface samples were collected during the destructive testing of Floor 24. Mold growth was detected in some of the samples.

Floor 11

Destructive testing on Floor 11 included eleven (11) inspection locations. A total of two (2) bulk samples and twelve (12) tape lift surface samples were collected during the destructive testing of Floor 11. Mold growth was detected in some of the samples.

The presence of what appears to be visible mold growth and water staining on the interior walls of the elevator shafts was not an effective indicator of where mold growth or water staining was detected on the exterior walls of the elevator shafts.

Visible mold growth was detected on various wall surfaces with the exception of the elevator shaft core board exterior. All investigation locations of elevator shaft core board exterior were observed or tested to be free of mold growth. The inspection locations, sample locations, and sample results for the Destructive Testing of Floors 1, 22, 23, and 24 are summarized in Figures 4.5, 4.6, 4.7, and 4.8 Preliminary Sample Location Plans, respectively; and the Analytical Laboratory Reports for the bulk and tape lift surface samples are included in Appendix B, Laboratory Reports, as attachments to the report.

The ventilation duct chases were, in general, clean, but showed signs of water staining, and a limited number of surface tape lift samples indicated the presence of mold spores.

Water Damage Assessment

LCD performed a water damage assessment (WDA) in an effort to identify areas of the building that have been historically associated with, currently associated with, or pose a potential source of water damage.

Above Ceiling

LCD opened 587 ceiling tiles during the above ceiling component of the WDA. One or more water-related issues were observed in approximately 154 of these access points into the ceiling.

Below Ceiling

During the below ceiling component of the WDA, LCD identified approximately 106,415 square feet of building surface area that is visually obscured by a variety of furniture, wall hangings, cubicle walls, personal belongings, supplies, and equipment. In addition to the visually obscured surfaces, LCD identified forty-six (46) rooms (e.g., personal offices, security-sensitive areas) that could not be accessed during the WDA. LCD also observed some evidence of spills of an unknown nature, stained window sills, stained ceiling tiles (visible from below), and over 1,100 live potted plants.

Exposure Potential and Management

To assist DGS in managing any mold-related issues or hazards, LCD assigned all areas of the building into one of four exposure potential categories: Normally Occupied, Occasionally Accessed, Maintenance Areas, and Inaccessible Areas. Each exposure category is described, along with current conditions observed in these areas, and responses that can be implemented to manage these conditions.

Normally Occupied – Definition: Areas of the building that are usually occupied with BOE and DGS personnel and the general public have been categorized as "Normally Occupied." With the exception of specific areas such as the roof deck, the patio, and the parking garage, Normally Occupied areas have both a below and above ceiling component.

Areas Below Ceiling – Current Conditions

- With the exception of a couple of JLS-wrapped column enclosures on Floor 11 (unoccupied), there is currently no VMG.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 19

- There are some stained ceiling tiles (visible from below).
- There are some water-stained window components and walls.
- There is evidence of over-watered plants.
- No significant mold-related air issues are currently identified; it does not appear that conditions above the ceiling have adversely impacted conditions below the ceiling.
- There is an extremely low potential for any skin contact.

Areas Below Ceiling - Responses

- 11th floor: complete the investigation of the conditions on this floor and perform as-needed renovations with an emphasis on the interface and penetrations between the 11th and 12th floors
- Areas in general: repair areas of water staining and damage as identified in the WDA.
- Evaluate existing Operations & Maintenance (O&M) Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.
- As part of an O&M Program, ensure that there is a building policy/program in place to address "live" plants as a potential source of water damage and mold.

Areas Above Ceiling - Current Conditions

- There are some areas that appear to have VMG.
- Stained ceiling tiles have been discarded above the ceiling.
- There are some currently installed ceiling tiles that have water staining that can only be seen from above the ceiling.
- Water-stained gypsum board, ceiling sheetrock, fire-proofing and pipe insulation have also been observed in the area above the ceiling.
- The status of mold-related air issues above the ceiling is unknown; it does not appear that conditions above the ceiling have adversely impacted air conditions below the ceiling.
- There is a low potential for skin contact to personnel performing work above the ceiling.

Areas Above Ceiling - Responses

- Remediate any specific areas of what appeared to be VMG during the WDA survey.
- Repair water leaks identified and reported during the WDA survey.
- Evaluate existing Operations & Maintenance (O&M) Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.

Occasionally Occupied – Definition: Areas of the building that are locked and prevent uncontrolled access by the general building population are categorized as "Occasionally Accessed."

Occasionally Accessed - Current Conditions

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 19

- There are some areas that appear to have VMG present
- Water staining is present.
- No mold-related air issues for storage rooms below the hard ceiling have been identified, but air issues are unknown for other "Occasionally Accessed" areas.
- There is a low potential for skin contact for personnel working in these areas.

Occasionally Accessed - Responses

- Remediate areas that appear to have VMG present.
- Repair water leaks identified during WDA survey.
- Repair water damaged paint and sheetrock.
- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report

Maintenance Areas – Definition: Areas that are generally accessed only by DGS-BPM personnel or specialty contractors/ vendors are categorized as "Maintenance Areas."

Maintenance Areas - Current Conditions

- There are some areas that appear to have VMG present.
- Water leaks and staining are present.
- No mold-related air issues have been identified, but air issues are unknown for all of the areas that have been categorized as "Maintenance Areas."
- There is a low potential for skin contact for personnel working in these areas because of training and personal protective equipment used by these personnel.

Maintenance Areas - Responses

- Repair water leaks identified during WDA survey.
- Remediate VMG identified during WDA survey.
- Repair areas of water staining (gypsum board).
- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report.
- Secure FSRs.

Elevator Shaft/Pit Response:

- Clean and encapsulate with antimicrobial agent.

Inaccessible Areas – Definition: Areas of the building that are always inaccessible to all personnel are categorized as "Inaccessible Areas."

Inaccessible Areas - Current Conditions

- There are areas that have mold present in both the elevator shaft external wall enclosures and the HVAC duct shaft risers.
- Water staining is also present in both of these areas.
- Air issues are unknown for all of the areas that have been categorized as "Inaccessible Areas," including the interior of the HVAC metal ducts.

- There is an extremely low potential for skin contact for personnel working in these areas because of training and personal protective equipment used by these personnel should they ever need to access these areas.

Inaccessible Areas - Responses

- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report.

Future Investigative Activities

Future investigative activities should include obtaining access to previously inaccessible areas to allow completion of the record for this investigation and provide DGS with sufficient information to manage the mold-related issues in this property.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 19

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 20

1.0 Background

On July 2, 2008, LaCroix Davis LLC (LCD) was contracted by the State of California, Department of General Services (DGS), Real Estate Services, Project Management Branch (RES, PMB) to provide building and environmental forensic services at the Board of Equalization (BOE) building located at 450 N Street, Sacramento, California. The Board of Equalization (BOE) building was substantially completed in December 1992 and has experienced a variety of water-related events throughout its history.

The scope of the services for the BOE building is fivefold: 1) to review historic records of water damage, and to interview building engineers and other building service personnel; 2) to conduct a water-damage potential (WDP) survey of specified building systems in floors 1 – 24; 3) to conduct an inspection for visible mold growth in the building elevators; 4) to provide emergency response to water-related events and/or complaints; and 5) to maintain open communication with RES, PBM and other affected parties by attending the weekly coordination meeting, as necessary. A final report was then to be issued based on the accumulated data.

Break rooms were not included as part of the LCD investigation because they are part of an ongoing investigation being performed by BioMax and HTI.

1.1 Project Team

Under the initial project management of Mr. Benjamin J. Heckman, Senior Manager and subsequently Mr. Chris Corpuz, Senior Manager, the LaCroix Davis project team was staffed by field personnel from both LCD's Folsom and Lafayette, California offices:

- Jeffrey Baldwin, Associate
- Gary Bayne, Associate Safety Professional
- Stephen Davis, Principal
- Shelley Hawkins, Research Associate
- Theodore Ice, Senior Associate
- James LaCroix, Principal
- Josh Shiyomura, Field Technician
- Andrea Steinbach, Senior Associate
- Thomas Wangerin, Senior Associate
- Michael Van Brunt (Van Brunt Associates)

2.0 Historical Information/Document Review

LCD staff performed multiple interviews with key personnel involved in the management and assessment of BOE building currently and historically. LCD also performed a historical document review involving thousands of pages of documents related to the following issues: water intrusion, fungal growth, other consultant's reports, building system failure, indoor air quality, HTI/BioMax remediation reports, and DGS maintenance work orders.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 20

2.1 Interviews

LCD staff performed nine (9) interviews between July and September 2008 with key personnel involved in the management (DGS) and assessment (HTI, BioMax and DGS) of BOE building.

Table 2.1 Preliminary Interview Summary

Interviewed Personnel	Position at BOE	Time Worked at BOE	Responsibilities	Interview Date
Thomas Piette, DGS	Supervising Architect	1998 - 2005	Roofing, perimeter integrity, water intrusions	9/23/2008
Jerry Piotrowski DGS	Chief Engineer II	1998 - 2005	Maintaining all building systems	9/23/2008
Robert San Juan DGS	Chief Engineer II	2007 to date	Maintaining all building systems	9/9/2008
John Munoz DGS	Office Building Manager II	2007 to date	Facility Manager	9/9/2008
Dave Edwards, DGS	Project Director	Feb. 1994 to date	Perimeter work, related to building envelope (Curtain wall and balconies)	9/9/2008
Rick Boggs JLS	Remediation Contractor/ Project Manager	Dec. 2007	Perform Fungal Remediation and Water Intrusion Cleanup	9/9/2008
Lance Lester DGS - ESHOP	Dept. Ind. Hyg. - BPM	1999 - 2007	Indoor Air Quality, Investigation and Remediation Oversight	9/9/2008
Wes Frey HTI	IH Consultant (BOE)	Oct. 2007 to date	Indoor Air Quality, Investigation and Remediation Oversight	8/7/2008
K. Hsi HTI	IH Consultant (BOE)			
B. Daly HTI	IH Consultant (BOE)			
Michael Polkabla, BioMax	IH Consultant (DGS)	Nov. 2007 to date	Indoor Air Quality, Investigation and Remediation Oversight	7/31/2008

The interviews covered the management and assessment of BOE during the time period of 1998 to 2008. Multiple members of the LCD staff performed the building related interviews:

Messrs. James LaCroix, Stephen Davis, Benjamin Heckman, Chris Corpuz, and Michael Van Brunt (Van Brunt Associates).

Methodology

The LCD conducted interviews to gain a verbal history of the building as recalled by multiple individuals related to water intrusion, fungal problems, building system failure and maintenance activities. This information was utilized to aid in the physical investigation related to historic or current problematic areas in the building.

Verbal summaries were documented by the LCD employees conducting the interviews. The individuals being interview were asked a range questions depending on their responsibilities, focusing on: 1) their role and involvement at the BOE building, 2) recollections of significant water intrusion events, 3) recollections of significant fungal problems or remediation projects, 4) identification of problematic building systems, 5) knowledge of DGS work order maintenance requests, and 6) any areas/building systems that should be investigated by LCD.

Findings

The interviews resulted in the identification of multiple areas of significant water intrusion, fungal-related problems and areas that LCD focused on during our investigation. The following is a brief summary of the significant areas/events identified by all or some of the individuals interviewed.

1. Floors 22, 23, and 24: These floors were vacated due to fungal growth concerns. Remediation is being performed to some degree on these floors by JLS Environmental Services (JLS) and monitored by two industrial hygiene consultants: BioMax Environmental, LLC (BioMax) and Hygiene Technologies International, Inc. (HTI).
2. Ceiling Tiles: Multiple groups have mapped stained ceiling tiles throughout the building. All stained ceiling tiles have been replaced as of March/April 2008.
3. Break Rooms: Almost all break rooms that have plumbing issues are being addressed by DGS and BioMax. According to BioMax, there are 50 break rooms: ten have been remediated and 37 still require remediation.
4. Bathrooms: The bathrooms on Floors 22, 23, and 24 have had problems with one or more of the following: plumbing, sinks, toilets and main water lines (horizontal and vertical lines). JLS/BioMax have remediated five of the six bathrooms on Floors 22-24
5. Water Intrusion Events: Multiple plumbing, drainage, window issues and storm-related events have occurred on various floors throughout the building:
    a. The sink in the Floor 10 break room accidently overflowed.
    b. In January 2008, water from a winter storm entered through the Floor 23 balcony doors. Historically, the balconies have also leaked.
    c. BOE employees installed "belly pans" on Floor 22 to catch water.
    d. Variable Air Volume box flex line connections have failed and been replaced in multiple locations.
    e. Multiple "Punch-out" windows were discovered to have problems in January 2008.

f. The Floor 12 mechanical room has had plumbing-related failures that have impacted Floor 11. Large amounts of water have been reported during these events, which impacted the ceiling drywall on Floor 11.
g. Four conference rooms on Floor 1 had water intrusion in March/April 2008. These events were related to the sprinklers along the perimeter atrium windows; all areas were remediated.
h. There is a history of water intrusion related to the expansion joint between the building and parking structure.
i. There is a history of water intrusion related to the exterior irrigated planters on the Floor 12 mechanical level.

6. Fire Sprinklers: There were no reported problems with the fire sprinklers.
7. Fire Proofing: According to BioMax, 50% of the water stained areas on Floor 22 had fungal growth. DGS decided to remove selected fire proofing on Floor 22 for multiple reasons, such as life safety concerns, the presence of fungal growth, and accessibility.
8. Window Repairs: DGS contracted JR Roberts Corporation (JRRC) to perform window related repairs for the entire exterior curtain wall system
    a. MCA repair was driven by window-related water intrusion and window failure
9. Roof: There is a history of water intrusion on Floor 24. The roof is currently being repaired by DGS.
10. Indoor Air Quality (IAQ) Testing: HTI performed floor by floor IAQ surveys in January/February 2008 on Floors 1-21, except 12 and 13. "All results were unremarkable" according to B. Daly.
11. Elevators: There have been historical water intrusion issues involving the elevator shafts in the parking lot, and the high rise elevator shaft adjacent to Floors 13 and 14.

2.2 Building-Related Documents

LCD staff reviewed more than 3,000 pages of building-related historical documents that were focused on the management and assessment of BOE building between the dates 1994 - 2008. LCD's document review focused on the following issues: water intrusion, fungal growth, other consultant's reports, building system failure, indoor air quality, and HTI/BioMax remediation reports.

Methodology

LCD reviewed documents to gain knowledge of the building's history involving water intrusion, fungal problems and remediation, building system failure and indoor air quality. This information was utilized to aid in the physical investigation related to historic or current problematic areas in the building.

The documents were reviewed with the same focus as the previously described interview topics: 1) descriptions of significant water intrusion events, 2) descriptions of significant fungal problems or remediation projects, 3) identification of problematic building systems, and 4) insight on any areas/building systems that should be investigated by LCD.

Findings

Figure 2.1 – Preliminary Timeline of Selected Events at the BOE Building (1990-2008) summarizes selected historical events from LCD's interviews and document review.

2.3 DGS Maintenance Work Orders

LCD staff reviewed the DGS Maintenance Work Orders records for the BOE building between the dates 1998 - 2007. LCD's review of the DGS Maintenance Work Orders focused on the following issues: water intrusion related complaints and plumbing/building system failures.

Methodology

LCD reviewed the DGS Maintenance Work Orders for the BOE building and filtered the results that involved problems related to water intrusion complaints and plumbing/building system failures. This information was utilized to aid in the physical investigation related to historic or current problematic areas in the building.

Findings

Details of the DGS Maintenance Work Orders reviewed by LCD are included in the DGS Maintenance Work Order Tables found in Appendix A.

3.0 Elevator Shaft Inspection

The elevator shaft inspections were performed by multiple LCD staff during the off hours of August 11 - 20, 2008. The primary purpose of the elevator shaft inspections was to visually determine the presence or absence of visible fungal growth and signs of water intrusion on the interior walls of the elevator pits and shafts.

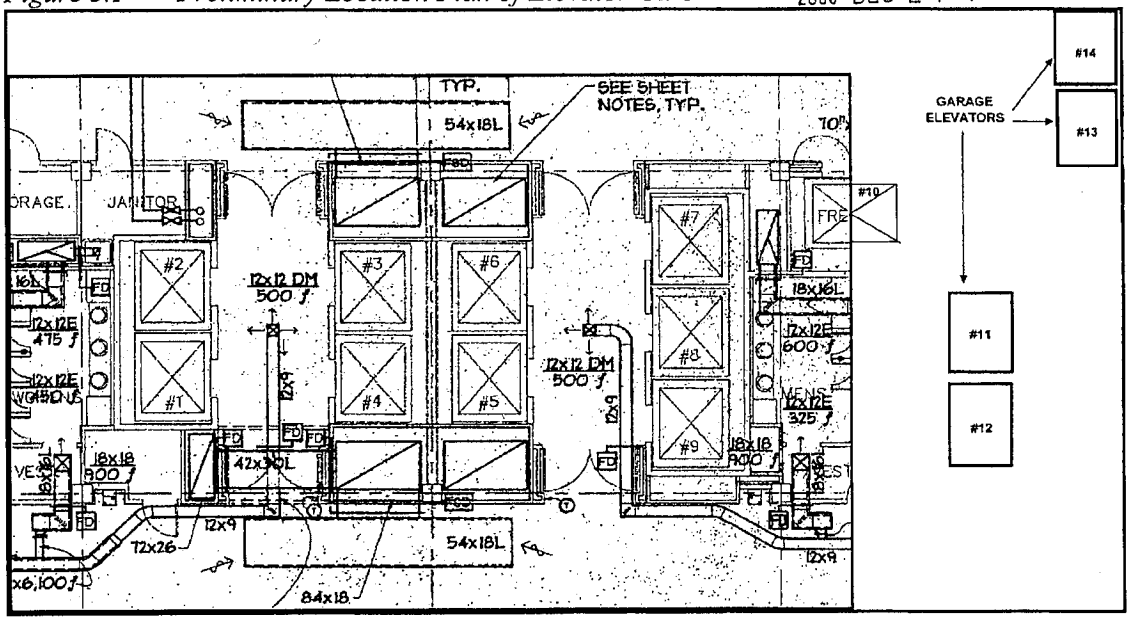
Methodology

The elevator shaft inspections were performed by Stephen Davis, Benjamin Heckman, Josh Shiyomura, Michael Van Brunt, and Chris Corpuz of LCD. The inspections of the elevator shafts were limited to visual observations, photo documentation, and quantification of the observed areas of visible fungal growth and water stains/damage in the elevator pits and the interior shaft walls (1-14) of all floors serviced by the elevators (see Figure 3.1).

The inspections were performed while riding on top of each elevator car, with the assistance of Otis elevator technicians, and in conjunction with consultants from Hygiene Technologies International (HTI) Inc. LCD inspectors were safety-trained and equipped with fall protection in accordance with the site safety plan and confined space permit prepared for this activity. No fungal sampling (air, bulk, or tape lift) or destructive testing was conducted during the elevator shaft inspections.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 20

Figure 3.1 Preliminary Location Plan of Elevator Cars



Findings

Less than one percent of the visually inspected elevator shaft surface area showed signs of what appears to be visible mold growth. Less than ten percent of the visually inspected surface area showed varying degrees of water staining.

The water staining and suspect mold growth in the east low rise elevators (Elevators #1&2) appears to be related to water leaks from the janitor rooms and the women's rest rooms adjacent to these elevator shafts. It appears that water staining and suspect mold growth in the other elevator shafts may be due to a variety of causes as identified during the interview and document review phase of the investigation, with no single event or events being able to account for both the historical and current conditions.

The observations of suspect visible fungal growth and water staining for the inspected elevator shafts are summarized below:

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11:20

Table 3.1 Preliminary Elevator Shaft Inspection Summary

Elevator Shafts	Elevator Car	Approx. Total Inspected Areas per Shaft (sq. ft.)	Areas with Visible Mold Growth (sq. ft.)	Percent of Areas with Visible Mold Growth	Number of Panels Inspected	Number of Panels with Water Staining
1 (Low Rise)	1	12,636	1	0.01%	468	65
	2					
2 (Low Rise/High Rise)	3	44,928	16	0.04%	1,664	108
	4					
	5					
	6					
3 (High Rise)	7	46,332	137	0.30%	1,716	171
	8					
	9					
4 (Freight)	10	15,444	1	0.01%	572	25
5 (Parking Structure)	11	3,456	0	0.00%	128	38
	12					
6 (Parking Structure)	13	3,456	0	0.00%	128	0
	14					
Totals		126,252	155	0.12%	4,676	407

Note: Although panels may vary in size due to adjustments made during installation, the average panel is approximately 27 square feet.

The observations of visible fungal growth and/or signs of water intrusion for each elevator shaft are summarized in Table 3.2 Preliminary Elevator Shaft Inspection Summary by Elevator Car in the Tables section of this report.

4.0 Building Core Investigation

Methodology

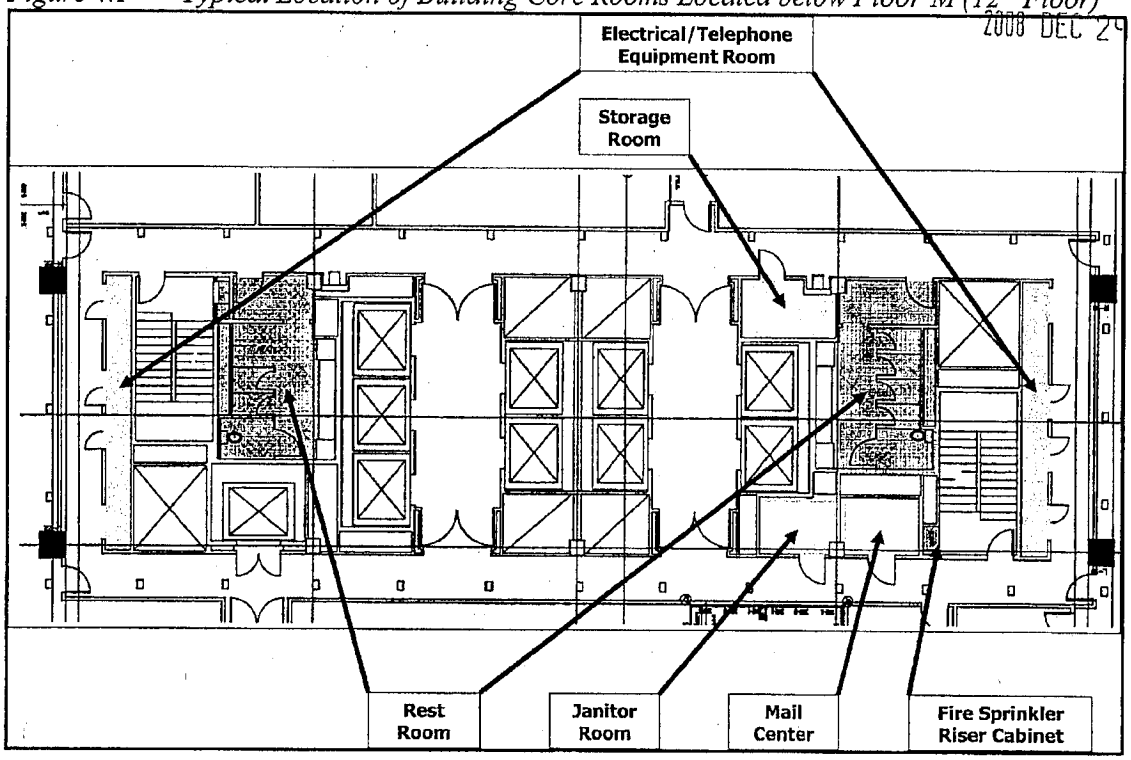
The building core investigation was comprised of two components: 1) a visual survey of the rooms and spaces (e.g., fire sprinkler riser cabinets, elevator lobbies) associated with the building core throughout the building; and 2) the destructive testing on four unoccupied floors of the building.

The visual survey of core rooms and spaces on each floor was performed by Theodore Ice and Chris Corpuz. Any break rooms located in the core area of the building were not included as part of the LCD investigation because they are part of an ongoing investigation being performed by BioMax and HTI.

On September 26, 2008, the sprinkler riser cabinet (located in the southwest stairwell) and the janitor room (located at the east end of the south hallway) on each floor were surveyed. On September 30, 2008, the storage rooms, mail center, and electrical/telephone equipment rooms were also surveyed. The restrooms (above the hard ceiling only) were surveyed by Mr. Ice on November 6 and 25, 2008. Except for the restrooms, areas above and below the ceiling were surveyed wherever a hard ceiling with an access hatch was present. No air, bulk, or surface tape lift samples for mold were collected during this component of the core investigation.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 20

Figure 4.1 Typical Location of Building Core Rooms Located below Floor M (12th Floor)

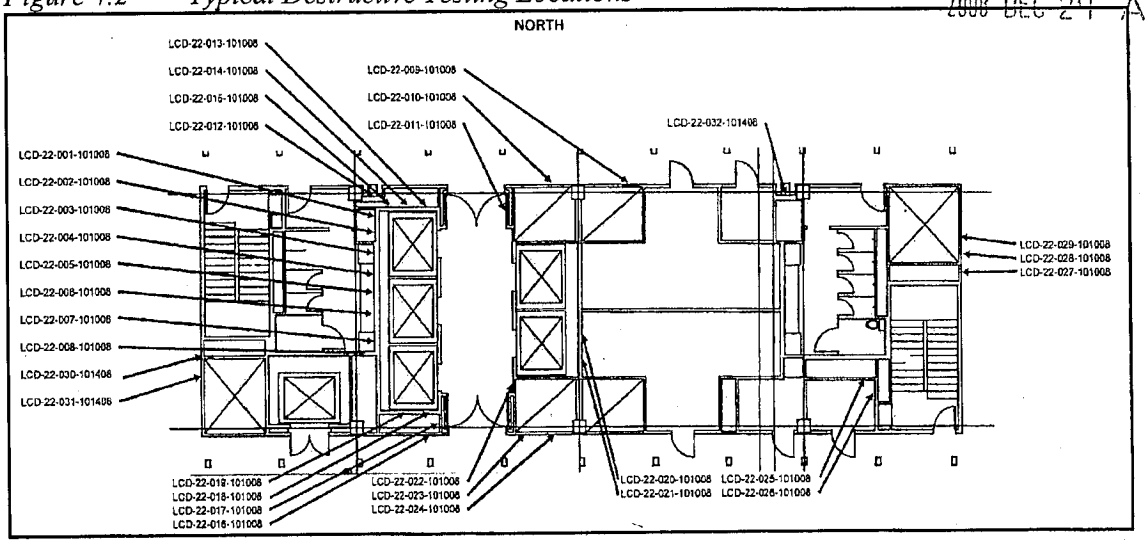


Destructive testing was performed in an effort to characterize areas of the building core that had not been previously investigated (e.g., ventilation duct enclosures, pipe chases, and undefined structural spaces). The intrusive nature of this work limited this component of the investigation to four currently unoccupied floors in the building (i.e., 11, 22, 23, and 24).

The destructive testing included physically cutting through selected walls of the building core, visually observing, photographically recording, and collecting bulk and surface tape lift samples. Information from the interviews, historical document review, elevator shaft investigation and building core visual survey was compiled, evaluated, and used in the selection of the destructive testing locations.

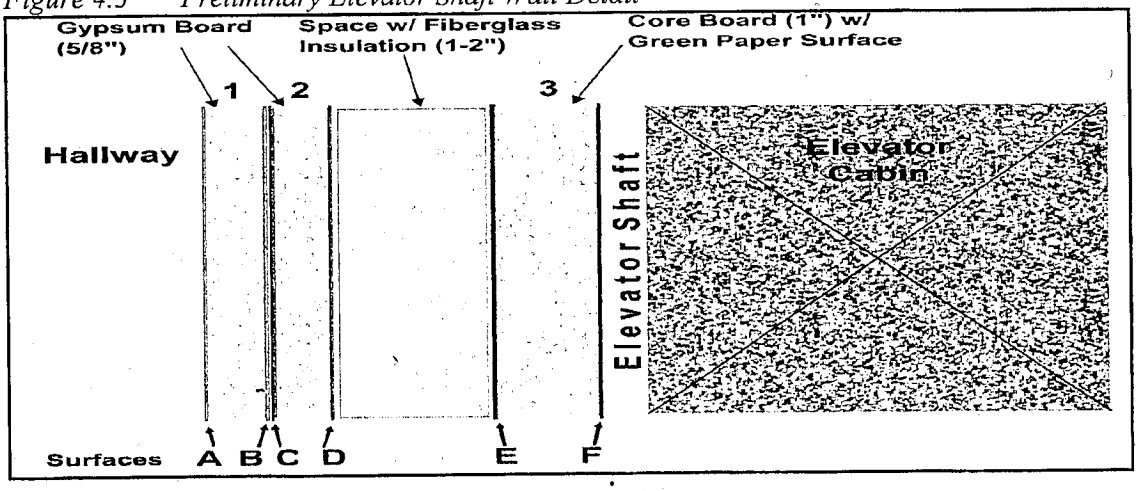
RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 20

Figure 4.2 Typical Destructive Testing Locations



One of the primary objectives of the destructive testing was to verify the construction details of the elevator shaft walls and the extent of any water damage or mold growth associated with these walls. The general construction details of these walls are shown in the following diagram:

Figure 4.3 Preliminary Elevator Shaft Wall Detail



Destructive testing was performed by at least two members of the LCD field staff at any one time. Members of the LCD staff that participated in the destructive testing component of the core investigation at various times included: Messrs. Ice, Corpuz, Wangerin, Heckman, and Davis. Destructive testing was performed on the following dates:

- Floor 22 – October 10 and 14, 2008
- Floor 23 – November 4 and 5, 2008
- Floor 24 – November 11 and 12, 2008

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11:20

- Floor 11 – November 19 and 20, 2008

Findings

Core Investigation - Visual Survey

Many of the core rooms contain DGS-BPM or BOE supplies and equipment, and therefore offer only a limited opportunity for visual observation. In some cases (e.g., rooms 7B, 10B, 10C and 17A), rooms cannot be entered or surveyed because they are completely filled with supplies and equipment. Some core rooms (e.g., Storage Room 17C and Storage Room 23C) are inaccessible because they are locked and cannot be accessed with the building maintenance master key.

With the exception of some of the elevator lobbies and the fire sprinkler riser cabinets, building core rooms and spaces are constructed with hard ceilings and most are equipped with metal access hatches.

Fire Sprinkler Riser Cabinets

The fire sprinkler riser (FSR) cabinets are located in the southeast stairwell of the building. A FSR cabinet is located to the right of the stairwell door on each floor. Each cabinet is equipped with a metal access door. Of the twenty-four (24) FSRs (one on each floor) that were investigated, four (4) contained what appeared to be visible mold growth (VMG), typically located around the bottom of the cabinet, and nine (9) FSRs showed signs of water staining.

Janitor Rooms

The janitor room on each floor is typically located at the east end of the south side hallway, near the southeast stairwell. Twenty-four (24) janitor rooms (one on each floor) were investigated. Six (6) of the janitor rooms contained what appeared to be VMG in the space above the hard ceiling. Eleven (11) of the janitor rooms had signs of water staining above and/or below the hard ceiling. In addition to the possible VMG and water staining, there is evidence of corrosion and on-going repairs of the pipe fittings located above the ceiling.

Storage Rooms

The storage rooms located in the building core may serve functions other than storage. Some storage rooms are used as mail centers or electrical and telephone equipment rooms. One hundred seven (107) building core storage rooms were investigated.

Four (4) of the storage rooms (in areas above the hard ceiling) showed signs of what appeared to be VMG. Two (2) of the storage rooms (in areas below the hard ceiling) showed areas of water-damaged paint and what appeared to VMG. Air monitoring subsequently performed in these two storage rooms by BioMax showed no signs of significant mold-related air issues. Cracks observed in some of the concrete floors can potentially act as pathways for water spilled in these areas.

The source of water in the six storage rooms where suspect VMG was observed could not be determined because the water damage appears to have occurred long ago and there are no longer any signs of water present.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 AM 10:30

Restrooms

There are two restrooms located on each floor. The LCD investigation of the restrooms was limited to a visual survey of the area above the hard ceiling and some destructive testing (to be discussed under the Destructive Testing section of this report).

The area above the hard ceiling was investigated in forty-eight (48) restrooms. Seven (7) of the restrooms in the above ceiling area showed signs of what appeared to be VMG. Other restroom above-ceiling observations included active water leaks, accumulating water, water damage around the floor drain pipes, and water-stained fireproofing.

Observations from the Building Core visual survey are summarized in the following:

Table 4.4 Preliminary Core Room Investigation Summary

FLOOR	SE Stairwell Sprinkler Riser Cabinet	Janitor Closet (SE)	Electrical and Telephone Equip (NE)	Storage Room A (SE)	Storage Room B (SW)	Storage Room C (NW)	Storage Room D (NE)	Other (1st floor)	Electrical and Telephone Equipment East	Electrical and Telephone Equipment West	Elevator Shaft VMG (SF)	No. of Panels with Water Staining	FLOOR
PH											0	16	PH
24											9	5	24
23											9	2	23
22											8	3	22
21											15	2	21
20		w									14	5	20
19	m										17	3	19
18	m										16	6	18
17	w	w	w								11	0	17
16	w	w	w								4	9	16
15	w	m									6	7	15
14		m									14	28	14
M 13											24	5	M 13
M 12		w									12	21	M 12
11		w									20	27	11
10	m								w	w	9	25	10
9	w	w							w	w	4	31	9
8		m									2	10	8
7		w									1	19	7
6	m	w				m				m	0	20	6
5	w	w		w	w	m			w		0	37	5
4	w	w			m	m					2	28	4
3		m									0	29	3
2	w	w				m					0	18	2
1 upper	w	m	w					w			0	12	1 upper
1 lower	w	m	w					w			0	0	1 lower

Key:	
w	Water staining
18	Water staining total (in square feet)
m	Visible mold growth (VMG)
16	VMG total (in square feet)
M 12	Mechanical floor
PH	Penthouse floor

Core Investigation - Destructive Testing

The inspection locations, sample locations, and sample results for the Destructive Testing of Floors 1, 22, 23, and 24 are summarized in Figures 4.5, 4.6, 4.7, and 4.8 Preliminary Sample Location Plans, respectively. The Analytical Laboratory Reports for the bulk and tape lift surface samples are included in Appendix B, Laboratory Reports.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11:21

Floor 22
Destructive testing on Floor 22 included thirty-two (32) inspection locations. All destructive test locations were protected by a containment system and work practice protocols developed by BioMax and implemented by JLS Inc. Specifications for the wall penetrations and repairs were reviewed and inspected by the Office of the State Fire Marshall.

Wall penetrations impacting the firewall assembly surrounding the elevator shafts were limited to 1-inch diameter boreholes. Penetrations in other firewall assemblies were limited to 4-inch by 4-inch openings.

LCD visual observations made through the 1-inch boreholes were performed with the aid of a digital borescope imaging device. Borescope observations were hampered by the presence of densely packed fiberglass insulation between the wall components, and the use of 1-inch boreholes and the borescope were abandoned in destructive testing on subsequent floors.

A total of two (2) bulk samples and nine (9) tape lift surface samples were collected during the destructive testing of Floor 22. Mold growth was detected in some of these samples. Most of the mold detected inside the northeast walls of the men's restroom appears to be associated with a leaking water fountain in the north hallway of this floor.

Floor 23
Destructive testing on Floor 23 included thirty-two (32) inspection locations. A total of six (6) bulk samples and six (6) tape lift surface samples were collected during the destructive testing of Floor 23. Visual observations were made through a limited number of 4-inch by 4-inch openings which provided much better viewing access despite being fewer in number than the borehole method used on Floor 22. Mold growth was detected in some of the samples.

Floor 24
Destructive testing on Floor 24 included fifteen (15) inspection locations. A total of ten (10) tape lift surface samples were collected during the destructive testing of Floor 24. Mold growth was detected in some of the samples.

Floor 11
Destructive testing on Floor 11 included eleven (11) inspection locations. A total of two (2) bulk samples and twelve (12) tape lift surface samples were collected during the destructive testing of Floor 11. Mold growth was detected in some of the samples.

General Observations
The presence of what appears to be visible mold growth and water staining on the interior walls of the elevator shafts was not an effective indicator and did not correlate with the location of where mold growth or water staining was detected on the exterior walls of the elevator shafts.

Visible mold growth was detected on various wall surfaces with the exception of the elevator shaft core board exterior. All investigation locations of elevator shaft core board exterior were observed or tested to be free of mold growth.

The ventilation duct chases were in general clean, but showed signs of water staining, and a limited number of surface tape lift samples indicated the presence of mold spores.

5.0 Water Damage Assessment

Methodology

LCD performed a water damage assessment (WDA) in an effort to identify areas of the building that have been historically associated with, currently associated with, or pose a potential source of water damage. Using information from the interviews and the review of building documents, LCD compiled historical water damage data and graphically noted this information on drawings for each of the floors, including the Mechanical, Penthouse, and Heliport levels of the building.

As determined in a meeting attended by representatives from DGS, LCD, BioMax, and LCD, the WDA was limited to a systematic visual survey of areas above and below the ceiling on each floor. No sampling was permitted during the WDA, due to project time constraints and a need to comply with the agreed upon DGS/BOE inspection protocols. A WDA was performed on each floor, except Floor 1 and the adjoining parking garage.

The WDA was performed by members of the LCD field staff including, Messrs. Ice, Wangerin, Corpuz, Beckman, Davis, Mr. Gary Bayne, and Ms. Andrea Steinbach. The WDA comprised two tasks: the above ceiling survey and the below ceiling survey. Each task was generally performed by a two-person team.

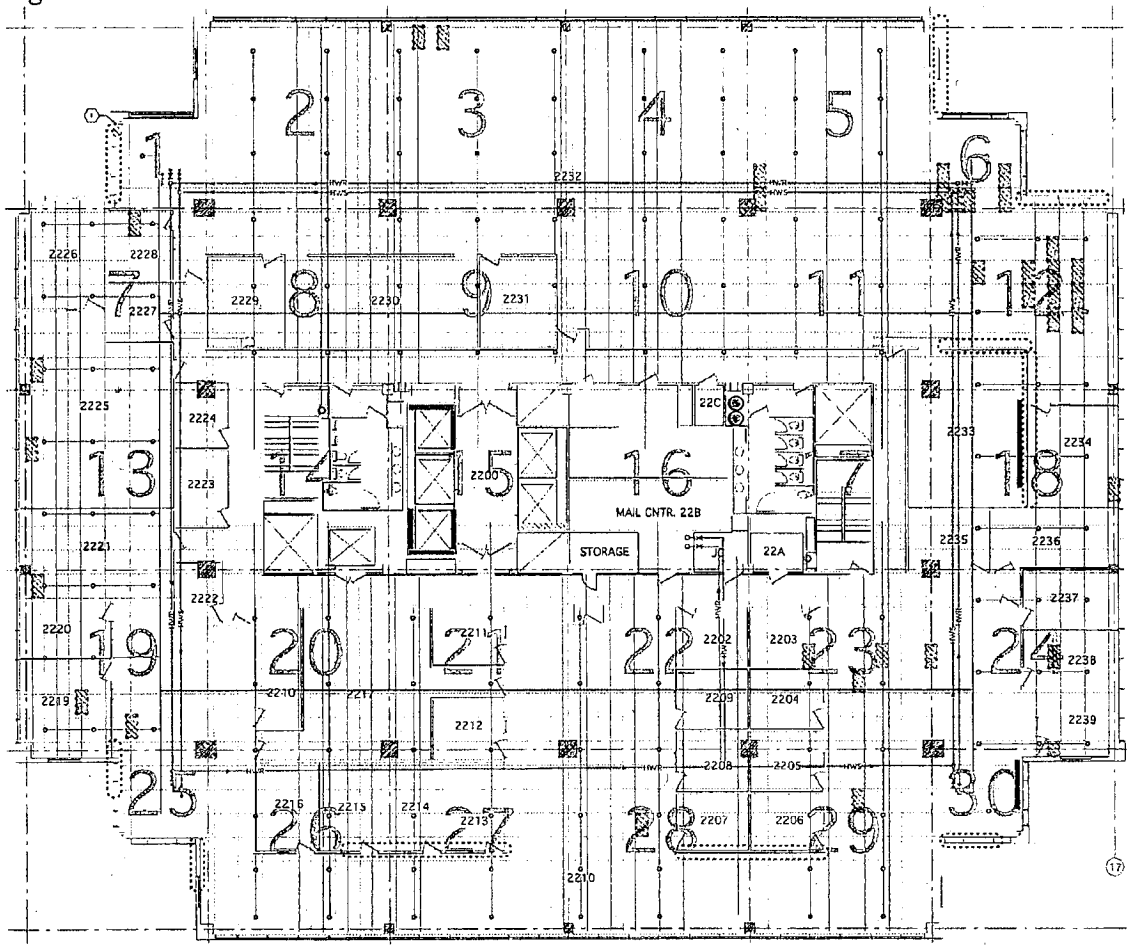
Using the above floor drawings with the historical water damage data and the existing column lines of the building, LCD overlaid each of the floor drawings with a matrix of thirty (30) investigation grids. Floors 1 and 2 have different floor plans and therefore additional grids were added to accommodate their unique floor plans.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 21

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 21

Figure 5.1



Any historical data found in a specific grid was then used to identify what ceiling tiles were opened when the above ceiling area was investigated. Using a ceiling access protocol developed for the BOE building by BioMax, one to three ceiling tiles were opened in proximity to a historical event location.

The WDA in areas below the ceiling was a visual survey focused on identifying any currently existing areas of water damage, water staining, visible mold, and sources of potential water damage. Other important components of the below ceiling visual survey included the noting of building surfaces obscured from visual observation and the presence of live plants.

Findings

A complete summary of the observations made during the WDA by floor can be found in Table 5.1 and the Preliminary WDA Floor Plans as attachments of this report.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 21

Above Ceiling

LCD opened 587 ceiling tiles during the above ceiling component of the WDA. One or more of the following issues were observed in approximately 154 of these access points into the ceiling:

- Water leaks and staining
- Fiberglass insulation (installed and discarded as debris)
- Drain pipe leaks
- Stained fireproofing
- Discarded ceiling tiles
- Stained ceiling tiles (visible only from above the ceiling)

Below Ceiling

During the below ceiling component of the WDA, LCD identified approximately 106,415 square feet of building surface area that is visually obscured by a variety of furniture, wall hangings, cubicle walls, personal belongings, supplies, and equipment. In addition to the visually obscured surfaces, LCD identified forty-six (46) rooms (e.g., personal offices, security-sensitive areas) that could not be accessed during the WDA. See Table 5.2 Inaccessible Rooms/Spaces. LCD also observed some evidence of spills of an unknown nature, stained window sills, stained ceiling tiles (visible from below), and over 1,100 "live" potted plants.

6.0 Exposure Potential and Management

To assist DGS in managing any mold-related issues or hazards in the Building, LCD has assigned each area of the building into one of the following four exposure potential categories:

- Normally Occupied
- Occasionally Accessed
- Maintenance Areas
- Inaccessible Areas

Each exposure category is described below, along with current conditions observed in these areas, and responses that can be implemented to manage these conditions.

6.1 Normally Occupied

Areas of the building that are usually occupied with BOE and DGS personnel and the general public have been categorized as "Normally Occupied." They include both office areas and common areas such as the restrooms, stair wells, elevator lobbies, mail rooms, break rooms, elevator cars, conference rooms, training rooms, roof deck, patio area, and Floor 1 (main lobby, cafeteria, childcare, parking garage).

With the exception of specific areas such as the roof deck, the patio, and the parking garage, Normally Occupied areas have both a below and above ceiling component.

Areas Below Ceiling – Current Conditions

- With the exception of a couple of JLS-wrapped column enclosures on Floor 11 (unoccupied), there is currently no VMG.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 21

- There are some stained ceiling tiles (visible from below).
- There are some water-stained window components and walls.
- There is evidence of over-watered plants.
- No significant mold-related air issues are currently identified; it does not appear that conditions above the ceiling have adversely impacted conditions below the ceiling
- Extremely low potential for any skin contact.

Areas Below Ceiling - Responses

- Floor 11: Complete the investigation of the conditions on this floor (including heavily water-stained fire proofing) and perform as-needed renovations with an emphasis on the interface and penetrations between Floor 11 and Floor 12.
- Areas in general: repair areas of water staining and damage as identified in the WDA
- Evaluate existing Operations & Maintenance (O&M) Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.
- As part of an O&M Program, ensure that there is a building policy/program in place to address "live" plants as a potential source of water damage and mold.

"Areas Above Ceiling" in Normally Occupied areas of the building are similar to "Areas Below the Ceiling" with the exception that the Floor 23 Roof Deck and the Parking Garage do not have above ceiling areas.

Areas Above Ceiling - Current Conditions

- There are some areas that appear to have VMG
- Stained ceiling tiles have been discarded above the ceiling
- There are some currently installed ceiling tiles that have water staining that can only be seen from above the ceiling
- Water-stained gypsum board, ceiling sheetrock, fire-proofing and pipe insulation have also been observed in the area above the ceiling.
- The status of mold-related air issues above the ceiling is unknown; it does not appear that conditions above the ceiling have adversely impacted air conditions below the ceiling
- There is a low potential for skin contact to personnel performing work above the ceiling.

Areas Above Ceiling - Responses

- Remediate any specific areas of what appeared to be VMG during the WDA survey
- Repair water leaks identified and reported during the WDA survey.
- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11:21

6.2 Occasionally Accessed

Areas of the building that are locked and prevent uncontrolled access by the general building population are categorized as "Occasionally Accessed." In general, these areas are located as part of the building core and have a hard ceiling. Core storage rooms (including some former pay phone booths) and the fire equipment rooms require a key and therefore fall into this category. Restrooms (above the hard ceiling) are also included in this category.

Occasionally Accessed - Current Conditions

- There are some areas that appear to have VMG present.
- Water staining is present.
- No mold-related air issues for Storage rooms below the hard ceiling have been identified, but air issues are unknown for other "Occasionally Accessed" areas.
- There is a low potential for skin contact for personnel working in these areas.

Occasionally Accessed - Responses

- Remediate areas that appear to have VMG present.
- Repair water leaks identified during WDA survey.
- Repair water damaged paint and sheetrock.
- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.

6.3 Maintenance Areas

Areas that are generally accessed only by DGS-BPM personnel or specialty contractors/ vendors are categorized as "Maintenance Areas." Personnel that work in these areas should be trained and provided with personal protective equipment and work practice protocols to control exposure to hazardous conditions that may be present. Areas that are categorized as "Maintenance Areas" include:

- Elevator Shafts/Pits
- Janitor rooms
- Electrical/telephone equipment rooms
- Mechanical floor
- Penthouse floor
- Helipad
- Elevator equipment rooms
- Fire sprinkler riser cabinets

Maintenance Areas - Current Conditions

- There are some areas that appear to have VMG present.
- Water leaks and staining are present.
- No mold-related air issues have been identified, but air issues are unknown for all of the areas that have been categorized as "Maintenance Areas."

- There is a low potential for skin contact for personnel working in these areas because of training and personal protective equipment used by these personnel.

Maintenance Areas - Responses

- Floor 24 - Complete the investigation of the conditions on this floor (including heavily water-stained fire proofing) and perform as-needed renovations with an emphasis on the interface and penetrations between Floor 24 and the Helipad.
- Repair water leaks identified during WDA survey.
- Remediate VMG identified during WDA survey.
- Repair areas of water staining (gypsum board).
- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.
- Secure FSRs.

Elevator Shaft – Current Conditions

- Less than one percent of the visually inspected elevator shaft surface area showed signs of what appears to be visible mold growth.
- Less than ten percent of the visually inspected surface area showed varying degrees of water staining.

Elevator Shaft/Pit Response:

- Clean and encapsulate with antimicrobial paint/coating*

*Menetrez, M.Y. et al. 2008. "Testing Antimicrobial Paint Efficacy on Gypsum Wallboard Contaminated with *Stachybotrys chartarum*." *Journal of Occupational and Environmental Hygiene* 5: 63-66.

*Krause, M. et al. 2006. "Controlled Study of Mold Growth and Cleaning Processes on Treated and Untreated Wet Gypsum Wallboard in an Indoor Environment." *Journal of Occupational and Environmental Hygiene* 3: 435-441.

6.4 Inaccessible Areas

Areas of the building that are always inaccessible to all personnel are categorized as "Inaccessible Areas." These areas include the elevator shaft external wall enclosures located to the north of elevator shaft #9 and south of elevator shaft #7. The north elevator shaft external wall enclosure has large slots that run the length of the top and bottom of the enclosed space but displays no noticeable air movement from adjoining spaces. The south elevator shaft external wall enclosure also has large slots that run the length of the top and bottom of the enclosed space, but is characterized by significant air movement because it also serves as a common plenum for the building restroom exhaust fan system. Both of these areas are totally sealed and are not accessible unless the wall is cut to allow access into these areas. Similarly, the source and return metal ducts of the building Heating, Ventilation, and Air Conditioning (HVAC) are located in risers that extend from the top to the bottom of the building. These duct risers are not accessible unless the wall of a riser is cut to allow access into these areas.

RECEIVED
PROJECT MANAGEMENT
BRANCH
2008 DEC 29 A 11: 21

Inaccessible Areas - Current Conditions

- There are areas that have mold present in both the elevator shaft external wall enclosures and the HVAC duct risers.
- Water staining is also present in both of these areas.
- Air issues are unknown for all of the areas that have been categorized as "Inaccessible Areas," including the interior of the HVAC metal ducts. However, the extensive air monitoring history of the building has not indicated that such an air problem may exist.

  The north elevator shaft external wall enclosures are open to one another but do not appear to actively communicate air to adjoining spaces including the elevator shaft itself.

  As part of the common plenum for the building restroom exhaust fan system, the south elevator shaft external wall enclosure remains under continuous negative pressure and its contents are exhausted directly out of the building via Exhaust Fan Unit 2.

- There is an extremely low potential for skin contact for personnel working in these areas because of training and personal protective equipment used by these personnel should they ever need to access these areas.

- Evaluate existing O&M Programs for the building and determine if they adequately address the issues identified in this section of the report. If not, develop and implement those additional O&M Program components needed to ensure timely management of water-related issues.

7.0 Future Activities

LCD's ability to complete their investigations in a timely manner was often controlled by other activities in the building. As a result, even those activities that did take place were conducted at a very cursory level. In many cases, LCD's investigations were limited to solely visual observations, due to the lack of time, access to areas of the building, or funding for more definitive investigative methods. Both the core room investigation and the floor-by-floor water damage assessment were incomplete because of the large number of rooms and areas that were inaccessible.

Due to the logistics of safely working under an extensive area of elevated ceiling and in an area generally accessible to all building personnel and the general public, LCD was also unable to complete the WDA for the first floor which also includes those areas of the building that extend into the parking structure, the parking structure, the soffits that extend out from the perimeter walls of Floors 1 and 2, and the irrigated landscaping around the building perimeter.

Destructive testing in the building was limited to four building core areas: Floors 11, 22, 23, and 24. Only Floor 11 was located below the Floor 12 mechanical rooms. The WDA of Floor 11 revealed many areas of potentially significant water damage. Destructive testing should be performed on several other floors to determine whether the conditions revealed in the first four

floors of destructive testing are truly representative of the conditions throughout the building. Any additional locations for destructive testing should include additional areas throughout Floor 11 and multiple floors located below Floor 11.

Future investigative activities should include obtaining access to inaccessible areas to allow completion of the record for this investigation and to provide DGS with sufficient information to manage the mold-related issues in this property.

8.0 Limitations and Qualifications

The assessment performed by LCD does not include or cover the following matters: Matters that are subsequently discovered that could not have been reasonably foreseen or detected, using industry standards, during the performance of the assessment. Matters that could not have been discovered by LCD because of barriers, lack of access or other matters affecting accessibility. Matters that were not disclosed to LCD prior to, during, or after the performance of the assessment. Any new deficiency that arose after the completion of the assessment by LCD.

To the extent that additional information becomes available to LCD, LCD reserves the right (without any obligation to do so) to modify its evaluation and/or this Report at any time, based upon further review and analysis of any such additional information or data.

Certain items mentioned in the Report were performed by others not involving the supervision of, or management by, LCD, but were relied upon by LCD in making its evaluation and assessment.

The assessment performed by LCD is not meant or intended to supplement, modify, or extinguish any warranty or representation made or given by third parties performing any of the recommended corrective work.

When consultation involves microbiological growth, or any assessment thereof, such microbiological growth may reoccur if the source of the growth is not remedied. All remediation of fungi in indoor environments can be inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and site evaluation. Except as may be noted in the assessment performed by LCD, subsurface areas, latent defects, or non-accessible areas and conditions were not field investigated and may differ from the conditions implied by the surface observations. Additionally, the passage of time may result in a change in the environmental characteristics at the subject property and the surrounding properties. No investigation or assessment can absolutely rule out the existence of any microbiological growth at any given site. LCD does not remediate or remedy sources of microbiological growth.

This Report and the assessment/survey conducted by LCD is prepared, and was performed, solely for the use and benefit of the client identified at the beginning of this Report. No other party may rely on this Report for any other purpose.

RECEIVED
PROJECT MANAGEMENT
BRANCH

2008 DEC 29 A 11: 22

COPY

Report prepared by,

Chris Corpuz, MS, CIH
Senior Manager
LaCroix Davis LLC

Report reviewed by,

for
Stephen C. Davis, MPH, CIH
Principal
LaCroix Davis LLC