

ASSESSING A COMPLEX COMMERCIAL BUILDING FOR MOLD

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CIRSx

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Potential Areas of Conflict of Interest:

- Consulting Contract to perform research for Air Answers
- Performs expert testimony for plaintiffs and defendants for mold litigation



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BSME engineering degree from Purdue University

MBA from Northwestern University

He has successfully passed the Indiana Professional Engineer Examination and the National and Illinois Professional Home Inspection Examinations

Larry has performed over 10,000 investigations of properties for which he has investigated, created remediation plans, performed testing, and issued post remediation verifications

Larry authored a chapter entitled, **"Building Science and Human Health"**, in a medical textbook titled, Nutrition and Integrative Medicine for Clinicians, Volume 2 published by CRC Press

Larry is the sole environmental expert on a national study, with a team of physicians, on a research project into sources of causes for Alzheimer's and Dementia patients.

Certified Indoor Environmental Consultant (CIEC), Certification #0703091, by The American Council for Accredited Certification, sanctioned by the (CESB) Council for Engineering and Scientific Specialty Board.

He is a Certified Infrared Thermographer, Level I, Certificate #19735, by Flir Systems, Inc., Boston, MA. This Certification meets the requirements of the National Society of Non-Destructive Testing which includes classroom, laboratory, testing, and documented field experience



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Adam's County Courthouse



A FIFTY+ YEAR OLD
COURTHOUSE IN
DOWNSTATE ILLINOIS

87,000 SQUARE FEET

5 LEVELS INCLUDING A
BASEMENT LEVEL AND AN
OLD UNUSED JAIL ON THE
TOP LEVEL



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IS THE BUILDING OWNED PRIVATELY OR IS IT A PUBLIC BUILDING

- WHO IS THE CLIENT? AN OWNER? A MANAGER/OFFICER?
- WHAT ARE THE CLIENT'S NEEDS AND MOTIVES?
- WHAT IS THE PURPOSE?
- ARE THERE OCCUPANT HEALTH COMPLAINTS?
- WHAT EXACTLY ARE THEY LOOKING FOR FROM YOU?



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"TO BE OR NOT TO BE?" THAT IS THE QUESTION

- TRADITIONAL VERSUS INFLAMMATORY
- SHOULD YOU EDUCATE THE CLIENT IF THEY ONLY WANT TRADITIONAL AND WHY?
- DO THEY ALSO WANT A REMEDIATION PLAN? YES OR NO, OR IS IT OPTIONAL?
- WHO WILL THEY BE SHARING THE REPORT WITH?



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GATHERING PRELIMINARY INFORMATION

- OBTAIN RECENT FLOOR PLANS AND BLUEPRINTS THAT INCLUDE MECHANICAL EQUIPMENT AND DUCTWORK
- OBTAIN ANY MAINTENANCE RECORDS OF HVAC EQUIPMENT
- DELINEATE PRIVATE AND PUBLIC AREAS WHERE THE PUBLIC MAY ENTER AND USE THE BUILDING



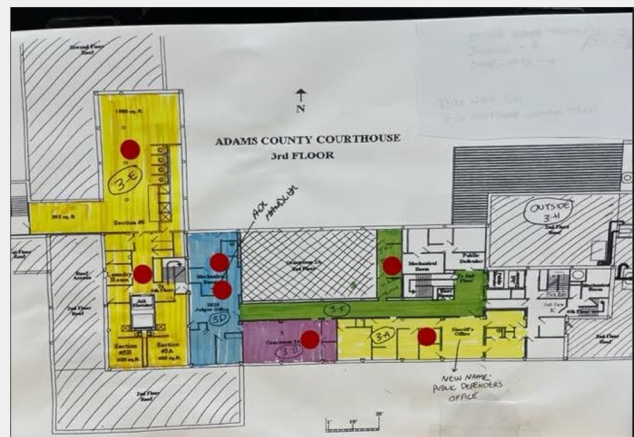
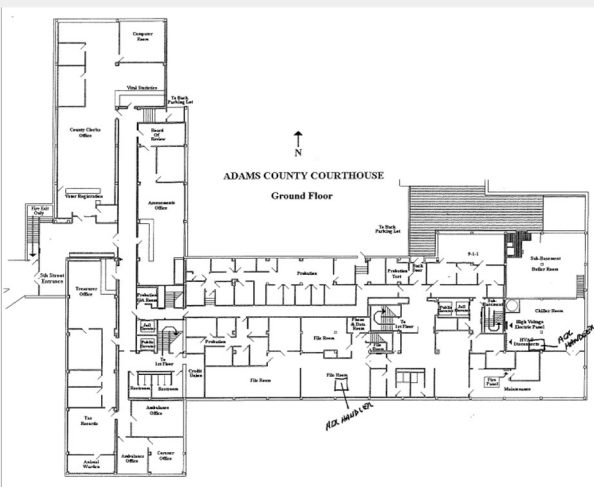
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FLOOR PLANS



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DESIGNING THE PROPOSAL...FIRST:

- IF THERE ARE HEALTH COMPLAINTS:
 - CREATE AND PASS OUT A SURVEY TO THE EMPLOYEES
 - DETERMINE AREAS OF "HOT SPOTS"
 - DETERMINE CATEGORIES OF SYMPTOMS
 - CREATE A CHART LAYING OUT TOTAL AND CATEGORIES OF Sx ON A CHART AND THEN ONTO THE FLOOR PLANS



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OCCUPANT QUESTIONNAIRE

**ENVIRONMENTAL HEALTH QUESTIONNAIRE
FOR ADAMS COUNTY COURTHOUSE
EMPLOYEES
JANUARY 2023**

Information provided will be in strict confidence and not divulged to any other entity without your permission in writing. The purpose of this information is to assist in locating any areas potential for testing of harmful environmental materials. Thank you for your participation.

✓ Would be happy to provide add'l info. My cell # is [redacted] 1. Holly Hwang, Assoc. Circuit Judge

1. Floor and room description: (Example: ground floor, county clerk's office)
Office - 3rd Floor I was a Public Defender from 2003 to 2010 & spent significant Courtroom 2D - 2nd Floor and 3rd floor in the old jail.

2. Do you experience any of the following to a significantly greater degree when at work, as opposed when not at work: (circle all that may apply to you):

a. Wheezing, sneezing, hard to get a breath, coughing, tearing eyes, joint pain, extreme fatigue, brain fog, (vertigo) leaky gut, headaches, Other: _____

Neuropathy - hands/feet/legs; Heart Palpitations

3. Do you have a history of respiratory health issues? (Yes/No) Hard tremors
Sneezing, watery & burning eyes, Throat irritation, cough
runny nose, burning tongue/while at work (mold) Wheezing

4. Do you have a history of elevated inflammation health issues? (Yes/No) Yes
Have diagnosed autoimmune responses since 2017

5. If in your work, you also go to other floors and parts of the building, do you experience any of the above symptoms when in those areas? Yes/No
A blackish substance sprays out of my office vent regularly
If yes, please describe the level of the building and area, as well as the type of symptoms: All over the building; symptoms in the 2nd floor
have increased since Steve Pro was called in to clean the old jail area. I work with my windows open in my office by January 10th or sooner. I've kept a health journal for 3 years.

Since 2017 I have seen numerous doctors and have submitted to numerous tests & scans. I am prescribed low Dose Gabapentin & Lyrica for general neuropathic (unknown cause). I have a call into my neurologist regarding tests for more fibroids; I have the symptoms of Fibro but do not have the brain lesions. Have been tested for various cancers, heavy metals, Lyme Disease - blood, mcs, etc.

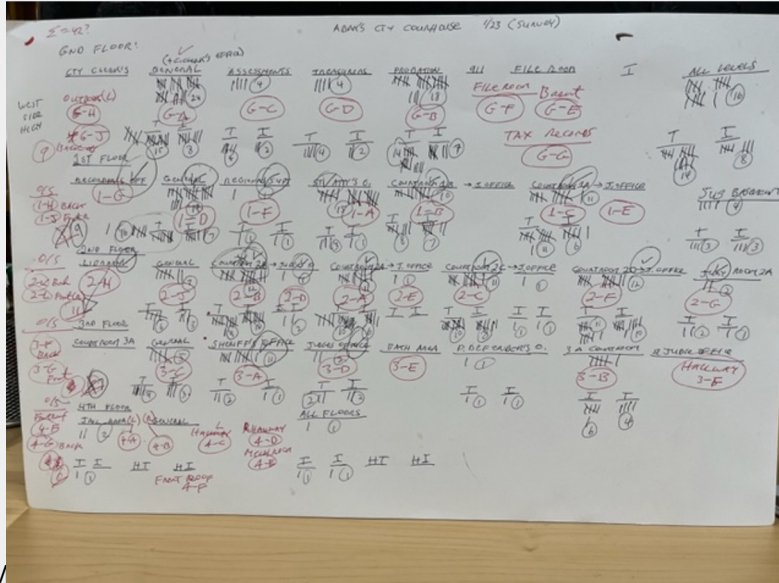


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TALLY HOT SPOTS WITHIN THE WORK AREAS



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CREATING THE PROPOSAL

- BASED ON TRADITIONAL OR INFLAMMATORY, DETERMINE WHAT AREAS IN THE BUILDING NEED HOW MANY OF WHAT TYPE OF TESTS PERFORMED
- DETERMINE HOW MANY INVESTIGATORS WILL BE NEEDED TO PERFORM TESTING, SEARCHING FOR CAUSES USING VARIOUS INSTRUMENTS AND METHODS.
- DETERMINE HOW MANY DAYS WILL BE NEEDED TO PERFORM THESE TASKS AS WELL AS A DAY TO PREP THE STAFF AND PREPARE C-O-Cs, MATERIALS FOR TESTING, ETC.
- DETERMINE HOW MANY PERSONAL HOURS WILL BE NEEDED TO REVIEW ALL DATA AND CREATE A REPORT BASED ON DECISIONS OF EACH AREA EXAMINED AND THE BUILDING IN TOTAL
- DETERMINE IF HVAC INVESTIGATION IS TO BE A PART OF THE INVESTIGATION
- NOW CREATE THE PROPOSAL



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Report Example

Testing Outcome:

In assessing the degree of environmental concerns relative to microbial growth in each area, we reviewed and analyzed the results of the above listed tests, along with the visual information, particle densities and questionnaire data. From this, we identified each test type results as being acceptable, potentially harmful or unacceptable relative to recommended thresholds. These results are correlated by a color coded map, included in the attachments sent with this report.

Red: Unacceptable
Orange: Near Unacceptable
Yellow: Potentially Unacceptable
Green: Acceptable
Blue: Active Moisture

*Because there isn't a way to determine everyone's levels of sensitivities, one should consider only Acceptable levels as safe

Summary:

Ground Floor Overall Results: Unacceptable. Active Moisture detected in sub-basement/boiler room
1st Floor Overall Results: Unacceptable
2nd Floor Overall Results: Unacceptable. Active Moisture detected on the East wall of Courtroom 2B
3rd Floor Overall Results: Unacceptable
4th Floor Overall Results: Unacceptable

On all levels of the courthouse, there was a presence of hydrophilic mold species (that require high moisture levels on food sources to grow) such as *Stachybotrys*, *Chaetomium* and species of *Aspergillus*. These are all considered as more violent on health effects and are indicative of continuous high levels of moisture and water in the environment. We additionally observed high levels of rust on metal surfaces, as noted in our observations below. This also is indicative of high levels of moisture and water in the indoor environment.

The testing results that were sent to laboratories provides information of both current and historic water and moisture damage in the building. See the reports attached.

Observations inside air handlers and supply and return plenums, which were accessible during our investigation, indicate some have interior insulation. Interior insulation in ductwork where there is high humidity is virtually always contaminated with microbial growth. Additionally, the visible condition of ductwork, and junctions of the ductwork, indicate a lack of cleaning and maintenance. Consider that the ductwork system is a transportation system moving air from one location to another. Specifically, the location of some air handlers are not on the same level of the building where the air is being transported.

We recommend a review of all photos, laboratories and notes to fully understand the assessment provided.

**** MISC (Questionnaire Data) - The number of respondents in this survey is not representative of the total number of employees in the building. ****

GROUND LEVEL	ROOM	PARTICLE DENSITIES	FUNGI-10 SURFACES	FUNGI-10 SUPPLY VENT	AIR SAMPLE	SWAB/TAPE	MISC (Questionnaire Data)
	Maintenance (C-V)	6,790	Unacceptable	N/A	Acceptable	N/A	Number of Individuals with Health Effects: NA
	Outdoor level: 420						
	PHOTOS:	Maintenance					
	VISUALS:	<ul style="list-style-type: none"> Concrete flooring that's painted Open ceiling. Disconnected air duct on south wall ceiling. You can see the dirt/dust coming out of the vents, see pictures. Overall dusty but a maintenance shop. No Breitmair imaging anomalies at the time of our investigation. 					
GROUND LEVEL	ROOM	PARTICLE DENSITIES	FUNGI-10 SURFACES	FUNGI-10 SUPPLY VENT	AIR SAMPLE	SWAB/TAPE	MISC (Questionnaire Data)
	PROBATION OFFICES (G-8)(G-J)	5,550	Unacceptable	Acceptable	Acceptable	N/A	Number of Individuals with Health Effects: 15
	Outdoor level: 420		Elevated levels of <i>Stachybotrys</i>				
	PHOTOS:	Probation Offices					
	VISUALS:	<ul style="list-style-type: none"> VCT tiles in hallway, carpet in offices Office 1 flowers on walls. Carpeting one stain on ceiling vent doesn't look too dusty Office 2 fish on the wall, carpeting and fan going in the room. Not too dusty Office 3 yellow ribbon on wall, carpeting stains on wall and dusty vent Office 4 trees on wallpaper, carpeting dusty vent Office 5 cactus carpeting, small stain on ceiling and dusty vent Office 6 holding bag on carpeting dusty vent is all Printer area dusty vent Office 7 baseball pictures, carpet, dusty vent dust on ceiling Office 8 Carpeting dusty vent Office 9 round mirror dusty vent, window in office Office 10 art on wall, carpet, dusty vent Office 11 purple wall dusty vent Office 12 dusty vent Office 13 two desks carpeting, two supplies dusty 					



PERFORM A REPORT REVIEW MEETING WITH THE CLIENT TO EXPLAIN THE REPORT AND ITS RESULTS AND ANSWER THEIR QUESTIONS AND OFFER PROFESSIONAL OPINIONS AS NEEDED

- IF DESIRED BY THE CLIENT OFFER A MEETING WITH THE EMPLOYEES TO PRESENT THE SAME



CLOSING COMMENTS

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