

# **STUCCO REPORT**



**1234 Any Street  
Philadelphia PA 19100  
PREPARED BY  
INSPECTIONS UNLIMITED INC.**



**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**

August 21, 2020

Joseph Jones

Re: 1234 Any Street  
Philadelphia PA 19100

Dear Joseph Jones,

On August 18, 2020, I inspected the above referenced property, as per your request. The home is a 95± year old building with a major addition in the rear that as per information presented was completed in 2017. The temperature was approximately 84 ± degrees and the weather was clear. The following is a summary of the conditions found from a visual inspection and moisture probing, if any changes are noted and are of concern call my office immediately and I will discuss the issues with you at that time and if necessary return to the property.

This inspection report and any verbal information given during the inspection and any time subsequent to the inspection are CONFIDENTIAL and are for the sole use of the client (as indicated on this report). This report is not transferable or assignable to any third party. If any other parties obtain access to this report, whether the report obtained with or without permission neither the inspector nor the company will bear any responsibility under any circumstances for the contents of the report or any verbal information.

In the event that any problems should arise requiring repairs or replacement of any components included in this inspection or believed to be covered by this report, this inspector shall be notified and have the opportunity to make a physical inspection prior to any such repairs or replacement.

Should there be any questions regarding this report please do not hesitate to contact my office. It was a pleasure to have been of service to you.

Very truly yours,

Fred Klein, ACI  
Inspections Unlimited Inc.  
American Society of Home Inspectors ®  
ASHI Certified Member #8465  
Philadelphia License #24524

ps. As per your request a copy of this report is being given to your Realtor and or lawyer.



**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**

## **CONCLUSION**

IT IS IMPORTANT THAT ALL QUOTES FOR REPAIRS OR REPLACEMENT BE OBTAINED, IN WRITING, PRIOR TO THE EXPIRATION OF THE INSPECTION CLAUSE AS STATED IN YOUR AGREEMENT. FAILURE TO OBTAIN QUOTES MAY HAVE A NEGATIVE IMPACT IF THERE ARE HIDDEN OR ADDITIONAL ITEMS REQUIRING REPAIRS OR REPLACEMENT. OUR INSPECTION IS VISUAL AND LIMITED IN NATURE TO THOSE AREAS ACCESSIBLE AT THE TIME OF THE INSPECTION.

***NO RE INSPECTION OF ANY COMPONENTS, SYSTEMS OR DEFECTS FOUND OR ASSUMED ARE INCLUDED AS A PART OF THIS INSPECTION OR REPORT. IN THE EVENT A RE INSPECTION IS REQUESTED OF ANY ITEM INCLUDED OR DUE TO CONDITIONS AT THE TIME OF THE INSPECTION NOT INCLUDED A MINIMUM CHARGE OF 60% OF THE ORIGINAL INSPECTION WILL BE DUE AT THE TIME OF THE RE INSPECTION.***

There are various areas of stucco over frame and stucco over masonry, only those areas over frame were tested.

The stucco appears to have been painted in April of this year, the reason for this is not known but should be determined. Painting stucco that is 3± years old normally would be done to cover possible staining or visible defects. Because of this our visual inspection is compromised.

There was a previous invasive stucco test performed. This may have been done at the time of the previous purchase. Being this is assumed to have been at the completion of the addition those results typically would not show major elevated levels due to the short time after completion.

It is our opinion that the reason for the painting be determined. In addition there was a previous invasive stucco test performed. The reason for this and the results should be obtained.

***The 36.0 % moisture readings at the 3rd floor doors are an indication of area of concern. It is our opinion that the stucco be removed exposing the framing. This will allow for a determination of damage to the substrate, framing etc. Any and all damaged items must be replaced. When the stucco is replaced it should be done to the current standards with stop bead, weep screeds etc. For a proper repair it is recommended that the all the stucco on this "plane" of the doors be removed and replaced.***

Although not a part of an invasive stucco inspection it was observed that there is staining and signs in various areas from what is assumed moisture infiltration. Whether this was the result of roof issues and or the installation of the windows is beyond the scope of our inspection. The pictures below are a sampling of this condition, but not all areas.



**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**



Multiple windows were installed "flush" with the surface of the stucco. Because of the lack of a reveal and the lack of stop bead, the caulking is the main deterrent to water infiltration. Proper caulking under these conditions must be done more often and is difficult. This must be monitored and replaced in the future on an as needed basis to reduce the chance of water infiltration.



**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**



## **STUCCO**

The construction of the building, a three story row home is masonry and is covered with and/or constructed of brick and stucco over masonry and frame.

Conventional or traditional stucco is referred to as three-coat stucco because it has a 3/8-inch scratch coat, a second 3/8-inch brown coat, and a thin "color coat" on top, for a total system thickness of about an 7/8 to one inch. All three coats are mixed from Portland cement, sand, water, and some lime for workability; the topcoat has color powder and may include some polymer additives, this will vary by the manufacturer.

Where "manmade stone" is used this is applied instead of the final color coat of stucco. All other details are the same.

The system starts with a drainage plane based on some type of building paper *or as preferred an approved drainage plane* over the wood the framing of the structure. Building standards typically call for *two layers of Grade D kraft paper, which is made with virgin wood fibers or one layer of Grade D and one of Tyvek stucco house wrap*. Or as today recommended *and preferred an approved drainage plane*. The paper/drainage plane is there to *drain water*, so it has to be carefully tied into all flashings around all windows and doors etc. Metal flashing systems are also installed to divert roof water away from the stucco system, and to protect any penetrations and or points of termination. The paper *or as preferred an approved drainage plane* and flashings have to overlap each other in a way that creates a shingle effect so as to drain the water away from the interior surfaces.

Over the papers *or as preferred an approved drainage plane* and flashings, a stucco galvanized netting or metal lath is fastened to the wall. Next comes the base coat, troweled into the lath mesh and tooled with grooves while wet, to provide keys for the second coat to lock into. The 3/8-inch-thick second coat is applied and tooled flat, and then both must cure for *7 days* before the color coat gets troweled on. Like all



## **INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**

cement, stucco will shrink and crack; many traditional contractors will wait 14 days to make sure the first coats have completely "cracked out," so new cracks won't telegraph through the topcoat. Three-coat stucco is designed to be porous. Rain soaks into it, then drains out when the storm ends. The papers and flashings are vital to protect the building, without them, water will soak the wood and create conditions for rot and mold.

As requested an invasive testing, using a Delmhorst BD-2100 moisture meter and/or a Flir MR160 meter, a deep wall probe which gives a percent of moisture in the substrate. These moisture readings are recorded at the time of the inspection

### **Procedures:**

Drill two ¼" holes through the exterior stucco to the subsurface behind in areas considered to have high moisture levels using the protocols for hard coat stucco and/or manmade stone or brick as detailed by the Moisture Warranty Corporation .

Take moisture readings at each drilling location using the Delmhorst BD-2100

Seal each drilling hole when inspection is completed using a silicone caulk of similar color to the stucco. An exact match can not always be achieved.

### **This stucco inspection limited to the following:**

A visual examination of the condition of the stucco system, exterior sealants, flashings, windows, doors, gutters, deck-to-building connections, stucco terminations and any penetrations through the stucco system.

Providing a detailed report indicating moisture levels in suspected areas. This is provided by using a Delmhorst Moisture Meter and/or a Flir MR160 and probing suspected locations.

Preparing a report of our observations of potential problem areas and recording any high readings found and normal readings as gauge. The readings provided in the report are indicators of the presence of retained moisture at the surface of the substrate or framing wood in the area tested at that given moment in time. These readings are not represented to be the absolute moisture content of the full thickness of the substrate or framing wood. The inspection provides information on specific areas of problems and defects. Moisture content in wood of **19%** or more over a sustained period of time can cause wood and other organic materials to deteriorate. In any areas to be repaired, the areas should be opened in a progressive manner until clean dry materials are found, typically 2 past the last elevated reading and/or damaged material where applicable.

Any damaged areas can then be repaired or replaced as needed. During repairs, we strongly recommend the use of a high-quality moisture cure silicone along with proper detailing of all areas.

The report only reports on the condition of the structure at the specific locations indicated. Locations are determined by the inspector according to probable areas of possible moisture intrusion. No judgment is intended or given for any areas not reported on. This report is not a structural engineering inspection report.



## **INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**

**LIMITATIONS OF LIABILITY:** Because this is a limited inspection, we can make no guarantee, express or implied, that our observations and random moisture readings offer conclusive evidence that no installation or moisture problems exist, or that problems found are all-inclusive. This7 inspection company, its employees shall not be liable for non-visual defects, unseen defects, unspecified defects or hidden damage and conditions existing on the subject property and hereby disclaims any liability or responsibility thereof. All parties concerned agree to hold harmless and indemnify this inspection company evolving any liabilities that may result.

**FURTHER TESTING/INVESTIGATION:** Our procedure is to rely on moisture meter readings as an indicator of relative moisture values between different test spots, not as an absolute value of water content in the substrate. It is difficult to determine if the structural wood of your home has been damaged in areas of high readings without 'probing' and/or removing a core sample of the stucco to allow for visual inspection. Should we feel that further investigation is needed this will be indicated. This condition will prevail when soft or "missing" substrate is observed.

**It was observed at the time of inspection that the some or all of the following items were not present.**

Weep Screeds as required to allow water that will enter regardless of detailing. These have been required since the 1990s.

Proper detailing around windows, doors etc. The use of stop bead and proper application of high-quality silicone sealant is a major deterrent to water infiltration. Being that the different materials present expand and contract at different rates the stop bead and sealant allow for this movement.

Expansion joints where required.

These items cannot be properly retrofitted once the stucco has been installed as they must be installed prior to application of the stucco system.

Any areas that are repaired because of this inspection report should be detailed as to the most recent protocols for stucco application.

### **Moisture guidelines, established by the National Home Builders Research Center**

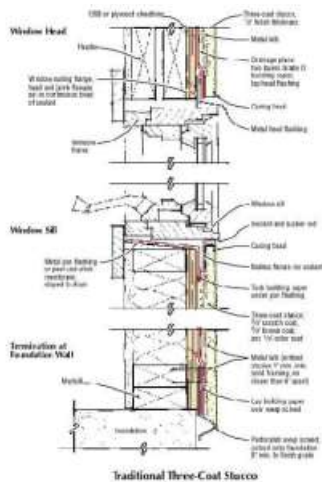
- Less than 18 to 20% maybe acceptable moisture readings. (The EPA & some States have varying levels for mold growth.) But this is an indication of active water infiltration that must be addressed.
- 
- 20% to 30% is elevated and with the elevated levels further investigations is required to inspect for mold growth, substrate damage or deterioration. Recommendations of repairs to correct the source of the moisture will be addressed.
- 
- Greater than 30% open for repair or replacement and to check for structural damage. Our



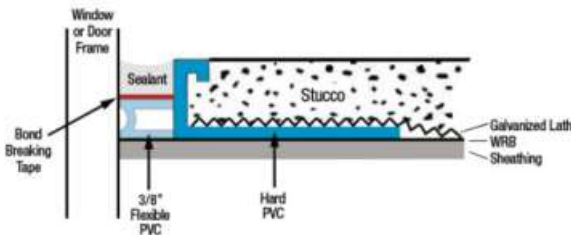
# INSPECTIONS UNLIMITED INC.

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF John JonesStultz for the property located at 1234 Any Street Philadelphia PA 19100**

Delmhorst Moisture Meter maximum reading is 40%.



The visible details and flashing do not meet the current requirements. These requirements state that a properly detailed and caulk joint be present everywhere the stucco meets a dissimilar surface such as windows, door frames, soffits and penetrations. Failure to provide these conditions will lead to water infiltration and the resulting damage. ***These can not be retro fitted.***



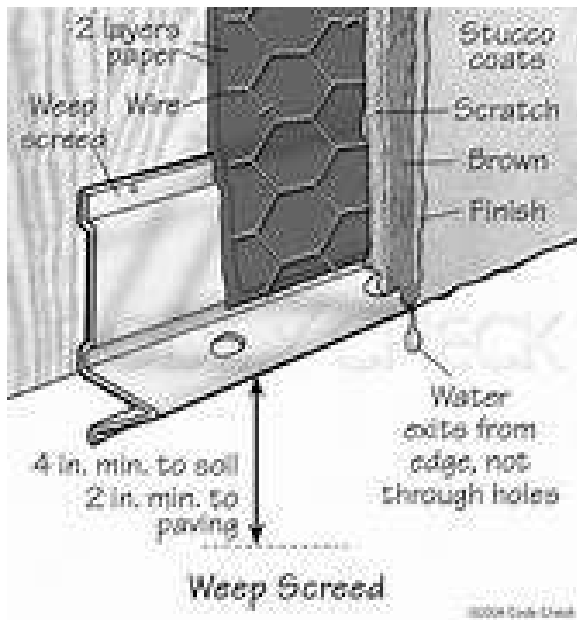
There are no visible weep screeds present. These are required at the bottom of all walls, overhangs etc. Failure to have weep screens properly installed will result in water being trapped behind the stucco. All stucco systems allow some water to infiltrate with proper flashings and weep screens this water/moisture is allowed to exit at the bottom of the walls or overhang. Without a means of exiting damage, mold etc will occur. There is no practical means of properly installing weep screens once the stucco has been installed.





**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**



It was noted that previous stucco invasive testing was performed on this property. It is recommended if possible the reason, results and any documentations be obtained. This will aid in your decision making.



**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**





**INSPECTIONS UNLIMITED INC.**  
**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF**  
**John JonesStultz for the property located at 1234 Any Street Philadelphia PA**  
**19100**





**2nd Floor**



**3rd Floor**



**INSPECTIONS UNLIMITED INC.**  
**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF**  
**John JonesStultz for the property located at 1234 Any Street Philadelphia PA**  
**19100**



**Core 3rd Floor Front Bath**





**INSPECTIONS UNLIMITED INC.**

**THIS DOCUMENT IS FOR THE CONFIDENTIAL AND EXCLUSIVE USE OF  
John JonesStultz for the property located at 1234 Any Street Philadelphia PA  
19100**

