

Hedderman Stucco

A Division of Hedderman Engineering Inc.

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Prepared For: David and Beverly Walsh
Address: 614 Asbury B Houston, TX 77007
Produced By: Phillip Lawlis
Date: October 31, 2018





HEDDERMAN ENGINEERING, INC.

www.heddermanengineering.com Office 281-355-9911 Fax 281-355-9903 office@heddermanengineering.com

DATE: October 31, 2018 and November 2, 2018

TO: David and Beverly Walsh

Dear Mr. and Mrs. Walsh :

At your request, a visual and probing moisture stucco inspection of the house located at 614 Asbury B, Houston, Texas, was made by Mr. Phillip Lawlis, TREC #9309, EDI Inspector #TX-172. **The visual inspection was performed on October 31 and the probing inspection was delayed due to rain until November 2.**

Transmitted herewith is the stucco analysis report stating our professional opinions on the current condition of the stucco cladding and substrate materials in tested and/or accessible areas. The scope of our inspection and other important information, particularly in the area of dispute resolution should a question arise, is contained in our Service Agreement, which has been included at the end of this report.

This report was prepared for a buyer or seller in accordance with the clients requirements. The report addresses a single system and the stucco cladding details. While the report may refer to the roof, doors, windows, railings, etc. as these items interact with the cladding, it is not intended as a substitute for a complete standard inspection of the property. Standard inspections performed by a license holder on a TREC report form and/or an engineering inspection company will contain additional information a buyer should consider in making a decision to purchase. While the inspector is a licensed TREC inspector, the type of inspection work being performed is considered specialized and is not regulated by the Texas Real Estate Commission.

Thank you for asking HEDDERMAN STUCCO/HEDDERMAN ENGINEERING, INC. to perform this important inspection work for you. If you have any questions after reviewing this report, please feel free to contact our office.

At your service,

HEDDERMAN STUCCO
Tim Hedderman, President
Texas Firm Number: 7942

INTRODUCTION

PURPOSE:

The purpose of this moisture inspection is to help assess the condition of the stucco system by looking for visible installation flaws, inadequate water diversion and sealant failures and conduct random moisture readings using electronic moisture reading devices. Please note that providing a scope of work for remedial repairs is not the purpose of this inspection. Although this report may include observations of some building code violations, total compliance with codes, specifications, and/or legal requirements is specifically excluded. This also applies to all non-code making bodies, including but not limited to, the Texas Lathing and Plastering Contractors Association and their respective recommendations of building construction details. Further investigation may be needed to determine the extent of water damage, if any, and how to best address any moisture problem that may be indicated by this inspection.

Also excluded from the scope of the inspection are any and all items related to mold and/or all microbial substances. Due to the current limitations of coverage on most homes by the insurance industry in Texas, where damages due to mold and/or other microbial substances may not be covered, we routinely recommend that you have a mold inspection by a qualified professional.

We make no representation regarding the condition of this house other than as contained in this written report. Any verbal discussions concerning this house that were made at the time of the inspection, and not contained in this written report, are not to be relied upon.

It is recommended that you obtain as much history as is available concerning this house. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the house, knowledge of any drainage problems, receipts from repair work that has been performed, reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether repairs, renovation, remodeling, additions or other such modifications have taken place at this house.

This report is provided solely for the use of the person to whom this report is addressed, and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted to perform the inspection. If a third party chooses to use this inspection report, they do so without HEDDERMAN ENGINEERING, INC. permission or authorization, and they do so at their own risk.

SCOPE OF INSPECTION:

This is a basic stucco inspection and is limited to the following:

1. A visual examination of the condition of the stucco, exterior sealants, flashings, windows, doors, roof-to-stucco transitions, parapets, gutters, deck-to-building connections, stucco terminations and any penetrations through the stucco.
2. Conducting of random electronic moisture scanning of the building envelope.
3. Preparing a report of our observation of potential problem areas and recording any high readings found.
4. Providing detailed information on typical moisture--related problems in stucco homes to assist you in maintaining the value of your home.

LIMITATIONS OF LIABILITY:

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

FURTHER TESTING/INVESTIGATION:

Our policy 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 in the summary section of the report.

REPAIR FOLLOW--UP AND ANNUAL INSPECTIONS:

A repair follow-up inspection should be conducted within three months after completion of the repairs to assess the effectiveness of the moisture modifications. This is extremely important. Annual Inspections should also be scheduled to ensure that your stucco system remains dry. This way, any sealant failures, stucco cracks, etc. can be caught and repaired promptly. Testing and maintaining your home on a regular basis is the best way to prevent costly repairs associated with moisture damage. Also, for homeowners who decide to sell their home, annual inspections and maintenance documentation will be a valuable selling tool, providing evidence to show that your home has been inspected and maintained.

FOR THE PURPOSES OF THIS INSPECTION, NORTH WILL BE ASSUMED TO BE FROM THE RIGHT SIDE OF THE HOUSE TOWARDS THE LEFT, WHEN FACING THE HOUSE FROM THE FRONT.

Project Information

Property Information	Inspection Information
Type of System: Traditional Hardcoat	Date of Inspection: 11-2-18
Substrate Material: Plywood	Inspector: Phillip Lawlis TREC#9309
Construction Year: 2010	Party Present: Client, Agent, and Seller
Stories: 3	Temperature/Humidity:
Window Type: Metal	Weather Conditions: Partly Sunny Cloudy
	Last Significant Rain: During

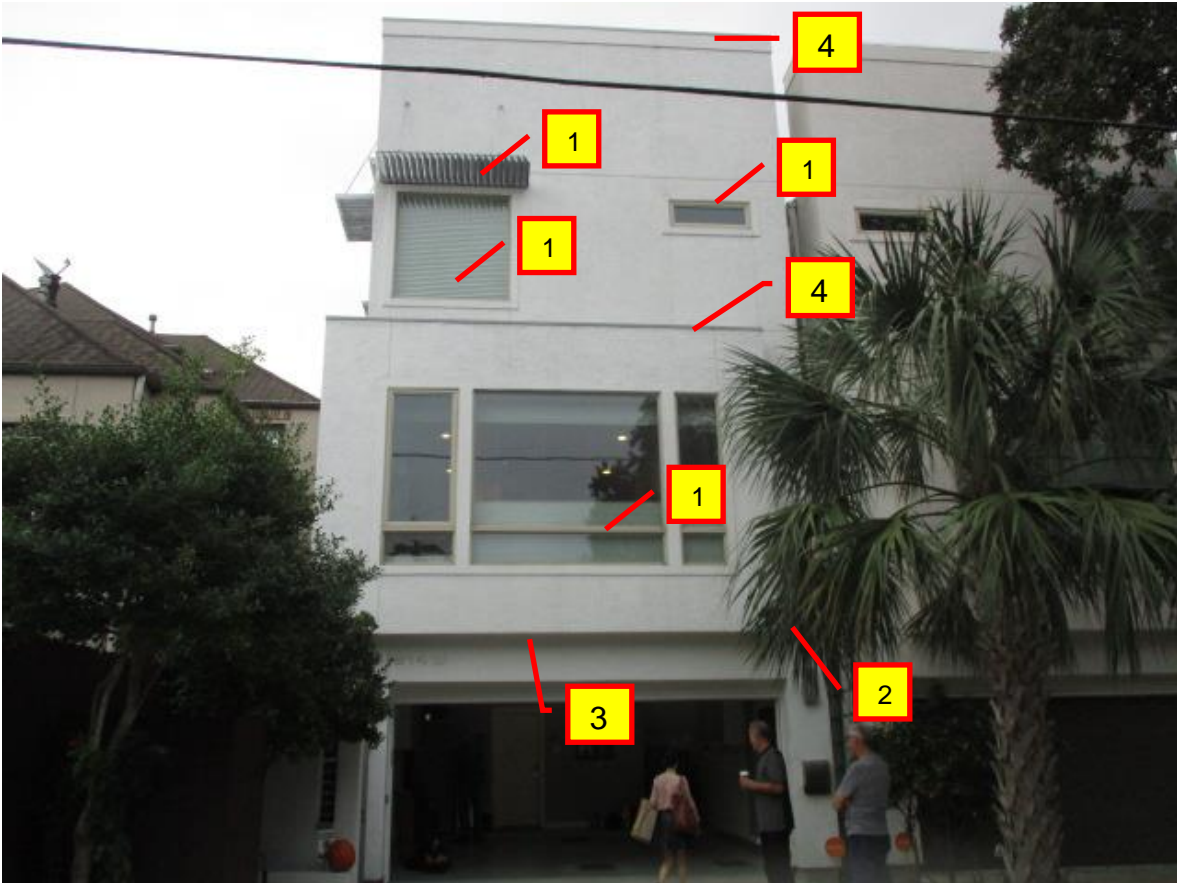
Inspections Test Equipment				
Test Equipment	Test Range			Test Settings
	Low	Elevated	High	
Delmhorst 2100	0-14	15-17	18-40	#1 Wood
Tramex	0-13	14-18	19+	Not Used
G.E. Protimeter	0-15	16-20	21-100	Not Used

Important Note: The test equipment is used to help locate problem areas. It must be understood that the use of test equipment is not an exact science, but rather these proven tools are used to help identify indicators of possible problems. At times, because of hidden obstructions within the wall cavity, the meters will obtain false readings or no readings at all. Some meters will pick up the presence of metals, wiring, unique wall finishes, etc. Positive moisture readings do not always mean there is a problem, nor do negative moisture readings necessarily mean there is not a problem. We do not use the equipment to determine exact moisture content, but rather to obtain relative readings between suspected problem areas and non-problem areas. This information is then used to help determine potential problem areas which may warrant further investigation.

Visual Observations

Item Description	Yes	No	N/A	Comments
Window Head Flashing Present	X			
Kick Out Flashing Present			X	
Door Pan Flashing Present			X	
Balcony Flashing Present			X	
Weep Screen Flashing Present	X			
J Flashing Present		X		
Cap Flashing at Walls/Parapets	X			
Satisfactory Sealant at Windows		X		
Satisfactory Sealant at Doors	X			
Satisfactory Sealant at Penetrations		X		
Satisfactory Sealants at Flashings	X			
Satisfactory Sealants at Accents		X		
Stucco Contact with Roof		X		
Wrapping of Bottom of Substrate	X			
Stucco Contact with Ground		X		
Stucco Contact with Concrete		X		
Stucco Cracking		X		
Stucco Finish Cracking		X		
Stucco Delamination		X		
Stucco Paint Finish Satisfactory	X			
Rust Present	X			At bottom of overhangs
Mildew Present		X		
Excessive Efflorescence		X		
Chimney Cap			X	
Chimney Cricket			X	
Chimney Flashing Present			X	

Visual Observations Details



West Elevation (front)

#	Description of Visual Observations
1	Sealant missing, separated and/or inadequately applied
2	Rust at bottom corner indicating moisture
3	Relief drainage plane not present where stucco meets siding – joint has been sealed
4	Cap Flashing Present



North Elevation

#	Description of Visual Observations
1	Sealant missing, separated and/or inadequately applied
2	Rust at bottom indicating moisture
3	Relief drainage plane not present where stucco meets siding – joint has been sealed
4	Upper scupper sealants not visible – recommend sealing as needed

Probing Moisture/Substrate Analysis



West Elevation

Probing area #	Moisture Reading	Substrate Integrity
#1	12.7 Low	Firm
#2	16.5 Elevated	Firm
#3	13.1 Low	Firm
#4	10.3 Low	Firm
#5	40.0 High = Wet	Soft
#6	No Reading	Deteriorated
#7	9.8 Low	Firm
#8	29.9 High	Soft
#9	No Reading	Deteriorated



North Elevation

Probing area #	Moisture Reading	Substrate Integrity
#1	12.4 Low	Firm
#2	11.7 Low	Firm
#3	10.9 Low	Firm
#4	30.0 Low	Firm
#5	31.8 Low	Firm
#6	No Reading	Deteriorated
#7	40.0 High	Soft

Conclusions

Core Sampling/ Substrate Damage

Substrate damage was found on this house and further framing damage may be present beyond the substrate. It is recommended that all areas noted not to have **“Firm” substrate (Including Semi-soft, Soft, or Deteriorated)** be opened up to verify the extent of any damage. It is also recommended that the condition be repaired accordingly. It is noted that core sampling of the areas that were noted in the report is recommended to evaluate damage prior to removal of any large sections of stucco. Consult a qualified waterproofing contractor to perform a core sample and/or to repair the damage where applicable. Refer to elevation photos for locations.

Obtain Cost Estimate

Elevated moisture readings were observed in the substrate behind the stucco at some areas, however at this point the substrate/sheathing was found to still be in a firm condition. It is recommended that all areas above or around these areas be sealed by a qualified stucco waterproofing contractor to prevent moisture penetration and to have the stucco rechecked three months after sealing these areas.

Obtain Cost Estimate

Sealants

Seal all window constructions (miters and mullions) to prevent future moisture intrusion. The inspector recommends that you consult a qualified stucco waterproofing contractor to seal these areas to prevent moisture penetration.

Most of the details and/or opening on this house lack adequate sealant. Windows, doors and penetrations through the exterior veneer system should be professionally sealed around the perimeters using a high quality, professional sealant (i.e., polyurethane). The sealant should be properly tooled into the joints to help prevent moisture intrusion and sealant separation. Hedderman Stucco recommends that you consult with a stucco waterproofing contractor to seal all doors, windows, and penetrations as needed to avoid moisture penetration.

Hedderman Stucco recommends that you consult with a stucco waterproofing contractor to seal all doors, windows, and penetrations as needed to avoid moisture penetration.

Obtain Cost Estimate

Great care should be exercised in choosing the appropriate caulk. Each caulking manufacturer has recommendations about how their particular caulk should be applied. It is important that these guidelines be followed in order to maximize the effectiveness of the caulk and to enhance its ability to protect your home.

All joints should be thoroughly cleaned before caulking to ensure the effectiveness and adherence of the caulk. Important Note: Check with your caulking contractor regarding silicone caulk versus polyurethane caulk when exterior painting is required. Silicone caulks cannot be painted whereas polyurethane can.

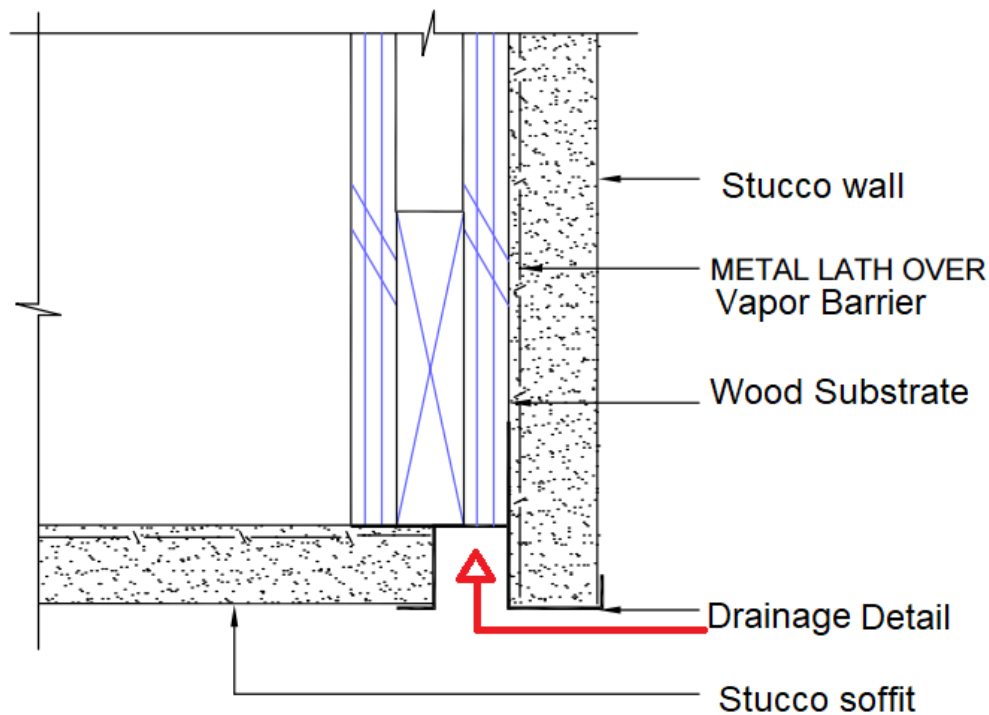
Bottom Of Walls

The flashing at the bottom of the stucco walls was observed to be weepscreed flashing. A weepscreed has holes in the bottom to allow moisture in the wall a path to exit the wall, rather than being kept inside the wall.

Overhangs

The stucco veneer at the overhanging areas did not have a provision for a drainage relief plane to allow moisture a path to exit the stucco wall, as shown in the detail below. It is noted that there was staining in this area that may be an issue from not having this newer detail. Damage was found at the bottom edge of the stucco and this detail should be added when repairs to the area are made.

Obtain Cost Estimate



Overhanging Wall

Additional Information

It is recommended that a follow-up inspection be completed in 6 to 8 months after all repairs are completed to ensure that the moisture levels remain within an acceptable level and proper corrections have been made to prevent moisture intrusion and wood rot.

This report only identifies the condition of the structure at the specific locations indicated. The locations of probing were determined by the inspector according to the probable areas that appeared to be vulnerable to moisture intrusion and in accordance with industry standards. Due to the inability to utilize the Tramex Wet Wall Detector on non EIFS systems (i.e., Traditional Hardcoat, etc.) a representative number of windows and various other areas that are prone to water intrusion were tested for elevated moisture by using a probe meter. The recommendations for corrections to prevent moisture intrusion are given in accordance with our best judgment, previous inspection experience, previously witnessed repairs, and knowledge gained from our personal experiences and other knowledgeable persons in the industry. No judgment is intended, or given, for any area that was not tested or reported.

Please note that the moisture readings included in this report are the raw data recorded by the Delmhorst probe meter. Moisture levels are affected by the ambient weather conditions and other factors, and this can result in variations between the readings taken on one day and readings taken in the same area on another day. The readings provided in this report are accurate indicators of the presence of retained moisture at the surface of the substrate in the area tested at that given moment in time. These readings are not represented to be the absolute moisture content of the full depth of the substrate.

These moisture readings are not represented to be the absolute moisture content of the full depth of the substrate. Rather, this documentation is represented as a moisture and wall substrate evaluation of the current conditions. Furthermore, the investigations, opinions, and recommendations reported within this document are not represented as an "inspection" sanctioned by the Texas Real Estate Commission (TREC) even though the inspector is a TREC licensed inspector.

This report was prepared for either the prospective buyers or current owner. Its intended use is to assist in their efforts to identify, and at their discretion, to request action to mitigate potential environmental exposure risks, construction and/or maintenance deficiencies prior to buying or selling this property.

CLOSE

Opinions and comments stated in this report are based on the apparent performance of the items included within the scope of the inspection, at the time of the inspection. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, merchantability, and/or need for repair of any item inspected.

At your service,



Tim Hedderman
Registered Professional Engineer #51501
Texas Firm Number: 7942



HEDDERMAN ENGINEERING, INC.

www.heddermanengineering.com Office 281-355-9911 Fax 281-355-9903 office@heddermanengineering.com

RECEIPT

October 31, 2018

TO: David and Beverly Walsh

REF: Stucco inspection of the house at 614 Asbury B, Houston, Texas.

Total cost of inspection: \$700.00

Total Paid: \$700.00

Total Due: - 0 -

For your records, following is the Service Agreement that you executed for this inspection.

HEDDERMAN STUCCO DIVISION

Office: 281-355-9911 Fax: 281-355-9903

office@heddermanengineering.com www.heddermanengineering.com

Stucco Inspection Service Agreement

NOTICE: THIS AGREEMENT IS INTENDED TO BE A LEGALLY BINDING CONTRACT - PLEASE READ IT CAREFULLY

DATE OF INSPECTION: 10/31/2018

CLIENT NAME: David & Beverly Walsh

PROPERTY ADDRESS: 614 Asbury Unit B

COST OF INSPECTION: \$700.00

Purpose of inspection

The purpose of the inspection is to help in assessing the condition of the stucco and substrate material, to visually view the stucco system looking for installation flaws, inadequate water diversions, sealant failures and perform a moisture analysis using a probing method to check moisture levels in the substrate behind the stucco. Although this report may include observations of some building code information, compliance with codes, specifications, and/or legal requirements is specifically excluded. This also applies to all non-code making bodies, including but not limited to, the Texas Lathing and Plastering Contractors Association and their respective recommendations of building construction details. Since building codes change every few years, our inspections are not done with the intention of bringing property into compliance with current code requirements or current standards. Rather, the standard of our inspections is a performance standard to determine if the items inspected are performing adequately at the time of the inspection, or are in need of repairs. It is pointed out that other engineers/inspectors may have contrasting opinions to those given in this report. It is not within the purpose and/or scope of this report to determine the insurability, habitability, merchantability, future performance, suitability of use, economic life span, and/or issues unnamed in this report. This report is not an insurance policy, neither is it an expressed nor implied warranty and /or guarantee as to future life and/or continued performance of the items inspected. Our inspection and report are intended to express the inspector's perceived impression of the apparent performance of the inspected components and systems viewed on the date of the inspection. Our intent is to reduce your risk associated with this transaction, however we cannot eliminate all risk, nor assume your risk. Any items pointed out as in need of repair or further investigation should be evaluated by a qualified repair specialist or service company **PRIOR TO CLOSING ON THE PROPERTY.**

It is recommended that you obtain as much history as is available concerning this property. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the property, receipts from repair work that has been performed, reports performed for or by stucco inspection companies, relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether inspections, repairs, renovations, remodeling, additions or other such activities have taken place at this property.

Scope of inspection

The scope of the inspection includes limited, visual observations at the exterior of the structure, and the attic (if applicable) as viewed only from the areas determined by the inspector to be safely accessible. A visual examination of the condition of the stucco, exterior sealants, flashings, windows, doors, roof-to-stucco transitions, parapets, gutters, deck-to-building connections, stucco terminations and any penetrations through the stucco. The scope also includes conducting of moisture probing of the building envelope at areas the inspector chooses to probe based on inspectors judgement and experience. We will prepare a report of our observation of potential problem areas and record any high moisture readings found. Only those items readily accessible and visible at the time of the inspection will be included in this report. Disassembly or removal of any portion of the structure is beyond the scope of this inspection.

Limitations of Inspection

A visual inspection with probing of the stucco will generally produce a competent assessment of the current condition of the stucco system, provided repairs have not been performed which would cover distress patterns normally produced by problems. Because

the inspection procedure is a limited inspection, however an inherent residual risk remains that undiscovered problems exist and/or future problems will develop. We can make no guarantee, express or implied, that our observations and random moisture readings offer conclusive evidence that no installation or moisture problem exist, or that all problems were found. This inspection company, its employees and any divisions 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 and responsibility thereof. All parties concerned agree to hold harmless and indemnify this inspection company involving any liabilities that may result.

This report is provided solely for the use of the person to whom this report is addressed, and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted with to perform an inspection. If a third party chooses to use this inspection report, they do so without HEDDERMAN STUCCO/HEDDERMAN ENGINEERING, INC. (HS/HEI) permission or authorization, and they do so at their own risk.

If this inspection is prepared for a buyer or seller in accordance within a real estate transaction it is noted that the inspection addresses a specific system, which is the stucco cladding and details. While our report may refer to the roof, doors, windows, railings, etc. as these items interact with the stucco cladding, it is not intended as a substitute for a complete standard inspection of the property. Standard inspections performed by a licensed Inspector on the TREC report form and/or from an engineering inspection company will contain additional information a buyer should consider in making a decision to purchase. While the inspector may be a licensed TREC inspector, the type of inspection work being performed is considered specialized and is not regulated by the Texas Real Estate Commission.

Dispute Resolution

In the event of a complaint concerning the inspection services provided pursuant to this agreement, Client must notify Hedderman Stucco/Hedderman Engineering Inc. in writing of such complaint within ten (10) business days of the date of Client's actual discovery and thereafter allow a prompt re-inspection of the item relating to the claimed condition. Client further agrees that client and he/she/it's agents, employees or independent contractors **will make no alterations, repairs or replacements to the item complained about prior to a re-inspection by HEI as agreed above.** You agree that failure to comply with this procedure shall result in your express release of all claims Client may have against HS/HEI, known and unknown, related to the item complained about and any related alleged act or omission by Hedderman Stucco.

Mediation:

In the event a dispute, controversy or claim arising out of or relating to this agreement, the inspection, or the report resulting from these inspection services, and assuming the dispute cannot be settled through direct discussions between the Client and HS/HEI, the parties agree to endeavor first to settle the dispute by mediation before resorting to arbitration. If the mediation does not result in a settlement of the dispute, then any unresolved controversy shall be submitted to binding arbitration, as set forth below. The parties shall share equally the costs of the mediator.

LIMITATION OF LIABILITY:

In any event Hedderman Stucco fails to fulfill its obligations under this agreement, Client agrees that CLIENTS EXCLUSIVE REMEDY AT LAW OR IN EQUITY AGAINST HS/HEI IS LIMITED TO AN AMOUNT EQUAL TO THE INSPECTION FEE PAID HEREIN. Client assumes the risk of losses greater than the refund of the fee paid herein. Client acknowledges that this limitation of liability is reasonable in view of the relatively small fee that HEI charges for making the inspections when compared with the potential of exposure that HEI might otherwise incur in the absence of such limitation of liability, and that a much higher fee would be charged if HEI were subject to greater liability.

Statute of Limitations

The parties agree that no claim, demand, or action, whether sounding in contract or in tort, may be brought to recover damages against HS/HEI, or its officers, agents, or employees MORE THAN TWO YEARS AND ONE DAY AFTER THE DATE OF THE INSPECTION OR THE DATE ANY PURPORTED CAUSE OF ACTION ARISING OUT OF THE INSPECTION ACCRUES. TIME IS EXPRESSLY OF THE ESSENCE HEREIN. Client understands that this time period may be shorter than otherwise provided by law.

Acceptance of Report

By signing I confirm that I have read, understood, and agree to the above pre-inspection service agreement, and that I agree to be bound by these terms and conditions. In the absence of Client to sign this service agreement prior to or at the time of the inspection, then acceptance of the report and/or payment for the inspection shall constitute agreement with all of the terms of this agreement. The report to be prepared by inspector shall be considered the final and exclusive findings of the inspector regarding the inspection of the property. Client shall not rely on any oral statements made by the inspector prior to issuance of the printed report.

NOTE: IF THE INSPECTION IS CANCELLED LESS THAN ONE FULL BUSINESS DAY BEFORE THE SCHEDULED TIME, THE CLIENT WILL BE CHARGED ½ OF THE ORIGINAL INSPECTION FEE AND AGREES TO PAY SUCH PENALTY FEE.



I HAVE READ AND ACCEPT THIS AGREEMENT*