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| **CURTIS:** | Welcome back to the Your Project Shepherd Construction podcast, where we teach that every successful project has four key components demonstrated by the simple child's drawing of a house. The foundation is proper planning. The left wall is your team, the right walls, communication and the roof. Protecting it all is proper execution. Have all four of those components in place and your project is going to be solid. |
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| **CURTIS:** | Our topic today, in my opinion, is one of the most important things that you can do to protect yourself off in your project, and that is third party inspections. And joining me today to talk about third party inspections are my friends Rick Scott with B C engineers and Rhonda Lynn Reilly with exterior inspections. Thanks, guys, for coming on. |
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| **REECE:** | Good morning. |
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| **RL:** | Thank you. |
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| **CURTIS:** | Good morning. I am super excited to have you guys on today. You guys are on a lot of our projects with us. And like I said, having a third set of eyes, a fourth set of eyes, a fifth set of eyes on every project is something that we've talked about on this show quite a lot. Just the importance of verification, the trust but verify mentality that we should all have when we're executing a any construction project, whether it's home commercial, whatever. |
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| **CURTIS:** | And you guys provide some essential services. So why don't you guys take just a moment and tell us about your company, kind of what you do and what services that you offer as it relates to third party inspections once you go ahead. |
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| **RL:** | Adrenaline. Well, I'm Rhondalynn Riley. My company is Exterior Inspections. We've been around since 1997 doing construction console team. Our primary business is building envelope inspection. We started out in the resale market, so we started out on the back end of projects finding issues. Right. And I quickly learned that I'd much rather be on the front end of a project and try to troubleshoot and avoid issues versus trying to find them on the back end and fix them later. |
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| **RL:** | So we do inspections from prior to construction, start all the way through to the back end to make sure that the house is performing. |
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| **CURTIS:** | Awesome. |
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| **REECE:** | Great. Good morning. I'm with BEC Engineers Consultants. We're a full service civil and structure engineering firm. We primarily look into residential construction and the greater Houston market, and we do everything from the design for the structural foundation framing. So we're on the tail end or on the on the upfront end with the architects and the designers. And we also have civil engineers that will do the drainage wells. |
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| **REECE:** | So preparation for flood planning control, management of the tension, everything. And then we have a full department that's full service on the inspections during the construction. And so we have a team that goes out, looks at every stage of the construction, as we call them, just to make sure there's a third set of eyes that sort all that level of insurance and assurance that the home is getting built and ultimate in accordance with the design intent of the structure engineering. |
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| **REECE:** | And as Kyle Birken mentioned in one of the early episodes, it's sort of that insurance that helps you make sure that you've got the product that is designed. A lot of times things for human things can get missed. We're not affiliated with the city by any stretch of imagination, and a lot of people, you know, say, hey, I had your inspector out and turned out it was a city inspector that wasn't one of our inspectors where we are third party inspector. |
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| **REECE:** | And that's a big message that I'd like to get across, is that we are not affiliated with the city. You know, the city does require structural engineering letters and inspections to be done throughout certain phases of the home. Not all phases, unfortunately, but some people like to just scrape by with a minimum. But we always recommend that, you know, our guys are familiar with our plans, know what the intent is, and they know just, you know, how to make sure that everything is getting and constructed in accordance with that design intent, to make sure there's no issues that are covered up and sort of hidden and might come out in the wash later |
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| **REECE:** | on when the project's done. I was too late. |
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| **CURTIS:** | So and I've said this before, and I'm not trying to pick on the city inspectors because those guys are definitely overworked and underpaid. They're government employees. But, you know, the city inspectors typically have certain things. They look for me, they're code inspectors they're supposed to be looking for building code. But because of their workload, how many houses they'd look at every day and kind of the broad knowledge that they have to have of kind of everything, they're not able to catch everything. |
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| **CURTIS:** | They're not looking for everything. They're not necessarily looking for the same things that you guys are looking for, right? Correct. You guys are more so they're generalists and you guys are more specialists. So talk about the things that specifically you work for. And when you go to a site to do inspections frontline. |
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| **RL:** | So I would like to start by saying, you know, that is in and of itself the city inspections and the fact that they have really high caseload is in a in and of itself a reason to have a third party because they are looking for code, which is minimum standard for building number one. And number two, you know, we're all human. |
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| **RL:** | So the more eyes, sets of eyes on the project that you can get, the better off you're going to be, the more likely you're going to catch something that needs to be corrected. And then secondarily, we're there to ensure that things like manufacturers, installation instructions are followed if it as it pertains to for me, whether barriers flashing, that sort of thing, and also to ensure that maybe some best practices are implemented in a project based on just experience in the field of seeing things that have previously failed. |
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| **RL:** | So yeah, I mean that's, I think more eyes you can put on a project, the better off you are, and then again implementing some best practices so that you don't have problems later. |
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| **CURTIS:** | Yeah. So specifically you guys, you mentioned things like the weather barrier, the RB, but you do a ton of stucco work. You know, that's one of those things that the city inspectors, they'll come out and they'll check that, you know, the lath is in place. They might check for a sweep screen if you're if you're lucky. But again, that's not something that is. |
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| **CURTIS:** | Those guys are trained on all the stucco details that need to be in place. That's not a great product usually used in the market anyway. It gets used a lot because of cost, but, you know, there's some there's some knowledge that has to be there to achieve a good stucco installation. And that's one of the things that you guys look at. |
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| **CURTIS:** | Right? |
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| **RL:** | Yeah. So we specialize in cement, plaster, stucco. That's the industry that I came into the inspection industry from. So, you know, I'm going to have to respectfully disagree on. Okay, Stucco is a wonderful product properly installed. And I am going to say this is it. I haven't been to very many projects where it was actually the stucco that was the point of origin or the basis of the problem. |
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| **RL:** | Right. So we look at whether barriers and flashing in the building envelope before it ever gets covered. Because I always tell people that if your building envelope is not intact and watertight prior to covering it, regardless of what you're putting on it, siding, brick, you know, metal panels, stucco, it's not going to be watertight after you cover it. |
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| **RL:** | And then, you know, we see it through to the end to make sure that it's waterproofed as well. So when we come in and do a final inspection, we're looking at all of those things. It could cause that exterior cladding to either prematurely wear or fail in some way. |
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| **CURTIS:** | Do you guys also review design details for that wall assembly? So if you're involved or if the architect of the builder talks to you before the project starts, will you guys review that that that wall section to make sure that that's something that you approve of? |
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| **RL:** | Absolutely. So we'll do a plan, review and detail review and give recommendations for these detailing or best practice wall assemblies. And we're looking at not only the wall assembly itself, but the detailing how it interfaces with the roof, how it interfaces with the door, how it interfaces at a balcony, or how, you know, dissimilar materials like brick and siding or stone and stucco, how those interface and how to how to time together in a watertight weather type manner. |
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| **CURTIS:** | And increase you guys are also involved on the front end obviously because you're doing the structural design. Yep so talk about you know after you guys do your structural design or kind of during your structural design, I guess how are you guys coordinating with the builder and the architect to make sure that you know that the design and tenants understood that there's no conflicts between architectural and structural and maybe even things like truss design, like how much coordination is involved before the project ever starts and then how do you make sure that that is implemented in the field? |
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| **REECE:** | Great question. Every one of our contracts does have inspection services involved in and to our proposals, and we try to get them as well as we can to sort of look at the pretty poor pieces, everything from the very starting point for our clients, builders, people that have worked with us before, they know the process for new clients. |
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| **REECE:** | We're trying to be a bit more proactive, and these are the drawings. Here's the process that you can expect to see going forward. These are the services that we provide. If you're in a TR one storm area, that's super important to get us involved at the upfront end of construction because we need to be submitting the necessary paperwork to the to the train website. |
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| **REECE:** | And then we need to be making sure that monitoring every single step of the step of the way, because the burden, the proof as effectively put on the engineer to do that here in Houston, that's not as important. But there's a lot of times when things will get built and then the city rate tags them. You need an engineer later on and that's pretty done. |
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| **REECE:** | And so what's left? Well, I can sign and see or something that we didn't have any representation to verify that happened. And that puts everyone in an awkward situation. So trying to be proactive to get up front early is super important to us and for new homeowners, when our client is the homeowner, we really try to make that work and there's always room for improvement or is trying to improve our services and our processes to make sure that that's well communicated to them. |
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| **REECE:** | Because, you know, we've had many times where Congress is out on site and the questions asked and then we're scrambling to try to get an inspector out there that day, like looking at looking at repairs and all sorts of cars. There's never a dull, never a dull day. And the office when it comes to inspections, there's always something new going on. |
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| **CURTIS:** | Which inspections do you recommend people do? Like you mentioned. |
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| **REECE:** | You say all of them. |
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| **CURTIS:** | Up here, inspections. |
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| **RL:** | All of them. Yeah, I agree. |
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| **CURTIS:** | How many legs for each of you? How many inspections are there on a do you recommend on a typical custom home build project? |
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| **RL:** | Obviously, it's going to vary based on the project size, right? We normally do about 4 to 6 job site visits per project, sometimes more, especially if there's corrective actions. We're going to call for a re-inspection so that we can come back out and documented correction corrective actions have been made. And so, you know, just to your point about documentation and it's so hard to then sign off on something after it's already occurred, that's all the more reason to have the inspection, because now you have documentation that you know of how the structure was built. |
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| **RL:** | So that if there is a problem later on, you have photographic evidence or other documentation to go back to and you're not having to disassemble a property in order to figure out whether it was done right or not to begin with. Yeah. |
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| **REECE:** | So I'll start with the minimum. Lee, if you're in the city of Houston, they require if you're doing a slab on grade protection, they typically would need an internal letter, special inspection for the elongation of the tenants to be done. Sometimes the people can be taken care of by the by the city, and they don't require that They used to. |
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| **REECE:** | But some I'll also say to say that some projects or some people manage to get by without inspectors and then some people just maybe just have a short, short straw or something like that. And they get flagged by the city that how you need this letter. And so minimum, Lee, you need the allegations and the city also want won't sign off on anything regarding CMU. |
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| **REECE:** | So your concrete masonry units or steel the steel on the project and I'm talking about structural steel written they typically will need a wild and bolt letter as well. So those are the three minimum inspections that usually need to have a third party engineer with a letter that is signed and sealed by a registered Texas P to show that the allegations are in accordance with the plans and stressed accordingly based on how we measure the elongation of the tenants. |
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| **REECE:** | Same use as and same is the one this we get done or asked to do after that after the fact because the city just after Harvey made it more of a requirement never used to be that. And then they sort of started mandating it and so we had all these walls that were granted and they're like, hey, can you write me a simulator? |
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| **REECE:** | It's like, sure, I'm looking at a wall. I don't know what's in it. And it happened, you know, more than I'd like to admit. |
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| **CURTIS:** | Just to clarify that for people who are listening, they don't know what that means. So when you build a seam, you all come in commonly known as like a cinder block wall. We see a lot of those for elevated houses, houses on a crawl space here in Houston. Other parts of the country who are listening may have a basement and built from a CMU perimeter wall or stem wall, but those CM use those blocks have to be build. |
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| **CURTIS:** | And then typically there's some rebar inserted into the into the blocks. And then that kind of holds them together and keeps them from shifting. Is that right, sir? |
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| **REECE:** | Correct. And then the steel, as I mentioned, is the other letter that the city of Houston typically requires. If you're building in West, you require that the engineer does the pre-poll pull monitor. So what that means that there is an engineering representative on site throughout anytime concrete is getting placed watching the trucks are not necessary during the testing, but watching the trucks, making sure that the placement is done correctly. |
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| **REECE:** | And then in the elongation ends or any anything regarding the foundation and then the engineer has to sign off on a foundation certification and they also require framing as a minimum to that includes as a minimum the framing inspection, checking all the beams, the walls and layouts, roofing rafters, joist, everything on the plans pretty much, yeah. And then a sheathing or nail pattern inspection, which is looking at the nail pattern of the sheathing that goes around the house. |
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| **REECE:** | And for any interior share walls are added and they also require a clipping strap and strict inspection to be done. That is all the clips and straps that are used to connect the rafters to the walls, studs to the floor, diaphragms and then the bottom plates to the foundation. |
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| **CURTIS:** | So that that city is actually requiring the things that should be inspected anyway. Yes. So they are helping you all out by requiring those services, whereas a lot of builders or homeowners or just bypass that because they're like, I don't spend 300 bucks on that or 500 bucks on that, right? Correct. Yeah. I mean, those are great points to have you all out to the job site anyway, right? |
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| **CURTIS:** | So yeah, the city requiring that is a good thing that protects their citizens within their city. Probably more cities should do that honestly. |
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| **REECE:** | Yeah. And I think as everything sort of tends and we do have a more of a CIA system where you know things happen and more regulations are put in place. I mean that's tending to be more and more or trending more and more in that direction. Yes, sir. You know, to list to answer your question, to list a few extra inspections. |
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| **REECE:** | We do it if we were to do a full service. I mean, we start from right from the get-go on the ground. If you've got a home that has dropped, as were our inspectors out there with a tape measure drop in the tape measure, making sure that the piers are dropped to depth, having a representative from the geotechnical engineering firm and the structure engineering firm is highly recommended when you're drilling, Piers, because quite often you're you know, you might run into complications on the drilling. |
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| **REECE:** | You will hit water, you'll your bell will start collapsing, and you need someone on there to be able to make it a very, very quick executive decision to help the process keep moving. Otherwise, you have got concrete, something there. Big delays like that can happen. |
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| **CURTIS:** | So I think a no builder wants more inspections. So this sounds weird coming from a guy who also builds homes. But I think, man, there's several phases which I think we need more inspections, whether it's the city inspector or the there's more situations where I think the city needs to require a third-party inspection and that is just purely from protecting the homeowner, the consumer standpoint in the longevity of the of the home. |
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| **REECE:** | And if I can add, we are talking about the city inspectors before. And I think that is why it's important to have a respect for every professional and the process of a home building. Definitely, you know, on the city inspectors, they have a really hard job. I mean, they are looking at you know, they can have a day where they've got a lot of inspections and they walk into houses with five different sets of engineering plans, five sets of different architectural plans that have time to look at every single note detail, general specification, general tech, typical details, typical notes. |
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| **REECE:** | And so trying back to the third-party inspection, you know, our guys are trained specifically on our drawings, on our process and how we do things, and they can catch a lot more just due to that advantage that a city inspector may be out of catch. So they are more going off of their experience, what they can see and what they're doing and just doing the best that they can do to do that. |
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| **REECE:** | And so I think there's a lot of advantage and paying, you know, a very small amount of money for relative to the cost of your potential dream home or whatever it is you're building at a big investment to make sure that you get right done right the first time and you're not paying tenfold, you know, maybe even a hundred fold for the cost of the inspection and issues further on down the line. |
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| **REECE:** | If it is if something's missed. Yeah. |
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| **CURTIS:** | Again, you're asking a guy or gal who, um, their city inspector who may have 20 or 30 houses, they're inspecting a day, if they're working an eight hour day, they have to do, you know, 3 to 5 houses every single hour. And they, they try to group those things in geographic location. But, you know, they're driving around. |
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| **CURTIS:** | They are having to get access to the job site. And I mean, it's a tough job. And you're asking them to in, let's say, a ten- or 15-minute max stop on a job site to catch what really is, you know, an hour or two worth of walk around in five or 10 minutes. |
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| **REECE:** | But most framing inspections are minimum minimally an hour long. So a good-sized custom home or had 40,000 square foot homes that have taken two days to inspect with two people. And, you know, we get multiple pages, you know, just multiple red lines. And as a city inspector, you cannot put that assurance or level of insurance on a city inspector to be like, yeah, no, they, they signed off on my framing. |
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| **REECE:** | I'm good. It's just that's, that's not fair to them and it's also not fair to the homeowner as well. |
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| **CURTIS:** | And again, a lot of the builders just have this get it done. Get me to the next step mentality. I know my guys did this right and we see all the time people that just they trust their subcontractors too much. You know, they’re like, oh, I've been using this guy. He's been framing for me for 20 years. He knows what he's doing, or this guy's been doing stucco for me for 20 years. |
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| **CURTIS:** | I trust that guy. Right? And those are the ones that we often see the most screw ups on, where maybe the builders just don’t have that level of knowledge because he's just always trusted his subcontractor and he's never learned how it should be done because that guy knows how to do it right. |
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| **RL:** | Well, and I think, you know, that may be a sign of a quality builder when a homeowner is looking for a builder. Right. Is that builder willing to bring in third parties to verify their trades work and ensure that that builder is doing the best job they possibly can for somebody who's purchasing or building a home? |
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| **CURTIS:** | Right. We suggest we're like, hey, here's our engineer, you know, Rondo in toner. All the all these partners that we have here are here are the services they offer. Here's the inspections. They do we recommend that you do all these not because we're not because we're bad, because we're human and we miss things, and our subs are human, and they miss things. |
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| **CURTIS:** | And, you know, even if a good builder or a good project manager, you walk around and see the same thing every day and you kind of become blind to certain things. It's just human nature, right? |
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| **REECE:** | I think a good builder willing to do that, promote that level of transparency and hey, look, I want other people looking at my work. I think that speaks volumes to the quality of work that they're willing to put their name to being a builder that's like, God, I want to do that. I mean that it's a lot easier to hide things, particularly if you're a new home owner. |
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| **REECE:** | You've got no idea. Like, you know, Brian hit on season one. I mean, there's a lot of things you just don't know what you don't know until it's too late. Yeah. And so as a builder wanting to do that, I for me, my professional experience, you know, the good builders, the ones that like I want all, all, all these services and I want that to be my standard. |
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| **REECE:** | I mean that's that speaks volumes to us because well, we're looking for quality partners too, to partner with them. And I love it when we have a builder that wants that professional agreement that, you know, as a as a minimum basis, we are going to do all these things. I don't care if the city needs it. I want this to be done so that I can tell my homeowners that they've got a quality product. |
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| **CURTIS:** | I like to put it in perspective with kind of the costs of the house, too, you know? And, you know, we're talking here mostly about custom homes, which I would put in the it's kind of the general range and our market of, you know, $800,000 to several million. So we're not talking about a cheap home. Right. So in perspective, with the cost of the home, you know, the cost to do these inspections is a very small fraction of the of the overall budget. |
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| **CURTIS:** | And yeah, I get it. I mean, $1,000 here is it's still a lot of money. But when you think about, you know, what you're investing your money in, in protecting yourself, it's a real small cost. So I just wanted to ask you really quickly, what are some typical cars that people can expect? And again, this is the Houston market in 2023 on a home of indeterminate size for this conversation and bullets, I don't know. |
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| **CURTIS:** | Let's just say it's a 4000 square foot custom home with it's with, you know, a mix of stucco and brick or something like that, just to kind of paint a picture of what we're inspecting, What kind of past what should people expect from each of you guys or your services for a project? |
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| **RL:** | So I would say that we're relatively inexpensive in comparison to some, you know, a person can expect 1200 dollars to $3,000 depending on the size of the project and how involved we are, you know, whether they get us involved on the front end and then do all the inspections in between and then final out with us. Yeah, 1200 or 3000. |
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| **RL:** | Okay. |
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| **REECE:** | For us from the inspection side, our typical custom right is $270. Sorry turn to $75 for a inspect a BMC inspector to go out on site do they do the poll for do the observation for an hour and a half. And then those photos that report the photos then reviewed by the engineer of record and a letter was provided that says these have this has been reviewed. |
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| **REECE:** | These are the list of deficiencies, if applicable or, you know, clean letter and the engineered seal. |
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| **CURTIS:** | So to 75 per so on a project if you're doing four or five inspections total on a project maybe. |
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| **REECE:** | So we all typically tried out for a site visit. So if you've got if you're able to do multiples, if you're doing like framing club and strap on the same thing or role as into one, you know, double charge for the same site visit. Right. So we look at it typically more from per a site visit as how we sort of were to get you multiple observations and then if there's over time, you know, if that if that inspection is ends up going up to 3 hours, we document that, explain why, and then and then a charge for that time of this trip fees, other things, those are other expenses that |
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| **REECE:** | typically get built into what we do if you if we for our professional service agreements our clients that we work with a lot, sometimes we can come down on those prices and for the for the repeatability and just to get that yeah, get those out there. |
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| **CURTIS:** | So people might spend another 1000 1500 dollars over the life of a project. Right. So you know, combined, if you hire both of these companies, you might spend 3000 bucks or so on your project. We were supposed to have one other person on the podcast with us today, Ryan Atlee with Turner Home Matters. Turner's been on here three times, I think already. |
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| **CURTIS:** | But Ryan is a guy who does field inspections for Turner. He was going to be with us to see their inspections are included in their overall project costs that they charge. So unless you're asking them to do extra things outside of their scope that you've already paid for, there's no extra cost. So, you know, when you hire them for building performance design, they include, you know, I think, three or four inspections during the process. |
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| **CURTIS:** | And so, again, in your overall project budget, if you're talking 801 million, 2 million, 3 million, an extra three or $4,000 is a very small line item on your budget to give you peace of mind. Right? |
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| **RL:** | I agree completely. |
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| **CURTIS:** | What are some what are some typical things that you I guess some repeat things that you see that are problems that get missed by builders, subcontractors? What are some typical things that you catch in the field? |
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| **RL:** | Well, so we typically do a minimum of three inspections. Our first inspection is what we call the weather barrier substrate flashing inspection. And so it's not substrate like Reece's described, but rather, you know, what is what is the exterior cladding going over? That is our substrate. So the typical things I see there is just rips, cuts stairs, improper interfaces with related balconies, lashings, roof flashing, window flashing, store flashing. |
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| **RL:** | You know, if you're doing a sheet material synthetic weather barrier Right. And it's got cuts and tears and that is the place where water is supposed to go. If it gets behind the cladding, that can become problematic. And then, you know, our next inspection is a lath inspection on a house. It is a stucco house. And I can say that we do just inspect that to a higher level of performance than you would get from the city. |
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| **RL:** | So proper attachment of the lath, proper fastening and installation of accessories and then finally is, you know, people have this idea that caulking is ugly. It doesn't have to be ugly. And I think that that if more people actually saw it and noticed it and knew what it did, they would maintain it, you know, every 1 to 3 years. |
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| **RL:** | So we're looking on the back end to see everything is sealed up. And, you know, a lot of times caulking falls by the wayside, especially on houses that are brick veneer or stone veneer, because for some reason people think that that mortar is water resistant and it's not. |
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| **CURTIS:** | And caulking is something that has a life span. It's not, it's not a lifetime product. It requires replacement maintenance. Right. So, in fact, that's one of the things that we had a guy on a few weeks ago, Eric Kline with Good Smith Home Maintenance and Repair. And we talked about how that's one of the things that people just homeowners never check. |
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| **CURTIS:** | So once they're in the house, they're living there. Also, speaking for myself here, how often do I go out and walk around my house and look at the caulking in my house? And I know better, you know, so and you guys get hired also a lot on the resale side, right? So somebody buying a house, you guys will get brought in to look at, you know, the stucco or the masonry and do it in a pre-purchase inspection, too, right? |
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| **RL:** | That's correct. And, you know, probably the most instances of deficiencies on that in that pre-sell inspection is, again, sealant and keeping the dirt down off of the house and, you know, maintaining where your sprinkler heads spray. Right. If we're watering the house three times a week instead of the turf or the or the raised beds, it's not going to grow more house. |
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| **REECE:** | That's also going to cause foundation. Houston is notorious for that and are watering trees and swimming pools are three biggest reasons for foundation movement. So I you know I definitely agree that you have people like yeah, I water my house, I'm good. I'll set 10 minutes for every zone. Well you're going to stage the watering per the zones if you've got a zone down the side of the house that's part gravel and drainage, it doesn't need watering for 10 minutes like the front yard or the backyard mine. |
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| **REECE:** | So you've really got to, you know, don't just do a blanket time allocation. You got to really tailor up to each zone that you're doing. And that's a huge reason for why we get caught out on the consulting side to look at foundation movement, foundation issues. And as you said, I mean, that was what happened with the season one thing, the drainage, and that's why I was at the biggest reason for foundation just overwatering block drainage block holes, people third plants all the way up against the house and block the weep holes. |
|   |   |
| **REECE:** | And guess what? The water can't leave holes or painting the holes. That's another big one we see. And you're going to see that. |
|   |   |
| **RL:** | Looking and painting them. |
|   |   |
| **CURTIS:** | Yes. So a lot of that is a lack of homeowner education, too. You know, the builder doesn't tell the homeowner, you know, So when the person moves into their home, the builder doesn't take the time a lot of times to explain what these different systems of the house do and why they're important and why you shouldn't put a flower bed against your house. |
|   |   |
| **CURTIS:** | They don't explain what that that swale is that's made to take the water away from the house. And so I can tell my story example, uh, Brian and Heather didn't like the way the swale looked in their side yard because their dog kept getting muddy. So they're go, well, just add some dirt there and build it up and no more swale and my dog's cleaner. |
|   |   |
| **CURTIS:** | But guess what? Now the water is coming back toward the house. |
|   |   |
| **REECE:** | And I can send you a link to the FBI. Published a paper on homeowner maintenance that if you have in the Foundation Performance Association of Houston just you know, it's a document that just goes through homeowner responsibilities and maintenance and things to sort of upkeep that. |
|   |   |
| **CURTIS:** | So yeah, he'll send that to me, I'll be sure and input it on the notes on the podcast for people to, to read that too. |
|   |   |
| **RL:** | So can I just add to that. This is this homeowner maintenance that we're talking about is a good reason for us to be retained as a third party inspector about 11 months after the closing of a home and then regular maintenance inspections are ongoing because you just said yourself, even you don't walk around your house with a critical eye looking for things that need to be maintained. |
|   |   |
| **RL:** | Right. So even after someone closes on the house, maintenance inspections are not a bad idea. |
|   |   |
| **CURTIS:** | I think a lot of that goes back to and I've touched on this before with other guests, that I think people are just less involved with their homes now in general than they used to be. You know, you think about like my grandparents, me and my grandpa was always out working on his house or walking around doing things around the outside of the house. |
|   |   |
| **CURTIS:** | And whether it's busyness or just a lack of knowledge, people just don't spend as much time tinkering on their house. Now, in general, especially in Houston, for many months of the year, we are more indoor creatures. And so, you know, and I think this really comes into play a lot on the on the sides of a house in a city like Houston where you get five foot setbacks. |
|   |   |
| **CURTIS:** | There's nothing interesting to see on the sides of your house and you don't have that much reason to walk around and just stare at the side of your house. In fact, there's one side of my house that I never walk down unless there's a problem. So yeah, I think that plays into that kind of the lack of maintenance. |
|   |   |
| **CURTIS:** | But going back to, you know, kind of things that are typical failures. So I guess let's talk about what are typical failures that you see and how can those things be prevented. So on the engineering side, do you have any examples of something that if it's not done right and this is something that happens a lot, it's going to cause long term failure or long term problems. |
|   |   |
| **REECE:** | Along the. |
|   |   |
| **CURTIS:** | Curve as long as you want? |
|   |   |
| **REECE:** | You know, it's a great question. And I asked those I mean, that question. He's our senior inspector and product manager for all of the inspections business, oversees everything before it comes to either me or any of our other engineers. And, you know, I thought he had a really good response, and that was that, you know, the list of deficiencies really comes down to the project manager running it. |
|   |   |
| **REECE:** | If that project manager, the PM of the job really has the time to actually look through the punch list, really walk the punch list when you know the whole episode on punch list and the importance of doing that. That list for us of, of and corrections and issues go down immensely. You can tell the people that really know how to how to sort of work that out versus like, I'm just going to trust someone else to do it. |
|   |   |
| **REECE:** | And, you know, that happens a lot where all do an inspection. We have a list of 20 deficiencies that get up. We can't. We record how the deficiencies are done, handled. We get out there, nothing's done, nothing's changed. And I got to tell me I did that. |
|   |   |
| **RL:** | To. |
|   |   |
| **REECE:** | So, you know, to speak specifically to some of the you know, I just wanted to mention that because that's a very important factor. And I think really having engaged PMS that can really walk the jobs and do that as key to making sure that that as minimized to speak specifically to issues. I mean, I could go on for a long time, but when it comes to foundations, a very typical thing is dirt and the great booms, if you've got a price tension foundation, you know, you get a nice clean make up and this happens a lot. |
|   |   |
| **REECE:** | You got a nice clean make up, a formal water set, everything's done. And then you've got, you know, we do the inspection, great guy comes along and does some final grading to sort of fill in the gaps in his process, do it against that and all the dirt falls through the gap and is sitting nice and around on cables. |
|   |   |
| **REECE:** | Well, that's great. Concrete can't go around the table if this dirt there and you know, our inspectors are you know are this or taking it off. I've even been on job sites where I'm digging dirt out like concrete, getting pulled. And I'm like, guys, like, get this thing out of here. Like, what's going on? So that that's just a general thing. |
|   |   |
| **REECE:** | It sounds funny, but that's a serious issue that we have. A lot of reports are just clean debris from the great booms, clean dirt, making sure that that you've got a nice solid system for your for the concrete to be poured and gauge the structural components that are necessary to make that foundation work. A lot of times, rebar, mist and little details will have a lot of little extra details for drops, things where just noise and bars, elevator drops, you know, beams that need to go around, elevator drops. |
|   |   |
| **REECE:** | Sometimes I just get completely immersed or beams in general. More humans. I'm not doing this. It sometimes will have very specific details on how we need to drop. Or a great one is if you're in a floodplain, you have to mitigate for the for the flood control. That means that so like a bathtub, you got water and a bathtub and there's a national level for every element that you put into the bathtub, raise that water level. |
|   |   |
| **REECE:** | The job of mitigation is to make sure that you remove as much as you're putting out so that that water level doesn't increase as a net as a net volume of fill. And so what happens is we'll design drops and drop slabs never as a unique way to get a work, get around having the homeowners spend a lot of money digging a pond or drop the foundations in the middle if we're going to save on grade. |
|   |   |
| **REECE:** | What's with post tension, painting walls and that's a wall specifically drop that foundation so that it's out of the middle, that's out of the floodplain. Mitigation controlled wall. The guy comes back and says, I don't want to do that. What's going to party? How I usually do and just put a 12 and a two by 12 on board and form the thing up one out of four, a lot of a lot of concrete and that floodplain. |
|   |   |
| **REECE:** | And then if it gets caught then we're having to dig holes somewhere else. So even details like that, those, those are things that A, you'll never, ever get coverage from a city inspection because they're not looking at the civil plans. I don't know if that's required. And so that's a that's a that's a common thing that we see on the structural side, on the foundation and framing a lot of a lot of changes. |
|   |   |
| **REECE:** | A big thing that we see red lines, changes that are made in fields that are not read re coordinated back through the engineering team or that are moved or things that are substituted out. People don't like putting an engineer beams on. Had a lot of builders feel like hey you've got this five and a half by 18 inch beam. |
|   |   |
| **REECE:** | Some of that with too much falls like nerf would have occurred. We would have done that. There's a reason why we're doing that. It comes down to performance design, performance designers as making sure that the building doesn't perform just to the to the code minimum, but it's also making sure is performed to the attendance of its use. |
|   |   |
| **REECE:** | And so if you got a very modern home, big, long spans, 30 foot long beam card minimum says that beam can probably deflect about an inch if you're going to go by the code minimum. And that's not what we designed to. Yes. Or one inch isn't acceptable to any homeowner. |
|   |   |
| **CURTIS:** | Yeah, the homeowner doesn't want their beam sagging an inch on their beautiful modern home. |
|   |   |
| **REECE:** | Level five finish. I'm not going to say, yeah, that's fine. Yeah. |
|   |   |
| **RL:** | Well, and two, during the structural inspection, you have trades that are making penetrations through structural elements. Right. Well, okay, so if, if you have designed something that should not have a hole in it and the mechanical contractor thinks that's a good place to run their duct work. Right. That can be a problem. |
|   |   |
| **REECE:** | Yeah. And so, you know, the beams are big issue that we commonly see just either substitutions which some allowed, some are not. They're just wrong beams for the wrong places. Penetrations, plumbers, electricians will come through and destroy wherever they want. A good plumber is going to ask the question, where can I draw this hole? I need to root this thing. |
|   |   |
| **REECE:** | You need to provide that access. Bad plumber is just going to be like, yeah. So I mean, honestly, I've seen some awful things and I liken it to standing on a branch and sort of cutting, cutting the branch and you're standing on the outside because, yeah, I mean I've seen notches out of entire. |
|   |   |
| **CURTIS:** | It's like a Bugs Bunny emerge. |
|   |   |
| **REECE:** | Demonstrates exactly that. And just um, you know, you get this big beam and, and they just notched a 12 inch chunk out of the beam and thought that was going to be okay. I'm wondering why everything's deflecting. It's like, well, here it is. |
|   |   |
| **CURTIS:** | And for, for consumers listening, every engineered beam has a certain place within the beam that you can drill holes and there's a certain number and diameter of holes and kind of where in the overall length of the beam can you drill the holes? And if that's not followed, it's going to weaken that that beam. |
|   |   |
| **REECE:** | And yeah, and to that point, a very common issue that we see is that choice too. 12 or conventional lumber is handled differently to engineered wood beams, which is also handled very differently to tea jars or injurious to the engineered beams that look like a little high beam. If you look at the cross-section, it's like a tube by a member at the top. |
|   |   |
| **REECE:** | And then there's plywood in the vertical web. Those have complete flip flop of where you can put the holes versus one or two. But 12 is right, because of the way that they're engineered. And so a lot of people just think this I've always done it. Someone's going to go drill these holes right through right through this year. |
|   |   |
| **REECE:** | Like, we can't do that with your eyes, and you have to follow these guidelines. And so just having that education understanding very expensive when that gets done and a five minute question could have saved a very expensive retrofit of trying to fix and repair some things like that. |
|   |   |
| **CURTIS:** | And I'll say that this is one of those things that if there's a high level of coordination during design, a lot of this, the stuff going to get headed off early because if the if the builder, the HVAC contractor or the engineer are talking about where things are going to be run, that can get, you know, mitigated during design process because, hey, we're going to run our ducks here, We're going to run our plumbing here and let's use a truss, let's use trusses instead of I-beams. |
|   |   |
| **CURTIS:** | Let's make sure that that we have a path for our duct work. And then then we're not drilling holes and structural. Yeah. |
|   |   |
| **REECE:** | We had the project just a few months ago. We had that coordination meeting up front and you pointing out how access this that needs to go through this way. All right, great. We're just that beams on the wireless. Let's really think about this. Let's turn that let's turn the trusses so that they get installed correctly and you can actually get those where they needed to go without trying to put steel plates or drill holes or, you know, switch out steel beams like that on the fly in the middle of construction. |
|   |   |
| **REECE:** | And that's just so integral to stopping being patient, you know, making sure that's coordinated. And the design phase can save a whirlwind of issues at the tail end. |
|   |   |
| **CURTIS:** | I just wanted to say that all of these things are designed to work together as a systems, right? And especially on the exterior stuff that stucco, the masonry, whatever it is. All of those products are a system and they're designed to be installed a certain way. Certain materials are more compatible with each other, too. And so, you know, I think people make a lot of substitutions. |
|   |   |
| **CURTIS:** | They're like, Oh, well, that product's too expensive. I'm going to I'm going to substitute this, whether it's a beam or whether on the RV, we're going to use these products that aren't compatible because it's cheap to do it that way. So I think one of the things that you look for on the land during inspections is making sure that that that system of that wall assembly is intact, too, right? |
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| **RL:** | That's right. So, you know, specific brands are made and manufactured with a number of components and tested that the components by this particular manufacturer all work together in harmony to make sure that that house is watertight, airtight, whatever the case is. And for example, I've had projects where we had one brand of weather resistant barrier, but the flashing around the windows was a separate and different brand. |
|   |   |
| **RL:** | The problem becomes is a lot of then finger pointing when there is a failure, who's responsible? And if everyone is responsible, generally that means no one is responsible, right? You know, there's transfer warranty. There's transfer responsibility. When you're using brand X tape on brand Y weather barrier and brand, you know, y weather barrier in relation to something else. |
|   |   |
| **RL:** | Yeah, I'm a proponent of single system sourcing for all the that make up the exterior building envelope so that it minimizes the finger pointing and it minimizes the potential for failure because those products weren't tested and approved to work with one another. |
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| **CURTIS:** | A great example is in fact, I had this conversation with Miguel from Tamlyn back at the Builders Show in January. We talked about this and, you know, Tamlyn, you know, all the manufacturers, they're going to test their product with their own product. I mean, they will sometimes bring in other products to test for compatibility, but when they're in there, they're testing facility, they're using their WRP, they're tape, they're flashing products, and in fact, they'll give a different warranty. |
|   |   |
| **CURTIS:** | If you use the whole system. So if you just use one component, it might be a five year warranty. If you use all their components, you might get a ten, 15, 20 year warranty, whatever that is. So you don't want to wait until you have a failure or a lawsuit or whatever. And then you find out later that those products voided each other out. |
|   |   |
| **CURTIS:** | And now there's no warranty. |
|   |   |
| **RL:** | That's exactly right. Yeah, they are tested together. And like you said, someone who has served as an expert witness in construction defect litigation where people have had leaks on the exit from the exterior of their house. Right. If you know, you have brand X tape around the window, but brand Y, whether barrier X is going to say, well, we weren't manufactured to stick to brand, why? |
|   |   |
| **RL:** | And of course you have a failure. And now it really falls back on the builder. And if the builder doesn't have the insurance or if the builder is not there anymore, then it falls back on the homeowner. |
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| **REECE:** | On that topic, have you ever seen people will try to put a sticker on through the reply? |
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| **RL:** | Absolutely. |
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| **REECE:** | So that's that. In terms of substitution, that's a huge one we've had because the cost of plywood went up astronomically two years ago and that's gone up and down and fluctuated. But a lot of people were switching plywood to apply and plywood. Everyone knows what plywood is. RSP So apply is a much thinner version that is used as a structural sheathing and people just think I can switch those out of those letters. |
|   |   |
| **REECE:** | Then people said that they're equivalent. But when it comes to stock, I know you can't attach stucco to glorified cardboard. |
|   |   |
| **RL:** | Sorry. So. So that that product properly installed is a weather resistant barrier. And it really does change how you attach the lath to the house, because you're right, it's not it may be structural from a raccoon perspective, but certainly it's not capable of holding a weight of 13 to Â£16 per square foot of stucco. So, yeah. |
|   |   |
| **REECE:** | Perfect example of when someone might swap something out for a budget without going following the process on that channel of thought all the way down to the to the inth degree. And it can cause issues down the line. |
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| **CURTIS:** | Yeah, I know there's plenty of some builders engineers that that might argue that thermal ply is an acceptable substitution. I would never use it. I would never recommend that people use it again. It's a waxy cardboard essentially that you're that you're wrapping your house with. In fact, we posted a video on our Instagram this week to videos of a several million dollar house just down the street here in Bel Air where the builder did the removal sheathing and it wasn't even installed. |
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| **CURTIS:** | Right. There's gaps and tears and reversal apps on it. It's just it's a lost the whole house has a lawsuit waiting to happen. |
|   |   |
| **REECE:** | But it's a case of where you know and not to knock the product. I think everything has an application. Everything has a place is not a direct substitution of RSP despite what some people will argue. I mean, I've heard argument saying that's equivalent to RSP or plywood. That's not that can be used, but it needs to have a place that needs to be rerun through the engineer. |
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| **REECE:** | You can't use it on three story homes, you can't use it on areas where you're relying on that plywood to do that. Now, in many, many instances you can we can make it work and we've had to make it work on many, many of our projects and make those substitutions. You know, just yesterday I got asked to switch back from zero fly to plywood because then reply is no more expensive than plywood. |
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| **REECE:** | I'm like, Wow. |
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| **RL:** | Well, this is all an argument for having our inspection on the front end of the weather barrier substrate flashing inspection, because those things get improperly installed all the time. Yeah. |
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| **CURTIS:** | Last question that I have is do these inspections ever get confrontational? You know, again, some builders want you guys there, but we make it part of our process. We suggest that you do these inspections. I imagine that sometimes you guys are brought in, and the builder doesn't want you there or the subcontractors don't want you there doing that inspection. |
|   |   |
| **CURTIS:** | Do these situations ever, ever get confrontational? |
|   |   |
| **RL:** | Well, I've been doing this for 26 years and I can say I can probably count on two hands and have some fingers left over the number of times that it's become heated or confrontational. My approach in the inspections in my team is trained that our job is really there. We're there to help and to educate. Right. And there's some people that just don't want to hear it because they feel like they know better. |
|   |   |
| **RL:** | And I've been doing it for 20 years and you and it's worked for 20 years and that may be fine. But obviously systems and ways of doing things evolve. And they certainly have evolved over my career. It's really going to be on the client if the client is the homeowner to make sure that that we're there and seen as advocates not only for the homeowner but for the builder. |
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| **RL:** | You know, what I would say is if we're not brought in by the builder, which most of the time we are, it's really important for me, for the builder and the trades to understand that we're there to help. We're there as a team member. It's not we're not there, as many inspectors are perceived to be, to just bust people's chops because we think that's fun. |
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| **RL:** | We really want to see that the project is successful and can perform. |
|   |   |
| **REECE:** | One of the things that Carl has planted in our businesses or as a as a church is not as a joke. We take it very seriously, but it's raw. Number one, a business is the client's was right a wrong. Number two, if the client's wrong refer to rule number one. And so we take that seriously. I mean, we do anywhere from one or two inspections a day to up to 40 or 50 on the really high side, you know, averaging around about 2020 inspections a day all across the greater Houston, you know, the population of Houston is bigger than home country. |
|   |   |
| **REECE:** | So that's a big area to cover. And when you're dealing with that, you know, we do have some confrontational situations that come up either due to poor communication, as you sort of stressed, as one of the foundations walls of the of your diagram communication of when people are going to be on site, when the inspectors get there or issues or, hey, I sent you this. |
|   |   |
| **REECE:** | And again, it just comes down to communication. So every time I get those calls, I take it with we always I've trained my team to make sure that they're acting very professional and the and the light of. We'll get back to you. What you know, we're going to make sure that we do what it takes to make sure that you have got the product that you need. |
|   |   |
| **REECE:** | And that's always important to always get three sides of the story. There are always three sides to a story and just trying to navigate and make sure that we can get, you know, personal conflicts aside or that but get to the key point. What does this home need to make sure that they've got the product that's needed that could be here for days going on. |
|   |   |
| **REECE:** | Two different examples, but most of our clients and builders are great and that's as you said, I'm probably on, you know, hands and toes that I can count where we've had had situations like that arise for various reasons. And, you know, we just make sure that if it is a mistake on our end, you know, coordinating or scheduling, whatever it is we do, whatever it takes to make sure that they're we get that back on track and keep going forward. |
|   |   |
| **CURTIS:** | I think when people when builders, or contractors, realize that your services are going to protect them also, it's not just protecting the homeowner. I mean, that's the ultimate goal, as is the project. But you're also protecting the builder and the subcontractor because if you can catch their problems, you're saving them a ton of potential warranty issues and legal issues down the road if we get these things upfront. |
|   |   |
| **CURTIS:** | Right? |
|   |   |
| **REECE:** | I agree. And we really try to work with them and be like, you know, I know some of I've been told some other examples where it's like my way or the highway from an engineering side and we really try to make like this is on the plans, this is what you installed. Let's figure out a way that we can really get this back to where it needs to be in order to, to try and make a change on the fire, to make sure that the original design was not compromised. |
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| **REECE:** | But you're still not having to pay $10,000 to put this out and start again. And that's commonly what we deal with on the daily sometimes. So. |
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| **CURTIS:** | Well, guys, thank you both so much for being with me today. It's a great place to wrap up. We're out of time. So thank you so much for being here. We will definitely link both of your websites, your contact information and our show notes so people can contact you. But thank you so much for being here. |
|   |   |
| **RL:** | Thank you for having me. |
|   |   |
| **CURTIS:** | Look forward to having you back again in the future. |
|   |   |
| **REECE:** | Thank you for having us. |
|   |   |
| **CURTIS:** | All right. Thank you guys for joining us again on the your project. Shepherd podcast. We hope to see you again next time. As we come close to wrapping up season two. We'll talk to you later. |