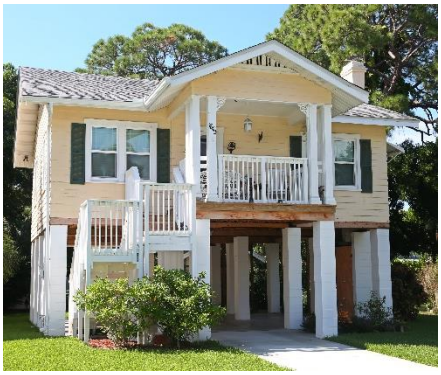

Thinking of Elevating?

SanCap Resilience,
Resilient Building Working Group
August, 2024

Three Sanibel Case Studies

When does it make sense to elevate your home?
Elevate first, or renovate first?
What is the home elevation experience like?

Disclaimer: We're NOT experts, we're your neighbors. But we've studied this issue and are sharing what we've learned. Any mention of private companies or brands is not an endorsement.

Introduction

SanCap Resilience spoke with three homeowners in the community who elevated their homes. We share their thoughts and experiences in three accompanying case studies.

Each home provides unique insights. For example, owners of one home elevated the home and then repaired it to its original condition. Another elevated and then completely redesigned the interior. The third restored the home at ground level, and then elevated it later. Two homeowners elevated the garage and converted it to additional living space, while the other left the garage at ground level. One home was elevated about 5 feet, while the other two elevated about 10 feet.

Yet all three homeowners agreed that investing in elevating made sense for them in terms of home value, insurability, and peace of mind. If you have questions about any of the cases, you can reach us at info@SanCapResilience.org.

The Decision

These three slab-on-grade homes suffered severe internal damage from Hurricane Ian. Homeowners faced four options:

1. Repair the existing house, subject to FEMA 50% rule.
2. Demolish and rebuild to local and FEMA code.
3. Add a second floor to the existing structure.
4. Elevate the house and repair to local and FEMA code.

Each case explores how homeowners evaluated these options and arrived at Option #4.

Flood Risk

The elevation of your home, compared to the height of a potential flood, determines your flood risk. One estimate of potential flood height is the Base Flood Elevation (BFE), as determined by FEMA.[1] Both the elevation of your home and your BFE are provided in your Elevation Certificate.[2] If the lowest level of your home is below BFE, it means you are at greater risk of loss from flooding, but it can also affect insurance costs and the future resale value of your home. Elevating your home well above BFE is one way to remedy this problem.

The Lifting Process

The lifting process can be completed in a matter of weeks, though the entire home elevation process is likely to take many months based on how extensive your renovation plans are and how much time is needed for permitting and inspection.

The lifting process begins with excavating around and under the home (pictured here is House #1).

The lift begins with excavating around and under the home, followed by the setting of pilings, which provide a base for lifting the home. Once utilities are disconnected, jacks are used to simultaneously lift the entire home on its slab. The lift is done in stages, with time between stages to allow for inspections. Footings and support columns are added during and after the lift. Many contractors have descriptions and videos on their websites. You can also see local news coverage of the lift of one of the homes in our case studies.[3]

Cost

Reported costs for home elevation over the past year have ranged from $70-75/sqft for 5 ft lift, to $100-110/sqft for 10 ft lift.[4] This covers the elevation process and new structural supports. Expenses for external and internal finishes are extra, as well as costs for permitting and disconnecting/reconnecting utilities. Some websites cite costs up to $160/sqft, but it's unclear whether this includes some of the costs noted as "extra," above.

Permitting

Home elevation requires multiple permits. Sanibel homeowners will need to secure appropriate permits from the City, while Captiva homeowners will need permits from Lee County.

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[1] Base Flood Elevation is "The elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. " https://www.fema.gov/node/404233#:~:text=The%20elevation%20of%20surface%20water,%2C%20V1%E2%80%93V30%20and%20VE.

[2] A new Elevation Certificate may be required for your home following Hurricane Ian. Your home's BFE can be found at https://www.floodsmart.gov/understanding-my-flood-zone .

[3] https://www.youtube.com/watch?v=LUfu-OWL8gY, and https://winknews.com/2023/05/03/house-jacking-lifts-sanibel-home-off-ground-for-hurricane-proofing/

[4] Based on case study interviews and "'House jacking' lifts Sanibel home 5 feet off the ground." WINK News, May 5, 2023, https://winknews.com/2023/05/03/house-jacking-lifts-sanibel-home-off-ground-for-hurricane-proofing/

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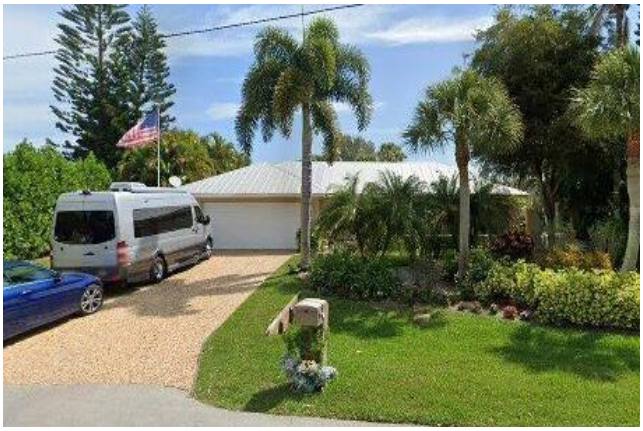

Home Elevation Cases Studies

House #1

- Sanibel
- 3 BR, 2 Bath, ~1,700 sqft (before and after elevation)
- Elevated ~5 feet
- Garage remained at ground level

“We love where we live and want to stay. This was a great option.”
Ellen, homeowner

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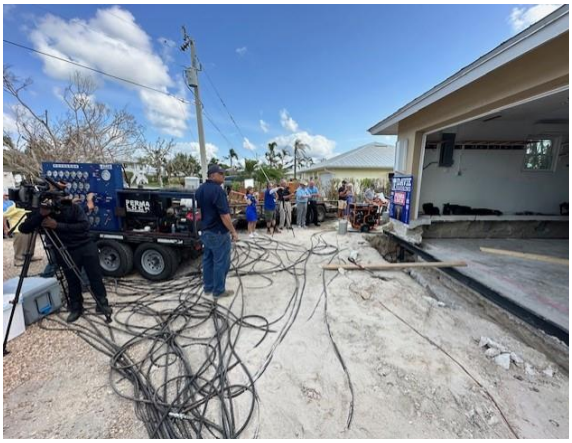
For Marco and Ellen, it’s all about community. They love Sanibel, and after 14 years, they couldn’t imagine living anywhere else. Their ground-level home was severely damaged by Hurricane Ian, but it was still structurally sound. They decided to look for a long-term solution that would get them above future floods.

After careful research, elevating the existing house seemed like a better investment than building from scratch or attempting to build on top of the existing walls. A five-foot lift would get them above the Base Flood Elevation (BFE) and bring them into compliance with local and FEMA code.

While Marco has years of experience in the construction industry, no one he or Ellen knew on Sanibel or Captiva had lifted their home before. They researched and identified a number of potential contractors, eventually choosing a Louisiana-based company with experience elevating homes in Southwest Florida.

Beyond cost, they were concerned about how the house would survive the lifting process. “Footings and slabs are constructed differently here than up North. I wanted to understand

how they were going to lift this," Marco explained. When they met with the contractor, they asked lots of questions. "After the interview, I was satisfied they knew what they were doing," Marco recalled. The contractor showed them how all portions of the house are lifted at the same rate – about 8 inches every 40 minutes – and explained that the lift would not disturb anything in the house. They wouldn't even have to remove pictures from the walls or wine glasses from the cabinets.

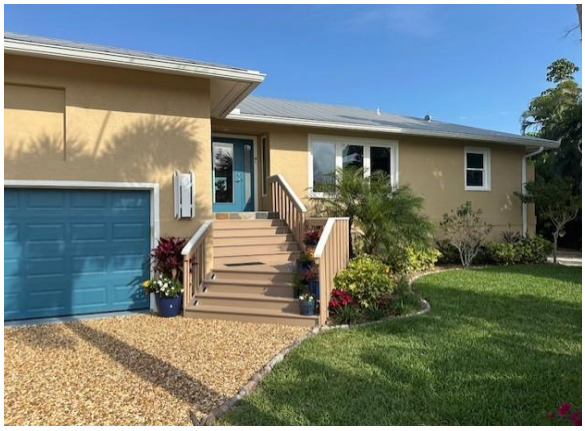

Lift in progress.

It turned out theirs would be the first home elevated on Sanibel following Hurricane Ian. "Fortunately, the contractor had done a few lifts elsewhere in Lee County. So when he submitted all the paperwork here, it went through pretty quickly," Marco noted. And one up-side of being the first on Sanibel is that local news coverage documented the event, giving the rest of us a chance to see the elevation in progress.[1]

"It's as if the house is still on the ground. Everything turned out great."

Marco, homeowner

Marco and Ellen decided to leave the garage at ground level. To maintain the existing roofline of the house, the garage walls were lengthened so that the interior height is now 16 feet. Additionally, their decision to lift only 5 ft meant fewer stairs to access the house. "Five feet gets us high enough we shouldn't have a problem with a flood, but you still feel part of the yard and the pool, and whatever is going on outside." The finished home doesn't even look elevated, unless you look closely.


Marco and Ellen's home, elevated and finished.

"My advice to people who are considering lifting is to interview at least a couple of contractors," Marco noted. "And talk to their former customers. If they won't give you references, don't even bother."

"Our concern had been, 'Will the house break, will things break, when they lift it,'" recalled Marco. "Well, not a thing. We're extremely happy. It's as if the house is still on the ground. Everything turned out great."

Photo credits: 1) Homeowner, 2) SanCap Resilience, 3) SanCap Resilience

[1] https://www.youtube.com/watch?v=LUfu-OWL8gY, and https://winknews.com/2023/05/03/house-jacking-lifts-sanibel-home-off-ground-for-hurricane-proofing/

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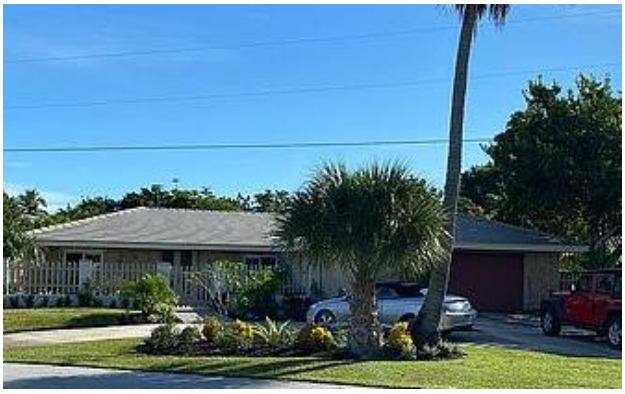

Home Elevation Cases Studies

House #2

- Sanibel
- 4 BR, 4 Bath, ~2,200 sqft before elevation
- 5 BR, 3 Full Bath, ~3,100 sqft after elevation
- Elevated ~10 ft
- Garage elevated and converted to living space

“People say, ‘you’re spending a lot of money.’ I say no, I’m *making* a lot of money.” Milt, homeowner.

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Milt and Janet considered all their options after Hurricane Ian devastated their ground-level home on Sanibel. They figured they could probably restore the home and stay within the limits of the “50% rule.” But their insurance company encouraged them to look further and evaluate options for getting the home above any future flood.

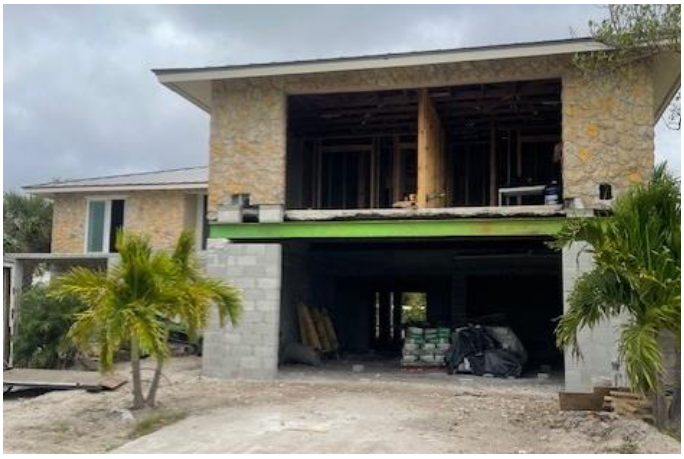
They estimated that tearing down and rebuilding would cost over $500/sqft. Building a second floor on the existing structure might be somewhat cheaper, but it would mean living in a wood-framed house instead of concrete block. They also had concerns about the existing foundation that pre-dated the storm.

Their research into elevating the existing home uncovered a number of potential advantages. In addition to being considerably cheaper, they could elevate the garage with the house and convert it into living space, increasing the value of their home. They found that about a 5 ft lift would bring them into FEMA compliance, but they were interested in going up 10 ft. That not only would give them peace-of-mind for future storms, it would also allow the ground level of

the home to be used as a garage and more. "Overall, we're adding $200,000 - $300,000 to the value of the home, above the cost of elevating and restoring it," Milt explained.

"I saw video of a baseball set on a table during a lift. It never moved. That helped convince me." Janet, homeowner.

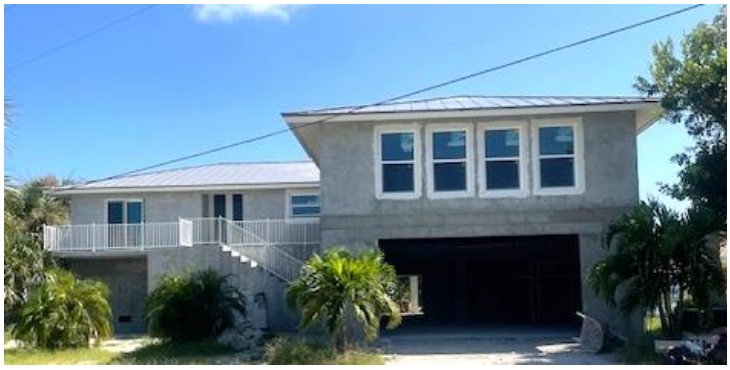
Milt and Janet had lived in the Northeast after Sandy, and they were familiar with many successfully-elevated homes. So, they interviewed three contractors, and liked them all, but ultimately chose an elevation contractor who offered general contracting services for the entire home renovation, which appealed to Milt and Janet.



The former garage, now elevated, has been divided into two bedrooms. The new, deep, two-car garage is beneath.

They chose to enclose the ground level with concrete block and a series of garage doors, which will give them a three-car garage with an elevator plus recreational space. "That way we can secure the area when we need to, but then easily open it up to the outdoors," Milt noted. It's also designed to allow potential flood waters to easily flow into and out of the space. The former garage, now elevated, was used to create two bedrooms, increasing the living space to 3,100 sqft.

Their contractor's architect encouraged them to completely rethink the layout of the house. Since utilities would be disconnected, they could just as easily be reconnected anywhere in the house. This allowed them to move bedrooms and the kitchen to the edges of the house, while the main living areas could be centered, overlooking the pool. "We got much more than we anticipated," Milt recalled. "This is going to be a great living space." They're glad they made the decision to elevate, and pleased with the outcome.



House #2, nearing completion.

Photo credits: 1) Homeowner, 2) SanCap Resilience, 3) SanCap Resilience

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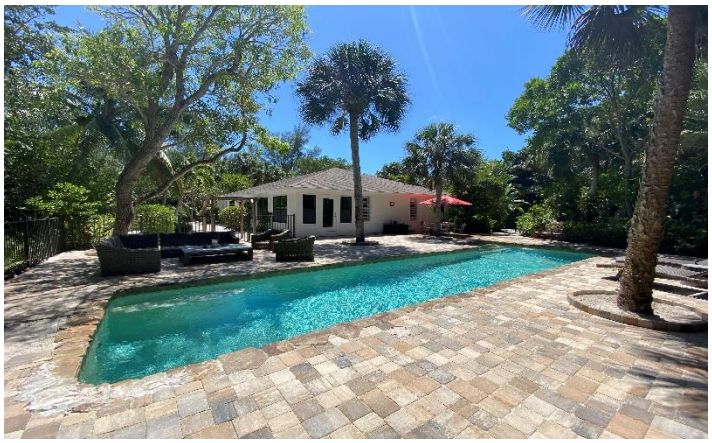

Home Elevation Cases Studies

House #3

- Sanibel
- 3 BR, 2 Bath, ~2,000 sqft before elevation
- 4 BR, 3 Bath, ~2,400 sqft after elevation
- Elevated ~10 feet
- Garage elevated and converted to living space

"Let's elevate for peace of mind against future storms."

Jeff, homeowner

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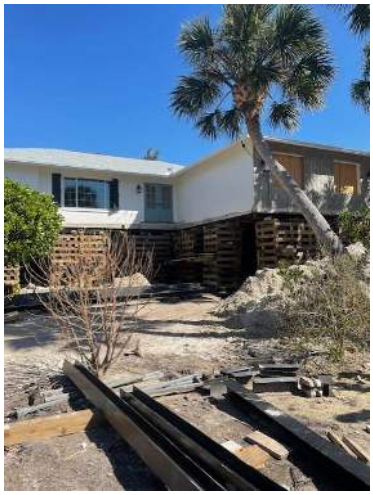
Jeff and Tracey's home did not incur any structural damage, however they did get hit with 40" of floodwater from Ian. They had fully restored their ground-level home, staying within FEMA's "50% rule" – and *then* they decided to elevate it.

They had just finished remodeling and were getting ready to landscape when Hurricane Idalia passed by Sanibel. "Even if a storm doesn't hit Sanibel, we're going to worry about it. We said, 'Let's elevate instead to protect ourselves against future storms, while also increasing the size and the value of our home in doing so.' Now we don't have to worry about it anymore."

When Jeff and Tracey began the cleanup following Hurricane Ian, they didn't know elevating was an option. Once they learned more, they realized it offered benefits beyond just peace-of-mind. They could save significantly on insurance while also increasing the value of their home. They decided to raise the garage with the home and convert it to living space, adding a new 4th bedroom and 3rd full bathroom. By raising the home 10 feet, they could also use the new space under the home for a bigger garage and added outdoor living space in the future. They evaluated their options and chose a contractor who had lifted other homes in the area.

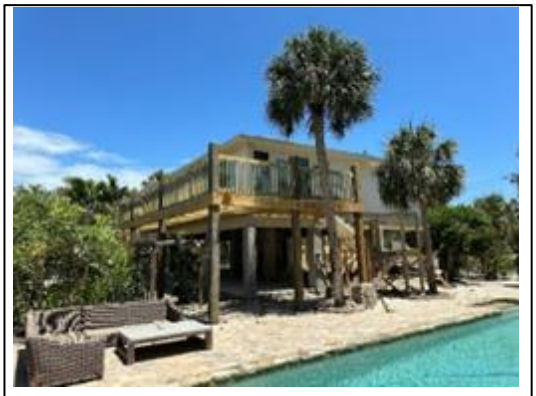
Once they made the decision to elevate, Jeff and Tracey were pleased with how quickly the project progressed. Jeff recalled, "The contractor started the lift on January 8 and three months later, the lift was done. Now we're just finishing the exterior – stairs, decking, paint, landscaping, etc. Re-building from scratch would have taken us years, not to mention being at least 3-5x the cost of elevating instead."


Elevated and converted garage

Because they had just repaired and remodeled the home, Jeff and Tracey were particularly concerned about possible damage during the lift. Jeff explained, "We were most afraid of drywall cracks, separating tile, things like that. But there were no cracks, no drywall issues, nothing. And because our home was already repaired before the lift, we had full power, running water and HVAC throughout the lift process. The way the contractor does this is so incredibly meticulous."

"Yes, lifting your home is a significant investment and undertaking, however it's far faster and less expensive than starting over, especially when you love your home and want to keep it."

Jeff & Tracey, homeowners


Elevated home with new deck added

Jeff says their contractor nailed it – "The way they lifted and secured our home is amazing. It's all tied together with an iron framework, helical pilings, new footings which are integrated with our original footings, and cement columns. I was here throughout and witnessed the project first hand. This job was done to commercial grade and is so incredibly strong."

Jeff and Tracey are also finding even more side benefits of the living space being 10 feet up. They enjoy their "treehouse" view – and were also thinking about a new outdoor dining area, recreational space, or hot tub in the yard. And now with over 2000 sqft of additional space in their "new" lower level, those can now go under the house instead, without any increase in impervious space. Not to mention the new rear deck that could also be enclosed with screening to create even more outdoor living space in the future."

As they near completion of their project, they can reflect on what they've accomplished and the process they've gone through. "You've got to be realistic," explains Jeff, "this is a lot of work. But not nearly as much as building a new house. And the end product is just amazing."

Photo credits: 1) Homeowner, 2) SanCap Resilience, 3) SanCap Resilience