

## INTRODUCTION TO CAT5 BUILDERS, LLC

January 1, 2023

Dear Perspective Client,

Congratulations for deciding to build your own new home on the island of St. Croix (STX) in the United States Virgin Islands (USVI). An island with a full and rich history inhabited by a variety of nationalities. Christopher Columbus's second voyage landed here on November 14, 1493 now called Salt River Point. St. Croix holds the title of the most eastern territory which can be seen at Point Udall on the East end of the island. This document will help you familiarize yourself with the process, from the initial land search all the way to selecting finishing touches. Building a house in STX is very different from building in the United States of America (USA).



A Danish Map of St. Croix by Jens Michelsen Beck 1754

First, building on STX and in the USVI using traditional construction materials and methods takes longer, costs more and needs to be done under strict building codes because homes in the USVI are located in an area where earthquakes and hurricanes occur annually. In September 2017. For example, two Category 5 hurricanes hit the US Virgin Islands with sustained winds over 180 miles per hour (mph) resulting in loss of life and billions of dollars (USD) of property damage.

When a weather forecaster mentions a gentle breeze you can expect wind speeds from 8-12 mph. Gale force winds can reach up to 63 mph. A Category 5 hurricane is three times stronger than the worst Gale.

We incorporated CAT5 BUILDERS, LLC to provide future home owners with an opportunity to build their island dream home using advanced building technology that are not only highly resistant to earthquake and hurricanes but also cost-effective and has a shorter building cycle as building components are premanufactured off-site in a controlled manufacturing facility. The Founders of CAT5 BUILDERS have used these materials, components and methods to build a variety of hotels throughout the United States for Hilton Hotels & Resorts, Marriott International, Hyatt Hotel Corporation, etc., for example. This technology is being used by some of the largest international commercial construction companies. We are the first to introduce the technology into the USVI to simplify the entire design/building process so that you and your family can begin enjoying island life in your new home.

Typically, when someone says they're planning to build their own home, they are referring to a custom build where they have a say in almost every aspect of the building project (short of items restricted by local laws and zoning regulations). But, in the realm of new construction in the USVI, the Home Owner needs to accept that control is often negotiated as things need to be done a bit differently, as the USVI's has time honored culture, traditions and methods that must be respected. Additionally, the majority of the building materials and finishes need to be imported to the island so it is not like we can go down to the local Big Box Store and purchase it immediately. Selecting the finishes can make or break a construction deadline.

If you are building with cash then there is no need for financing and a considerable amount of time can be saved since you will not need to comply with the rules and regulations of the financial institutions (banks). However, there are several local USVI banks that CAT5 BUILDERS can refer you to who are familiar with our methods of construction. Financing and related mortgage topics are covered in greater depths in other articles.

You came to St. Croix for the weather, the sun, the sand, the beaches, the cool eastern breezes from the North Atlantic Ocean, the laid back way of island life or something else so it is best to understand the location of where you plan to build.

- ✓ Do you prefer a sunrise or a sunset?
- ✓ Do you need to be near the beach or nestle on a mountain side with panoramic views?



A sunset at Cane Bay by Donald Stevens, 2021

Therefore, the best way to determine where to build you will need hire a licensed USVI Real Estate Professional (Agent). Agents can help you identify the preferred location on the island, find the ideal lot or property then help manage all of the business transactions to complete the purchase of the property.



A view heading to the Tidal Basin by Donald Stevens, 2021

While we offer architectural and engineering service in-house we are happy to work with your architect, designer and even your own sketches. Building a new home is always a team effort so one person or one company can never do it all so let us know how we can help. If CAT5 BUILDERS is asked to assist in the design then you will need to communicate “your wants, your needs and your desires” along with a budget or the amount that you intend to invest in the construction and finish of your new home. Here are a few important design decisions that need to be made early on:

- 1.) Number of bedrooms and bathrooms. How many people will be living in the house? Is your family growing, or are you downsizing? What about houseguests or vacation rentals?
- 2.) Single story versus two story or more. Are there mobility issues that should be accommodated?
- 3.) Outdoor space. How much outdoor space should you have?
- 4.) Open concept or individual rooms. How open you want your house to be depends on your taste and lifestyle. Individual rooms give a more classic feel, while open concept homes are more typical to island living.
- 5.) Design style. What aesthetic do you want your house’s exterior to have? Dutch West Indies, Modern, Tropical, Moorish, Colonial, etc.?
- 6.) Interior design. Are you partial to modern design, a more traditional look or something in between?
- 7.) Future resale value. Are you concerned with resale value?

During the lot selection process CAT5 BUILDERS can help make sure that it fits the needs of your home’s floor plan and design. We’ll check zoning laws and restrictions and identify any attributes of the lot that might make it more expensive to build on — for example, a steeply graded lot may require more engineering, or a lot in a remote area may necessitate a septic system. When public utilities are not available, not reliable and/or not cost-effective to acquire, CAT5 BUILDERS provides the option of being totally Off-The-Grid by

using state of the art Solar Energy, Rain Water Collection and Septic systems. When and if utilities become available the home owners can make connections at a later date.

After the designs and blueprints have been finalized and your permits have been approved, that's when construction starts and your home begins to take shape, generally following these steps:

- 1.) Land preparation - The first step in the construction process is getting the land ready. This includes clearing the area, installing erosion control barriers and temporary utilities.
- 2.) Excavation – The topography on the island varies from flat or level ground to steep inclines on the sides of mountains. Excavation timeframes can vary depending on the complexity of the site, the size and configuration of the home.
- 3.) Footings - The footings will be made of poured concrete reinforced with steel rods. The footings will be designed based on soil conditions and building material loads.
- 4.) Structure – The bones of the home are comprised of Light Gauge Galvanized Steel Framing members that are manufactures and prefabricated into Exterior/Interior Load Bearing Wall, Floor & Roof Panels, Floor & Roof Trusses, and much more. The structure is clad with CAT5-MATRIX high strength ½” & ¾” tongue & groove magnesium-oxide sheathing (MgO Boards). Components are factory assembled in Frederiksted and shipped to the project site then erected by the CAT5 BUILD Team. More information about the building system please visit our website [www.cat5builds.com](http://www.cat5builds.com).
- 5.) Exterior finishes – Once the structure is up then the focus is making the roof and the exterior walls weather tight which means installing the preferred roofing finishes, exterior windows and doors. The last step is to apply weatherproof exterior coatings and painted to match your new Caribbean lifestyle.
- 6.) Plumbing, electrical and HVAC - Once the home is “dried in,” our preferred subcontractors will start installing the home’s major systems, including plumbing pipes, electrical wiring and heating and cooling ducts.
- 7.) Interior wall board – CAT5 BUILDERS uses a ½” MgO exterior sheathing board on the interior face of the structural components to make the home extremely resistant to fire, moisture, mold, termites, and mildew. Sheet joints are sealed with waterproof sealant and finished with premium paints.
- 8.) Interior finishes - In this step, most of the home’s interior features will be added. This includes doors, kitchen counters and cabinets, bathtubs, vanities, and hard-surfaced flooring such as tile. Interior painting and hardwood installation are sometimes done during this step, but they may be done later if there is risk of damage due to continuing construction.
- 9.) Site features - Driveway, walkways, patios, a pool and final grading, for example, along with landscaping.

- 10.) Fixture installation - With the house close to completion, toilets, faucets, light switches, the hot water heater, the electrical panel, the solar array, and the HVAC systems are all installed.
- 11.) Final inspection - Once construction is complete, a final inspection will be conducted by the local USVI building officials. Upon passing, you'll receive a certificate of occupancy, which gives you the green light to move in but wait there is one more step.
- 12.) Final walkthrough - Before you move in, together we will conduct a final walkthrough to make certain that the home meets your satisfaction and to instruct you how to use and care for items in the new home like the solar system, the water collection, the appliances and much more.
- 13.) Turn the key – The easiest part of the whole project is when the keys are turned over to you and you take that first step into your new island home.

Once that is done it is officially your new island dream home and for you and your family and friends to enjoy.

Welcome Home to St. Croix, United States, Virgin Island!



## EVERYTHING YOU MAY WANT TO KNOW ABOUT COLD-FORMED STEEL

The following information has been provided by the Steel Framing Industry Association. Since you may be new to this technology CAT5 BUILDERS would like to share some back ground information about the industry then answer some typical questions. If there is an unanswered question please feel free to ask us.

Cold Formed Steel (CFS) is arguably one of the most sustainable and increasingly-popular contemporary building products. This material is found in the most progressive homes and buildings of modern society. But what exactly is this product that we have come to depend so heavily on? To answer these questions, here is a comprehensive guide to CFS.



Galvanized Light Gauge Steel Master Coils

**What is Cold-Formed Steel?** Cold-formed steel or metal stud framing, is a term used to describe the manufactured steel products that are produced via cold-working processes such as stamping, rolling, and shaping. CFS studs products are most notably designed for various structural purposes. This is a sturdy and reliable construction material used widely in the foundation and framing of modern buildings and homes.

Despite what the name might seem to suggest, CFS studs are manufactured at roughly room temperature; however, this is comparatively much colder than the temperature at which steel is often shaped. This room-temperature process allows cold-formed steel to have a different chemical composition than certain other shaped metals, making it strong, durable, and lightweight, among other valuable characteristics. These factors are what make cold-formed steel studs framing so ideal for many modern feats of construction.

**History of Cold-Formed Steel:** The introduction of cold-formed steel (or Light Gauge Metal) in North America industries began in the early 1850s. This was during the period of time following the First Industrial Revolution, when population rates in America were on a steep rise and businesses were looking for ways to continue to advance the established societal foundation of production and manufacturing. However, the general use of cold-formed steel studs framing in construction did not begin until the 1900s due to the extensive availability of other more familiar materials and a lack of standardized design methods and information regarding CFS framing.

Over the years, the construction industry grew to incorporate CFS framing as a standard building material to meet the need for safe and strong structures. The catalyst for this change is often understood to be the publication of the first CFS design guide in 1946 out of Cornell University. As standards, regulations, and best practices gradually became widely understood, CFS became a more accessible and effective building material. This also came at the end of World War II, when an influx of soldiers returned to America and were now in the market for new homes as they rebuilt their post-war lives.

This regularization of CFS unleashed a new level of structural potential for American architecture, which heightened the structural standard within many major cities. The widespread uptake of CFS allowed for more diversity in construction methods and building types, and this material use slowly extended to become a common nationwide practice. In modern society, the use of CFS is widespread due to its extensive durability and reliable longevity.

**What Makes CFS Framing Different?** (Difference between Hot and CFS) The alternative to CFS (or light gauge metal) is hot-rolled steel. When steel is heated above its recrystallization temperature (i.e. hot-formed steel or hot-rolled steel), it can be easily molded to fill the general needs of various industries. However, this process can affect the composition of the steel during the cooling process, as it causes shrinking to the structure of the steel. The CFS manufacturing process is completed at room temperature, which results in a much more predictable final product. Because the steel is not heated before being manufactured, it does not face the same reductive cooling process as other steel products, making it a strong and durable material perfect for building and construction.

Ultimately, the primary differences between hot-formed steel and CFS can be found in the process used to create them. Hot-formed steel has a quicker and easier process, but it results in a less precise material than CFS.

**How is CFS Used?** CFS is necessary for modern construction projects that require the utmost in safety and strength. The shiny steel components you see often embedded into the framework of modern homes and buildings are CFS. This steel is used as the structural foundation of these building projects. For example, the skeletons of homes that you might see in the early stages of construction are increasingly replacing the dated wooden process with CFS, especially in areas where wood quickly rots or becomes infested with termites. Other uses include foundation wall, pool structures, decking, roofing, load-bearing support, and so many more.



Home2Suites in Chantilly, Virginia by VANGUARD - 2019

Specifically, CFS studs framing is often used in homes and large buildings where security and stability are especially important, such as homes being built in environments where threats are imminent. However, CFS is a viable option for almost any construction project, even when it is not imperative in use. For example, even the smallest of homes in low-risk environments can benefit from the use of CFS studs framing. It is a diverse material that can provide any project with an added layer of protection.

**CFS Framing Members and Types:** CFS framing, sometimes referred to as CFSF, demonstrates how CFS can be incorporated into several facets of a home's building and design process. These pieces can be manufactured as both the largest studs to the smallest connecting members. Larger constructions might have entirely CFS structural framing while other smaller constructions might just include the partial use of CFS framing.

CFS members have been adapted to meet almost any project need; you can find CFS drift connectors, vertical deflection connectors, rigid connectors, load-bearing members, curtain wall members, specialty connectors, drift connectors, hybrid vertical connectors, fixed connectors, cold formed steel bridging connectors and members, and so much more. In even the smallest addition of CFS products contributes to the overall safety of a project.

**CFS Building Designs:** When building with CFS, it is likely that safety, longevity, and structural security are all important factors to consider. This software that is used by our manufacturing partner can determine load-bearing capacities and model how a structure will handle seismic activity, points of pressure (hurricanes), and other structural issues. This allows structural engineers to safely and effectively design buildings with CFS.

The CFS building design process often incorporates several drafts and revisions based on calculated data. This is largely what has made CFS constructions successful in the magnitude that they are today. This also has helped increase the safety and reduce unintentional building collapse over the years.

**Regulations and Specifications of Use:** The AISI, or the American Iron and Steel Institute, publishes recurrent documents and design specifications regarding CFS. Naturally, building codes must also be followed, but these may vary based on the area, and often refer back to the most current AISI publication as these publications are thorough and comprehensive. The most recent titles include, "North American Specification for the Design of CFS Structural Members," "Code of Standard Practice for CFS Structural Framing," and "North American Standard for Seismic Design of CFS Structural Systems." By combining all of the most recent research, outlining the industry's best practices, and addressing common issues, AISI sets the stage for CFS constructions.

**The Environmental Sustainability of CFS:** One increasingly important benefit of CFS is its environmental sustainability. CFS is recognized in three areas of sustainability: low-maintenance resource management, low emission shipping, and recyclability.



- ✓ First, the long-lasting nature of this material means that the structures created with CFS are less likely to need frequent repairs, maintenance, demolition, or reconstruction. This shorter lifetime and increased need for maintenance found in other materials indicate that they produce more waste and cause more carbon emissions in the building and rebuilding process. CFS requires little to no maintenance over centuries, naturally resulting in less waste and reduced carbon emissions.
- ✓ Next, because CFS is lighter in weight than many other building materials, its use creates a more sustainable building process. The lightweight nature of this material reduces the emissions in transportation. Compared to other products, its lightweight nature also helps reduce the resources required for lifting during the building process.
- ✓ Finally, the sustainability of CFS is rooted in the recyclability of this material. In the instance that a structure is demolished, CFS can be easily reused, repurposed, and recycled, which makes it a more environmentally-friendly building material than other single-use substances. With the pressure on all industries, including construction, to use sustainable materials, CFS remains an unimpaired building option.

**Resisting the Elements:** Homes and other building constructions are valuable investments that are important to preserve, but this preservation can be increasingly difficult to manage when in areas prone to natural disasters. However, there are several different ways that CFS can help these structures resist the damages caused by the elements.

**Hurricanes:** CAT5 BUILDERS uses time and hurricane tested connections that make it extremely resistant to hurricanes by encapsulating the exterior CFS Wall Frame (Wall Panels) into the reinforced concrete footings, foundations and walls. Wall and Roof Component connections are structurally engineered to handle wind speeds up to 220 mile per hour(mph).



**Earthquakes:** CFS resists the effects of seismic activity, as lighter buildings make it safer for building in areas prone to earthquakes. CFS structures have the ability to flex reducing the probability of collapse allowing the occupants a safe space to live.



**Fire Resistance:** With wooden-framed buildings and homes, a fire can quickly spread and leave nothing but destruction in its path. CFS is different, however, in the fact that it is completely non-combustible. The fire-resistant aspect of CFS



**Water Damage:** CFS does not retain water, nor is it susceptible to water damage. Other building materials, such as wood framing, can easily become disastrous when exposed to water. CFS protects homes from the costly damages often caused by flooding and storm water. This makes it especially beneficial to homes in areas prone to rain and along the coast where hurricanes and other tropical storms are likely.



**Pest Resistance:** Unlike wooden framing and other traditional material options, CFS is not threatened by pests like termites. It's also resistant to mold and mildew, making it a safe and sanitary alternative.



**What about Rust?** CFS and the Process of Galvanization - The one risk that CFS poses over other framing and construction products is the risk of rust and corrosion. When steel products encounter rain and moisture, the sound chemical composition of these members could become threatened. This happens when the iron becomes oxidized by its exposure to the elements. Oxidation causes the metal stud framing to rust and corrode away, undermining its strength and durability. However, this risk has long been addressed by the introduction of steel galvanization.

If you are not familiar with galvanization, this is the process of sealing a metal with liquid zinc. The liquid zinc does not change the chemical composition of the steel nor does it compromise the strength of the material. This seal simply

provides an added layer of protection for the CFS and is known to last hundreds of years. Galvanization works because zinc does not face the same risks of oxidation that steel products do. This process is used by all reliable steel distributors, and it effectively eliminates the risk of rust and corrosion in CFS constructions.

**Lower Insurance Rates and CFS:** On top of all of the apparent benefits of building with CFS, there is the potential of additional financial advantages. This is most uniquely evident in the fact that building with CFS might help you qualify for lower insurance rates. According to the Steel Framing Industry Association, the non-combustible nature of CFS can reduce the insurance liability of your structure, making you eligible for lower premiums. These lower rates can help you offset the cost of building with CFS, meaning that it might just pay for itself. This makes CFS an especially beneficial option for high-risk structures in need of reduced insurance rates.

**Other Benefits of CFS:**

- ✓ **Durable:** Known for its enhanced durability, CFS is a long-lasting building material. This provides a crucial element of longevity to building projects that can help structures withstand the test of time and all of the challenges that might come with it.
- ✓ **Ease of Use:** Achieving an ideal balance of durability and lightweight is what makes CFS a widely accessible building material. The lightweight nature of the product makes it possible to build structures that surpass the limits on size and scale that wood has.
- ✓ **Progressive:** The renowned strength of CFS has allowed the construction of taller, lighter, buildings and sturdier homes, without fear of collapse, and this progress continues to evolve due to its outstanding strength.
- ✓ **Reliable:** If you live near the coast or on a fault line, CFS could give you the reliable peace of mind that you need to feel safe in your home. The reliable nature of CFS allows society to accomplish incredible, beautiful, structural feats.



## SOME COMMON QUESTIONS & ANSWERS

Now that you understand the generalities of CFS Building Technology let us answer some questions:

1. We understand that Galvanized CFS Framing is protected against rust but have you seen what happens to metal on this island? *Answer: YES. Anything exposed to the environment will eventually degrade so there are two things. 1. We use a higher grade of Galvanization that is rated for extreme coastal environments. 2. None of our CFS is directly exposed to the salt-laden air as it is fully encapsulated within the Floor, Wall and Roof Assembly. The structural frame, if properly maintained, could easily last several hundred years.*
2. Why don't you use typical Fiberglass Insulation or other types of insulation in your Building Assemblies? *Answer: Houses near the equator fight solar heat gain and the best technology for keeping that gain from entering the structure are micro-Thermal Reflective Insulations (TRI). Fireman use Thermal Reflective Liners to protect themselves from intense flame and heat. These Liners keep the majority of the heat from passing through the layer and hurting the fireman. Our TRI's reflect 97% of the solar heat energy away from entering the structure (dwelling). Since we use an open-cavity (not filled with traditional fiberglass, for example, insulation) and the TRI is placed on the interior face of the structural wall panel the heat is reflected back into the 6" CFS cavity where it can be naturally vent using passive or active systems (vents, exhausts, etc.).*
3. What is the R-Value of your Exterior Wall? *Answer: The TRI itself has an R-1.3 when used in an assembly the Value fluctuates based on interior and exterior finishes and cavity depth.*
4. Can you explain to me why a high R-Value is not required? *Answer: R-Value is the rating system used to grade insulation products or a material's insulating properties. In cold climates the idea is to have a high R-Value so that the heat generated inside the house does not dissipate quickly through the exterior wall assembly increasing heating costs. The higher the R-Value the slower the heat loss will occur. In hot climates there is no "cold" but the most important goal is to avoid solar heat gain. With traditional reinforced concrete and cement masonry units (CMU or block) as the day progresses the sun heats up the structure and when the sun sets all of that solar energy (heat) that was absorbed into the walls & roof now dissipates inside the house making it hotter inside than the outside. With a CAT5 BUILDERS your home will require less energy to cool yourself both day and night.*
5. What is the purpose of the 4" Corrugated Pipe under the Slab and why does it go inside the Exterior Wall Framing Assembly? *Answer: CAT5 BUILDERS can take advantage of the laws of physics especially the one that we all know that "hot air rises." The earth directly under your house will naturally be cooler than any ground exposed to the sun and heat. By installing a network of pipes in that environment we can allow air into the system, which is passive, where it cools naturally, and brought into the cavity of our framing system forcing the hotter air up and out through a cornice or roof vent. When the sun sets at the end of the day there is no built-up heat energy within our structure.*
6. Can we add a Solar Powered Vent to help increase the exchange of hot air out of the wall & roof cavities of the structure? *Answer: Yes. You can try Remington, Quiet-Cool, HQST, etc.*
7. Once a wall is closed how do you locate studs if we need to hang something? *Answer: There are wood and CFS stud detecting devices available on the market that can detect Studs, Nogs, and Chords.*
8. Steel and lightning do not mix so how is a Cold Formed Steel (CFS) home grounded? *Answer: Since the Framing System is buried directly into the Concrete Footings, Foundation Walls and/or Slabs (based on individual designs) the structure has a direct path for electrical current if lightning strikes any and every part of the house. In the case of our Structures the entire framing system has a direct load path making it safer for the energy to dissipate quickly and safely with a reduced chance of damage.*
9. How well does CFS framing protect against earthquakes? *Answer: Positive connections and the strength of steel provide great protection against earthquake and hurricanes. A lighter structure with stronger connections results in*

*less damage from seismic force. CFS's high ductility makes it the best construction material for earthquake resistant design.*

10. Can mold grow on CFS framing components? *Answer: Mold requires three things to grow: 1. the mold spores, which exist everywhere there is air, 2. moisture, and 3. organic material, which provides the food for the mold. Steel does not contain any organic material, and therefore cannot support mold growth.*
11. Will steel framing affect the indoor air quality of my home? *Answer: NO! Steel framing is recommended by the Healthy House Institute for chemically sensitive and environmentally conscious homeowners who seek good indoor air quality. Steel frames do not need to be treated for termites and are free of resin adhesives and chemicals normally present in other construction materials.*
12. What is MgO Sheathing? *Answer: Magnesium Oxide (MgO) Board is an advanced structural sheathing board that can be used to replace pressure treated plywood, gypsum wallboard (drywall) and other sheathings for both exterior and interior applications. CAT5-MATRIX Boards are made with Magnesium Oxide, Magnesium Sulfate, modifiers and water in a patented technological process. CAT5-MATRIX Boards do not produce harmful off-gases (VOC's), can be cut and installed with traditional wood framing tools, are fire resistant (non-combustible) and highly resistant to water, moisture, mold, and termites. The board is environmentally friendly, non-toxic and can be disposed of in the ground as a nutrient.*
13. There are some reports that MgO Sheathing have had problems? *Answer: YES, this is correct. Various types of MgO Boards have been in use since coming onto the market in 2007. The majority of those boards contain some amount of Magnesium Chloride Salt (MgCl<sub>2</sub>) or Oxychlorides. Those elements are found to be harmful to embedded fasteners, hurricane clips & anchors as they are susceptible to corrosion as they are prone to absorb moisture. As a result MgCl<sub>2</sub> based board was then susceptible to the spread of mold and decay. CAT5-MATRIX solved the inherent problems and now offers a MgCl<sub>2</sub> free board.*
14. Are CAT5-MATRIX Boards Code Compliant? *Answer: YES, the Board has been tested and evaluated by an international material testing facility and compliant to ICC-ES AC386, ICC-ES AC376 & ICC-ES AC378 for the 2021 International Building Code (IBC) and 2021 International Residential Code (IRC).*
15. What is the Fire-Rating for CAT5-MATRIX Boards? *Answer: The board itself is non-combustible under ASTM E136. A fire-test-response test method that determination under specified laboratory conditions the combustibility of building materials.*
16. Why don't you use Gypsum Board in your Wall and Ceiling Assemblies? *Answer: Gypsum Board (or drywall) is a product that is "not" ideally suited for island environments so we do not care to use it as it is prone to damage and wear-n-tear and when it gets wet it will instantly degrade. MgO is a superior sheathing product that when compared to the cost life-cycle is more economical than Gypsum Board.*
17. How do you hang pictures in a CFS House? *Answer: We use 1/2" minimum MgO for the interior wall sheathing. All MgO has structural properties just like plywood so you can screw anywhere into the MgO. If you hit one of our Structural Metal Studs the screw will need to be self-tapping (to drill into and thorough the CFS) but if it does you'll be able to hold greater loads. Screws can be sourced at Home Depot in STX. For heavier objects you can either screw directly into the Studs or use Winged Toggle Hangers, for example. The manufacturer will provide ratings based on weight for their various types of hangers.*
18. How do you mount a Flat Screen TV? *Answer: CAT BUILDERS will supply a horizontal sheet of galvanized metal on the Interior Face of the Wall Panel to accept the mounting plate for any mounting plate. This way you are guaranteed to have structural support where it is needed. Please note that Horizontal Flat Strapping can be provided for mounting Kitchen Cabinetry, Shower Grab Bars and other areas where increased structural reinforcing is required. We can assist you with the supply of the appropriate fastener if not provided within the mounting kit package.*

19. Can CAT5-MATRIX MgO Board be purchased in the U.S.V.I? *Answer: YES. Our company (CAT5 BUILDERS) has the only license to distribute and sell this product in Florida, USVI, Puerto Rico and the Caribbean.*
20. Is CAT5-MATRIX MgO water resistant? *Answer: YES! MgO is highly resistant to water but not completely waterproof based on its density and molecular structure. We need to use Elastomeric and Silicone paints to make it waterproof.*
21. Can the MgO Board on the ceilings be painted? *Answer: YES it can.*
22. Can MgO Board accept any brand name paint or are special paints needed? *Answer: YES! But we prefer specific types of Elastomeric and Silicone Paints that are designed to work specifically with the MgO to increase the performance of the Wall, Floor or Roof Assembly against the elements. Also there is a variety of finishes such as "Knock-Down, Cat Face, Dash Finish, etc., that can be used to create various interior and exterior looks.*
23. Do you use traditional wood casings, trim and moldings? *Answer: Island homes are highly susceptible to Termites despite rigorous treatments. We can offer similar casings in MgO and PVC (plastic) which are highly resistant to infestation, rot and mildew.*
24. Can the Homeowner come back and install other ceiling finishes over the MgO? *Answer: YES. Homeowners are welcome to finish the interiors ceilings and walls with whatever finish they desire as their budget may not allow at time of construction. Wood boards, like 5/8" Cyprus Tongue & Groove on the ceiling, floor tile, and other finishes can be installed at any time.*
25. Are there any special tools needed as a homeowner handling the typical "honey-do list"? *Answer: NO. Standard tools available at the Big Box Stores.*
26. The Wall Panel Sample details a structural feature called 'slip track', what is it? *Answer: "Slip Track" is a feature within CFS Framing that allows for other wall, floor and roof assemblies to deflect under load without load transfer into the Wall below that is made with the 'slip track' feature. Residential construction rarely has loads where this feature would be used.*
27. What are benefits of an Open Frame Cavity (OFC)? *Answer. OFC's allow for the easy installation of Mechanical, Electrical and Plumbing (MEP) allowing for faster install times. MEP's are inspected and tested prior to the closing of the frame with interior MgO Board. Our manufacturer provides pre-punched services holes both horizontally and vertically for these utilities.*
28. Are electrical outlet boxes for light switches, power receptacles, etc., mounted directly to a stud (as in a typical wood stud home)? Can they be attached directly to the MgO Board? *Answer: YES & YES! The Outlet Boxes get mounted directly to the Metal Stud using self-tapping screws prior to the installation of the Interior 1/2" MgO Board. It is possible to use an Old Work Electrical Box and secure it directly to the MgO Board per National Electrical Code (NEC) Guidelines.*
29. What does NOG mean? *Answer: A NOG is the name of a continuous structural CFS member made during the manufacturing process of the same Gauge, Grade and Galvanization that is installed at specific locations to increase the strength (load capacity) and reduce the lateral deflection (wind). NOGs have their Lips and Webs removed at the location of every vertical stud. NOG's are another name for Horizontal Bridging or Blocking.*
30. Can a common Drywall Joint Compound be used to fill nail holes or other Homeowner damages? *Answer: YES.*
31. Are the weather proof exterior coatings reliable? *Answer: YES.*

32. Do the Wall Panels & Roof Components come pre-treated with these exterior coatings or are these coating applied on site? *Answer: YES and YES. Some of the Coatings can be factory installed in a controlled environment and others will be need to be Site applied and finished by a skilled contractor. Since there will be a variety of Wall Panels, for example, being joined together in-situ each connection will create a Joint that will need to be sealed and finished to provide a uniform look and finish.*
33. The description notes 'door jacks and window pre-insulated'. What is this referencing? *Answer: For VANGUARD's clients in the USA that are in colder climates insulating the voids created during fabrication require factory installed insulation (Closed/Open Cell, Fiberglass, etc.) Insulation would not be required in Exterior Walls.*
34. Can a CFS framed house be remodeled? *Answer: YES! The CFS industry as a whole has a variety of solutions when it comes to remodeling. CFS components can be reused and/or recycled so there is no environmental impact. Also, steel framing enables larger spans in the design of the home, fewer interior load bearing walls are needed, making renovation very easy while allowing more flexibility in design.*

If there are any additional questions please feel free to contact us at CAT5 BUILDERS so we can answer.

Thank you!