

An Unconventional Alternative Proposal for Helping to Design Your Home

With Disaster Resistant Construction Technologies and Methods

By: **innovate design development and construction** and Jim & Linda Andrakin a sole proprietorship

Additionally

An introduction to an alternative contracting method to rebuild your home

By: **innovative design development and Construction Corporation**

(An authentic Home built with SCIP panels from Gulf Concrete Technology, Long Beach Mississippi USA)



(Photo courtesy of and by permission of Gulf Concrete Technology, Long Beach, Mississippi USA)

Disaster Resistant Homes®

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Our three priorities for your home design are:

1. Design and Engineering your home for disaster survivability during wildfires, earthquakes and high winds events, we have trademarked “Disaster Resistant Homes®.”
2. Design according to your tastes and ideas in interior spaces and exterior styles for your home.
3. (Optional) developing the best possible green design options and landscaping options for your home site.

We propose to achieve these priorities with Structural Concrete Insulated Panels (SCIP) technology. The brand of SCIP is EMMEDUE® panels, supplied exclusively by Gulf Concrete Technologies of Long Beach Mississippi USA. Your home will have an Engineered Foundation, an Engineered Steel Post and Beam superstructure along with all the other standard construction materials and methods needed along with your choices of all finishing materials.

The steps to achieve the home design priorities:

1. Design and Engineer the Home Structure from your tastes and ideas for your floor plans, elevations, and Roof Plans located on your home site.
2. Develop the exterior style to meet your tastes and ideas.
3. Develop the interior designs to meet your tastes and ideas for each room space of your home.
4. Develop Bids for the civil, mechanical and structural engineering of your home design.
5. Develop a set of “Plans and Specifications” to submit to the planning and building departments for approval.

The Design Process Goal is to create a Set of “Plans and Specifications”

These “Plans and Specifications” are submitted to the local Building and Planning Departments for APPROVAL to build your new home.

Home “Plans” Development needed for the home

The “Plans” are the graphics made up of the Drawings and Schedules or (lists of all items) of your home and represent the quantities of materials that will be used to build your home.

Site Plan, Foundation Plan, Floor Plans, Window-Door and other Schedules, Exterior Elevations, Structural Plans, Framing Plans, Sections Plans, Fireplace Plans, Elevations Plans, Utility Plans, Window Details, Interior Elevations, and any Other Details needed to be drawn to scale.

Home “Specifications” Development needed for the Home

The Specifications are the written details of your home and represent the quality of the items that will be in your home.

The “Specifications” are divided and listed in 16 Divisions:

1. General Requirements, 2. Site Work, 3. Concrete, 4. Masonry, 5. Metals, 6. Carpentry, 7. Thermal and Moisture Protection, 8. Doors, Windows, and Glass, 9. Finishes, 10. Specialty Items, 11. Equipment, 12. Furnishings, 13. Special Construction, 14. Conveying Systems, 15. Mechanical (Plumbing and Heating Ventilating Air Conditioning), 16. Electrical

The written specifications are important for the details of the engineering calculations and all the items that go into building your home. Including the exact manufacturer, the make, the model number of the products to be used in your home and submitted to the Planning and Building Departments for Approval and use during the building of your home. Examples of details of the products specified are windows, doors, all interior items used in your kitchen, bathrooms and all other rooms and architectural spaces including all the finish materials for floors and ceilings materials, door locks and all the rest of the items used to finish your home. The generic wording of finish materials is not a good concept. We need the specific manufacturer and model number, color and every other detail about all finish materials. Generic descriptions of rough materials are ok, but not the finish materials.

The specifications are developed and use a standard set of numbered building and construction divisions in all construction projects. In this phase, it is the homeowner that should shop for the Manufactures, Makes and Model numbers to be included in the written specifications that are included to as the finish materials that will become a part of the home. Substitutes should be only allowed if the homeowner gives the contractor permission in writing with a written request from the General Contractor with a very good reason for the need for a substitution. So that generalizations and cheaper individual substitute of products are not used by contractors in bids or building your new home. The CSI MasterFormat 2004 Residential Specification is the standards of specifications that innovative design development and construction used to help write specifications for your home. Below is the table of contents to these standards that are made available for each home.

Examples Shown below from the index standard used to develop your Written Specification:

Examples Of the written Specifications to be used, see below:

DIVISION 00 00 00. PROCUREMENT AND CONTRACTING REQUIREMENTS

00 00 00 - Procurement and Contracting Requirements

UDA Specifications Residential is designed to define specific materials and installation processes used in residential construction. This outline is created for use by Builders, Architects, Contractors, Remodelers, and Owners involved in the construction of projects of all types. The Specifications Guide works as a companion to UDA Contracts in addition to your construction documents and materials lists to fully describe in detail your construction project.

00 10 00 - Instructions

To provide uniformity in the organization of these specifications, UDA has assigned classification codes that correspond, whenever possible, with the section headings and numbering system of the Construction Specifications Institute's MasterFormat.

01 60 00 - Product Requirements (Scope of Work)

All materials shall be installed in strict accordance with the manufacturer's written specifications or Material's Institute Standards. Where the manufacturer's recommended details are used, the manufacturer shall be responsible for the performance of their product. All Items not specifically mentioned that are required to make the work complete and operational shall be included.

01 70 00 - Execution and Closeout Requirements

The execution of all work shall be in strict accordance with these specifications and manufacturer's written specifications or Material's Institute Standards. Where the manufacturer's recommended details are used, the manufacturer shall be responsible for the performance of their product. All work not specifically mentioned that is required to make the work complete and operational shall be included.

Codes - Construction shall comply with all applicable national, state and local building codes. It is the responsibility of the Contractor and Owner to ensure compliance with said codes and modify the specifications as needed to comply with such codes.

Measurements - The Contractor shall check and verify all dimensions and conditions before proceeding with construction. Do not scale drawings. Noted dimensions take precedence.

Workmanship - Workmanship shall conform to the best and highest standards of quality in each trade and shall include all items of fabrication, construction, and installation. All work shall be completed by skilled tradesmen and mechanics. Installation of all equipment and materials shall be in strict accordance with manufacturers recommendations.

Insurance - Builders Risk Insurance shall be maintained by the contractor during the course of construction until final acceptance by the owner. All bonding and insurance requirements shall be coordinated with the Owner prior to beginning construction. All contractors shall provide and be solely responsible for necessary barricades and safety precautions, and strictly adhere to all governing codes on safety, including the OSHA Act.

Design of the Floor Plans, the Elevation Plans, and the Roof plans

The Floor Plans of the home developed according to Jim's design process as written in the Appendix, **please see "Jim's Design Process" in the Appendices section**

The Elevation Plans of the Home developed according to Jim's design process as written in the Appendix, **please see "Jim's Design Process" in the Appendices section**

The Roof Plans of the home developed according to Jim's design process as written in the Appendix, **please see "Jim's Design Process" in the Appendices section**

The Engineering of your Home

As soon as the Floor plans, the Elevation Plans, and the Roof Plans are completed and approved by the homeowner, it is time to get Bids from a Structural Engineer. A Civil Engineer and Licensed Surveyor and a Mechanical Engineer for prices from the engineers for the foundation, structural steel frames integrated with SCIP's. And the home site engineering and surveying, the Heating, Ventilating, and Air Conditioning (HVAC) System and Fire Sprinkler Engineering that will become your home.

Your home will be engineered to survive exterior wildfires, earthquakes events, high wind events and interior fire events. From these 3 Bids of structural engineers, it is time to decide if you are ready to choose one of the Bids for the structural engineering of your home? If yes, does the homeowner want to meet the engineers? Or does the homeowner just want to hire the engineer?

Other Optional Engineering services include Energy Engineering for Green Energy Design and Engineering including a Zero Net Energy option.

The Civil Engineering of the Home

The development of the plot plan needed for the “Plans and Specifications” to submit to the Planning and Building Departments.

The surveying for the location of the home needed to build the foundation of the home at the correct placement on your building site.

The development of any drainage systems as needed to be submitted to the Planning and Building Departments

The development of any geological engineering as needed to be submitted to the Planning and Building Departments

The Structural Engineering of the Home

The Foundation Engineering Calculations with Foundation Plans and Foundation Section Details and Specifications as needed to be submitted to the Planning and Building Departments

The Steel Frame Engineering Calculations with Framing plans and Framing Sections Details and Specifications as needed to be submitted to the Planning and Building Departments

The Floor Plans Calculations with Section Details and Specifications as needed to be submitted to the Planning and Building Departments

The Wall Plans Calculations with Section Details and Specifications as needed to be submitted to the Planning and Building Departments

The Roof Plans Calculations with Roof Section Details and Specifications as needed to be submitted to the Planning and Building Departments

The Mechanical Engineering of the Home

The Engineering Calculations and Plans & Specifications of the Electrical, Plumbing, Heating Ventilating & Air Conditioning (HVAC) Systems, fire Sprinkler system, and any optional green energy systems as needed to be submitted to the Planning and Building Departments

The Computer Assisted Drawings (CAD)

CAD drawings often called The Working Drawings which include all the “Plans and Specifications” needed to submit to the local Planning and Building Departments for APPROVAL to Build your new home

The plans and specifications are gathered together from the Home Owner, the Home designer and the Engineers, inspired by the home owner’s tastes and ideas and submitted to the draftsman to be compiled into the full set of working drawings which include:

The Map Location of the Parcel to be built on Drawing

The Plot Plan Drawing

The Foundation Plan Drawings

The Foundation Section Plans and details to 1/2 inch equals 1 foot

The Floor Plans drawn to ¼ inch equals 1 foot

The elevation Plans to ¼ inch equals 1 foot

The Roof Plans to ¼ inch equals 1 foot

The Foundation Section Plans and details as needed 1/2 inch equals 1 foot

The Steel Framing Plans and details as needed 1/2 inch equals 1 foot

The Steel Section Plans and details as needed 1/2 inch equals 1 foot

The Floor Section Plans and details as needed 1/2 inch equals 1 foot

The Roof Section Plans and details as needed 1/2 inch equals 1 foot

Stair Case sections and details as needed 1/2 inch equals 1 foot

Stair Case railing plans and details as needed 1/2 inch equals 1 foot

Decks and Railings Details as needed 1/2 inch equals 1 foot

Porches and Railings Details as needed 1/2 inch equals 1 foot

Exterior Trim Details as needed 1/2 inch equals 1 foot

Interior Trim Details as needed 1/2 inch equals 1 foot

Drop Ceiling Details as needed 1/2 inch equals 1 foot

Other Drawn Details as needed for each home as examples needed 1/2 inch equals 1 foot

The written “Specifications” are also gathered together from the Home Owners shopping for finish materials. Including brochures of the specific finish materials and the other Specifications included from the Home Designer. And the Engineers and submitted with the Drawings which are compiled by the Draftsman into Blue Print Size paper. The Drawings are then checked by the Home Designer and Engineers and the Home Owner and then submitted to the local Planning and Building Departments along with the fees of the agency departments for Approval.

The submission of “Plans and Specifications” to the local Building and Planning Departments Process specific to the rebuilding phone numbers, links, addresses

Sonoma County has set up a special office to expedite the approval of your Plans and Specifications for your home.

<https://www.sonomacountyrecovers.org/>

Sonoma County Rebuild Hotline:
(707) 565-1788

<http://sonomacounty.ca.gov/Rebuilding/>

Napa County has provided special provisions to help with expediting your Plans and Specifications approval and building process.

<https://www.countyofnapa.org/2225/Rebuilding-After-the-Fire>

<https://www.countyofnapa.org/1935/Parcel-Data-Report>

1195 Third Street
2nd Floor
Napa, CA 94559

Phone: 707-253-4417

Fax: 707-253-4545

Planning@countyofnapa.org

The **City of Santa Rosa** has also set up special Provisions for expediting the Planning and Approval process.

<https://srcity.org/2675/Rebuilding>

VISIT OR CONTACT THE PERMIT CENTER

- Address: 100 Santa Rosa Avenue, Room 6, Santa Rosa, CA 95404
- Hours: Monday - Friday, 8am-5pm
- Email: rebuild@srcity.org
- Phone: 707-543-4649

If you have any specific questions about the approval of your plans and specifications process I recommend that you call the appropriate office and ask them for specific answers to your questions, they will be happy to help you and answer your questions during the rebuilding process.

How to handle your “APPROVED” set of “Plans and Specifications” and the building inspection cards, the details:

“AFTER you have an APPROVED SET OF PLANS” and Job Cards

You can contact the North Coast Builders Exchange at (707) 542-9502

<https://ncbeonline.com/>

The North Coast Builders Exchange will help you find a contractor and or submit your Plans and Specifications to their virtual plan room for General Contractors to Bid on the rebuilding of your home.

If you are going to contact General Building Contractors individually or act as your own General Contractor:

When you get the Original set of **APPROVED** “Plans and Specifications”(AP&S) from the planning and building departments, the homeowner should get a scan of the Approved set of “Plans and Specifications” in a “PDF computer file copy.” And keep a backup copy PDF computer file on a separate storage device like a thumb drive or disc. And keep the Original Copy, hard copy of the “Plans and Specifications permanently in a safe place. A blueprinting shop can do the scan and creation of the PDF computer file for you.

NOTE: ALWAYS KEEP THE ORIGINAL HARD COPY from the Planning and Building Departments of your “Plans and Specifications” YOURSELF in a safe place with back up computer PDF files of the same Approved set of plans.

You can order the scanning and printing at a blueprinting shop. Order the scan and PDF computer files, to distribute to at least three licensed General Contractors as you meet with them or you can give the General Contractors a PDF copy on a Disc or Hard printed copy or both.

The approved set of Plans and Specifications needs to be in the hands of the owner-developer, the person responsible for the job being done right at all times. Only copies are given to General Contractors for bids.

Keep one **set of AP&S** with the “**Job Cards**” in a safe place, off the building site for the building inspector to see during inspections during the building of your home.

Note: The “**Job cards**” from the building department should be brought to the job site only on the day of each inspection for the inspector to sign and then returned to the safe storage place.

Note: Always keep the “ORIGINAL SET OF APPROVED PLANS” you get from the building department in case you need to make more copies or in case of any potential disagreements-arbitration-litigation.

Keep one hard copy of the **set of AP&S** with you as you meet with contractors for notes.

Keep another **set of AP&S** to write on as the job goes forward to write any questions on that you ask the contractor or subcontractors.

The construction industry protocol is:

“Get Bids from at least 3 General Contractors to build your home.”

I recommend you always get at least 4 General Contractors to Bid on Building your home.

You are betting a lot of money on the building of your home, and you want a quality built home. Speed is not as important as the quality of your home and the integrity of your General Contractor.

A copy of the APPROVED “Plans and Specifications” stays with the job cards that gets signed at inspection time by the inspectors so that the inspectors can see the APPROVED Plans and Specifications as needed. Another copy stays on your home building site for your contracting team’s notes.

Separate "BIDS" from 4 separate General Contractors. (Do not show or tell the separate contractors anything about prices and or share with the separate General Contractors what they tell you separately until after you select your General Contractor to build your home).

There are NO bad questions asked of the BIDDING General Contractors. Make notes before you meet with each General Contractor of the questions you want to ask the General Contractors.

Take notes on what each of General Contractors tells you so you can compare the notes when you compare the prices of the different bids.

Ask for references from the General Contractors with phone numbers so you may contact homeowners clients of the contractor.

Decide if you like any of the first 4 Contractors "as you compare the prices," go over the notes you took about the contractors questions to you and your questions you asked the contractors and their answers.

(If the prices are within 10-20% of each other the General Contractors all see the job the same.)

If one BID is much lower than the other three contractors, usually that contractor forgot something important or something else is wrong.

Usually, it is best to pick a contractor with a middle Bid, that you feel good about and is in the middle price range.

(Lowest bids are how the government does things, but the contractors attempt to get change orders for some reason-excuse to raise the price or other nefarious methods to raise the costs.)

If you feel good about a specific General Contractor and his or her references check out well, and the prices compare well it is time to pick a contractor.

If you don't feel good about a general contractor never hire this contractor, If necessary go back to the beginning and make more copies of the **set of AP&S** and call 3 or 4 more general contractors and ask them for bids.

Be Patient in this process of picking a General Contractor will save you an unbelievable amount frustration in the building of your home.

Approximate New Home Building Process List for Disaster Resistant Homes®

General Building requirements to start building as needed

The Surveyor to stake out the foundation, locations of utilities, other building site specifics including drainage and retaining walls, and roads

Temporary utility pole in place

Contractor to Form the foundation and place rebar as specified by the plans

Foundation rough Plumbing placed as needed

Foundation Rough Electrical and communication placed as needed

Building Inspection for OK to pour the foundation

Pour the foundation, take a sample for testing

Steel Frame erected by the Steel subcontractor inspection of welding as needed

SCIP panel placed and supported and openings framed as needed

Exterior backing materials and hangers placed as needed

Exterior plumbing placed

Exterior Electrical placed

Building Inspection for OK to Apply the Exterior structure plaster scratch coat

Exterior stucco Brown coat placed

Exterior stucco Finish coat placed

Exterior trim placed

Utility room hangers backing as needed

Interior metal Steel Stud walls placed as needed, sheetrock and lath as needed

Interior backing and hangers for trim, cabinets, other fixture backing placed as needed

Hangers placed as needed for drop ceiling

Rough Plumbing placed as needed

Rough Electrical and communications Placed as needed

HVAV rough placement as needed

Rough sprinkler plumbing installed

Building Inspection OK to close interior Stud utility walls

Building inspection OK to place interior structural plaster

Apply Interior Structural Plaster first coat scratch coat

Apply interior plaster 2nd coat as needed

Apply Interior plaster finish coat as needed

Install windows and doors including garage door

Install kitchen cabinets and countertops

Install Bathroom cabinets and countertops

Utilities Room finishing as needed

Install finish plumbing

Install finish electrical and communication

Install HVAC units and finish fixtures as needed

Install finish trim around doors windows & closets as needed (less floor trim)

Install drop ceiling and ceiling trim as needed

Interior and exterior paint as needed

Finish list of things to do as needed touch up

Install finish floor materials as needed

Install finish floor trim

touch ups and clean ups as needed

- Exterior
- Interior

Building Inspection: Finals Inspections from your Building Inspectors are signed off

- Plumbing
- Electrical & communications
- HVAC testing and finals inspection

Temporary utility pole removed

Final cleanups are finished.

Your Home is finished ready to resume your lives as normally as possible.

The Conventional Home Building Process

Commission an architect or Residential Home Designer to design your home and produce a set of plans and specifications to be submitted to the local planning and building departments.

After the Plans are approved, ask 3 General Building Contractors to give you Bids on Building your home. And pick one of the Contractors and his Bid to build your home.

Simple to make these two decisions and straightforward as long as you find the Architect and you find the Contractor that you think and feel will build you a high-quality home.

The Architect and the Contractor will make all the other decisions for you. This option works fine as long as you want a conventional home with a wood based structure.

You end up with a fine home. Assuming that your Architect designs a home that meets your tastes and ideas dreams and budget constraints and that the Contractor does build a high-quality Home.

The real problem we all have witnessed in the 2015 Clear Lake wildfires and the 2017 Northern and Southern California wildfires and also in the Berkeley Hills wildfires is the potential risks that all these homes still face with from the wildfire threats that seemed to have increased in our lifetime.

If you do choose the conventional Architect-General Contractor path to rebuilding your home, may I please recommend that you ask your Architect if he or she knows about the SCIP (Structural Concrete Insulated Panel) building systems. May I also recommend that your Architect explores with you this SCIP option as an alternative to the conventional wood structural building?

A SCIP home will look and feel the same as a conventional wood framed home.

All the background material for your Architect to learn and know about this type of SCIP construction is contained in this proposal on the CD for him or her to learn about this type of construction if they are not familiar with SCIP type of construction. The best-made Panels information is also on the CD in pdf format for them along with the necessary engineering reports that he or she will need to evaluate SCIP type construction.

Our Alternative method of the design Engineering and developing your plans and Specifications proposal

Innovative design development and construction offers an alternative approach that will allow you and your family to more intimately participate in the planning and building process and that will also allow you to track all costs from the beginning to the end of your rebuilding process.

Jim Andrakin offers to design your floor plans, elevations, and roof plans with your help at every step along this path. He then offers and proposes to help locate three engineers of each type of engineer that is needed to give you bids on this process.

Jim or a Draftsperson to combine the design drawings and the engineering calculations and drawings and compile the specifications gathered by the homeowner and the home designer into the "Plans and Specifications", into what is often called "Working Drawings" for submission to the local Planning and Building Departments for approval.

Our Alternative method of contracting to Build Your Home

An Alternative method of Contracting to Build your home with you the Home Owner acting as the General Contractor. Jim Andrakin can be working as your consultant at a percentage of 5% each subcontractor, or Jim can be paid by the

hour for Jim's supervision time of subcontractors at \$75.00 per hour and travel expenses or by a combination of both methods of a percentage and an hourly rate.

Jim proposes to allow you to pick and pay each subcontractor that will help build your home. He will help find at least three subcontractors in each sub-contracting area needed to rebuild your home and request bids from the subcontractors to be mailed directly to you for review. You will then need to pick and pay each subcontractor individually. Most Subcontractors can be paid in 2 or 3 increments as their work on your house progresses. Jim will ask the subcontractors to provide a payment breakdown according to the work progress as the work proceeds along with the subcontractor's Bid price.

Jim believes some potential Home Owners may enjoy this alternative method. This alternative method does require much more work by the homeowners than the convention rebuilding process.

But the advantages are that you will be able to track all building costs in real time as each part of the work progresses and see all the quality of each subcontractor's work, as the work progresses.

Jim recommends that a special rebuilding bank account is set up by the homeowner for this process.

If the homeowner would like Jim will provide his proposed contract for an alternative rebuilding method.

Jim's home design process

A key feature of any new home building process is the right match between the client's dreams, the building budget and the "Plans and Specifications" of the new home design.

The design process that Jim uses as he designs the first draft of a set of floor plans for the homeowner is:

Jim reviews the important unique needs of the homeowners from "Home design questions for Disaster Resistant Home Design," to help Jim in the conceptualization of the initial set of floor plans before drawing the Floor Plans for the first review by the homeowner. Jim reviews your parcel location and the surrounding parcels, and the physical topology of your area. By looking at your parcel from google earth computer program, and reviews the setback limits imposed by the local planning agency, and the approximate or square footage of the new home, and selects an outline shape for the Floor Plans of your Home, and the drawing process is ready to start.

The home drawing process is divided into 3 phases:

The floor plan development phase.

The elevation plan development phase.

The roof and ceiling plan development phase.

The Floor Plan Design Phase and the drafting to scale process begins

Jim starts by visualizing the outline of the home with a quick sketch considering a unique shape requested by the homeowner in the size of the square footage and the setback requirements for your specific parcel.

Jim starts the drawing of the initial floor plan to scale by Jim imagining that he is entering the home at different times with different weather conditions like coming home from work, coming home from grocery shopping by walking into the entryway and pulling into the garage or carport under different weather conditions.

Jims visualizes the entryway dimensions and floor, the entry closet and the entryway from the garage. He imagines he may need to use a half bathroom as you set down shopping items in the entryway and or in the kitchen.

He imagines where the utility room is located. At some point, there will be a need to relight the water heater or to turn on a circuit breaker that has turned off. He also imagines replacing utility systems as needed.

Jim has never been able to use a computer to go through the design process. All Jim's drawings come from his drawing boards. Jim is imaging himself helping with home improvements as he did when he worked as a handyman. So while Jim is on his drawing board, drawing to scale, he imagines all the normal stuff that happens in the home. And he thinks what the most convenient and easiest way to arrange all these spaces to help a home to be efficient is.

So Jim continues visualizing the details of the kitchen, the dining area, the living room and other architecturally needed details provided by the homeowner as he is imaginarily walking through the home. He imagines going up the stairs to the second floor while thinking where the best place for the staircase to be is? How does the top of the staircase go into the hallway and where are the entryways to the bedrooms and common bathroom? Looking for the entryway to the master bedroom and where should the closets be? And the entryway to the master bath? How this all looks on the second floor or in a single floor home, how does this all look related to the rest of the home already preliminary designed?

There comes the point in time and drawing when Jim feels this is ready for the first home owner review knowing this is for review, not finalization. Jim wants to know how the homeowners think and feel about this layout of the first-floor plan.

Because it is not about what Jim thinks and feels so much, but what you the homeowner thinks and feels about the home.

The first home owner design review will give Jim the ideas and opinions of the homeowner to go back to the drawing board and make changes according to the review of the homeowner so that Jim can present the 2nd set of floor plans to the homeowner. This process is repeated as many times as it takes until the homeowner feels and thinks, yes this home is fine for myself and my family, and this is the best we can do. This should be the end of the floor plan process. But not always. Sometimes the homeowners will request changes during the next phases of your home design. Jim will make changes as needed to get to your best home design.

The Elevations Design Phase the Exterior Style decisions are made, including the exterior wall textures, trim styles, the exterior doors and window placements, styles and sizes.

At this point, it is time for Jim to draw the first set of elevations for the homeowner's review using a flat roof design, for the homeowners. The walls styles, textures, and heights with door and window styles, sizes and placement are drawn. The feeling of the exterior of the home is what needs to be finalized over the set of elevation drawings and reviews by the homeowner with just a flat style roof, not knowing the final roof designs. This process is repeated as many times as is needed until the homeowners feel and think that “this is the style and look of the home we want to build. This should be the end of the Elevation Plan Design Process. But not always. Sometimes the homeowners will request changes during the next phase of the Roof Design of the home. And the changes will be made.

The Exterior Roof Design and the Interior Drop Ceiling Design and Specification Phase.

In this Phase of the Design and set of home owner’s reviews, Jim asks the homeowner metaphorically to think of the Roof Design metaphorically, as we all think of haircuts and hairstyles of human beings. The same person looks very different with just different hair lengths and hairstyles. Similarly, homes with the same floor plans and elevation views look very different with different styles, shapes, and lengths of overhangs over the walls of Roof Designs. Jim believes homes are comparable to this metaphorical hairstyle concept.

After the exterior Roof Plans are completed, it is time to specify the specific interior drop ceiling designs and the specific materials to be specified in the home.

So it Jim’s job as a designer is to draw the Roof Plans and help specify the interior ceiling materials and ceiling trim if there is to be ceiling trim that is most appealing to the homeowner's tastes and ideas.

So Jim must go through this process until the homeowner is pleased and happy with the roof designs and interior ceiling materials. This should be the end of the home design planning process.

But not always. Sometimes the homeowners will request changes during this last phase of home design. Which Jim the home designer will accommodate as needed.

When all three phases of the home design phases are finalized according to the home owner’s tastes, ideas, and dreams, it is now time to start the Engineering Phase and the written Specification Phase for the home’s “Plans and Specifications that will be submitted to the local Planning and Building Departments.

Jim is also very mindful of the home design seven-step process as taught in the book titled “Super House Design your Dream Home For Super Energy Efficiency, Total Comfort, Dazzling Beauty, Awesome Strength, and Economy” by Donald R. Wuifinghoff.

Our story of “Disaster Resistant Homes®” & iddc innovative design development and construction the sole proprietorship and the CA corporation by the same name

Jim Andraikin is a San Francisco native and was a retired General Engineering and Building Contractor. The 2017 Northern California wildfires emotionally motivated him, and with Linda, his wife’s statement: “there ought to be materials that will not burn,” began to search for technologies that are available that could have minimized the destructive outcomes of these horrific wildfires.

Jim was surprised to learn that there did exist, for the last 35+ years, technologies that could have minimized the damage caused to the homes that were destroyed during the 2017 catastrophic events.

The disaster resistant building technology is known generically as “**Structured Concrete Insulated Panels**” or **SCIP**. There are companies in China, Mexico, Columbia, and in many parts of the world that build SCIP panels. The panel patents on the technology were issued between 1967 through 1992. There have been over 100,000 SCIP buildings built worldwide in the last 35 years. The engineering reports needed by engineers to engineer specific home designs are also available on our website. There are many companies where the SCIP panels may be purchased. In our opinion, the highest quality SCIP panels sold as **EMMEDUE®** panels. The panels are exclusively purchased in the USA from **Gulf Concrete Technology(GCT)** located in Long Beach Mississippi, see at www.gct2.com. We exclusively specific and use SCIP’s panels from **GCT**.

This SCIP type of home did survive the 2015 clear lake fires and the construction pictures built by the homeowners may be seen at <http://jimndar.net/tri-di-panel-construction/indexpg.htm>

So, Jim decided to develop some hypothetical new home designs as examples to do estimates to compare the costs of the SCIP technologies and conventional wood framing construction. Again Jim was surprised to learn that because of the increases in the costs of conventional wood construction. SCIP building technologies seemed to be economically competitive with high-end residential construction methods today.

In early December of 2017, Jim decided to reactivate his California construction licenses and to proceed to attempt to find some clients who want to investigate nice home designs according to the client’s tastes and ideas and to rebuild with SCIP technologies.

Jim’s company Innovative Design Development and Construction are in the process of developing many home designs to choose from, or you may request a custom individualized home design from your ideas. We are ready to build your new homes using SCIP technology. We can use conventional design and contracting methods. We also offer an unconventional building strategy which will allow the homeowners to track all building costs in real time and potentially serve as the General Contractor. Jim can act as your building consultant in part of or all of the building process which potentially could save the homeowners some of the cost of rebuilding their homes.

We will design, or design & build or design and supervise the engineering, and Plans and Specifications development to submit to the local planning and building agencies and or help supervise the new home construction SCIP disaster resistant home technology.

Jim started in the construction industry as a laborer in the early 1980’s and worked in several of the building trades up to the level of a journeyman and qualified as a general building contractor in 1988 and also qualified as general engineering contractor in 1991. He also has industrial design experience from the late 1970’s that included residential architectural design. We commissioned the creation of a new website where there is the best information we could gather about home design and engineering using SCIP technologies.

Jim & Linda can be contacted at 707 984 1190 or Jim’s message phone at 707 984 4419

andrakin@mcn.org

www.disaster-resistant-homes.com

Summary of our offers:

1. We can design or help you design your new, “Disaster Resistant Home®” for approximately \$2,250.00.
2. We can convert an existing conventional wood structured home design to a SCIP type “Disaster Resistant Home®” design for approximately \$3.50-\$4.50 per square foot.
3. We can help you build your new “Disaster Resistant Home®” with you serving as your own General Contractor. Jim can serve as your consultant helping to supervise the subcontractors for 5% of the costs of the subcontractors and 5% the cost of materials or help you build your new home on an hourly basis of \$75.00 per hour or a combination of an hourly rate and a percentage rate.
4. We can design or help you design and build your new “Disaster Resistant Home®” for approximately \$250-\$350 per square foot depending on the design and engineering of your new home design and the finishing materials you choose for your new home.

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(An authentic Home built with SCIP panels from Gulf Concrete Technology, Long Beach Mississippi USA)



(Photo courtesy of and by permission of Gulf Concrete Technology, Long Beach, Mississippi USA)

A Disaster Resistant Home®

An example of an authentic SCIP home under construction

(An authentic Home built with SCIP panels from Gulf Concrete Technology, Long Beach Mississippi USA)



(Photo courtesy of and by permission of Gulf Concrete Technology, Long Beach, Mississippi USA)

Fire Resistance

Earthquake Resistance

Thermally Efficient

Sustainable & Energy Efficiency

Cost Effective

Wide choice of finishes