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“first look” at GigaCrete’s revolutionary new New Construction “GigaHouse”

“GigaHouse”

Utilizing GigaPanel

What is GigaCrete

- GigaCrete is a family of products based on low carbon footprint “Green” ceramic binders significantly outperforming Portland cement: We do not use PORTLAND CEMENT which is a high CO2 producer
- **StuccoMax**, a waterproof exterior coating that is non-combustible
- **PlasterMax**, a fire rated abuse resistant coating over foam replacing gypsum board
- All GigaCrete coatings **bond permanently** to EPS insulation foam, concrete products, bricks and plasters.
- All are one coat applications and **fast to apply**
- All are **abuse resistant**, non combustible, no VOC’s, no off-gassing utilizing only safe and **healthy materials** that will not support the growth of mold or mildew.

What is GigaCrete's unique "GigaHouse"

"GigaPanel" is not what you think….
It is **not** a SIP's panelized building system at all….
It is a patented steel framed insulation system!

The building components are structural steel "stud" construction, proven for decades, signed off by a local structural engineer who only has to agree with the calculations of leading structural engineering already completed.

We reversed the building process Typically building with studs comes first, then fiberglass insulation is added in between the studs, this creates thermal leaks and sound transmission through the studs into the home…. Neither fast nor ideal.

GigaPanel Systems starts with the insulation first…**R28.5+** rigid foam insulation panels with computerized insert channels cut into the foam precisely where structural engineering dictates the steel studs fit to meet code compliance for a steel framed structure!

The structural components are then slipped into place and securely attached with self tapping screws….Exactly the same as steel framed construction only this can be done by unskilled labor, purposely made to be very simple, guaranteed square, right the first time, no measuring, no room for errors.

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Overview of installation methodology

1. Layout steel track on slab and permanently attach
2. Locate wall insulation panels into track
3. Slide down connectors and screw together top and bottom
4. Cut electrical outlets and link to conduits and secure with insulating foam (same as ICF construction)
5. Coat exterior with 3,500 psi StuccoMax (same day as roof is installed)
6. Coat roof with Gigaroof (StuccoMax)
7. Coat interior with fire rated, 8500+psi PlasterMax

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Tools needed to build a house

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6” thick R-28.5 GigaPanel components

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GigaPanel is designed for rapid assembly by unskilled labor

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16 linear feet of wall GigaPanel is easily carried into position

Step 1: Lay out the bottom tracks according to plans and include water resistant gaskets between the bottom track and the slab.

Step 2: Attach bottom track to the slab with Ramset pins or screws

Step 3: Locate panels next to where they are needed

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Step 4: Insert pre-cut foam panel into steel stud bottom track

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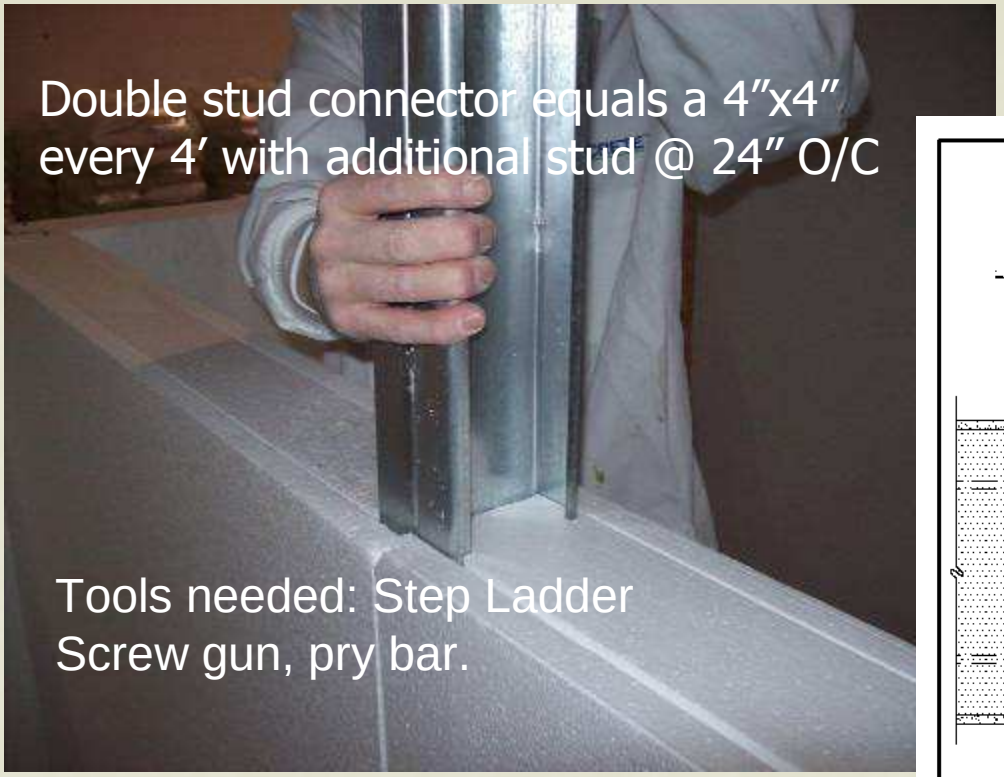
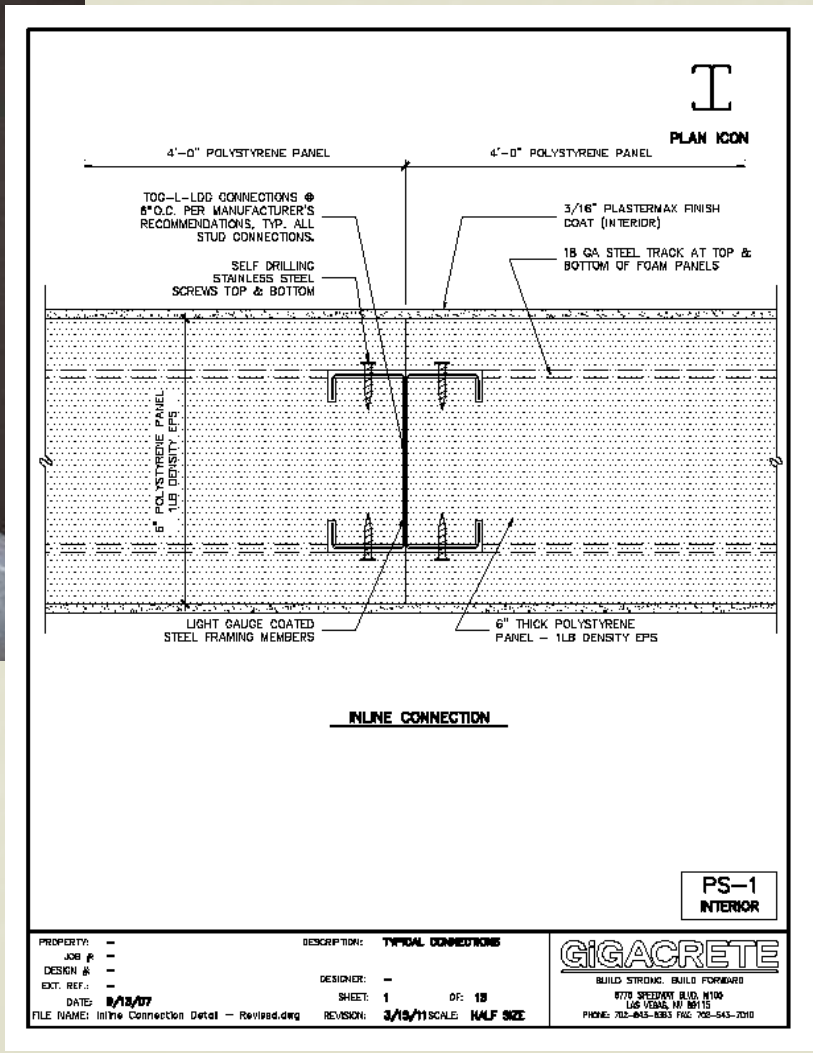
- Panels are laid in place in minutes not days
- CNC cuts are guaranteed to be square with studs
- located exactly where needed as per structural needs
- no measuring
- no room for errors

NO SPECIAL SKILLS NEEDED

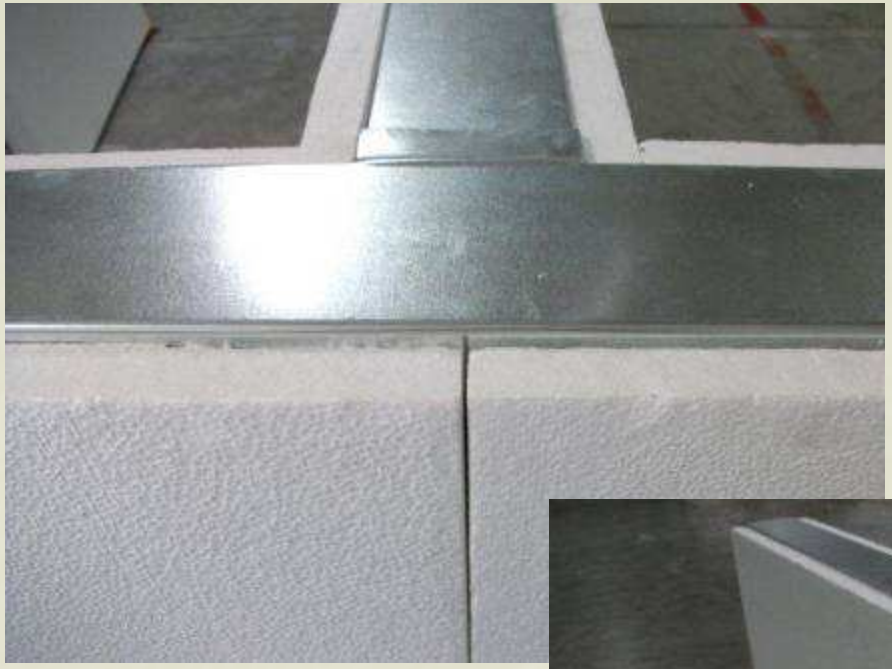
Step 5: Insert studs



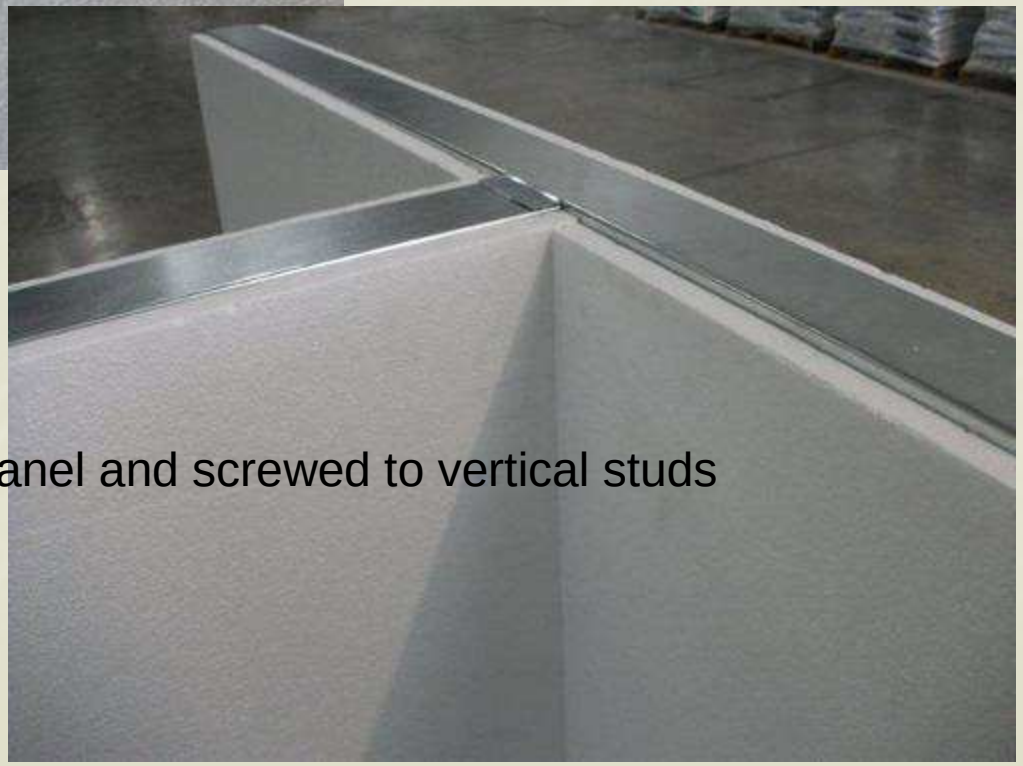


Patented connectors based on
“steel framing” construction methods
Slide down engineered grooves in panels forming panel to panel connections and the structural members both at the same time.

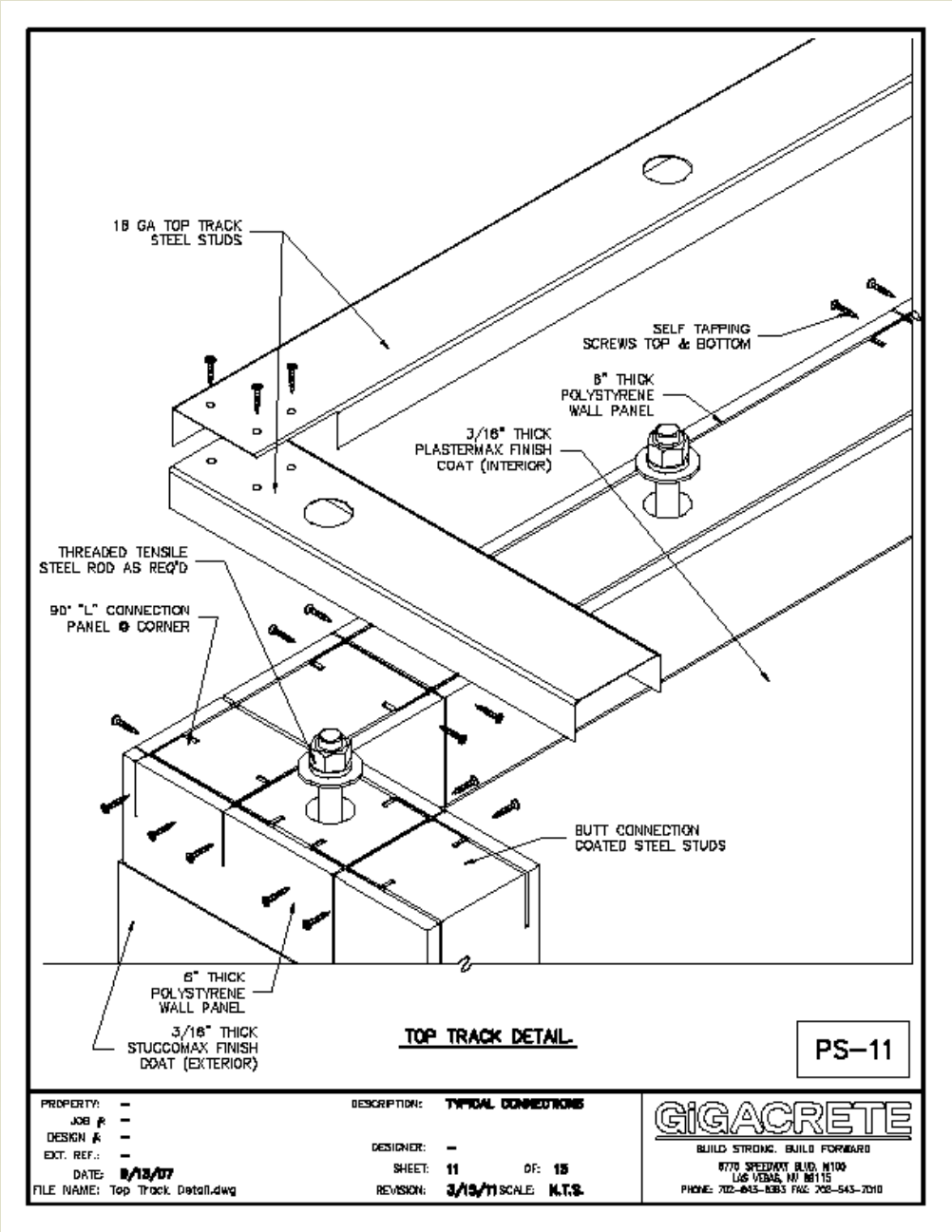
Note: the GigaPanel designs determine where the structural studs and connectors are placed



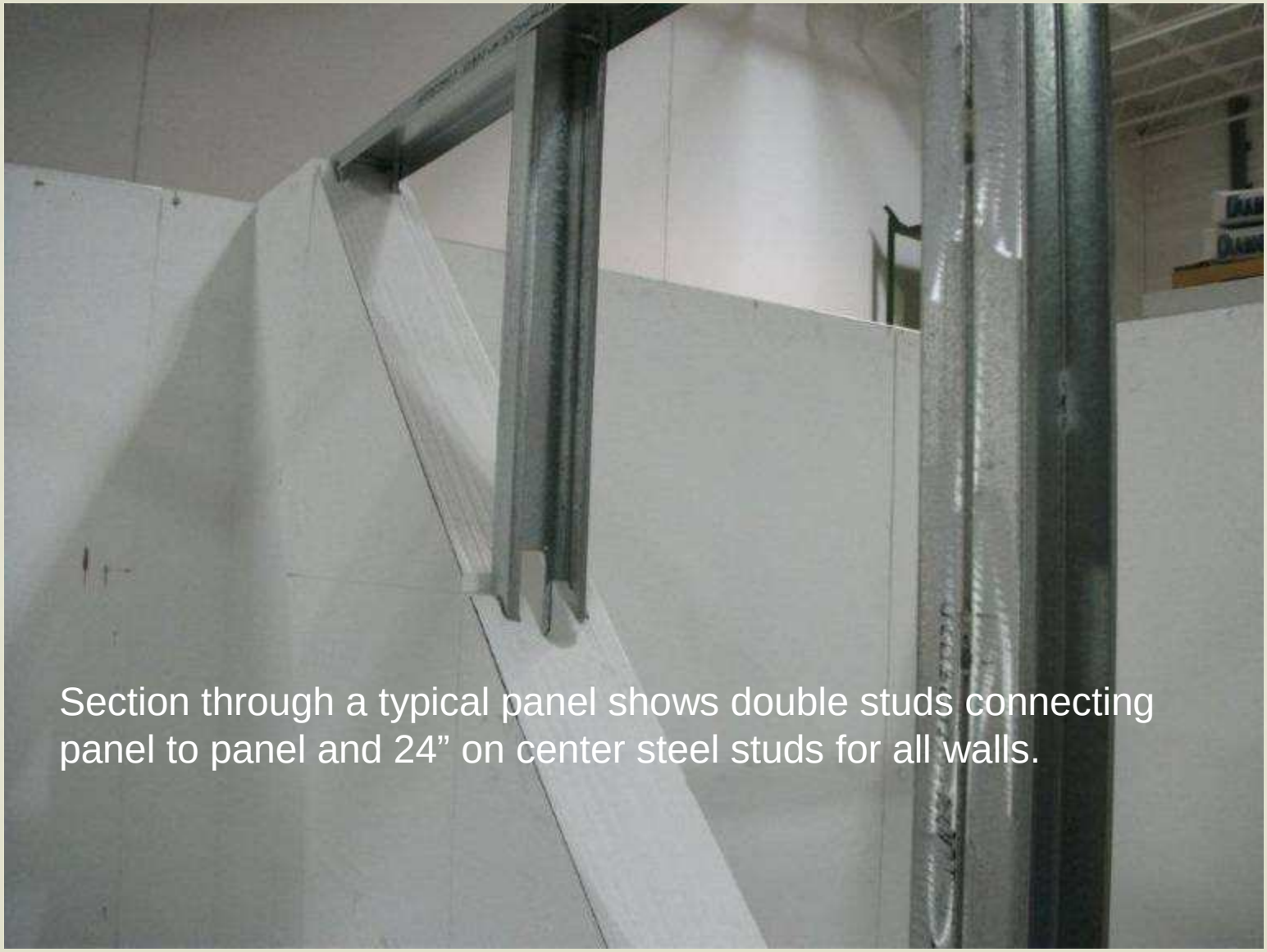
Finished top track



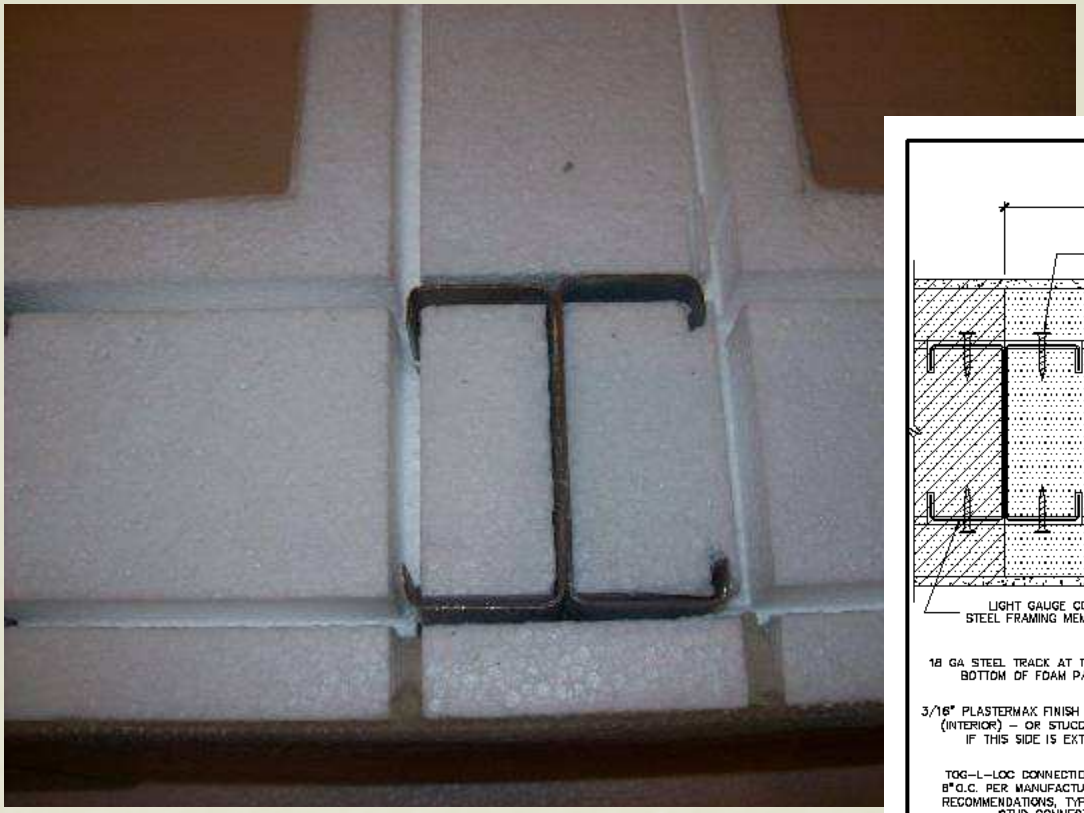
Top track inserted into EPS panel and screwed to vertical studs

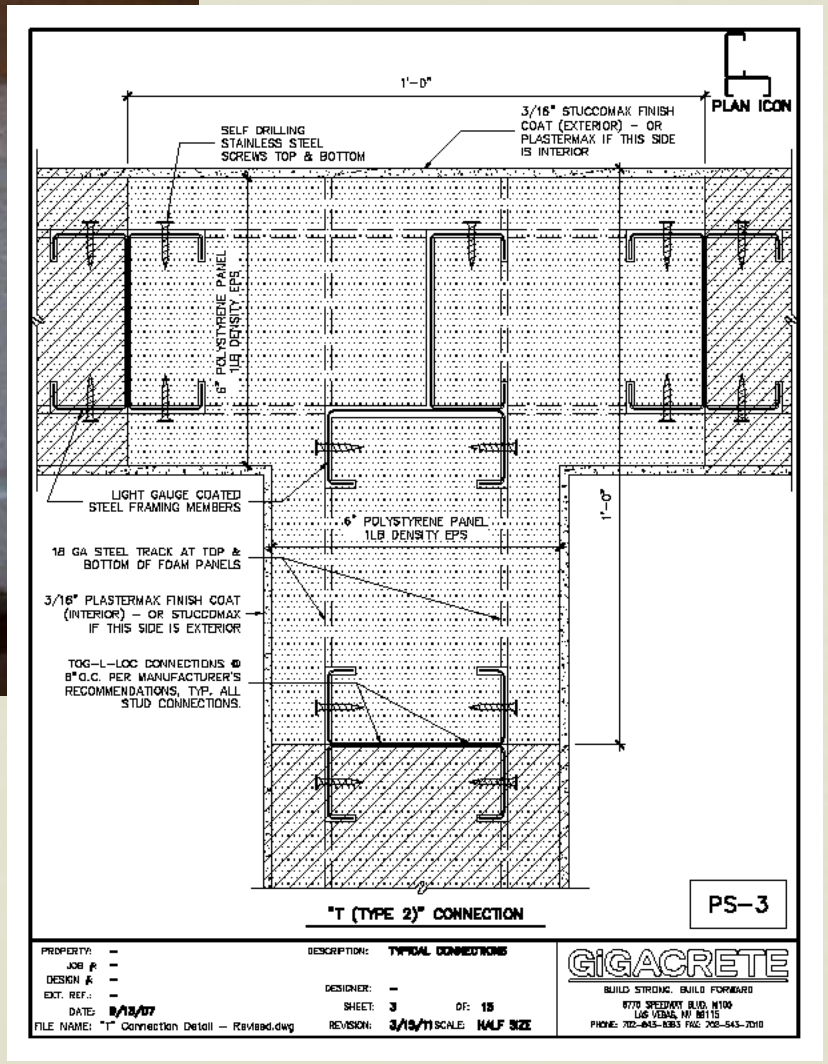


Exploded view of connections

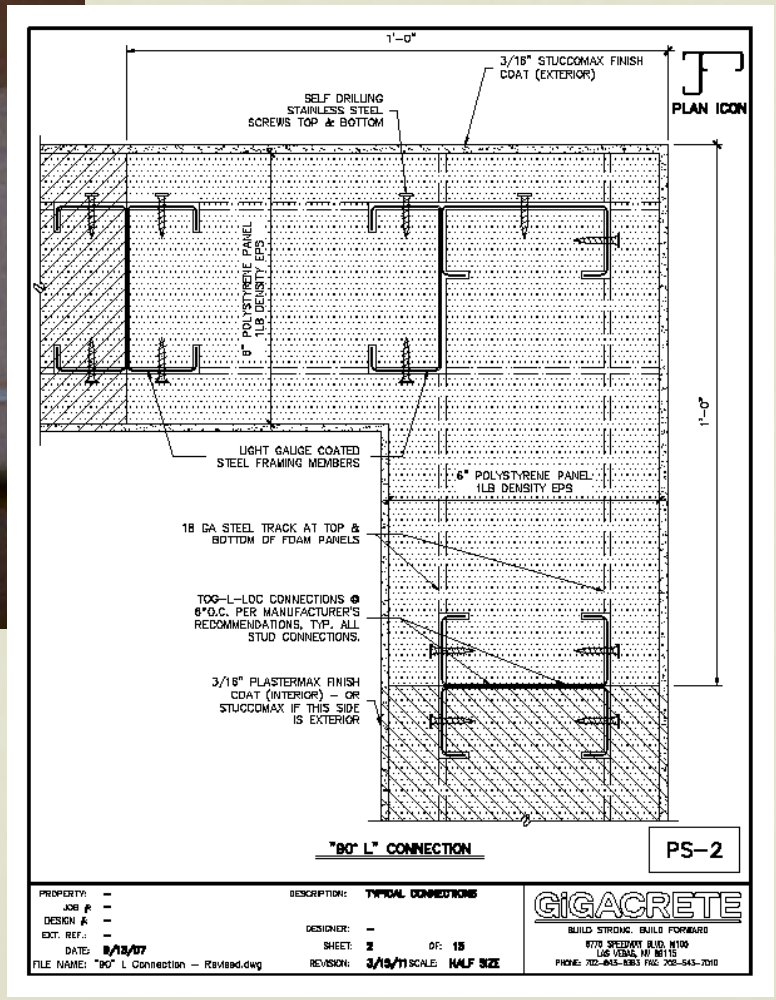


Section through a typical panel shows double studs connecting panel to panel and 24” on center steel studs for all walls.

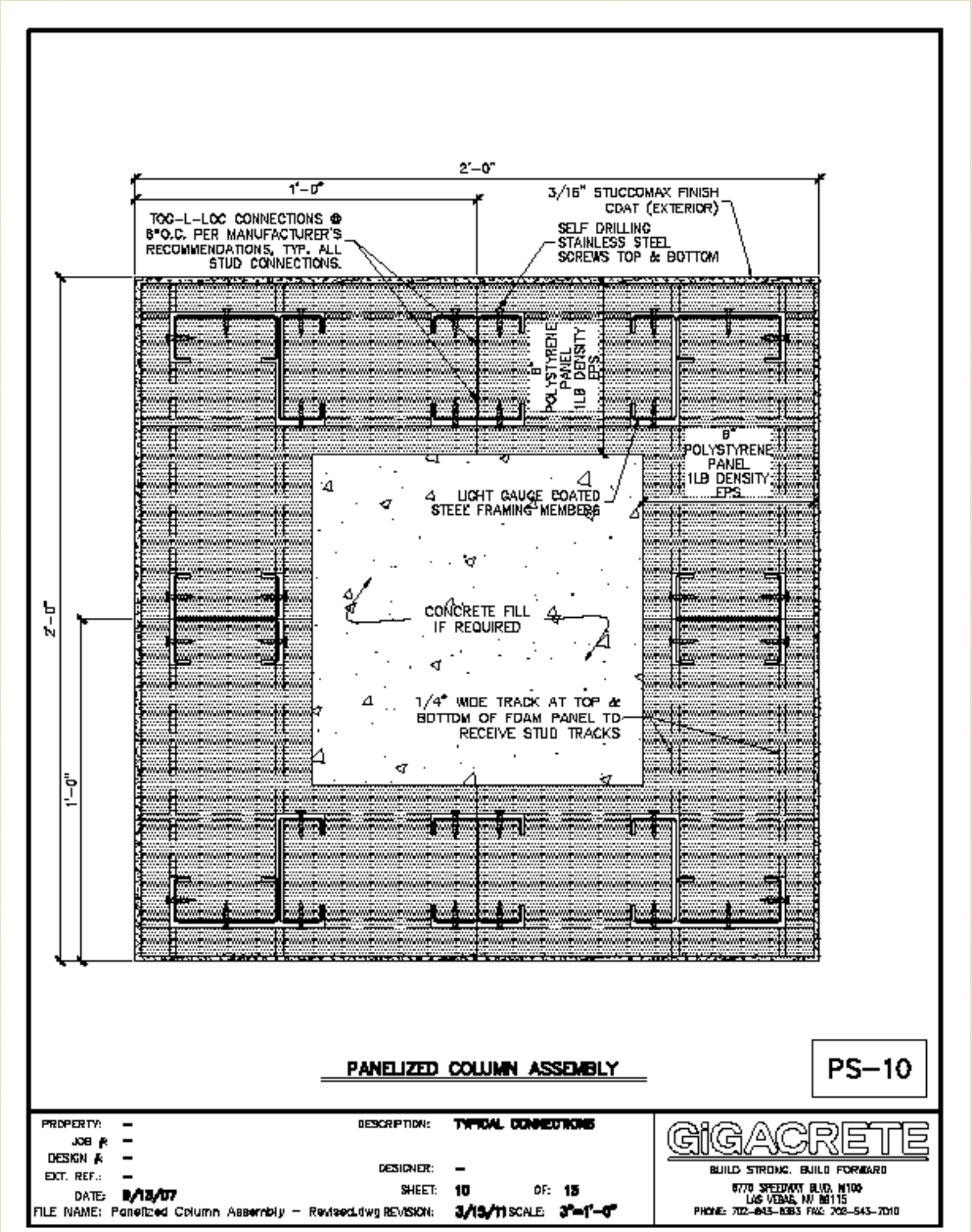




Pre-cut “T” sections



Pre-cut corner sections



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Column
made from 4 pre-cut corners

Columns are used for additional Structural support, HVAC (heating ventilation air conditioning systems) Plumbing and venting chases. Typically used in corners

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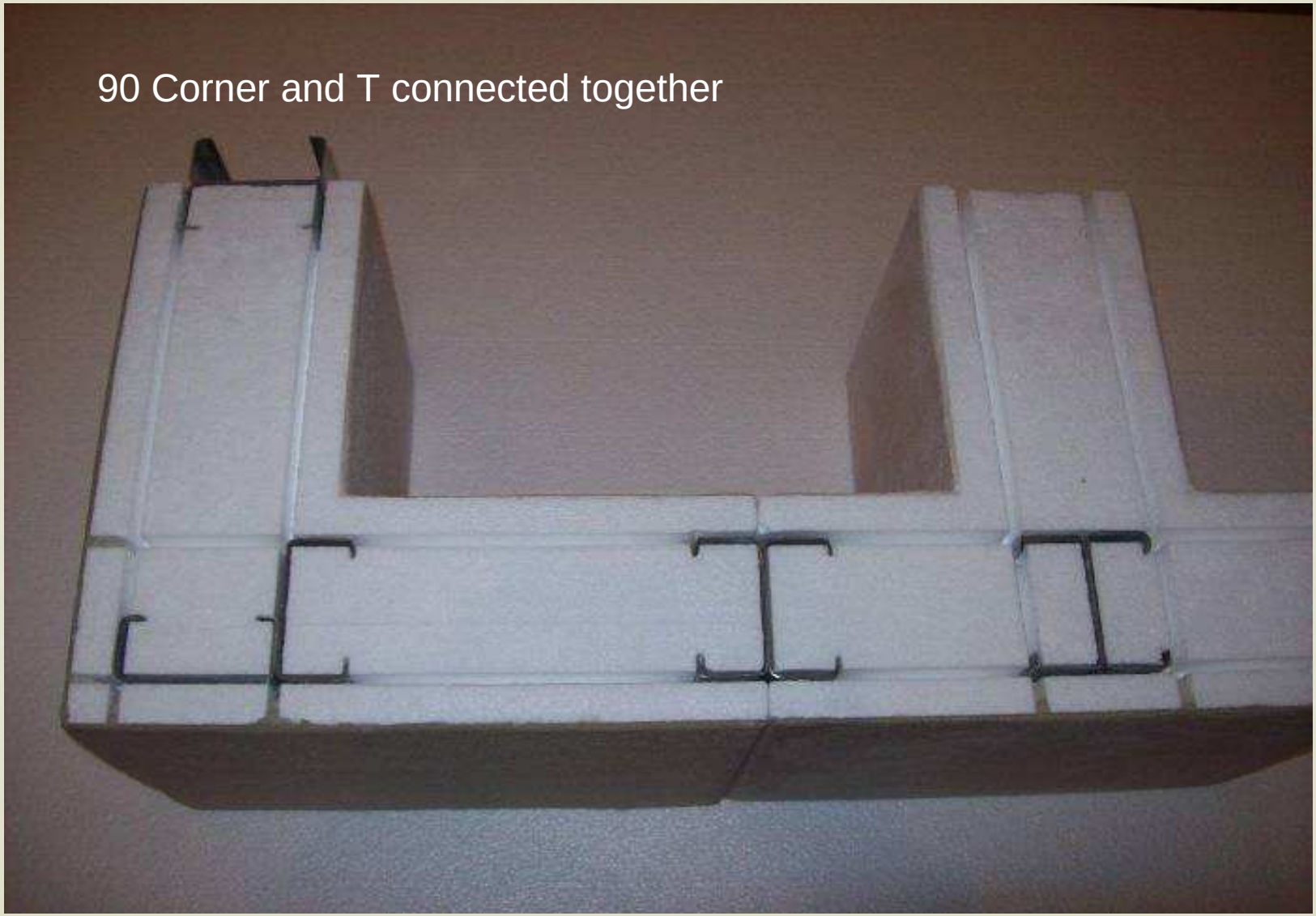

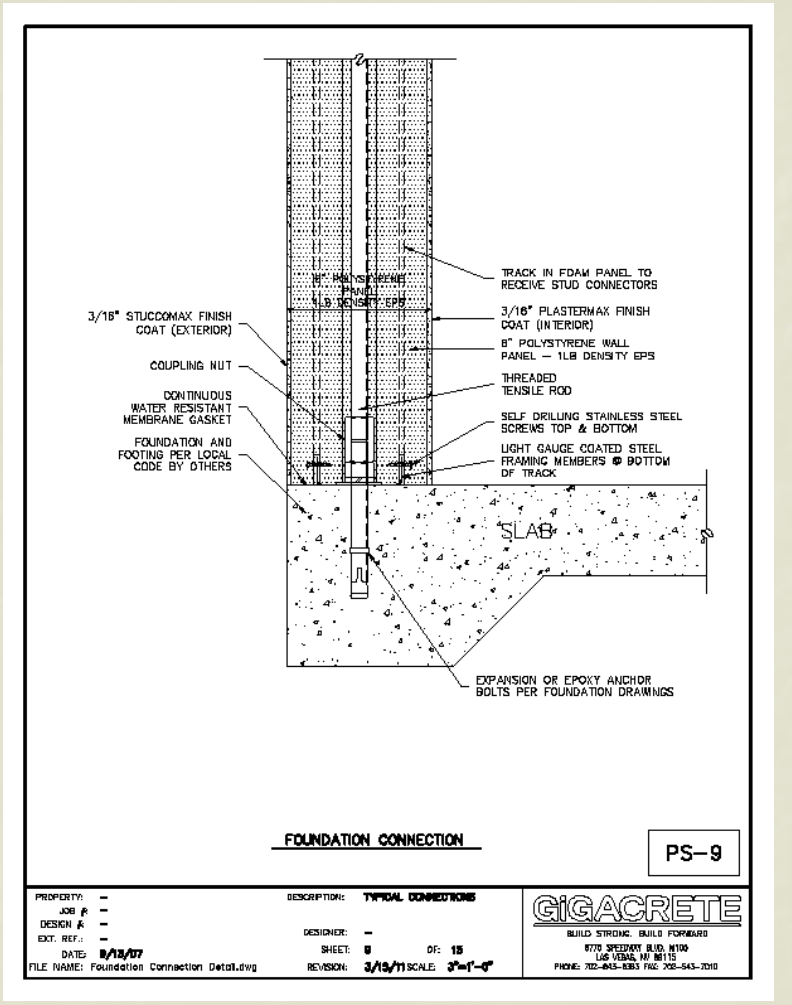

Foundation to wall connection

Hurricane anchors… solid steel connection from the roof to the foundation

Step 6: Laser level and brace walls before adding roof trusses

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Step 7: Roof trusses added to walls a few hours after building walls

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Compression ring holds 200 mph roof trusses securely together

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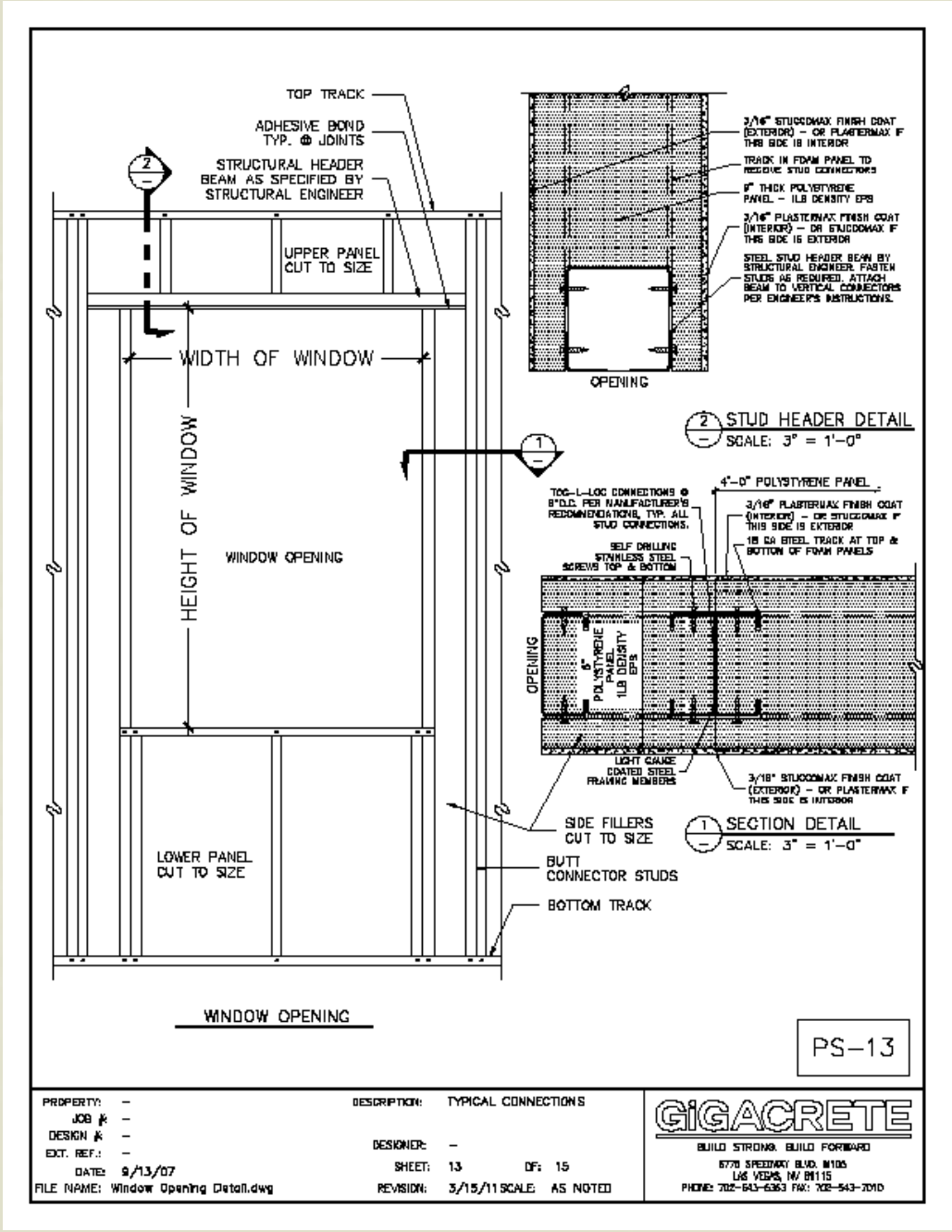
Step 8: Install doors and windows



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Window and Door framing

Step 9: Roof panels are laid onto trusses and studs slid into location holes cut into foam panels

Step 10: Roof studs are screwed to trusses with steel brackets

Roof panels from inside the house
Showing stud perlins

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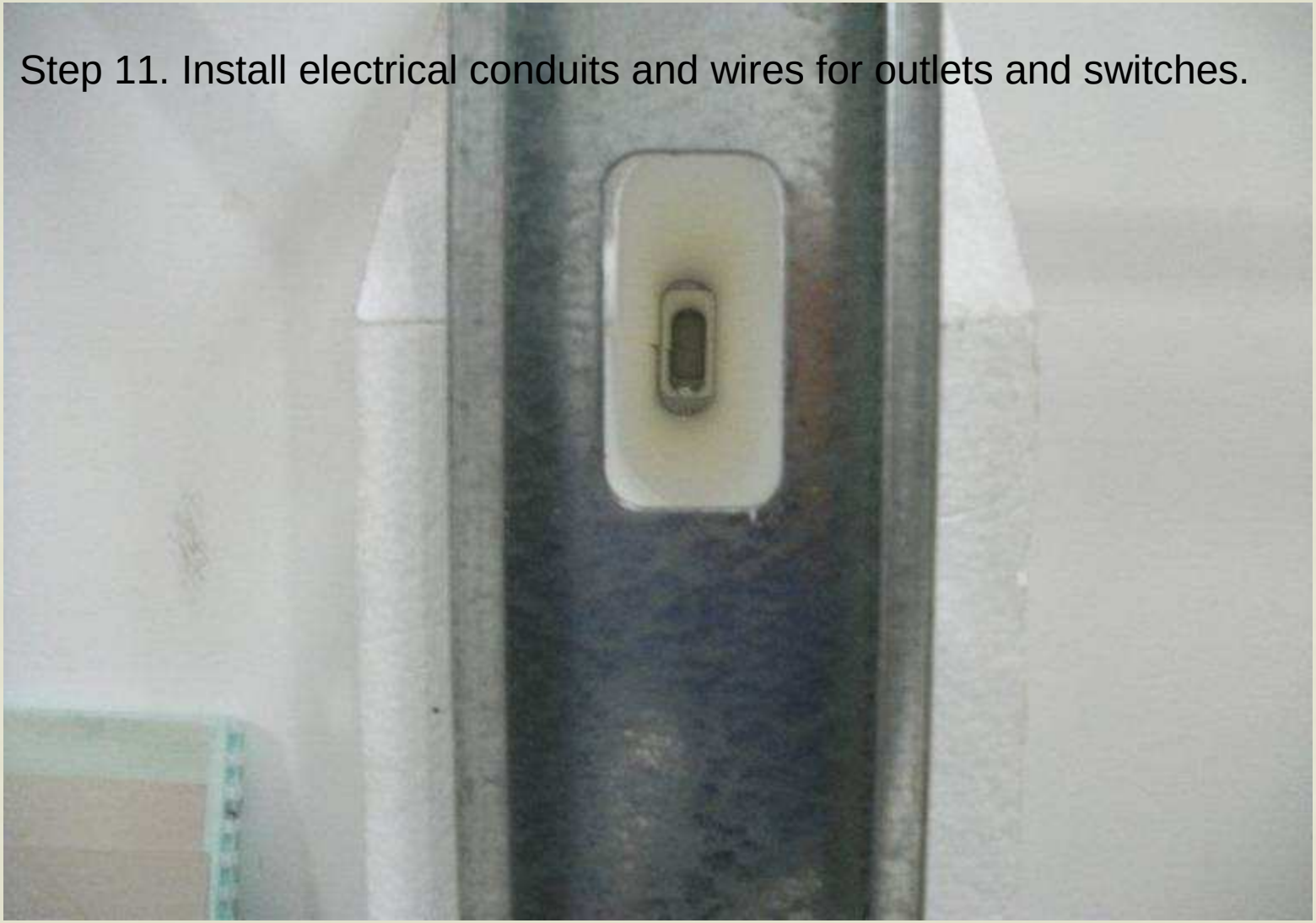
Step 11. Install electrical conduits and wires for outlets and switches.

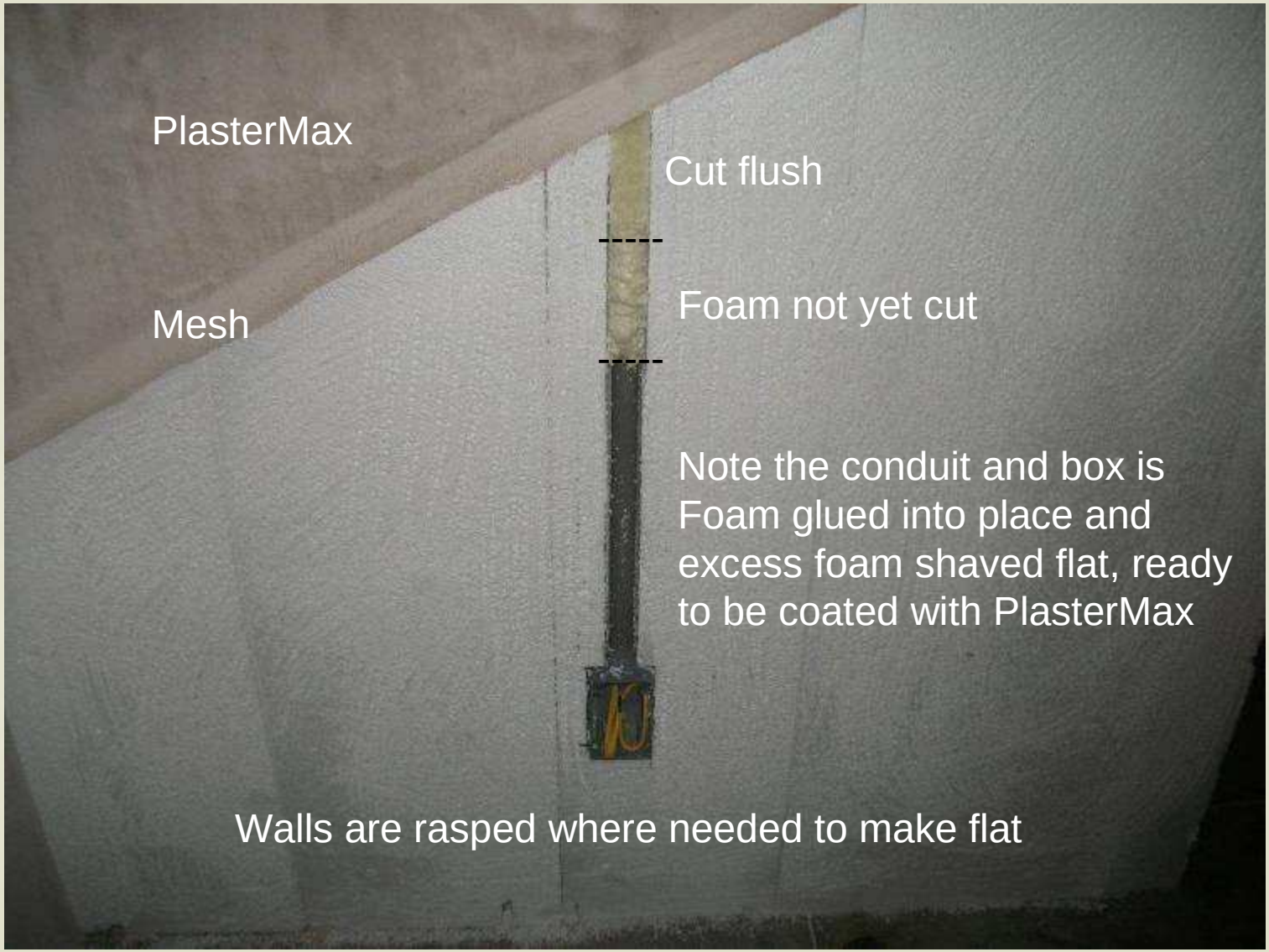


Conduits are pre cut into panels ready to pull wiring.

Conduit or plumbing passing through walls
Must meet local electrical codes

Electrical wiring inside chase

Retrofit electrical after house is completed



Step12: StuccoMax is direct applied over the foam insulation panels

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Window and Door trims cut from EPS foam are covered with StuccoMax

Step 13: Colored GigaRoof spray applied directly over the EPS foam (non USA projects)

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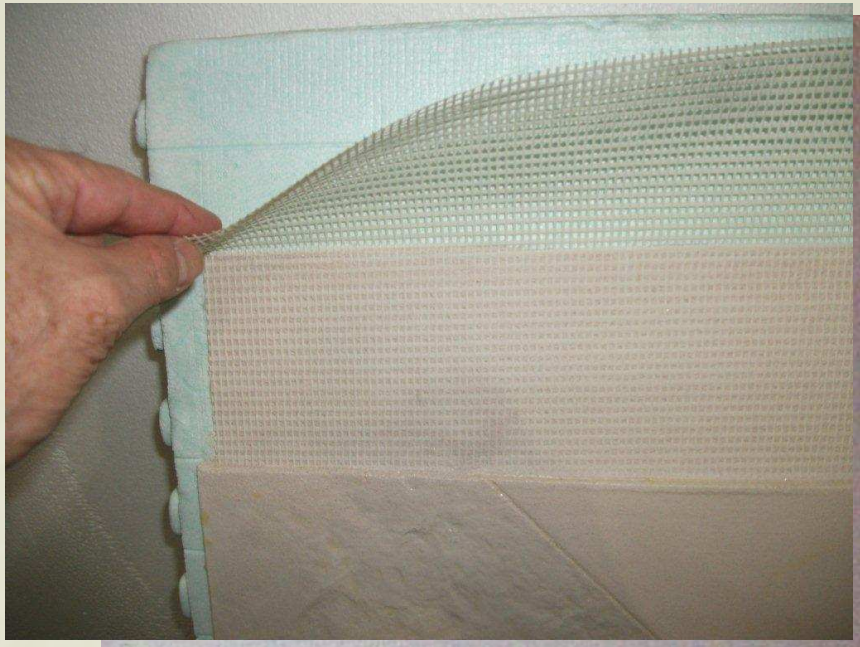
Step 14. PlasterMax over interior walls



GigaCrete coatings are added directly to the EPS foam, note the imbedded mesh


Note:
Gutter system integrated into molding for rain collection
Doors (by others) added

Step 15. Add insulation sheets on underside of roof and over trusses

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PlasterMax applied directly over EPS foam panels.
All panel seam lines are covered over to create a
seamless and durable ceramic finish.

Ceiling underside of roof panels and beams covering structural roof trusses

Finished PlasterMax over the foam interior wall panels

Optional Magnesium board ceilings (no gypsum board)
With PlasterMax roller texture knockdown finish

Step16: Window trims are added, screwed into steel studs, patched and ready for paint.

Step17:
StuccoMax is washed to remove dust particles, primed and painted.

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Simonton vinyl windows (no wood) come in all standard sizes

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End result is a very energy efficient and virtually maintenance free living environment

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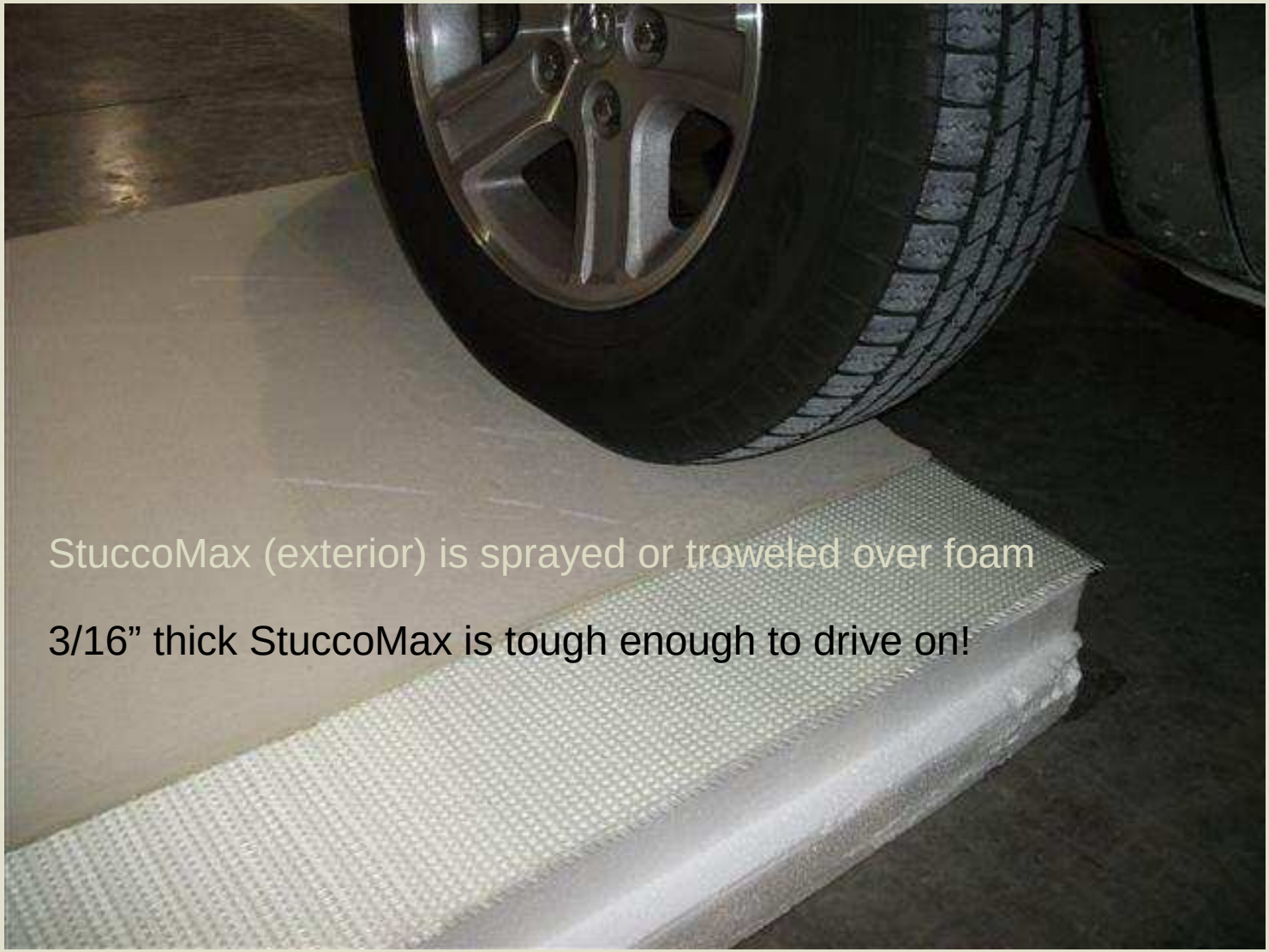
StuccoMax (exterior) is sprayed or troweled over foam
3/16” thick StuccoMax is tough enough to drive on!

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SUSTAINABLE
“GigaPanel”
build strong, build safe, build fast

1. Completed rapidly with supervised local labor
2. Simplicity = speed = reduced cycle time
3. High “R” values means less operating costs to heat or cool
4. Only healthy materials are used
5. No Portland cement used in the house structure
6. Exterior StuccoMax is WATERPROOF
7. Interior PlasterMax is the Worlds only fire rated, 8,500+ psi abuse resistant plaster designed specifically for applications over insulation foam