

## END OF YEAR GREETINGS FROM THE CONSTRUCTION SITE!

Since the structural steel frames have been erected and the entire window package has been ordered the wood framing has really taken off. As I said last month, this is the most exciting moment of any construction project and I heartily encourage everyone to pass by and take a look at structure taking its true form!

With the ever increasing scarcity of wood the construction industry has been very pro-active at developing new techniques and materials for building stronger, greener and more efficiently. Talk of 2x4's and post and beam has now evolved into a vocabulary of parallams, LVL's, Truss joists and many other newly created words.

The role of glue in construction has had as much of an affect on the construction industry as computers have in the world of industry. Entire lines of products have been developed using recycled scrap lumber that is formed together in molds with highly water resistant adhesive binders. This has created much greater freedom for architects, engineers and builders in developing long span structures with minimum deflection.

As you look across the Beth El construction site you can see these elements integrated into our own project. Over every window opening you can see parallam headers. These are beams made of recycled wood chips with all their strands laid "parallel" to each other and held together by high strength glue. Next, if you look at the floor joists being laid for the Religious School 2nd floor you will see "Truss Joists", glue laminated 2x4 top and bottom cords held together by a foot high strip of OSB board (oriented strand board) also utilizing the same wood scrap technology.

The main portion of the Religious School roof will be utilizing another technology that has increased in use in recent years, light-gage truss construction. This uses 2x4's nailed together with light gage metal plate connectors to create long span beams. By using only 2x4's for members only farmed, new growth forests need to be cut saving old growth trees.

One of the most spectacular uses of special wood framing will be utilized in our Sanctuary and Social Hall spaces. Long span deeply curving bowstring trusses will carry the



roof loads over these large spaces to the bearing walls. Aside from the sweeping beauty these trusses will give these spiritual spaces, their glu-laminated top and bottom cords connected by 2x4 cross cords will again be using wood sparingly and very efficiently.

Special attention has been paid to the seismic strength of this structure and glue laminated plywood shear walls are being used in unison with a family of latest technology earth-bound high tensile metal connectors to knit all the building components together into a unified structural shell.

With all this discussion of efficient wood usage in the structural frame, one of the "greenest" elements of our building uses no wood at all. The entire building exterior "skin" is to be wrapped in a material created by cementitious panels, called Hardi Board, that looks like a wood product but takes away no trees at all. This material will give a nice human scale to our building and blend it with its neighboring residences. The play of light against the shadow reveals created by these overlapping boards will change during the day and throughout the seasons.

With the High Holy Days soon upon us the next article will reflect on our journeys, past and future, discussing those elements that our community will bring with us in our move to our new *Mishkan*, sanctuary, and *Bayit*, home.

It looks to be a great *Shanah Tovah!*

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