4.501 Massachusetts Institute of Technology



November 3, 2005

Due in Class Monday Nov 14th

Modeling

This assignment calls for new physical models, do not revise the existing models

- 1. For this phase you will work in groups of two. Partner with one student from your current group try to select someone with a similar approach to design and construction and someone whose schedule works with yours.
- 2. Each sub-team will remodel the top or bottom and middle area of the section model reviewed in class this past Monday. In summary, we will review 6 models on Nov 14th, two from each team. Of the two groups, the first sub-team will model the roof and floor/ceiling of the floor below (Fig 1). The second, will model the floor and the foundation (Fig. 2). Your sub-team must take a stance on the problem, we should see two distinct philosophies for areas of each model.
- 3. Take a position on one subject matter as it relates to digital fabrication technologies, state a hypothesis. For example "my team is using DF for part alignment" or "it is used to assure a particular data point from the original model in support of concurrent construction", etc.
- 4. This assignment is research into future methods of construction. There is no right or wrong answer. You should speculate. Be bold! Fifteen years ago most people did not believe in the web. Who could have ever imagined purchasing all of their Holiday gifts online? Who could have ever thought we could view news clips on our phones while sitting in traffic?



Fig 1. Roof/Second Floor Section Model

Fig 2. Foundation/Second Floor Section Model

Model Requirements

a) SECTION: Walls should expand vertically a minimum of 4' into the floor above or below, for example for the roof/floor model the walls should extend 4' down into the first floor

b) SCALE: Model should be 1"=1'-0" – Same as the last model

c) MATERIALS: Challenge traditional methods to represent model ideas. How can the user visually distinguish new from old construction methods through your model? Use materials that allow the viewer to distinguish between legacy (hand) and CNC methods (computer based

d) ASSEMBLY: What are the principles of your assembly? Your model should reflect assembly systems for both vertical (walls) and horizontal surfaces (roof & floor).

e) PRESENTATION: Joel and I plan to have a guest reviewer at the next presentation. Bring the old (4 person) model and your new (2 person group) model to class. Present the digital model and physical model in presentation form for our next class, you can decide how you want to present the two.