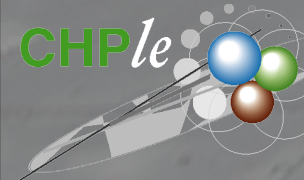


A Prototype for a Manufactured Vocational Technology Classroom

A collaboration between the Center for High Performance Learning Environments (VT), GE Modular Space Division and Montgomery County Schools



Center for High Performance Learning Environments



Sponsored by:
U.S. Environmental Protection Agency
U. S. Department of Energy



VIRGINIA TECH
COLLEGE OF ARCHITECTURE
& URBAN STUDIES

Examples from Blacksburg, VA





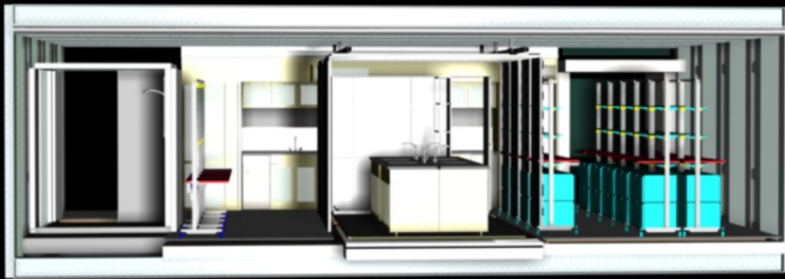
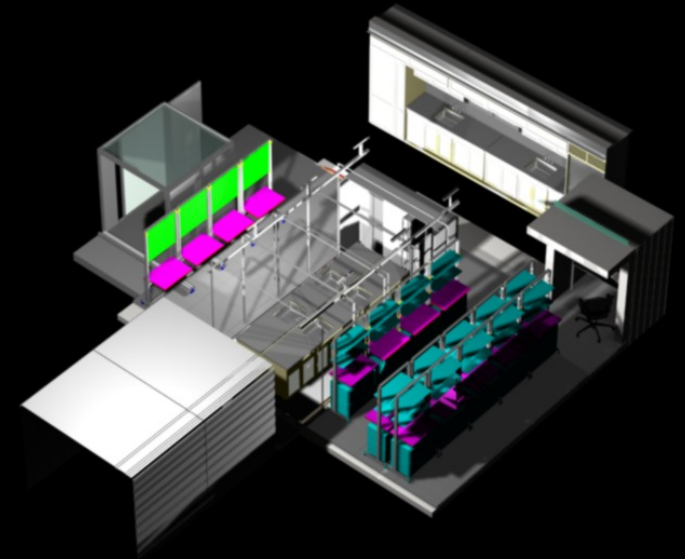
NB:

- **Superb use of natural lighting?**
- **Excellent cross ventilation?**



- **Convenient maintenance strategies?**

Research Opportunity: Innovative Architectural Design and Prototyping



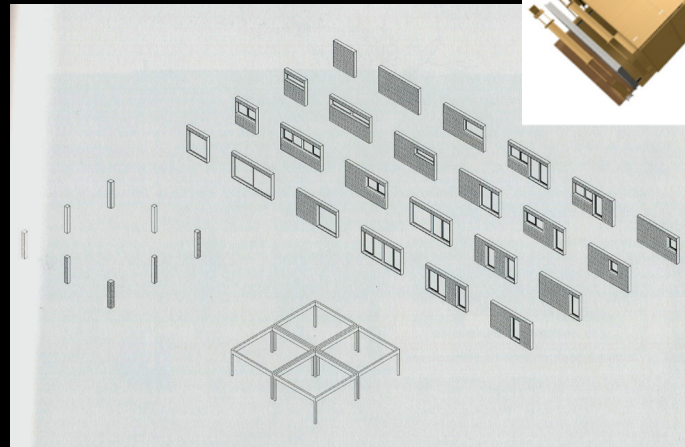
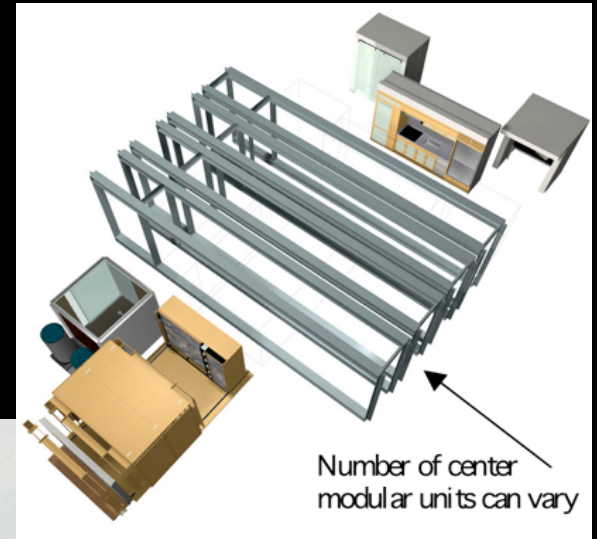
Virginia Tech entry in Solar Decathlon, national competition for energy self-sufficient home designs, on the mall in Washington DC, 2002

Exploration of Alternatives



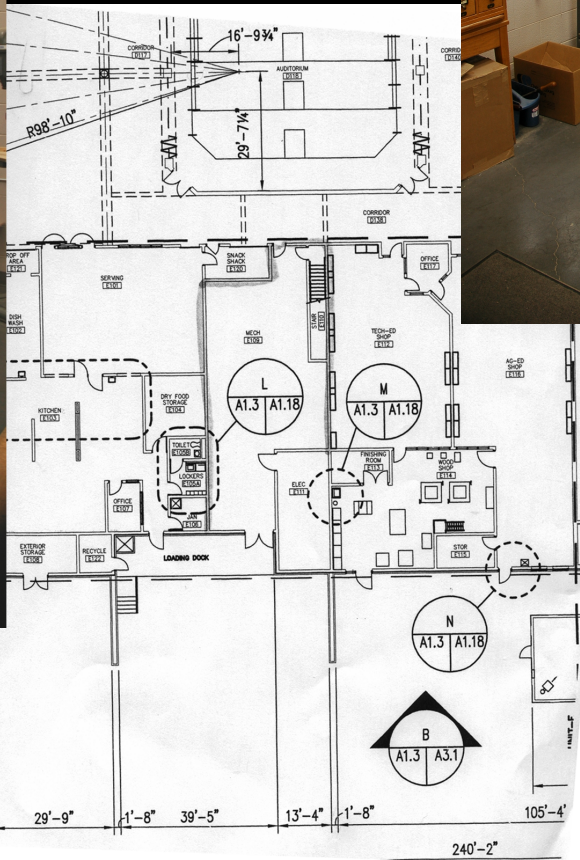
Pre-Fab Modular Units

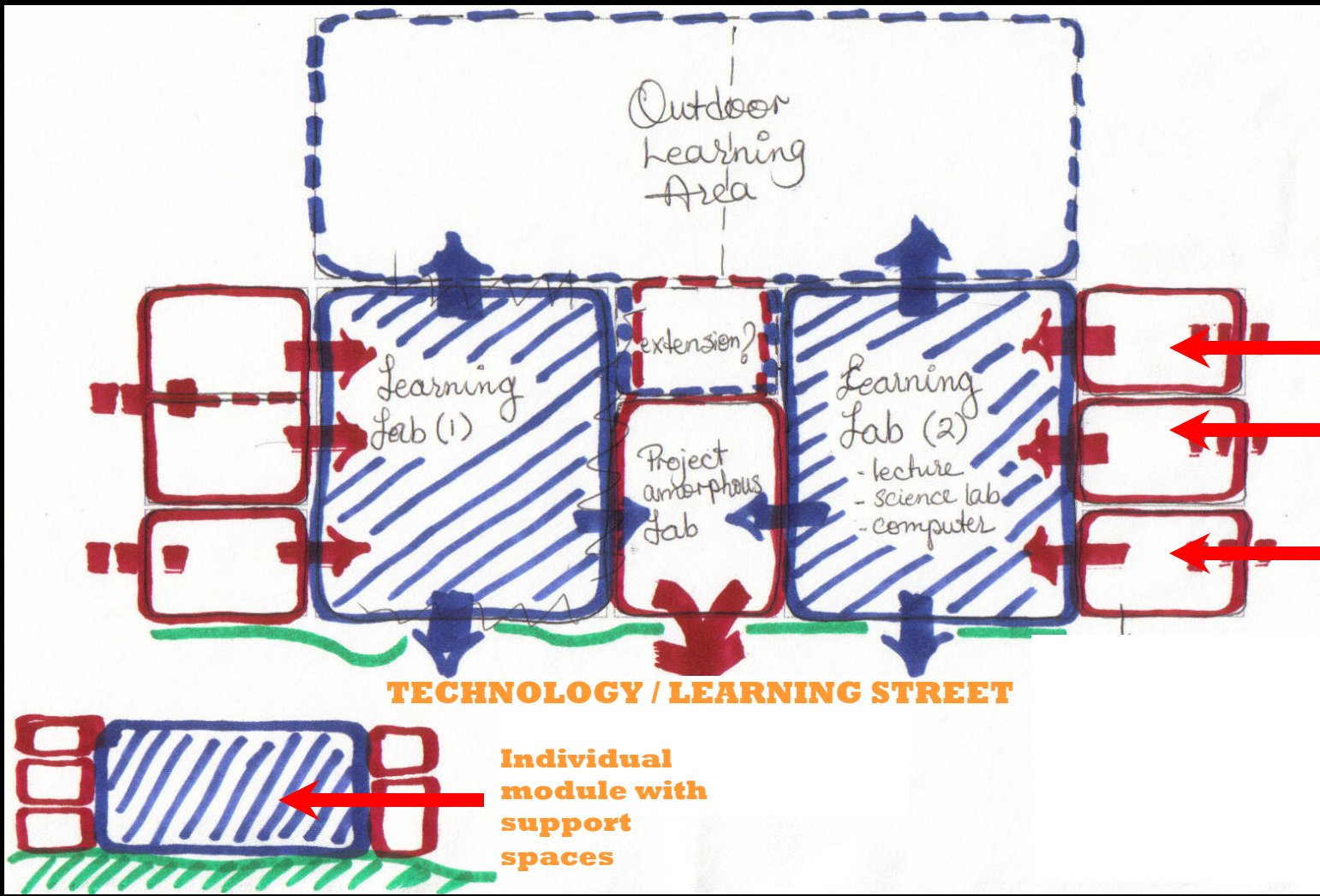
“Kit of part” components





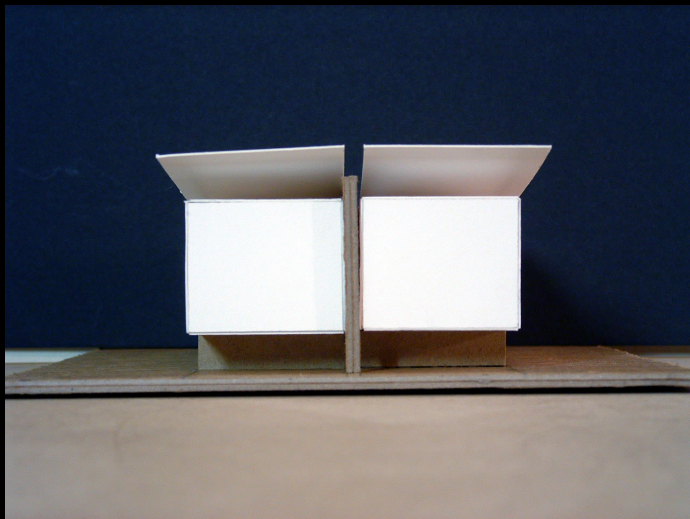
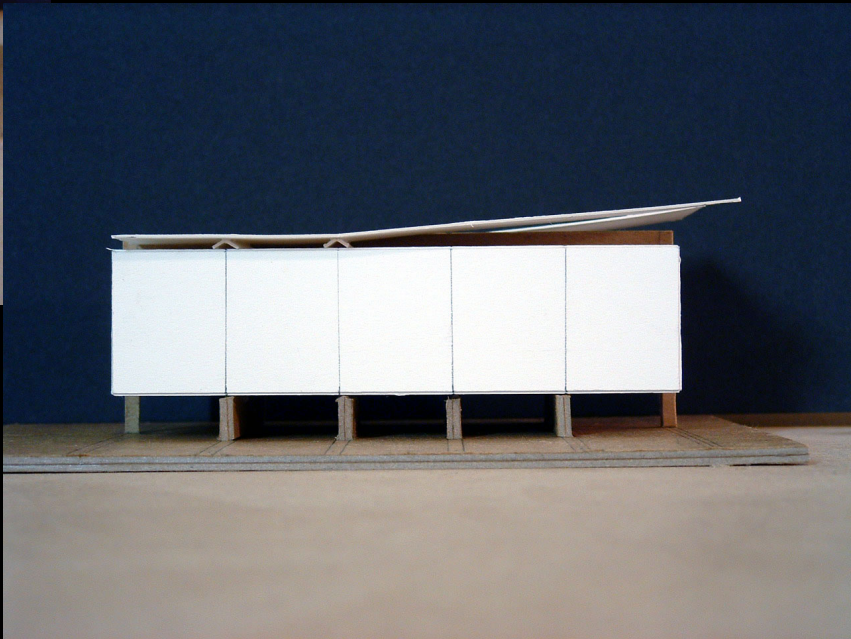
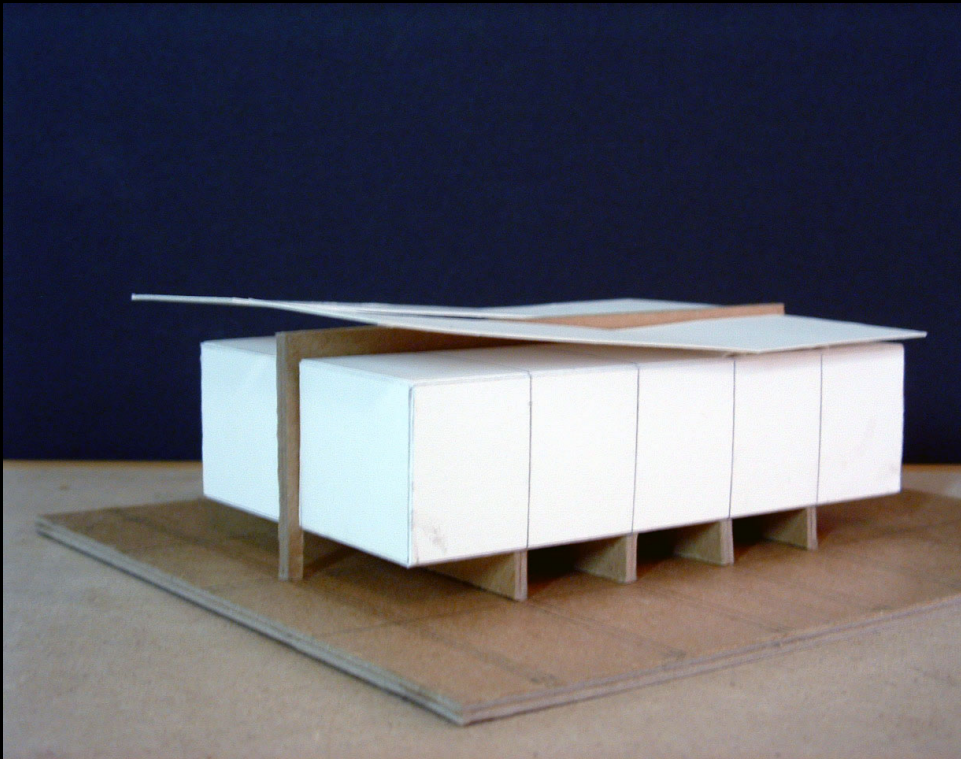


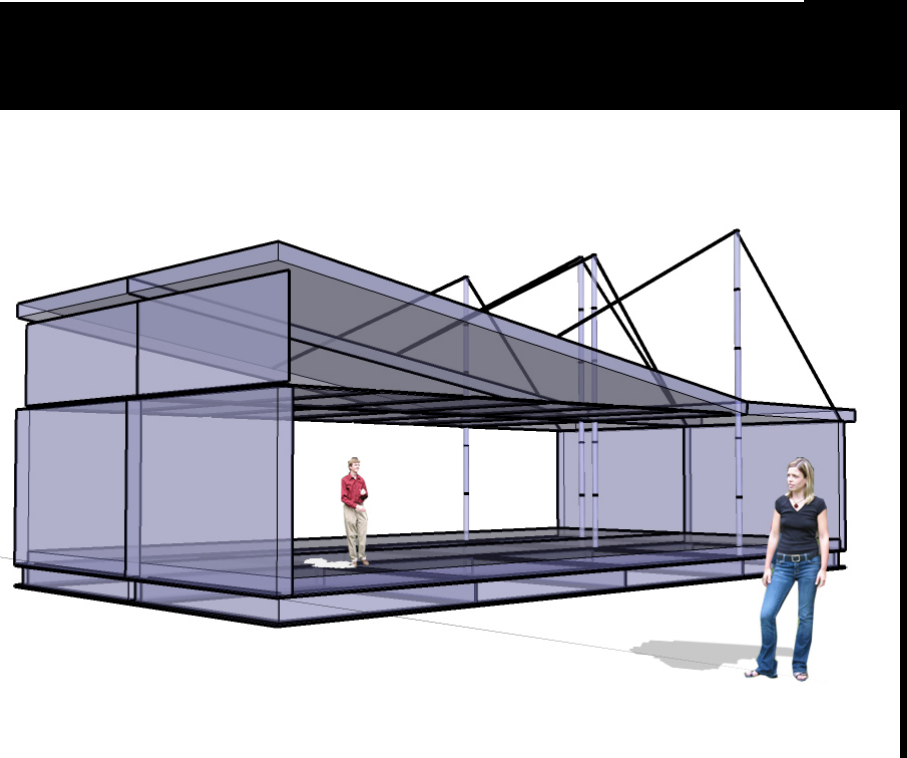
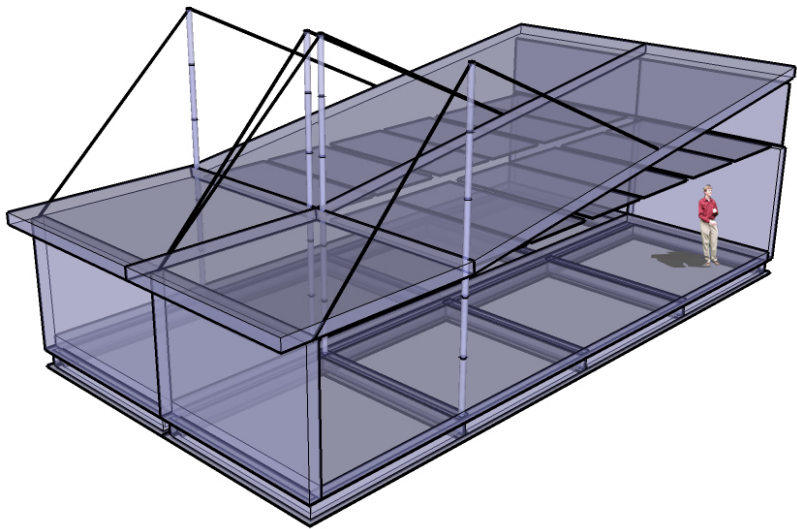
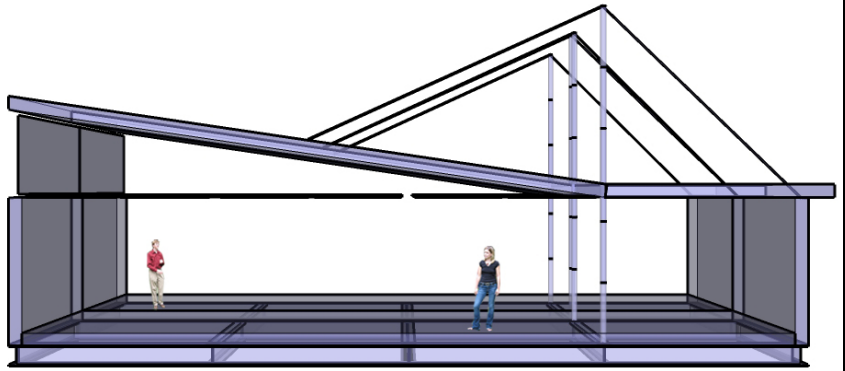


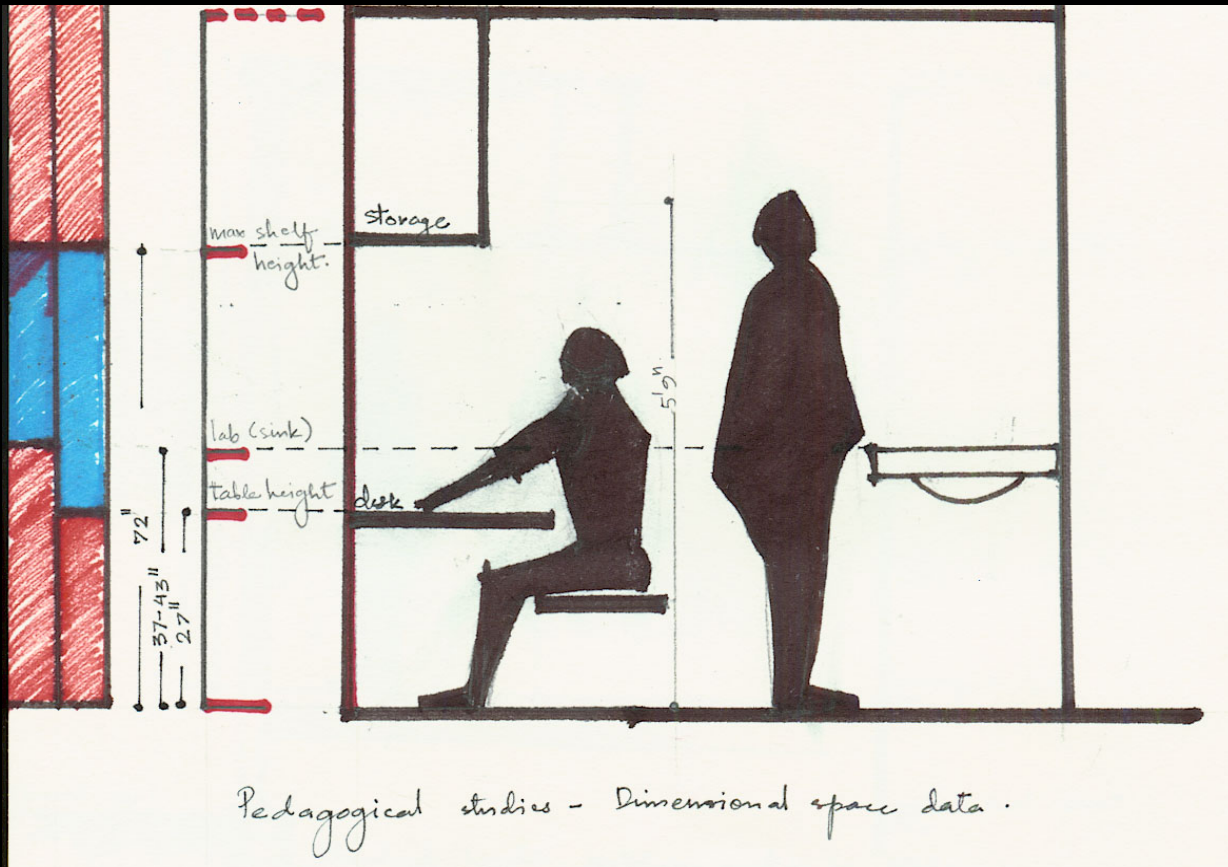


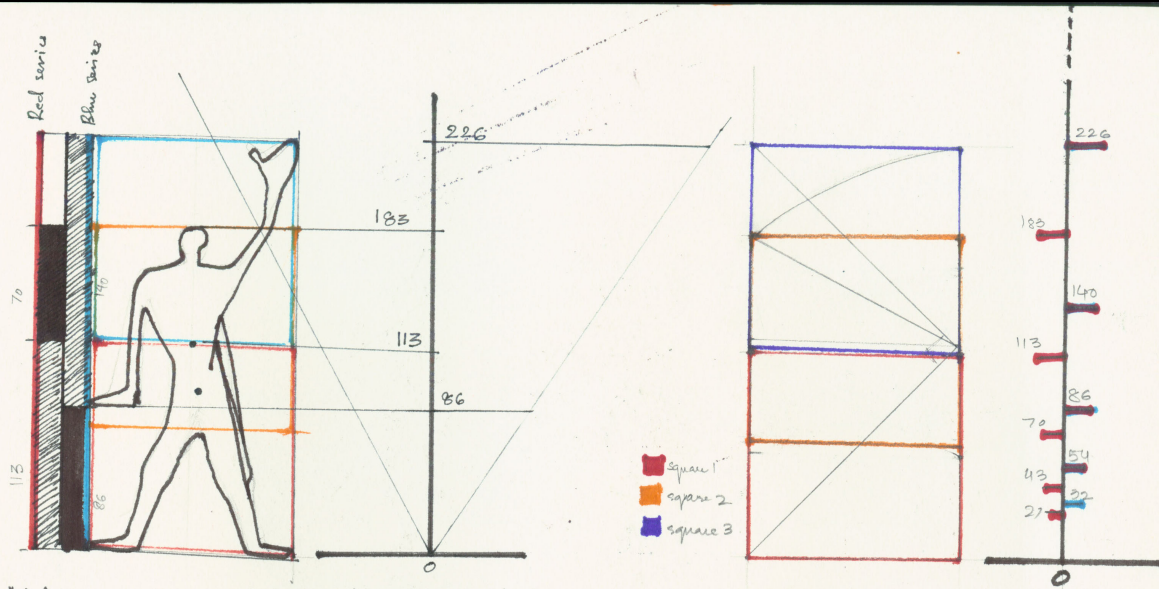
Learning Lab- Support Spaces











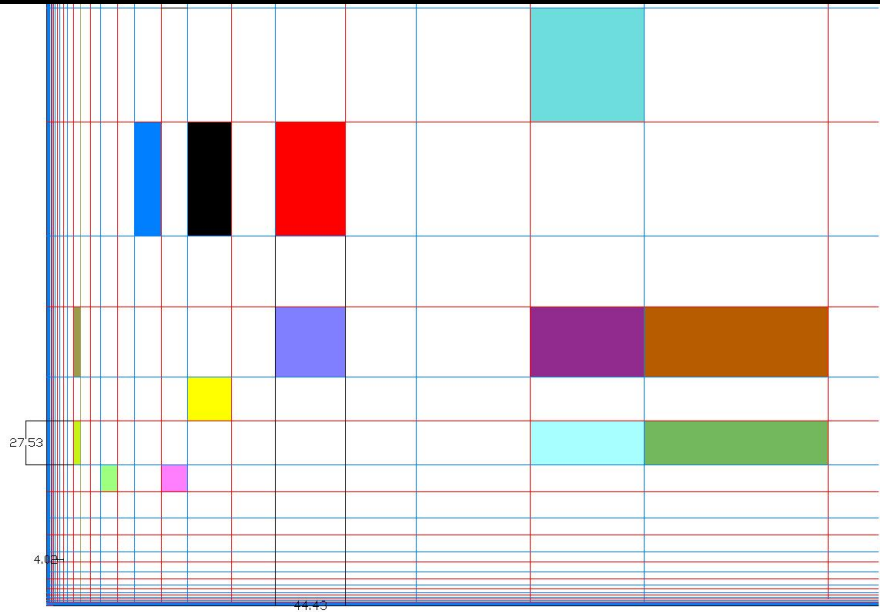
Modular - measuring tool based on human body and mathematics.

Man - inhabitant of space

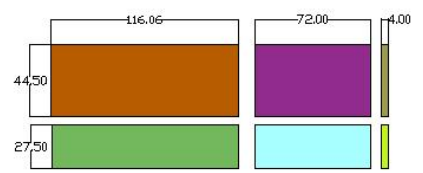
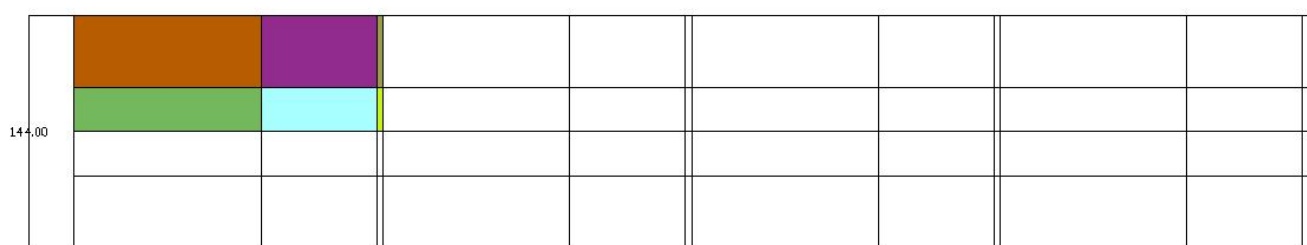
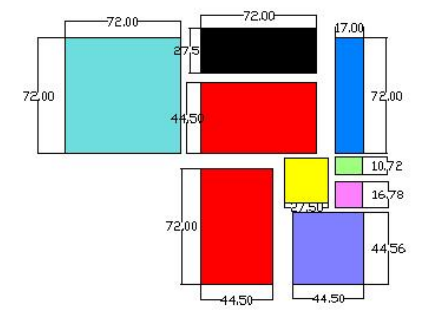
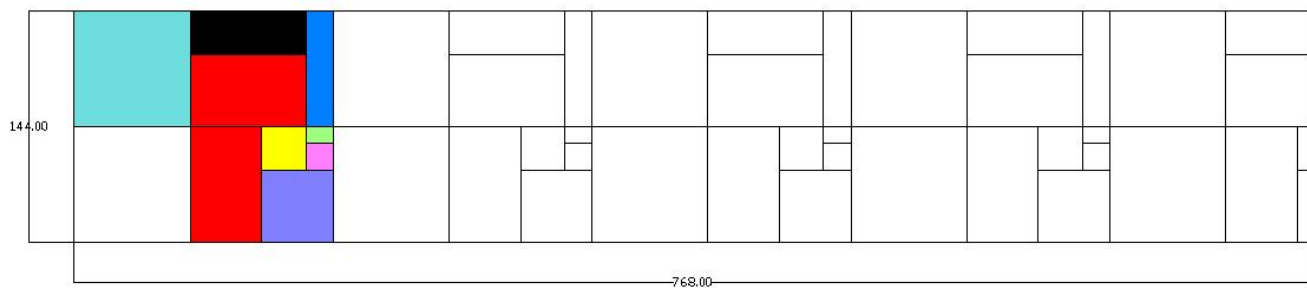
Modular - series of measures "containers" or "extensions" of man.

Modular - bridging the gap in architectural (feet inches) and metric values imparting universality to any value.

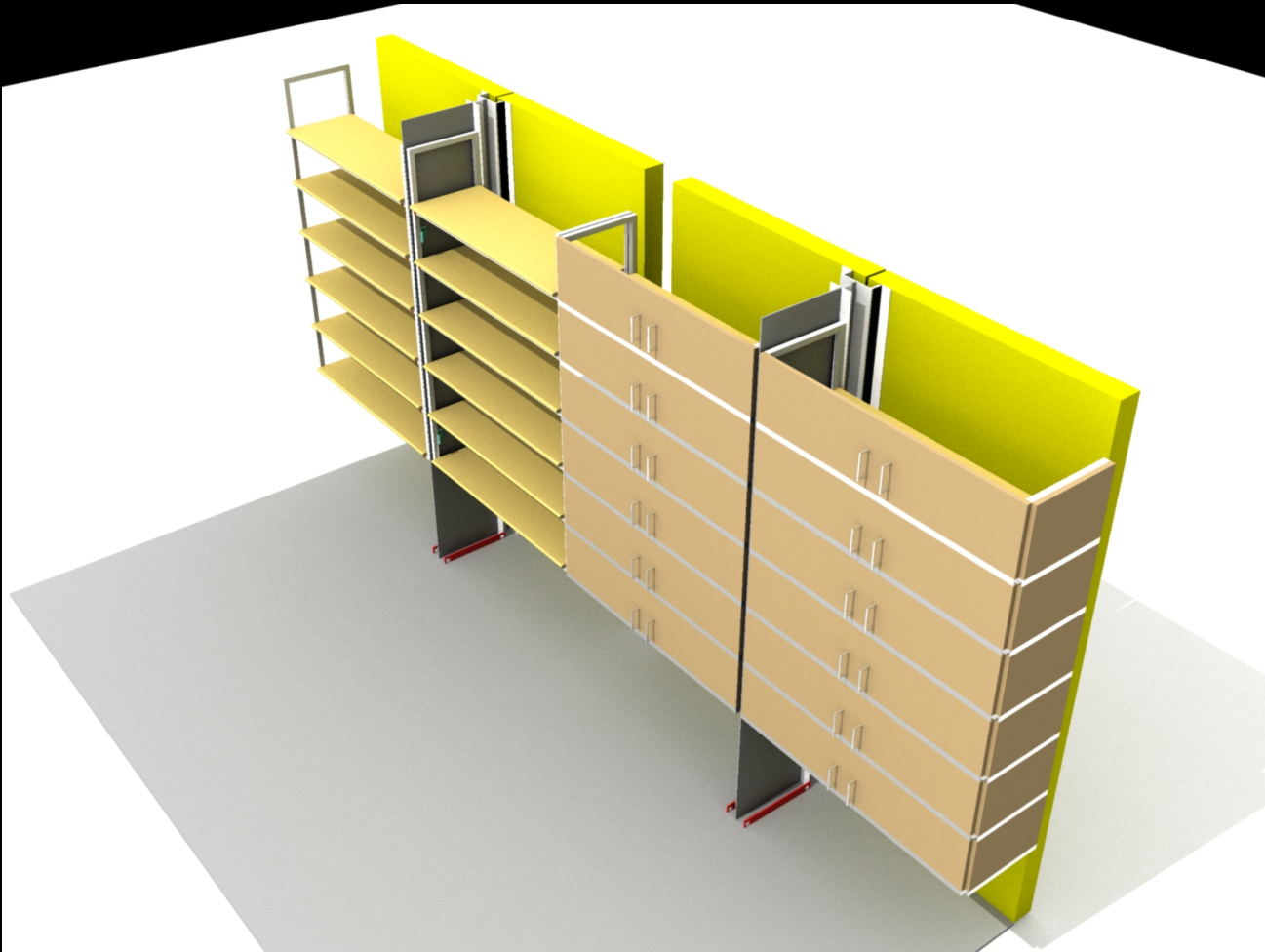
" And so the grid was born, a proportioning grid meant to be installed in building sites in order to supply and abound of harmonious and useful measures for the planning of rows, doors, cupboards, windows, to lend itself to infinite combinations of mass production, to take in the elements of prefabricated beds and to join them without difficulty.

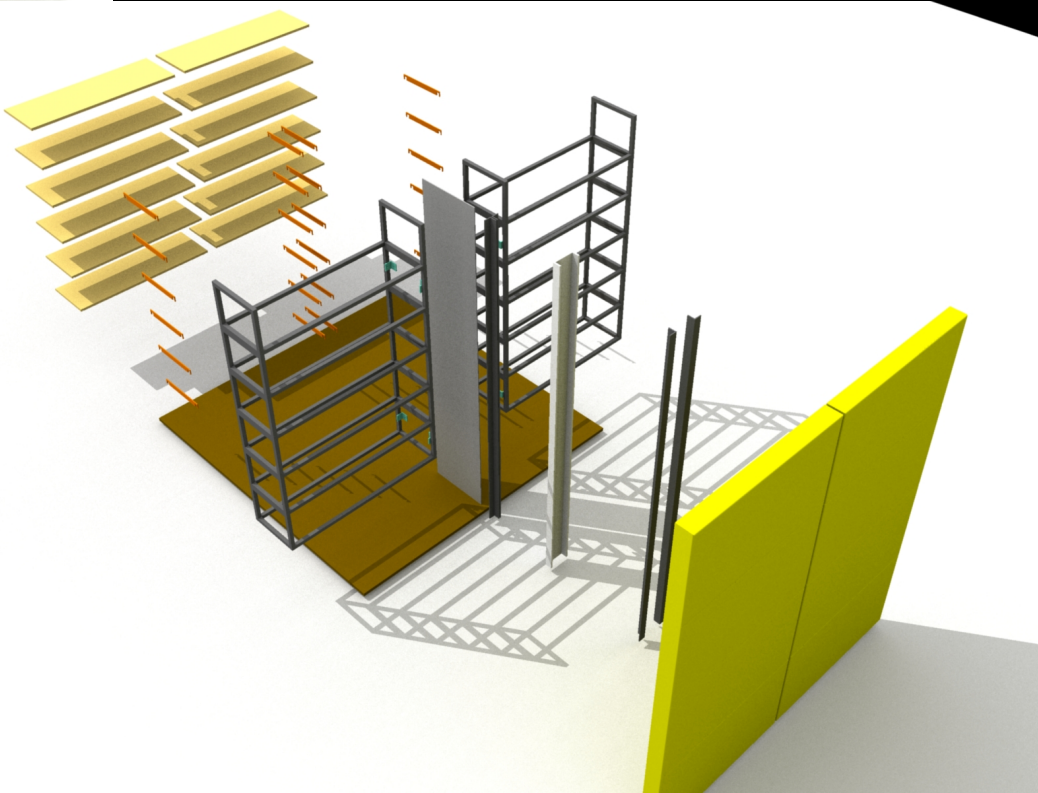
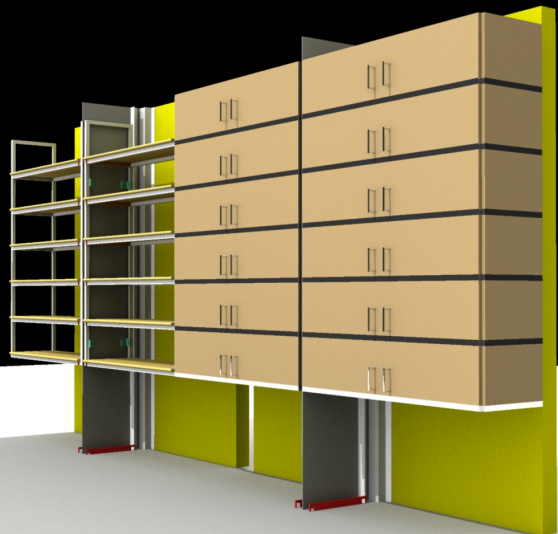


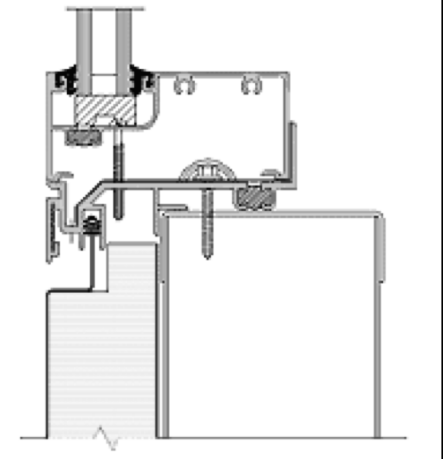
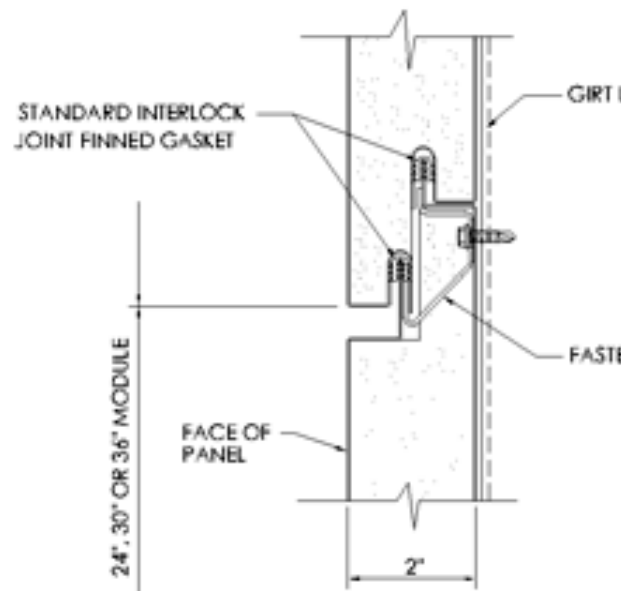
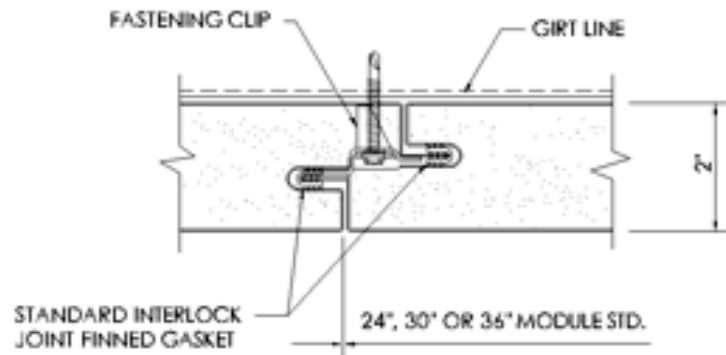
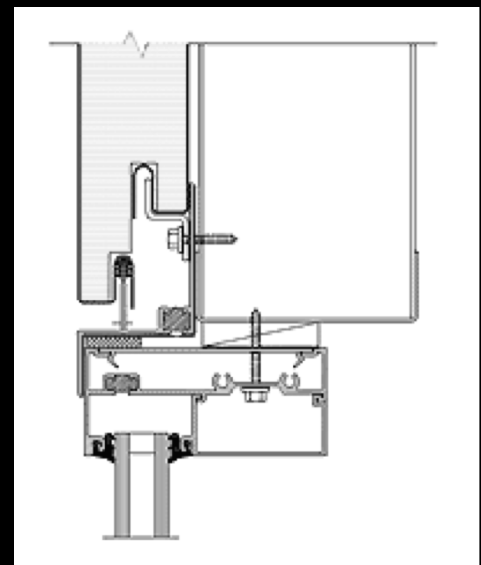
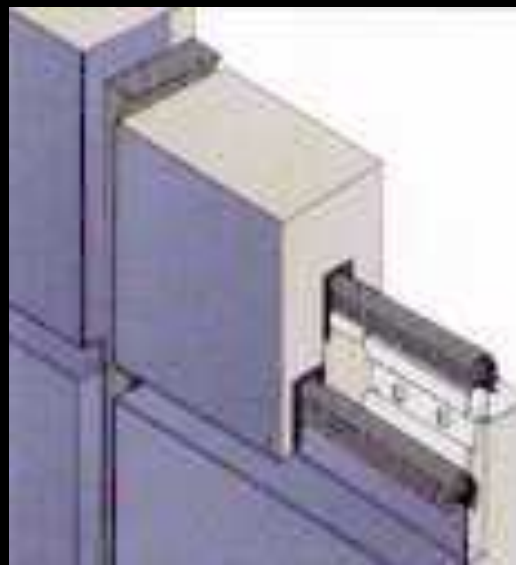
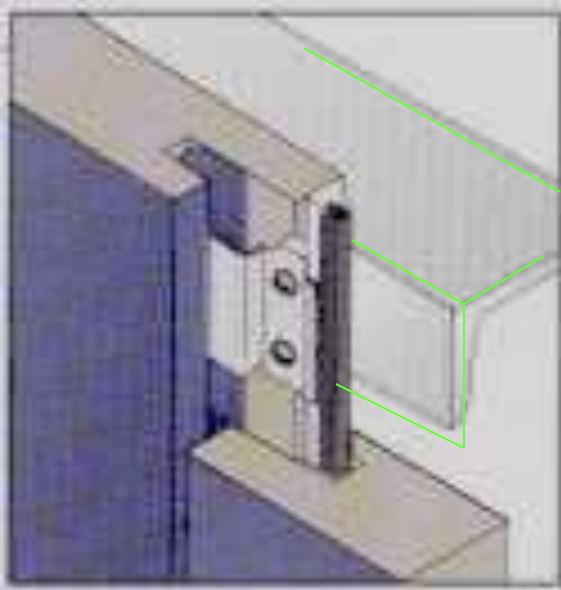
MATERIAL	SIZE		THK
	WIDTH	LENGTH	
ALUMINUM COMPOSITE			
ALUCO BOND	62"	19' 2"	
REYNO BOARD	38.37"	4' - 20.3"	3MM
RKSCOPE	48"	1220 - 6172 MM	
RKSCOPE	42"		4MM
ZINC COMPOSITE PANELS			
REYNO BOARD	38.37" / 1000MM	243" / 6172MM	
PETVARCH ARCHITECTURAL PANELS 47' 3/4"			
ATAS WALL PANEL			
MULTIPURPOSE	8', 12', 16"	2' - 28"	
NETFOR	12"	2' - CUSTOMER SPECIFY	
GRUNE	4, 8, 8, 4 1/2, 6 1/2, 8 1/2"	2' - 28"	
BELVEDRE	24", 36", 37 1/2", 36"	8' - 40"	
RIGID WALL	16"	2' - CUSTOMER SPECIFY	
ARC METAPHOR	12"	CUSTOMER SPECIFY	
CEMENT BOARD FABRICATORS			
WHERET HEAVY DUTY CEMENT BOARD	4"	8' / 10'	
FRIMA CLAD-HEAVY DUTY-BOARD WITH PAINT FINISH	4"	8' / 10'	
CARBONITE FACING AND CLADDING SHEETS	4"	8' / 10'	
CARBONITE CORRUGATED SHEETING	40"	4', 5', 8', 10'	
FORMA WALL			
METAL COMPOSITE PANELS	24", 30", 36"	19, 20", 37"	
GLAZE GUARD			
DRAGLE GLAZING PANELS	48"	99', 120", 144"	



POSSIBILITIES OF PANEL ARRANGEMENTS ON THE 12' X 64' FACADE







detail - window

Aluminium panel detail showing possible horizontal and vertical joinery between panels

2-3" thick aluminium composite panels R value 9 -22

GE Modular Space
and
Whitley Manufacturing





