

system evaluation

2

TOOLS TO HELP EVALUATE, CONTINUED.....

COMMON SENSE! VERY IMPORTANT IN FIGURING OUT ECONOMIES, CONSTRUCTION COMPLEXITIES, AND ADVANTAGES.

SOMEONE ONCE SAID "LESS IS MORE" (YOU BETTER KNOW WHO) AND TO A GREAT EXTENT, THE OPPOSITE IS TRUE IN ARCHITECTURAL ECONOMICS. LESS IS LESS, (READ CHEAPER) THIS IS NOT ALWAYS TRUE, AND WITH EXPERIENCE YOU WILL LEARN HOW TO MANIPULATE (AND INNOVATE) THE CURRENT CONSTRUCTION TECHNOLOGY TO YOUR AND YOUR CLIENTS ADVANTAGE. BUT FOR NOW, IN SCHOOL, THESE STATEMENTS MAY HELP YOU DEAL WITH ECONOMY IN BUILDING.

- : THE MORE EFFICIENT A PLAN AND SECTION ARE, THE LESS, IT WILL COST. (A HIGH RATIO OF USEABLE SPACE TO SUPPORT SPACE IS DESIRED)
- : THE SIMPLER A STRUCTURAL SYSTEM IS, THE LESS IT WILL COST.
- : THE MORE PARTS THAT ARE IDENTICAL, THE LESS IT WILL COST. (REPITITION SAVES)
- : THE MORE PIECES THERE TO ASSEMBLE, THE MORE TIME IT TAKES, THE MORE IT COSTS.
- : THE MORE COMPLICATED IT IS , THE MORE IT COSTS

OBVIOUSLY COSTS CANNOT DICATATE DESIGN ALL THE TIME. BUT MY POINT IS DONT WASTE MONEY AND EFFORT WHERE IT WILL NOT BE APPRECIATED. SPEND IT WHERE IT IS USEFUL, NEEDED.

STUDIO PROJECTS ARE TIME TO SPREAD YOUR DESIGN WINGS, DONT TIE YOURSELF DOWN TO BUDGETS, COSTS, BUT DONT FLAGRANTLY THROW SQUARE FOOTAGE AWAY IN UNUSEABLE CORNERS, OVERSIZED ROOMS AND EXTRA TALL FLOOR TO FLOOR HEIGHTS EITHER, THATS NOT GOOD DESIGN.

SO, IN STUDIO PROJECTS, USE COMMON SENSE!, DECIDED WHAT THE CRITERIA TO EVALUATE THE STRUCTURAL SYSTEM WILL BE, WHAT DOES IT HAVE TO DO? ARE YOU POSITIVE THAT IN THE 75 YEAR LIFE OF THE BUILDING IT WILL NOT NEED TO EXPAND OR CHANGE FUNCTION? HOW DO YOU ACCOMODATE THAT? DETERMINE CRITERIA, DETERMINE OPTIONS FOR BUILDING SYSTEMS, RATE THE SYSTEMS CHARACTERISTICS AS TO HOW WELL IT FULFILLS THE CRITERIA. A MATRIX WORKS WELL FOR THAT.

EXAMPLE: ONE FLOOR OFFICE BLDG. STRUCT. EXPRESSION DESIRED, EXPANSION REQUIRED, MAX. FLEXIBILITY REQUIRED.

SYSTEM	C R I T E R I A				SCORE
	FLEXIBILITY	DES. INTENT	MECH./ELEC. INT.	ADD OPER.	
STL. COL. BM. PRST. DCK	+	0	+	-	+1
HVY. TMBR. COL. EM. WD. DCK	+	+	0	0	+2
PRST BRG. WALL. PRST. DCK	-	-	-	-	-4
PRD. CONC. COL. WFL. SLAB	+	+	-	+	+2
STL. COL. BM. JST. MTL. DCK. S	+	0	+	-	+1

NOTE THAT THE CRITERIA USED WAS LIMITED DUE TO THE SPACE ON THIS PAGE, YOU WONT HAVE TO LIMIT YOUR CRITERIA. ALSO NOTE A TIE BETWEEN THE HEAVY TIMBER SYSTEM AND THE WAFFLE SLAB. TO BREAK THE TIE I'D ADD MORE CRITERIA, IN THIS CASE ECONOMY, OR ACOUSTICS. ECONOMY WOULD RULE OUT THE WAFFLE SLAB UNLESS THERE ARE MORE FLOORS TO BE ADDED TO THE BUILDING (ECONOMY IN REPITITION REMEMBER?) OR ACOUSTICS WOULD FAVOR THE WAFFLE SLAB OVER HEAVY TIMBER IF THERE WERE MORE FLOORS BECAUSE CONCRETE DEADENS SOUNDS CAUSED BY IMPACTS BETTER THAN WOOD.....MORE TO FOLLOW SOON.....