

# EMU - SUSTAINABILITY P.T.A.G.

BLOCK & STACK

MECHANICAL SYSTEMS

RADIANT SLAB (HOT WATER) AT ATRIUM  
TEMPERATURE TARGETS? USES?

TRANSIENT & OCCUPIED

ACTIVE - INTERACTION - DESTINATION

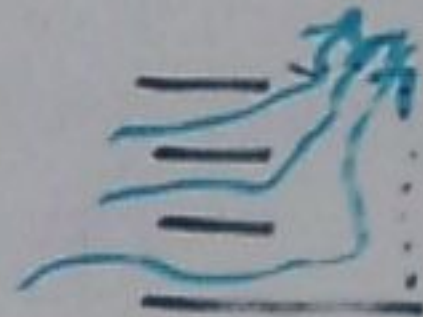
FULLY CONDITIONED? TEMPERED/HEAT? UNCONDITIONED?

MODELING NEEDED

STRATIFICATION? DEPENDS ON SUN  
EXT. CONDITIONS

OCCUPANT COMFORT VS.  
TEMPERATURE

AIR MOVEMENT  
RADIANT TEMP



ALSO PROPOSING NIGHT FLUSH MASS COOLING  
GZB - 4" CONCRETE

NIGHT FLUSH LOOKS LIKE CONFLICTS WITH NORTH BAR  
FLOOR PLAN & LACK OF FLOW THROUGH OPPORTUNITIES  
AUTOMATED OR MANUAL CONTROLS?  
FOR NIGHT FLUSH

DASHBOARDING

LILUS NIGHT FLUSH SYSTEM - LEARN FROM ERRORS

MATCH MODELING TO TIME OF DAY/WK/YEAR USAGE  
CONFERENCE AREAS CAN'T SWING MUCH

ATRIUM & CONCERT HALL LOBBY

DOORS TO ATRIUM - VESTIBULES & COMFORT

MASS WALLS OF ~~APPROX~~ CONCERT HALL & HEAT SINK

ATTRACTION OF INDOOR SUNNY WINDOWS  
CREATE PLENTY OF THEM

NEED TO BUDGET FOR THESE ADVANCED STRATEGIES

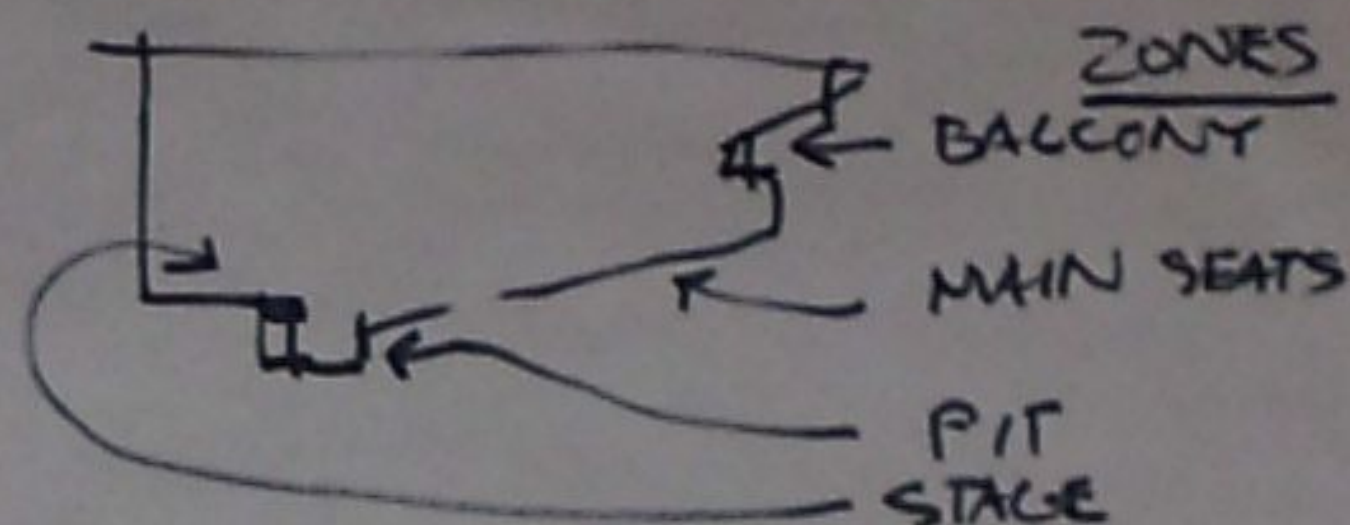


# EMU SUSTAINABILITY T.A.C.

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## STRATIFICATION IN CONCERT HALL?

- DISPLACEMENT VENTILATION TAKES ADVANTAGE OF ...  
NEEDS CAREFUL DESIGN



## CONFERENCE ROOMS

RADIANT PANEL FOR TEMP CONTROL - HEAT & COOL  
OR CHILLED SAILS - COSTS RENOVATION CHALLENGES

↑ FEWER \$/btu  
OR CHILLED BEAM - MORE CONVECTION, MORE EFFECT PER EA.

~~LOWER COST~~ FEWER \$/btu

ATRIUM CONFERENCE ROOMS POSSIBLY SOLAR LOAD DETERMINED

STUDENT OFFICE WING - HIGH RENOVATION RATE

MAIN CONF. ROOMS - MIXED MODES

POSSIBLY CONVERT EXISTING TO AIR HANDLERS WITH REHEAT

CRAFT CENTER & HEAT RECOVERY

MAINTENANCE OF PASSIVE SYSTEM CHOICES

CEILING FANS?

SEE EXAMPLES BEFORE CHOOSING. SEE GOTOBIN

## SEED ANALYSIS

ANALYSIS OF EXISTING GLAZING

OPTIMIZE INSULATION → NO MECH SYST?

## DAYLIGHTING

WINDOWS PER FUNCTION - DAYLIGHTING - VIEW

CHALLENGE OF ATRIUM CONFERENCE ROOMS

VS. DAYLIGHT GETTING TO OFFICES