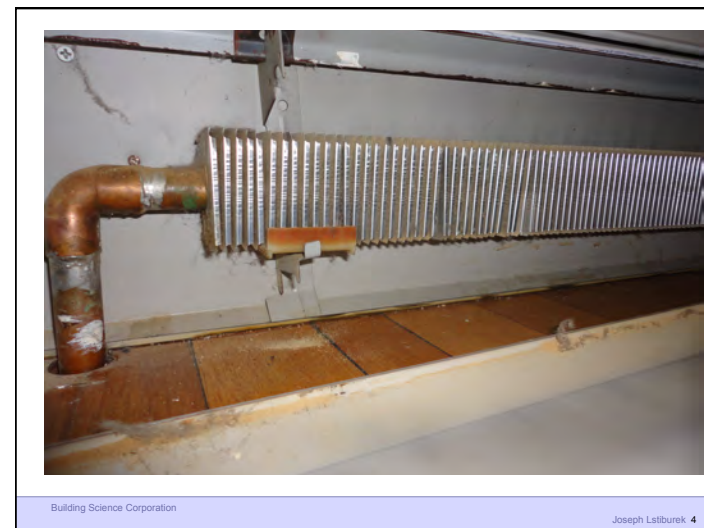
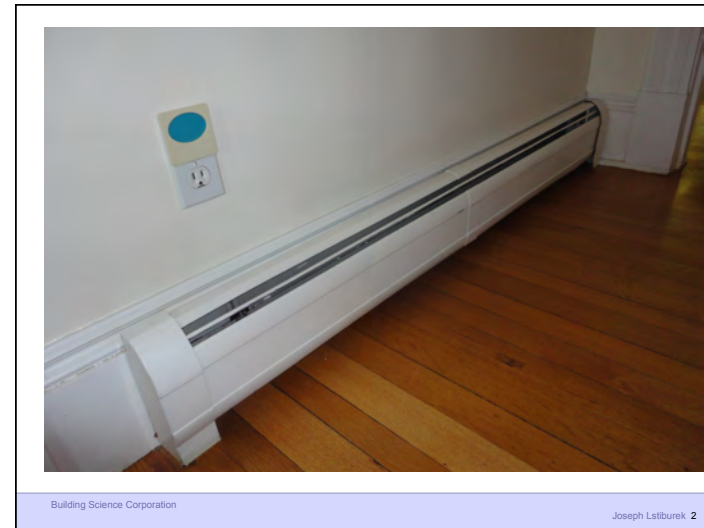


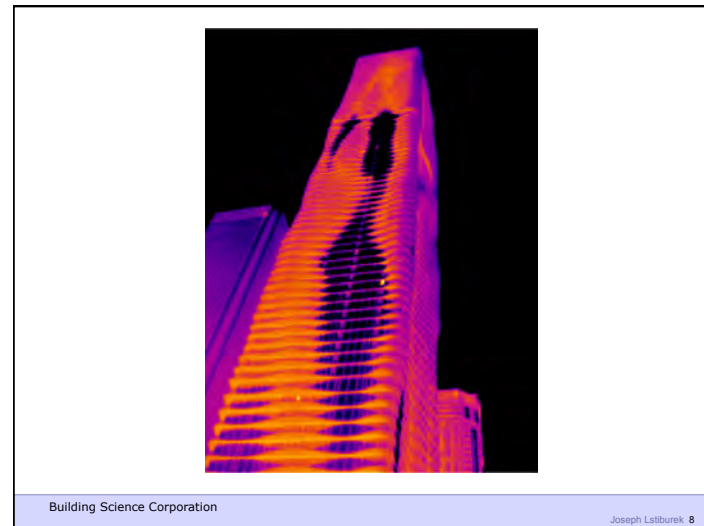
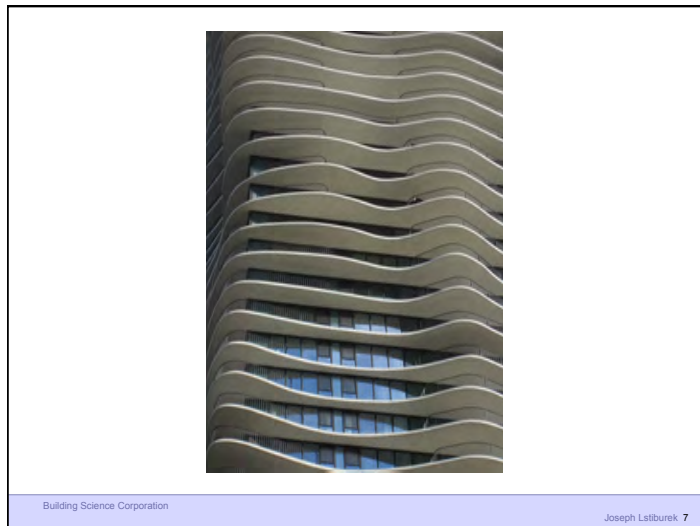
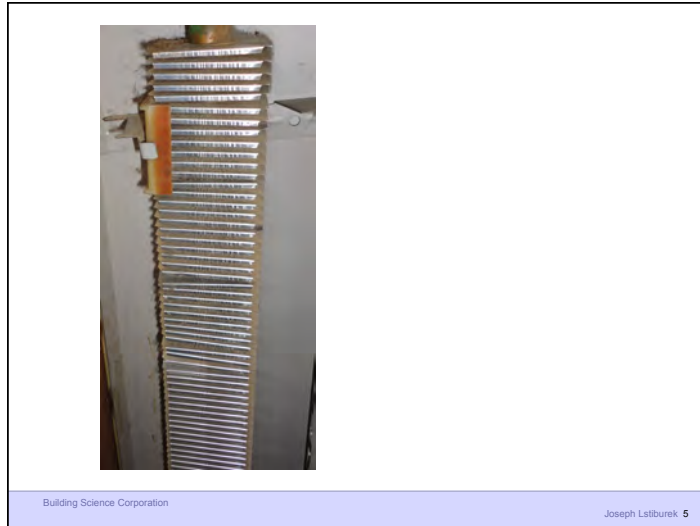
Joseph Lstiburek, Ph.D., P.Eng, ASHRAE Fellow

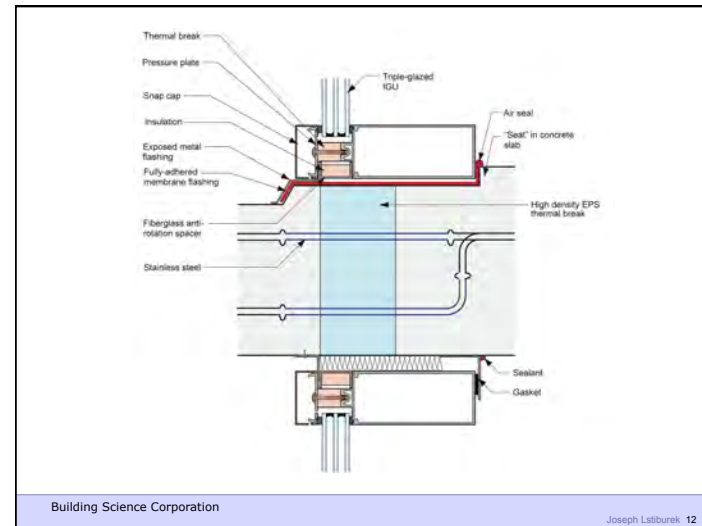
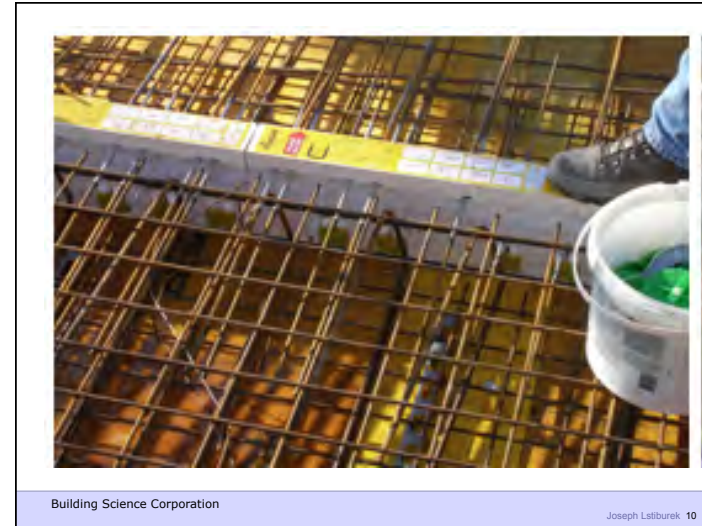
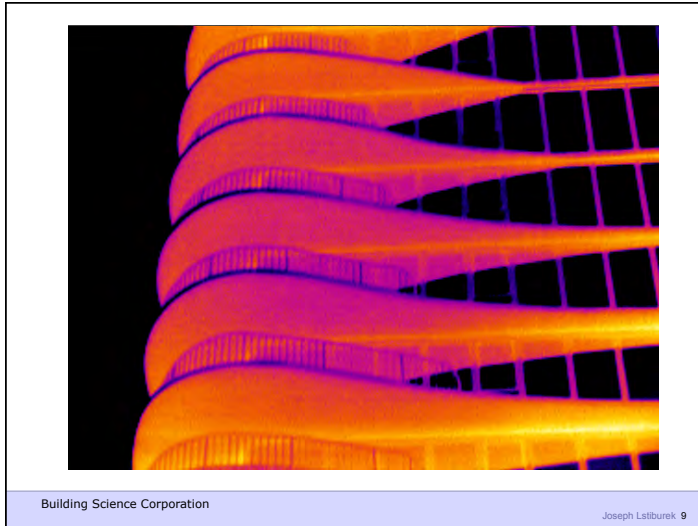
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Life is Tough Enough As it Is...

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Life is Tough Enough As it Is...
It's Harder When You Are Stupid

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Don't Do Stupid Things

Building Science Corporation Joseph Lstiburek 15

What Is A Building?
It is an environmental separator

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At the most basic level a building provides shelter - shelter from the elements as well as from other dangers. Its' function is to separate the inside from the outside as required by the local environment and the wishes of its occupants. A building creates an interior environment that is different from the exterior environment – it is an environmental separator. This interior environment should be controllable by the occupants in a manner that meets their needs.

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- Control heat flow
- Control airflow
- Control water vapor flow
- Control rain
- Control ground water
- Control light and solar radiation
- Control noise and vibrations
- Control contaminants, environmental hazards and odors
- Control insects, rodents and vermin
- Control fire
- Provide strength and rigidity
- Be durable
- Be aesthetically pleasing
- Be economical

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Heat Flow Is From Warm To Cold
 Moisture Flow Is From Warm To Cold
 Moisture Flow Is From More To Less
 Air Flow Is From A Higher Pressure to a
 Lower Pressure
 Gravity Acts Down

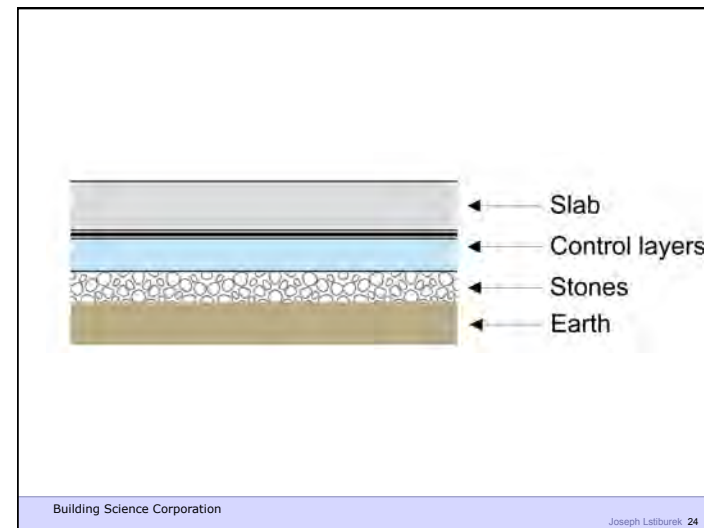
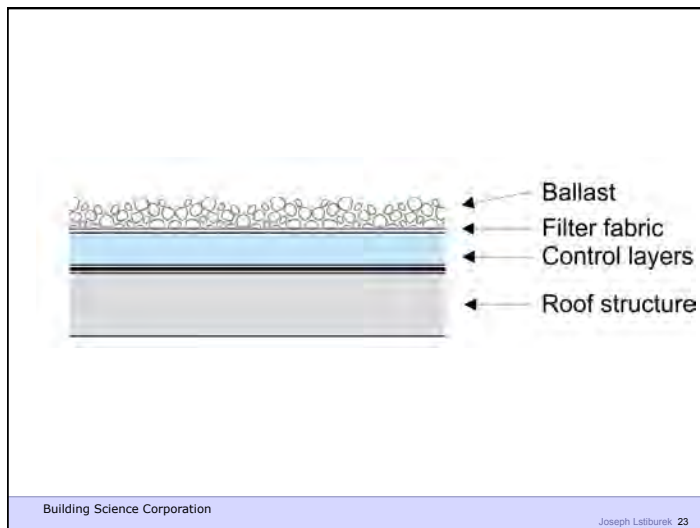
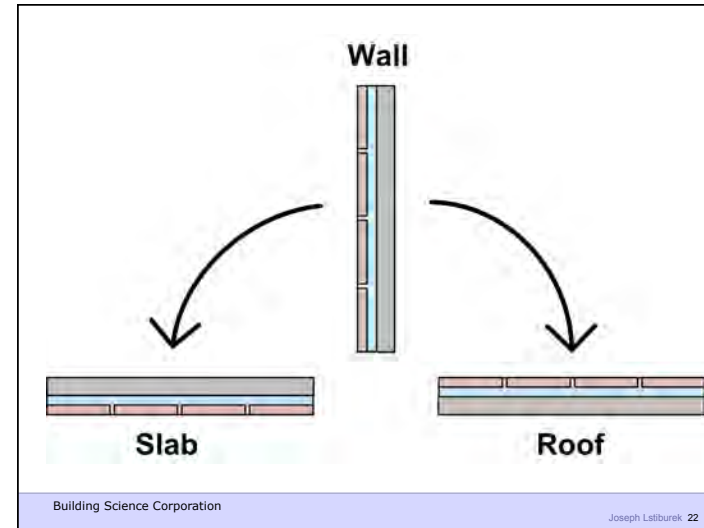
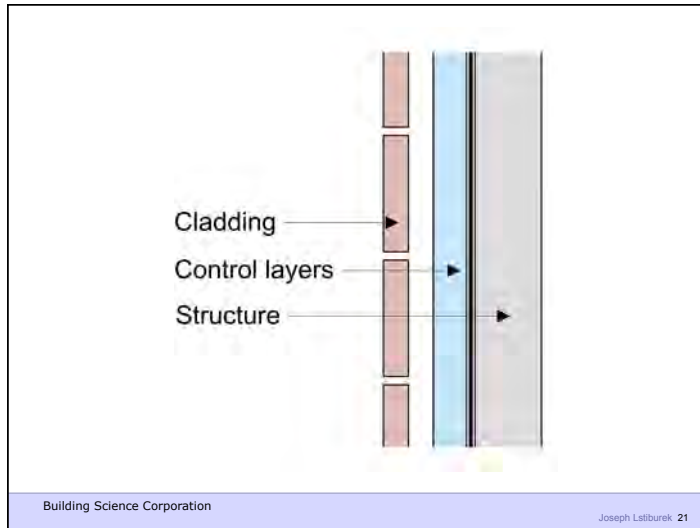
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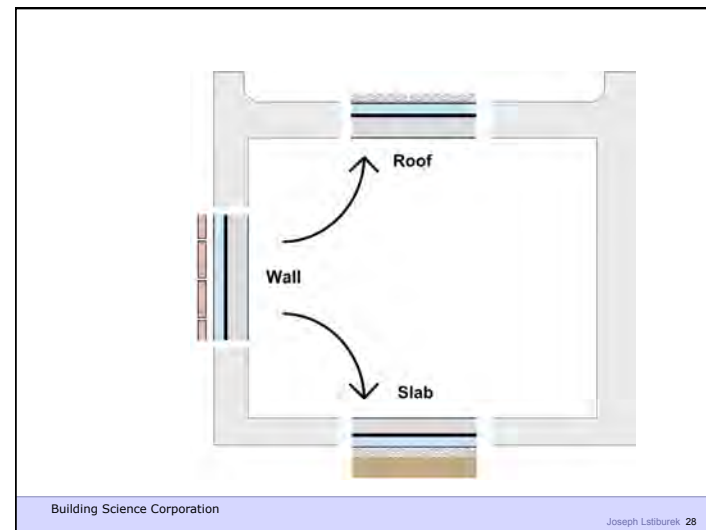
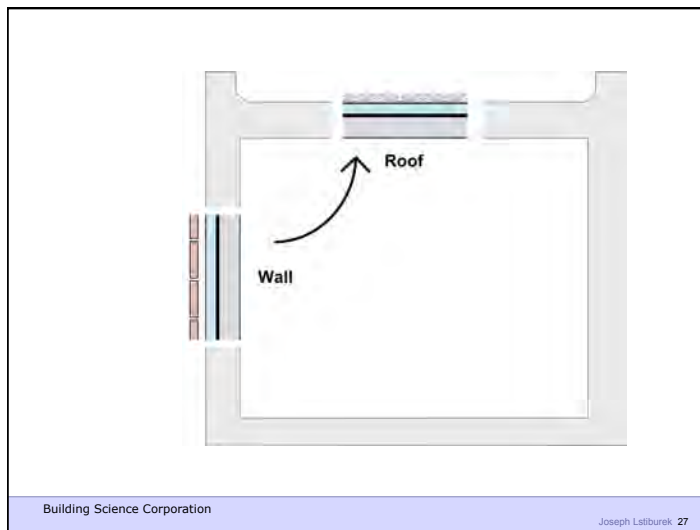
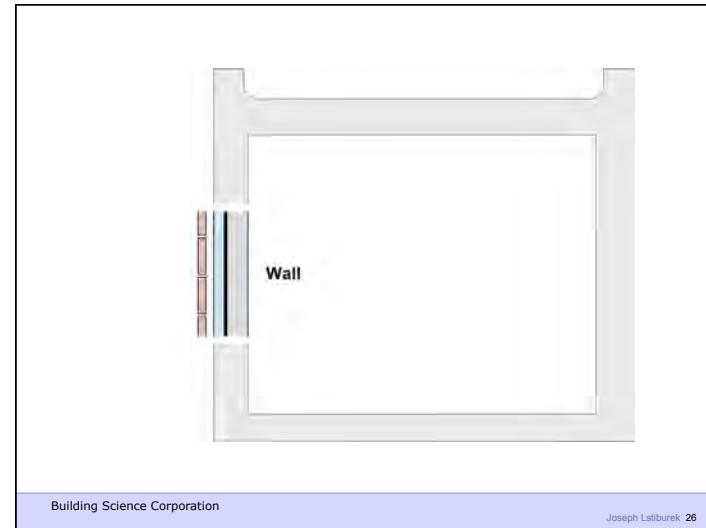
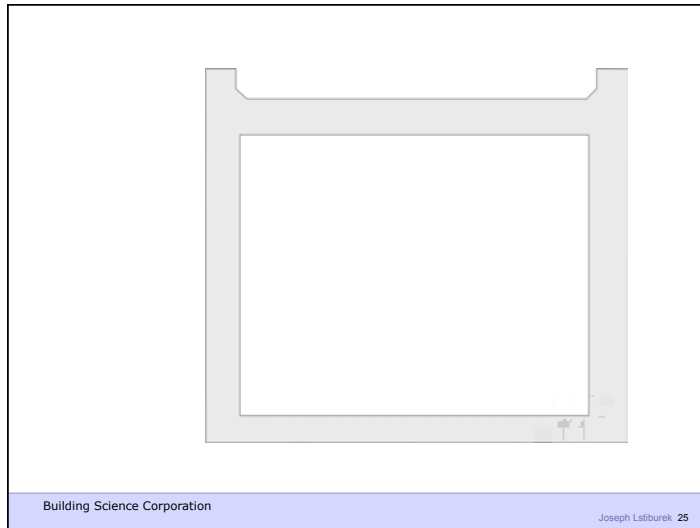
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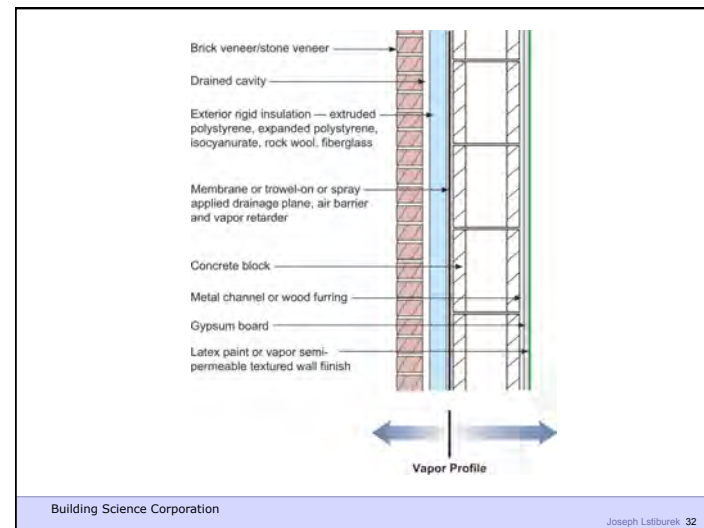
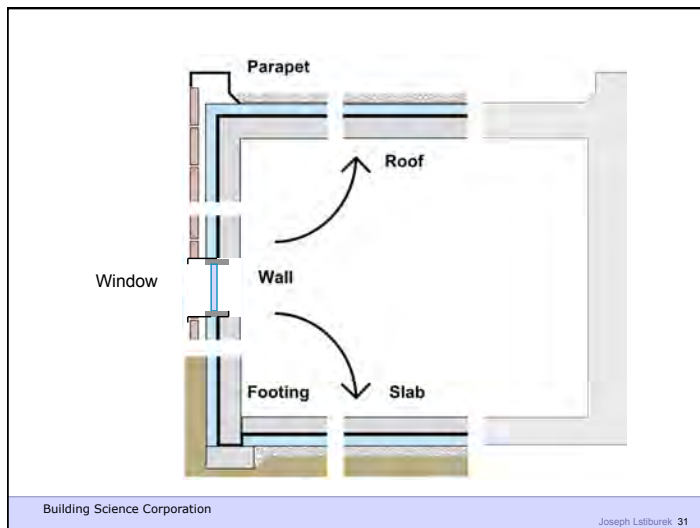
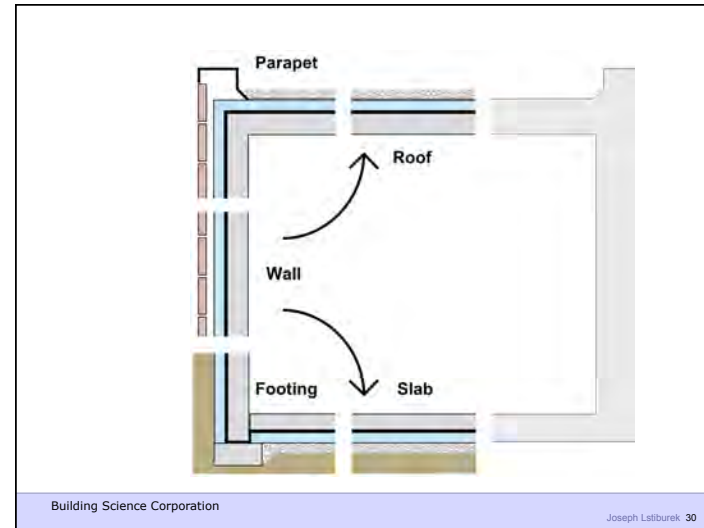
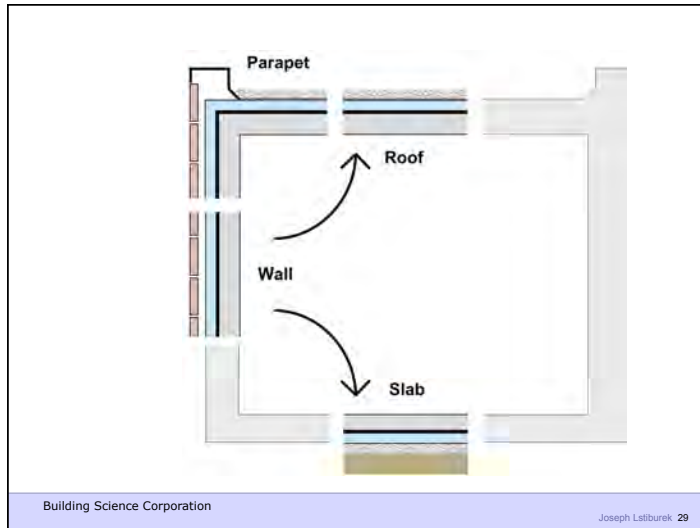
Water Control Layer
 Air Control Layer
 Vapor Control Layer
 Thermal Control Layer

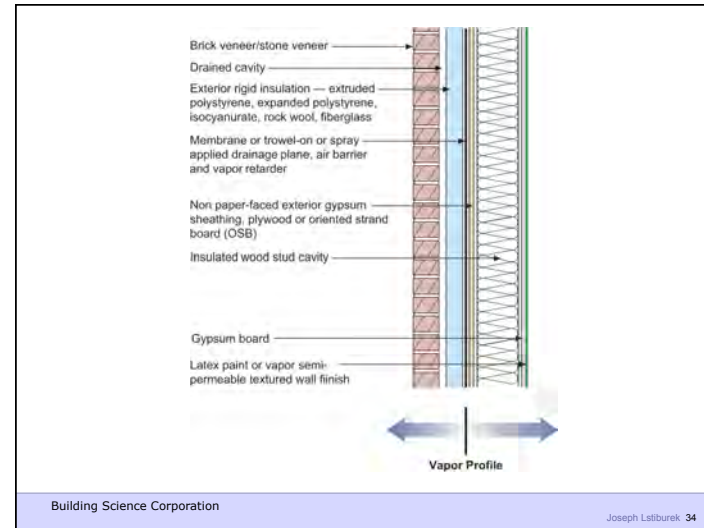
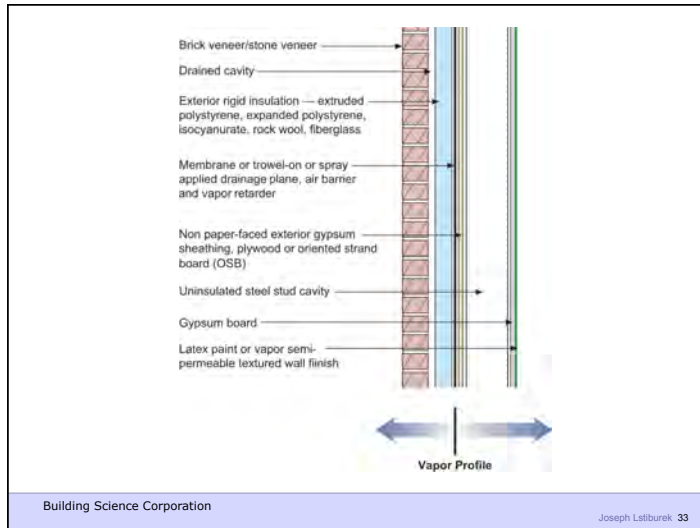
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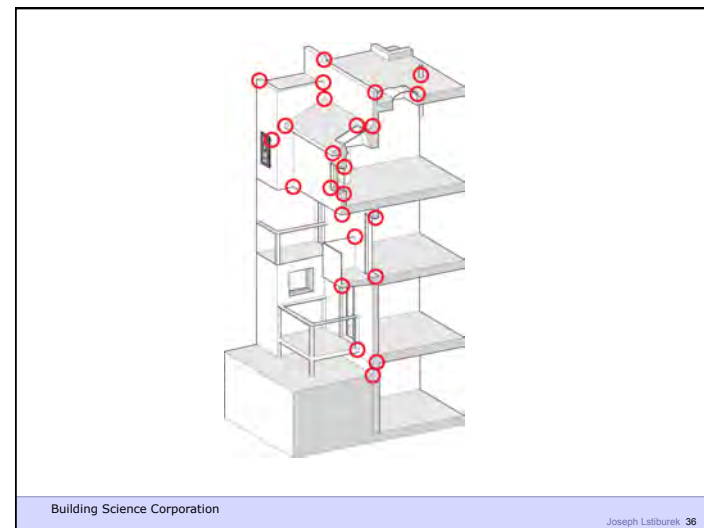


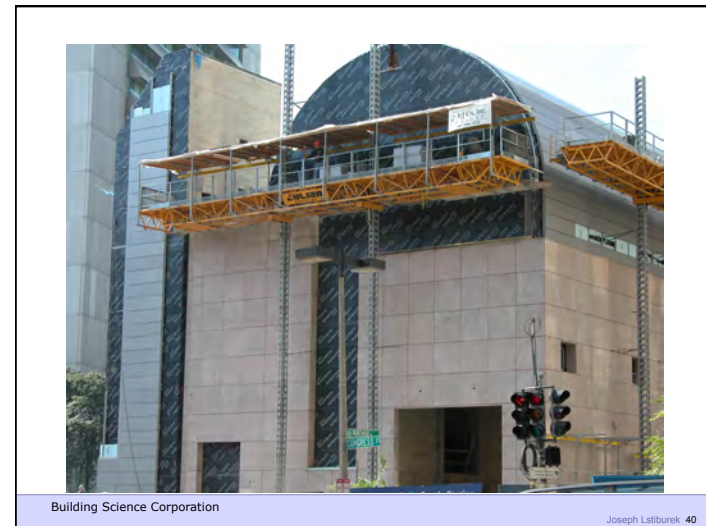
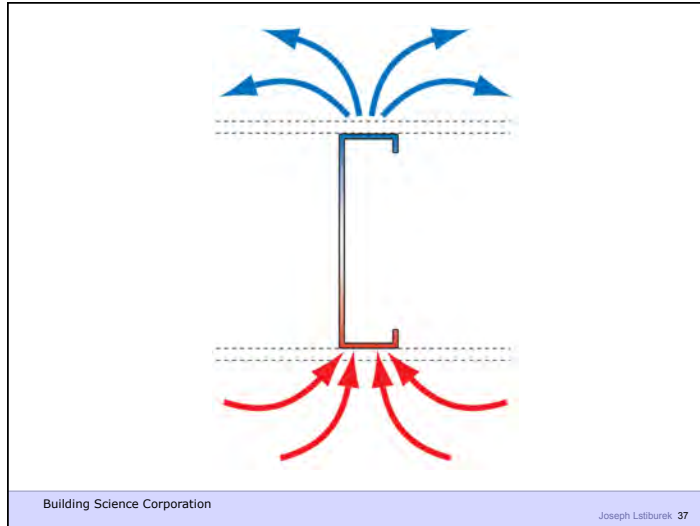


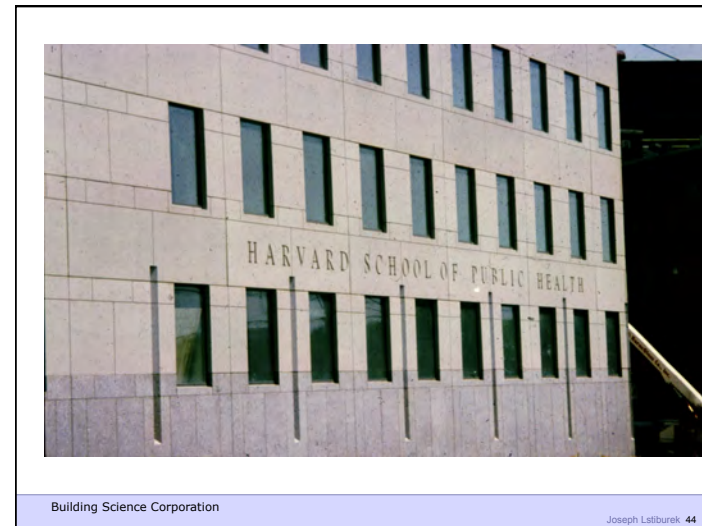
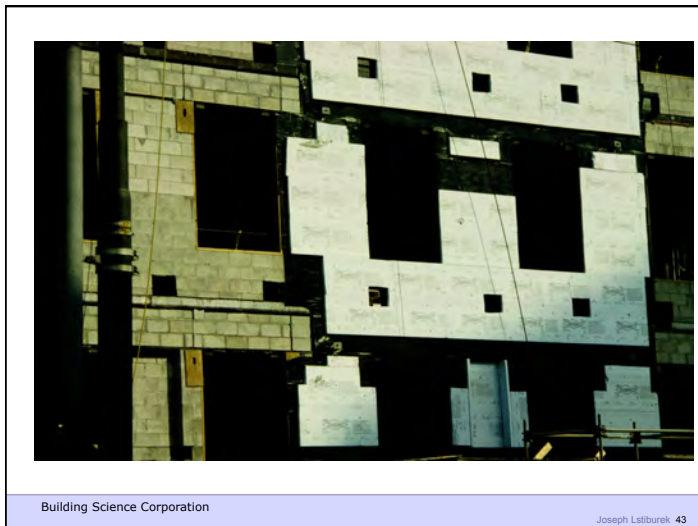
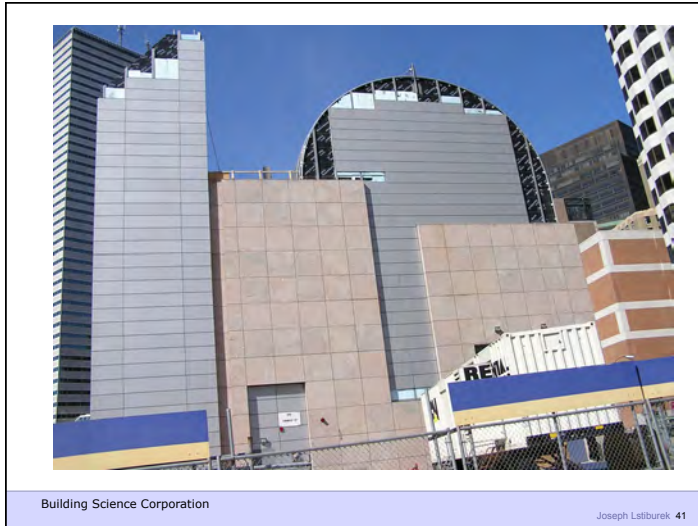
Commercial Enclosure: Simple Layers

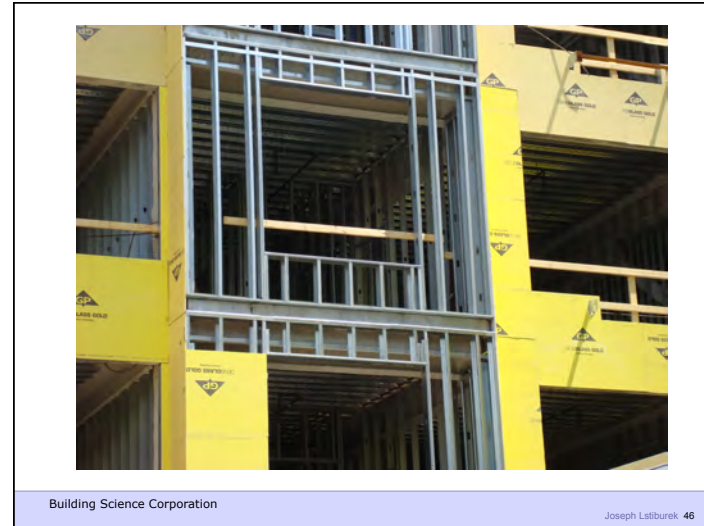
- Structure
- Rain/Air/Vapor
- Insulation
- Finish

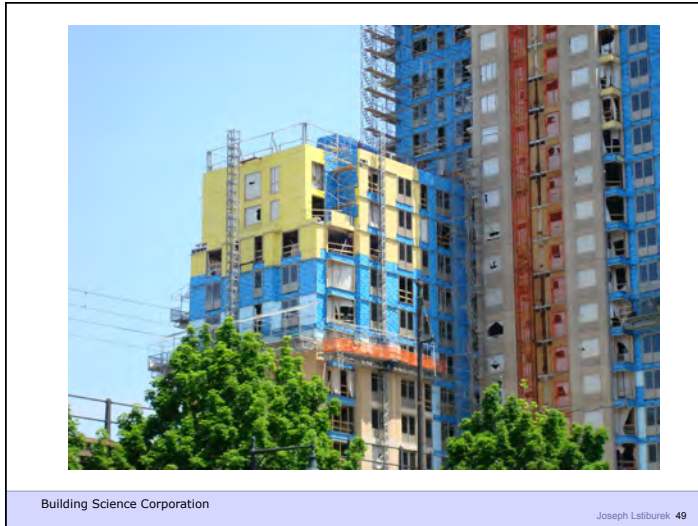
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Don't Do Stupid Things

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