What is a Building?
A Building is an Environmental Separator

2nd Law of Thermodynamics
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

Water Control Layer
Air Control Layer
Vapor Control Layer
Thermal Control Layer
Commercial Enclosure: Simple Layers

- Structure
- Rain/Air/Vapor
- Insulation
- Finish
null
Rain enters cup due to momentum ("kinetic energy")

Cup drains water to exterior

---

Rain enters cup due to momentum ("kinetic energy")

Wind enters cup—pressurizing cup; no rain entry due to wind driven rain

Cup can still drain water to exterior

Entire wind pressure taken here
Baffle to deflect raindrops hitting face of cup due to momentum ("kinetic energy")

Pressure in cup is same as pressure outside on face of baffle

Momentum driving force converted to gravity—water drains away

Wind enters cup—pressurizing cup; no rain entry due to wind driven rain

Cup can still drain water to exterior

Entire wind pressure taken here

Insulating glass unit

Seal (gasket)

Seal (tape)

Setting block (typically two per unit)

Hole providing drainage and pressurization

Frame

Rough opening
Intent of sealant is to limit this lateral flow of water between sheathing and building wrap.

Flashing tape

Sealant “bedding” joint

Building wrap “wrapped” into opening