Flashing

What flashing must accomplish.

How water moves.

Thinking out the details.

What flashing must do

- Collect
  - Gather water which infiltrates
  - Be everywhere it is needed
  - Deal with all the ways water can move
- Control
  - Capacity to retain water until it drains
  - Prevent bypass flow
- Discharge
  - Get the water out of the wall
  - Path to daylight

Working with flashing

Prescriptive:

Follow the rules, codes, manufacturers' specific guidelines and recommended practices, and the construction documents.

Conceptual:

Does the flashing as-recommended, as-designed or as-built do everything it should *(collect, control, discharge)*?

Good flashing requires a thought process, not just rules.

What BIA has to say

Brick Industry Association *Technical Notes*

7-1998

Flashing is a membrane, … which collects water that has penetrated the exterior wythe and facilitates its drainage back to the exterior.

7-1992

Flashing is essential in a drainage wall system…

21B-1998

… the flashing should extend through the outer face of the wall and be turned down to form a drip …

What BIA has to say

7-1998

End Dams - Where the flashing is not continuous, such as over and under openings in the wall, the ends of the flashing should be extended beyond the jamb lines on both sides and should be turned up into the head joint several inches at each end to form a dam.

What lawyer bait might say

I do not want to see the flashing.

Flashing is too ugly, … too difficult, … too expensive, … too time consuming, … not my problem.

EIFS doesn't leak.

We have never used it, … never had a problem.

What the heck is an end dam?

Why flashing is needed

The wall *WILL* leak.

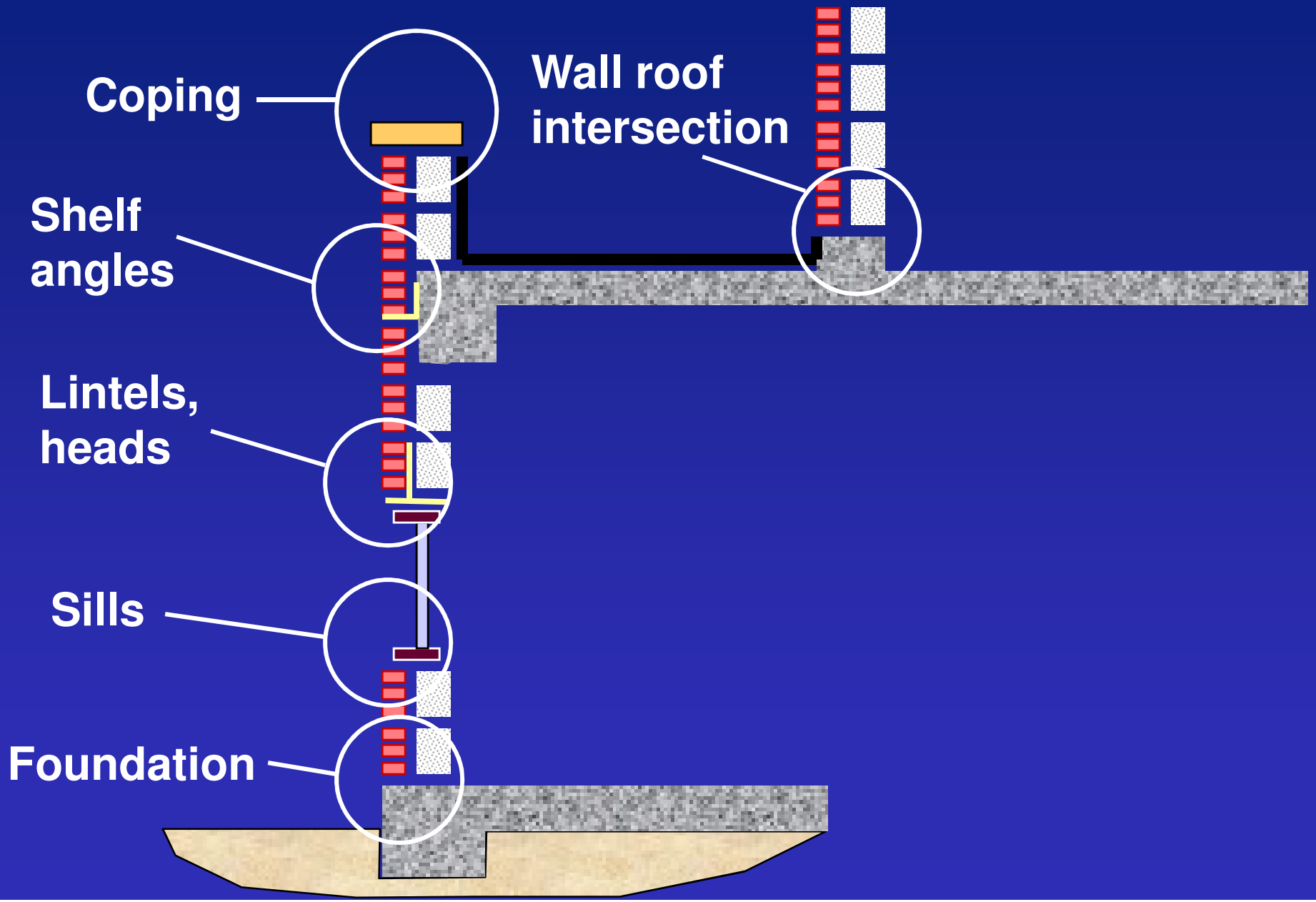
Immediate:

- Masonry permeability, stucco permeability
- Drainage and pressure equalized systems
- Internal weeps and drains
- Non-performing subsystems

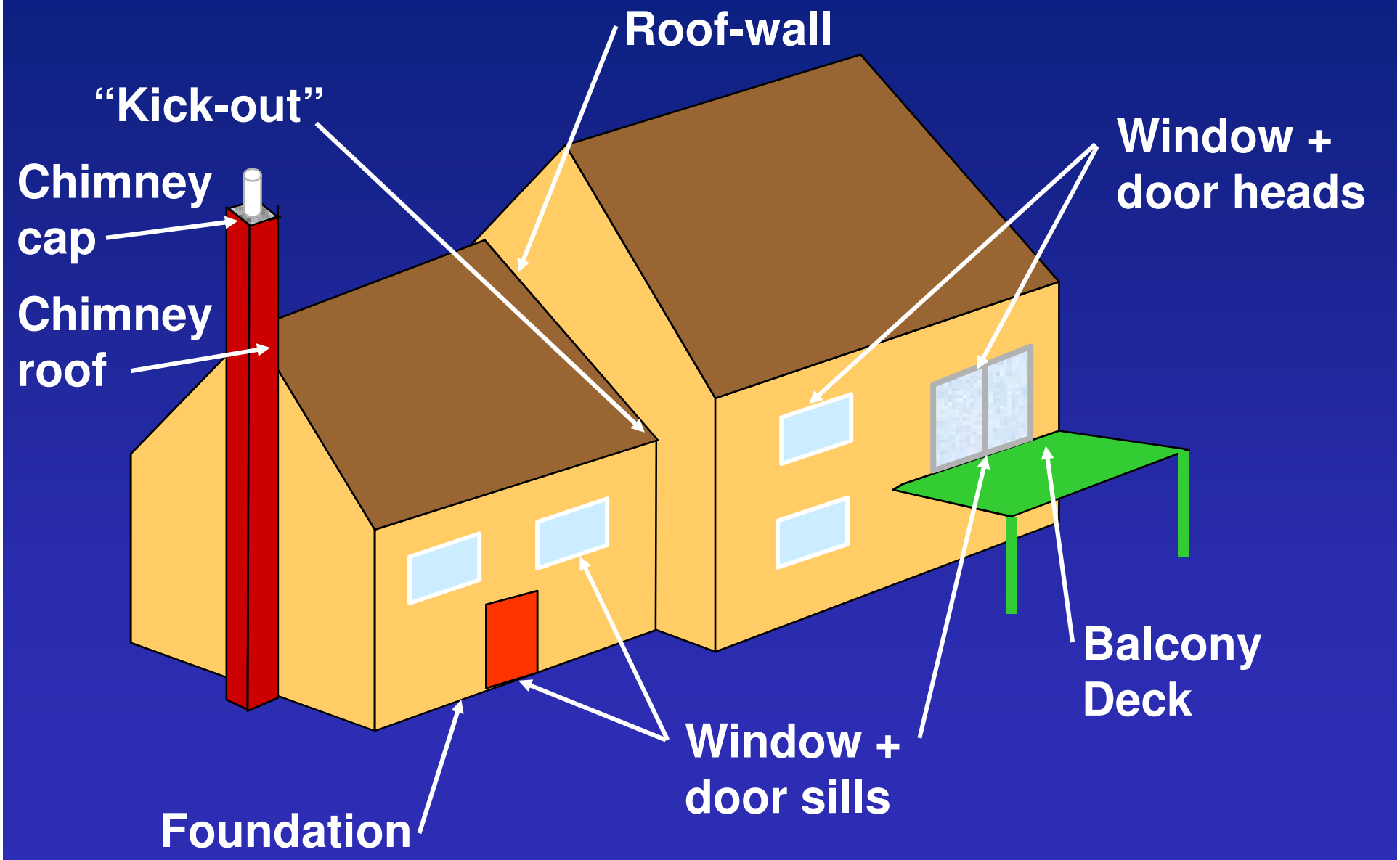
Future:

- Deterioration, UV degradation
- Cracking
- De-bonding
- Unbalanced useful life
- Maintenance deferred

Where it is needed - masonry



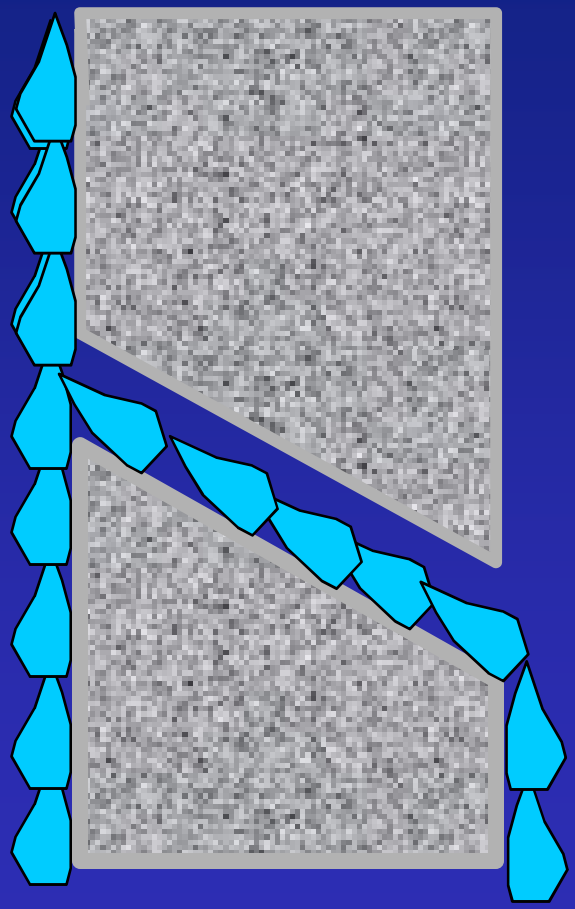
Where it is needed - residential



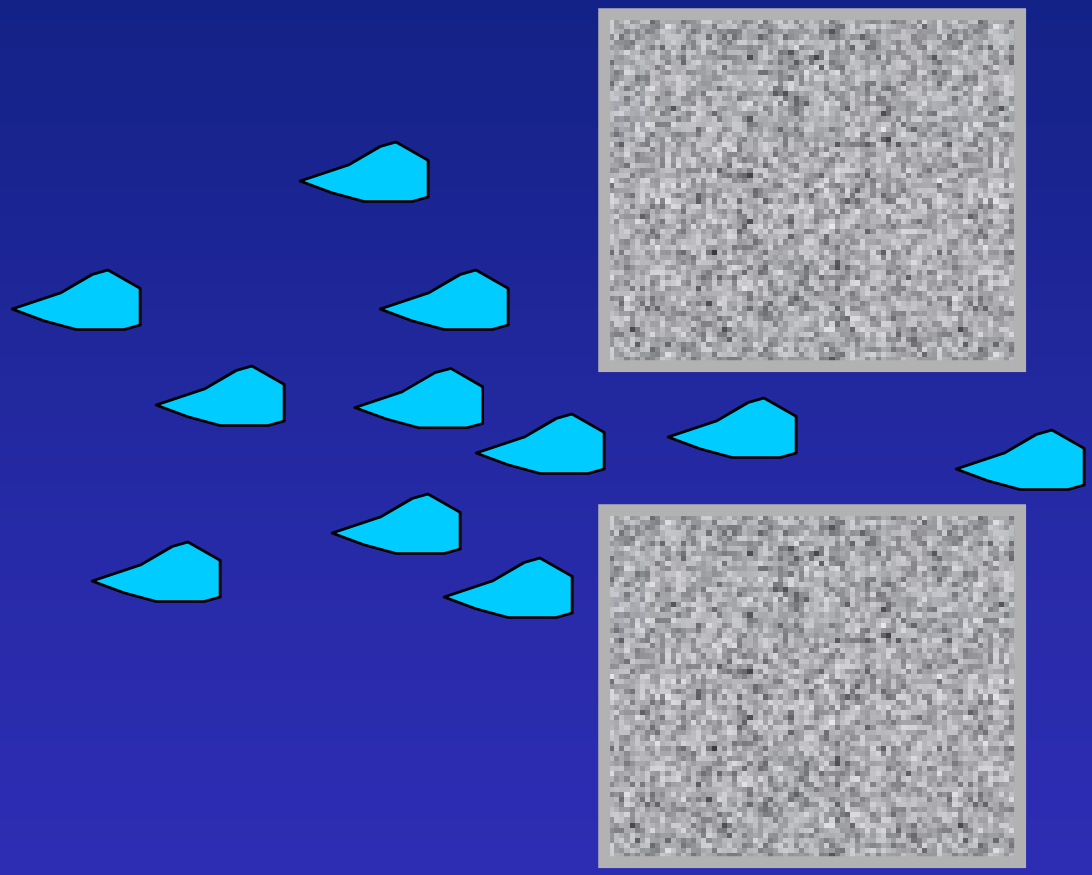
Ways water can move

Gravity
Kinetic energy
Surface tension
Capillary suction
Air currents
Differential pressure

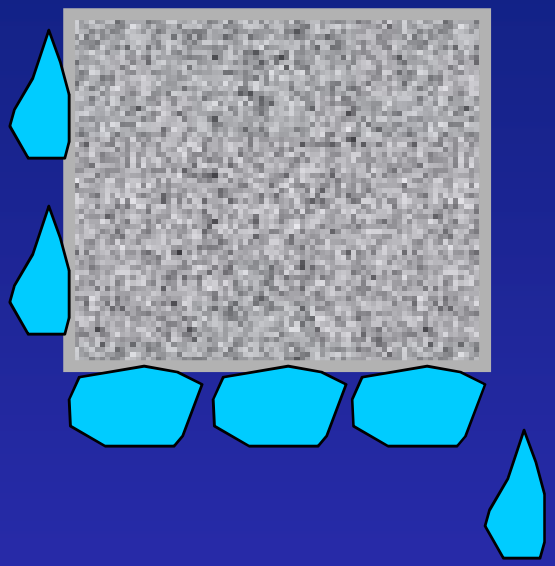
Gravity



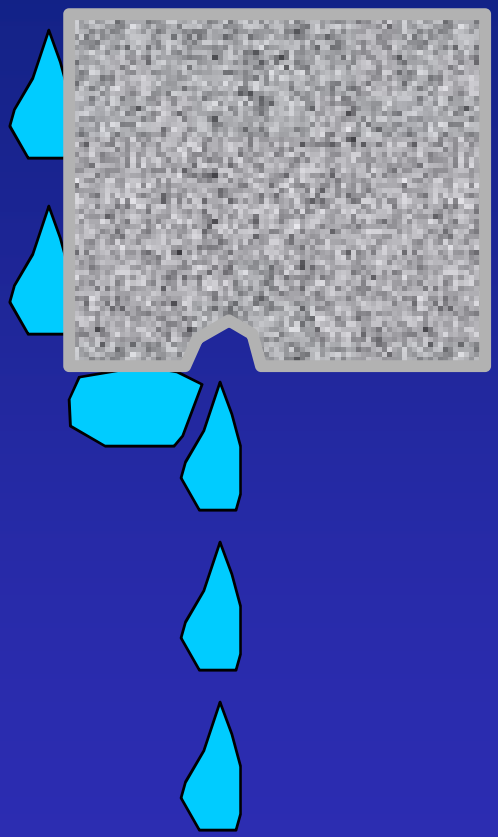
Kinetic energy



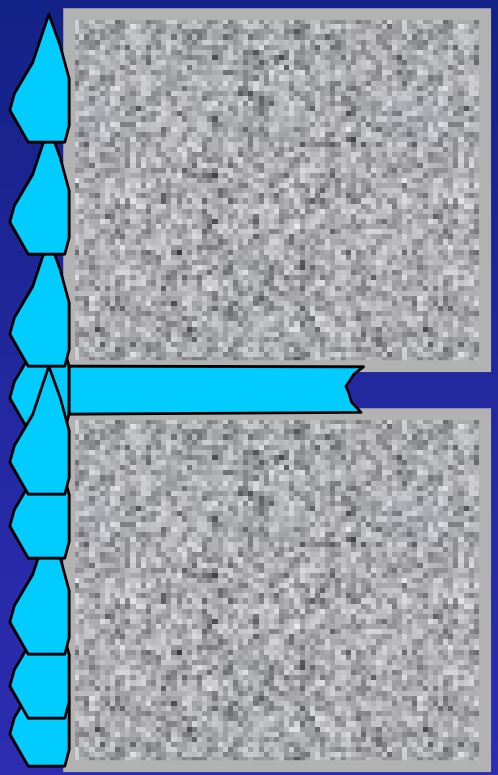
Surface tension



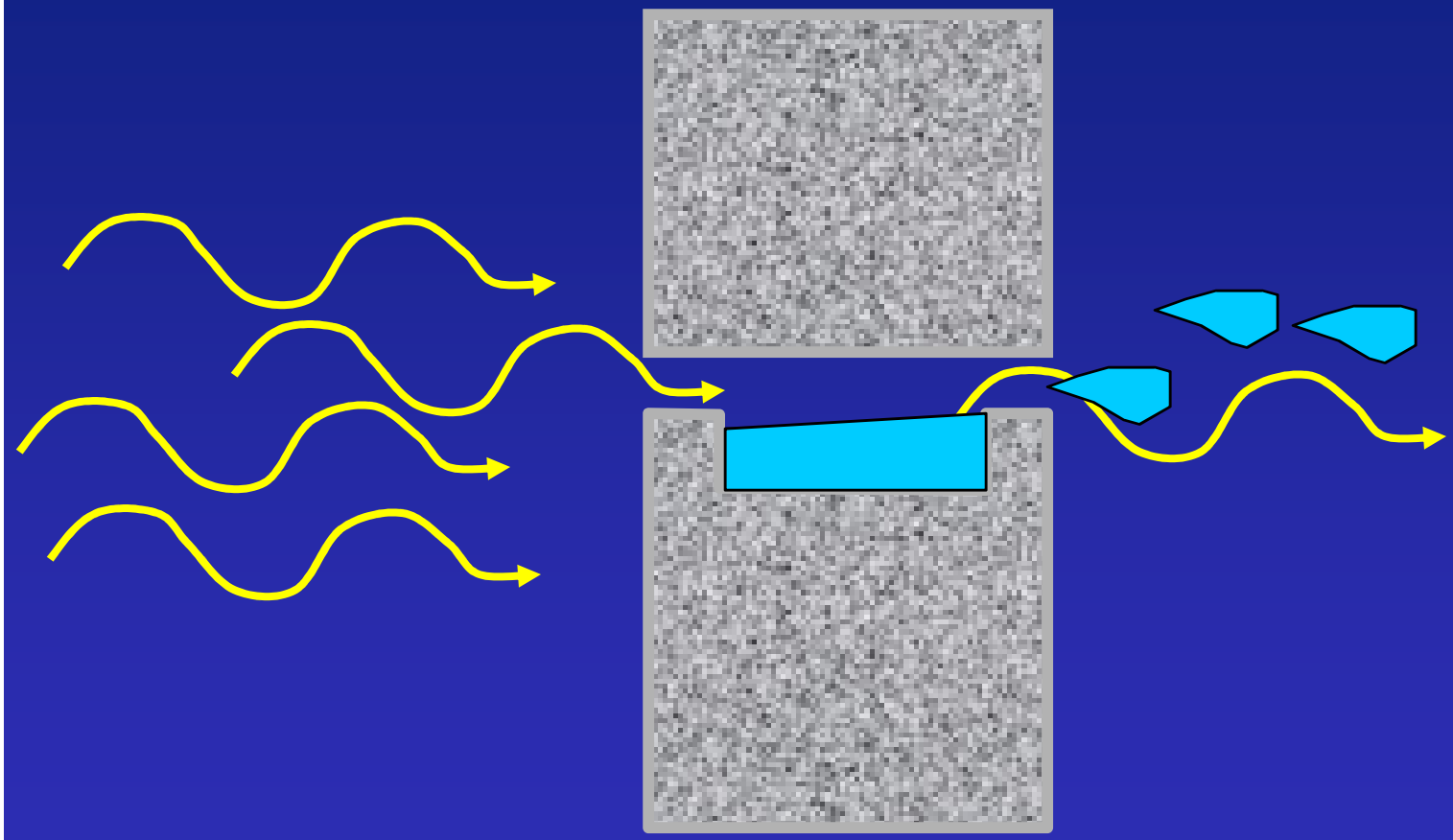
Surface tension



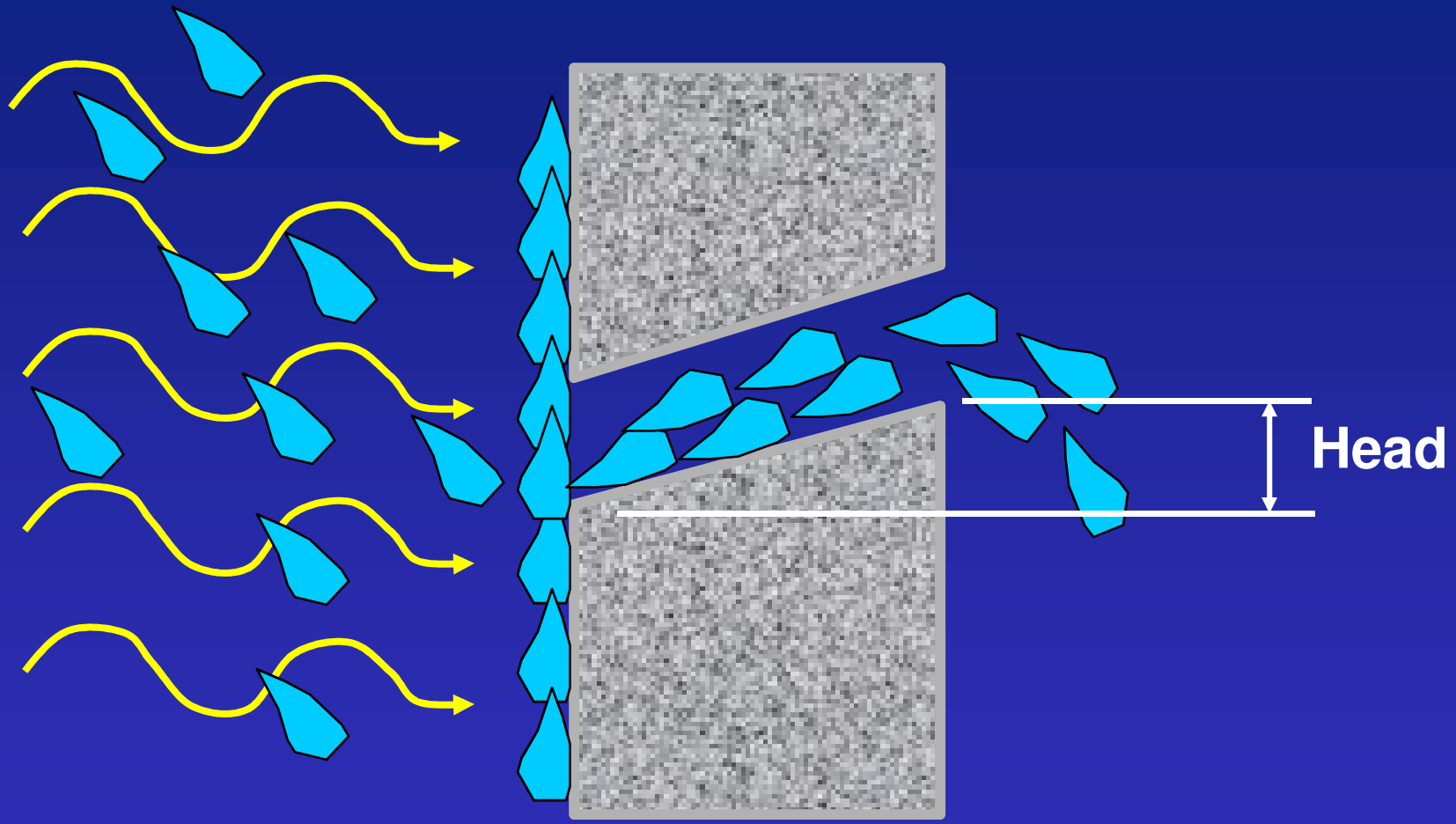
Capillary suction



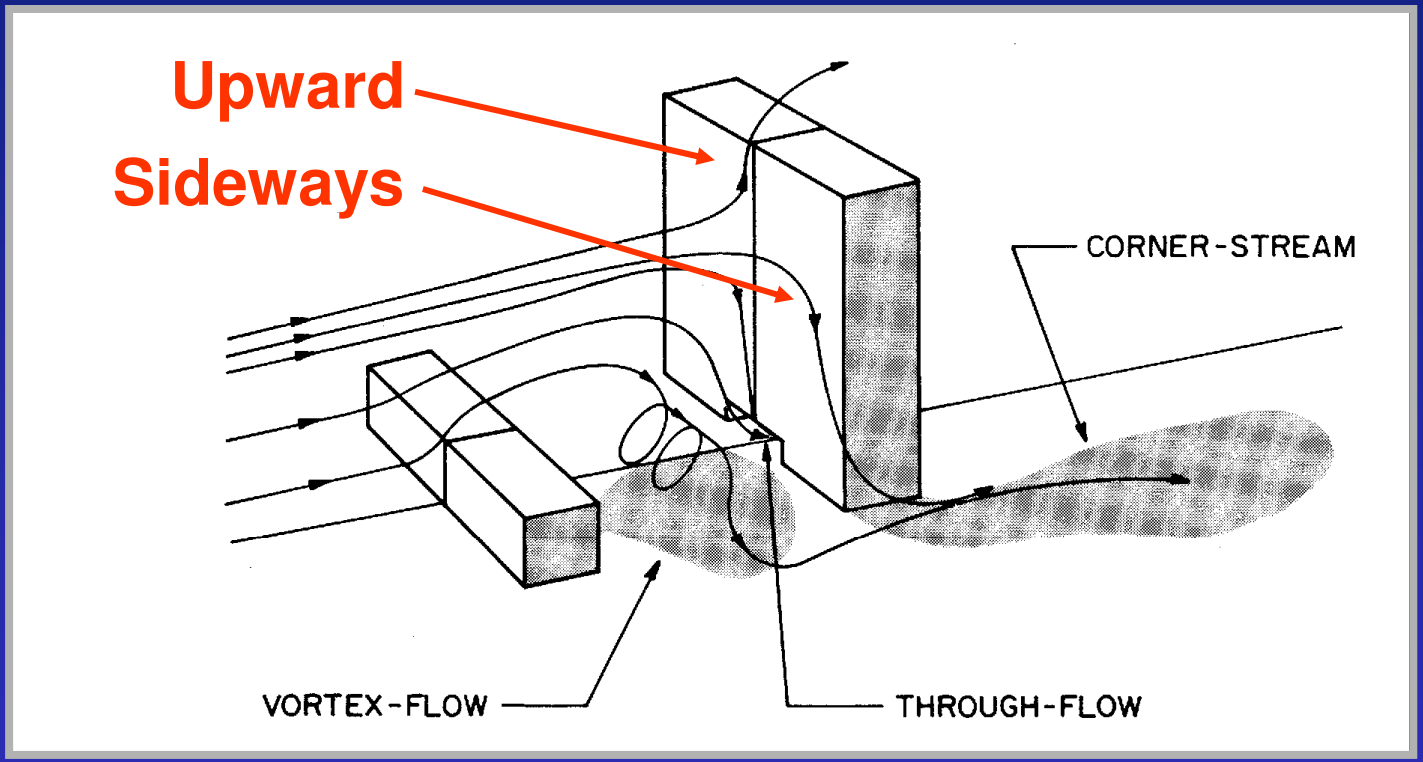
Air currents



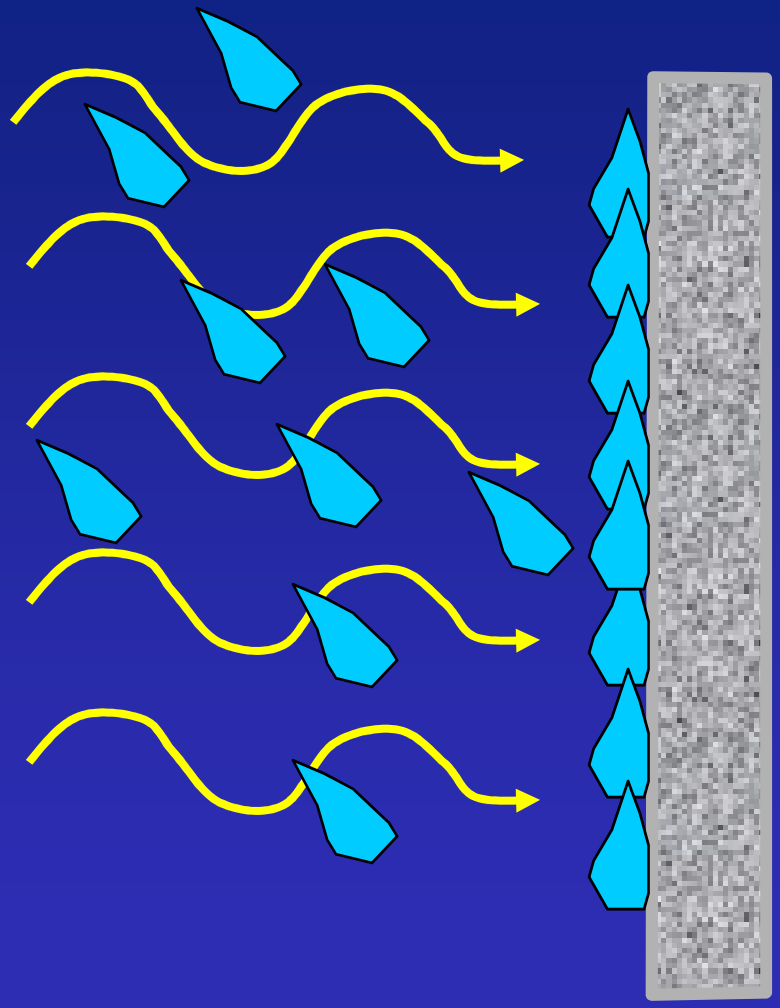
Differential pressure



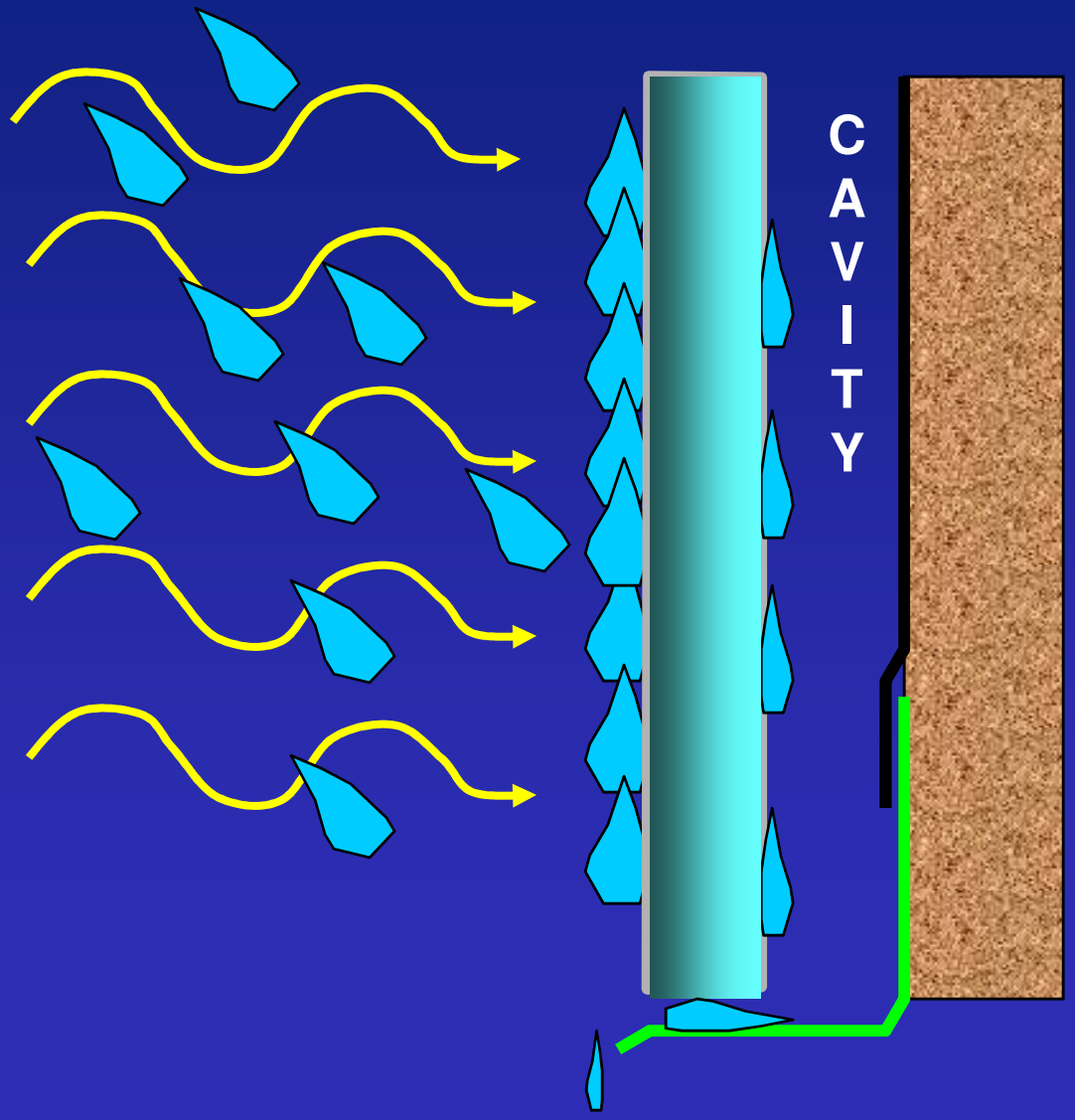
Wind patterns



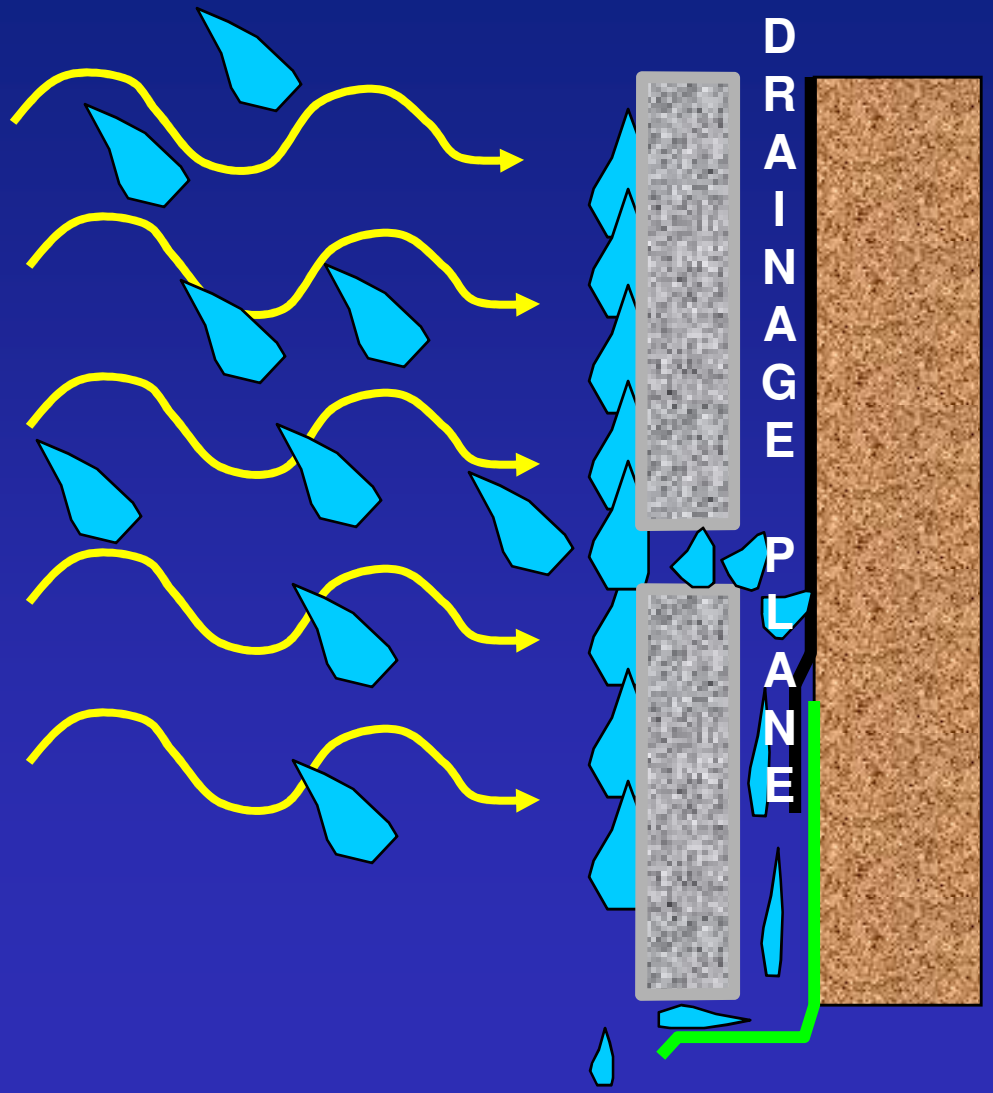
Resisting intrusion – face seal



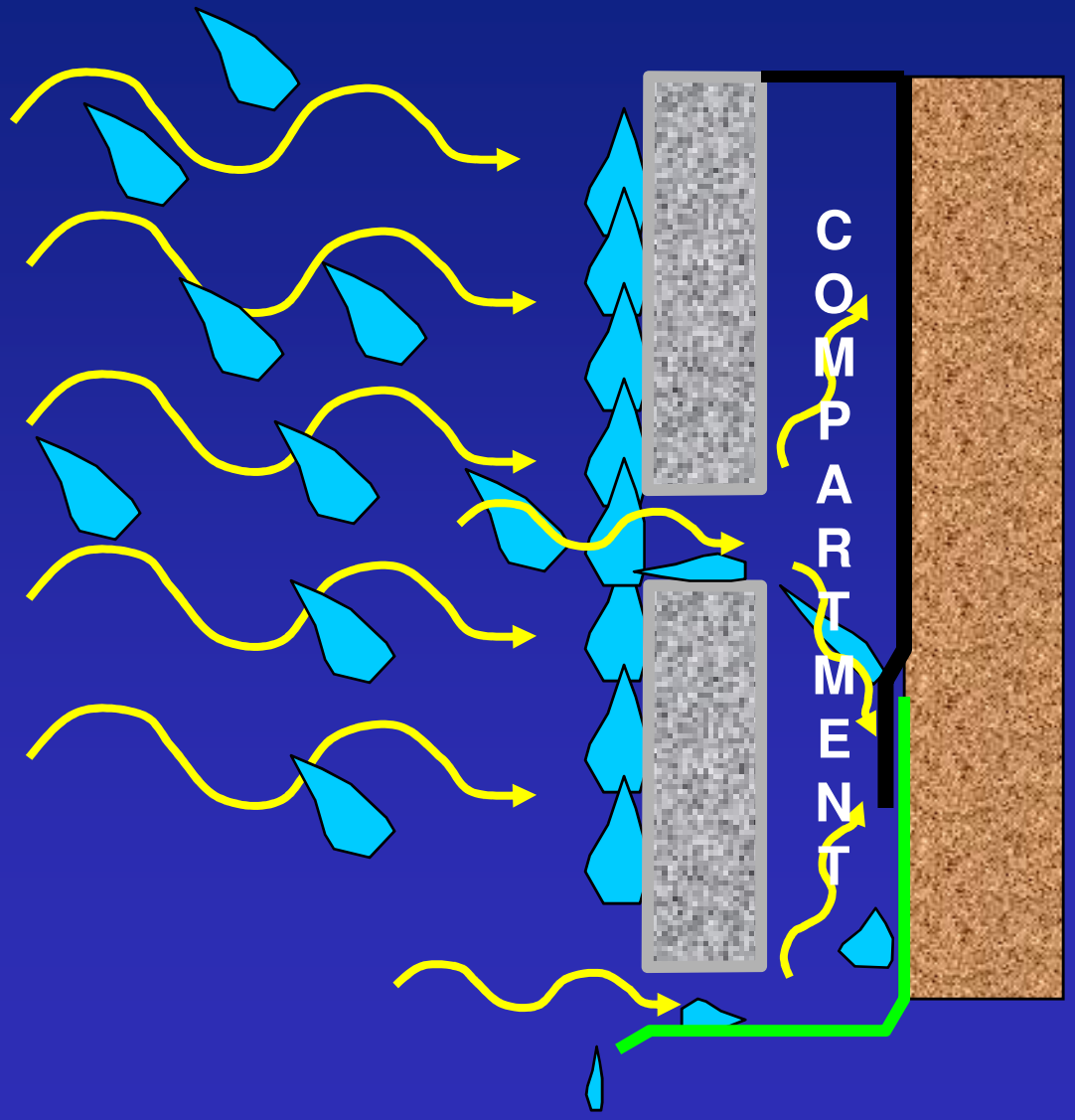
Resisting intrusion – cavity



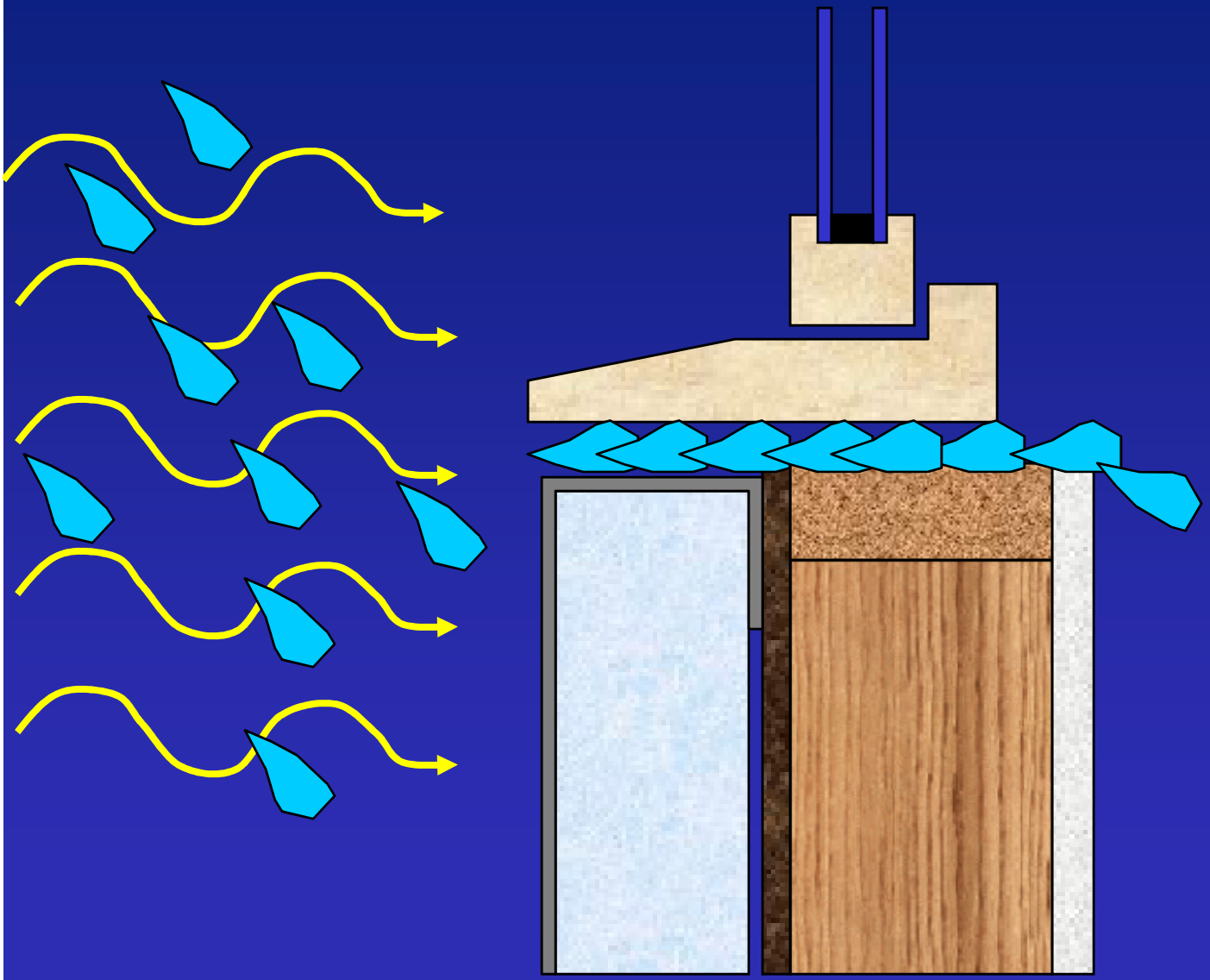
Resisting intrusion – rain screen



Resist intrusion – pressure

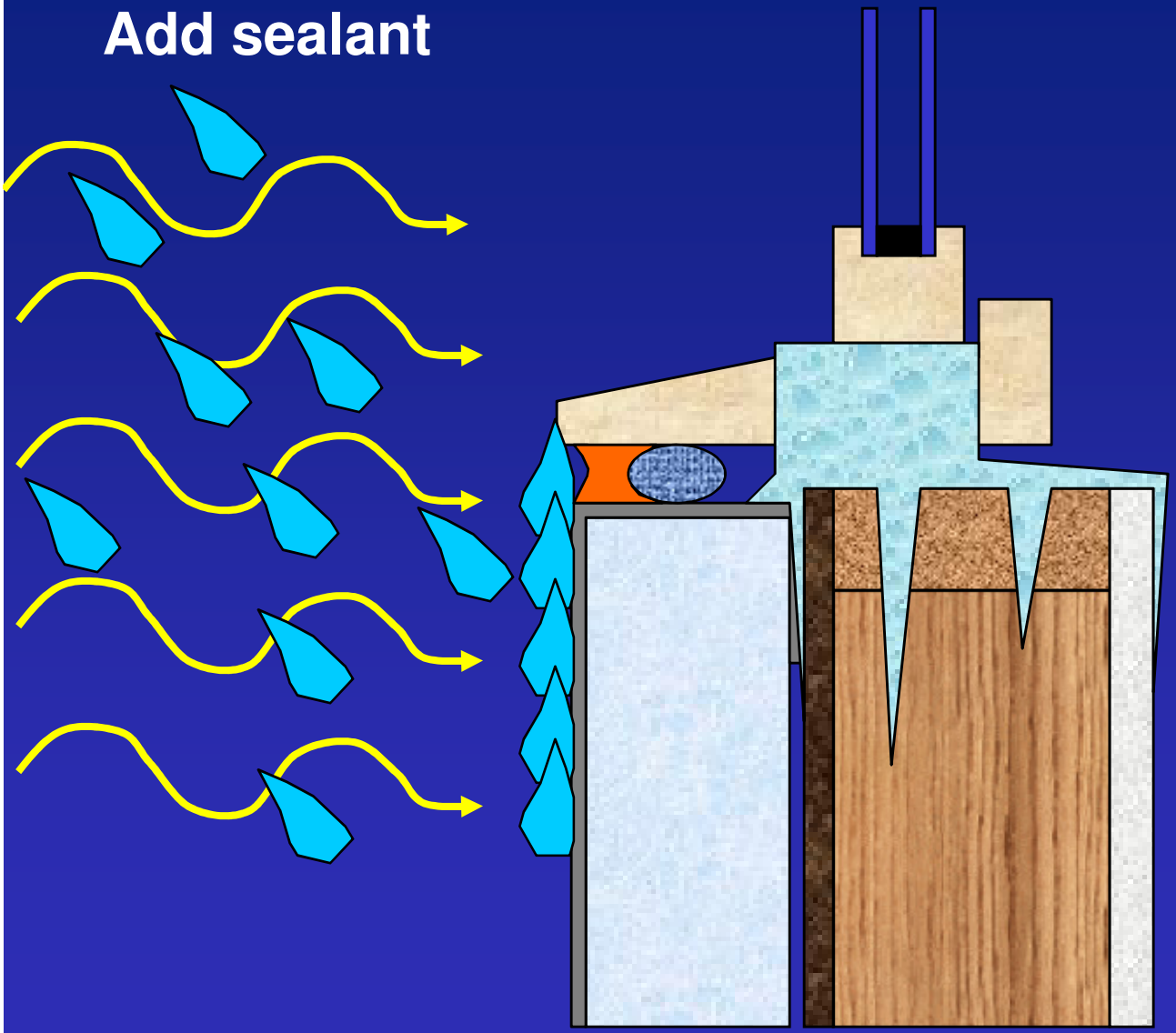


Window sill



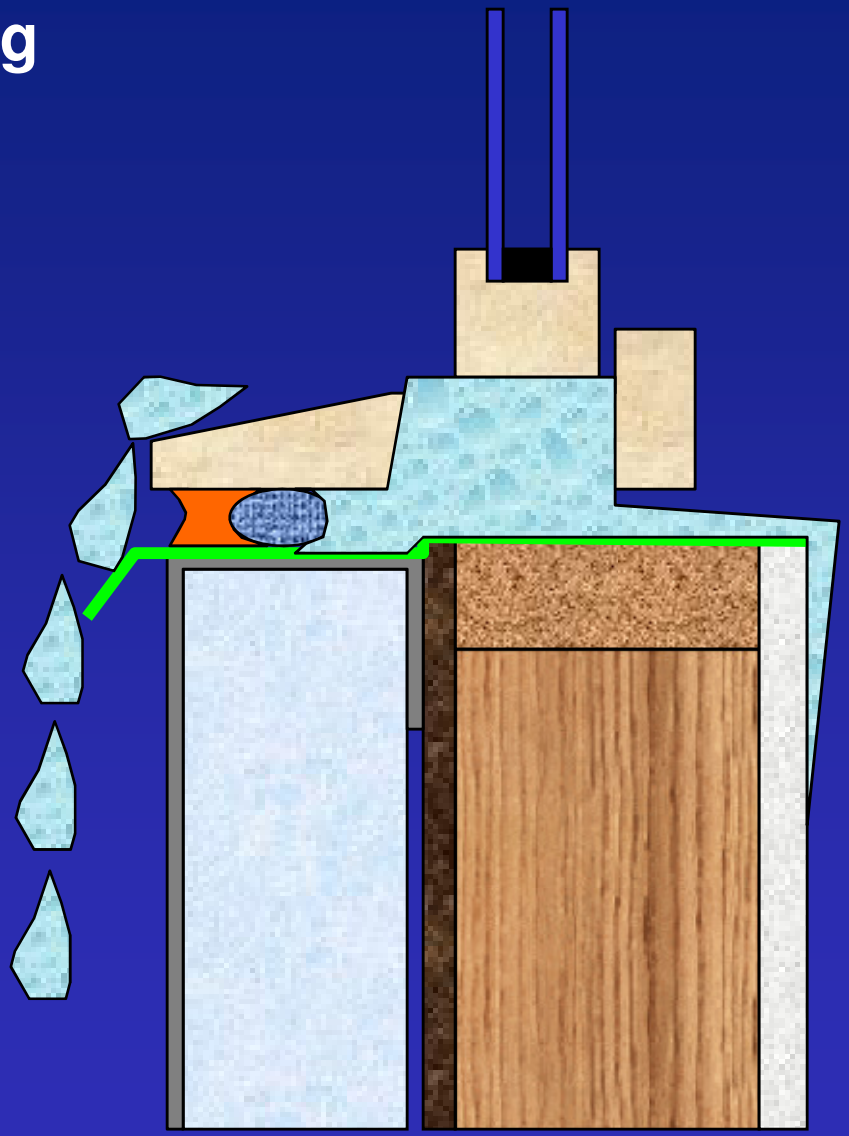
Window sill

Add sealant



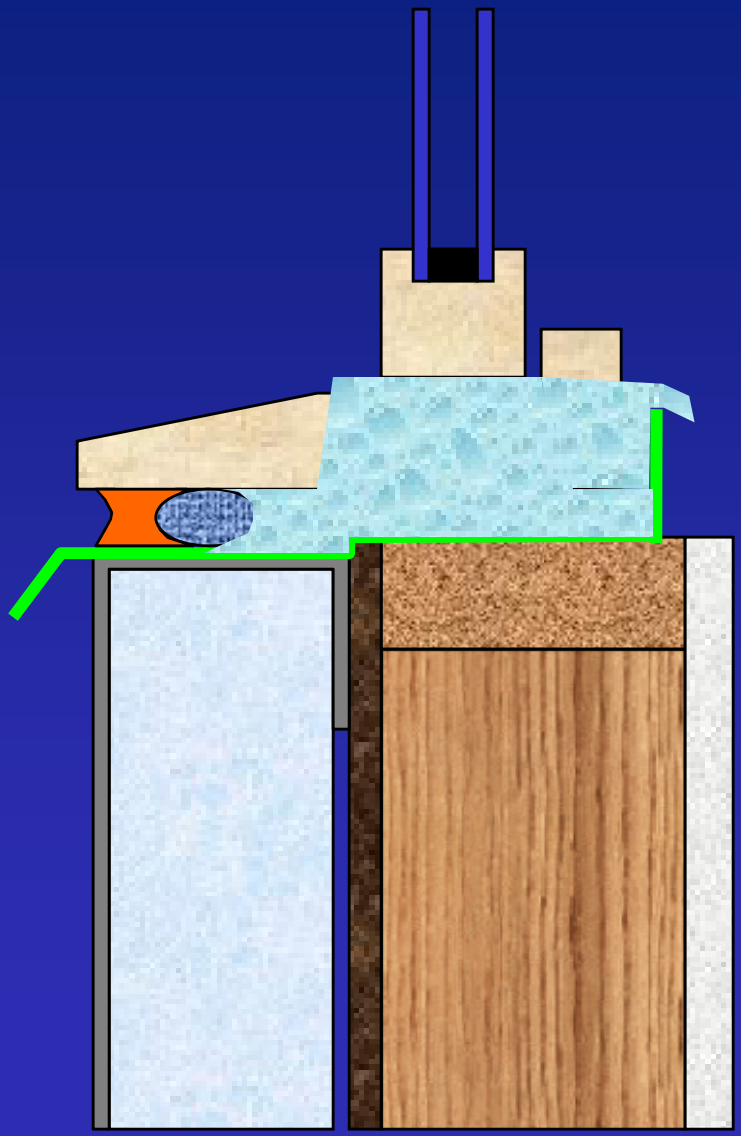
Window sill

Add flashing



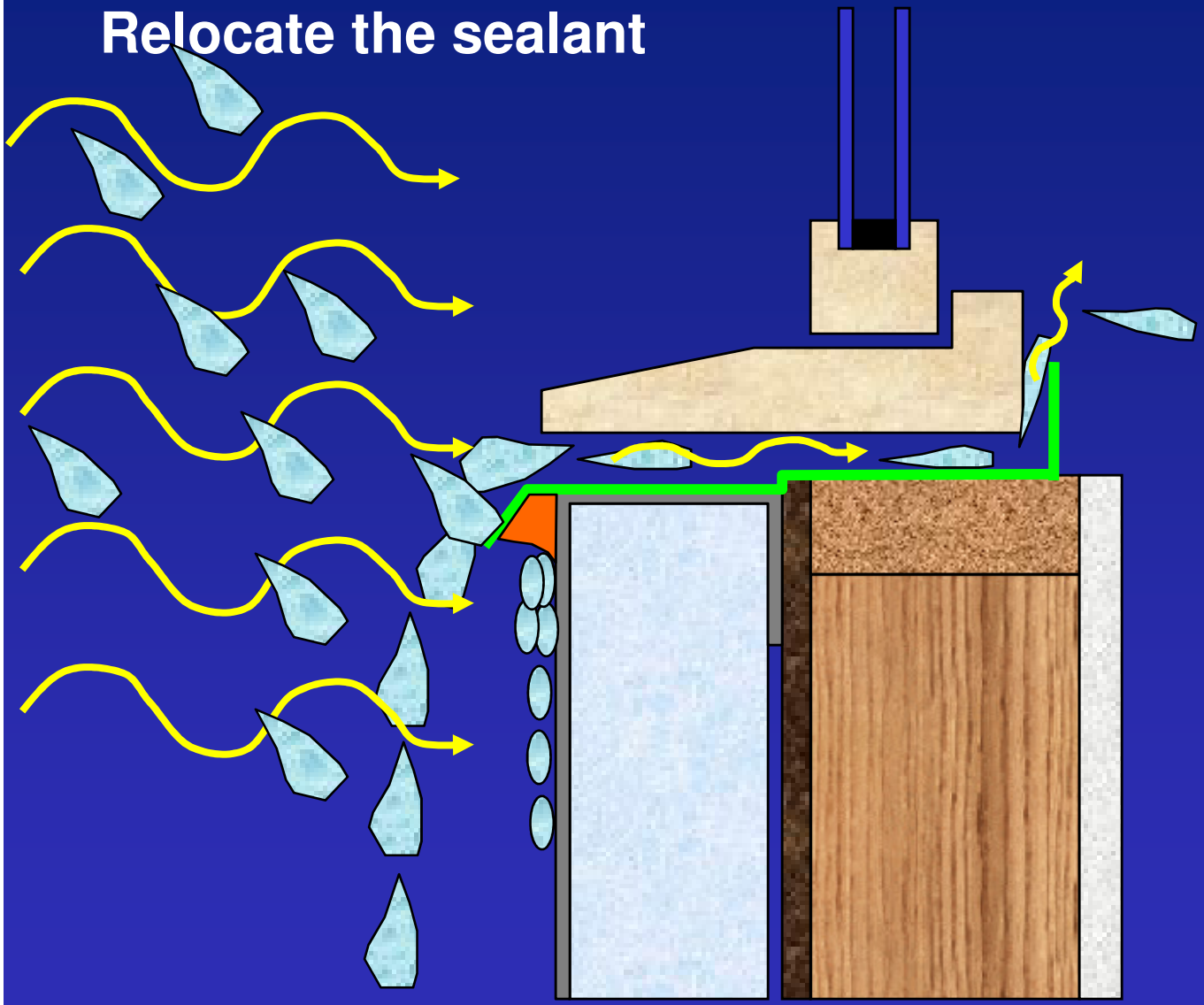
Window sill

Add upturn



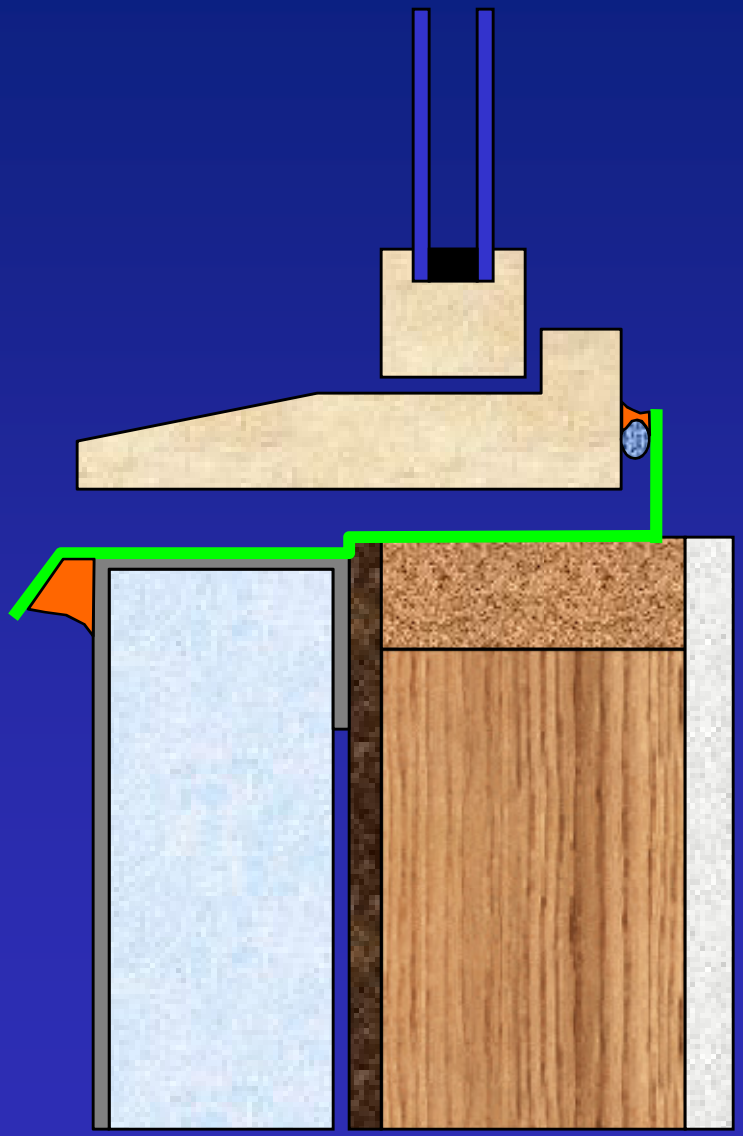
Window sill

Relocate the sealant

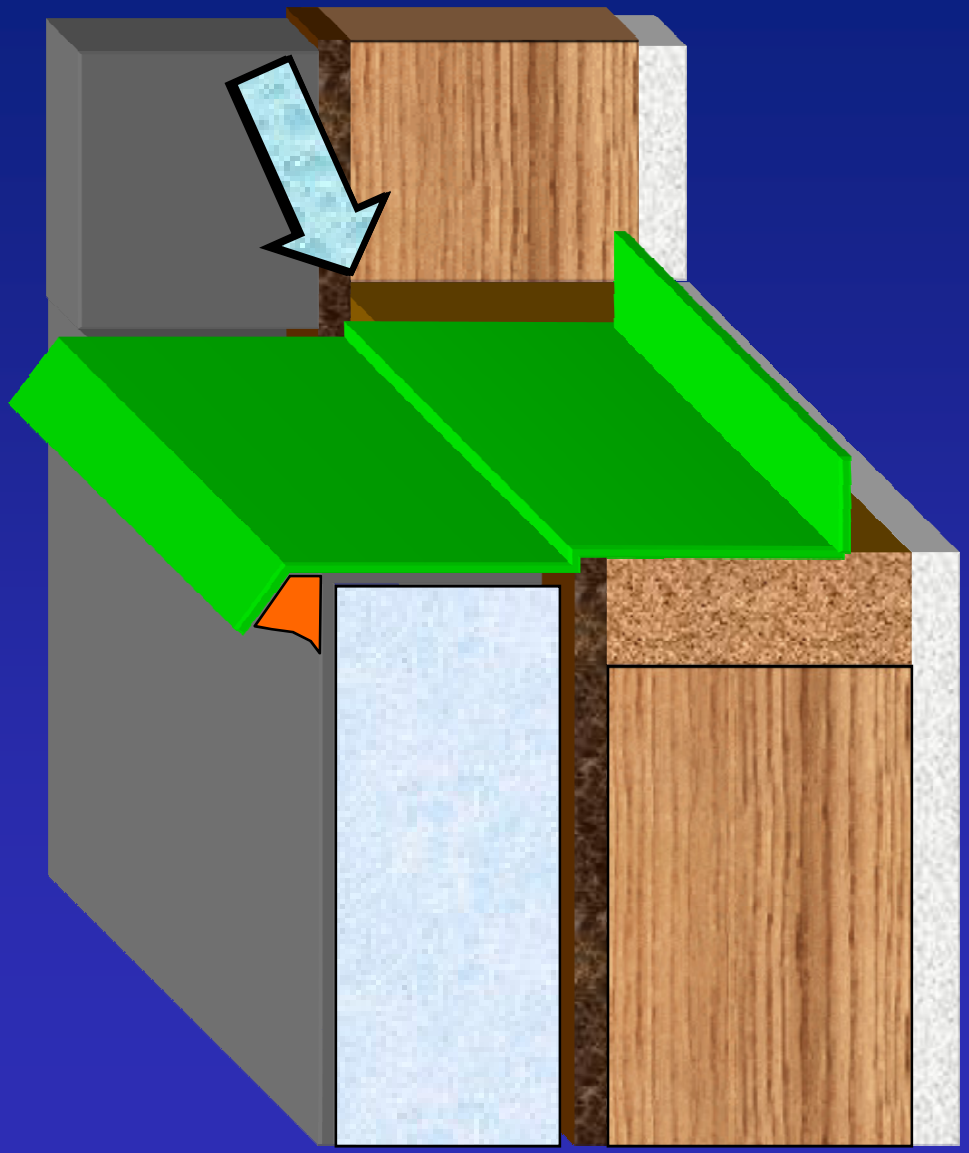


Window sill

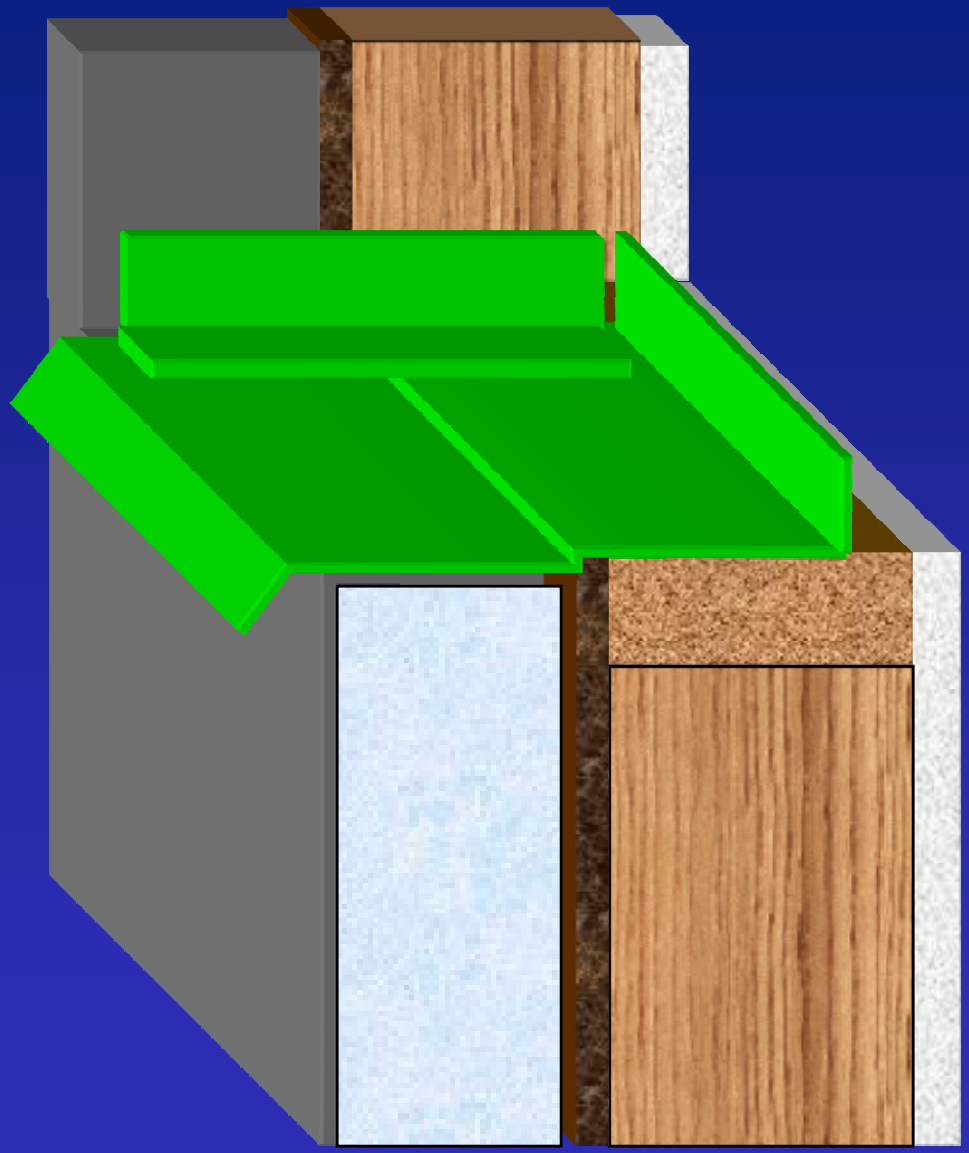
Add air seal



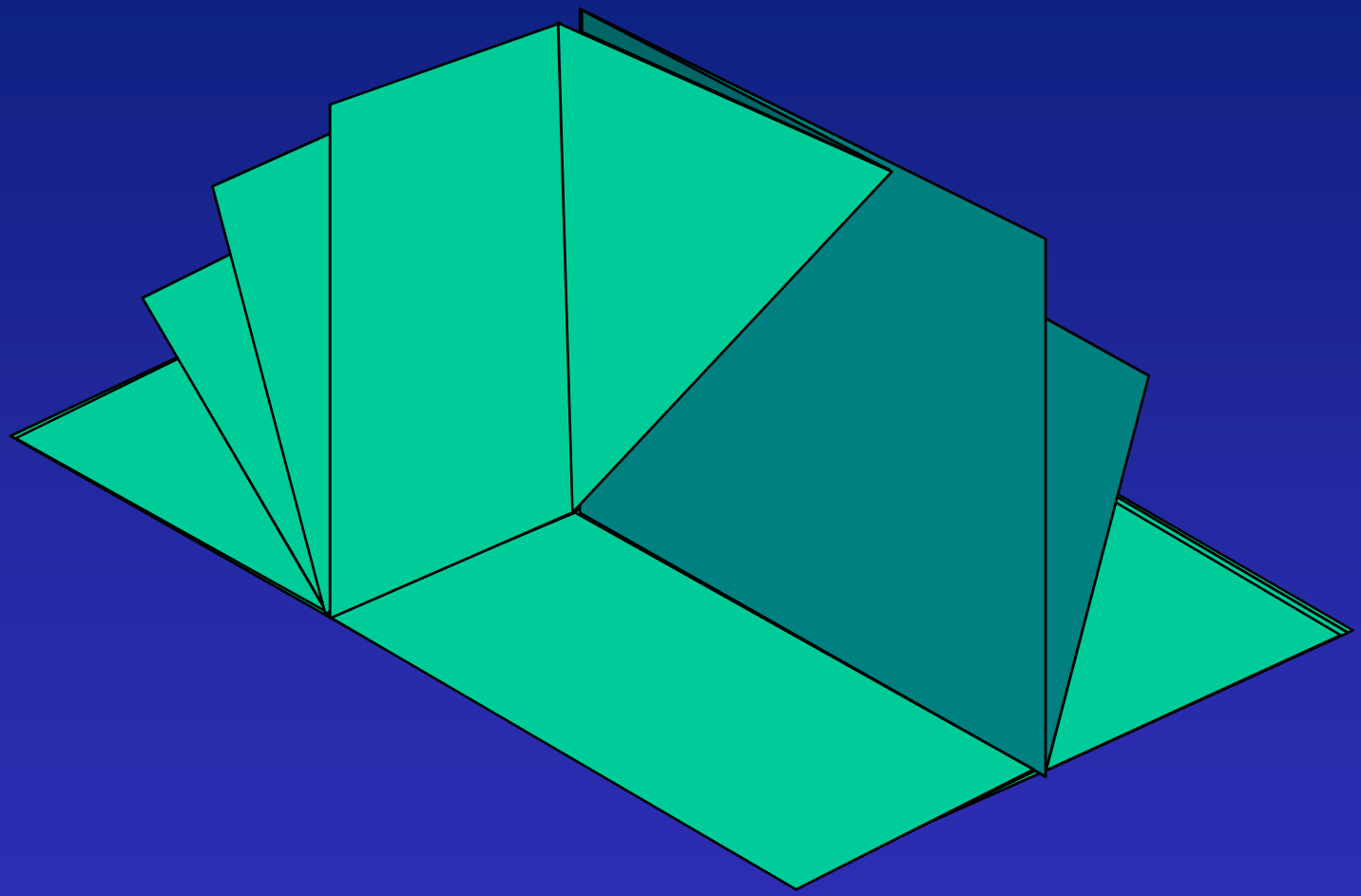
Visualize in three dimensions



End dams



Fold an end dam



Other atypical locations

What happens at other locations away from the typical cross-section?

- Inside corners
- Outside corners
- Expansion joints
- Transitions to other cladding materials
- Laps, splices
- Ends

Secret of flashing

Think like water.

Effective flashing results from a thought process, not a rule book.

Keep Dry