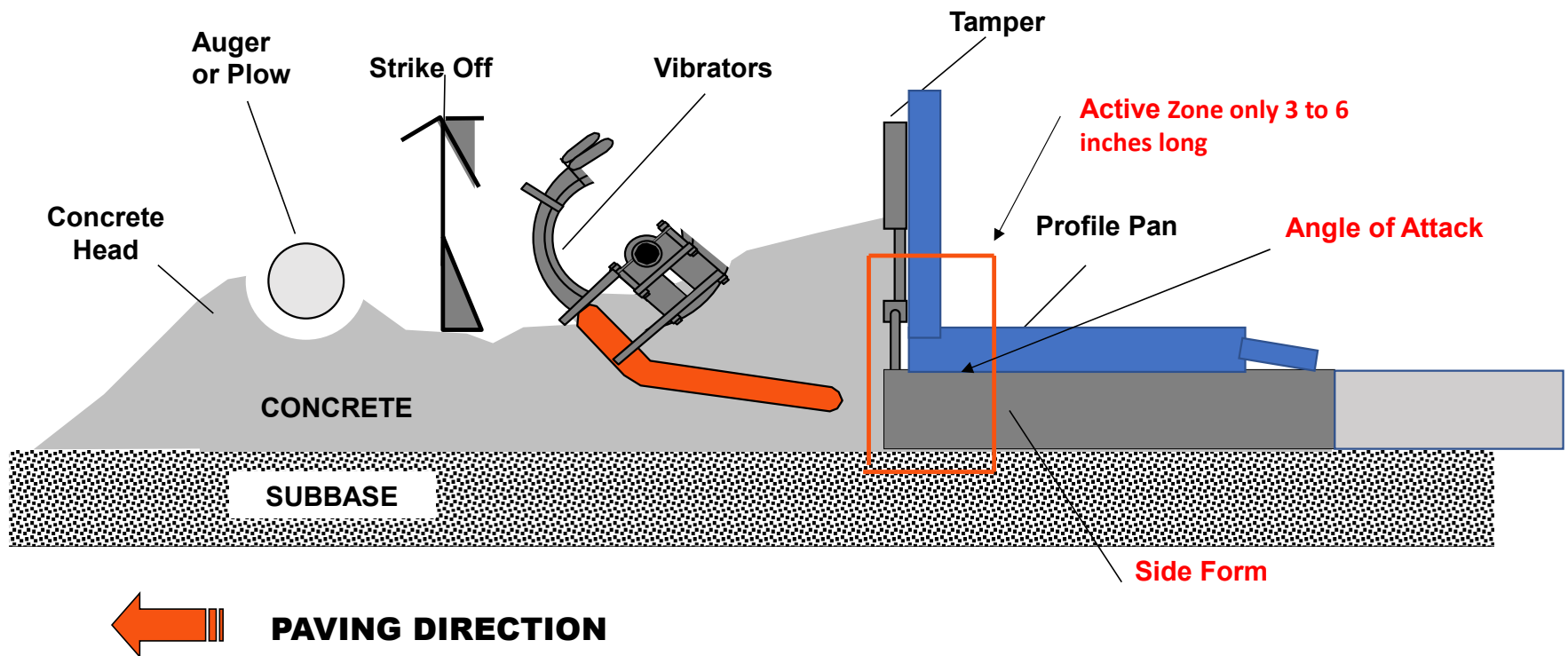


Constructing Smooth Concrete Pavements

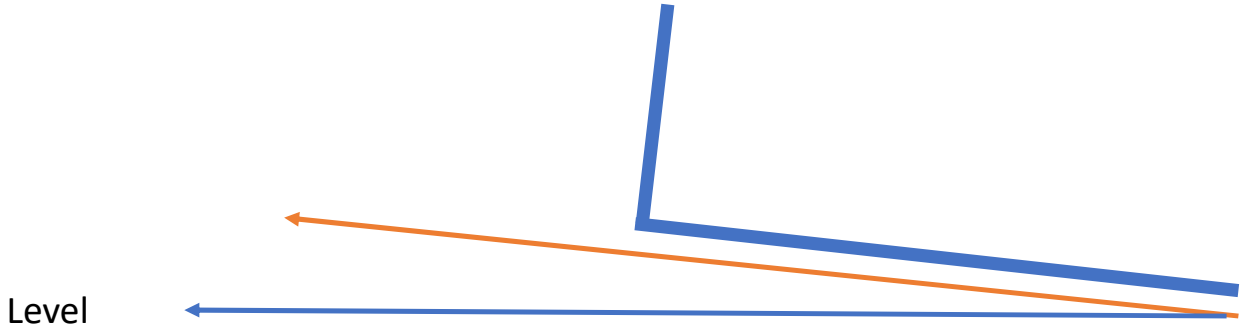
Daniel DeGraaf

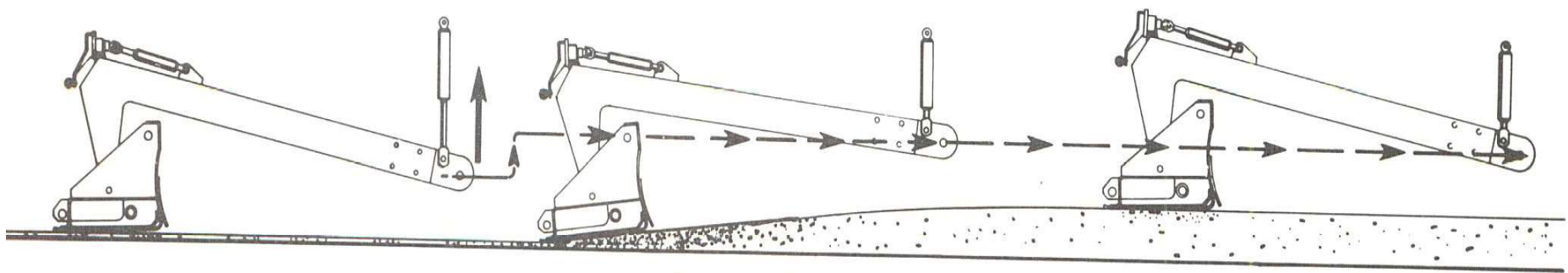
How does a paver produce a pavement



Angle of Attack (Plane)

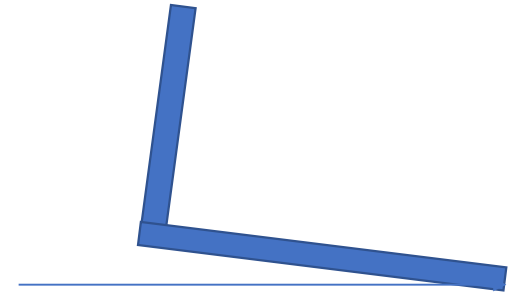
Most Critical Ride Quality Control Element





Angle of Attack (Plane)

- Control the leading edge
 - Do not let too much concrete get under the pan
 - Continuous wavelength is produced – spacing and amplitude determine ride measure
- As the profile grade changes so does the angle of attack
 - The paver must be adjusted as profile changes – Up and Down Hill



Angle of Attack

- Weight is not the answer
 - Cannot compress a liquid
 - Not wise to pound square peg into a round hole
 - Compare paver weight to area of finish pan
 - Edge squeeze does not work
 - The back of the pan should just touch the surface
 - Paver can pull mix apart

Angle of Attack

- Steady forward movement
 - Minimize starts and stops as well as speed changes
 - Match paver speed to hourly plant production

Concrete Mix Design PEM

- Must be easy to consolidate – minimal vibration
- Well-graded with minimum paste content – hold its shape well
- Aggregate absorption becomes critical
- Segregation must be minimized
- Differential vertical shrinkage of the slab can show up in the IRI measurement