

# Achieving Smoothness



# Smooth Pavements Are What the Customers Want



The customer doesn't want the road infringing upon their driving/riding experience...



or their cargo!



Expectations are changing with regards to how we spend our time in vehicles.



Expectations for productivity while on the road may be changing too...



Autonomous or self-driving vehicles are here.



The customer will get his or her way...



even when they are wrong!



Satisfying the customer with our products requires collaboration, planning, and execution.

- What the customer wants is simple: pavements that do not detract from their experience in vehicles while driving on the pavement.
  - To deliver this requires a collaborative effort:
    - Policy decision makers need to understand what the customer wants.
    - Designers need to foresee the impediments to delivering on what the customer wants.
    - Contractors need to close the deal during construction!

Question One: What is Smooth?

This is smooth!



**Question One:** What is smooth pavement to the customer?

**Answer:** Pavement that rides uniformly smoothly, quietly, and has little impact on the travel of the vehicle.



**Engineers can define smooth, but...**

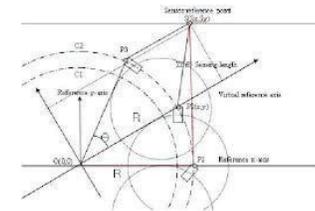
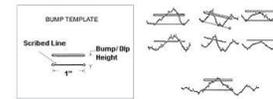


Figure 2 Model for the trace of the concrete wheel

Those pesky customers will tell us what they want if we listen.





Question Two: Are policy decision-makers, designers, and contractors ALL needed to build smooth pavements?

YES!





Designers – Don't expect a silk purse to be made from a sow's ear!

- If the customers' "riding" experience is not considered throughout much of the design process, it can detract from satisfying the customers.
- We can, of course, make a silk purse from a sow's ear if we use all of the tools available to us and know what the customer wants.





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Policy Decision-Makers: Customers want uniformity of smoothness and uniformity of tire-pavement noise.

- Diamond Grinding is a tool that can be used for more than meeting a specified smoothness... don't be afraid to use it continuously on certain projects!

Question Three: What are the biggest challenges to the paving contractor to deliver smooth pavements?

Answer: Not stepping back often enough and asking, what does the customer need for this project to be smooth?

