

Hamburg Wheel Track Testing Pilot

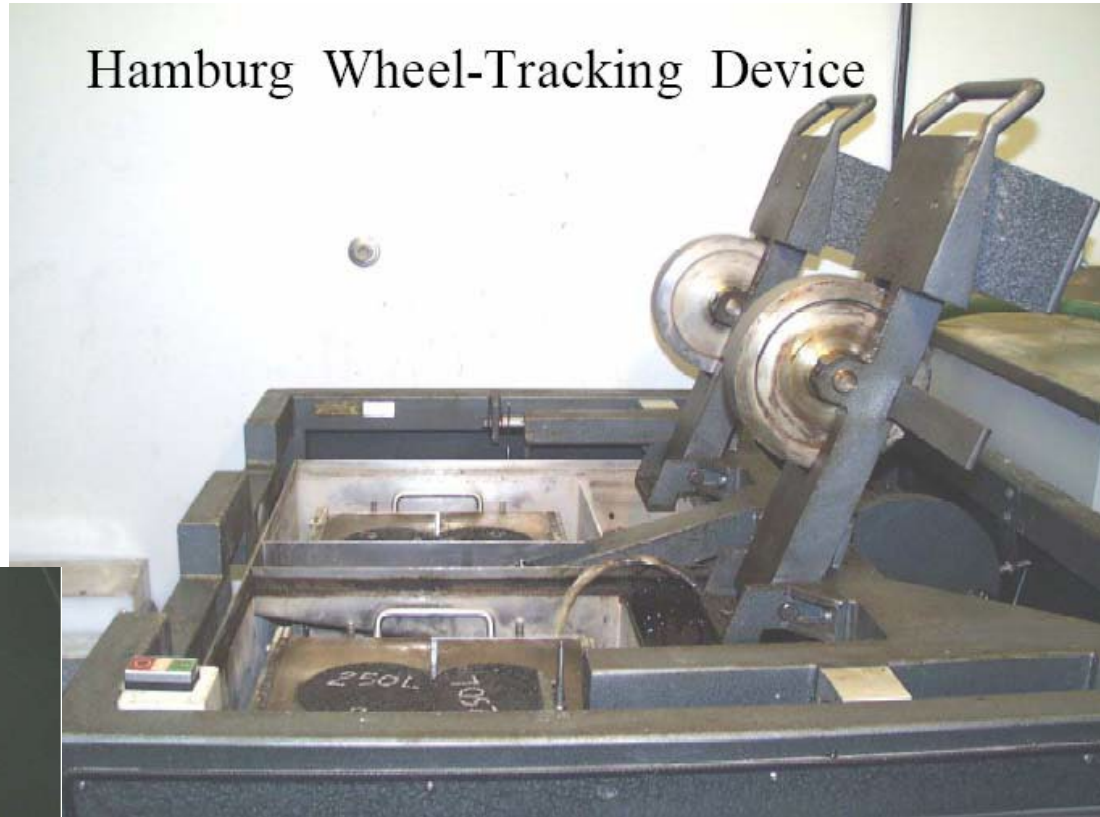
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Construction Services Engineer
PennDOT District 9-0

PennDOT Moving to HWT Testing

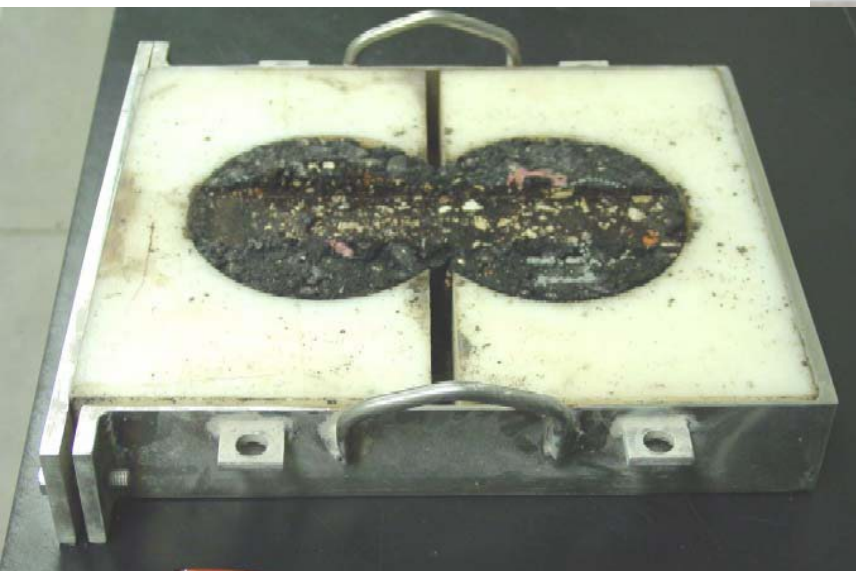
Target - Balanced Mix Design
for PA mixes

Incremental Approach – Not
all at Once

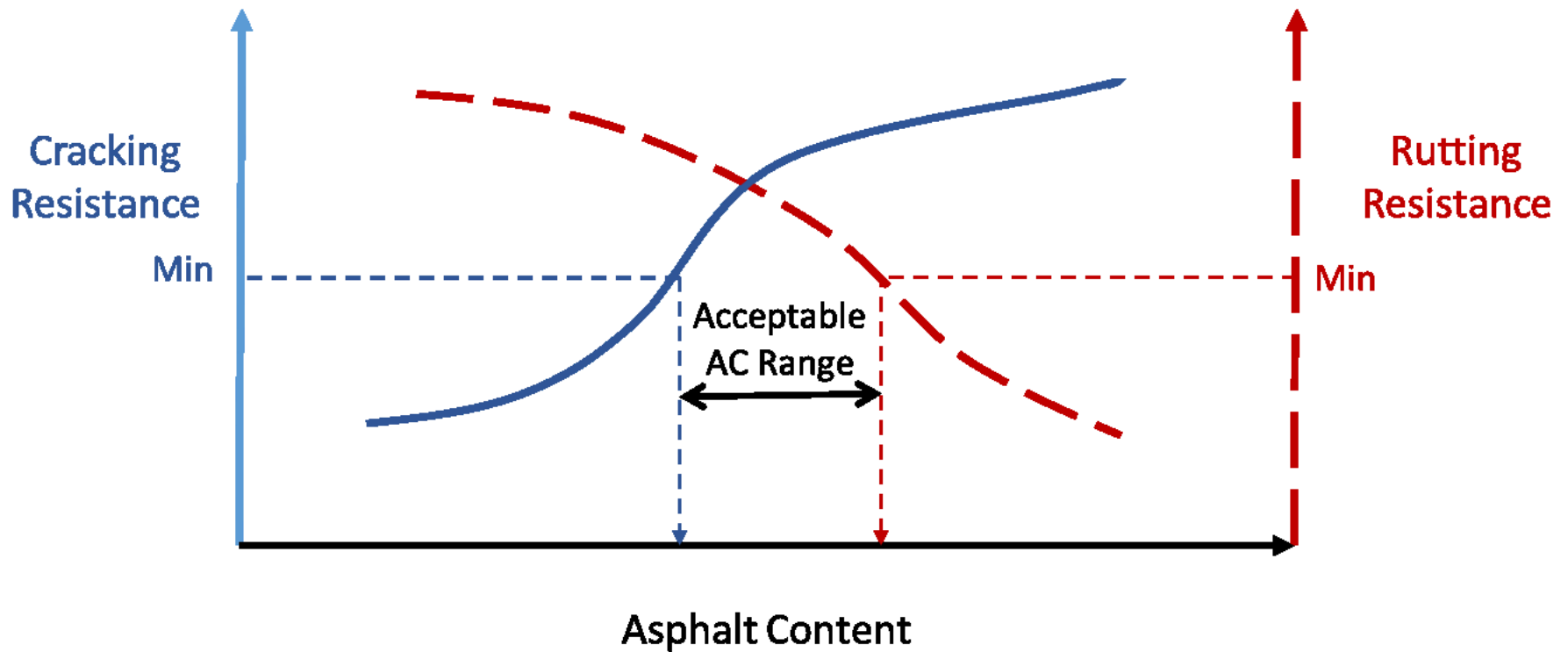
Hamburg Wheel-Tracking Device



Photos courtesy of Asphalt Institute



Balanced Asphalt Mix Design



First Step – Rutting Test

Looking for a rutting test that is...

- Well established, proven track record
- Detects rut-prone mixes
- Bonus would be capable of testing wet or dry for moisture susceptible mixes

Choices...

- APA
- AMPT
- Hamburg

My Choice - HAMBURG



Other Testing Options



HWT Testing Advantages

- **Rutting Resistance Measure**
 - Very well established track record detecting rut-prone asphalt mixtures.
 - Rules of thumb
 - 12.5mm at 20,000 cycles for polymer modified mixes
 - 12.5mm at 10,000 cycles for non-polymer modified mixes
- **Moisture Susceptible Aggregate Measure**
 - May replace AASHTO T283 (TSR) eventually

Implementation Challenges

- Implementation will not be quick or simple.
 - Pick performance test(s)
 - Decide on test protocols.
 - Who will be doing testing and how large of an investment is the equipment?
 - Contractors / Producers
 - Special Testing Labs
 - Enough lead time between project bid and paving?
 - Trained technicians to run testing?

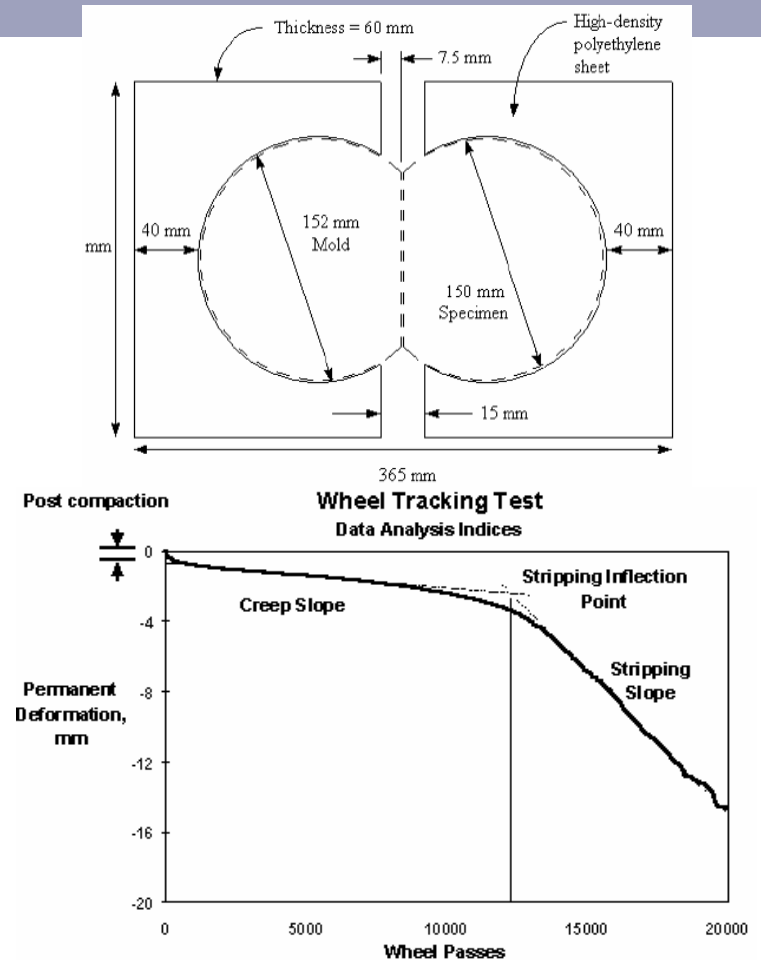
HWT Standard Special Provision Status

- Standard Special previously circulated through APQIC Pro-team.
- CT2 recently in circulation.
 - Comments were due Jan. 10, 2020
- Shooting for end of January for solicitation letter to Districts.
- Asking Districts to include the special provision on a minimum of 3 projects in the 2020 construction season with anticipated final inspection dates before October 31, 2021.
- Payment to be an “each” item with number of tests specified

HWT Test Requirements

- **Hamburg Wheel Tacking Test.**
(AASHTO T 324)


- Lab produced samples only for this pilot.
- Gyrotory samples % 7.0 (+/- 0.5%) air voids
- Test run at 122⁰ F (50⁰ C)
- All samples tested to 20,00 cycles or 14mm rut depth, whichever comes first



HWT Standard Special Provision 2020

- HWT Testing results are for **information only** in 2020.
- HWT test results are not required until the final project inspection.
- No project construction delays because of testing availability or results in 2020.
- Payment to contractor for HWT testing in 2020.
- Incremental changes in future years.
 - Incidental to JMF, Testing requirement for JMF approval, Limits established...

Questions?

A photograph of a black bear walking on a paved road. The bear is on the left side of the road, near a guardrail. A silver SUV is driving away from the camera on the right side of the road. The background shows a rocky hillside and green trees. A speech bubble is overlaid on the image, containing text.

If Garth
doesn't
know, ask
Neal Fannin