

IDOT

HMA

Issues

And

More!!!



FHWA Technical Advisory

FHWA Technical Advisory

- **As a result of some recent Contractor Fraud in other states, FHWA released a T.A. on August 9th titled:**

“Use of Contractor Test Results in the Acceptance Decision, Recommended Quality Measures, and the Identification of Contractor/Department Risks”

Key Points

- ❑ **Sampling/testing for verification by state**
- ❑ **Contractor tests used if independently verified**
- ❑ **Split samples should not be used for verification**
- ❑ **Single test to test comparison is not recommended**
- ❑ **Moving averages are not recommended**
- ❑ **PWL recommended for determining pay**



What it Means to Illinois

- ❑ **IL currently not meeting code for independent sampling & testing.**
- ❑ **Much of Illinois QC/QA program is recommended against**
 - ❑ **test to test comparisons**
 - ❑ **moving average**
- ❑ **Opportunity to address QC/QA complaints**



Now What?

- ❑ **Initial Survey revealed 14 States also rely on Contractor Results for Acceptance**
- ❑ **I.D.O.T sent a more detailed Survey – No Help!**
- ❑ **Extent of Illinois' compliance has yet to be determined.**

ERS Update



Projects to Date

- **33 Projects completed since 2000**
 - **46 Mixtures**
- **More slated for 2005**
- **No disincentives given to date**

Average Pay Since Disincentive (Using 2004 Specification)

AC	102.1
Voids	101.8
In-Place Density	100.5
Combined Pay	101.3

Currently

- **Usage District Option**
 - **D1 SMA Project for 2005**
 - **D9 No projects to date**
- **BMPR Still Involved**

Potential Spec. Changes

- **Parameter weight adjustment?**
- **Increase binder PWL LL?**
- **Expansion to smaller projects**
- **Plate samples**
- **Clean up wording/clarity**

Future

- **TA Outcome**

- **Meets many of TA recommendations**

- **IDOT and Industry Expansion Efforts**

Expansion Effort Goals

- ❑ **Reward the better contractor**
- ❑ **Increase quality**
- ❑ **Lower costs by eliminating unnecessary method specs.**

While....

- ❑ **Not delaying the traveling public**
- ❑ **Not overburdening testing staff**

What's the next step???

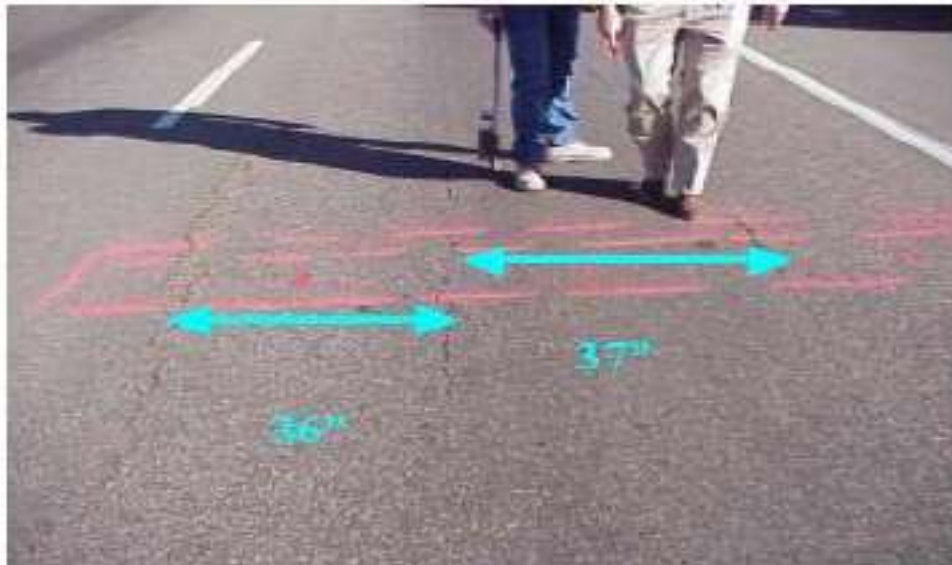
- ▣ **Discussions with IDOT and Industry**



Paver Anti-Segregation Kit Specifications

Background

- **Illinois discovered paver induced Segregation/Cracking in 1993 Crack Investigation of I-72 & I-155**
- **CO & other States began seeing same phenomenon**
- **CO recently developed Spec requiring pavers to have Anti-Segregation Kits installed**





US 36 36-26 EB Station 447+71 Contract-92231 06/16/95

US 36/I-72 4 Yrs. Old

Barber Green BG-265 Full Width Screed

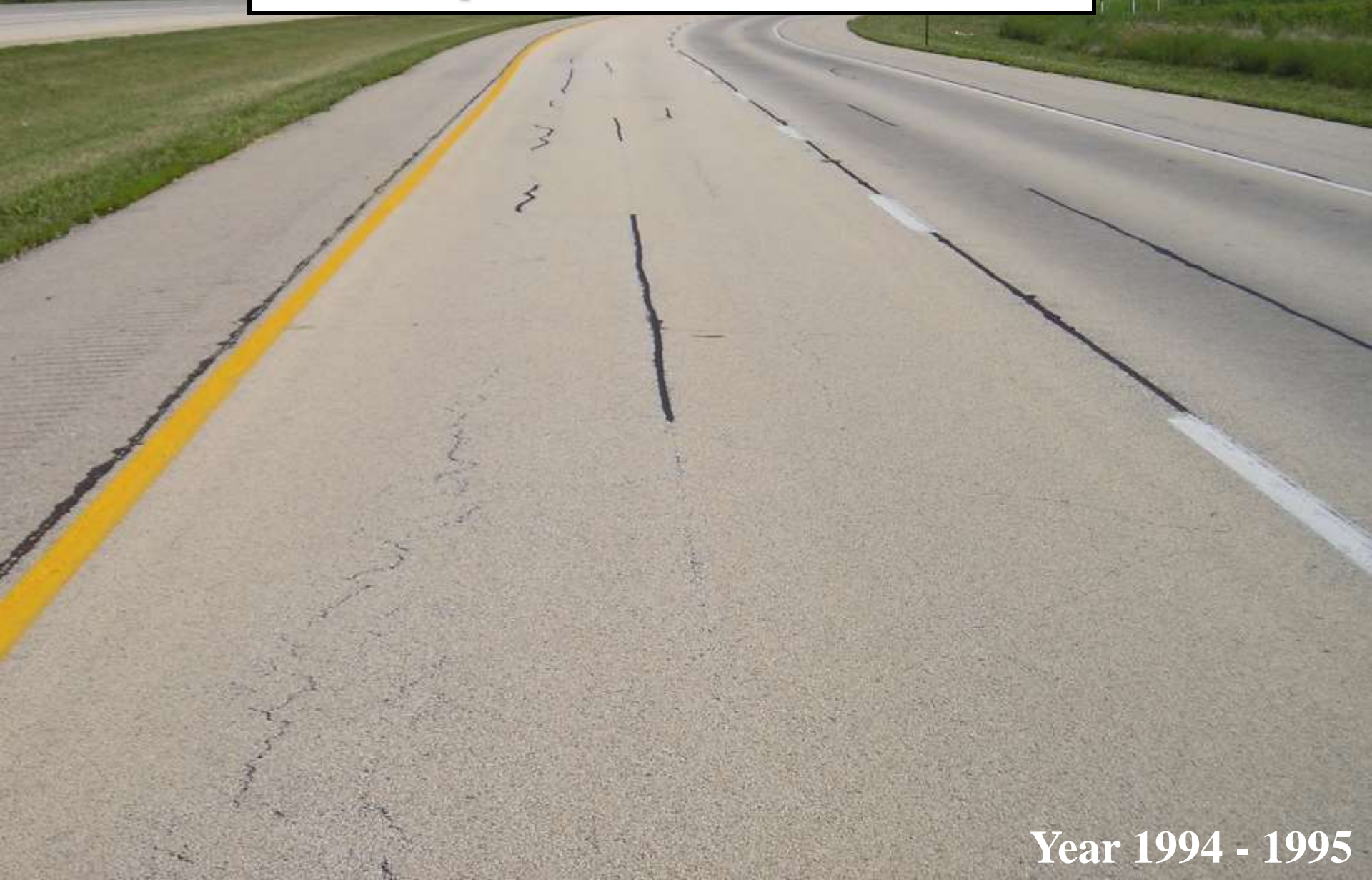
A photograph of a multi-lane asphalt highway, likely Veterans Parkway in Illinois. The road shows significant longitudinal cracking, with several deep, irregular cracks running parallel to the direction of travel. The road is paved with asphalt and has white dashed lane markings. A metal guardrail is visible on the left side of the road. In the background, there are trees and a clear sky. A white box with a black border is overlaid on the right side of the image, containing text.

IL 4 / Veterans parkway

Paved: 1997

Crack Sealed: 1999

**US 51 Near Elwin
Cedar Rapids 620 w/ ROADTEC SB2500**



Year 1994 - 1995

Discussion with Industry

- **Reps from each of following manufacturers:**
 - **Blaw Knox**
 - **Caterpillar / Barber Green**
 - **Cedarapids**
 - **Vogelle' / Champion**
 - **RoadTec**
- **One Contractor / User of each Brand**
- **Several District Reps**

Outcome

- **Identified need for education.**
 - **Manufacturers to put together training.**
- **IDOT Spec requiring Anti-Segregation Kits be installed when factory kit available**
- **Paver Manufacturers to provide a check sheet for Contractor & RE to fill out prior to paving**

New Specification

- **New Special Provision will be inserted in all HMA Contracts beginning with January 21, 2005 Letting, which Requires:**
 - **Paver Manufacturer's Anti-Segregation Kits be installed if available**
 - **Contractor submit written Cert. kit has been installed as viable & operational**
 - **Contractor/RE paver inspection prior to paving using Manufacturer Checklist**
 - **Completed Checklist be provided to RE**



Anti-Segregation Devices Inspection Sheet

Vögele America, Inc.
1445 Sheffler Drive
Chambersburg, PA 17201
ph# (717) 264-3200
fax# (717) 264-5047

Inspector's Name: _____ Inspection Date: _____

Paver Information

Tractor Hours: _____
Tractor Model #: _____
Tractor s/n: _____
Screed Model #: _____
Screed s/n: _____

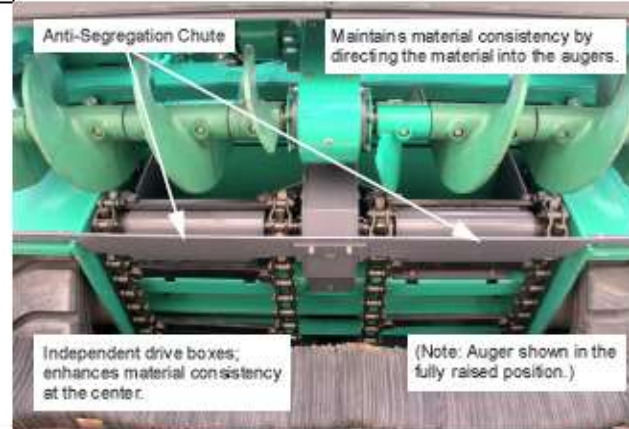
Owner Information

Company Name: _____
Address: _____
City: _____
State: _____
Zip: _____

Check the boxes as marked: Pass Repair

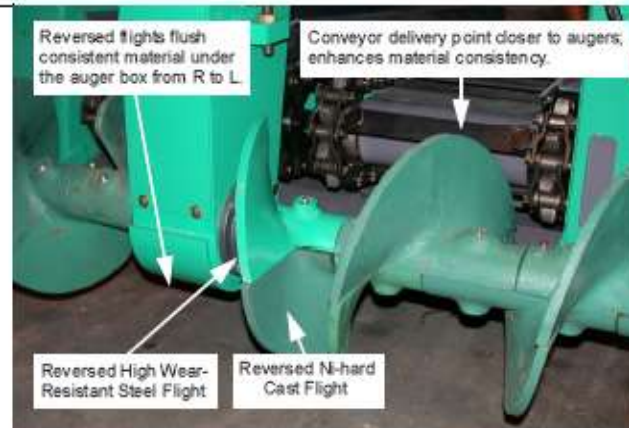
Anti-Segregation Chute

- Ensure the anti-segregation chute is securely mounted to the paver's main-frame at the rear of the conveyor tunnels.
- Replace chute if it is worn or damaged.



Reversed Quarter Auger Flights

- Ensure there are two quarter reversed auger flights (one steel and one cast) mounted immediately to the right of the auger box.
- Replace auger flight if it is worn to a "knife edge" or if it is broken.



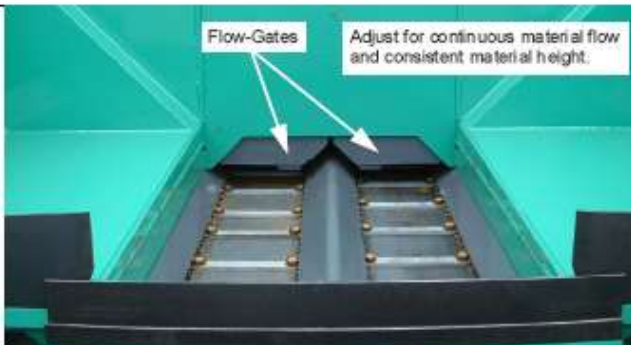
Adjustable Height Auger Assembly

- Ensure the auger raise/lower function operates properly. (The auger raise/lower switch is located at the operator's console.)



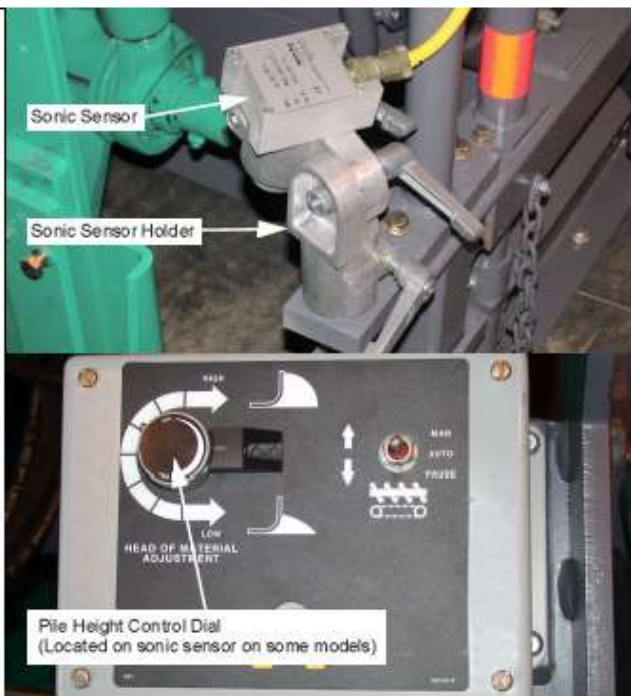
Flow-Gates

- Ensure the left and right flow-gates, which are located at the rear of the hopper, operate properly. (Flow-gate level scale indicators are located at the front of the engine cowling.) (Flow-gate switches are located at the operator's console and the screed control box.)



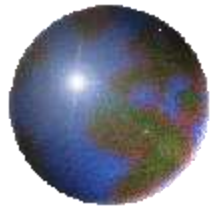
Automatic Proportional Feeder Control System

- Ensure the sonic sensor is in its proper holder and can be easily adjusted and securely mounted.
- Ensure the left and right feeder control systems operate properly.
 - Place screed on ground.
 - Aim sonic sensor eye between the augers and the fender at an angle of 15° away from the end-gate.
 - Place parking brake switch in the On (down) position.
 - Place stop/resume switch in the RESUME (up) position.
 - Place travel control handle in the F (forward) position.
 - Turn pile height control dial fully counter-clockwise (minimum).
 - Position all three left or right feeder switches to the AUTO position.
 - Slowly turn the pile height control dial clockwise; the auger speed should proportionately increase from minimum to maximum as the dial is fully turned clockwise, and vice-versa.



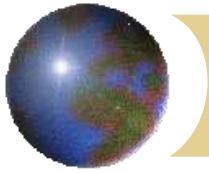
Better Communication

- **Manufacturers**
- **Equipment Suppliers**
- **Contractors**
- **Resident Engineers**



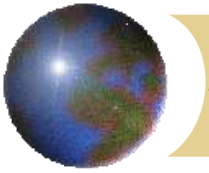
Subcontractor Issues

Commitment of Administration

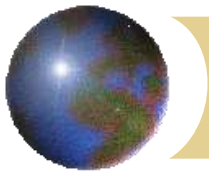


✦ Race neutral initiatives

✦ Increase capacity



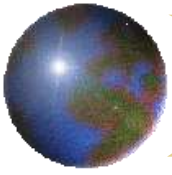
- ❖ **Subcontractor Mobilization**
- ❖ **Prequalification rule changes**
- ❖ **Retention of subcontractor bid records**
- ❖ **Complaint form**



✚ **The bar is raised**

✚ **Your effort has to raise**

✚ **Waivers still exist**



Either we address
or
legislators will

Tollway

Specification

Harmonization



Tollway Initiative

- ***IDOT specs/standards***
- ***2007 spec book***
- ***Small supplemental spec book***



Web Based MISTIC

- ***Input***
- ***Updated CARE-AC***
- ***PCC & Aggregate also***



Also Include

- ***Standards***
- ***Specs***
- ***Bid items***
- ***Approved lists***



E Bidding

Electronic Bidding



Issues


- *Format*
- *Cost*
- *Optional???*
- *Security*
- *Volume*



Goal

- *Tollway Compatible*
- *Adds Value*
- *No Problems*
- *Demo 2005*





***Scope
Schedule
Budget***

Scope

- ***No scope creep***
- ***Plain projects***
- ***Down scope***

Schedule

- ***Projects to letting***
- ***Projects completed***

Budget

Program \$\$

=

Construction \$\$



Railroad Insurance Issues

Starting Dialogue

- ***Major Railroads***
- ***Master Agreements***
- ***Umbrella Insurance***

[***Goal***]

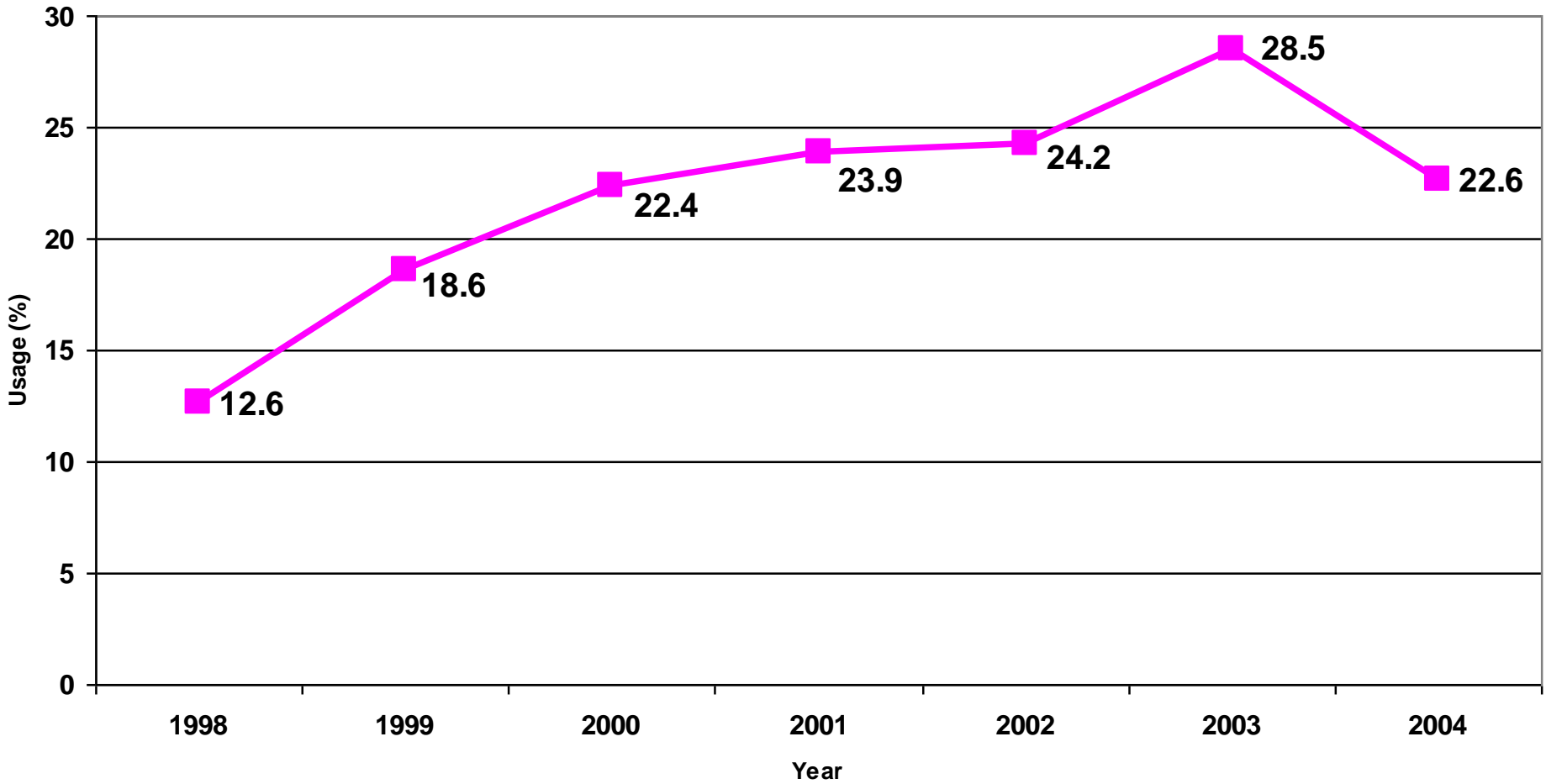
- ***Insurance Pre-Approval***
- ***Minimize Delays***
- ***Insurance Policy with IDOT***

When?

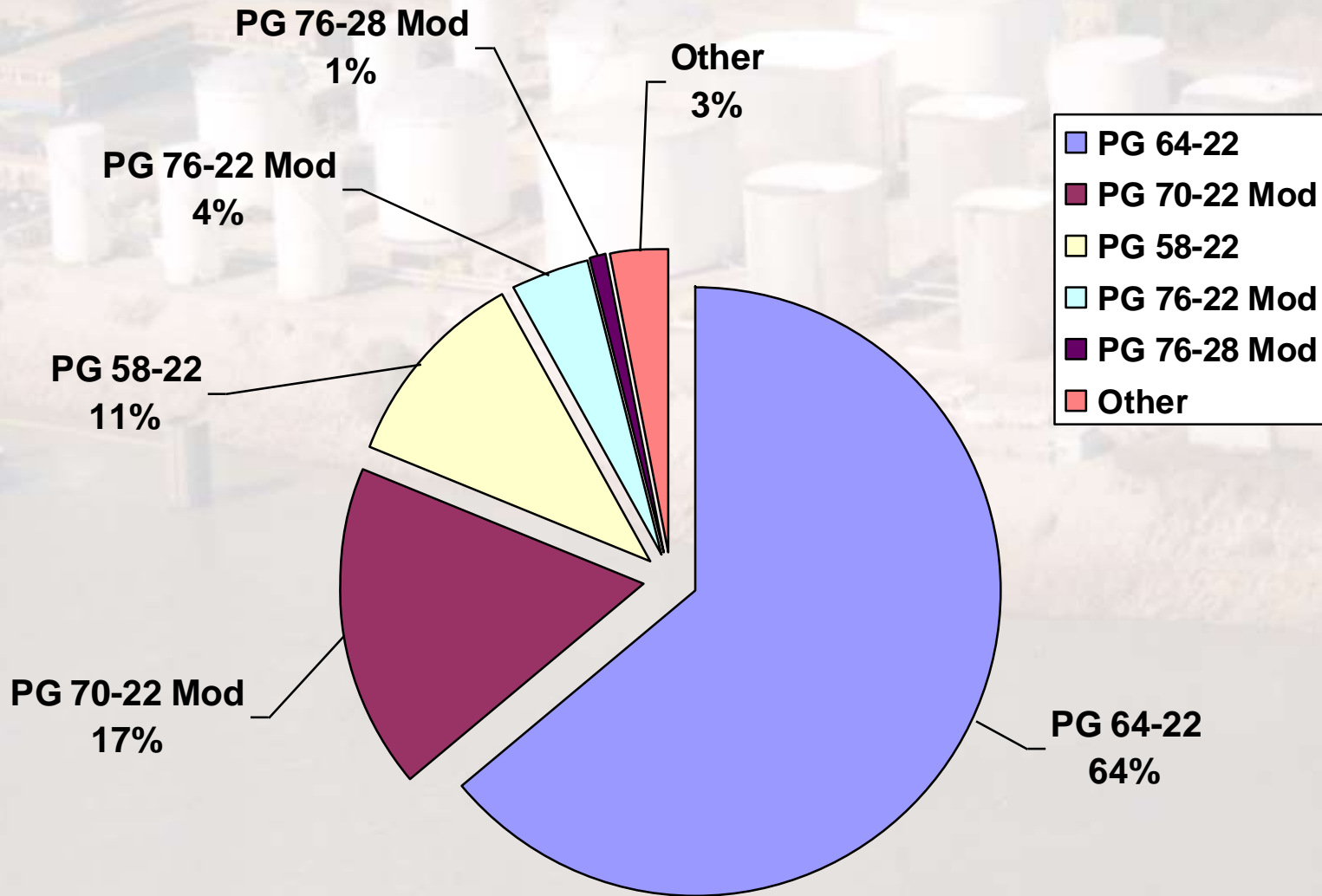
- ***Work in progress***
- ***2006 Projects ?***

Asphalt Binder Update

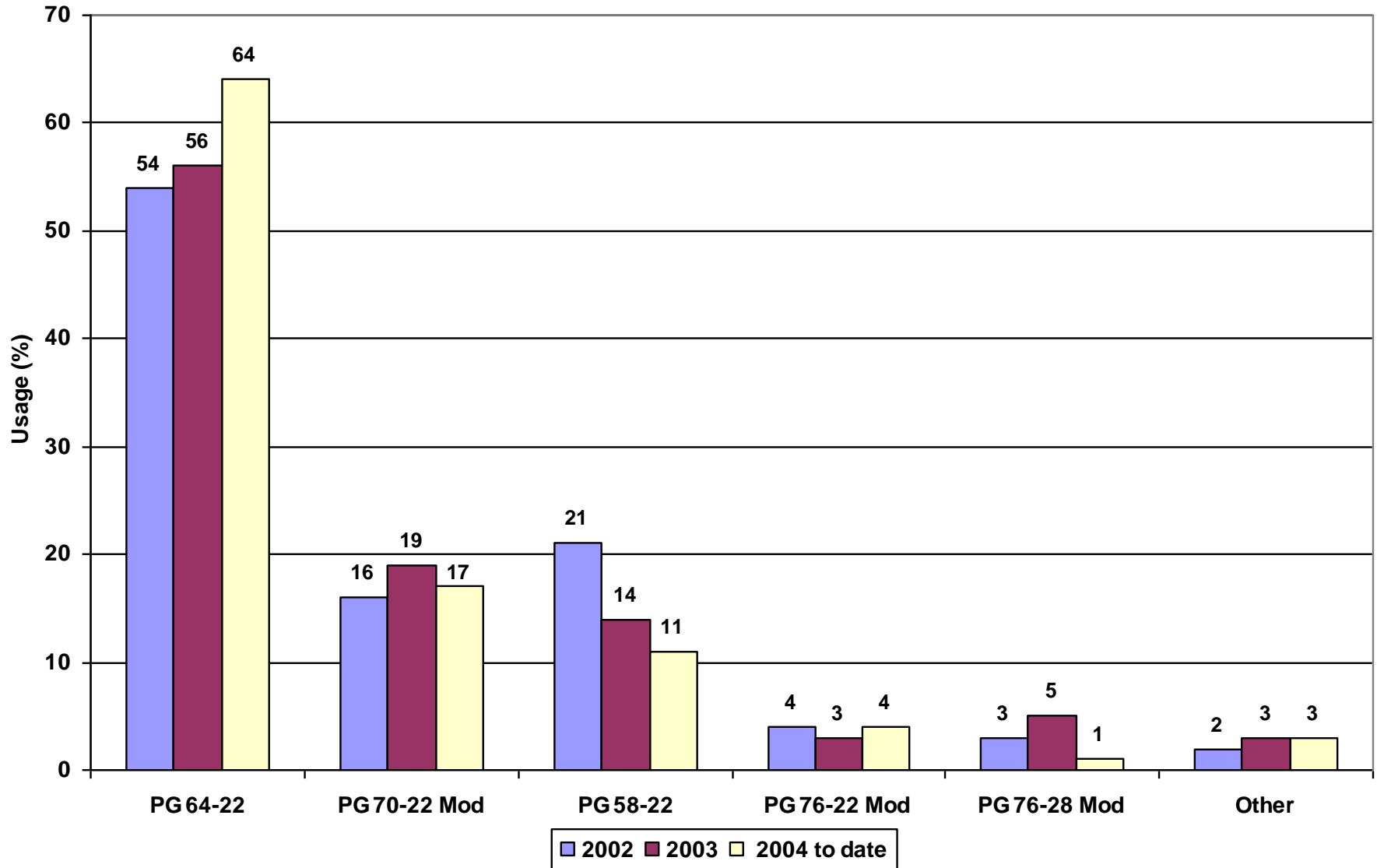
Polymer Modified Binder Usage



Grades Used (2004 to Date)



2002, 2003, & 2004 Grade Usage





**2004
Perpetual
Pavement
Award**



Asphalt Pavement Alliance Honor Outstanding HMA Design / Construction



- **Long life HMA**
- **Excellence in design**
- **Quality of construction**
- **Value to public**



Criteria



- ≥ 35 yrs.
- Rehab $\leq 4''$ OL
- OL intervals ≥ 13 yrs.



Illinois Award



- **I- 180**
- **2 miles**
- **1969**
- **15” HMA**
- **Granular Subbase**



Rehabs



- **No FD patching**
- **1987 1"mill / 1.5" OL**
- **2001 2" OL**

Shows concept Works



35 yr. old pavement

Marshall Mixtures

Old Construction Techniques

What Next ???



- **Use it!**
 - **Fatigue design**
 - **Final x-sect**
 - **\$ for projects**

Thank You

