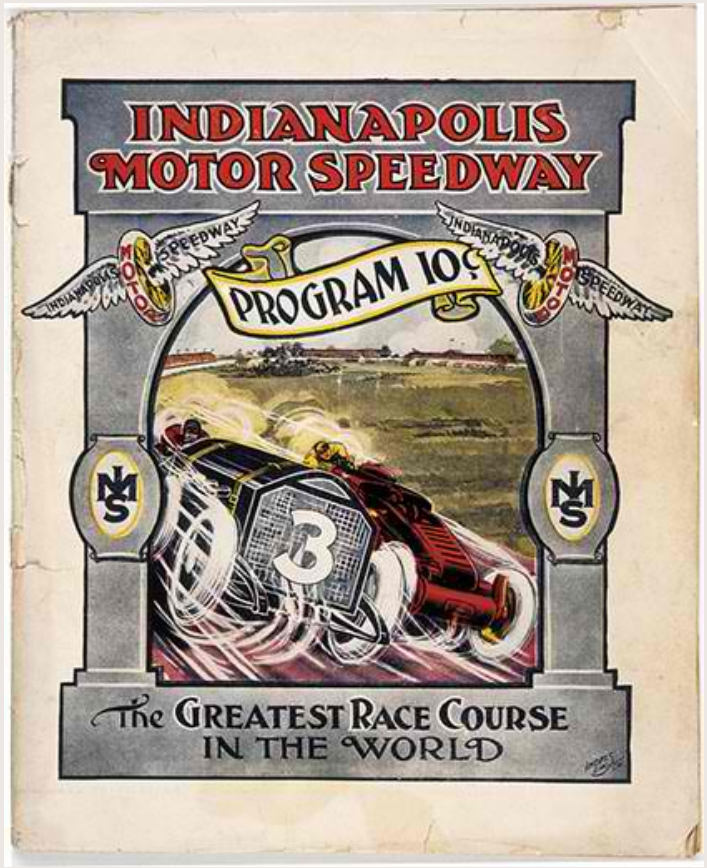
A ***History*** of ***Paving*** at the ***Indianapolis Motor Speedway***

1st Indy 500 – May 30, 1911

Asphalt – The *KyRock* Years…

- **1936** – Asphalt patches applied to portions of turns
- **1937** – All <u>turns</u> completely paved with "Ky Rock"
- **1938** – Short chutes paved
- **1939** – Back stretch paved, but ~1900' of front stretch <u>still brick</u>



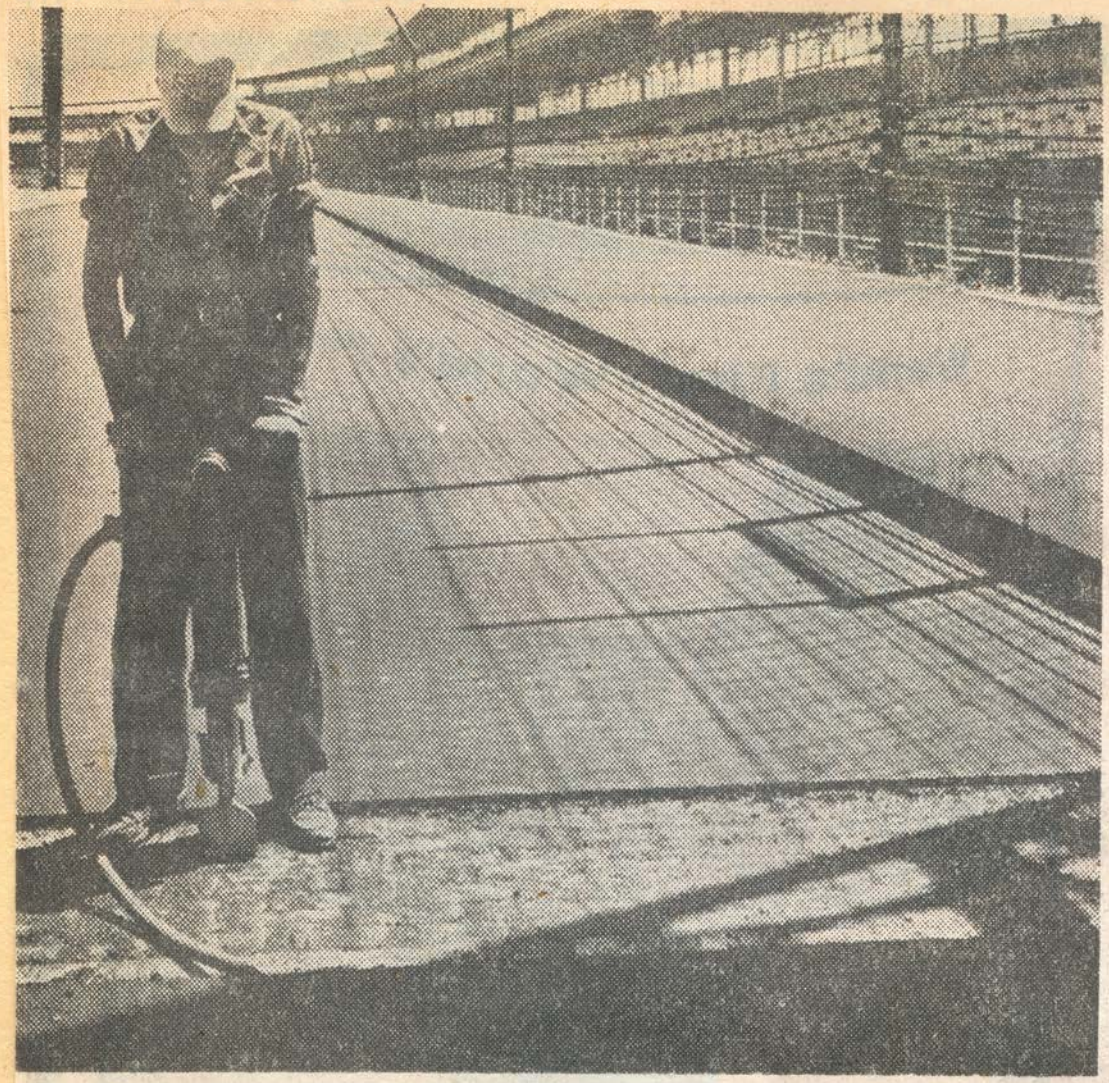
Asphalt – Early *Resurfacing*…

- **1955** – All existing asphalt portions resurfaced
- **1961** – Remaining bricks covered on Front stretch
- **1964** – Back stretch and Turn 3 resurfaced
- **1969** – Front stretch and Turns 1, 2 and 4 resurfaced

1976

- **1st Complete Resurfacing**
- $175,000
- Cracks sealed with AE-150 & sand
- 1/2” Leveling course ~2400 tons
- 1” ACBF Slag Surface course with AP-5 (60-70 Pen) ~4400 tons

THURSDAY, JULY 15, 1976

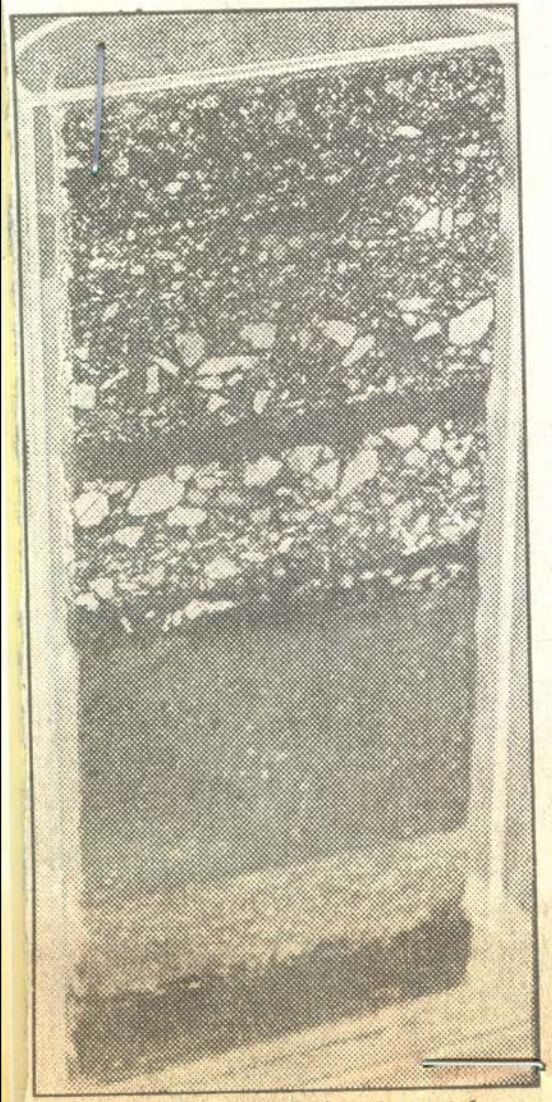


'NEW' ROW OF BRICKS — The original three rows of bricks at the start-finish line of the Indianapolis Motor Speedway were dug up and replaced yesterday as the final touch of a $175,000 resurfacing project for the 2½-mile track. More than 700 bricks were dug up by John Moore of the IMS staff and about half of them had to be replaced from the dwindling supply of original bricks from 1911. (Star Photo by Greg Griffo)

1988

- **2nd Complete Resurfacing**
- Pits also paved
- Extensive treatment of cracks on oval
- 1/2” to 3/4” Leveling course
- 1” ACBF Slag Surface course
  - 9.5% AC 20
  - 50 Blow Marshall

Paving: 10,500 tons of material used in '88



Core section of track surface
Trinidad tar is first layer

● Continued from A-1

Slag also is used on state highways and interstates, though it isn't common on city streets or parking lots, he said.

"The main selling feature is the skid resistance," Scheper said.

About 10,500 tons of material were used in the 1988 paving, including the paving of the pit area, he said.

That partially includes the yard of bricks.

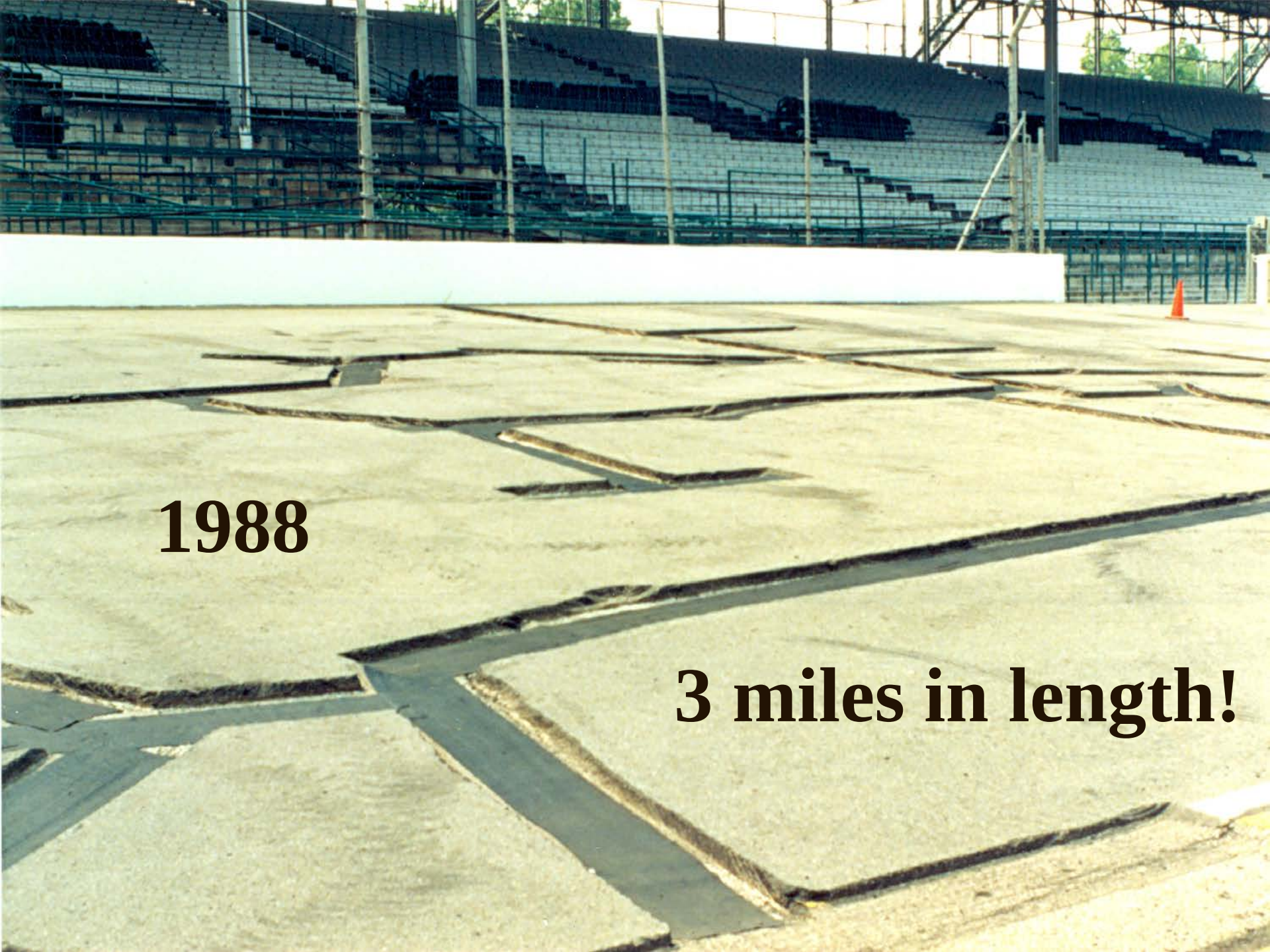
Bricks removed

So the cars wouldn't fall into a ditch each time they passed the start-finish line, the contractors had to remove the bricks and replace them later.

"The bricks were removed, we put stone to bring it up to the elevation of the old asphalt, and paved over and marked it. Then it was saw-cut and removed and the bricks put back" by Speedway employees, Scheper said.

Track superintendent Thompson said, "It's smooth."

1988


1988
3 miles in length!

1988

1995

3rd Complete Resurfacing

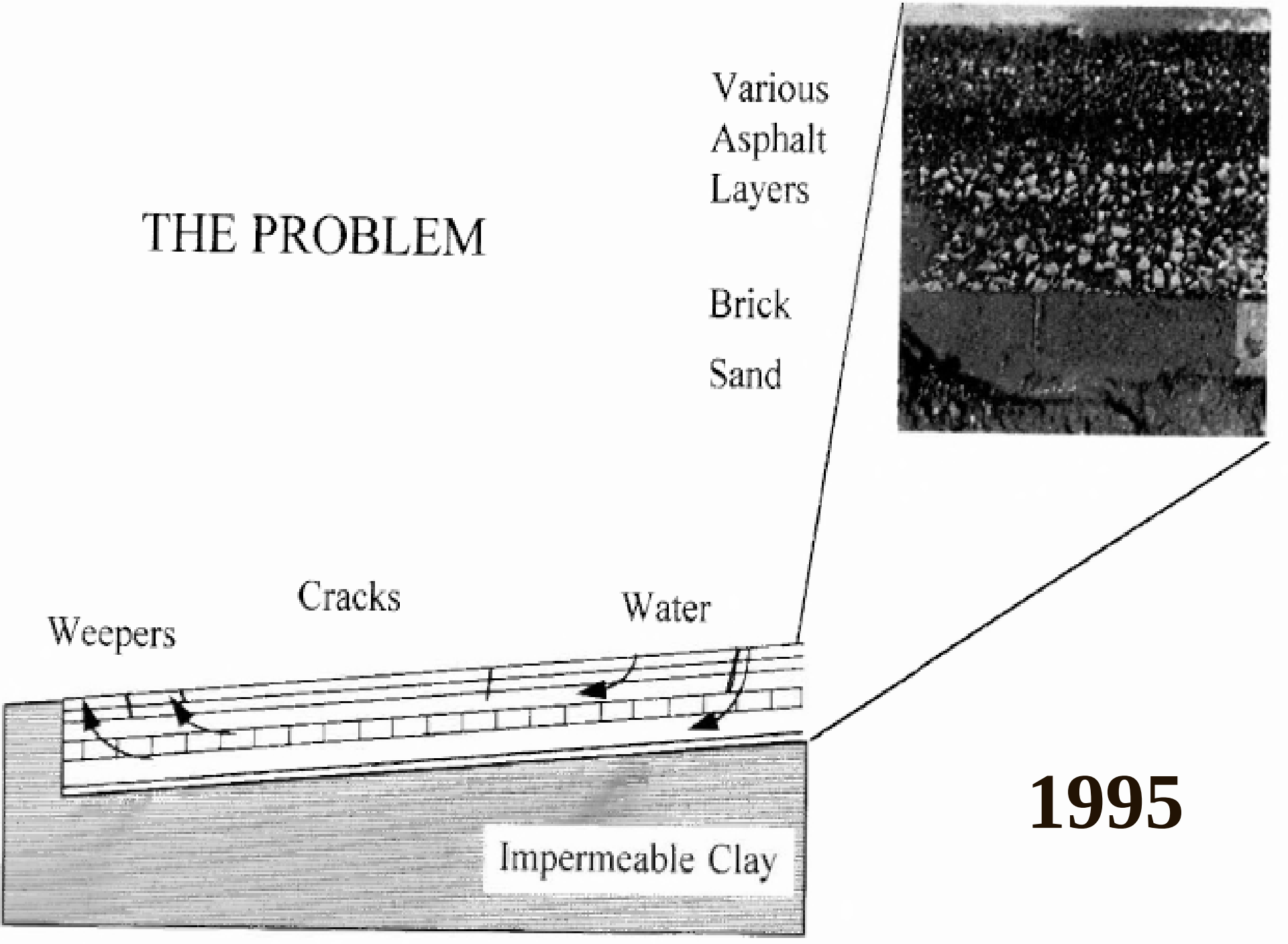
1st Time Entire Oval Was Milled

Construction Digest
West Edition
November 13, 1995

Serving Ohio, Kentucky, Indiana, Illinois, and E. Missouri

SMOOTHING THE RIDE TO VICTORY LANE

THE PROBLEM



1995

New High Friction Surface

Open Grade Drainage Mixture

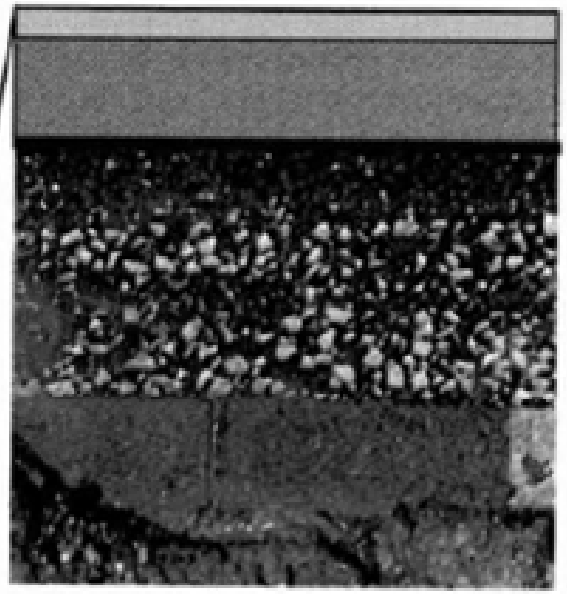
Polymer Seal

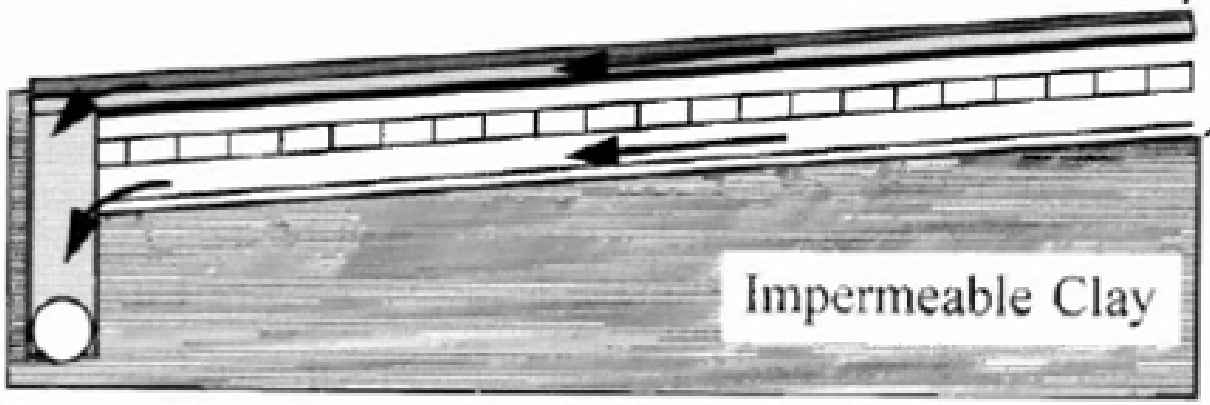
THE SOLUTION

Remaining Asphalt

Brick

Sand





Tile Drain

1995


1995

1995 – 3” Milled

1995 – 2” of OGDL

1995 – 1” ACBF Slag Surface with PG 64-34


1996


1996

1996

At end of the race!

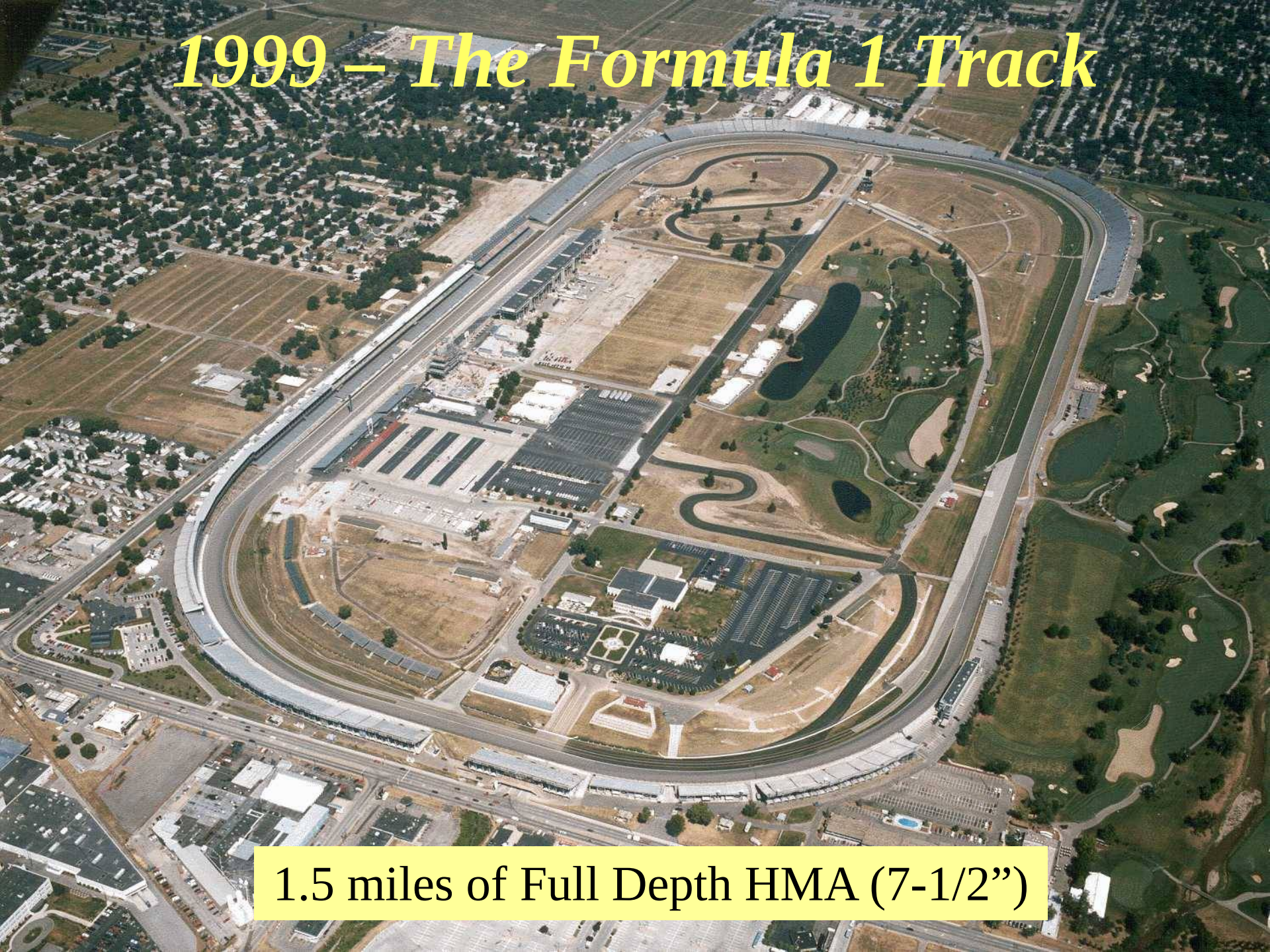
1996 – SMA (82-22)

July 19th, 1997 – Race on Aug 2nd!

PG 100-4 Placed at ~ 450F


1997
Modified
OGDL


Cedarapids
Greyhound
1997
PG 88-10
400F
9 15 9


1999 – The Formula 1 Track
1.5 miles of Full Depth HMA (7-1/2”)

1999 – 3” of Base Course (PG 64-22)

1999 – Longitudinal Under Drains

1999 – 3” of OGDL (PG 82-16)

1999 – 1.5” Surface (PG 88-10)

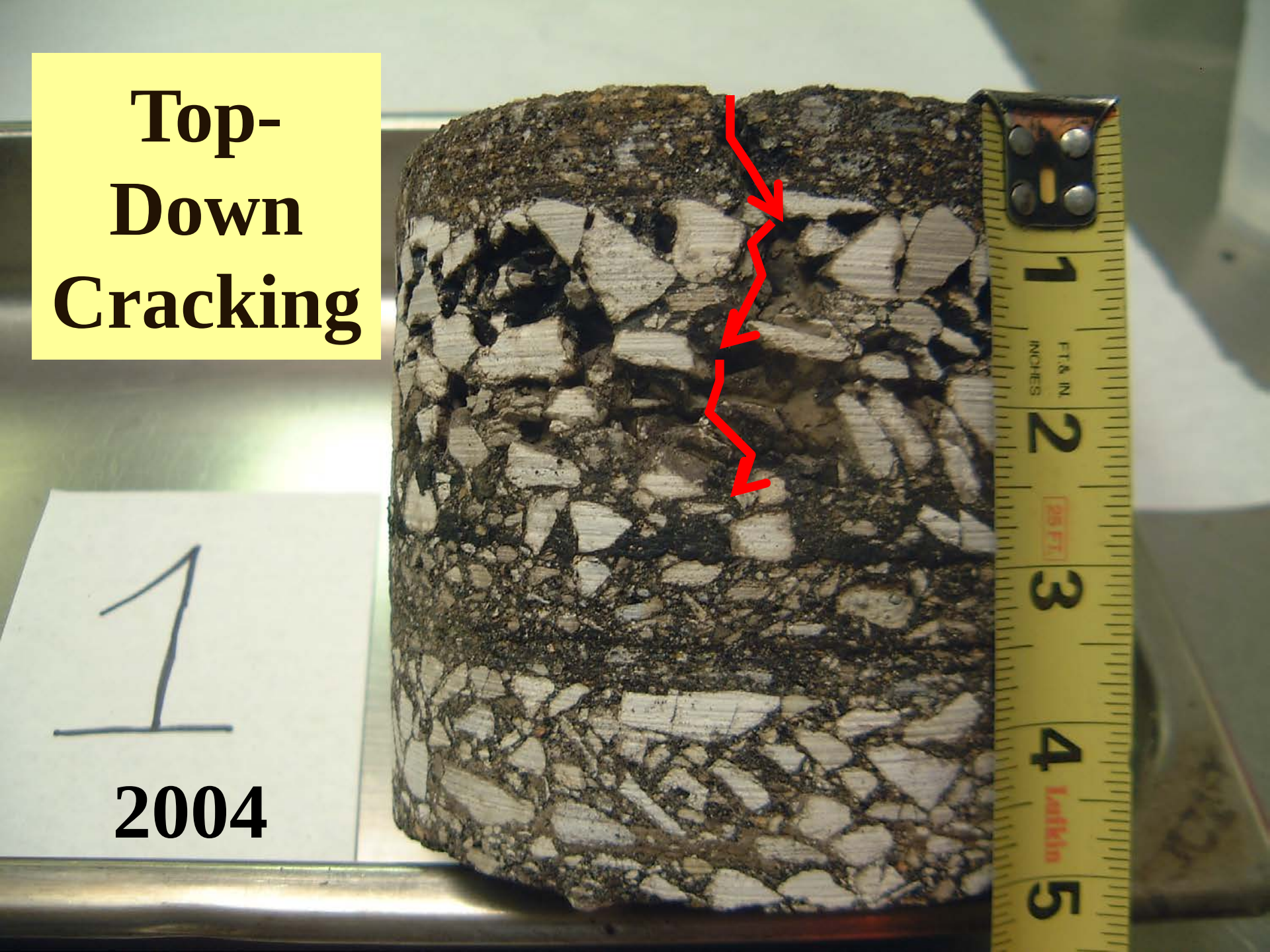
9.5mm C-G ACBF Slag

2004 Main Oval, Pits and Warm-up Lanes

(4th Complete Resurfacing)


2004
Existing Cracks…

Top-Down Cracking



2004

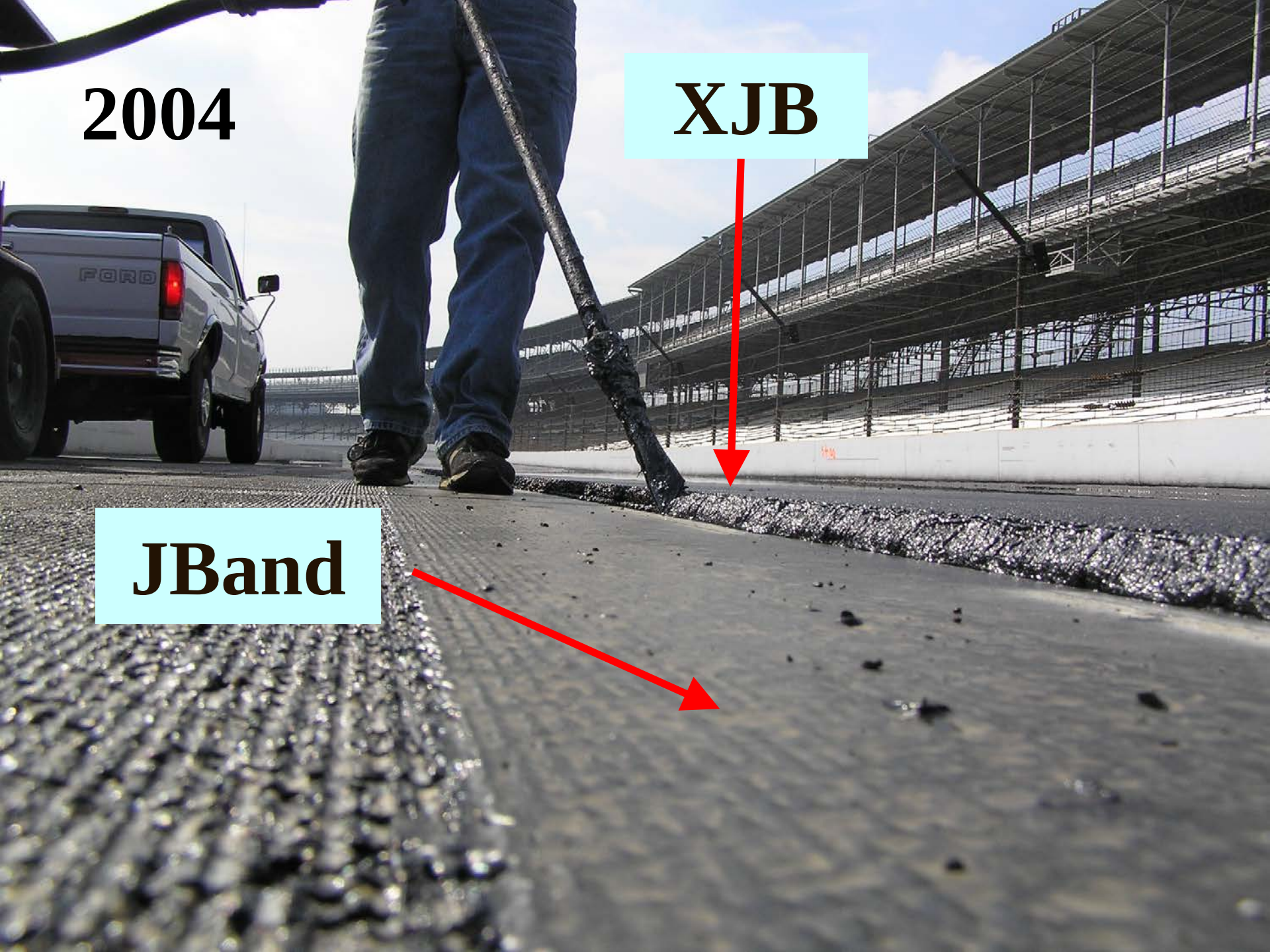
SAMI Application


2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
1st Lift – 1.5” Dolomite SMA (PG 76-28)

2004

IRL Smoothness Test
(prior to placing surface)


2004
2nd Lift – 1” Steel Slag SMA (PG 76-28)


2004
XJB
JBand
FORD

2007 Chicane

2007 – New Turns on Road Course

2007 – 3.5” of Base Course

2007 – 1.5” of Intermediate

2007 – 1” of SS SMA

2011 – MotoGP Rehabilitation

2011

1” Milling

2011 – Milled Surface

2011 – *Watering* Milled Surface

2011 – *Brooming* Excess Water

2011 – Polymer Modified Tack

2011 – 3rd and Final Day

9.5mm F-G Dolomite Surface (PG 82-22)

2011 – 1st Use of RAP in Surface


2011


2011

What Have We *Learned*?

- Investigate distress issues ***thoroughly***
- Mix shear strength is ***very important***
- ***Avoid*** highly absorptive aggregates
- Strive for mix ***impermeability***
- Use ***highly*** modified AC's & emulsions
- ***Master*** best practices (prod & paving)
- Have ***backup*** equipment
- ***Pray*…a lot!** ☺

Thank You!

June 17, 2011