

Techniques that worked

Set Goals

Employee Reward Incentive...

20% of the total bonus earned for that year given back in the form of a gift card!



Techniques that worked

- Set Goals
- Plan & Identify Potential Problems



Revised Plan Pavement **Pavement** Structure Structure 1.5" - 9.5mm Wearing 1.5" - 9.5mm Wearing 1" - 9.5mm Scratch 2" – 19mm Binder Variable Depth Variable Depth 19mm Binder 9.5mm Scratch



Project Milestones SR 79 Kirwan Heights

- 2 year project
- Northbound in 2005
- Southbound in 2006
- Major work activities
 - Rehabilitate/Reconstruct mainline bridge structure
 - Crack and seat existing pavement
 - Place approximately 379,000 tons of asphalt

Reconstruct Pavement Structure 1.5" - 9.5mm Wearing	Crack & Seat Pavement Structure	Revised Crack & Seat Pavement Structure
2.5" – 19mm Binder	1.5" – 9.5mm Wearing	1.5" – 9.5mm Wearing
	2.5" – 19mm Binder	2.5" – 19mm Binder
		4" – 25mm Base
17" – 37.5mm Base	14" – 37.5mm Base	10" – 37.5mm Base



Project Milestones SR 79 Mt. Nebo

- 2 year project
- Northbound in 2007
- Southbound in 2008
- Major work activities
 - Rehabilitate mainline bridge structure
 - Crack and seat existing pavement
 - Place approximately 150,000 tons of asphalt
 - Misc. drainage and highway lighting upgrades



1.5" - 9.5mm Wearing

2.5" - 19mm Binder

4" - 25mm Base

4.5" – Minimum Variable
Depth 37.5mm Base

5" - 37.5mm Base

1.5" - 9.5mm Wearing

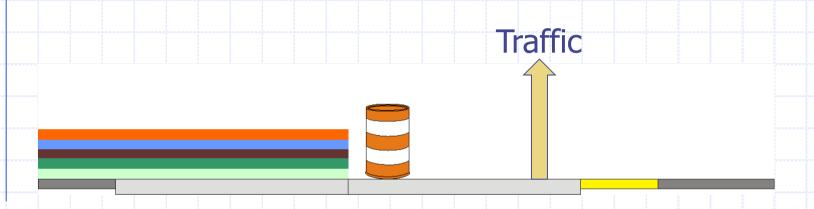
2.5" - 19mm Binder

4" - 25mm Base

5" - 37.5mm Base

4.5" – Minimum Variable
Depth 37.5mm Base

Original Construction Phasing

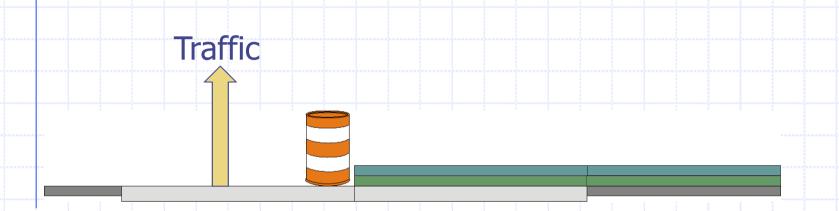


- 1. 5" Depth 37.5mm Base
- 2. Variable Depth 37.5mm Base
- 3. 4" Depth 25mm Base
- 4. 2.5" Depth 19mm Binder
- 5. 1.5" Depth 9.5mm Wearing

Problems with Planned Traffic Control and Phasing

- Traffic exposed to an 18" drop-off
- If each lift were to be stepped there would be insufficient room to carry traffic
- Less than ideal joint construction
- Compromised ride quality

Paving Sequence Right Travel Lane and 10' Shoulder



- 1. Variable Depth 37.5mm Base Travel Lane
- 2. Variable Depth 37.5mm Base 10' Shoulder
- 3. 5" Depth 37.5mm Base 10' Shoulder
- 4. 5" Depth 37.5mm Base Travel Lane

Paving Sequence Right Travel Lane and 10' Shoulder



- 1. Variable Depth 37.5mm Base
- 2. 5" Depth 37.5mm Base

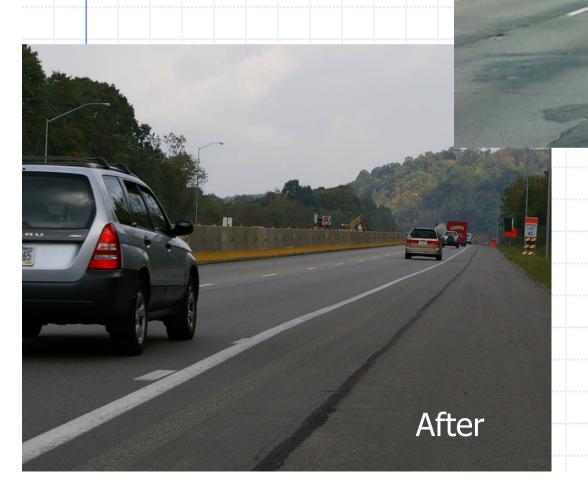




Techniques that worked

- Set Goals
- Plan & Identify Potential Problems
- Involved everyone in process owners, QC, mechanics, paving crews, and plants
- Training for crews
- Shoulder first method
- Systematic adjustments
- Employee incentive
- Plan, Execute, Evaluate, and Repeat





Before

Key Factors for Award Winning Quality Control!

- Plant Quality Control
 - Good Aggregate Source
 - Consistency of mix Design
 - Innovations at the plant
 - Communication
 - Well Trained Technicians

Key Factors for Award Winning Quality Control!

- Field Quality Control
 - Planning
 - The Right personnel
 - The Right Equipment
 - Good Field Technician
 - Joint Construction

The Right Equipment...



1. The Paver...

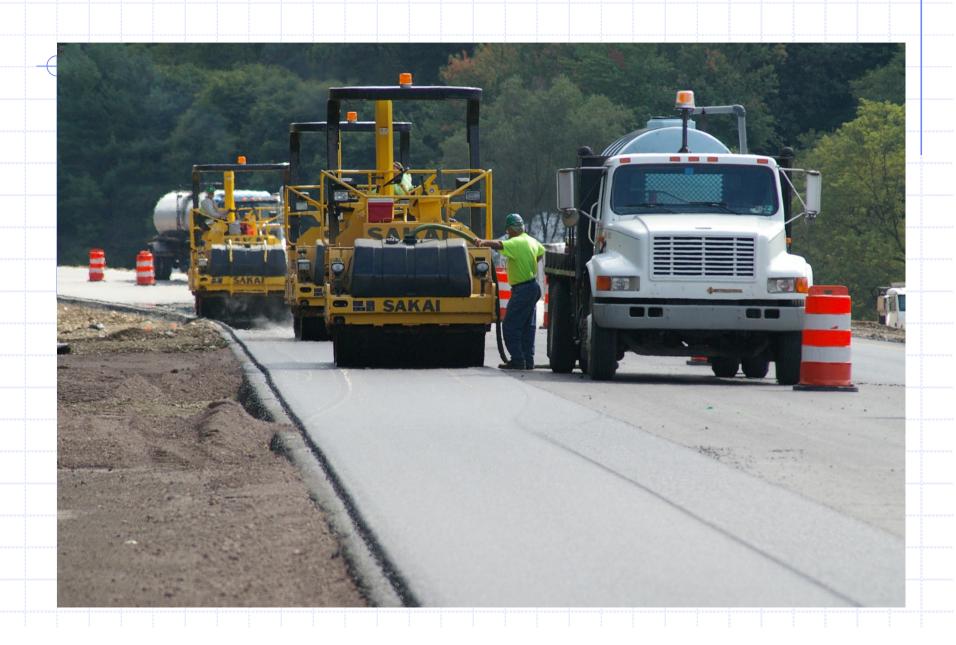




2. The Material Transfer Vehicle...



3. The rollers...



Good Field Technician



Project Core Density Results

S.R. 79 SECTION 35M- NEVILLE ISLAND PROJECT

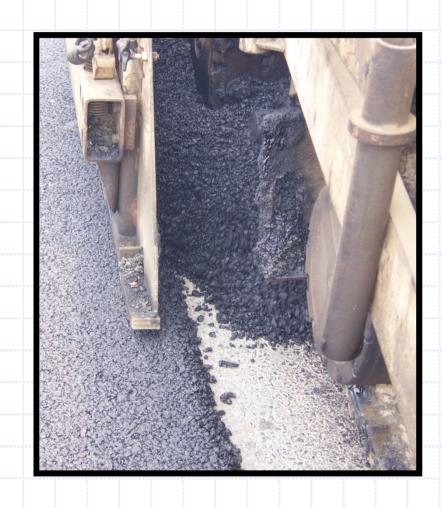
- ■58 Wearing Cores @ 94.2% of Theoretical
- •72 Binder Cores @ 93.9% of Theoretical
- 427 Base Cores @ 93.9% of Theoretical
- For a Grand Total of 557 Cores
- 0 FAILURES

S.R. 79 SECTION A12- KIRWIN HEIGHTS PROJECT

- •69 Wearing Cores @ 94.4% of Theoretical
- ■797 Binder Cores @ 94.1% of Theoretical
- ■584 Base Cores @ 93.9% of Theoretical
- •For a Grand Total of 750 Cores
- 0 FAILURES

Joint Construction

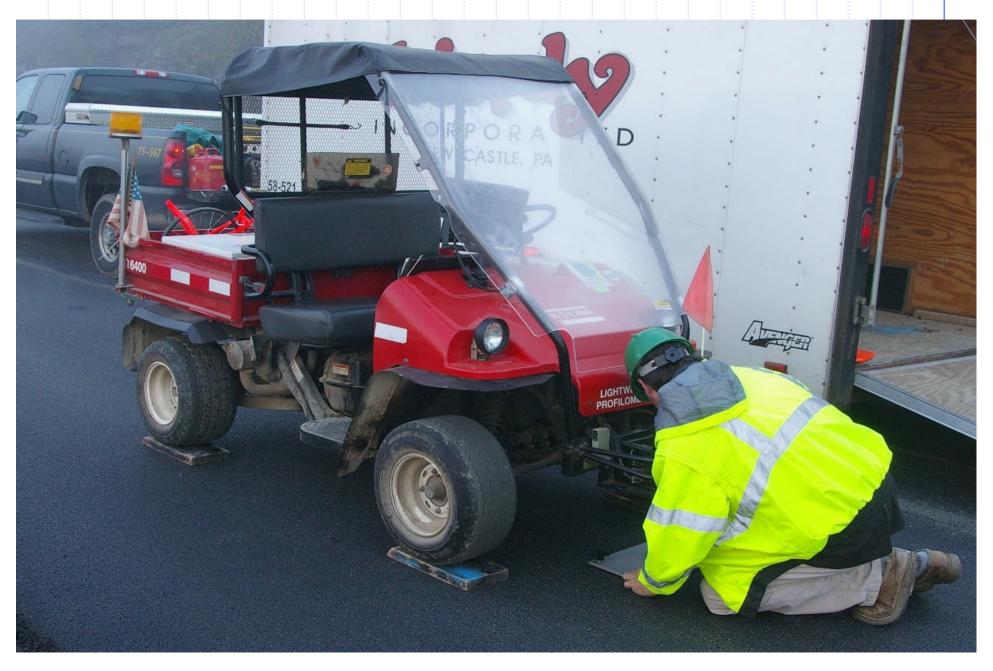
A key to constructing quality, durable joints is consistently getting the proper amount of overlap of the hot mat over the cold mat at the joint. Operate the paver so that the edger plate on the screed overlaps the previously placed pavement by 1 to 1 1/2 inches.



Techniques for achieving a high quality ride...

- The Right Paving Equipment
- Well Trained Ride Technician
- "Real time" numbers
- Communication
- Construction Techniques
- **EMPLOYEE REWARD INSENTIVE!!**

Well Trained Ride Technician



"Real Time Numbers"

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PROJECT	}] }				1 3	SR79-35N
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	^	PASSING			TRAVEL		
***********		AVG.	R	!	AVG.	R	
WEARING	27.5	28.0	28.5	26.1	27.1	28.0	
BINDER	35.5	37.1	38.6	36.1	37.9	39.7	
25MM	73.6	73.0	72.4	64.9	69.7	74.4	
37.5 3RD LIFT	100.5	97.3	94.0	90.8	88.9	86.9	
37.5 2ND LIFT	167.9	166.8	165.6	164.8	165.2	165.6	
37.5 FIRST LIFT	A. L						5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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	Total	Bonus	Earned	\$ 55,9	20.43 (91%)	
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Ride Bonus Project Totals



PROJECT	AVG. IRI	BONUS	%
SR79 35M	28.4	\$117,838	91%
SR79 A12	35.6	\$124,971	79%

 Construction Techniques – Pave the 10' Shoulder First



 Construction techniques – thinner lifts closer to the surface.



Employee Reward Incentive...

20% of the total bonus earned for that year given back in the form of a gift card!



Lindy's Best Ride Experience

Since 1998, We had 38 Ride Spec Jobs

Best Projects

- SR 79-A08: Neville Island: 26.9 in/mile
- ◆SR 79-35M¹: Mt Nebo: 28.4 in/mile
- SR 28-A32: Aspinwall: 31.6 in/mile
- *All PennDot District 11

¹Won The Sheldon G Hayes award in 2009

Questions or Comments?

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