Approved: April 3, 2002
Date

MINUTES OF THE HOUSE TRANSPORTATION.

The meeting was called to order by Chairperson Gary Hayzlett at 2:00 p.m. on March 25 , 2002 in Room 519-S of the Capitol.

All members were present except:
Representative Beggs, excused
Representative Dillmore, excused
Representative Dreher, excused
Representative Howell, excused
Representative Powell, excused
Representative Powers, excused

Committee staff present:
Bruce Kinzie, Office of the Revisor
Hank Avila, Legislative Research Department
Ellie Luthye, Committee Secretary

Conferees appearing before the committee:
Dean Carlson, Secretary of Transportation

Others attending:
See attached sheet

Chairman Hayzlett called on Secretary Dean Carlson who gave a presentation on Asphalt vs Concrete. He presented the committee with a packet that contained information, graphs and statistics regarding the types of paving material that is being used for highway construction and compared the cost of each. He also compared the AASHTO pavement design guide with the Cross report that had been used in testimony by the asphalt industry in their previous testimony. He concluded that KDOT needs to strike a balance between competing industries to keep prices of paving materials competitive and their goal was to sustain an adequate highway system and at the same time provide a competitive environment in the paving industry. (Attachment 1)

Chairman Hayzlett adjourned the meeting at 3:00 p.m. The next meeting of the House Transportation Committee will be Tuesday, March 26, 2002.

HOUSE TRANSPORTATION COMMITTEE GUEST LIST

DATE: March 25, 2002

NAME	REPRESENTING
Jim Jones	Ks Asphalt & Pavement Assoc
Don Popejoy	" " "
Jason Johnson	Koch Pavement Solutions
Buddy Clark	" " "
Barney O'Donnell	O'Donnell & Sons Const.
Vern Hopkins	APAC Kansas Inc. Shears
Debbie Huff	Andrews Asphalt + Construction
Jim Andrews	Andrews Asphalt
Dean Andrews	" "
Roger Heckert	Heckert Const Co. Inc.
Scott Heidner	KS Consulting Engineers
Eric Collins	Ks Governmental Consulting
Matt Ross	W/K Chapter American Concrete Paving Assoc
Jim Holmes	Holland Corp
Don Beuerlein	Koss construction Co.
Kim Wilson	Clarkson Const Co.
David Wittwer	Wittwer, Inc.
John Pendry	LRM
Richard Brown	Koss Construction Co.

HOUSE TRANSPORTATION COMMITTEE GUEST LIST

DATE: March 25, 2002 (continued)

NAME	REPRESENTING
G. Allen Payne	Koss Construction Company
Andy Gisi	Ks Dpt. Transp.
Nancy Boyina	KDOT
Dean Carlson	KDOT
Scott C.J. Toman	Kansas Sand & Concrete
Patrick J Hurley	Economic Lifelines
Tom Whitaker	Ks Motor Carrier Assn.
Butch Spray	Venture Corp

KDOT SURFACE SELECTION

Impact on the Paving Industries.

House Transportation Committee
March 25, 2002
Attachment 1

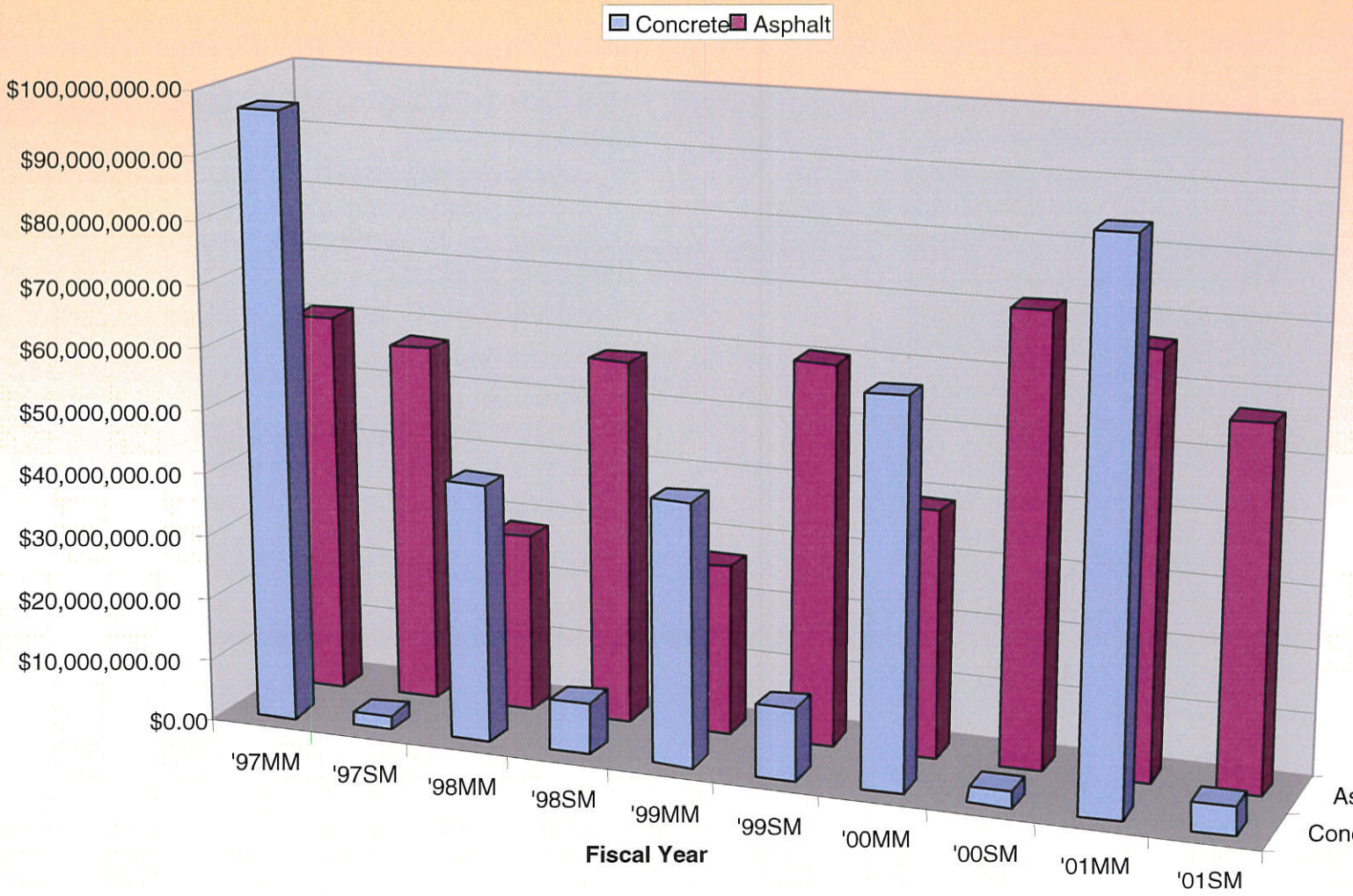
Purpose - Present issues raised by Kansas Asphalt Pavement Association

- Loss in hot mix tonnage being let
- KDOT won't build anymore asphalt pavements
- Surface selection process is unfair to asphalt
- Findings from "Cross" report
- Saving the Comprehensive Transportation Program

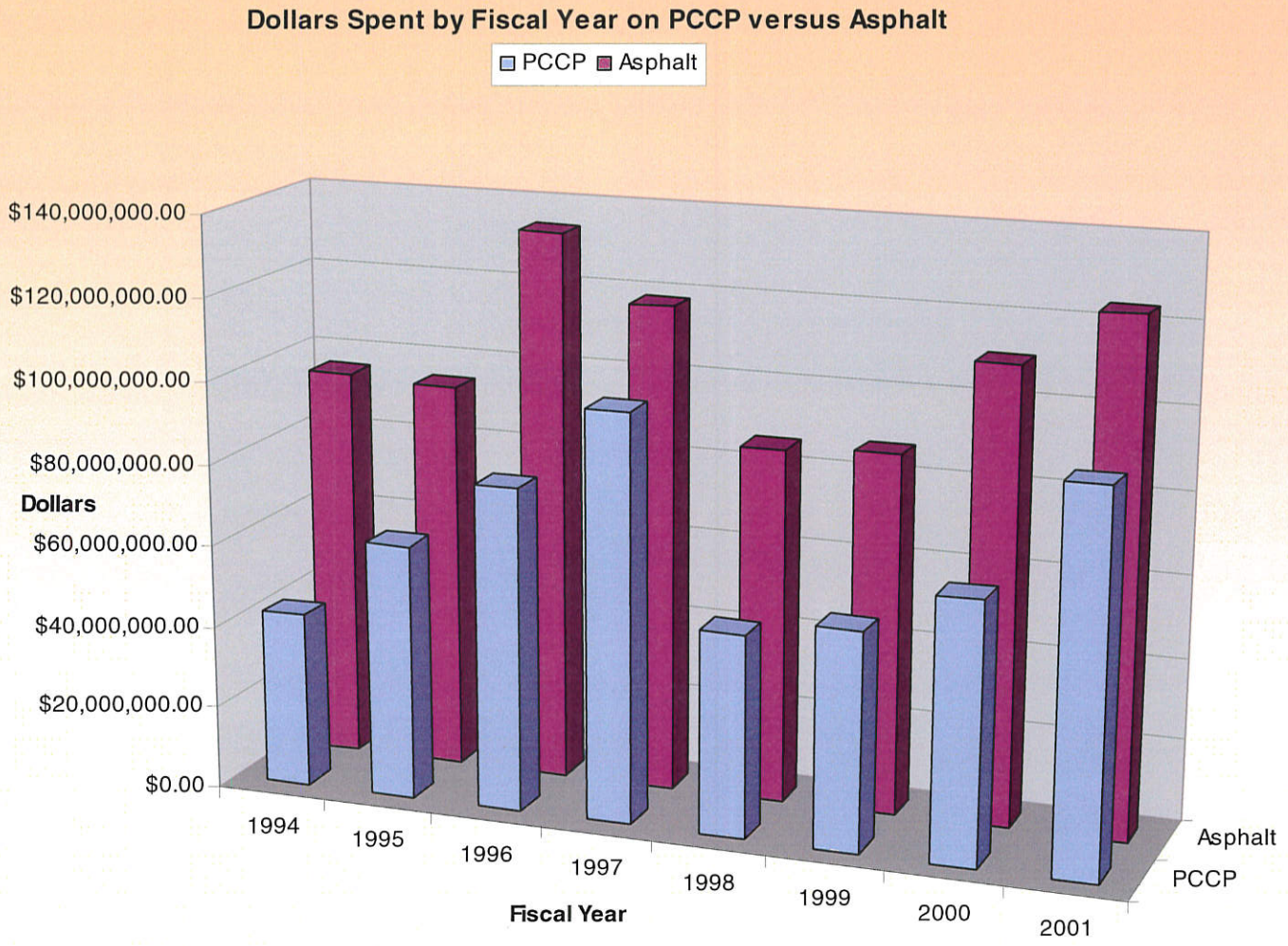
Definitions:

- AASHTO-American Association State Highway and Transportation Officials
- CHP-Comprehensive Highway Program
- CTP-Comprehensive Transportation Program
- CY-Construction Year
- FHWA-Federal Highway Administration
- FY-Fiscal Year
- KAPA-Kansas Asphalt Pavement Association
- KM-Kilometers
- LCCA-Life cycle cost analysis
- MM-Major Modification
- SHA-State Highway Agency
- SM- Substantial Maintenance

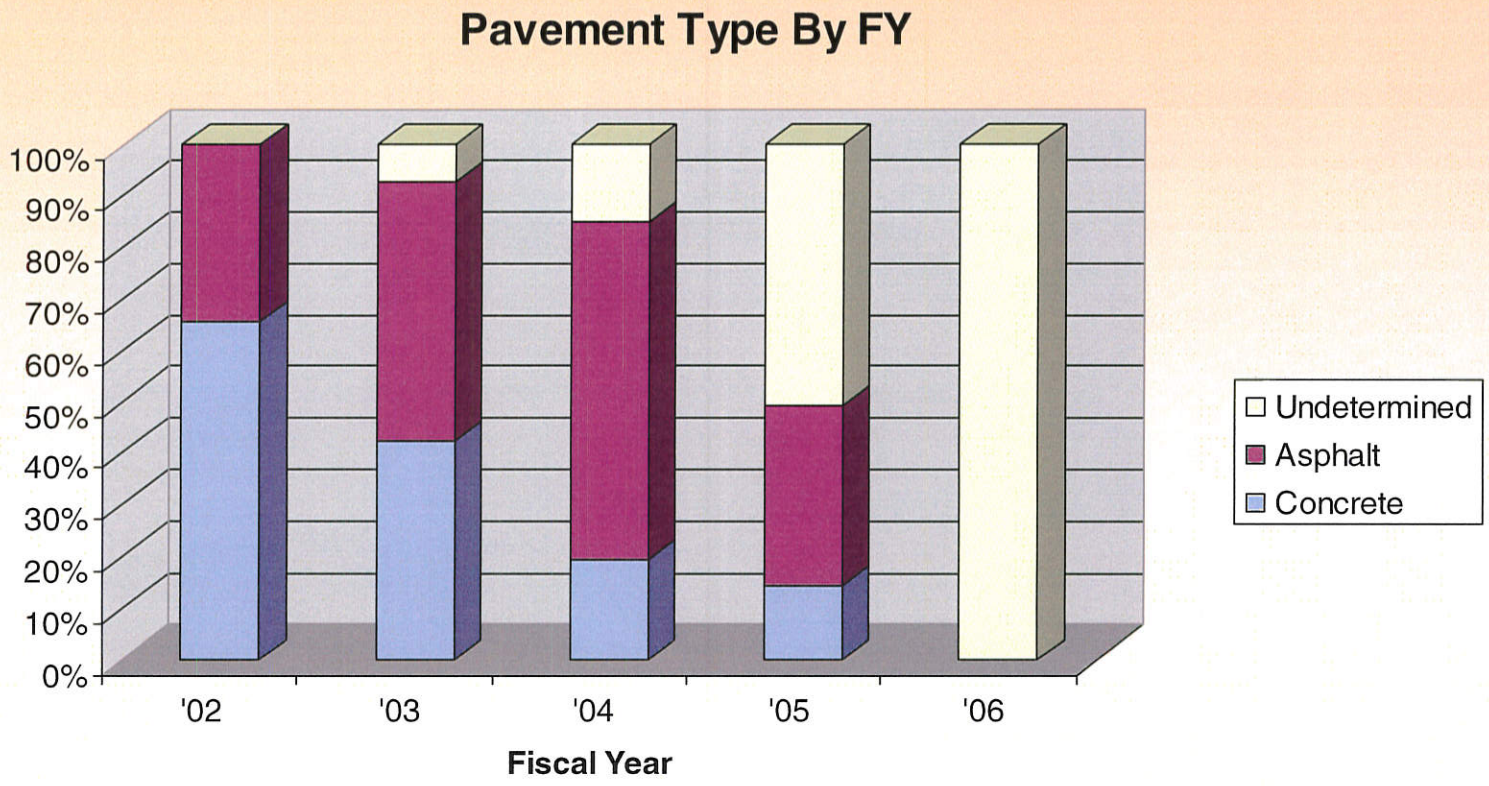
Expenditures By Program



Combined Cost by Pavement Type



Future Pavement Type Determination



Pavement Type By Program & Roadway

CY '00 – '04

Asphalt: 0%, Concrete: 90%

Interstate MM, New & Reconstr.

346.5

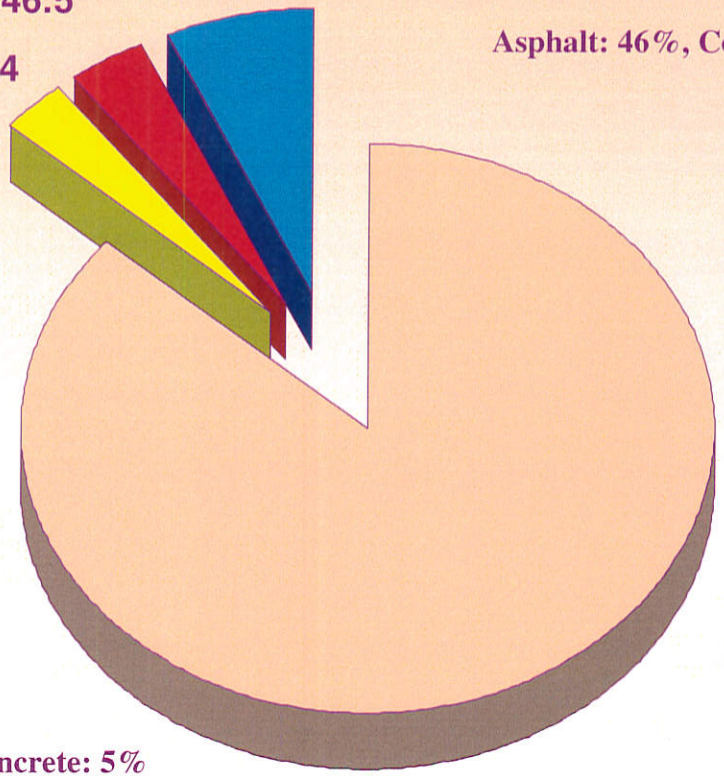
659.15 Non-Interstate MM, New & Reconstr.

Asphalt: 46%, Concrete: 30%

297.14

Non-Interstate MM, Rehab

Asphalt: 100%

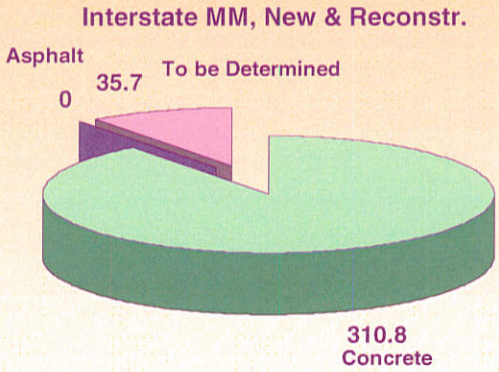


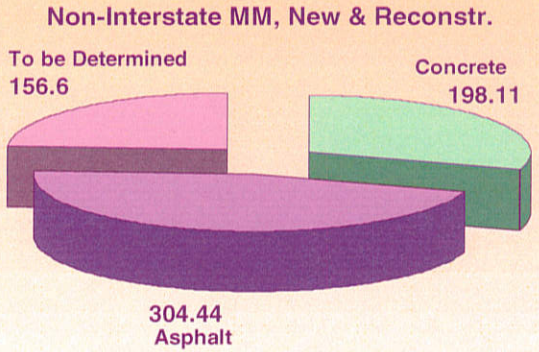
Asphalt: 95%, Concrete: 5%

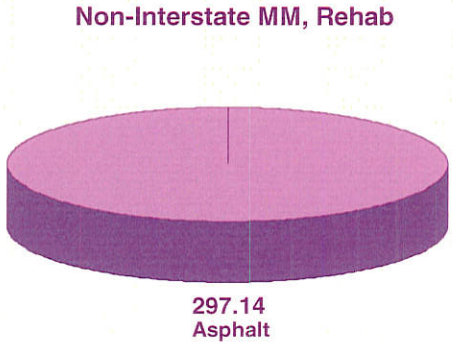
Substantial Maintenance

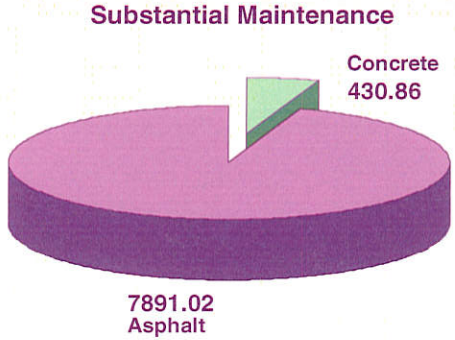
8321.88 km

Pavement Type By Program
CY '00 – '04





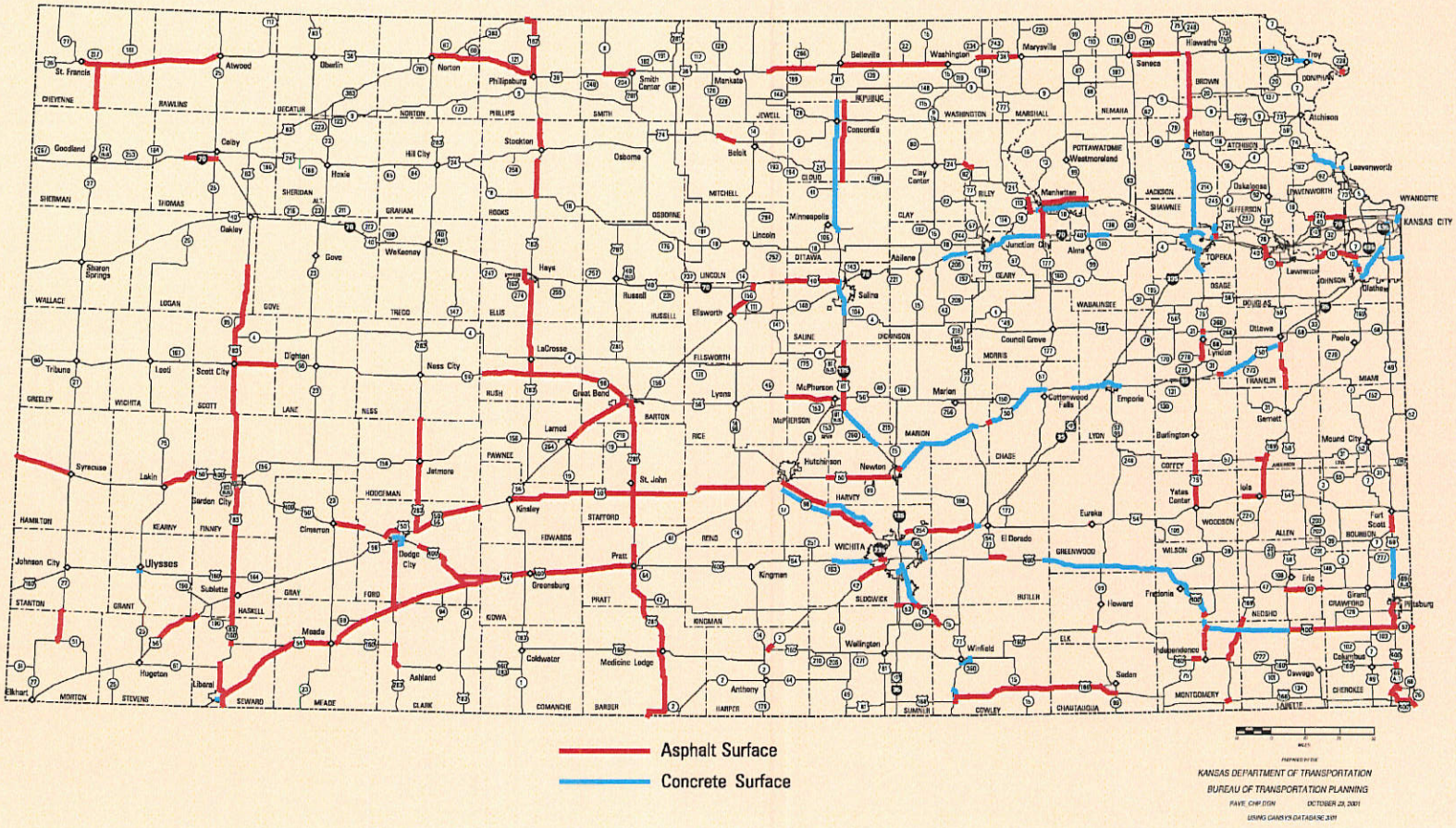




In km

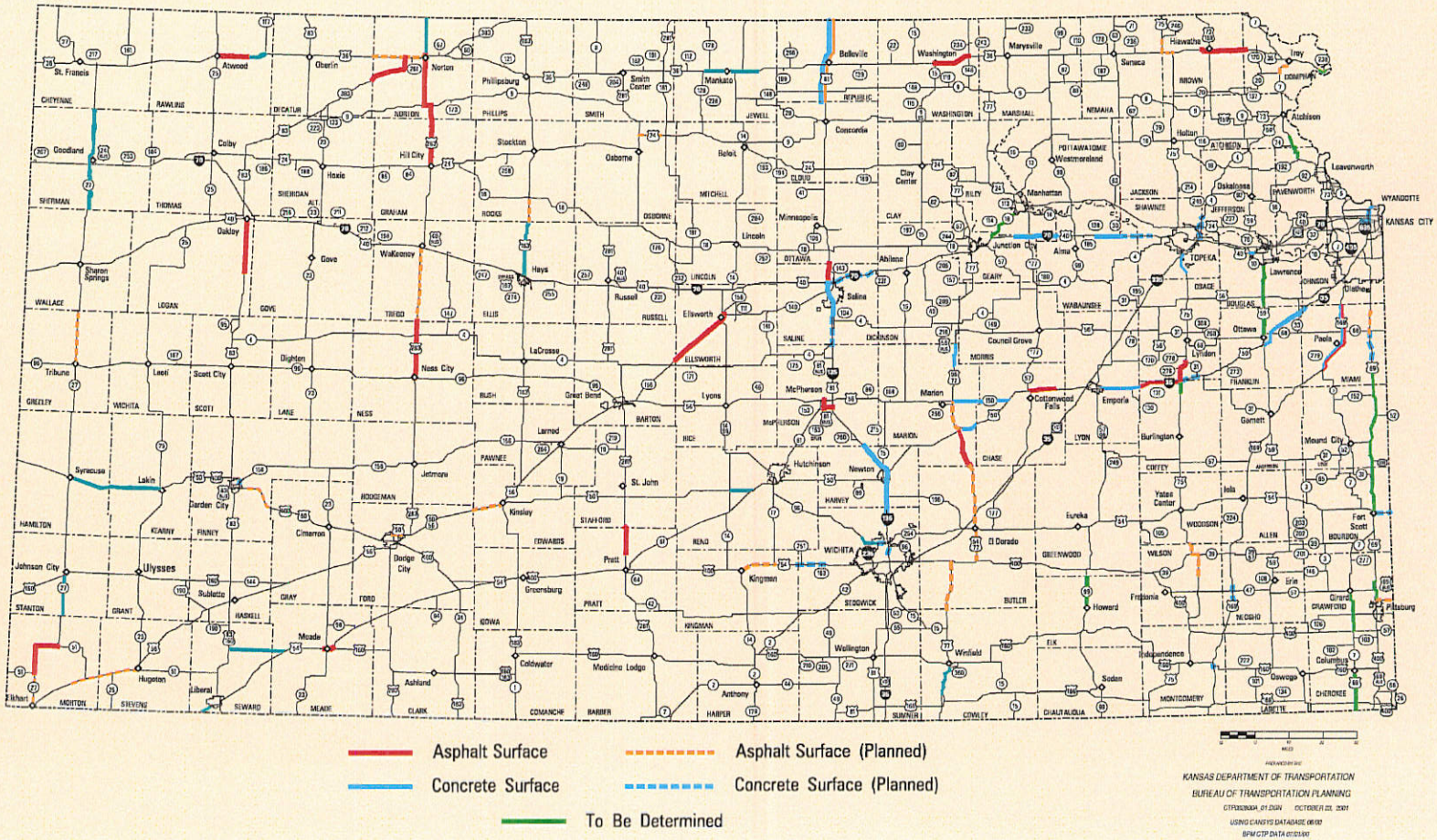
Comprehensive Highway Program

PAVEMENT TYPE CONSTRUCTED DURING CHP

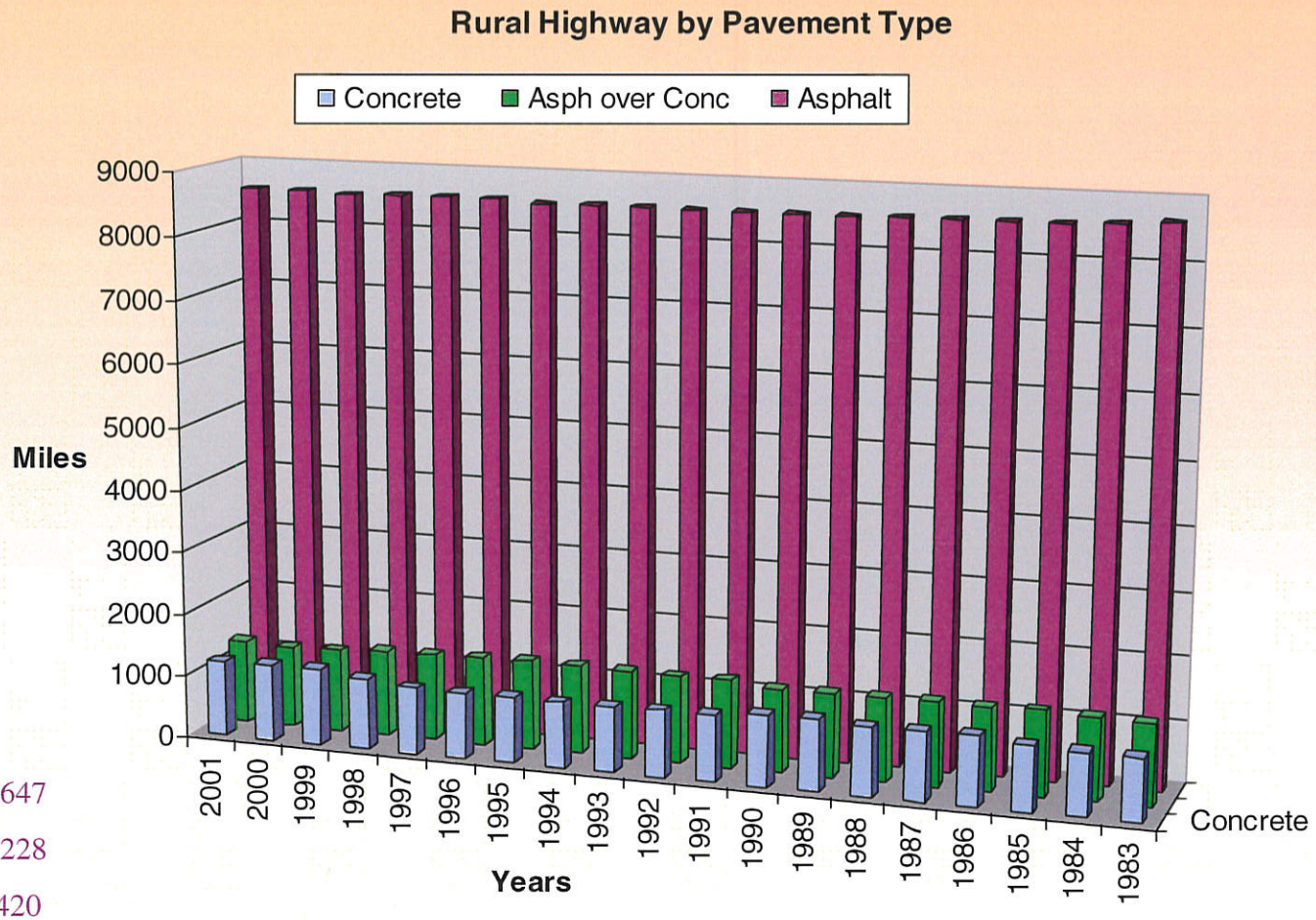


Comprehensive Transportation Program

PAVEMENT TYPE CONSTRUCTED / PLANNED DURING CTP



Roadway Miles of Pavement Type

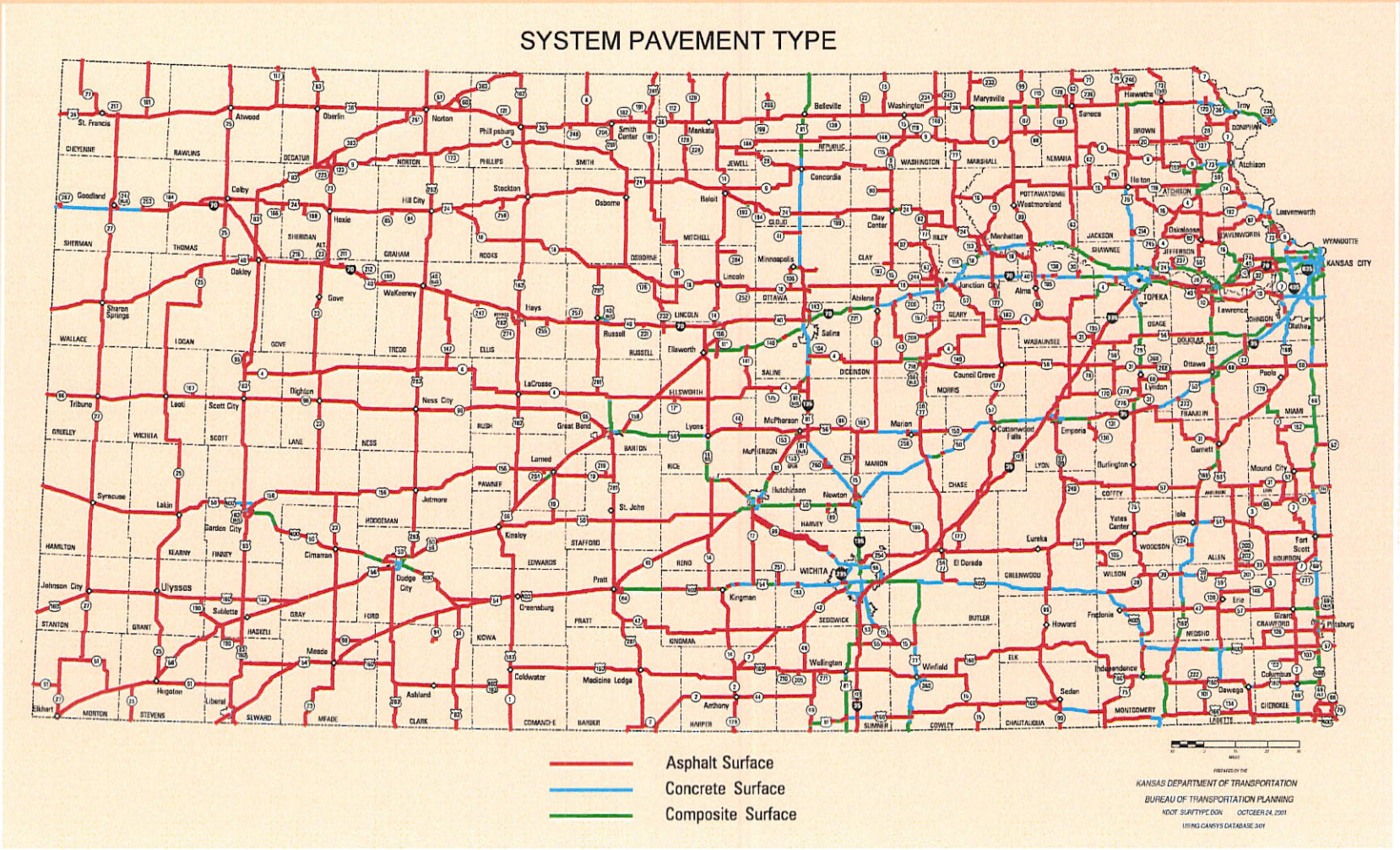


Asph Range: 8517-8647

Conc Range: 1005-1228

Asph/Conc: 1289-1420

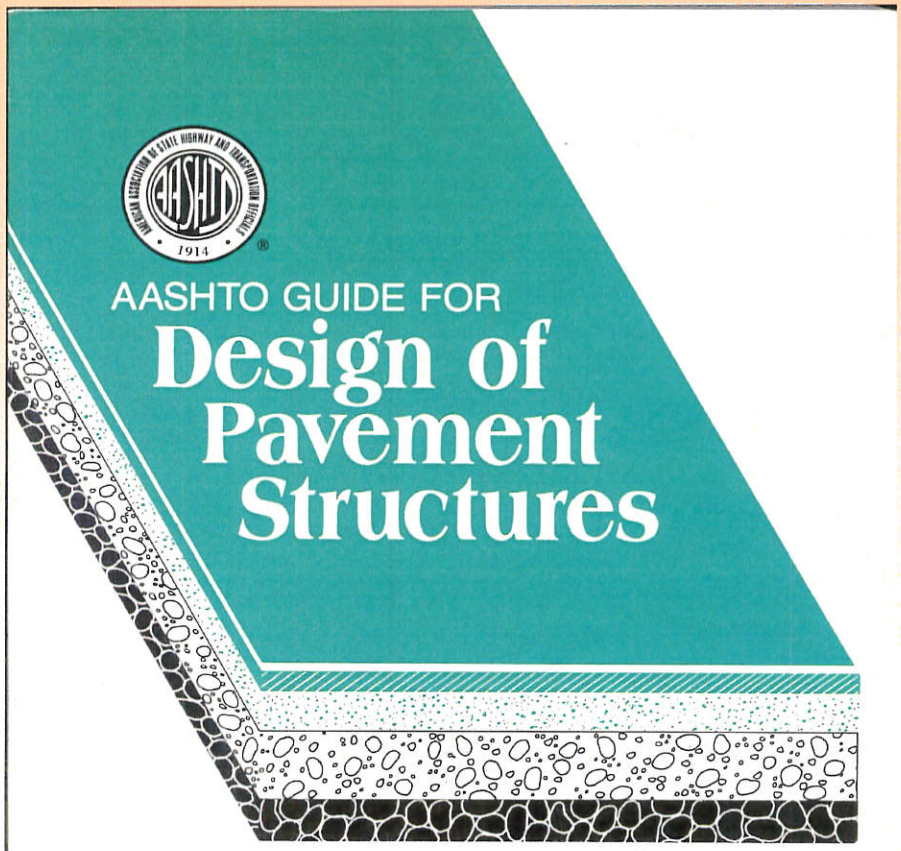
Current Highway Pavement Type



Ease the Dip in Asphalt Production

- Changed surfacing on two projects
- Emergency work
- Added projects to the SM program
- Rescinded the intersection policy

AASHTO Pavement Design Guide



PUBLISHED BY THE
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES

- Interim Guide for flexible pavement published in 1961
- Interim Guide for rigid pavement published in 1962
- Combined in Interim Guide published in 1972
- Revised in 1981, 1986, and 1993

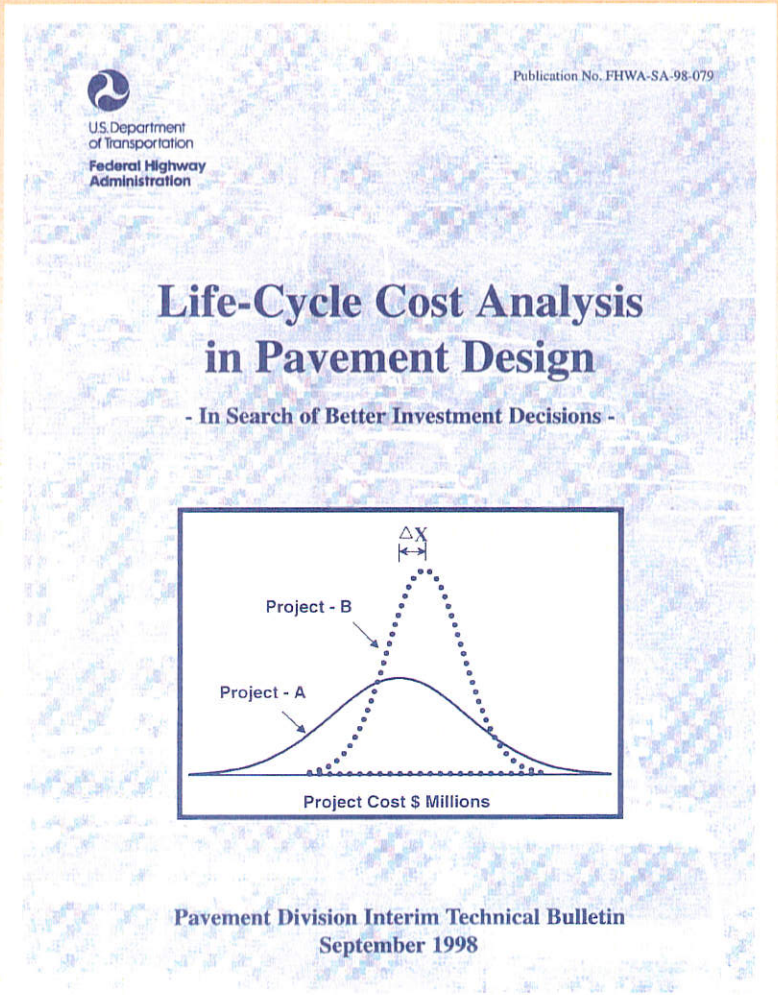
States Using AASHTO Guide
Approved by FHWA Title 23 U.S.C. 109

- Thirty-nine states use the AASHTO Guide for new and reconstructed concrete and asphalt pavement
- Thirty-six states use the Guide for rehabilitation

Pavement Selection Factors

- Traffic
- Soils
- Weather
- Constructability
- Recycling
- Cost
- Performance
- Adjacent Pavements
- Conservation
- Local Materials
- Traffic Safety
- Stimulation of Competition
- Local Preference

FHWA LCCA Manual



Life Cycle Cost Analysis

- Performed by KDOT since the mid 1980's
- Follow suggested guidelines from FHWA
- Latest guideline is an Interim Technical Bulletin
- The Technical Bulletin suggests two methods
  - Deterministic
  - Probabilistic
- Software for latter has not been released
- KDOT will evaluate effects and most likely adopt

FHWA Evaluation of KDOT's LCCA Procedure

Evaluation
of
KDOT's Life Cycle Cost Analysis Process
FHWA, Kansas Division Office
October 24, 2001

Background

The National Highway System (NHS) Act of 1995 required State highway agencies (SHA) to conduct Life Cycle Cost Analyses (LCCA) on all NHS projects over $25 million. The FHWA Policy Statement on LCCA, as published in the October 18, 1996, *Federal Register*, defines LCCA as a decision support tool. The Policy Statement further states that a LCCA is not a decision in, and of, itself. In 1998, the Transportation Equity Act for the 21st Century removed the requirement to conduct LCCA on NHS projects.

FHWA Evaluation Conclusion

Conclusion

"It is the opinion of the Kansas Division Office that KDOT's current LCCA process and its use as a decision-making tool meets the current requirements. Further, as evident by the high-level of condition to which the road network has been maintained, the process used by KDOT has worked well. In the future, it may be practical for KDOT to consider enhancements to the LCCA process."

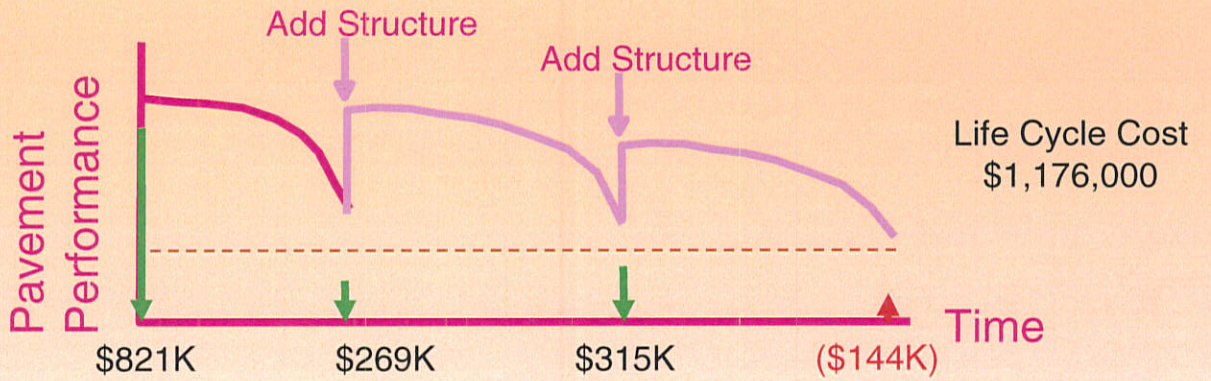
Dated 10/24/01

Highway Agencys Using LCCA

- Thirty-four states have a documented procedure
- Ten states use an informal procedure
- Twelve states consider both agency and user costs

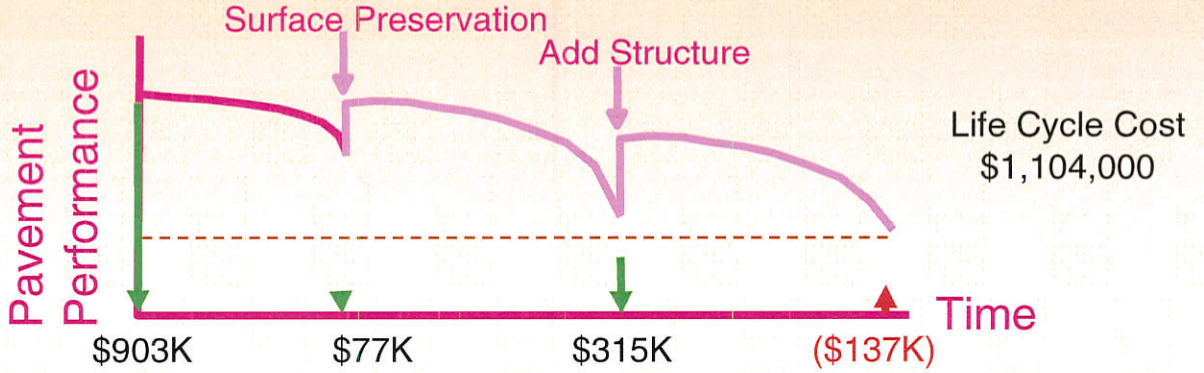
Cost of Different Strategies

10-Year Asphalt



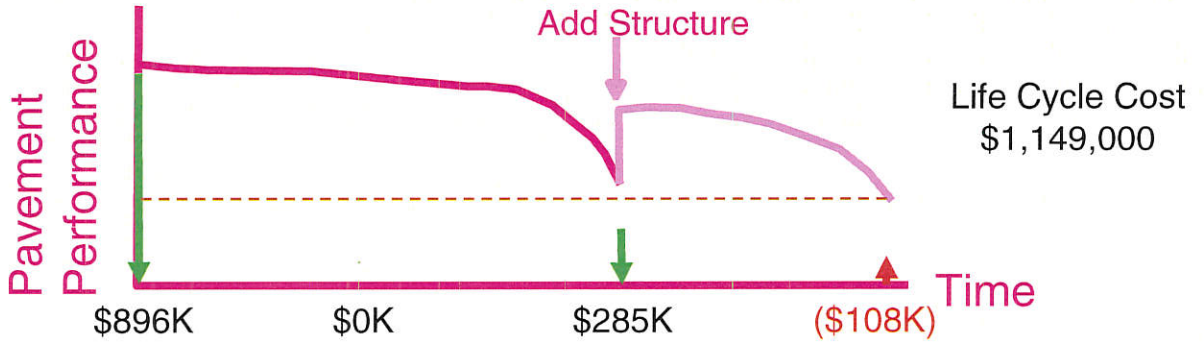
Life Cycle Cost
$1,176,000

20-Year Asphalt



Life Cycle Cost
$1,104,000

20-Year Concrete



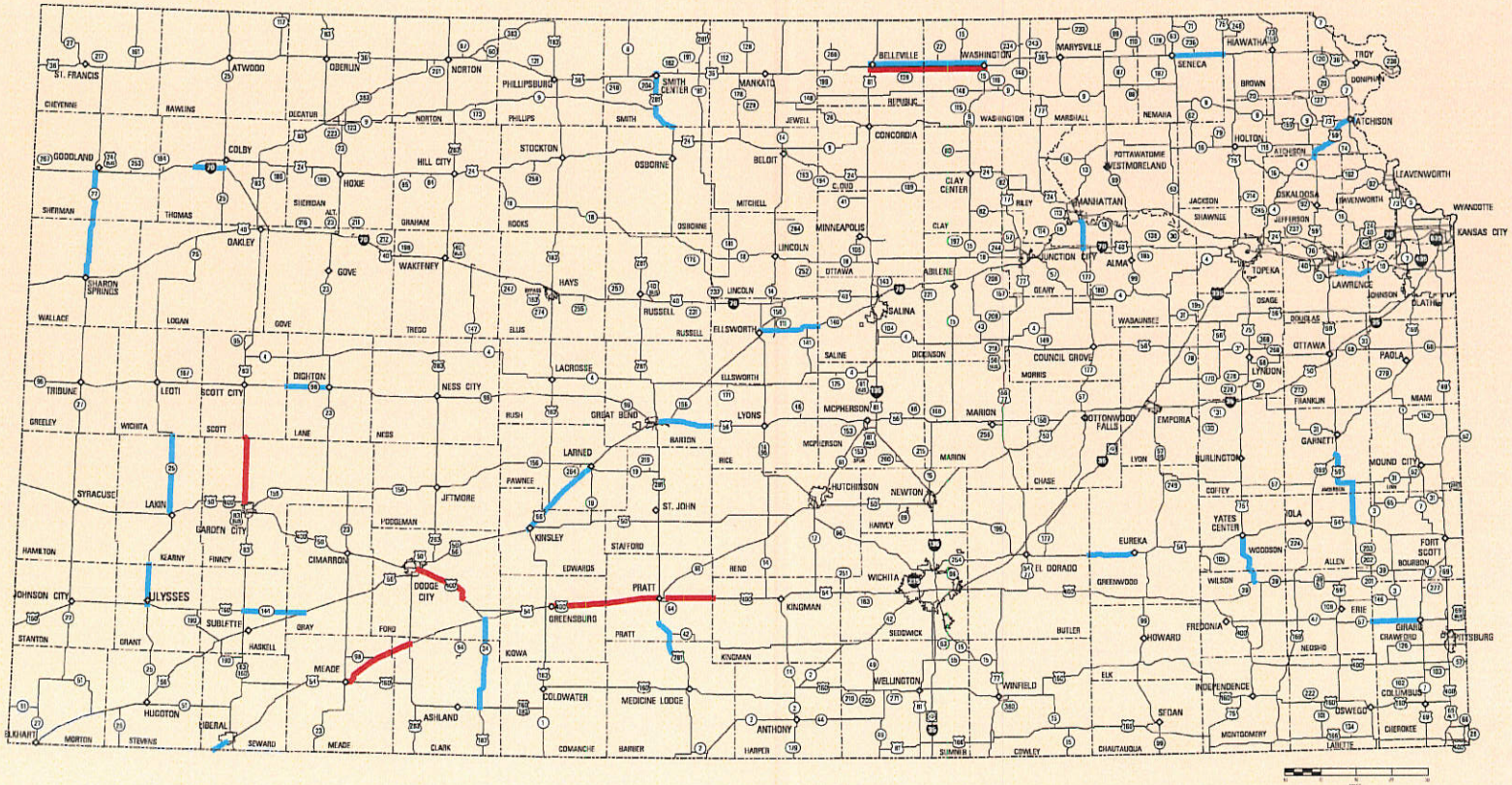
Life Cycle Cost
$1,149,000

Performance Issues Related to Surface Type

- Immediate problems
- Past problems
- Expectations for future

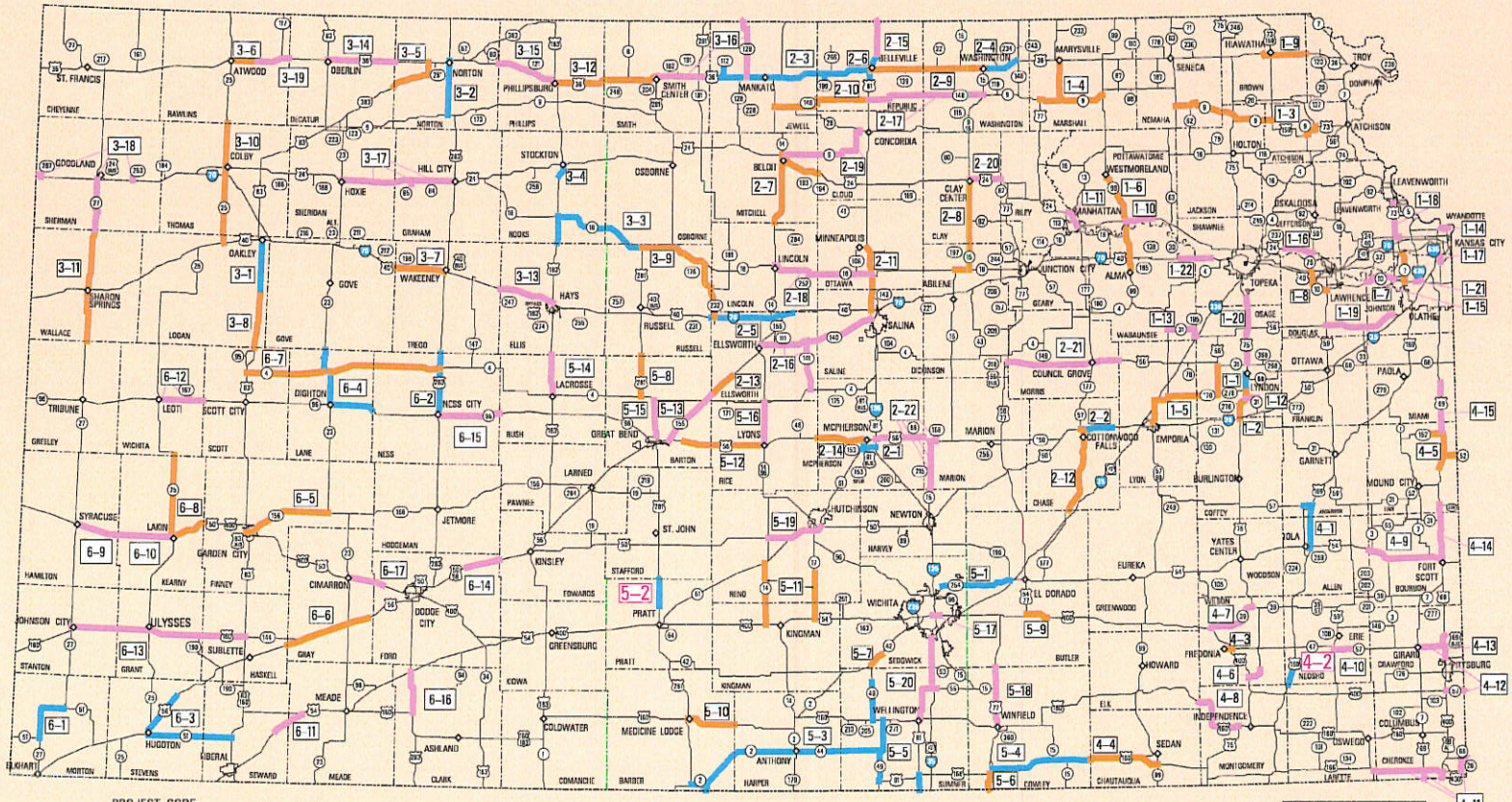
Premature Distress on Asphalt Pavement

ASPHALT PROJECTS WITH PROBLEMS



Asphalt SuperPave Projects

COMPLETED SUPERPAVE PROJECTS



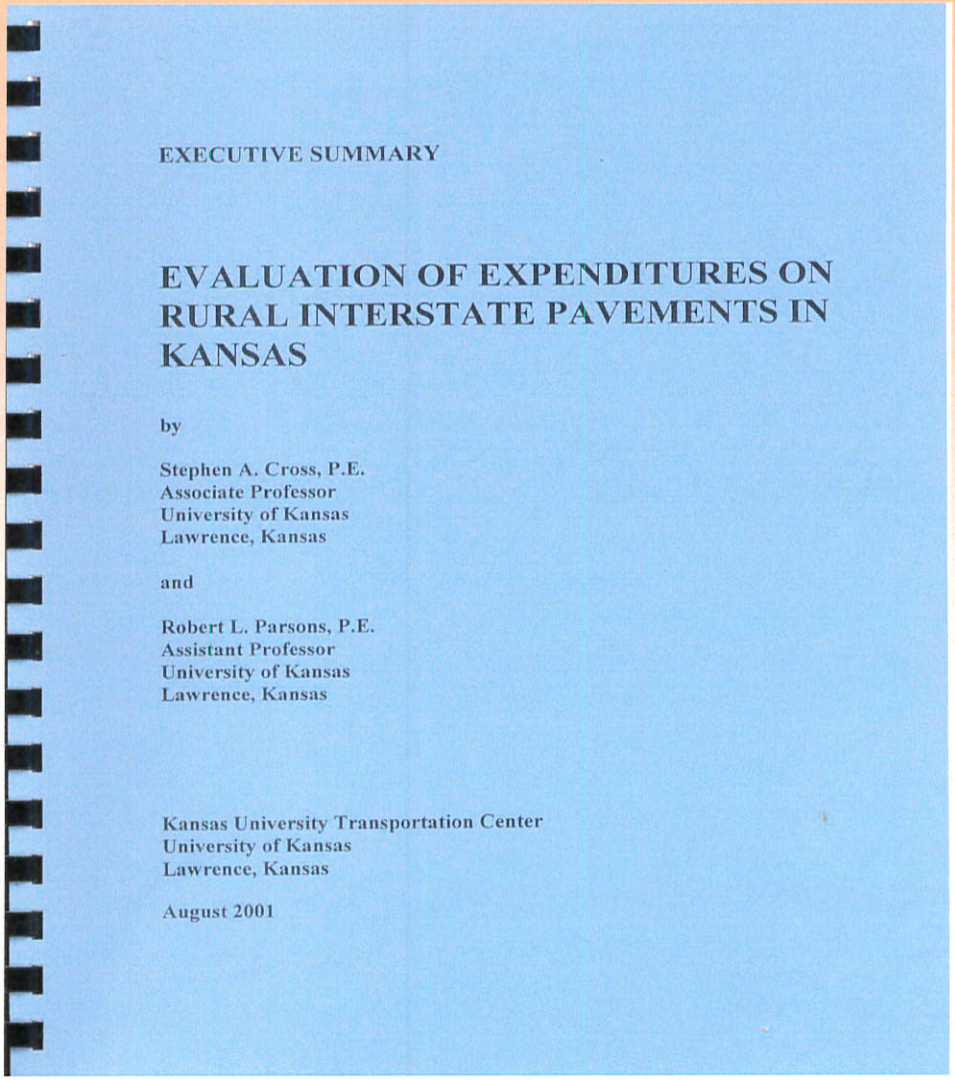
Benefits of SuperPave

- Potential benefits, reduce rutting and cracking, are being reflected in KDOT's business
- Rescinded concrete intersection policy
- Changed Concrete to HMA in urban section
- Re-evaluated urban interchange when concrete was favored due to high traffic volume
- SuperPave mixtures are no stronger than mixes used prior to SuperPave
- The strength of HMA is reflected in pavement design

Change In Surface Type

- Ninety-five projects since 1997
- Five projects changed from Concrete to Asphalt
- Six projects changed from Asphalt to Concrete
- Net gain of one project for Concrete
- Net loss in mileage is 4.4 miles

KAPA Report on Pavement Cost



EXECUTIVE SUMMARY

EVALUATION OF EXPENDITURES ON RURAL INTERSTATE PAVEMENTS IN KANSAS

by

Stephen A. Cross, P.E.
Associate Professor
University of Kansas
Lawrence, Kansas

and

Robert L. Parsons, P.E.
Assistant Professor
University of Kansas
Lawrence, Kansas

Kansas University Transportation Center
University of Kansas
Lawrence, Kansas

August 2001

KAPA Report
Recommendations as stated in the Cross Report

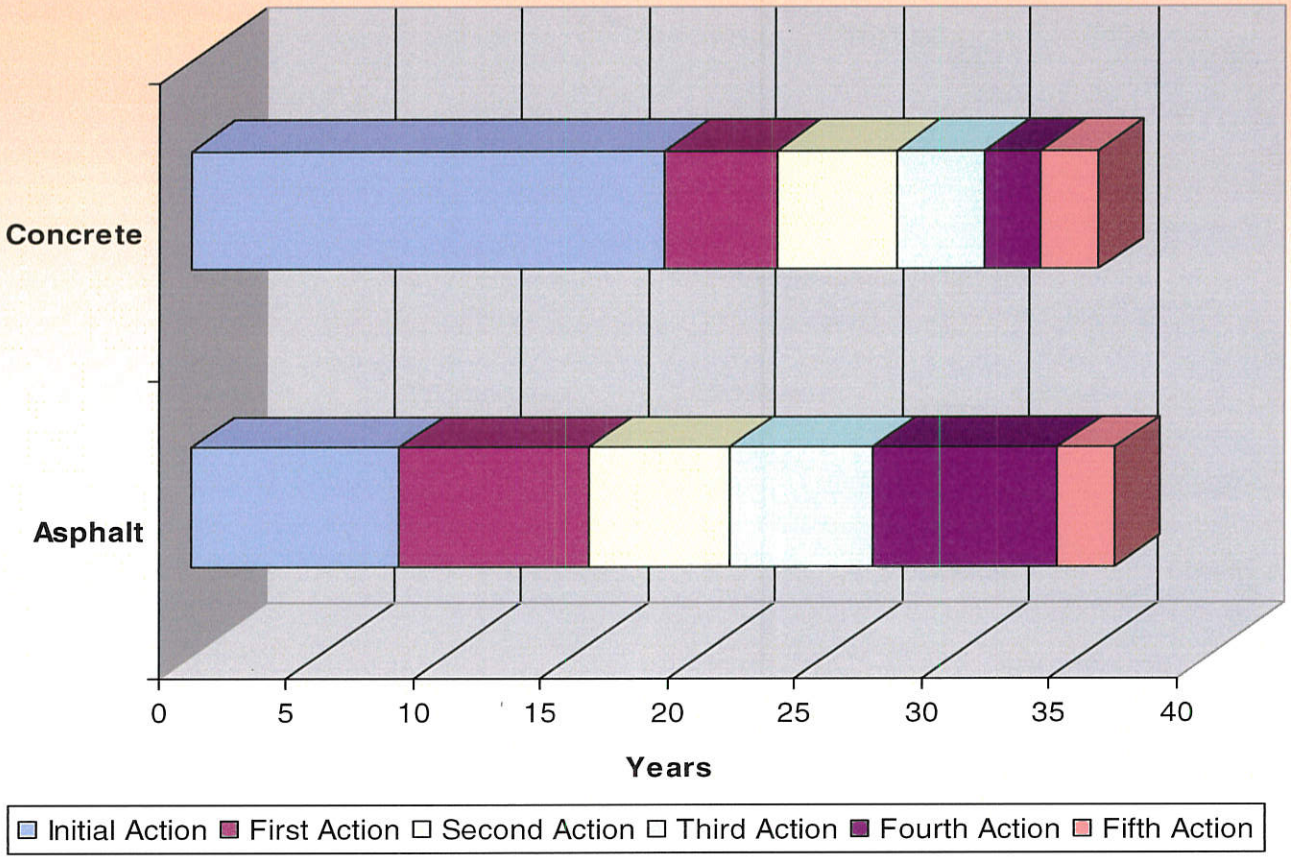
- Asphalt should last 8-10 years past original construction
- Needs only a seal or surface recycle after 8-10 years
- Needs three inch overlay at 27 years
- Needs rehabilitation after 35 years

- Concrete should last 10-12 years past original construction
- Needs patching and crack sealing after 10-12 years
- Overlay needed after 19 years
- Reconstruction at 35 years

KAPA Report Issues

- Good only for historical information
- Did not consider performance of pavement over time
- Ignored actual overlays placed 8-10 years after original construction
- Frequency of maintenance actions were discounted
- Initial asphalt surface lasted 8 years, not 27 years as stated in report
- Initial concrete surface lasted 18.5 years, not 11 years as stated in report
- Concrete distress largely caused by "D"-cracking aggregate

Action History on I-70



KAPA's Solution To Saving CTP

- Use asphalt where concrete is selected for the surface type
- Projecting that all the surfacing remaining would be asphalt

Counters to Claim to Save CTP

- Using asphalt industries suggestion to use inexpensive first costs would leave a large deficiency in pavement needs after ten years
- Limited number of projects where there is a choice between asphalt and concrete
- Over the life of the program there is very little cost difference if first costs only were used to select pavement surface type

PCC and HMA Surfacing Dollars

Year / Type	'94	'95	'96	'97	'98	'99	'00	'01
Conc	$43	$62	$79	$99	$49	$53	$63	$92
HMA	$96	$95	$134	$118	$86	$87	$111	$124
% of Total	31% / 69%	39% / 61%	37% / 63%	46% / 54%	36% / 64%	38% / 62%	36% / 64%	43% / 57%

Competition Is Needed

- KDOT needs to strike a balance between competing industries to keep prices of paving materials competitive.
- The industries are there to serve the State's needs.
- KDOT's goal is to sustain an adequate highway system and at the same time provide a competitive environment in the paving industry.

KDOT IS A GOOD STEWARD

Number Four In Nation for Pavement Condition

- Per Capita Income (1999) - 24 states are lower
- Per Capita Vehicle Miles - 26 states are lower
- State highway miles - 26 states have less
- Highway Disbursements - 19 states spend less per capita
- Gas tax - 31 States are lower

THE END