LIFE CYCLE COSTS FOR LIME IN HOT MIX ASPHALT

VOLUME II – APPENDICES

by

R.G. Hicks, P.E.
Professor Emeritus
Department of Civil Engineering
Oregon State University
Corvallis, OR 97331

and

Todd V. Scholz, Ph.D., P.E. Roadworthy Research & Design 1580 Royal Drive Reno, NV 89503

prepared for

National Lime Association Arlington, Virginia (www.lime.org)

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FOREWARD

This is Volume II of a three-volume report. The contents of each volume of the report are described as follows:

- Volume I Final Report describes the study, summarizes the findings, and provides conclusions and recommendations.
- Volume II Appendices contains all of the supporting data for the study.
- Volume III LCCA Software User's Guide is a user's guide for the Windows-based software program developed specifically for this study.

The final report (Volume I) and appendices (Volume II) will be of interest to State highway agency personnel and hot-mix asphalt paving contractors responsible for conducting and/or reviewing pavement design life cycle cost analyses. The software user's guide (Volume III) will be of interest to those practitioners that have obtained and desire to use the LCCA software.

R. Gary Hicks Corvallis, Oregon

> Todd V. Scholz Reno, Nevada

ABSTRACT

Life cycle cost analysis (LCCA) is recognized by public agencies as an effective tool to assist in the selection of highway construction, maintenance, and rehabilitation treatments.

Accordingly, the Federal Highway Administration (FHWA) has developed an LCCA methodology that will likely become the standard in the industry. The methodology can be used to evaluate the life cycle costs (LCC) of paving materials with additives/modifiers, such as hydrated lime.

This report uses information from past highway projects to:

- identify the benefits and costs of adding lime;
- compile past performance data into an LCCA model; and
- compare the LCCs for asphalts with and without lime.

Estimated lives used in the LCCA model are based on interviews and on engineering judgment. Practitioners can use project-specific data with the LCCA software to generate project-specific estimates of life cycle costs.

This report presents the LCCA results for interstate and state highway projects. The findings show that lime is the most cost effective design for all of the applications studied. Life cycle cost savings from lime are, on average, \$2 to \$3 per square yard; or, \$13,000 to \$21,000/lane mile (13% to 15% of project life cycle costs). These results are based on the widely accepted use of lime as an additive that reduces stripping.

ACKNOWLEDGMENTS

The authors are grateful for the assistance of the following agencies and contractors that provided the information to perform life cycle cost comparisons:

Agencies

- Arizona
- California
- Colorado
- FHWA (WFLHD¹)
- Georgia
- Mississippi
- Oregon
- Nevada
- South Carolina
- Texas
- Utah

Contractors

- APAC
- FNF Construction
- Granite Construction
- Kiewit Pacific
- Lafarge
- C.W. Matthews Contracting
- Morse Brothers
- Staker Construction
- Dean Word Company
- Young Contractors

The information provided and used in the analyses was verified by those surveyed.

DISCLAIMER

The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy presented herein. The contents do not necessarily reflect the official views of the agencies and contractors that provided information in support of the study. Users of the LCCA model need to apply their judgment when using the results of this report or the software described in Volume III.

¹ Western Federal Lands Highway Division of the Federal Highway Administration

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LCCA Analysis of HMA Paving Alternates **Survey Form**

PREFACE

The following questions are being used to develop life cycle costs for comparing lime-treated HMA with conventional HMA applications. The questions will be sent about 1-2 weeks in advance of a visit (or telephone call) from one of the team members. Our team will complete the interview form.

If you have questions, please contact the following individual:

Internet:

R.G. Hicks Department of Civil, Construction and Environmental Engineering Apperson Hall 202 Oregon State University Corvallis, OR 97331-2302 Phone: 541-737-5318 Fax: 541-737-3052

r.g.hicks@orst.edu

1.	When did your agency begin using lime in HMA applications? Year
2.	How is lime added to the HMA?
	☐ In the drum mixer
	☐ Dry lime added to dry aggregate
	☐ Dry lime added to wet aggregate
	☐ Lime slurry added to aggregate
	If lime is added to aggregates, is the aggregate-lime mix marinated before use? Yes No If so, is it required or optional?

3.	What is the curren	t estimated usage	of lime in the	HMA in	the following	applications?

Туре	Typical % of Lime in the Mix	Tons of Lime Used Statewide	% of Use in all HMA
Gap-Graded HMA			
Open-Graded HMA			
Dense-Graded HMA			

4. What are the reasons for using lime? (Estimate level of importance.)

Reason for Using Lime	Level of Importance (1 = very important, 2 = moderately important, 3 = less important)
Resist stripping	
Improve aging resistance/slow oxidation	
Filler to stiffen the binder/reduce rutting	
Improve fracture toughness at low temperatures/reduce cracking	
Alter plastic properties of clay fines	

5. Please provide typical cost information (Average, 10 and 90 percentile) for the following.

	HMA Conventional	HMA With Liquid Anti-Strip	HMA Lime-Treated
Asphalt Binder (\$/ton)			
HMA (\$/ton)			
Open-Graded			
Gap-Graded			
Dense-Graded			
Routine Maintenance* (\$/yd²/yr)			
Preventive Maintenance** (\$/yd²/yr)			

^{*}Crack seals, patching (surface and trenches)

^{**}Fog seals, sand (scrub) seals, slurries, microsurfacings

- 6. What is the life expectancy (in years) for each of the applications noted in Question #3 above? Please provide the following for each:
 - Average life expectancy
 - Lower range (1 in 10 projects fails to achieve this life)
 - Upper range (1 in 10 will exceed this life)

Type of Road	Range of ESALs	HMA Lime-Treated	HMA Not Lime-Treated
Interstate (High Volume)			
State and US Highways (Medium Volume)			
Local Roads (Low Volume)			

7. Please identify the maintenance and rehabilitation (M&R) strategies (e.g. chip seals, overlays) for the following types of pavements.

Existing Pavement		M&R Strategies Used		Typical Pavement Age When Required (yrs)	
Туре	Highway Type	Maint.	Rehab.	Maint.	Rehab.
Conventional	Interstate				
HMA	State & US Highways				
	Local Roads				
Modified HMA	Interstate				
With Liquid Anti-	State & US Highways				
Strip Additives	Local Roads				
HMA with	Interstate				
Lime Treatment	State & US Highways				
	Local Roads				

		HMA Conventional	HMA with Lime	HMA with Liquid Antisti
Interstate (Multilane)	Length of Project (lane-miles)			
	Total Lane Closure Time* (hrs/day)			
	Typical Lane Rental Fees (\$/hr)			
State & US Highways	Length of Project (miles)			
(2 lane)	Total Lane Closure Time* (hrs/day)			
	Typical Lane Rental Fees (\$/hr)			
Local Roads	Length of Project (miles)			
(2 lane)	Total Lane Closure Time* (hrs/day)			
	Typical Lane Rental Fees (\$/hr)			
*Paving only	ý			
Interviewed:				
zation:				
s:				
		Sta	te: Z	Zip:
		Fay	·	

E-mail:

List of Agency Contacts

ARIZONA Douglas A. Forstie

Phone: 602-255-7286 State Materials Engr., Materials Group Fax: 602-2550-8138 Arizona Department of Transportation

E-Mail: dforstie@dot.state.az.us 1221 North 21st Avenue

Phoenix, AZ 85009

CALIFORNIA

Phone: 916-227-7254 Phil Stolarski

Fax: 916-227-5295 Chief, Office of Materials and Foundations E-Mail: Phil Stolarski@dot.ca.gov California Department of Transportation

5900 Folsom Blvd.

Sacramento, CA 95819-4612

COLORADO

Phone: 303-757-9249 Tim Aschenbrener

Fax: 303-757-9242 CDOT Materials Engineer

E-Mail: tim.aschenbrener@dot.state.co.us Colorado Department of Transportation

4201 East Arkansas Avenue Denver, CO 95819-4612

FHWA

Phone: 360-696-7725 Brad Neitzke

Fax: 360-696-7845 Office of Federal Highway Projects E-Mail: Federal Highway Administration

610 E Fifth St.

Vancouver, WA 98661

GEORGIA

Phone: 404-363-7512 Wouter Gulden

Fax: 404-362-4925 State Materials & Research Engineer

E-Mail: wouter.gulden@dot.state.ga.us Office of Materials & Research

Georgia Department of Transportation

15 Kennedy Drive Forest Park, GA 30297

MISSISSIPPI

Phone: 601-359-1666 Jimmy W. Brumfield Fax: 601-359-1716 State Materials Engineer

E-Mail: jbrumfield@mdot.state.ms.us Mississippi Department of Transportation

P O Box 1850

Jackson, MS 39215-1850

NEVADA

Phone: 775-888-7520 Dean Weitzel

Fax: 775-888-7501 Chief Materials Engineer E-Mail: dweitzel@dot.state.nv.us Department of Transportation

1263 S Stewart Street Carson City, NV 89712

OREGON

Phone: 503-986-3053 Jeff Gower

Fax: 503-986-3096 Quality Assurance Engineer

E-Mail: jeffrey.l.gower@state.or.us Oregon Department of Transportation

800 Airport Road SE Salem, OR 97310

SOUTH CAROLINA

Phone: 803-737-6681 Milt Fletcher

Fax: 803-737-6649 State Materials Engineer

E-Mail: fletchermo@dot.state.sc.us South Carolina Dept. of Transportation

Box 191

Columbia, SC 29202

TEXAS

Phone: 512-465-7615 Katherine L. Holtz

Fax: 512-302-2215 Director, Materials and Tests Division

E-Mail: kholtz@mailgw.dot.state.tx.us Department of Transportation

125 E 11th Street

Austin, TX 78701-2483

UTAH

Phone: 801-965-4303 Howard Anderson

Fax: 801-965-4403 Engineer for Pavement Operations E-Mail: handerso@dot.state.ut.us Construction and Materials Division

Department of Transportation

4501 South, 2700 West – Box 8410 Salt Lake City, UT 84114-8410

List of Contractors

APAC

Phone: 404-603-2774 Randy C. West

404-603-2770 Director of Material Services Fax:

3505 Port Cobb Dr E-mail: rcwest@asphland.com

Smyrna, GA 30080

FNF Construction

480-784-2910 Mark Belshe Phone: 480-921-8720 115 S 48th St Fax: E-mail: mark@fnfinc.com Tempe, AZ 85281

Granite Construction Inc.

Phone: 775-352-1954 Jon A. Epps 775-355-3431 P O Box 2087 Fax: Sparks, NV 89432 E-mail: jepps@granite-net.com

Kiewit Pacific Co.

Phone: 925-686-3030 Mike Phelps 5000 Marsh Dr Fax:

E-mail: rmphelps@Kiewitnc.com Concord, CA 95420

Lafarge

Phone: 303-657-4227 Scott Shuler

303-657-4413 Product Development Manager Fax:

E-mail: sshuler@largeus.com 1400 W 64th Ave

Denver, CO 80221

C.W. Matthews Contracting Company, Inc.

770-422-7520 L. Pace Jordan Phone: 770-422-1068 1600 Kenview Dr Fax: E-mail P O Drawer 970

Marietta, GA 30061

Morse Brothers

Phone: 541-928-6491 Robert Reinhard Fax: 541-928-6494 32260 Hwy 34 E-mail: Tangent, OR 97389

A-7

Oldcastle Inc.

Phone: 202-295-2689 Dale S. Decker 3333 K Street NW Fax: 202-625-2153 E-mail: ddecker@oldcastle-materials.com Washington, DC 20007

Young Contractors, Inc. Phone: 254-754

254-754-2324 Bill Morgan P O Drawer 1800 Fax: 254-754-2305 E-mail: Waco, TX 76703

APPENDIX B Results from Survey

Table B.1. Year Agency Began Using Lime in HMA

Agency	Year Use Began
Arizona	1982 ¹
California	1990
Colorado	1990
FHWA (WDFD)	1983
Georgia	1981
Mississippi	1991
Nevada	1987
Oregon	1984
South Carolina	1983
Texas	1983
Utah	1989

¹Either lime or cement is permitted

Table B.2. Method of Adding Lime to HMA

	(1)	(2) Dry Lime to	(3) Dry Lime to	(4) Lime Slurry to	(5) Is Aggregate-Lime
Agency	In Drum	Dry Aggregate	Wet Aggregate	Aggregate	Mix Marinated?
Arizona			$\sqrt{1}$		No
California				$\sqrt{}$	Required
Colorado			$\sqrt{}$	$\sqrt{}$	Optional
FHWA (WDFD)			$\sqrt{}$		No
Georgia	\checkmark	$\sqrt{2}$			No
Mississippi			$\sqrt{}$		No
Nevada			$\sqrt{}$		Required
Oregon			$\sqrt{1}$		Optional
South Carolina			$\sqrt{1}$		No
Texas	$\sqrt{}$		$\sqrt{1}$	$\sqrt{}$	No
Utah				$\sqrt{1}$	Optional

¹Lime-wet aggregate mixed in pug mill ²Lime added this way for both batch and drum plants

Table B.3. Estimated Usage of Lime in HMA

Agency	Typical % of Lime	Tons of Lime Used Statewide	% of Use in All HMA
	a) Der	nse-Graded Mixes	
Arizona ¹	1.0	N/A	100
California	0.8-1.2	N/A	30
Colorado	1.0	20,000	95
FHWA (WDFD)	1.0	N/A	50
Georgia	1.0	82,000	85
Mississippi	1.0	39,250	100
Nevada	1.5	N/A	100
Oregon	1.0	7,300	50
South Carolina	1.0	39,000	75
Texas	1.0	N/A	40-50
Utah	1.0	N/A	100
	b) Op	en-Graded Mixes	
Arizona	1.0	N/A	100
California	0.7-1.0	N/A	5
Colorado	Not used	_	_
FHWA (WDFD)	1.0	N/A	100
Georgia	1.0	700	100
Mississippi	N/A	N/A	N/A
Nevada	1.5	N/A	100
Oregon	0.7	2,000	70
South Carolina	1.0	570	100
Texas	1.0	N/A	100
Utah	1.0	N/A	100
	c) Gap-0	Graded (e.g., SMA)	
Arizona	1.0	N/A	100
California	0.8-1.2	N/A	10
Colorado	Not used	_	_
FHWA (WDFD)	N/A	N/A	N/A
Georgia	1.0	1300	100
Mississippi	N/A	N/A	N/A
Nevada	N/A	N/A	N/A
Oregon	< 1.0	_	50
South Carolina	1.0	2,370	100
Texas	1.0	N/A	80-100
Utah	Not used	_	_

¹Lime or cement is allowed

Table B.4. Reasons for Using Lime

Agency	Resist Stripping	Improve Aging Resistance	Stiffen Binder	Improve Fracture Toughness	Alter Properties of Fines
Arizona	1	3	2	3	2
California	1	2	3	3	3
Colorado	1	3	3	3	1 (when appropriate)
FHWA	1	2	3	2	3
Georgia	1	3	3	3	3
Mississippi	1	1	2		3
Nevada	1	3	3	2	1
Oregon	1	2	3	3	3
South Carolina	1	2	2	2	2
Texas	1	3	2	3	2
Utah	1	2	2	2	2

Level of importance:
1 = very important
2 = moderately important

3 = less important

Table B.5. Typical Cost Information

			With	With
Agency	Mix Type	Conventional	Liquid Anti-Strip	Lime Treatment
		a) HMA (\$/t	on)	
Arizona	Gap	41	N/A	42
	Open	45	N/A	46
	Dense	30	N/A	31
California	Gap		_	_
	Open	_		_
	Dense	50	_	55
Colorado	Gap	N/A	_	N/A
	Open	N/A	_	N/A
	Dense	30	30.50	31
FHWA	Gap	_	_	_
	Open	21.50	N/A	23
	Dense	24.50	N/A	26
Georgia	Gap	54	_	55
	Open	53	_	54
	Dense	35	_	36
Mississippi	Gap	_	_	_
	Open	_	_	_
	Dense	38	N/A	39.25
Nevada	Gap	_	_	_
	Open	42	_	46
	Dense	32	_	36
Oregon	Gap	_	_	_
	Open	19.50	20.00	21.00
	Dense	20.00	20.50	21.50
South Carolina	Gap	_	N/A	35
	Open	_	N/A	35
	Dense	35	N/A	29.50
Texas	Gap	40	40.50	41
	Open	50	50.50	51
	Dense	30	30.50	31
Utah	Gap	_	_	_
	Open	40	_	42
	Dense	30	_	32

 $\$/yd^2 \cong 0.0487 \times \$/ton (open)$ $\cong 0.0525 \times \$/ton (gap)$

 $\cong 0.0562 \times \$/ton (dense)$

Table. B.5. Typical Cost Information (continued)

			Cost/yd ²	
	Type of Treatment	10%	Average	90%
	b) Routine Main	ntenance (\$/yd ²)		
Arizona	Fog Seal	0.20	0.30	0.40
	Crack Seal	0.30	0.50	0.70
California – Dist 2	Crack Seal	0.20	0.30	0.40
	PM Chip Seal	1.00	1.50	2.00
Colorado	Crack Seal	0.30	0.50	0.70
FHWA	Fog Seal	0.20	0.30	0.40
	Crack Seal	0.30	0.50	0.70
Georgia	Crack Seal	0.30	0.50	0.70
Mississippi	Chip Seal	0.80	0.90	1.00
Nevada	Fog Seal	0.30	0.40	0.50
Oregon	Fog Seal	0.35	0.40	0.45
	Crack Seal	0.30	0.50	0.70
South Carolina	Crack Seal			
Texas	Crack Seal	0.20	0.30	0.40
Utah	Crack Seal	0.30	0.50	0.70
	c) Preventive Ma	intenance (\$/yd²)		
Arizona	Fog Seal	0.30	0.35	0.40
	Chip Seal	0.80	1.00	1.25
California	Crack Seal	0.20	0.30	0.40
	PM Ship Seal	1.00	1.50	2.00
Colorado	N/A	_	_	_
FHWA	Chip Seal	0.80	0.90	1.00
Georgia	Chip or Slurry Seal	0.80	1.00	1.25
Mississippi	Chip Seal	0.80	0.90	1.00
Nevada	Chip Seal	0.80	1.00	1.25
Oregon	Chip Seal	0.80	1.00	1.25
South Carolina	Chip or Slurry Seal	1.00		
Texas	Chip Seal	0.80	1.00	1.25
	AR Chip Seal	1.75	2.00	2.25
	Microsurfacing	1.00	1.20	1.40
Utah	Chip Seal	0.80	1.00	1.25
	1 inch OGFC	1.60	1.80	2.00

Table B.6. Life Expectancy of HMA Applications

		Lime Treated		Non-Lime Treated				
Agency	10%	Average	90%	10%	Average	90%		
		a)	Interstate					
Arizona	13	15	17	10	12	14		
California	8	10	12	6	8	10		
Colorado	8	10	12	6	8	10		
Georgia	7	10	15		N/A			
Mississippi	7	10	15		N/A			
Nevada*	7	8	9	3	4	7		
Oregon	10	15	20	8	12	15		
South Carolina	10	12	15		N/A			
Texas	8	12	15	7	10	12		
Utah	15	20	25	7	10	15		
		b) State at	nd U.S. Highv	vays				
Arizona	18	20	22	15	17	20		
California	8	10	12	6	8	10		
Colorado*	8	10	12		8			
FHWA	15	20	25		N/A			
Georgia	8	10	14		N/A			
Mississippi	12	15	17		N/A			
Nevada	10	12	14	6	8	10		
Oregon	15	17	20	8	12	15		
South Carolina	8	10	12		N/A			
Texas	10	12	15	8	10	12		
Utah	15	20	25	7	10	15		
		c) Low	Volume Roa	ds				
Arizona	20	25	30	15	20	25		
California		N/A			N/A			
Colorado*	10	12	15	8	10	12		
FHWA	15	20	25		N/A			
Georgia	8	10	15	8	10	15		
Mississippi	12	15	17		N/A			
Nevada	18	20	22	12	15	18		
Oregon	15	20	25	7	10	15		
South Carolina	10	15	20		N/A			
Texas	8	12	15	7	10	15		
Utah	7	10	15	3	5	7		

^{*}Pavement preservation

Table B.7. Typical Maintenance and Rehabilitation Strategies Used – Lime Treated

Agency	Maintenance	Rehabilitation
	a) Interstate	
Arizona	Fog seals every 5 years	4 inch mill & fill plus 1 inch OGFC overlay every 15 years
California	Crack seal plus chip or slurry seal at 5-7 years	3 inch overlay over digouts every 10-15 years
Colorado	Crack seal at 5-7 years	2 inch mill & fill plus 2 inch overlay at 10-12 years
FHWA	N/A	N/A
Georgia	Crack seal at 7 years	2 inch mill & fill plus 1.5 inch overlay at 10 years
Mississippi	N/A	1.5 inch overlay every 10 years
Nevada	Fog seal as needed	2 inch overlay every 8 years
Oregon	Fog seal as needed	2 inch mill & fill plus 2 inch overlay at 15 years
South Carolina	N/A	2-4 inch mill & fill plus 2 inch overlay at 12 years
Texas	Crack seal prior to overlay	1.5-2.5 inch overlay every 10-15 years
Utah	1 inch OGFC every 5-7 years	2-3 inch mill & fill plus 2 inch overlay every 20 years
	b) State Highway	ys
Arizona	Fog seal/chip seal every 5 years	2 inch overlay every 20 years
California	Crack seal plus chip or slurry seal at 5-7 years	3 inch overlay over digouts every 10-15 years
Colorado	Crack seal at 5-7 years	2 inch overlay every 10-12 years
FHWA	Chip seal every 5-7 years	2 inch overlay every 10-15 years
Georgia	Crack seal at 8 years	1.5 inch overlay at 10 years
Mississippi	Chip seal as needed	1.5 inch overlay at 15 years
Nevada	Fog seal as needed	2 inch overlay every 12 years
Oregon	Chip seal every 8 years	2 inch mill & fill plus 2 inch overlay at 15-20 years
South Carolina	N/A	2 inch mill & fill plus 2 inch overlay at 10 years
Texas	Chip seal or microsurface every 5-7 years	1.5-2.5 inch overlay every 10-15 years
Utah	Chip seal or OGFC every 5-7 years	2 inch mill & fill plus 1.5 inch overlay every 20 years
	c) Local Roads	
Arizona	Fog seal/chip seal every 5 years	Chip seal to 2 inch overlay in 25 years
California	N/A	2 inch overlay over digouts every 10-15 years
Colorado	Crack seal at 5-7 years	2 inch overlay at 12-15 years
FHWA	Chip seal every 5-7 years	2 inch overlay at 10-15 years
Georgia	Crack seal at 7 years	1-1.5 inch overlay at 10 years
Mississippi	Chip seal as needed	1.5 inch overlay at 15 years
Nevada	Fog or chip seal as needed	2 inch overlay every 20 years
Oregon	Chip seal at 8 years	2 inch overlay at 20 years
South Carolina	N/A	Chip seal and/or 2 inch HMA overlay at 15 years
Texas	Chip seal every 5-7 years	1.5-2.5 inch overlay every 10-15 years
Utah	Chip seal or microsurfacing every 5-7 years	2 inch mill & fill plus 1.5 inch overlay every 20 years

Table B.8. Typical Maintenance and Rehabilitation Strategies Used – Non-Lime Treated

Agency	Maintenance	Rehabilitation
	a) Interstate	
Arizona	Fog seal every 5 years	4 inch mill & fill plus 1 inch overlay every 10- 12 years
California	Crack seal plus chip or slurry seal at 5-7 years	3 inch overlay over digouts every 8-12 years
Colorado	Crack seal at 3-5 years	2 inch mill & fill plus 2 inch overlay at 8 years
FHWA	N/A	N/A
Georgia	N/A	N/A
Mississippi	N/A	N/A
Nevada	N/A	N/A
Oregon	Fog seal as needed	Mill & fill plus 2 inch overlay at 12 years
South Carolina	N/A	N/A
Texas	Crack seal prior to overlay	1.5-2.5 inch overlay every 10-15 years
Utah	N/A	N/A
	b) State Highways	S
Arizona	Fog/chip seal every 5 years	Overlay every 17-20 years
California	Crack seal plus chip or slurry seal	3 inch overlay over digouts every 8-12 years
Colorado	Crack seal at 3-5 years	2 inch overlay at 8-10 years
FHWA	N/A	N/A
Georgia	N/A	N/A
Mississippi	N/A	N/A
Nevada	N/A	N/A
Oregon	Chip seal every 5-7 years	Mill & fills plus 2 inch overlay at 15 years
South Carolina	N/A	N/A
Texas	Chip seal or microsurfacing every 5-7 years	1.5-2.5 inch overlay every 10-15 years
Utah	N/A	N/A
	c) Local Roads	
Arizona	Fog/chip seal every 5 years	Chip seal/overlay in 20-22 years
California	N/A	2 inch overlay over digouts every 8-12 years
Colorado	Crack seal at 3-5 years	2 inch overlay at 10-12 years
FHWA	N/A	N/A
Georgia	Crack seal at 7 years	1.5 inch overlay in 10 years
Mississippi	N/A	N/A
Nevada	N/A	N/A
Oregon	Chip seal at 7 years	1.5 inch overlay at 15 years
South Carolina	N/A	N/A
Texas	Chip seal every 5-7 years	1.5-2.5 inch overlay every 10-15 years
Utah	N/A	N/A

Table B.9. Other Project Information

Agency	Interstate	State Highway	Local Roads
	a) Typical Project	Length (miles)	
Arizona	10	10	10
California	10	5-20	_
Colorado	3-5	< 10	3-5
FHWA	N/A	10	5
Georgia	2-10	2-10	0.2-20
Mississippi	3	1	_
Nevada	7-15	Up to 30	Up to 30
Oregon	10	10	4
South Carolina	7-10	5-7	_
Texas	5-10	5-10	Up to 30
Utah	10	5	5
	b) Lane Closure T	Time (hrs/day)	
Arizona	10	10	10
California	8-10	8-10	_
Colorado	7-10	8-10	8-10
FHWA	N/A	12	12
Georgia	9	9	N/A
Mississippi	24	8-10	_
Nevada	N/A	8-10	8-10
Oregon	8-10	8-10	8-10
South Carolina	8-10 (night time only)	8-10	8-10
Texas	8-10	8-10	8-10
Utah	2 lanes open in day/1 at night	8-10	8-10
	c) Lane Rental Fees	(\$/lane-mile-day)	
Arizona	Not used	Not used	Not used
California	Not used	Not used	Not used
Colorado	Not used	Not used	Not used
FHWA	Not used	Not used	Not used
Georgia	Not used	Not used	Not used
Mississippi	Not used	Not used	Not used
Nevada	Not used	Not used	Not used
Oregon	Not used	Not used	Not used
South Carolina	Not used	Not used	Not used
Texas	Not used	Not used	Not used
Utah	Not used	Not used	Not used

APPENDIX C Scenarios Evaluated

a) Interstates

Agency: ADOT Scenario: Lime-Treated

Traffic Level: Interstate – Rehab

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years	Estimated Cost, \$/yd ²			
		X	L	Н	\bar{X}	L	Н	
0	2 inch Mill & Fill + 1 inch OG Overlay	15	13	17	7.32	7.10	7.54	
1								
2								
3								
4			_					
5	Fog Seal	5	3	7	0.30	0.20	0.40	
6								
7				1				
8				1				
9	F C 1	-	2	7	0.20	0.20	0.40	
10	Fog Seal	5	3	/	0.30	0.20	0.40	
11								
13								
14								
15	2 inch Mill & Fill + 1 inch OG Overlay	15	13	17	7.32	7.10	7.54	
16	2 men vini ee i in - i men oo overlay	13	13	17	7.52	7.10	7.51	
17								
18								
19								
20	Fog Seal	5	3	7	0.30	0.20	0.40	
21								
22								
23								
24								
25	Fog Seal	5	3	7	0.30	0.20	0.40	
26								
27								
28								
29								
30	2 inch Mill and Fill + 1 inch OG Overlay	15	13	17	7.32	7.10	7.54	
31								
32								
33								
34								
35	Fog Seal	5	3	7	0.30	0.20	0.40	
36								
37								
38								
39		_		_	0.55	0.50		
40	Fog Seal	5	3	7	0.30	0.20	0.40	

Agency: ADOT Scenario: Non-Lime Treated

 $Traffic\ Level:\ \ Interstate-Rehab$

	Maintanana and Balakilitatian Stratana	Expec	ted Life,	Years	Estimated Cost, \$/yd ²			
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathbf{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н	
0	2 inch Mill and Fill + 1 inch OG Overlay	13	10	15	7.16	6.94	7.37	
1								
2								
3								
4								
5	Fog Seal	5	3	7	0.30	0.20	0.40	
6								
7								
8								
9								
10	Fog Seal	5	3	7	0.30	0.20	0.40	
11								
12								
13	2 inch Mill and Fill + 1 inch OG Overlay	13	10	15	7.16	6.94	7.37	
14								
15								
16								
17								
18	Fog Seal	5	3	7	0.30	0.20	0.40	
19								
20								
21								
22		_						
23	Fog Seal	5	3	7	0.30	0.20	0.40	
24								
25		- 12	4.0	4	5 4 4	604		
26	2 inch Mill and Fill + 1 inch OG Overlay	13	10	15	7.16	6.94	7.37	
27								
28								
29								
30	Eag Soal	5	3	7	0.30	0.20	0.40	
31	Fog Seal	3	3	/	0.30	0.20	0.40	
33		+			+			
34					+			
35					+	+		
36	Fog Seal	5	3	7	0.30	0.20	0.40	
37	1 og ocai	3	3	/	0.30	0.20	0.40	
38								
39	2 inch Mill and Fill + 1 inch OG Overlay	13	10	15	7.16	6.94	7.37	
40	2 men wini and rin + 1 men oo overlay	13	10	13	7.10	0.74	1.31	

Agency: Caltrans Scenario: Lime-Treated

 $Traffic\ Level:\ \ Interstate-Rehab$

	Maintenance and Rehabilitation Strategy	Expect	Expected Life, Years			Estimated Cost, \$/yd ²			
Year	Maintenance and Renabilitation Strategy	X	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	3 inch Overlay	10	8	12	9.27	8.99	9.55		
1									
2									
3									
4									
5	Crack Seal + Chip Seal	5	3	7	1.80	1.20	2.40		
6									
7									
8									
9									
10	3 inch Overlay	10	8	12	9.27	8.99	9.55		
11									
12									
13									
14									
15	Crack seal + Chip Seal	5	3	7	1.80	1.20	2.40		
16									
17									
18									
19									
20	3 inch overlay	10	8	12	9.27	8.99	9.55		
21									
22									
23									
24									
25	Crack seal + Chip Seal	5	3	7	1.80	1.20	2.40		
26									
27									
28									
29									
30	3 inch overlay	10	8	12	9.27	8.99	9.55		
31									
32									
33									
34									
35	Crack seal + Chip seal	5	3	7	1.80	1.20	2.40		
36									
37									
38									
39									
40	3 inch overlay	10	8	12	9.27	8.99	9.55		

Agency: Caltrans Scenario: Non-Lime Treated

Traffic Level: Interstate -- Rehab

	Maintenance of Dalah Trades Courtes	Expec	ted Life,	Years	Estimated Cost, \$/yd ²			
Year	Maintenance and Rehabilitation Strategy	$\overline{\mathbf{X}}$	L	Н	X	L	Н	
0	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	
1								
2								
3								
4	Crack seal + Chip seal	4	3	5	1.80	1.20	2.40	
5								
6								
7								
8	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	
9								
10								
11		+ .	2	-	1.00	1.20	2.40	
12	Crack seal + Chip seal	4	3	5	1.80	1.20	2.40	
13								
14		_						
16	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	
17	3 inch Overlay + digouts	8	0	10	8.43	8.18	8.08	
18								
19								
20	Crack seal + Chip seal	4	3	5	1.80	1.20	2.40	
21	Cruck Scar - Chip Scar	+	3	3	1.00	1.20	2.10	
22								
23								
24	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	
25	, ,							
26								
27								
28	Crack seal + Chip seal	4	3	5	1.80	1.20	2.40	
29								
30								
31								
32	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	
33								
34								
35								
36	Crack seal + Chip seal	4	3	5	1.80	1.20	2.40	
37								
38								
39								
40	3 inch Overlay + digouts	8	6	10	8.43	8.18	8.68	

Agency: Colorado Scenario: Lime-Treated

Vaan	Maintenance and Rehabilitation Strategy	Expect	Expected Life, Years			Estimated Cost, \$/yd ²			
Year	Maintenance and Renabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	2 inch Mill & Fill + 2 inch Overlay	10	8	12	8.57	8.31	8.83		
1									
2									
3									
4									
5	Crack Seal	5	3	7	0.50	0.30	0.70		
6									
7									
8									
9									
10	2 inch Mill & Fill + 2 inch Overlay	10	8	12	8.57	8.31	8.83		
11									
12									
13									
14									
15	Crack Seal	5	3	7	0.50	0.30	0.70		
16									
17									
18									
19									
20	2 inch Mill & Fill + 2 inch Overlay	10	8	12	8.57	8.31	8.83		
21									
22									
23									
24									
25	Crack Seal	5	3	7	0.50	0.30	0.70		
26									
27									
28									
29									
$\overline{}$	2 inch Mill & Fill + 2 inch Overlay	10	8	12	8.57	8.31	8.83		
31									
32									
33									
34									
35	Crack Seal	5	3	7	0.50	0.30	0.70		
36									
37									
38									
39									
40	2 inch Mill & Fill + 2 inch Overlay	10	8	12	8.57	8.31	8.83		

Agency: Colorado Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy	Expec	Expected Life, Years			Estimated Cost, \$/yd ²		
ı caı		$\bar{\mathrm{X}}$	L	Н	$\bar{\mathrm{X}}$	L	Н	
0	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	
1								
2								
3								
4	Crack Seal	4	2	6	0.50	0.30	0.70	
5								
6								
7								
8	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	
9								
10								
11								
12	Crack Seal	4	2	6	0.50	0.30	0.70	
13								
14								
15								
16	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	
17								
18								
19								
20	Crack Seal	4	2	6	0.50	0.30	0.70	
21								
22								
23								
24	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	
25								
26								
27								
28	Crack Seal	4	2	6	0.50	0.30	0.70	
29								
30								
31								
32	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	
33								
34								
35								
36	Crack Seal	4	2	6	0.50	0.30	0.70	
37								
38								
39								
40	2 inch Mill & Fill + 2 inch Overlay	8	6	10	8.34	8.09	8.59	

Agency: Georgia Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy	Expec	Expected Life, Years			Estimated Cost, \$/yd ²			
		X	L	Н	X	L	Н		
0	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	8.68	8.42	8.94		
1									
2									
3									
4									
5									
6									
7	Crack Seal	3	1	5	0.50	0.30	0.70		
8									
9									
10	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	8.68	8.42	8.94		
11									
12									
13									
14									
15									
16				_	0.70	0.00	^ - ^		
17	Crack Seal	3	1	5	0.50	0.30	0.70		
18									
19					0.60	0.40	0.04		
20	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	8.68	8.42	8.94		
21									
22									
23									
24									
25 26									
27	Creat Seel	3	1	5	0.50	0.20	0.70		
28	Crack Seal	3	1	3	0.50	0.30	0.70		
29									
30	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	8.68	8.42	8.94		
31	2 mon with 6 1 m + 1.5 men Overlay	10		1.0	0.00	0.72	0.74		
32									
33						+			
34						+			
35						+			
36						+			
37	Crack Seal	3	1	5	0.50	0.30	0.70		
38	- Caron Sour	3			0.50	0.50	3.70		
39						+			
40	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	8.68	8.42	8.94		

Agency: Georgia Scenario: Non-Lime Treated (Not Used)

	Maintenance and Rehabilitation Strategy	Expec	Expected Life, Years			Estimated Cost, \$/yd ²			
Year		$\bar{\mathbf{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		
1									
2									
3									
4									
5	Crack seal	3	1	5	0.50	0.30	0.70		
6									
7			_						
8	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		
9									
10									
11									
12	0.1.1	2	1		0.50	0.20	0.70		
13	Crack seal	3	1	5	0.50	0.30	0.70		
14 15									
16	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		
17	2 inch Mill & Fill + 1.5 inch Overlay	8	3	12	8.48	8.22	8.73		
18		+							
19									
20									
21	Crack seal	3	1	5	0.50	0.30	0.70		
22	Cruck Sear		1		0.50	0.50	0.70		
23									
24	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		
25	,								
26									
27									
28									
29	Crack seal	3	1	5	0.50	0.30	0.70		
30									
31									
32	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		
33									
34									
35									
36									
37	Crack seal	3	1	5	0.50	0.30	0.70		
38									
39									
40	2 inch Mill & Fill + 1.5 inch Overlay	8	5	12	8.48	8.22	8.73		

Agency: Mississippi Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy	Expect	Expected Life, Years			Estimated Cost, \$/yd ²			
		$\bar{\mathbf{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	1.5 inch Overlay	10	7	15	3.31	3.21	3.41		
1									
2									
3									
4									
5									
6									
7									
8									
9									
10	1.5 inch Overlay	10	7	15	3.31	3.21	3.41		
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	1.5 inch Overlay	10	7	15	3.31	3.21	3.41		
21									
22									
23									
24									
25									
26									
27									
28									
29									
	1.5 inch Overlay	10	7	15	3.31	3.21	3.41		
31									
32									
33									
34									
35									
36									
37									
38									
39									
40	1.5 inch Overlay	10	7	15	3.31	3.21	3.41		

Agency: Mississippi Scenario: Non-Lime Treated (Not Used)

Vann	Maintenance and Rehabilitation Strategy	Expec	Expected Life, Years			Estimated Cost, \$/yd ²			
Year		X	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		
1									
2									
3									
4									
5									
6									
7									
8	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		
9									
10									
11									
12									
13									
14									
15									
16	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		
17									
18									
19									
20									
21									
22									
23									
24	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		
25									
26									
27									
28									
29									
30									
31	1.5 in als Occadent	0		10	2.20	2.10	2.20		
32	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		
33									
34									
35									
36									
37									
38									
39	1.5 inah Ovarlay	0		10	2 20	2 10	2 20		
40	1.5 inch Overlay	8	5	12	3.20	3.10	3.30		

Agency: Nevada Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estin	nated Cost, S	\$/yd ²
1 cai	Maintenance and Renadmitation Strategy	$\bar{\mathbf{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	8	7	9	4.05	3.93	4.17
1							
2							
3							
4							
5							
6							
7							
8	2 inch Overlay	8	7	9	4.05	3.93	4.17
9							
10							
11							
12							
13							
14							
15							
16	2 inch Overlay	8	7	9	4.05	3.93	4.17
17							
18							
19							
20							
21							
22							
23							
24	2 inch Overlay	8	7	9	4.05	3.93	4.17
25							
26							
27							
28							
29							
30							
31		_					
32	2 inch Overlay	8	7	9	4.05	3.93	4.17
33							
34							
35							
36							
37							
38							
39							
40	2 inch Overlay	8	7	9	4.05	3.93	4.17

Agency: Nevada Scenario: Non-Lime Treated (Not Used)

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years		ated Cost, \$	
1 Cai	Maintenance and Renadmenton Strategy	$\bar{\mathrm{X}}$	L	Н	X	L	Н
0	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
1							
2							
3							
4	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
5							
6							
7							
8	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
9							
10							
11							
12	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
13							
14							
15							
16	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
17							
18							
19							
20	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
21							
22							
23							
24	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
25							
26							
27							
28	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
29							
30							
31							
32	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
33							
34							
35							
36	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71
37							
38							
39							
40	2 inch Overlay + digouts	4	3	7	3.60	3.49	3.71

Agency: Oregon Scenario: Lime-Treated

V	Maintanana and Dahahilitation Cometana	Expect	ted Life,	Years	Estimated Cost,		/yd ²
Year	Maintenance and Rehabilitation Strategy	\overline{X}	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Mill & Fill + 2 inch Overlay	15	10	20	6.43	6.24	6.62
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	Fog Seal	5	3	7	0.40	0.35	0.45
11							
12							
13							
14							
15	2 inch Mill & Fill + 2 inch Overlay	15	10	20	6.43	6.24	6.62
16							
17							
18							
19							
20							
21							
22							
23							
24							
25	Fog Seal	5	3	7	0.40	0.35	0.45
26							
27							
28							
29							
	2 inch Mill & Fill + 2 inch Overlay	15	10	20	6.43	6.24	6.62
31							
32							
33							
34							
35							
36							
37							
38							
39					2		
40	Fog Seal	5	3	7	0.40	0.35	0.45

Agency: Oregon Scenario: Non-Lime Treated

V	Maintanana and Dahahilitatian Churchana	Expec	ted Life,	Years	Estima	ated Cost, \$	/yd ²
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	X	L	Н
0	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28
1							
2							
3							
4							
5							
6							
7	Fog seal	5	3	7	0.40	0.35	0.45
8							
9							
10							
11							
12	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28
13							
14							
15							
16							
17							
18							
19	Fog seal	5	3	7	0.40	0.35	0.45
20							
21							
22							
23							
24	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28
25							
26							
27							
28							
29					+		
30	Pro col				0.40	0.25	0.45
31	Fog seal	5	3	7	0.40	0.35	0.45
32							
33						+	
34						+	
35	2 inch Mill & Fill + 2 inch Overlay	12	0	1.5	6 10	5.02	(20
36	2 men wini & fin + 2 men Overlay	12	8	15	6.10	5.92	6.28
37						+	
						+	
39							
40							

Agency: South Carolina Scenario: Lime-Treated

	Maintenance and Debakilitation Chapters	Expect	ted Life,	Years	Estima	ated Cost, \$	5/yd ²
Year	Maintenance and Rehabilitation Strategy	$\overline{\mathbf{X}}$	L	Н	X	L	Н
0	2 inch Mill & Fill + 2 inch Overlay	12	10	15	9.69	9.40	9.98
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12	2 inch Mill & Fill + 2 inch Overlay	12	10	15	9.69	9.40	9.98
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23	2: 1369 0 79 22: 1 0 1	12	10	1.5	0.60	0.40	0.00
24	2 inch Mill & Fill + 2 inch Overlay	12	10	15	9.69	9.40	9.98
25							
26 27							
28							
29							
30							
32							
33					+		
34							
35							
36	2 inch Mill & Fill + 2 inch Overlay	12	10	15	9.69	9.40	9.98
37		12			2.02	2	7.70
38							
39							
40							

Agency: South Carolina Scenario: Non-Lime Treated (Not Used)

Year	Maintenance and Rehabilitation Strategy		ted Life,			ated Cost, \$	
		$\bar{\mathrm{X}}$	L	Н	X	L	Н
0	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.47	9.18	9.75
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.47	9.18	9.75
11							
12							
13							
15							
16							
17							
18							
19							
20	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.47	9.18	9.75
21							
22							
23							
24							
25							
26							
27							
28							
29							
30	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.47	9.18	9.75
31							
32							
33							
34							
35							
36							
37							
38							
39							
40	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.47	9.18	9.75

Agency: Texas DOT Scenario: Lime-Treated

	Maintenance and Dahahilitation Countries	Expec	ted Life,	Years	Estim	ated Cost, \$	5/yd ²
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	12	8	15	3.48	3.38	3.58
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	Crack Seal	2	1	3	0.30	0.20	0.40
11							
12	2 inch Overlay	12	8	15	3.48	3.38	3.58
13							
14							
15							
16							
17							
18							
19							
20							
21							
22	Crack Seal	2	1	3	0.30	0.20	0.40
23							
24	2 inch Overlay	12	8	15	3.48	3.38	3.58
25							
26							
27							
28							
29				-			
30							
31							
32							
33	C., 1 C., 1		1		0.20	0.20	0.40
34	Crack Seal	2	1	3	0.30	0.20	0.40
35	2:-10:-1	10		1.5	2.40	2.20	2.50
36	2 inch Overlay	12	8	15	3.48	3.38	3.58
37							
38							
39							
40							

Agency: Texas DOT Scenario: Non-Lime Treated

V	Military and D. L. L. Tradius Courts	Expect	ted Life,	Years	Estim	ated Cost, S	\$/yd ²
Year	Maintenance and Rehabilitation Strategy	X	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	10	7	12	3.37	3.27	3.47
1							
2							
3							
4							
5							
6							
7							
8	Crack Seal	2	1	3	0.30	0.20	0.40
9							
10	2 inch Overlay	10	7	12	3.37	3.27	3.47
11							
12							
13							
14							
15							
16							
17							
18	Crack Seal	2	1	3	0.30	0.20	0.40
19							
20	2 inch Overlay	10	7	12	3.37	3.27	3.47
21							
22							
23							
24							
25							
26							
27							
28	Crack Seal	2	1	3	0.30	0.20	0.40
29							
	2 inch Overlay	10	7	12	3.37	3.27	3.47
31							
32							
33							
34							
35							
36							
37							
38	Crack Seal	2	1	3	0.30	0.20	0.40
39							
40	2 inch Overlay	10	7	12	3.37	3.27	3.47

Agency: Utah Scenario: Lime-Treated

V	Maintagana and Dahakilitation Charters	Expect	ted Life,	Years	Estim	ated Cost, \$, \$/yd ²	
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathrm{X}}$	L	Н	
0	2 inch Mill & Fill + 2 inch Overlay	20	15	25	8.79	8.53	9.05	
1								
2								
3								
4								
5	1 inch OGFC	5	3	7	2.04	1.98	2.10	
6								
7								
8								
9								
10	1 inch OGFC	5	3	7	2.04	1.98	2.10	
11								
12								
13								
14								
15	1 inch OGFC	5	3	7	2.04	1.98	2.10	
16								
17								
18								
19								
20	2 inch Mill & Fill + 2 inch Overlay	20	15	25	8.79	8.53	9.05	
21								
22								
23								
24	4: 1.0000				201	1.00	2.10	
25	1 inch OGFC	5	3	7	2.04	1.98	2.10	
26								
27								
28					-			
29	1 inch OGFC	5	3	7	2.04	1.98	2.10	
31	1 IIICII OUI'C	3	3	/	∠.∪4	1.70	2.10	
32								
33								
34								
35	1 inch OGFC	5	3	7	2.04	1.98	2.10	
36	1 IIICII OUI'C	3	3	/	∠.∪4	1.70	2.10	
37								
38								
39								
40	2 inch Mill & Fill + 2 inch Overlay	20	15	25	8.79	8.53	9.05	
40	2 men will & fill + 2 men Overlay	20	13	23	0.79	0.33	9.03	

Agency: Utah Scenario: Non-Lime Treated (Not Used)

	Maintanana and Bababilitation Courters	Expect	ted Life,	Years	Estim	ated Cost, \$	S/yd ²
Year	Maintenance and Rehabilitation Strategy	X	L	Н	X	L	Н
0	2 inch Mill & Fill + 2 inch Overlay	10	7	15	8.34	8.09	8.59
1							
2							
3							
4							
5	1 inch OGFC	5	3	7	1.95	1.89	2.01
6							
7							
8							
9		10			0.24	0.00	0.50
10	2 inch Mill & Fill + 2 inch Overlay	10	7	15	8.34	8.09	8.59
11							
12							
14 15	1 inch OGFC	5	3	7	1.95	1.89	2.01
16	1 IIICII OGFC	3	3	/	1.93	1.89	2.01
17							
18							
19							
20	2 inch Mill & Fill + 2 inch Overlay	10	7	15	8.34	8.09	8.59
21		10	,	- 10	0.5 .	0.03	0.07
22							
23							
24							
25	1 inch OGFC	5	3	7	1.95	1.89	2.01
26							
27							
28							
29							
30	2 inch Mill & Fill + 2 inch Overlay	10	7	15	8.34	8.09	8.59
31							
32							
33							
34							
35	1 inch OGFC	5	3	7	1.95	1.89	2.01
36							
37							
38							
39							
40	2 inch Mill & Fill + 2 inch Overlay	10	7	15	8.34	8.09	8.59

b) State and Local Highways

Agency: ADOT Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy		ted Life,			ated Cost, \$	
		$\bar{\mathbf{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	20	18	22	3.48	3.38	3.58
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	Chip Seal	10	7	12	1.00	0.80	1.25
11							
12							
13							
14							
15							
16							
17							
18							
19							
20	2 inch Overlay	20	18	22	3.48	3.38	3.58
21							
22							
23							
24							
25							
26							
27							
28							
29							
30	Chip Seal	10	7	12	1.00	0.80	1.25
31							
32							
33							
34							
35							
36							
37							
38							
39							
40	2 inch Overlay	20	18	22	3.48	3.38	3.58

Agency: ADOT Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years		ated Cost, \$	/yd²
ı cai		X	L	Н	X	L	Н
0	2 inch Overlay	17	15	20	3.37	3.27	3.47
1							
2							
3							
4							
5							
6							
7	Chip Seal	7	5	9	1.00	0.80	1.25
8							
9							
10							
11							
12							
13							
14	Chip Seal	7	5	9	1.00	0.80	1.25
15							
16							
17	2 inch Overlay	17	15	20	3.37	3.27	3.47
18							
19							
20							
21							
22							
23	Olive Cont	7	-	0	1.00	0.00	1.25
24	Chip Seal	7	5	9	1.00	0.80	1.25
25 26							
27							
28							
29							
30							
31	Chip Seal	7	5	9	1.00	0.80	1.25
32	City Gour	/	J	,	1.00	0.00	1.23
33							
34	2 inch Overlay	17	15	20	3.37	3.27	3.47
35	- 2 3 . v.i.m.j	17	1.5	20	3.37	3.27	3.17
36							
37							
38							
39							
40							

Agency: Caltrans Scenario: Lime Treated

	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estim	ated Cost, \$	S/yd ²
Year	Maintenance and Renabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	3 inch Overlay	10	8	12	9.27	8.99	9.55
1							
2							
3							
4							
5	Chip Seal	5	3	7	1.50	1.00	2.00
6							
7							
8							
9							
10	Crack seal + 3 inch Overlay	10	8	12	9.57	9.19	9.95
11							
12							
13							
14							
15	Chip Seal	5	3	7	1.50	1.00	2.00
16							
17							
18							
19							
20	Crack seal + 3 inch Overlay	10	8	12	9.57	9.19	9.95
21							
22							
23							
24							
25	Chip Seal	5	3	7	1.50	1.00	2.00
26							
27							
28							
29							
30	Crack seal + 3 inch Overlay	10	8	12	9.57	9.19	9.95
31							
32							
33							
34							
35	Chip Seal	5	3	7	1.50	1.00	2.00
36							
37							
38							
39							
40	Crack seal + 3 inch Overlay	10	8	12	9.57	9.19	9.95

Agency: Caltrans Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estima	ited Cost, \$	/yd ²
i cai	Maintenance and Renaomitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	3 inch Overlay	8	6	10	8.43	8.18	8.68
1							
2							
3							
4	Chip Seal	4	2	6	1.50	1.00	2.00
5							
6							
7							
8	Crack Seal + 3 inch Overlay	8	6	10	8.73	8.38	9.08
9							
10							
11					1.50	1.00	• • • •
12	Chip Seal	4	2	6	1.50	1.00	2.00
13							
14							
15	C., 1 C., 1 - 2 - 4 C., -1	0	(10	0.72	0.20	0.00
16	Crack Seal + 3 inch Overlay	8	6	10	8.73	8.38	9.08
17							
18 19							
20	Chip Seal	4	2	6	1.50	1.00	2.00
21	Chip Scal	4		0	1.50	1.00	2.00
22							
23							
24	Crack Seal + 3 inch Overlay	8	6	10	8.73	8.38	9.08
25	Clark cours of mon overlay			10	0.75	0.50	7.00
26							
27							
28	Chip Seal	4	2	6	1.50	1.00	2.00
29	-						
30							
31							
32	Crack Seal + 3 inch Overlay	8	6	10	8.73	8.38	9.08
33							
34							
35							
36	Chip Seal	4	2	6	1.50	1.00	2.00
37							
38							
39							
40	Crack Seal + 3 inch Overlay	8	6	10	8.73	8.38	9.08

Agency: Colorado Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estima	ated Cost, \$	S/yd ²
i cai	Maintenance and Renadmitation Strategy	X	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	10	8	12	3.48	3.38	3.58
1							
2							
3							
4							
5							
6							
7	Crack Seal	3	2	5	0.50	0.30	0.70
8							
9			_				
10	2 inch Overlay	10	8	12	3.48	3.38	3.58
11							
12							
13							
14							
15							
16	0.10.1	2			0.50	0.20	0.70
17	Crack Seal	3	2	5	0.50	0.30	0.70
18							
19	2: 10 1	10	0	10	2.40	2.20	2.50
20	2 inch Overlay	10	8	12	3.48	3.38	3.58
21							
23					-		
24							
25							
26							
27	Crack Seal	3	2	5	0.50	0.30	0.70
28	Cruck Soul				0.50	0.50	0.70
29							
30	2 inch Overlay	10	8	12	3.48	3.38	3.58
31		-					
32					<u> </u>		
33					<u> </u>		
34							
35							
36							
37	Crack Seal	3	2	5	0.50	0.30	0.70
38							
39							
40	2 inch Overlay	10	8	12	3.48	3.38	3.58

Agency: Colorado Scenario: Non-Lime Treated

	Maintanana and Dahahilitatian Stratage	Expec	ted Life,	Years	Estima	ated Cost, \$	/yd²
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathrm{X}}$	L	Н
0	2 inch Overlay	8	6	10	3.37	3.27	3.47
1							
2							
3							
4							
5	Crack Seal	3	1	5	0.50	0.30	0.70
6							
7							
8	2 inch Overlay	8	6	10	3.37	3.27	3.47
9							
10							
11							
12							
13	Crack Seal	3	1	5	0.50	0.30	0.70
14							
15							
16	2 inch Overlay	8	6	10	3.37	3.27	3.47
17							
18							
19							
20							
21	Crack Seal	3	1	5	0.50	0.30	0.70
22							
23							
24	2 inch Overlay	8	6	10	3.37	3.27	3.47
25							
26							
27							
28							
29	Crack Seal	3	1	5	0.50	0.30	0.70
30							
31							
32	2 inch Overlay	8	6	10	3.37	3.27	3.47
33							
34							
35							
36							
37	Crack Seal	3	1	5	0.50	0.30	0.70
38							
39							
40	2 inch Overlay	8	6	10	3.37	3.27	3.47

Agency: FHWA Scenario: Lime-Treated

	Mistage and Deletification Street	Expect	ted Life,	Years	Estimated Cost, \$/yd ²			
Year	Maintenance and Rehabilitation Strategy	$\overline{\mathbf{X}}$	L	Н	X	L	Н	
0	2 inch Overlay	12	10	15	2.92	2.83	3.01	
1								
2								
3								
4								
5								
6	Chip Seal	6	5	7	0.90	0.80	1.00	
7								
8								
9								
10								
11								
12	2 inch Overlay	12	10	15	2.92	2.83	3.01	
13								
14								
15								
16								
17								
18	Chip Seal	6	5	7	0.90	0.80	1.00	
19								
20								
21								
22								
23								
24	2 inch Overlay	12	10	15	2.92	2.83	3.01	
25								
26								
27								
28								
29								
30	Chip Seal	6	5	7	0.90	0.80	1.00	
31								
32								
33								
34								
35								
36	2 inch Overlay	12	10	15	2.92	2.83	3.01	
37								
38								
39								
40								

Agency: FHWA Scenario: Non-Lime Treated (Not Used)

Vaar	Maintanance and Dahahilitation Strategy	Expec	ted Life,	Years	Estim	ated Cost, \$	S/yd ²
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathrm{X}}$	L	Н
0	2 inch overlay	10	8	12	2.75	2.67	2.83
1							
2							
3							
4							
5	Chip Seal	5	3	7	0.90	0.80	1.00
6							
7							
8							
9							
10	2 inch overlay	10	8	12	2.75	2.67	2.83
11							
12							
13							
14							
15	Chip Seal	5	3	7	0.90	0.80	1.00
16							
17							
18							
19							
20	2 inch overlay	10	8	12	2.75	2.67	2.83
21							
22							
23							
24							
25	Chip Seal	5	3	7	0.90	0.80	1.00
26							
27							
28							
29							
30	2 inch overlay	10	8	12	2.75	2.67	2.83
31							
32							
33							
34							
35	Chip Seal	5	3	7	0.90	0.80	1.00
36							
37							
38							
39							
40	2 inch overlay	10	8	12	2.75	2.67	2.83

Agency: Georgia Scenario: Lime-Treated

Year	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estim	ated Cost, \$	/yd²
i cai	Maintenance and Renaumtation Strategy	X	L	Н	$\bar{\mathbf{X}}$	L	Н
0	1.5 inch Overlay	10	8	14	3.03	2.94	3.12
1							
2							
3							
4							
5							
6							
7							
8	Crack Seal	2	1	3	0.50	0.30	0.70
9							
10	1.5 inch Overlay	10	8	14	3.03	2.94	3.12
11							
12							
13							
14							
15							
16							
17							
18	Crack Seal	2	1	3	0.50	0.30	0.70
19							
20	1.5 inch Overlay	10	8	14	3.03	2.94	3.12
21							
22							
23							
24							
25							
26							
27							
28	Crack Seal	2	1	3	0.50	0.30	0.70
29							
30	1.5 inch Overlay	10	8	14	3.03	2.94	3.12
31							
32							
33							
34							
35							
36							
37							
38	Crack Seal	2	1	3	0.50	0.30	0.70
39							
40	1.5 inch Overlay	10	8	14	3.03	2.94	3.12

Agency: Georgia Scenario: Non-Lime Treated (Not Used)

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years	Estimated Cost, \$/yd ²			
1 Cai		$\bar{\mathrm{X}}$	L	Н	X	L	Н	
0	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	
1								
2								
3								
4								
5								
6	Crack Seal	2	1	3	0.50	0.30	0.70	
7								
8	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	
9								
10								
11								
12								
13								
14	Crack Seal	2	1	3	0.50	0.30	0.70	
15								
16	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	
17								
18								
19								
20								
21					0.70	0.20	0.50	
22	Crack Seal	2	1	3	0.50	0.30	0.70	
23				1.0	205	206	2.04	
24	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	
25								
26								
27								
28					+			
29	C., 1 C. 1	2	1	2	0.50	0.20	0.70	
30	Crack Seal	2	1	3	0.50	0.30	0.70	
31	15 11. 01.	0	(10	2.05	2.06	2.04	
32	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	
33					+			
35								
36								
37	Const. Cont		1	2	0.50	0.20	0.70	
38	Crack Seal	2	1	3	0.50	0.30	0.70	
39	15 - 10 - 1			10	2.05	2.06	2.04	
40	1.5 inch Overlay	8	6	10	2.95	2.86	3.04	

Agency: Mississippi Scenario: Lime-Treated

	Maintenance and Debabilitation Countries	Expec	ted Life,	Years	Estima	ated Cost, \$	/yd ²
Year	Maintenance and Rehabilitation Strategy	X	L	Н	$\bar{\mathbf{X}}$	L	Н
0	1.5 inch Overlay	15	12	17	3.31	3.21	3.41
1							
2							
3							
4							
5							
6							
7							
8	Chip Seal	8	6	10	0.90	0.80	1.00
9							
10							
11							
12							
13							
14							
15	1.5 inch Overlay	15	12	17	3.31	3.21	3.41
16							
17							
18							
19							
20							
21							
22		_					
23	Chip Seal	8	6	10	0.90	0.80	1.00
24							
25							
26							
27					-		
28					+	+	
29	1.5 insh Overday	1.5	10	1.7	2 21	2 21	2 41
30	1.5 inch Overlay	15	12	17	3.31	3.21	3.41
31							
33					+	+	
35					+	+	
36					+	+	
37					+	+	
38	Chip Seal	8	6	10	0.90	0.80	1.00
39	Chip scal	8	O	10	0.90	0.80	1.00
40					+	+	
40							

Agency: Mississippi Scenario: Non-Lime Treated (Not Used)

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years		ated Cost, \$	
ı cai		$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	1.5 inch Overlay	13	10	16	3.20	3.10	3.30
1							
2							
3							
4							
5							
6							
7	Chip Seal	7	5	9	0.90	0.80	1.00
8							
9							
10							
11							
12							
13	1.5 inch Overlay	13	10	16	3.20	3.10	3.30
14							
15							
16							
17							
18							
19							
20	Chip Seal	7	5	9	0.90	0.80	1.00
21							
22							
23							
24							
25							
26	1.5 inch Overlay	13	10	16	3.20	3.10	3.30
27							
28							
29							
30							
31							
32							
33	Chip Seal	7	5	9	0.90	0.80	1.00
34							
35							
36							
37							
38							
39	1.5 inch Overlay	13	10	16	3.20	3.10	3.30
40							

Agency: Nevada Scenario: Lime-Treated

	Maintenance and Rehabilitation Strategy	Expec	ted Life,	Years	Estima	ated Cost, \$	/yd ²
Year	Maintenance and Renabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	12	10	14	4.05	3.93	4.17
1							
2							
3							
4	Fog Seal	4	3	5	0.40	0.30	0.50
5							
6							
7							
8	Fog Seal	4	3	5	0.40	0.30	0.50
9							
10							
11							
12	2 inch Overlay	12	10	14	4.05	3.93	4.17
13							
14							
15	P. 0.1		2	-	0.40	0.20	0.50
16	Fog Seal	4	3	5	0.40	0.30	0.50
17							
18							
19 20	F C1	4	3	5	0.40	0.30	0.50
21	Fog Seal	4	3	3	0.40	0.30	0.30
22							
23							
24	2 inch Overlay	12	10	14	4.05	3.93	4.17
25	2 men overlay	12	10	11	1.03	3.73	1.17
26							
27							
28	Fog Seal	4	3	5	0.40	0.30	0.50
29							
30							
31							
32	Fog Seal	4	3	5	0.40	0.30	0.50
33							
34							
35							
36	2 inch Overlay	12	10	14	4.05	3.93	4.17
37							
38							
39							
40	Fog Seal	4	3	5	0.40	0.30	0.50

Agency: Nevada Scenario: Non-Lime Treated (Not Used)

	Maintenance and Bakabilitation Strategy	Expec	ted Life,	Years	Estim	ated Cost, \$	S/yd ²
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н
0	2 inch Overlay	8	6	10	3.60	3.49	3.71
1							
2							
3							
4	Fog Seal	4	3	5	0.40	0.30	0.50
5							
6							
7							
8	2 inch Overlay	8	6	10	3.60	3.49	3.71
9							
10							
11					0.40	0.00	0.50
12	Fog Seal	4	3	5	0.40	0.30	0.50
13							
14 15							
16	2 inch Organian	8	6	10	3.60	3.49	3.71
17	2 inch Overlay	8	0	10	3.00	3.49	3./1
18							
19							
20	Fog Seal	4	3	5	0.40	0.30	0.50
21	105 5001	<u>'</u>	3	3	0.10	0.50	0.50
22							
23							
24	2 inch Overlay	8	6	10	3.60	3.49	3.71
25	,						
26							
27							
28	Fog Seal	4	3	5	0.40	0.30	0.50
29							
30							
31							
32	2 inch Overlay	8	6	10	3.60	3.49	3.71
33							
34							
35							
36	Fog Seal	4	3	5	0.40	0.30	0.50
37							
38							
39							
40	2 inch Overlay	8	6	10	3.60	3.49	3.71

Agency: Oregon Scenario: Lime-Treated

	Maintanana and Bababilitation Strategy	Expect	ed Life,	Years	Estimated Cost, \$/yd ²			
Year	Maintenance and Rehabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н	
0	2 inch Mill & Fill + 2 inch Overlay	17	15	20	6.43	6.24	6.62	
1								
2								
3								
4								
5								
6								
7								
8				- 44	1.00	0.00		
9	Chip Seal	9	6	11	1.00	0.80	1.25	
10			1			+		
11								
12								
13								
15						+		
16								
17	2 inch Mill & Fill + 2 inch Overlay	17	15	20	6.43	6.24	6.62	
18	2 men wini & i iii + 2 men Overlay	17	13	20	0.43	0.24	0.02	
19								
20						+		
21								
22								
23								
24								
25								
26	Chip Seal	9	6	11	1.00	0.80	1.25	
27	•							
28								
29								
30								
31								
32								
33								
34	2 inch Mill & Fill + 2 inch Overlay	17	15	20	6.43	6.24	6.62	
35								
36								
37								
38								
39								
40								

Agency: Oregon Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy		ted Life,		Estimated Cost, \$/yd ²			
		X	L	Н	X	L	Н	
0	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28	
1								
2								
3								
4								
5								
6	Chip Seal	6	4	8	1.00	0.80	1.25	
7								
8								
9								
10								
11								
12	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28	
13								
14								
15								
16								
17								
18	Chip Seal	6	4	8	1.00	0.80	1.25	
19								
20								
21								
22								
23								
24	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28	
25								
26								
27								
28								
29								
30	Chip Seal	6	4	8	1.00	0.80	1.25	
31								
32								
33								
34								
35								
36	2 inch Mill & Fill + 2 inch Overlay	12	8	15	6.10	5.92	6.28	
37								
38								
39								
40								

Agency: South Carolina Scenario: Lime-Treated

Manne		Expect	Expected Life, Years			Estimated Cost, \$/yd ²			
Year	Maintenance and Rehabilitation Strategy	X	L	Н	X	L	Н		
0	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.69	9.40	9.98		
1									
2									
3									
4									
5									
6									
7									
8									
9									
10	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.69	9.40	9.98		
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.69	9.40	9.98		
21									
22									
23									
24									
25									
26									
27									
28									
29		4.0		- 10	0.10	0.10	0.00		
30	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.69	9.40	9.98		
31									
32									
33									
34									
35									
36									
37									
38									
39	2 in al Mill & Fill 2 in al Occada	10	0	10	0.60	0.40	0.00		
40	2 inch Mill & Fill + 2 inch Overlay	10	8	12	9.69	9.40	9.98		

Agency: South Carolina Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy		ted Life,	Years	Estimated Cost,		\$/yd ²	
i eai	Maintenance and Renaofintation Strategy	X	L	Н	X	L	Н	
0	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	
1								
2								
3								
4								
5								
6								
7								
8	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	
9								
10								
11								
12								
13								
14								
15 16	2 inch Mill & Fill + 2 inch Organica	8		10	9.47	9.18	0.75	
17	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	
18								
19								
20								
21								
22								
23								
24	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	
25								
26								
27								
28								
29								
30								
31								
32	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	
33								
34								
35								
36								
37								
38								
39								
40	2 inch Mill & Fill + 2 inch Overlay	8	6	10	9.47	9.18	9.75	

Agency: Texas DOT Scenario: Lime Treated

Same		Maintenance and Dakabilitation Streets	Expect	ted Life,	Years	Estimated Cost, \$/yd ²			
The content of the	Year	Maintenance and Rehabilitation Strategy							
Color Colo	0	2 inch Overlay	12	10	15	3.48	3.38	3.58	
3	1								
A	2								
6 Chip Seal 6 5 7 1.00 0.80 1.25 7 8 8 8 8 9 10 10 10 11 11 12 2 inch Overlay 12 10 115 3.48 3.38 3.58 13 14 15 16 17 18 18 19 20 19 20 20 21 21 22 20 20 21 21 22 20 20 21 21 22 20 20 21 21 22 20 20 21 21 22 20 20 21 21 22 20 21 21 22 23 24 2 inch Overlay 12 3 inch Overlay 13 3 inc	3								
Chip Seal									
The content of the									
8 9 10 10 10 10 10 11 11 12 10 15 3.48 3.38 3.58 13 12 2 inch Overlay 12 10 15 3.48 3.38 3.58 14 15 16 17 17 17 17 18 18 19 19 19 10 10 0.80 1.25 19 19 19 19 10 10 0.80 1.25 19 10 10 0.80 1.25 19 10 10 10 0.80 1.25 10 10 10 0.80 1.25 10		Chip Seal	6	5	7	1.00	0.80	1.25	
9 10 11 12 10 15 3.48 3.38 3.58 13 14 15 16 17 17 18 18 19 19 19 19 19 19									
10									
11 12 2 inch Overlay 12 10 15 3.48 3.38 3.58 13 14 15 16 17 18 18 19 10 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
12 2 inch Overlay 12 10 15 3.48 3.38 3.58 13 14 15 16 17 18 19 10 10 10 10 10 10 10 10 10 10 10 10 10 12 10 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
13									
14 15 16 17 18 19 10 10 125 19 10 10 10 125 10 125 10 125		2 inch Overlay	12	10	15	3.48	3.38	3.58	
15									
16 17 18 Chip Seal 6 5 7 1.00 0.80 1.25 19 19 19 10 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
17 Chip Seal 6 5 7 1.00 0.80 1.25 19 Chip Seal Chip Seal <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
18 Chip Seal 6 5 7 1.00 0.80 1.25 19 19 10<									
19									
20 1		Chip Seal	6	5	7	1.00	0.80	1.25	
21									
22									
23 12 10 15 3.48 3.38 3.58 25 10 15 3.48 3.38 3.58 26 10 10 15 3.48 3.38 3.58 27 10									
24 2 inch Overlay 12 10 15 3.48 3.38 3.58 25 1 <									
25			10	1.0	1.5	2.40	2.20	2.50	
26		2 inch Overlay	12	10	15	3.48	3.38	3.58	
27									
28									
29 6 5 7 1.00 0.80 1.25 31 6 5 7 1.00 0.80 1.25 32 32 33 34 34 34 34 34 34 34 34 35 35 35 35 36 2 inch Overlay 12 10 15 3.48 3.38 3.58 37 38 39 30									
30 Chip Seal 6 5 7 1.00 0.80 1.25 31 32 33 34 34 34 35 34 35 36 2 inch Overlay 12 10 15 3.48 3.38 3.58 37 38 39 30 <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td></td> <td></td>						+			
31 32 33 34 35 35 36 2 inch Overlay 12 10 15 3.48 3.38 3.58 37 38 39 39 30 <t< td=""><td></td><td>Chin Saal</td><td>6</td><td>5</td><td>7</td><td>1.00</td><td>0.80</td><td>1 25</td></t<>		Chin Saal	6	5	7	1.00	0.80	1 25	
32		Chip Sear	0	3	/	1.00	0.00	1.23	
33									
34									
35									
36 2 inch Overlay 12 10 15 3.48 3.38 3.58 37 38 39 30 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>+</td><td></td><td></td></t<>						+			
37 38 39		2 inch Overlay	12	10	15	3 48	3 38	3 58	
38 39		2 5 . v.i.mj	12	10	1.5	5.10	3.30	3.50	
39						+			
	40								

Agency: Texas DOT Scenario: Non-Lime Treated

Year	Maintenance and Rehabilitation Strategy	Expect	Expected Life, Years			Estimated Cost, \$/yd ²			
i eai	Maintenance and Renaomitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н		
0	2 inch Overlay	10	8	12	3.37	3.27	3.47		
1									
2									
3									
4									
5	Chip Seal	5	3	7	1.00	0.80	1.25		
6									
7									
8									
9									
10	2 inch Overlay	10	8	12	3.37	3.27	3.4		
11									
12									
13 14									
15	Chin Sool	5	3	7	1.00	0.80	1.2		
16	Chip Seal	3	3	/	1.00	0.80	1.2.		
17									
18									
19									
20	2 inch Overlay	10	8	12	3.37	3.27	3.4		
21	2 men e venus	10	0	12	3.37	3.27	3.1		
22									
23									
24									
25	Chip Seal	5	3	7	1.00	0.80	1.2		
26	1								
27									
28									
29									
30	2 inch Overlay	10	8	12	3.37	3.27	3.4		
31									
32									
33									
34									
35	Chip Seal	5	3	7	1.00	0.80	1.2		
36									
37									
38									
39									
40	2 inch Overlay	10	8	12	3.37	3.27	3.4		

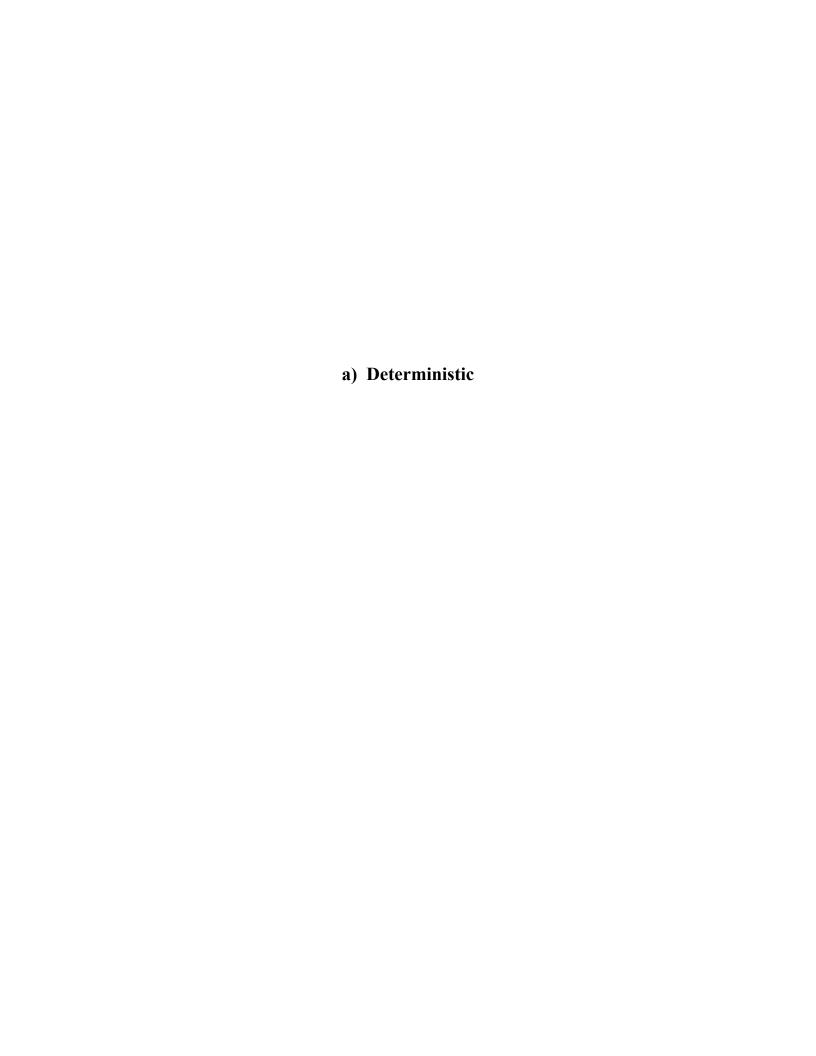
Agency: Utah Scenario: Lime-Treated

Vaca	Maintenance and Rehabilitation Strategy	Expect	ted Life,	Years	Estimated Cost, \$/yd ²			
Year	Maintenance and Renabilitation Strategy	$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н	
0	2 inch Mill & Fill + 1.5 inch Overlay	20	15	25	7.89	7.65	8.13	
1								
2								
3								
4								
5	1 inch OGFC	5	3	7	2.04	1.98	2.10	
6								
7								
8								
9		_		_				
10	1 inch OGFC	5	3	7	2.04	1.98	2.10	
11								
12								
13								
14	Cli. C. 1		2		1.00	0.00	1.25	
15	Chip Seal	5	3	7	1.00	0.80	1.25	
16								
17								
18								
19 20	2 inch Mill & Fill + 1 5 inch Organian	20	15	25	7.89	7.65	8.13	
21	2 inch Mill & Fill + 1.5 inch Overlay	20	13	23	7.89	7.03	8.13	
22								
23								
24								
25	1 inch OGFC	5	3	7	2.04	1.98	2.10	
26	1 men our c	3	3	,	2.04	1.70	2.10	
27								
28								
29								
30	1 inch OGFC	5	3	7	2.04	1.98	2.10	
31								
32								
33								
34								
35	1 inch OGFC	5	3	7	2.04	1.98	2.10	
36								
37								
38								
39								
40	2 inch Mill & Fill + 1.5 inch Overlay	20	15	25	7.89	7.65	8.13	

Agency: Utah Scenario: Non-Lime Treated (Not Used)

Year	Maintenance and Rehabilitation Strategy		ed Life,	Years	Estimated Cost, \$/yd ²			
		$\bar{\mathrm{X}}$	L	Н	$\bar{\mathbf{X}}$	L	Н	
0	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	7.50	7.28	7.72	
1								
2								
3								
4								
5	Chip Seal	5	3	7	1.00	0.80	1.25	
6								
7								
8								
9		10				7.00		
10	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	7.50	7.28	7.72	
11								
12								
13								
15	Chip Seal	5	3	7	1.00	0.80	1.25	
16	Chip Seal	3	3	,	1.00	0.80	1.23	
17								
18								
19								
20	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	7.50	7.28	7.72	
21					,,,,,	7.1.2		
22								
23								
24								
25	Chip Seal	5	3	7	1.00	0.80	1.25	
26	-							
27								
28								
29								
30	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	7.50	7.28	7.72	
31								
32								
33								
34								
35	Chip Seal	5	3	7	1.00	0.80	1.25	
36								
37								
38								
39								
40	2 inch Mill & Fill + 1.5 inch Overlay	10	7	15	7.50	7.28	7.72	

APPENDIX D Results of LCCA



ALTERNATIVE 1: ARIZONA INTERSTATE DETERMINISTIC (LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 1 in. OG Overlay; Lime-Treated	\$0.00	\$15,873.02	\$0.00	\$1,046,529.02	\$1,046,529.02	\$7.43
1							
2							
3							
4							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$34,718.20	\$1,081,247.22	\$7.68
6							
7							
8							
9							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$28,535.83	\$1,109,783.05	\$7.88
11							
12							
13							
14	Debabilitation 2 in M/E 1 in OC Overlay Lime Treated	\$4,020,6E6,02	¢45.072.00	¢1 046 520 04	PEO1 100 12	¢4 600 002 47	\$12.01
16	Rehabilitation; 2 in. M/F + 1 in. OG Overlay; Lime-Treated	\$1,030,656.02	\$15,673.02	\$1,046,529.04	\$561,100.43	\$1,690,883.47	\$12.01
17							
18							
19							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$10 277 78	\$1,710,161.26	\$12.15
21	Maintenance, r og Sear	ψ 4 2,2 4 0.00	Ψ0.00	Ψ42,240.00	Ψ19,211.10	ψ1,710,101.20	Ψ12.13
22							
23							
24							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$15.844.93	\$1,726,006.19	\$12.26
26			******	, , _ , _ ,	+ ************************************	, ,,, = 0,000	¥
27							
28							
29							
30	Rehabilitation; 2 in. M/F + 1 in. OG Overlay; Lime-Treated	\$1,030,656.02	\$15,873.02	\$1,046,529.04	\$322,664.44	\$2,048,670.63	\$14.55
31							
32							
33							
34							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$10,704.27	\$2,059,374.90	\$14.63
36							
37							
38							
39							
	Salvage*; Fog Seal	\$42,240.00		(\$301,312.01)	(\$62,759.99)	\$1,996,614.91	\$14.18

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: ARIZONA INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

	•	,				Cumulative	Cumulative
.,			Associated	Total Future	Present Worth	Present Worth	Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
1	Initial Construction; 2 in. M/F + 1 in. OG Overlay; Unmodified	\$0.00	\$15,873.02	\$0.00	\$1,024,001.02	\$1,024,001.02	\$7.27
2							
3							
<u>4</u>	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$34 718 20	\$1,058,719.22	\$7.52
6	maritorianos, rog osar	Ψ12,210.00	ψ0.00	ψ12,210.00	ψο 1,7 10.20	ψ1,000,7 10.22	Ψ1.02
7							
8							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$28.535.83	\$1,087,255.05	\$7.72
11		+,	7	+,-	+==,=====	+ 1,001, <u>-</u> 0010	****
12	D. I.	04.000.407.00	* 45.070.00	01.001.000.00	0011.000.10	01 700 010 51	0.10.00
13	Rehabilitation; 2 in. M/F + 1 in. OG Overlay; Unmodified	\$1,008,127.98	\$15,873.02	\$1,024,000.99	\$614,988.46	\$1,702,243.51	\$12.09
15							
16							
17	Maintananas, Fan Caal	£40.040.00	\$0.00	£40.040.00	#20 0F0 0F	£4 700 004 00	#40.04
19	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$20,850.85	\$1,723,094.36	\$12.24
20							
21							
22	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	¢17 127 00	\$1,740,232.24	\$12.36
24	ivialifice arice, Fog Seai	\$42,240.00	\$0.00	\$42,240.00	\$17,137.00	\$1,740,232.24	\$12.30
25	Rehabilitation; 2 in. M/F + 1 in. OG Overlay; Unmodified	\$1,008,127.98	\$15,873.02	\$1,024,000.99	\$384,119.98	\$2,124,352.22	\$15.09
26							
27 28							
29							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$13,023.38	\$2,137,375.60	\$15.18
31 32							
33							
34							
	Maintenance; Fog Seal	\$42,240.00	\$0.00	\$42,240.00	\$10,704.27	\$2,148,079.87	\$15.26
36	Rehabilitation; 2 in. M/F + 1 in. OG Overlay; Unmodified	\$1,008,127.98	\$15 873 N2	\$1,024,000.99	\$239,920.21	\$2,388,000.07	\$16.96
38	Tronabilitation, 2 III. 1991 + 1 III. OG Overlay, Ulliflounieu	ψ1,000,121.90	ψ13,013.02	ψ1,024,000.99	Ψ203,320.21	Ψ2,500,000.07	φ10.90
39							
40	Salvage	\$0.00	\$0.00	(\$756,095.98)	(\$157,486.51)	\$2,230,513.56	\$15.84

ALTERNATIVE 1: ARIZONA STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$4,000.00	\$0.00	\$493,984.00	\$493,984.00	\$3.51
1	•						
2							
3							
4							
5							
6							
7							
8							
9							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$95,119.43	\$589,103.43	\$4.18
11							
12							
13							
14							
15							
16 17							
18							
19							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$4,000.00	\$493,984.00	\$225,447.85	\$814,551.29	\$5.79
21	Kenabilitation, 2 in. Overlay, Lime-meated	\$409,904.00	φ4,000.00	φ493,904.00	\$223,447.03	φ014,331.29	φ5.79
22							
23							
24							
25							
26							
27							
28							
29							
30	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$43,411.27	\$857,962.55	\$6.09
31	·						
32							
33							
34							
35							
36							
37							
38							
39							
40	Salvage*; 2 in. Overlay; Lime-Treated	\$489,984.00			(\$102,058.30)	\$755,904.25	\$5.37

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: ARIZONA STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

1 2 3 4 5 6 7 Ma 8 9	ost Type tial Construction; 2 in. Overlay; Unmodified	Future Cost \$0.00	Associated User Cost \$4,000.00	Total Future Cost \$0.00	Present Worth Cost \$478,496.00	Cumulative Present Worth Cost	Cost (\$/sq. yd.)
0 Init 1 2 3 4 5 6 7 Ma 8 9	ost Type tial Construction; 2 in. Overlay; Unmodified		User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0 Init 1 2 3 4 5 6 7 Ma 8 9	ost Type tial Construction; 2 in. Overlay; Unmodified						
1 2 3 4 5 6 7 Ma 8 9	tial Construction; 2 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$478 496 00	£470 400 00	
1 2 3 4 5 6 7 Ma 8 9					ψ 11 O, 100.00	\$478,496.00	\$3.40
3 4 5 6 7 Ma 8 9							
3 4 5 6 7 Ma 8 9							
4 5 6 7 Ma 8 9							
5 6 7 Ma 8 9							
6 7 Ma 8 9		-					
7 Ma 8 9							
8 9		2442.000.00	20.00	* 4 4 0 0 0 0 0 0 0	* 4 0 0 0 0 0 4 0	4505 400 40	21.12
9	aintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$106,996.43	\$585,492.43	\$4.16
10							
11							
12							
13							
	aintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$81,308.49	\$666,800.92	\$4.74
15		ψ. ie,eσσ.eσ	ψ0.00	ψσ,σσσ.σσ	ψο 1,0001.10	+++++++++++++++++++++++++++++++++++++	+
16							
	ehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$245,647.04	\$912,447.96	\$6.48
18	enabilitation, 2 in. Overlay, Orimounieu	\$474,495.96	φ4,000.00	φ470,433.30	\$245,047.04	φ 912,44 1.90	φ0.40
19							
20							
21							
22							
23							
24 Ma	aintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$54,929.10	\$967,377.06	\$6.87
25	·						
26 Re	ehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$172,588.35	\$1.139.965.41	\$8.10
27	· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , , ,	, ,	, , , , , , , , ,	, , , , , , , , , , ,	, ,,	,
28							
29							
30							
31							
32		2442.222.22	***	#440.000.00	#00 F00 15	04 470 555 05	^
	aintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$38,592.46	\$1,178,557.87	\$8.37
34							
35 Re	ehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$121,258.28	\$1,299,816.15	\$9.23
36							
37					_		
38							
39							
	alvage	\$0.00	\$0.00	(\$210,887.10)	(\$43 925 47)	\$1,255,890.68	\$8.92

ALTERNATIVE 1: CALIFORNIA INTERSTATE DETERMINISTIC (LIME-TREATED)

						Cumulative	Cumulative
			Associated	Total Future		Present Worth	Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 3 in. Overlay; Lime-Treated	\$0.00	\$30,303.03	\$0.00	\$1,335,519.03	\$1,335,519.03	\$9.49
1							
3							
4							
	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$208 300 21	\$1,543,828.24	\$10.96
6	Walliterlance, Grack Seal + Grip Seal	Ψ233,440.00	ψ0.00	Ψ233,440.00	Ψ200,309.21	ψ1,040,020.24	ψ10.90
7							
8							
9							
10	Rehabilitation; 3 in. Overlay; Lime-Treated	\$1,305,216.06	\$30,303.03	\$1,335,519.10	\$902,228.85	\$2,446,057.08	\$17.37
11	•						
12							
13							
14							
	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$140,726.24	\$2,586,783.32	\$18.37
16 17							
18							
19							
	Rehabilitation; 3 in. Overlay; Lime-Treated	\$1,305,216.06	\$30,303.03	\$1,335,519.10	\$609 513 48	\$3,196,296.80	\$22.70
21	Trendshitation, o m. overlay, Enne Treated	ψ1,000,210.00	ψου,σοσ.σο	ψ1,000,010.10	φοσο,σ1ο.4ο	ψο, 100,200.00	ΨΖΣ.10
22							
23							
24							
	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$95,069.60	\$3,291,366.40	\$23.38
26							
27							
28							
29		04.005.040.00	400 000 00	04.005.540.40	0444 705 47	00 700 404 07	***
30	Rehabilitation; 3 in. Overlay; Lime-Treated	\$1,305,216.06	\$30,303.03	\$1,335,519.10	\$411,765.47	\$3,703,131.87	\$26.30
32							
33							
34							
	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$64,225 62	\$3,767,357.49	\$26.76
36		+ 255, 716.66	\$5.00	7200, 0.00	ţ3., <u>223.02</u>	+=,. 5.,5510	+23.10
37							
38							
39							
40	Salvage*; 3 in. Overlay; Lime-Treated	\$1,305,216.06		(\$1,305,216.06)	(\$271,862.21)	\$3,495,495.28	\$24.83

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: CALIFORNIA INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 3 in. Overlay + Digouts; Unmodified	\$0.00	\$33,333.33		\$1,220,277.33		\$8.67
1	- India contraction, c in crond, bigoato, cinicalita	40.00	400,000.00	ψ0.00	¥ :,===;=: : : e =	¥ 1,220,211100	40.07
3							
4	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$216,641.57	\$1,436,918.91	\$10.21
5 6							
7	Dehabilitation: 2 in Overlay I Dispute: Upmodified	¢4 496 044 04	#22 222 22	¢4 220 277 20	¢004 644 72	#0.330.563.63	¢16.54
9	Rehabilitation; 3 in. Overlay + Digouts; Unmodified	\$1,186,944.04		\$1,220,277.38	\$691,044.73	\$2,328,563.63	\$16.54
10 11							
12	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$158,297.88	\$2,486,861.51	\$17.66
13 14							
15							
16 17	Rehabilitation; 3 in. Overlay + Digouts; Unmodified	\$1,186,944.04	\$33,333.33	\$1,220,277.38	\$651,516.07	\$3,138,377.58	\$22.29
18							
19	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	¢115 666 71	\$3,254,044.29	\$23.11
21	ivialitienance, Grack Geal + Grilp Geal	Ψ233,440.00	ψ0.00	Ψ233,440.00	ψ113,000.71	\$5,254,044.29	Ψ23.11
22 23							
	Rehabilitation; 3 in. Overlay + Digouts; Unmodified	\$1,186,944.04	\$33,333.33	\$1,220,277.38	\$476,056.41	\$3,730,100.69	\$26.49
25 26							
27							
28 29	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	\$84,516.53	\$3,814,617.22	\$27.09
30							
31							
32 33	Rehabilitation; 3 in. Overlay + Digouts; Unmodified	\$1,186,944.04	\$33,333.33	\$1,220,277.38	\$347,849.76	\$4,162,466.98	\$29.56
34							
35 36	Maintenance; Crack Seal + Chip Seal	\$253,440.00	\$0.00	\$253,440.00	¢61 755 40	\$4,224,222.38	\$30.00
37	maintenance, Grack Sear + Only Sear	φ233,440.00	φυ.υυ	Ψ200,440.00	φυ1,733.40	ψτ,ΖΖ4,ΖΖΖ.30	φ30.00
38							
39 40	Salvage*; 3 in. Overlay + Digouts; Unmodified	\$1,186,944.04	\$33 333 33	(\$1,186,944.04)	(\$247 227 44)	\$3 976 994 94	\$28.25

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: CALIFORNIA STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

Year Cost Type	Future Cost	Associated User Cost	Total Future Cost	Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0 Initial Construction; 3 in. Overlay; Lime-Treated	\$0.00	\$6,060.61	\$0.00	\$1,311,276.61	\$1,311,276.61	\$9.31
1						
2						
3						
4						
5 Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$173,591.00	\$1,484,867.61	\$10.55
6						
/						
8 9						
	04 047 455 00	00 454 04	#4 050 007 57	0044.054.44	#0.000 F40.0F	£47.04
10 Rehabilitation; Crack Seal + 3 in. Overlay; Lime-Treated	\$1,347,455.96	\$6,451.61	\$1,353,907.57	\$914,651.44	\$2,399,519.05	\$17.04
12						
13						
14						
15 Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$117 271 86	\$2,516,790.92	\$17.87
16	ΨΖ11,200.00	ψ0.00	ΨΖ11,200.00	ψ117,271.00	Ψ2,510,750.52	ψ17.07
17						
18						
19						
20 Rehabilitation; Crack Seal + 3 in. Overlay; Lime-Treated	\$1,347,455.96	\$6,451.61	\$1,353,907.57	\$617.905.74	\$3,134,696.66	\$22.26
21	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, -, - ,	, , , , , , , , , , , , , , , , , , ,
22						
23						
24						
25 Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$79,224.67	\$3,213,921.33	\$22.83
26						
27						
28						
29						
30 Rehabilitation; Crack Seal + 3 in. Overlay; Lime-Treated	\$1,347,455.96	\$6,451.61	\$1,353,907.57	\$417,434.98	\$3,631,356.30	\$25.79
31						
32						
33						
34	0044 000 00	# 0.00	£044 000 00	# E0 504 05	60.004.077.05	#00.4 7
35 Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$53,521.35	\$3,684,877.65	\$26.17
36 37						
38						
38						
	\$1,347,455.96	¢6 /51 61	(\$1,347,455.96)	(\$280 660 24)	\$3 404 217 24	\$24.18
40 Salvage*; Crack Seal + 3 in. Overlay; Lime-Treated				(φ∠ου,σσυ.31)	φ3,4U4,∠11.34	φ 24.18

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: CALIFORNIA STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Cost	Cumulative Present Worth Cost	
0 1	Initial Construction; 3 in. Overlay; Unmodified	\$0.00	\$6,060.61	\$0.00	\$1,193,004.61	\$1,193,004.61	\$8.47
2 3							
	Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$180,534.65	\$1,373,539.25	\$9.76
6							
8 9	Rehabilitation; Crack Seal + 3 in. Overlay; Unmodified	\$1,229,183.94	\$6,451.61	\$1,235,635.55	\$902,866.79	\$2,276,406.04	\$16.17
10 11							
	Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$131,914.90	\$2,408,320.94	\$17.10
14 15							
	Rehabilitation; Crack Seal + 3 in. Overlay; Unmodified	\$1,229,183.94	\$6,451.61	\$1,235,635.55	\$659,715.92	\$3,068,036.86	\$21.79
18 19							
	Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$96,388.92	\$3,164,425.79	\$22.47
22							
24	Rehabilitation; Crack Seal + 3 in. Overlay; Unmodified	\$1,229,183.94	\$6,451.61	\$1,235,635.55	\$482,047.96	\$3,646,473.75	\$25.90
25 26 27							
28	Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$70,430.44	\$3,716,904.19	\$26.40
29 30							
31 32	Rehabilitation; Crack Seal + 3 in. Overlay; Unmodified	\$1,229,183.94	\$6,451.61	\$1,235,635.55	\$352,227.72	\$4,069,131.91	\$28.90
33 34							
	Maintenance; Chip Seal	\$211,200.00	\$0.00	\$211,200.00	\$51,462.83	\$4,120,594.75	\$29.27
37 38							
39 40	Salvage*; Crack Seal + 3 in. Overlay; Unmodified	\$1,229,183.94	\$6,451.61	(\$1,229,183.94)	(\$256,025.55)	\$3,864,569.20	\$27.45

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: COLORADO INTERSTATE DETERMINISTIC (LIME-TREATED)

			Associated	Total Future		Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$22,727.27	\$0.00	\$1,229,383.27	\$1,229,383.27	\$8.73
1							
2							
3							
4							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$57,863.67	\$1,287,246.94	\$9.14
6							
8							
9	Dehabilitation 2 in M/E + 2 in Overlay Lima Treated	#1 206 6FF 06	#20 707 07	\$1,229,383.23	\$000 F07 06	\$2,117,774.20	\$15.04
11	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,206,655.96	\$22,121.21	\$1,229,383.23	\$630,527.26	\$2,117,774.20	\$15.04
12 13							
14		-					
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$30,000,62	\$2,156,864.82	\$15.32
16	Manitenance, Crack Sealing	\$70,400.00	φυ.υυ	\$70,400.00	\$39,090.02	\$2,150,004.02	\$10.32
17		+					
18							
19							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,206,655.96	\$22 727 27	\$1,229,383.23	\$561 074 46	\$2,717,939.28	\$19.30
21	recreasintation, 2 m. 1991 · 2 m. Overlay, Eline Treated	ψ1,200,000.00	ΨΖΖ, ΓΖΓ.ΖΓ	ψ1,220,000.20	Ψ001,074.40	Ψ2,7 17,000.20	Ψ10.00
22							
23							
24							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$26,408,22	\$2,744,347.50	\$19.49
26	y	, , , , , , , , , , , , , , , , , , , ,	*	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	
27							
28							
29							
30	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,206,655.96	\$22,727.27	\$1,229,383.23	\$379,041.80	\$3,123,389.30	\$22.18
31	·						
32							
33							
34							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$17,840.45	\$3,141,229.75	\$22.31
36							
37							
38							
39							
	Salvage*; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,206,655.96			(\$251,333.22)	\$2,889,896.53	\$20.52

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: COLORADO INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$22,727.27	\$0.00	\$1,196,999.27	\$1,196,999.27	\$8.50
1							
3							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$60 178 22	\$1,257,177.49	\$8.93
5	Maintenance, Grack Gealing	ψ/ 0,400.00	Ψ0.00	ψ10,400.00	ψου, 17 0.22	Ψ1,201,111.40	Ψ0.00
6							
7							
8	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$874,635.66	\$2,131,813.15	\$15.14
9							
10							
11	Maintenance Const. Continu	£70,400,00	#0.00	¢70,400,00	£40.074.00	CO 475 704 70	645.45
13	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$43,971.63	\$2,175,784.78	\$15.45
14							
15							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$639,087.71	\$2,814,872.49	\$19.99
17	,		, ,		,		·
18							
19							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$32,129.64	\$2,847,002.13	\$20.22
21							
22 23							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$466 Q75 13	\$3,313,977.26	\$23.54
25	Trenabilitation, 2 iii. Wiff + 2 iii. Overlay, omnounicu	Ψ1,174,272.02	ΨΖΖ,1 Ζ1 .Ζ1	ψ1,100,000.20	ψ+00,373.13	ψ0,010,011.20	Ψ20.04
26							
27							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$23,476.81	\$3,337,454.07	\$23.70
29							
30							
31	Debekilitetian Oin M/C + Oin Overland Harradified	£4.474.070.00	#00 707 07	£4.400.000.00	#044 044 4F	#0.070.000.00	COC 40
33	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$341,∠14.15	\$3,678,668.23	\$26.13
34		-					
35							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$17,154.28	\$3,695,822.50	\$26.25
37	•						
38							
39							
40	Salvage*; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	(\$1,174,272.02)	(\$244,588.00)	\$3,451,234.51	\$24.51

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: COLORADO STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

	,		Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$4,000.00	\$0.00	\$493,984.00	\$493,984.00	\$3.51
1							
2							
3							
4							
5							
6							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$53,498.21	\$547,482.21	\$3.89
8							
9		#570.040.00	£4.000.00	6574 040 00	#007 00F 00	6005 440 00	00.04
11	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$4,000.00	\$574,240.03	\$387,935.99	\$935,418.20	\$6.64
12							
13							
14							
15							
16							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$36,141.48	\$971,559.68	\$6.90
18	maintenance, crack coaining	ψ10,100.00	ψ0.00	ψ10,100.00	ψου, ττι το	ψον 1,000.00	ψ0.00
19							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$4,000.00	\$574,240.03	\$262.075.65	\$1,233,635.33	\$8.76
21	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, , ,	, - ,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , ,	, -
22							
23							
24							
25							
26							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$24,415.89	\$1,258,051.22	\$8.94
28							
29							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$4,000.00	\$574,240.03	\$177,048.92	\$1,435,100.14	\$10.19
31							
32							
33							
34							
35							
36	Maintananas: Craek Saalina	¢70,400,00	\$0.00	\$70,400.00	¢16 404 50	\$1,451,594.63	¢10.04
38	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$10,494.50	φ1,451,594.b3	\$10.31
38							
	Salvage*; 2 in. Overlay; Lime-Treated	\$570,240.03	\$4,000,00	(\$570.240.02)	(\$118 774 75)	\$1,332,819.88	\$9.47
40	Salvage , 2 iii. Overlay, Little-Treated	\$57U,24U.U3	⊅4,000.00	(Φ070,Z40.03)	(\$110,774.75)	⊅1,33∠,019.88	Φ9.47

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: COLORADO STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
1	Initial Construction; 2 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$478,496.00	\$478,496.00	\$3.40
3							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$57,863.67	\$536,359.67	\$3.81
7 8 9	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$349,632.33	\$885,992.00	\$6.29
10 11							
12 13 14	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$42,280.42	\$928,272.41	\$6.59
15	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$255,472.92	\$1,183,745.33	\$8.41
18 19 20							
21 22 23	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$30,893.89	\$1,214,639.22	\$8.63
24 25	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$186,671.56	\$1,401,310.77	\$9.95
26 27 28							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$22,573.86	\$1,423,884.63	\$10.11
32 33	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$136,399.08	\$1,560,283.71	\$11.08
34 35 36							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$16,494.50	\$1,576,778.21	\$11.20
40	Salvage*; 2 in. Overlay; Unmodified	\$474,495.98		(\$474,495.98)	(\$98,832.32)	\$1,477,945.90	\$10.50

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: FHWA FEDERAL LANDS HIGHWAY DETERMINISTIC (LIME-TREATED)

	WATTVE T. TTWAT EDERAL LANDSTHOTIWAT DETERMINIC	,				Cumulative	Cumulative
			Associated	Total Future	Present Worth		Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$4,000.00	\$0.00	\$415,136.00	\$415,136.00	\$2.95
2							
3							
4							
5							
6	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$100,148.66	\$515,284.66	\$3.66
8							
9							
10							
11							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$411,136.01	\$4,000.00	\$415,136.01	\$259,292.73	\$774,577.38	\$5.50
13							
14 15							
16							
17							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$62,552.56	\$837,129.94	\$5.95
19							
20							
21							
22							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$411,136.01	\$4,000.00	\$415,136.01	\$161,953.47	\$999,083.41	\$7.10
25	Trondsmann, 2 mm o rondy, 2 mm o roadou	ψ,.σσ.σ.	ψ.,σσσ.σσ	ψ 1.10,100.0 t	ψ 10 1,000 i ii	+ + + + + + + + + + + + + + + + + + + 	\$71.10
26							
27							
28							
29	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$30,070,1 <i>4</i>	\$1,038,153.55	\$7.37
31	IMaintenance, Chip Seal	\$120,720.00	φ0.00	\$120,720.00	φ39,070.14	φ1,036,133.33	φ1.31
32							
33							
34							
35		A	04.000.00	0445 1005	0404 1== 5=	64 400 000 5	***
36 37	Rehabilitation; 2 in. Overlay; Lime-Treated	\$411,136.01	\$4,000.00	\$415,136.01	\$101,155.66	\$1,139,309.21	\$8.09
38							
39							
	Salvage	\$0.00	\$0.00	(\$274,090.67)	(\$57,090.08)	\$1,082,219.13	\$7.69

ALTERNATIVE 2: FHWA FEDERAL LANDS HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

		<u> </u>				Cumulative	Cumulative
			Associated	Total Future	Present Worth	Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$391,200.00	\$391,200.00	\$2.78
1							
2							
3							
4							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$104,154.60	\$495,354.60	\$3.52
6							
7							
8							
9							
10	Rehabilitation; 2 in. Overlay; Unmodified	\$387,200.00	\$4,000.00	\$391,200.00	\$264,280.70	\$759,635.31	\$5.40
11							
12							
13 14							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$70,363.12	\$829,998.42	\$5.89
16	Maintenance, Gnip Seal	\$120,720.00	φ0.00	\$120,720.00	\$70,303.12	\$029,990.42	φ5.09
17							
18							
19							
	Rehabilitation; 2 in. Overlay; Unmodified	\$387,200.00	\$4,000.00	\$391,200.00	\$178.538.57	\$1,008,537.00	\$7.16
21	, , , , , , , , , , , , , , , , , , ,	, ,	, ,	, ,	, -,	, ,,	•
22							
23							
24							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$47,534.80	\$1,056,071.80	\$7.50
26							
27							
28							
29		200= 000 00	*	****		A	***
30	Rehabilitation; 2 in. Overlay; Unmodified	\$387,200.00	\$4,000.00	\$391,200.00	\$120,614.26	\$1,176,686.06	\$8.36
31							
32							
33 34							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$32 112 Q1	\$1,208,798.87	\$8.59
36	mantonance, Only Seal	φ120,720.00	φυ.υυ	ψ120,120.00	ψυς, ΓΙΖ.ΟΙ	ψ1,200,130.01	φυ.39
37							
38		+					
39							
	Salvage*; 2 in. Overlay; Unmodified	\$387,200.00	\$4,000.00	(\$387,200.00)	(\$80.649.52)	\$1,128,149.35	\$8.01
		Ţ = = : , =00.00	7 ., 700	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(+,-:::0=)	, , .==,	Ţ 0.0 ·

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: GEORGIA INTERSTATE DETERMINISTIC (LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$0.00	\$20,000.00		\$1,242,144.00		\$8.82
1	,		· · ·	·			
2							
3							
4							
5							
6	M : 1	A70 400 00	40.00	# 7 0 400 00	#50 400 04	* 4 005 040 04	***
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$53,498.21	\$1,295,642.21	\$9.20
8							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$1,222,144.04	\$20,000.00	\$1,242,144.04	\$830 1 <i>1</i> 8 01	\$2,134,790.22	\$15.16
11	Teriabilitation, 2 in. With 11.5 in. Overlay, Eline-Treated	Ψ1,222,177.07	Ψ20,000.00	Ψ1,242,144.04	ψ000, 140.01	ΨΣ, 104,730.22	ψ10.10
12							
13							
14							
15							
16							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$36,141.48	\$2,170,931.70	\$15.42
18							
19		24 222 444 24	****	0101011101		**	
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$1,222,144.04	\$20,000.00	\$1,242,144.04	\$566,898.33	\$2,737,830.03	\$19.44
21 22							
23							
24							
25							
26							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$24,415.89	\$2,762,245.91	\$19.62
28							
29							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$1,222,144.04	\$20,000.00	\$1,242,144.04	\$382,976.20	\$3,145,222.11	\$22.34
31							
32							
33							
34 35							
36							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$16 494 50	\$3,161,716.61	\$22.46
38	manitorianos, ordon odding	Ψ10,400.00	ψ0.00	Ψ10,400.00	ψ10,404.00	ψο, το τ, τ το.οτ	Ψ22.40
39							
	Salvage*; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$1,222,144.04	\$20,000.00	(\$1,222,144.04)	(\$254,559.22)	\$2,907,157.39	\$20.65

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: GEORGIA INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

	·	ĺ	Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$0.00	\$20,000.00		\$1,213,984.00		\$8.62
1							
2							
3							
4	Maintananas Caali Caalina	£70,400,00	#0.00	£70,400,00	#F7.000.07	Φ4 074 047 C7	#0.00
6	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$57,863.67	\$1,271,847.67	\$9.03
7							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,193,983.94	\$20,000.00	\$1,213,983.94	\$887 046 17	\$2,158,893.84	\$15.33
9		ψ.,.σσ,σσσισ.	Ψ=0,000.00	ψ., <u>=</u> :σ,σσσ:σ:	+ + + + + + + + + + + + + + + + + + + 	+=, .00,000.0.	ψ.σ.σσ
10							
11							
12							
13	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$42,280.42	\$2,201,174.26	\$15.63
14 15							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,193,983.94	90,000,00	\$1,213,983.94	¢6/9 155 05	\$2,849,330.20	\$20.24
17	Renabilitation, 2 in. W/I + 1.5 in. Overlay, Onlinounled	\$1,195,965.94	\$20,000.00	\$1,213,963.94	φ040, 155.95	φ2,049,330.20	φ20.24
18							
19							
20							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$30,893.89	\$2,880,224.09	\$20.46
22							
23		24 400 000 04			* · = 0 00 / 00	**********	***
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,193,983.94	\$20,000.00	\$1,213,983.94	\$473,601.20	\$3,353,825.29	\$23.82
25 26							
27							
28							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$22,573.86	\$3,376,399.15	\$23.98
30	•						
31							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,193,983.94	\$20,000.00	\$1,213,983.94	\$346,055.76	\$3,722,454.91	\$26.44
33							
34 35							
36							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$16 494 50	\$3,738,949.41	\$26.56
38	manitorianos, ordon odding	ψι σ, ποσ.σσ	ψ0.00	ψεο,που.σο	ψ10,404.00	ψο,100,040.41	Ψ20.00
39							
	Salvage*; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,193,983.94	\$20,000.00	(\$1,193,983.94)	(\$248,693.77)	\$3,490,255.64	\$24.79

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: GEORGIA STATE HIGHWAY DETERMINISTIC

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 1.5 in. Overlay; Lime-Treated	\$0.00	\$2,985.07	\$0.00	\$429,609.07	\$429,609.07	\$3.05
1							
2							
3							
4							
5							
6							
7							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$51,440.59	\$481,049.67	\$3.42
9							
10	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$426,624.00	\$2,985.07	\$429,609.07	\$290,228.49	\$771,278.16	\$5.48
11							
12							
13							
14							
15							
16							
17							
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$34,751.42	\$806,029.58	\$5.72
19							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$426,624.00	\$2,985.07	\$429,609.07	\$196,067.97	\$1,002,097.55	\$7.12
21							
22							
23							
24							
25							
26							
27		4=0 400 00	**	0- 0 100 00	****	*	
	Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$23,476.81	\$1,025,574.37	\$7.28
29	D 1 133 C 45 C 1 1 T 1 1	0.400.004.00	40.005.07	* 400 000 07	0400 450 50	#4 450 000 00	40.00
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$426,624.00	\$2,985.07	\$429,609.07	\$132,456.50	\$1,158,030.86	\$8.22
31							
32							
33							
34							
35 36							
37	Maintananas: Craak Caaling	\$70,400.00	ቀስ ሳሳ	\$70,400.00	¢1E 960 00	\$1,173,890.96	#0.24
38	Maintenance; Crack Sealing	\$70,400.00	\$0.00	φ/U,4UU.UU	\$10,000.U9	φ1,113,890.9b	\$8.34
	Salvage*: 1.5 in Overlay: Lime Treated	\$426,624.00	¢2 005 07	(\$426,624.00)	(000 061 10)	\$1,085,029.85	\$7.71
	Salvage*; 1.5 in. Overlay; Lime-Treated				(Φ00,001.10)	φ1,000,029.85	٦/./١

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: GEORGIA STATE HIGHWAY DETERMINISTIC

		Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0 Initial Construction; 1.5 in. Overlay; Unmodified	\$0.00	\$2,985.07	\$0.00	\$418,345.07		\$2.97
1	40.00	+= ,===::	ψ0.00	ψ 1.10,0 10.01	ψ 1.10,0 10.01	Ψ=.σ.
2						
3						
4						
5						
6 Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$55,638.14	\$473,983.22	\$3.37
7						
8 Rehabilitation; 1.5 in. Overlay; Unmodified	\$415,360.01	\$2,985.07	\$418,345.08	\$305,680.65	\$779,663.87	\$5.54
9						
10						
11						
12						
13	Ø70 400 00	#0.00	Ф 7 0 400 00	040.054.05	#000 040 40	ΦΕ 00
14 Maintenance; Crack Sealing 15	\$70,400.00	\$0.00	\$70,400.00	\$40,654.25	\$820,318.12	\$5.83
	£41E 260 01	¢2.005.07	£440 245 00	¢222.257.06	\$1,043,675.98	₾7 44
16 Rehabilitation; 1.5 in. Overlay; Unmodified	\$415,360.01	\$2,985.07	\$418,345.08	\$223,357.80	\$1,043,675.98	\$7.41
18						
19						
20						
21						
22 Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$29,705,66	\$1,073,381.63	\$7.62
23	7.0,100.00	70.00	4.0,.00.00	+==+	+ 1,01 0,00 110	7
24 Rehabilitation; 1.5 in. Overlay; Unmodified	\$415,360.01	\$2,985.07	\$418,345.08	\$163,205.40	\$1,236,587.03	\$8.78
25						
26						
27						
28						
29						
30 Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$21,705.63	\$1,258,292.67	\$8.94
31	0445.000.04	40.005.07	0440.045.00	0440.050.50	04.077.545.00	40.70
32 Rehabilitation; 1.5 in. Overlay; Unmodified	\$415,360.01	\$2,985.07	\$418,345.08	\$119,252.59	\$1,377,545.26	\$9.78
33						
34 35						
36						
37						
38 Maintenance; Crack Sealing	\$70,400.00	\$0.00	\$70,400.00	\$15,860,09	\$1,393,405.35	\$9.90
39	Ψ10,400.00	ψ0.00	ψ10,400.00	ψ10,000.09	ψ1,000, 1 00.00	ψ5.90
40 Salvage*; 1.5 in. Overlay; Unmodified	\$415,360.01		(\$415,360.01)		\$1,306,890.41	\$9.28

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: MISSISSIPPI INTERSTATE DETERMINISTIC (LIME-TREATED)

			Associated		Present Worth		
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 1.5 in. Overlay; Lime-Treated	\$0.00	\$14,925.37	\$0.00	\$480,973.37	\$480,973.37	\$3.42
1							
2							
3							
4							
5							
6							
7							
8							
9							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$14,925.37	\$480,973.37	\$324,928.37	\$805,901.75	\$5.72
11							
12							
13							
14							
15							
16							
17							
18							
19							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$14,925.37	\$480,973.37	\$219,509.97	\$1,025,411.71	\$7.28
21							
22							
23							
24							
25							
26							
27							
28							
29							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$14,925.37	\$480,973.37	\$148,293.07	\$1,173,704.78	\$8.34
31							
32							
33							
34							
35							
36							
37							
38							
39							
40	Salvage*; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$14,925.37	(\$466,047.99)	(\$97,072.69)	\$1,076,632.09	\$7.65

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: MISSISSIPPI INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

			Acceinted	Total Cutura	Present Worth	Cumulative	Cumulative
V	Cook Time	Future Cost	Associated				Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost \$465,485.37	Cost (\$/sq. yd.)
- 0	Initial Construction; 1.5 in. Overlay; Unmodified	\$0.00	\$14,925.37	\$0.00	\$465,485.37	\$405,485.37	\$3.31
<u>1</u>							
3							
4							
5 6							
7							
0	Rehabilitation; 1.5 in. Overlay; Unmodified	\$450,560.01	\$14,925.37	\$465,485.38	\$340,125.61	\$805,610.98	\$5.72
9		\$450,560.01	φ14,925.3 <i>1</i>	φ 4 00,460.36	φ340, 123.0 I	\$605,610.96	φ3.12
10							
11							
12							
13							
14							
15							
	Rehabilitation; 1.5 in. Overlay; Unmodified	\$450,560.01	\$14,925.37	\$465,485.38	\$248 526 45	\$1,054,137.43	\$7.49
17	Trenabilitation, 1.3 in. Overlay, Oninounicu	ψ+30,300.01	Ψ14,020.01	ψ+00,+00.00	Ψ240,020.40	ψ1,00 1 ,107.40	Ψ1.43
18							
19							
20							
21							
22							
23							
	Rehabilitation; 1.5 in. Overlay; Unmodified	\$450,560.01	\$14,925.37	\$465,485.38	\$181 595 84	\$1,235,733.27	\$8.78
25		ψ.00,000.0.	ψ,o=σ.σ.	\$ 100, 100.00	ψ.σ.,σσσ.σ.	ψ., <u>2</u> σσ,.σσ. <u>2</u> .	40.1.0
26							
27							
28							
29							
30							
31							
	Rehabilitation; 1.5 in. Overlay; Unmodified	\$450,560.01	\$14,925.37	\$465,485.38	\$132,690.30	\$1,368,423.58	\$9.72
33			· · · · ·	, ,	, ,		· ·
34							
35		1					
36		1					
37							
38							
39							
	Salvage*; 1.5 in. Overlay; Unmodified	\$450,560.01	\$14,925.37	(\$450,560.01)	(\$93,846.71)	\$1,274,576.86	\$9.05

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: MISSISSIPPI STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

	THATTYE 1. MICCIOCH TTOTATE HIGHWAT DETERMINIOTIC (ET					Cumulative	Cumulative
			Associated	Total Future		Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 1.5 in. Overlay; Lime-Treated	\$0.00	\$2,985.07	\$0.00	\$469,033.07	\$469,033.07	\$3.33
1							
2							
3							
<u>4</u> 5							
6							
7							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$92,593.06	\$561,626.14	\$3.99
9	Manitenance, Only Seal	\$120,720.00	φ0.00	\$120,720.00	φ92,393.00	φ301,020.14	φυ.99
10							
11							
12							
13							
14							
15	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$2,985.07	\$469,033.07	\$260,437.41	\$822,063.55	\$5.84
16	·						
17							
18							
19							
20							
21							
22							
	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$51,413.64	\$873,477.19	\$6.20
24							
25							
26 27							
28							
29							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$466,047.99	\$2,985.07	\$469,033.07	\$144 611 65	\$1,018,088.84	\$7.23
31	Trenabilitation, 1.5 m. Overlay, Lime-Treated	Ψ+00,0+1.99	Ψ2,903.07	Ψ+09,033.07	Ψ144,011.03	\$1,010,000.04	Ψ1.23
32							
33							
34							
35							
36							
37							
38	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$28,548.17	\$1,046,637.01	\$7.43
39							
40	Salvage	\$0.00	\$0.00	(\$155,349.33)	(\$32,357.56)	\$1,014,279.45	\$7.20

ALTERNATIVE 2: MISSISSIPPI STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

	WATIVE 2. MISSISSIFFT STATE HIGHWAT DETERMINISTIC					Cumulative	Cumulative
			Associated	Total Future		Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
1	Initial Construction; 1.5 in. Overlay; Unmodified	\$0.00	\$2,985.07	\$0.00	\$453,545.07	\$453,545.07	\$3.22
3							
4 5							
6		\$126,720.00	00.00	\$126.720.00	\$06.206.70	\$540 941 96	\$2.01
8		\$120,720.00	\$0.00	\$126,720.00	\$96,296.79	\$549,841.86	\$3.91
9 10							
11 12							
13 14	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$450,560.01	\$2,985.07	\$453,545.08	\$272,387.42	\$822,229.28	\$5.84
15 16							
17							
18 19							
21	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$57,833.35	\$880,062.64	\$6.25
22 23							
24 25							
	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$450,560.01	\$2,985.07	\$453,545.08	\$163,588.83	\$1,043,651.46	\$7.41
28 29							
30							
31 32							
34	Maintenance; Chip Seal	\$126,720.00	\$0.00	\$126,720.00	\$34,733.21	\$1,078,384.68	\$7.66
35 36							
37 38							
39	Rehabilitation; 1.5 in. Overlay; Lime-Treated	\$450,560.01	\$2,985.07	\$453,545.08		\$1,176,631.89	\$8.36
40	Salvage	\$0.00	\$0.00	(\$415,901.54)	(\$86,627.74)	\$1,090,004.15	\$7.74

ALTERNATIVE 1: NEVADA INTERSTATE DETERMINISTIC (LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$20,000.00	\$0.00	\$590,240.00	\$590,240.00	\$4.19
1							
2							
3							
4							
5							
6 7							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$20,000.00	\$590,240.03	¢421 292 61	\$1,021,522.61	\$7.26
9	Renabilitation, 2 in. Overlay, Linie-Treated	\$370,240.03	φ20,000.00	\$390,240.03	φ431,202.01	\$1,021,322.01	φ1.20
10							
11							
12							
13							
14							
15							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$20,000.00	\$590,240.03	\$315,133.98	\$1,336,656.58	\$9.49
17							
18							
19							
20							
21 22							
23							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$20,000.00	\$590,240.03	\$230 265 31	\$1,566,921.89	\$11.13
25	Trendomation, 2 m. Overlay, Enne Treated	ψ07 0,240.00	Ψ20,000.00	Ψ000,2-10.00	Ψ200,200.01	Ψ1,000,021.00	ψ11.10
26							
27							
28							
29							
30							
31							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$20,000.00	\$590,240.03	\$168,252.61	\$1,735,174.50	\$12.32
33							
34							
35							
36 37							
38							
39							
	Salvage*; 2 in. Overlay; Lime-Treated	\$570,240.03	\$20,000,00	(\$570.240.03)	(\$118,774.75)	\$1 616 399 75	\$11.48

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: NEVADA INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 2 in. Overlay + Digouts; Unmodified	\$0.00	\$20,833.33	\$0.00	\$527,713.33	\$527,713.33	\$3.75
1	,,,,,,,,,,,,,	,	, -,	*	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	,
2							
3							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$451,091.56	\$978,804.89	\$6.95
5							
6 7							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$385 50 <i>1</i> 05	\$1,364,399.84	\$9.69
9	Trenabilitation, 2 iii. Overlay 1 Digouts, Offitiounled	Ψ300,079.99	Ψ20,033.33	ψ321,113.32	ψ303,394.93	ψ1,304,399.04	ψ9.09
10							
11							
12	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$329,608.18	\$1,694,008.03	\$12.03
13							
14							
15	Daladi littati ang Oling Ogradaga a Dinasata a Llagra di Gad	# 500.070.00	#00 000 00	# 507 740 00	0004 750 40	\$4.075.750.40	#14.00
17	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$281,750.46	\$1,975,758.48	\$14.03
18							
19							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$240,841.47	\$2,216,599.95	\$15.74
21	, , , , , , , , , , , , , , , , , , , ,						
22							
23							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$205,872.30	\$2,422,472.25	\$17.21
25 26							
27							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$175,980,50	\$2,598,452.75	\$18.45
29	rtendomation, 2 m. Overlay - Digotte, emineumou	φοσο,στο.σσ	Ψ20,000.00	ψοΣί,ί το.οΣ	ψ17 0,000.00	Ψ2,000,102.70	ψ10.10
30							
31							
	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	\$527,713.32	\$150,428.87	\$2,748,881.62	\$19.52
33							
34							
35	Dehabilitation: 2 in Overlay + Digayte: Upmodified	\$506.970.00	\$20,833.33	¢507 712 20	¢100 507 00	¢2 077 460 05	\$20.44
37	Rehabilitation; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	Φ∠ 0,033.33	\$527,713.32	φ120,301.23	\$2,877,468.85	\$∠0.44
38							
39							
	Salvage*; 2 in. Overlay + Digouts; Unmodified	\$506,879.99	\$20,833.33	(\$506,879.99)	(\$105,577.55)	\$2,771,891.31	\$19.69

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: NEVADA STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0 1	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$4,000.00	\$0.00	\$574,240.00	\$574,240.00	\$4.08
3		\$56,320.00	\$0.00	\$56,320.00	\$48,142.57	\$622,382.57	\$4.42
5		φου,σ20.00	ψ0.00	ψου,σ2σ.σσ	ψ+0,142.01	VOLU , VOL . OT	Ψ1.12
7 8 9	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$41,152.47	\$663,535.04	\$4.71
10 11							
12 13 14		\$570,240.03	\$4,000.00	\$574,240.03	\$358,668.63	\$1,022,203.67	\$7.26
15 16		\$56,320.00	\$0.00	\$56,320.00	\$30,069.71	\$1,052,273.38	\$7.47
17 18 19							
20 21	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$25,703.71	\$1,077,977.09	\$7.66
22 23 24		\$570,240.03	\$4,000.00	\$574,240.03	\$224 023 37	\$1,302,000.46	\$9.25
25 26	·	φοι σ,2 10.00	ψ1,000.00	ψον 1,210.00	ΨΕΕ 1,0ΕΘ.01	1,002,000.10	ψ0.20
27 28 29	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$18,781.45	\$1,320,781.91	\$9.38
30 31		\$56,320.00	\$0.00	\$56,320.00	\$16.054.46	\$1,336,836.37	\$9.49
33 34	_	φυσ,320.00	φυ.υυ	φυυ,υ20.00	φ10,004.40	ψ1,000,000.3 <i>1</i>	φ5.49
35 36 37	Rehabilitation; 2 in. Overlay; Lime-Treated	\$570,240.03	\$4,000.00	\$574,240.03	\$139,924.33	\$1,476,760.71	\$10.49
38 39							
	Salvage*; Fog Seal	\$56,320.00		(\$323,840.02)	(\$67,452.33)	\$1,409,308.38	\$10.01

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: NEVADA STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$510,880.00	\$510,880.00	\$3.63
1							
3							
	Maintananas Fag Cool	#E6 220 00	\$0.00	\$56,330,00	¢40 440 E7	¢550,000,57	\$3.97
5	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$48,142.57	\$559,022.57	
6							
7							
	Rehabilitation; 2 in. Overlay; Unmodified	\$506,879.99	\$4,000.00	\$510,879.99	\$373,295.00	\$932,317.57	\$6.62
9	rtendomation, 2 mm o vondy, o mmodinou	φοσο,σ. σ.σσ	ψ 1,000100	ψο το (οι οι οι	\$0.0,200.00	\$662,611.61	ψ0.02
10							
11							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$35,177.31	\$967,494.88	\$6.87
13							
14							
15							
	Rehabilitation; 2 in. Overlay; Unmodified	\$506,879.99	\$4,000.00	\$510,879.99	\$272,763.00	\$1,240,257.88	\$8.81
17							
18							
19	Maintenance Fan Oaal	# 50,000,00	#0.00	# 50,000,00	#05 700 74	#4 005 004 50	#0.00
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$25,703.71	\$1,265,961.59	\$8.99
21 22							
23							
	Rehabilitation; 2 in. Overlay; Unmodified	\$506,879.99	\$4,000.00	\$510,879.99	\$100 305 25	\$1,465,266.85	\$10.41
25	Terrabilitation, 2 in. Overlay, orimodified	ψουσ,στο.σσ	ψ+,000.00	ψο 10,07 5.55	ψ100,000.20	ψ1,400,200.00	ψ10.+1
26							
27							-
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$18,781.45	\$1,484,048.30	\$10.54
29	. 0						
30							
31							
	Rehabilitation; 2 in. Overlay; Unmodified	\$506,879.99	\$4,000.00	\$510,879.99	\$145,630.40	\$1,629,678.70	\$11.57
33							
34							
35							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$13,723.42	\$1,643,402.12	\$11.67
37							
38							
39	Calvaga*: 2 in Overlay: Upmodified	¢506.070.00	£4,000,00	(\$E06.970.00\)	(\$10E E77 EE)	¢4 527 024 57	610.00
40	Salvage*; 2 in. Overlay; Unmodified	\$506,879.99			(\$105,577.55)	φ1,537,824.57	\$10.92

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: OREGON INTERSTATE DETERMINISTIC (LIME-TREATED)

						Cumulative	Cumulative
			Associated	Total Future	Present Worth		Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$22,727.27	\$0.00	\$928,071.27	\$928,071.27	\$6.59
1		70.00	* ,·-·-·	70.00	¥===,=:	+ , - · · · · · · · · · · · · · · ·	¥3.33
2							
3							
5							
6							
7 8							
9							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$38,047.77	\$966,119.05	\$6.86
11							
12 13							
14							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$905,343.98	\$22,727.27	\$928,071.25	\$515,325.02	\$1,481,444.07	\$10.52
16							
17							
18 19							
20							
21							
22							
23 24							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$21 126 58	\$1,502,570.65	\$10.67
26	Maintenance, 1 og oca	ψου,υ2υ.υυ	ψ0.00	ψου,υ2υ.υυ	Ψ21,120.00	ψ1,002,070.00	Ψ10.07
27							
28							
29 30	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$905,343.98	\$22,727.27	\$928,071.25	\$286 1/1 60	\$1,788,712.34	\$12.70
31	Renabilitation, 2 III. W/I + 2 III. Overlay, Lilie-Heateu	φ905,545.96	φΖΖ,1Ζ1.Ζ1	φ920,071.23	\$200,141.09	\$1,700,712.34	φ12.70
32							
33							
34 35							
35							
37							
38							
39				(00.15.15.15.1	(0.51 : 2.5 : 2.5	44 -0-	
	Salvage*; Fog Seal	\$56,320.00		(\$245,461.33)	(\$51,126.90)	\$1,737,585.43	\$12.34

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: OREGON INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$22,727.27	\$0.00	\$881,607.27	\$881,607.27	\$6.26
1							
3							
4							
5							
6							
7	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$42,798.57	\$924,405.84	\$6.57
8							
9							
10							
11	D. I. I. III. III. III. III. III. III.	0050.070.00	000 707 07	0004 007 00	#550.040.00	04 475 055 44	040.40
12	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$22,727.27	\$881,607.26	\$550,649.29	\$1,475,055.14	\$10.48
14							
15							
16							
17							
18							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$26,731.86	\$1,501,787.00	\$10.67
20							
21							
22							
23	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$22,727.27	\$881,607.26	\$242 022 02	\$1,845,720.92	\$13.11
25	Renabilitation, 2 iii. W/F + 2 iii. Overlay, Orimouneu	φουο,ο <i>1</i> 9.99	ΦΖΖ, ΙΖΙ.ΖΙ	\$001,007.20	\$343,933.92	\$1,045,720.92	\$13.11
26							
27							
28							
29							
30							
	Maintenance; Fog Seal	\$56,320.00	\$0.00	\$56,320.00	\$16,696.64	\$1,862,417.56	\$13.23
32							
33							
34 35							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$22,727.27	\$881,607.26	\$214 820 11	\$2,077,237.68	\$14.75
37	Tronabilitation, 2 in. ivi/i + 2 in. Overlay, Uninounieu	ψυσυ,στ σ.99	ΨΔΔ,ΙΔΙ.ΔΙ	ψυσ1,001.20	Ψ2 17,020.11	ΨΖ,011,231.00	φ14.73
38							
39							
	Salvage	\$0.00	\$0.00	(\$572,586.66)	(\$119,263.53)	\$1,957,974.15	\$13.91

ALTERNATIVE 1: OREGON STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

	NATIVE I. OREGON STATE HIGHWAT DETERMINISTIC (LIME-TI				ı	Cumulative	Cumulative
				T			
. ,	0 17		Associated	Total Future	Present Worth	Present Worth	Present Worth
	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$4,545.45	\$0.00	\$909,889.45	\$909,889.45	\$6.46
1							
2							
3							
4							
5							
6							
7							
8							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$98,924.21	\$1,008,813.67	\$7.16
10							
11							
12							
13							
14							
15							
16							
17	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$905,343.98	\$4,545.45	\$909,889.43	\$467,112.89	\$1,475,926.56	\$10.48
18							
19							
20							
21							
22							
23							
24							
25							
26	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$50,785.04	\$1,526,711.60	\$10.84
27							
28							
29							
30							
31							·
32							·
33							
34	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$905,343.98	\$4,545.45	\$909,889.43	\$239,803.26	\$1,766,514.86	\$12.55
35							\$0.00
36							
37							
38							
39							
40	Salvage	\$0.00	\$0.00	(\$585,810.81)	(\$122,017.97)	\$1,644,496.89	\$11.68

ALTERNATIVE 2: OREGON STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

	RNATIVE 2. OREGON STATE HIGHWAY DETERMINISTIC (NOT L				1	Cumulativa	Cumulativa
			A : - 4 I	Takal Fortuna	Door or out Manually	Cumulative	Cumulative
			Associated	Total Future	Present Worth	Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$4,545.45	\$0.00	\$863,425.45	\$863,425.45	\$6.13
1							
2							
3							
4							
5							
6	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$111,276.29	\$974,701.74	\$6.92
7							
8							
9							
10							
11							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$4,545.45	\$863,425.44	\$539,292.98	\$1,513,994.72	\$10.75
13							
14							
15							
16							
17							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$69,502.84	\$1,583,497.56	\$11.25
19							
20							
21							
22							
23							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$4,545.45	\$863,425.44	\$336,840.81	\$1,920,338.37	\$13.64
25							
26							
27							
28							
29							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$43,411.27	\$1,963,749.64	\$13.95
31							
32							
33							
34							
35							
36	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$858,879.99	\$4,545.45	\$863,425.44	\$210,389.77	\$2,174,139.41	\$15.44
37							
38							
39							
40	Salvage	\$0.00	\$0.00	(\$572,586.66)	(\$119,263.53)	\$2,054,875.88	\$14.59

ALTERNATIVE 1: SOUTH CAROLINA INTERSTATE DETERMINISTIC (LIME-TREATED)

	NATIVE 1. 300 TH CAROLINA INTERSTATE DETERMINISTIC (EI	,				Cumulative	Cumulative
			Associated	Total Future	Present Worth	Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$22,727.27	\$0.00	\$1,387,079.27		\$9.85
1		\$0.00	4 ,	ψο.σσ	ψ.,σσ.,σ.σ. <u>σ.</u>	ψ.,σσ.,σ.σ. <u>σ.</u>	ψσ.σσ
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$22.727.27	\$1,387,079.21	\$866.365.58	\$2,253,444.86	\$16.00
13		+ 1,00 1,00 110 1	* ==,:=::=:	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+000,000.00	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7.0.00
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$22,727.27	\$1,387,079.21	\$541,129.39	\$2,794,574.24	\$19.85
25	, , , , , , , , , , , , , , , , , , , ,		, ,		, ,	, , , ,	·
26							
27							
28							
29							
30							
31							
32							
33							
34			_				
35							
36	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$22,727.27	\$1,387,079.21	\$337,987.82	\$3,132,562.06	\$22.25
37			_				
38							
39							
	Salvage	\$0.00	\$0.00	(\$909,567.96)	(\$189,453.04)	\$2,943,109.02	\$20.90

ALTERNATIVE 2: SOUTH CAROLINA INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

			Associated	Total Future	Present Worth	Cumulative Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$22,727.27	\$0.00	\$1,356,103.27		\$9.63
1		, , , , ,	,	,	, , ,	, , ,	,
2							
3							
4							
5							
6							
7							
8							
9							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$22,727.27	\$1,356,103.31	\$916,134.81	\$2,272,238.08	\$16.14
11							
12							
13							
14							
15							
16 17							
18							
19							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	¢22 727 27	\$1,356,103.31	¢619 007 95	\$2,891,145.93	\$20.53
21	Trenabilitation, 2 III. Will + 2 III. Overlay, Orimodined	\$1,333,370.04	ΨΖΖ,1Ζ1.Ζ1	ψ1,000,100.01	ψ010,901.03	Ψ2,031,143.33	Ψ20.33
22							
23							
24							
25							
26							
27							
28							
29							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$22,727.27	\$1,356,103.31	\$418,111.97	\$3,309,257.89	\$23.50
31							
32							
33							
34							
35							
36							
37							
38							
39		#4 000 0 7 0 04	#00 707 07	(#4,000,070,04)	(#077 707 00)	#0.004.500.0 7	#04.50
40	Salvage*; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04		(\$1,333,376.04)	(\$277,727.62)	\$3,031,530.27	\$21.53

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: SOUTH CAROLINA STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$4,545.45	\$0.00	\$1,368,897.45	\$1,368,897.45	\$9.72
1							
2							
3							
4							
5							
6							
7							
8							
9							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$4,545.45	\$1,368,897.40	\$924,778.03	\$2,293,675.49	\$16.29
11							
12							
13							
14							
15							
16							
17							
18							
19		£4 204 254 04	ΦΑ ΕΛΕ ΛΕ	£4 000 00 7 40	#CO4 74C 00	#0.040.400.00	¢00.70
21	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$4,545.45	\$1,368,897.40	\$624,746.90	\$2,918,422.39	\$20.73
22							
23							
23							
25							
26							
27							
28							
29							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$4 545 45	\$1,368,897.40	\$422,056,62	\$3,340,479.01	\$23.72
31		ψ1,004,001.04	ψτ,υτυ.τυ	ψ1,000,007.40	Ψ+22,000.02	ψ0,040,470.01	Ψ20.12
32							
33							
34							
35							
36							
37							
38							
39							
	Salvage*; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,364,351.94	\$4 545 45	(\$1 364 351 94)	(\$284,179.56)	\$3 056 299 45	\$21.71

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: SOUTH CAROLINA STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$4,545.45	\$0.00	\$1,337,921.45	\$1,337,921.45	\$9.50
1							
3							
4							
5							
6							
$\frac{3}{7}$							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$4.545.45	\$1,337,921.49	\$977,606,13	\$2,315,527.58	\$16.45
9		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+ 1,0 10110	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4 0000	, , , , , , , , , , , , , , , , , , ,	4.0
10							
11							
12							
13							
14							
15							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$4,545.45	\$1,337,921.49	\$714,327.22	\$3,029,854.81	\$21.52
17							
18							
19 20							
21							
22							
23							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$4.545.45	\$1,337,921.49	\$521,951,91	\$3,551,806.71	\$25.23
25		ψ.,σσσ,σ.σ.σ.	ψ 1,0 10110	ψ.,σσ.,σ <u>2</u> σ	ψο <u>Σι</u> ,σοιισι	ψο,σοι,σοσιι :	420.20
26							
27							
28							
29							
30							
31							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,333,376.04	\$4,545.45	\$1,337,921.49	\$381,385.14	\$3,933,191.86	\$27.93
33							
34							
35							
36 37							
37							
38							
		\$1,333,376.04	\$4 545 45	(¢1 222 276 04)	(\$277 727 62\	\$3.655.464.24	\$25.96
40	Salvage*; 2 in. M/F + 2 in. Overlay; Unmodified			(\$1,333,376.04)	(\$211,121.62)	გა,ხახ,404.24	\$∠5.96

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: TEXAS INTERSTATE DETERMINISTIC (LIME-TREATED)

	NATIVE 1. TEXAS INTERSTATE DETERMINISTIC (LIME-TREAT					Cumulative	Cumulative
			Associated	Total Future	Present Worth		Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$20,000.00	\$0.00	\$509,984.00	\$509,984.00	\$3.62
1	•						
2							
3							
4							
5							
6							
7							
8							
9							
	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$28,535.83	\$538,519.83	\$3.82
11							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$20,000.00	\$509,984.00	\$318,534.50	\$857,054.33	\$6.09
13							
14							
15							
16							
17							
18							
19							
20							
21	M : 1	0.40.040.00	** 0.00	* 40 0 40 00	0.47.000.40	0074 077 70	***
22	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$17,823.40	\$874,877.73	\$6.21
23	Debek Whatiers Oile Occades a Linea Transland	0400 004 00	# 00 000 00	#500.004.00	0400 OFF 74	Ø4 0 7 0 000 44	#7.00
25	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$20,000.00	\$509,984.00	\$198,955.71	\$1,073,833.44	\$7.63
26							
27							
28							
29							
30							
31							
32							
33							
	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$11 132 44	\$1,084,965.88	\$7.71
35		ψ 12,2 10.00	Ψ0.00	Ţ . <u>_</u> , <u>_</u> 10.00	Ç,102.14	÷ .,55 .,555.56	Ψ1.71
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$20,000.00	\$509,984.00	\$124,267 15	\$1,209,233.03	\$8.59
37		Ţ 100,00 1.00	+==,000.00	+	ψ. <u>=</u> ., <u>=</u> 07.10	÷ .,;,;	ψ3.30
38							
39							
	Salvage	\$0.00	\$0.00	(\$326,656.00)	(\$68.038.87)	\$1,141,194.16	\$8.11

ALTERNATIVE 2: TEXAS INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

Voor	Cost Type	Future Cost	Associated	Total Future Cost	Present Worth	Cumulative Present Worth	Cumulative Present Worth
	Cost Type	Future Cost \$0.00	User Cost \$20,000.00	\$0.00	Cost \$494,496.00	Cost \$494,496.00	Cost (\$/sq. yd.) \$3.51
1	Initial Construction; 2 in. Overlay; Unmodified	\$0.00	\$20,000.00	\$0.00	\$494,496.00	\$494,496.00	\$3.51
2							
3							
4							
5							
6							
7							
8	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$30,864.35	\$525,360.35	\$3.73
9		Ψ+2,2+0.00	ψ0.00	Ψ+2,2+0.00	ψου,σο-ι.σο	Ψ020,000.00	φ0.70
	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$20,000.00	\$494,495.98	\$334,063.77	\$859,424.12	\$6.10
11	Trendshitation, 2 m. Overlay, omnounce	ψ+7-4,400.00	Ψ20,000.00	ψ+0+,+00.00	φοσ-1,000.77	ψ000,424.12	φ0.10
12							
13							
14							
15							
16							
17							
	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$20,850.85	\$880,274.97	\$6.25
19		, , , , , , , , , , , , , , , , , , , ,	*	,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ,	*
	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$20,000.00	\$494,495.98	\$225.681.51	\$1,105,956.49	\$7.85
21	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , ,	, , ,	,
22							
23							
24							
25							
26							
27							
28	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$14,086.09	\$1,120,042.57	\$7.95
29	-						
30	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$20,000.00	\$494,495.98	\$152,462.34	\$1,272,504.92	\$9.04
31							
32							
33							
34							
35							
36							
37							
	Maintenance; Crack Sealing	\$42,240.00	\$0.00	\$42,240.00	\$9,516.06	\$1,282,020.97	\$9.11
39							
40	Salvage*; 2 in. Overlay; Unmodified	\$474,495.98	\$20,000.00	(\$474,495.98)	(\$98,832.32)	\$1,183,188.66	\$8.40

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: TEXAS STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

	NATIVE 1: TEXAS STATE HIGHWAY DETERMINISTIC (LIME-TREATE	.0)			•		
						Cumulative	Cumulative
			Associated	Total Future	Present Worth	Present Worth	Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
	Initial Construction; Initial Construction; 2 in. Overlay; Lime-Treated	\$0.00	\$4,000.00	\$0.00	\$493,984.00	\$493,984.00	\$3.51
1	initial Constituction, mitial Constituction, 2 III. Overlay, Eline-Treated	ψ0.00	Ψ+,000.00	Ψ0.00	ψ493,904.00	Ψ+35,304.00	ψ3.31
2							
3							
4							
5							
6	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$111,276.29	\$605,260.29	\$4.30
7		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ,	, ,	,
8							
9							
10							
11							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$4,000.00	\$493,984.00	\$308,540.95	\$913,801.24	\$6.49
13							
14							
15							
16							
17							
	Maintanana Okin Oaal	£440,000,00	00.00	0440 000 00	000 500 04	0000 004 00	#0.00
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$69,502.84	\$983,304.08	\$6.98
19							
20							
21							
22							
23							
	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$4,000.00	\$493,984.00	\$192 713 77	\$1,176,017.84	\$8.35
25	rediction, Em. Overlay, Emile Treated	ψ 100,00 1.00	ψ1,000.00	Ψ100,001.00	Ψ102,710.77	ψ1,170,017.01	φ0.00
26							
27							
28							
29							
30	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$43,411.27	\$1,219,429.11	\$8.66
31							
32							
33							
34							
35		+			 	 	
	Data de l'illitatione o Cinc Considerat Linea Transferi	0400 004 00	# 4.000.00	# 400 004 00	0400 000 45	04 000 707 50	00.50
36	Rehabilitation; 2 in. Overlay; Lime-Treated	\$489,984.00	\$4,000.00	\$493,984.00	\$120,368.45	\$1,339,797.56	\$9.52
37							
38							
39							
	Salvage	\$0.00	\$0.00	(\$326,656.00)	(\$68.038.87)	\$1,271,758.70	\$9.03

ALTERNATIVE 2: TEXAS STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
	Initial Construction; Initial Construction; 2 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$478,496.00	\$478,496.00	\$3.40
1							
2							
3							
4	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$115,727.34	\$594,223.34	\$4.22
6	Maintenance, Chip Seal	\$140,000.00	\$0.00	\$140,600.00	\$115,727.34	Φ394,223.34	Φ4.22
$\frac{6}{7}$							
8							
9							
	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$323,254.74	\$917,478.08	\$6.52
11	······································	+,	Ţ 1,000100	+ - , -	+ +	+	70.02
12							
13							
14							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$78,181.24	\$995,659.32	\$7.07
16							
17							
18							
19		0.17.1.107.00	*	A 1=0 10= 00	4010.000	21 21 1 22 2 2 1	***
	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$218,379.32	\$1,214,038.64	\$8.62
21							
22 23							
23							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$52.916.45	\$1,266,855.09	\$9.00
26	Mantieriance, Only Seal	Ψ140,000.00	ψ0.00	ψ140,000.00	Ψ32,010.43	ψ1,200,000.09	ψ9.00
27							
28							
29							
	Rehabilitation; 2 in. Overlay; Unmodified	\$474,495.98	\$4,000.00	\$478,495.98	\$147,529.24	\$1,414,384.33	\$10.05
31				•			·
32							
33							
34							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$35,680.90	\$1,450,065.23	\$10.30
36							
37							
38							
39		0.174.405.00	04.000.00	(0.474.405.00)	(#00,000,00)	04.054.000.0 4	AC 22
40	Salvage*, 2 in. Overlay; Unmodified	\$474,495.98		(\$474,495.98)	(\$98,832.32)	\$1,351,232.91	\$9.60

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: UTAH INTERSTATE DETERMINISTIC (LIME-TREATED)

//LIL	NATIVE I. UTAN INTERSTATE DETERMINISTIC (LIME-TREATED	,			•	•	
Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$0.00	\$22,727.27	\$0.00	\$1,260,359.27	\$1,260,359.27	\$8.95
1							
2							
3							
4							
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$236,083.77	\$1,496,443.04	\$10.63
6							
7							
8							
9							
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$194,043.65	\$1,690,486.69	\$12.01
11							
12							
13							
14		2007 000 00	***	****	0.450.400.50	A	212.11
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$159,489.73	\$1,849,976.42	\$13.14
16							
17							
18							
19		04 007 004 00	#00 707 07	#4 000 0F0 07	0575 044 50	#0.405.407.04	#47.00
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,237,631.99	\$22,727.27	\$1,260,359.27	\$575,211.52	\$2,425,187.94	\$17.22
21 22							
23							
23							
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	¢107 745 55	\$2,532,933.49	\$17.99
26		φ201,232.00	φυ.υυ	\$207,232.00	\$107,745.55	\$2,552,955.49	φ17.99
27							
28							
29							
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$88 558 00	\$2,621,492.47	\$18.62
31	Maintenance, 1 in. Ooi o, Linie-freated	Ψ201,232.00	ψ0.00	Ψ201,202.00	ψ00,000.00	Ψ2,021,402.47	Ψ10.02
32							
33							
34							
	Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$72 789 03	\$2,694,281.51	\$19.14
36	Transcribing, Fine Cor C, Emily Fronton	Ψ201,202.00	ψ0.00	Ψ201,202.00	ψ, 2,700.00	ψ <u>2,001,201.01</u>	ψ10.17
37							
38							
39							
	Salvage*; 2 in. M/F + 2 in. Overlay; Lime-Treated	\$1,237,631.99	\$22,727 27	(\$1,237,631.99)	(\$257.785 19)	\$2,436,496,32	\$17.30
<u> </u>	Jean-age , 2 m. m 2 m. evenay, Emile fredied	ψ1,201,001.00	Ψ <u></u> , , <u></u> , . <u></u> ,	(\$.,201,001.00)	(\$201,100.10)	Ψ=, 100, 100.02	ψ17.00

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: UTAH INTERSTATE DETERMINISTIC (NOT LIME-TREATED)

Year	Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 2 in. Overlay; Unmodified	\$0.00	\$22,727.27	\$0.00	\$1,196,999.27	\$1,196,999.27	\$8.50
2							
3							
4							
	Maintenance; 1 in. OGFC; Unmodified	\$274,560.00	\$0.00	\$274,560.00	\$225,668.31	\$1,422,667.58	\$10.10
6							
7 8							
9							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$808,649.83	\$2,231,317.41	\$15.85
11	·						
12							
13							
14	Maintenance; 1 in. OGFC; Unmodified	\$274,560.00	\$0.00	\$274,560.00	\$152 <i>\</i> 153 <i>\</i> 12	\$2,383,770.83	\$16.93
16	ivialitienance, 1 in. OGI C, Oninodined	φ274,300.00	φ0.00	\$274,300.00	\$102,400.42	φ2,363,770.63	\$10.95
17							
18							
19							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22,727.27	\$1,196,999.29	\$546,294.85	\$2,930,065.69	\$20.81
21 22							
23							
24							
	Maintenance; 1 in. OGFC; Unmodified	\$274,560.00	\$0.00	\$274,560.00	\$102,992.07	\$3,033,057.76	\$21.54
26							
27							
28 29							
	Rehabilitation; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02	\$22 727 27	\$1,196,999.29	\$369 057 23	\$3,402,114.98	\$24.16
31		 	4 ,	ψ.,.σο,σσσ. <u>=</u> σ	+ + + + + + + + + + + + + + + + + + + 	ψο, τοΣ, τ που	Ψ=σ
32							
33							
34	Maintanana 4 in OCEO Hamadified	#074 F00 00	#0.00	#074 F00 00	# 00 577 75	#0 474 000 70	#04.00
36	Maintenance; 1 in. OGFC; Unmodified	\$274,560.00	\$0.00	\$274,560.00	\$69,577.75	\$3,471,692.73	\$24.66
37							
38							
39							
	Salvage*; 2 in. M/F + 2 in. Overlay; Unmodified	\$1,174,272.02			(\$244,588.00)	\$3,227,104.74	\$22.92

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 1: UTAH STATE HIGHWAY DETERMINISTIC (LIME-TREATED)

O Initial Construction; 2 in. M/F + 1.5 in. Overlay; Lime-Treated		Cost Type	Future Cost	Associated User Cost	Total Future Cost	Present Worth Cost	Cumulative Present Worth Cost	Cumulative Present Worth Cost (\$/sq. yd.)
3 4 5 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$236,083.77 \$1,350,995.77 66 7 8 8 9 10 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$194,043.65 \$1,545,039.41 11 12 13 13 14 15 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$159,489.73 \$1,704,529.15 16 17 18 19 19 20 Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated \$1,110,911.98 \$4,000.00 \$1,114,911.98 \$508,831.27 \$2,213,360.42 12 12 12 12 12 12 12 12 12 12 12 12 12			\$0.00	\$4,000.00	\$0.00	\$1,114,912.00	\$1,114,912.00	\$7.92
3 4 5 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$236,083.77 \$1,350,995.77 66 7 8 9 10 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$194,043.65 \$1,545,039.41 11 12 12 13 13 14 15 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$159,489.73 \$1,704,529.15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	1							
4 S Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$236,083.77 \$1,350,995.77 6								
5 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$236,083.77 \$1,350,995.77 6								
6 7 7 8 9 9 9 10 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$194,043.65 \$1,545,039.41 11		Maintenance: 1 in OGEC: Lime_Treated	\$287 232 00	00.02	\$287 232 00	\$236 083 7 7	\$1 350 005 77	\$9.60
7 8 9 9 10 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$194,043.65 \$1,545,039.41 11		Maintenance, 1 in. OOI O, Linie-Treated	Ψ201,232.00	ψ0.00	Ψ201,232.00	Ψ230,003.77	ψ1,550,995.77	ψ9.00
9 10 Maintenance; 1 in. OGFC; Lime-Treated								
10 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$194,043.65 \$1,545,039.41 11	8							
11	9							
12		Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$194,043.65	\$1,545,039.41	\$10.97
13								
14								
15 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$159,489.73 \$1,704,529.15								
16		Maintananaa, 1 in OCEC: Lima Traatad	#207 222 00	* 0.00	¢207 222 00	£450 400 72	¢4 704 500 45	¢10.11
17		Maintenance, Fin. OGFC, Lime-Treated	\$207,232.00	\$0.00	\$207,232.00	\$159,469.73	\$1,704,529.15	\$12.11
18	17							
19								
20 Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated \$1,110,911.98 \$4,000.00 \$1,114,911.98 \$508,831.27 \$2,213,360.42 21								
21		Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Lime-Treated	\$1,110,911.98	\$4,000.00	\$1,114,911.98	\$508,831.27	\$2,213,360.42	\$15.72
23	21							
24								
25 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$107,745.55 \$2,321,105.97								
26 27 28 29 30 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$88,558.99 \$2,409,664.96 31 32 33 33 34 35 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$72,789.03 \$2,482,453.99 36 37 38 38 39			****	**	****		40.004.405.05	410.10
27 28 29 30 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$88,558.99 \$2,409,664.96 31 32 33 34 35 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$72,789.03 \$2,482,453.99 36 37 38		Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$107,745.55	\$2,321,105.97	\$16.49
28 29 30 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$88,558.99 \$2,409,664.96 31 32 33 34 35 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$72,789.03 \$2,482,453.99 36 37 38 38 39								
29 30 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$88,558.99 \$2,409,664.96 31 32 33 34								
30 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$88,558.99 \$2,409,664.96 31								
31 32 33 34 34 35 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$72,789.03 \$2,482,453.99 36 37 38		Maintenance: 1 in. OGFC: Lime-Treated	\$287.232.00	\$0.00	\$287,232.00	\$88.558.99	\$2,409,664,96	\$17.11
33			, , , , , , , , , , , , , , , , , , , ,	*	, , , , , , , , , , , , , , , , , , , ,	, ,	, , ,	,
33	32							
35 Maintenance; 1 in. OGFC; Lime-Treated \$287,232.00 \$0.00 \$287,232.00 \$72,789.03 \$2,482,453.99 36 37 38								
36 37 38								
37 38		Maintenance; 1 in. OGFC; Lime-Treated	\$287,232.00	\$0.00	\$287,232.00	\$72,789.03	\$2,482,453.99	\$17.63
38								
			ļ					
1 201	38							
39		Salvage*: 2 in M/E + 1.5 in Overlay: Lime-Treated	\$1 110 011 09	\$4,000,00	(\$1 110 011 0 <u>0</u>)	(\$231 300 90\	\$2.251.063.20	\$15.99

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

ALTERNATIVE 2: UTAH STATE HIGHWAY DETERMINISTIC (NOT LIME-TREATED)

	Cu						
			Associated	Total Future	Present Worth	Present Worth	Cumulative Present Worth
Year	Cost Type	Future Cost	User Cost	Cost	Cost	Cost	Cost (\$/sq. yd.)
0	Initial Construction; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$0.00	\$4,000.00	\$0.00	\$1,060,000.00	\$1,060,000.00	\$7.53
1							
2							
3							
4							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$115,727.34	\$1,175,727.34	\$8.35
6							
7							
8							
9	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,056,000.00	\$4,000.00	\$1,060,000.00	\$746,000,00	\$1,891,825.36	\$13.44
11	Renabilitation, 2 III. W/F + 1.5 III. Overlay, Onlinounled	\$1,030,000.00	Φ4,000.00	\$1,000,000.00	\$7.10,090.02	\$1,091,023.30	\$13.44
12							
13							
14							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$78.181.24	\$1,970,006.60	\$13.99
16		7 ,	70.00	* * * * * * * * * * * * * * * * * * *	4.0,.0	, , , , , , , , , , , , , , , , , , ,	4 10100
17							
18							
19							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,056,000.00	\$4,000.00	\$1,060,000.00	\$483,770.16	\$2,453,776.76	\$17.43
21							
22							
23							
24		2442.222.22	22.22		A-0.010.15	20 -00 -00	217.00
25	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$52,816.45	\$2,506,593.21	\$17.80
26							
27							
28 29							
	Rehabilitation; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,056,000.00	\$4,000.00	\$1,060,000.00	\$326 817 70	\$2,833,410.99	\$20.12
31	Tenabilitation, 2 iii. Wili 1 1.5 iii. Ovenay, oninounicu	ψ1,030,000.00	ψ+,000.00	ψ1,000,000.00	Ψ020,017.73	Ψ2,000,410.00	Ψ20.12
32							
33							
34							
	Maintenance; Chip Seal	\$140,800.00	\$0.00	\$140,800.00	\$35,680.90	\$2,869,091.89	\$20.38
36			·				
37							
38							
39							
40	Salvage*; 2 in. M/F + 1.5 in. Overlay; Unmodified	\$1,056,000.00		(\$1,056,000.00)	(\$219,953.23)	\$2,649,138.66	\$18.81

^{*} If a treatment was triggered in the final year of the analysis period, users costs were not accounted for in the salvage value.

b) Probabilistic*

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^{*} The graphs in this section are plots of the cumulative distribution of the life cycle cost (LCC) of Alternative 1 minus the LCC of Alternative 2. Probability across the all iterations in the Monte Carlo simulation process is on the y-axis. The difference in LCCs is on the x-axis. Thus, x-axis values less than zero indicate savings (i.e., the cost of Alternative 1 is less than the cost of Alternative 2), whereas values greater than zero indicate that the cost of Alternative 1 is greater then the cost of Alternative 2. See Volume III for additional discussion.

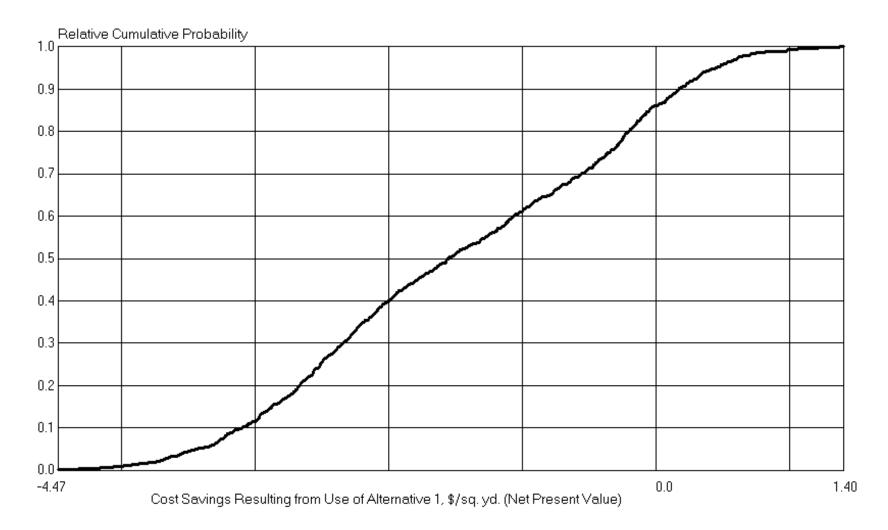
ALTERNATIVE 1: ARIZONA INTERSTATE PROBABILISTIC (LIME-TREATED)

Description	Mean	Minimum	Maximum	Standard Deviation
Life-Cycle Cost (\$)	\$2,035,359.86	\$1,716,703.92	\$2,448,736.25	\$157,189.62
Life-Cycle Cost (\$/sq. yd.)	\$14.46	\$12.19	\$17.39	\$1.12
Discount Rate (%)	4.06	2.51	5.49	0.77
Life of Initial Construction Alternative (years)	14.99	13.02	16.97	1.04
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$7.33	\$7.10	\$7.54	\$0.12
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.06	3.00	7.00	1.03
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.30	\$0.20	\$0.40	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.94	3.00	7.00	1.02
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.30	\$0.20	\$0.40	\$0.05
Life of 1st Rehabilitation Alternative (years)	15.02	13.01	16.99	1.04
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$7.32	\$7.10	\$7.54	\$0.12

ALTERNATIVE 2: ARIZONA INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,243,504.87	\$1,715,323.48	\$2,950,967.05	\$235,945.10
Life-Cycle Cost (\$/sq. yd.)	\$15.93	\$12.18	\$20.96	\$1.68
	1.00	0.71	- 10	
Discount Rate (%)	4.06	2.51	5.49	0.77
Life of Initial Construction Alternative (years)	12.65	10.01	14.99	1.31
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$7.16	\$6.94	\$7.37	\$0.11
Life of Maintanance Treatment Applied to Initial Construction Alternative (vegra)	5.11	3.01	7.00	1.02
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)			7.00	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative(\$/sq. yd.)	\$0.30	\$0.20	\$0.40	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.98	3.02	6.98	0.99
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.30	\$0.20	\$0.40	\$0.05
Life of 1st Rehabilitation Alternative (years)	12.57	10.00	14.99	1.34
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$7.15	\$6.94	\$7.37	\$0.11

Arizona Interstate



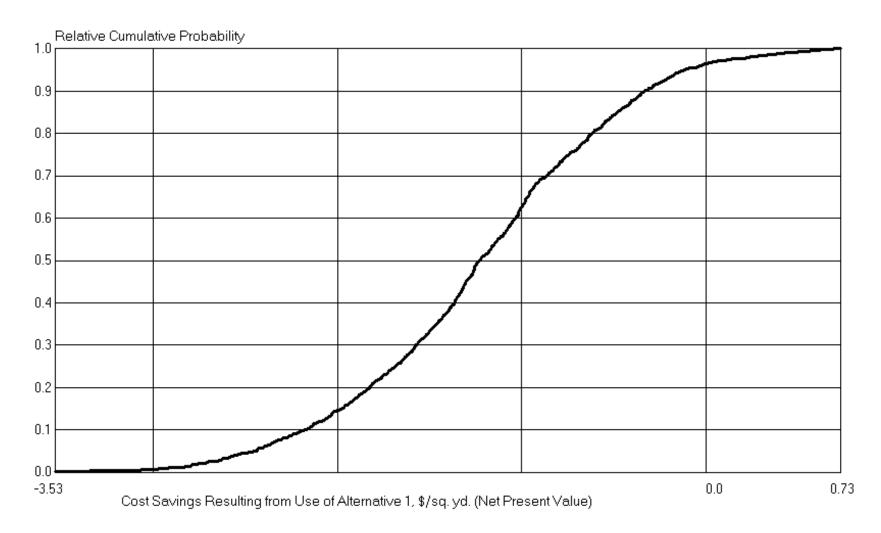
ALTERNATIVE 1: ARIZONA STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

Description	Mean	Minimum	Maximum	Standard Deviation
Life-Cycle Cost (\$)	\$588,623.29	\$457,642.25	\$822,678.57	\$67,523.34
Life-Cycle Cost (\$/sq. yd.)	\$4.18	\$3.25	\$5.84	\$0.48
Discount Rate (%)	3.94	2.50	5.49	0.79
Life of Initial Construction Alternative (years)	19.96	18.00	22.00	1.02
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.48	\$3.38	\$3.58	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	9.61	7.00	11.98	1.33
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.01	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	9.75	7.00	12.00	1.32
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.01	\$0.80	\$1.25	\$0.12
Life of 1st Rehabilitation Alternative (years)	20.04	18.00	21.98	1.00
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.48	\$3.38	\$3.58	\$0.05

ALTERNATIVE 2: ARIZONA STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$695,985.86	\$547,483.33	\$905,949.74	\$69,721.19
Life-Cycle Cost (\$/sq. yd.)	\$4.94	\$3.89	\$6.43	\$0.50
Discount Rate (%)	3.94	2.50	5.49	0.79
Life of Initial Construction Alternative (years)	17.35	15.00	19.98	1.34
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.37	\$3.27	\$3.47	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	7.00	5.01	9.00	1.01
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.01	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	6.98	5.00	9.00	1.02
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.02	\$0.80	\$1.25	\$0.12
Life of 1st Rehabilitation Alternative (years)	17.22	15.00	20.00	1.31
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.37	\$3.27	\$3.47	\$0.05

Arizona State Highway



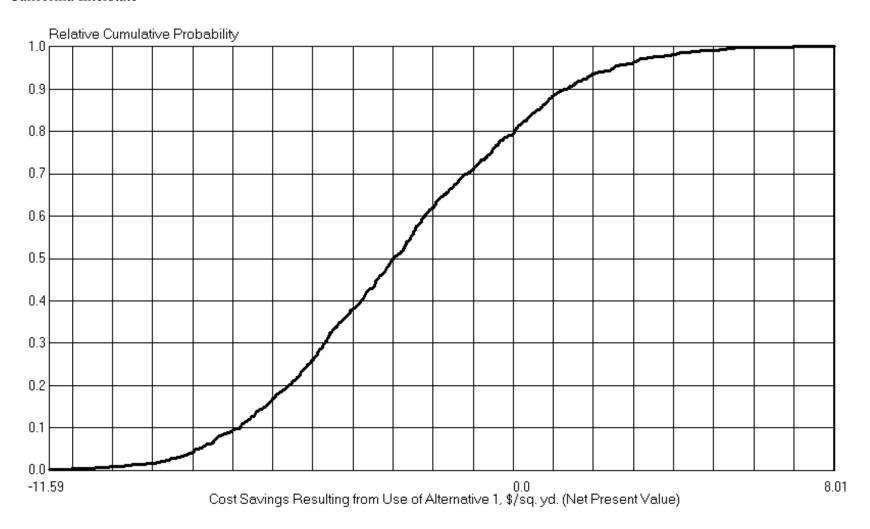
ALTERNATIVE 1: CALIFORNIA INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,936,949.63	\$2,948,877.61	\$5,728,791.27	\$498,627.48
Life-Cycle Cost (\$/sq. yd.)	\$27.96	\$20.94	\$40.69	\$3.54
Discount Rate (%)	3.96	2.50	5.50	0.80
Life of Initial Construction Alternative (years)	10.03	8.00	12.00	1.01
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$9.26	\$8.99	\$9.55	\$0.14
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.00	3.00	7.00	1.05
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.80	\$1.21	\$2.40	\$0.31
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.02	3.02	6.99	1.02
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.80	\$1.20	\$2.40	\$0.31
Life of 1st Rehabilitation Alternative (years)	9.99	8.03	11.99	1.02
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$9.27	\$8.99	\$9.55	\$0.15

ALTERNATIVE 2: CALIFORNIA INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$4,337,748.73	\$3,224,792.46	\$5,959,761.78	\$492,883.83
Life-Cycle Cost (\$/sq. yd.)	\$30.81	\$22.90	\$42.33	\$3.50
Discount Rate (%)	3.96	2.50	5.50	0.80
Life of Initial Construction Alternative (years)	7.97	6.01	9.99	1.03
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.44	\$8.18	\$8.68	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	3.99	3.00	5.00	0.51
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.80	\$1.20	\$2.40	\$0.31
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.01	3.00	5.00	0.53
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.81	\$1.20	\$2.40	\$0.30
Life of 1st Rehabilitation Alternative (years)	8.04	6.02	9.98	1.03
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.43	\$8.18	\$8.68	\$0.13

California Interstate



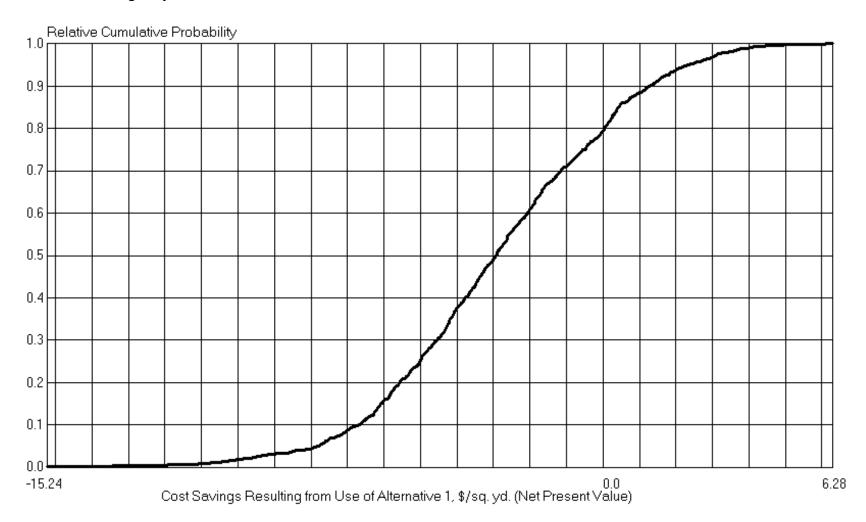
ALTERNATIVE 1: CALIFORNIA STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,851,061.32	\$2,918,345.08	\$5,523,724.03	\$463,891.06
Life-Cycle Cost (\$/sq. yd.)	\$27.35	\$20.73	\$39.23	\$3.29
Discount Data (0/)	4.00	0.50	5.40	0.70
Discount Rate (%)	4.02	2.50	5.49	0.78
Life of Initial Construction Alternative (years)	9.99	8.00	12.00	1.05
Unit Cost of Initial Construction Alternative	\$9.28	\$8.99	\$9.55	\$0.14
		0.04	0.05	
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.98		6.97	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$1.51	\$1.01	\$2.00	\$0.26
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.95	3.02	6.99	1.05
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$1.51	\$1.00	\$1.99	\$0.26
Life of det Debakilitation Alternative (venus)	40.00	0.01	44.00	4.05
Life of 1st Rehabilitation Alternative (years)	10.03		11.99	1.05
Unit Cost of 1st Rehabilitation Alternative	\$9.58	\$9.19	\$9.95	\$0.19

ALTERNATIVE 2: CALIFORNIA STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$4,254,137.44	\$3,076,535.70	\$6,367,176.30	\$487,440.50
Life-Cycle Cost (\$/sq. yd.)	\$30.21	\$21.85	\$45.22	\$3.46
Discount Rate (%)	4.02	2.50	5.49	0.78
Life of Initial Construction Alternative (years)	8.05	6.01	9.99	1.04
Unit Cost of Initial Construction Alternative (years)	\$8.43	\$8.18	\$8.68	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.01		6.00	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$1.50	\$1.00	\$2.00	\$0.26
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.01	2.00	6.00	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$1.50	\$1.00	\$2.00	\$0.25
Life of 1st Rehabilitation Alternative (years)	8.02	6.01	9.99	1.02
Unit Cost of 1st Rehabilitation Alternative	\$8.72	\$8.38	\$9.08	\$0.18

California State Highway



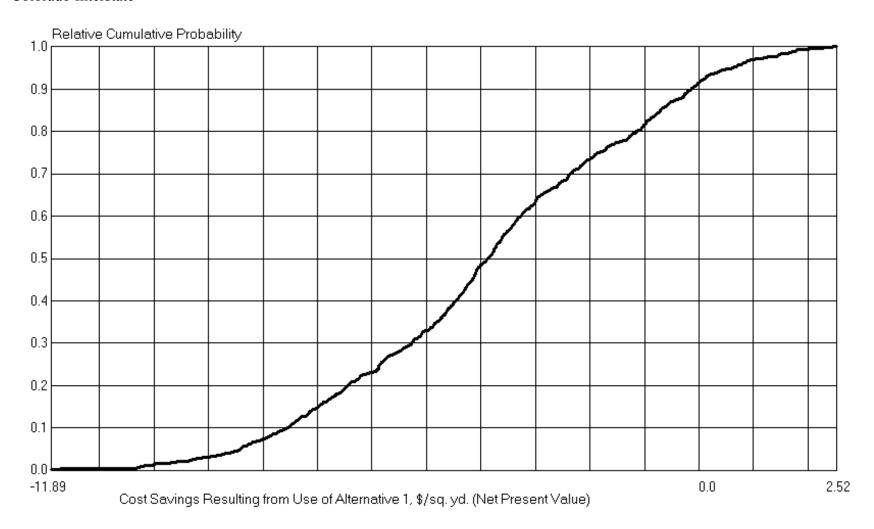
ALTERNATIVE 1: COLORADO INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,229,049.49	\$2,557,900.22	\$4,436,323.50	\$380,216.06
Life-Cycle Cost (\$/sq. yd.)	\$22.93	\$18.17	\$31.51	\$2.70
Discount Rate (%)	3.95	2.51	5.49	0.79
Life of Initial Construction Alternative (years)	10.06	8.02	11.99	1.07
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.57	\$8.31	\$8.83	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.00	3.00	7.00	1.05
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.00	3.03	7.00	1.01
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	9.98	8.00	11.99	1.04
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.56	\$8.31	\$8.83	\$0.13

ALTERNATIVE 2: COLORADO INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,773,395.69	\$2,852,918.37	\$5,214,783.51	\$405,065.82
Life-Cycle Cost (\$/sq. yd.)	\$26.80	\$20.26	\$37.04	\$2.88
Discount Rate (%)	3.95	2.51	5.49	0.79
Life of Initial Construction Alternative (years)	8.02		10.00	1.03
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.33	\$8.09	\$8.59	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	3.99	2.00	6.00	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	3.97	2.00	6.00	1.01
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	8.02	6.00	10.00	1.06
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.34	\$8.09	\$8.59	\$0.13

Colorado Interstate



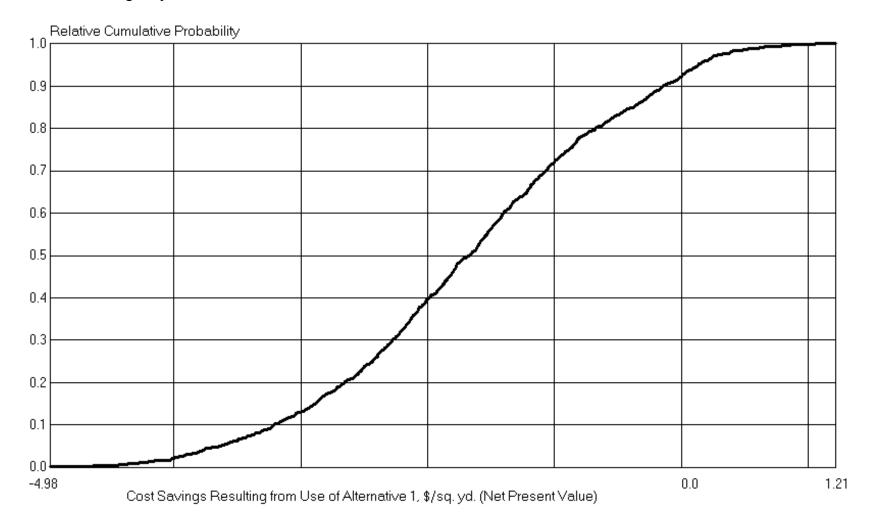
ALTERNATIVE 1: COLORADO STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$671,321.89	\$528,975.92	\$920,950.65	\$78,132.03
Life-Cycle Cost (\$/sq. yd.)	\$4.77	\$3.76	\$6.54	\$0.55
Discount Rate (%)	4.01	2.50	5.49	0.80
Life of Initial Construction Alternative (years)	10.01	8.00	12.00	1.02
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.48	\$3.38	\$3.58	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	7.36	6.00	9.00	0.81
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	7.33	6.01	9.00	0.78
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.51	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	10.00	8.02	12.00	1.02
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.48	\$3.38	\$3.58	\$0.05

ALTERNATIVE 2: COLORADO STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$789,980.42	\$590,866.72	\$1,080,908.57	\$86,194.93
Life-Cycle Cost (\$/sq. yd.)	\$5.61	\$4.20	\$7.68	\$0.61
Discount Rate (%)	4.01	2.50	5.49	0.80
Life of Initial Construction Alternative (years)	7.96	6.01	10.00	1.05
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.37	\$3.27	\$3.47	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.89	3.01	6.99	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.11
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.05	3.00	7.00	1.01
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.51	\$0.30	\$0.70	\$0.11
Life of Ast Dubushillaria Alternative (compa)	0.04	0.00	0.00	4.04
Life of 1st Rehabilitation Alternative (years)	8.04	6.00	9.99	1.04
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.37	\$3.27	\$3.47	\$0.05

Colorado State Highway



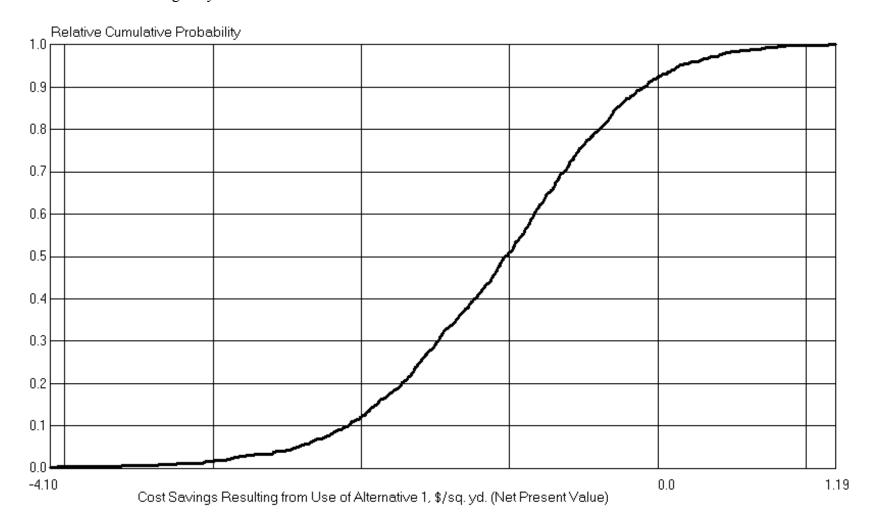
ALTERNATIVE 1: FHWA FEDERAL LANDS HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,133,373.47	\$861,481.57	\$1,466,811.23	\$116,860.86
Life-Cycle Cost (\$/sq. yd)	\$8.05	\$6.12	\$10.42	\$0.83
Discount Rate (%)	4.03	2.50	5.50	0.76
Life of Initial Construction Alternative (years)	12.33	10.01	14.97	1.34
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$2.92	\$2.83	\$3.01	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	6.01	5.00	7.00	0.50
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$0.90	\$0.80	\$1.00	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	6.00	5.00	7.00	0.51
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$0.90	\$0.80	\$1.00	\$0.05
Life of 1st Rehabilitation Alternative (years)	12.35	10.00	14.94	1.28
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$2.92	\$2.83	\$3.01	\$0.05

ALTERNATIVE 2: FHWA FEDERAL LANDS HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,284,971.85	\$925,938.06	\$1,846,868.15	\$144,136.40
Life-Cycle Cost (\$/sq. yd)	\$9.13	\$6.58	\$13.12	\$1.02
Discount Rate (%)	4.03	2.50	5.50	0.76
Life of Initial Construction Alternative (years)	9.98	8.01	12.00	1.01
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$2.75	\$2.67	\$2.83	\$0.04
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.00	3.00	6.99	1.00
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$0.90	\$0.80	\$1.00	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.00	3.01	7.00	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$0.90	\$0.80	\$1.00	\$0.05
Life of 1st Rehabilitation Alternative (years)	9.93	8.01	12.00	1.03
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$2.75	\$2.67	\$2.83	\$0.04

FHWA Federal Lands Highway



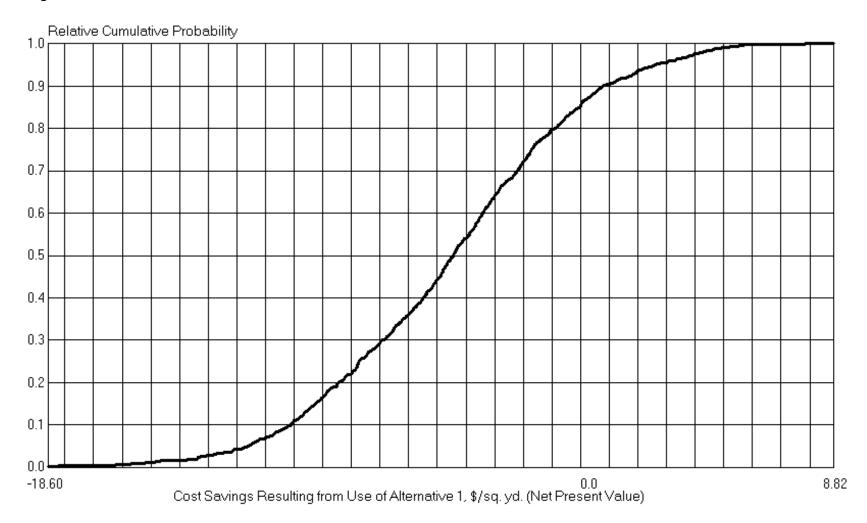
ALTERNATIVE 1: GEORGIA INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,087,265.75	\$2,183,501.14	\$4,912,237.12	\$435,893.73
Life-Cycle Cost (\$/sq. yd.)	\$21.93	\$15.51	\$34.89	\$3.10
Discount Rate (%)	4.03	2.51	5.50	0.77
Life of Initial Construction Alternative (years)	10.71	7.00	15.00	2.16
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.68	\$8.42	\$8.94	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	7.01	5.01	9.00	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	6.99	5.01	8.99	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	10.72	7.00	15.00	2.13
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.69	\$8.42	\$8.94	\$0.13

ALTERNATIVE 2: GEORGIA INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,731,570.43	\$2,530,751.27	\$5,716,951.63	\$544,269.62
Life-Cycle Cost (\$/sq. yd.)	\$26.50	\$17.97	\$40.60	\$3.87
Discount Rate (%)	4.03	2.51	5.50	0.77
Life of Initial Construction Alternative (years)	8.19	5.03	11.97	1.80
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.48	\$8.22	\$8.73	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.00	3.01	6.99	1.05
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.04	3.00	7.00	1.04
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	8.11	5.00	12.00	1.82
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.48	\$8.22	\$8.73	\$0.14

Georgia Interstate



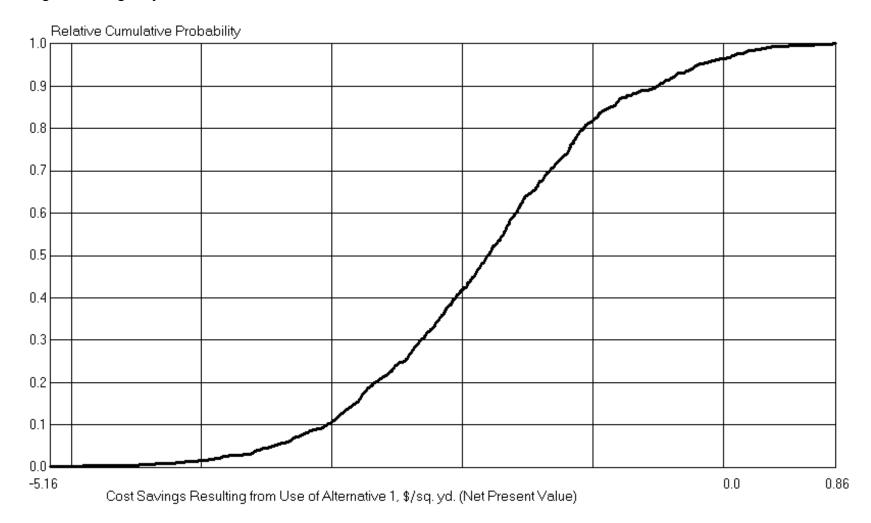
ALTERNATIVE 1: GEORGIA STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,119,945.16	\$799,277.62	\$1,625,623.24	\$138,866.78
Life-Cycle Cost (\$/sq. yd.)	\$7.95	\$5.68	\$11.55	\$0.99
B: 4B 4 (0)	1.00	0.50	5.40	0.77
Discount Rate (%)	4.06	2.52	5.49	0.77
Life of Initial Construction Alternative (years)	10.77	8.00	13.98	1.59
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.03	\$2.94	\$3.12	\$0.04
Life of Maintage and Transfer and Applied to Initial Construction Alternative (1999)	0.07	7.04	0.00	0.40
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	8.07	7.01	9.00	0.49
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	7.98	7.00	9.00	0.51
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.51	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	10.81	8.00	13.99	1.63
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.03	\$2.94	\$3.12	\$0.05

ALTERNATIVE 2: GEORGIA STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,376,878.77	\$1,023,431.27	\$1,903,835.41	\$148,439.34
Life-Cycle Cost (\$/sq. yd.)	\$9.78	\$7.27	\$13.52	\$1.05
Discount Rate (%)	4.06	2.52	5.49	0.77
Life of Initial Construction Alternative (years)	7.94	6.01	9.99	1.00
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$2.95	\$2.86	\$3.04	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	6.01	5.01	7.00	0.51
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	6.00	5.00	6.99	0.52
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.50	\$0.30	\$0.70	\$0.10
Life of 1st Rehabilitation Alternative (years)	7.85	6.01	10.00	1.02
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$2.95	\$2.86	\$3.04	\$0.05

Georgia State Highway



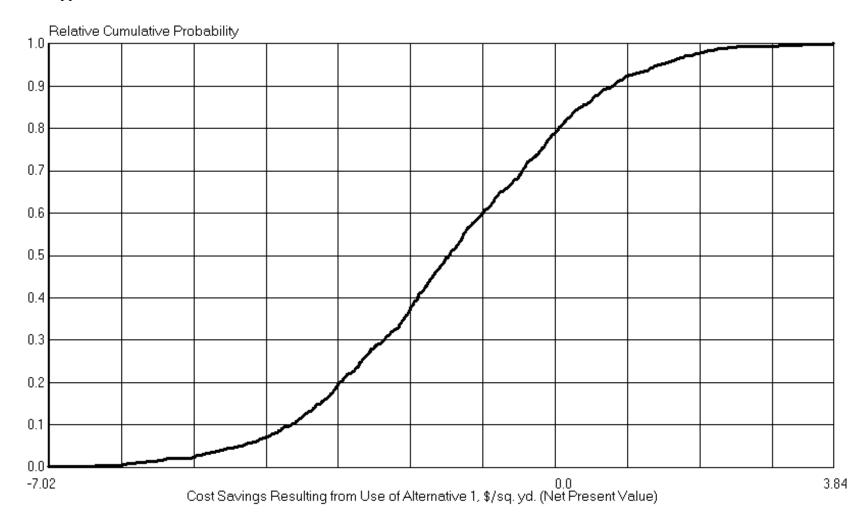
ALTERNATIVE 1: MISSISSIPPI INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,149,248.34	\$773,502.13	\$1,835,236.15	\$174,281.08
Life-Cycle Cost (\$/sq. yd.)	\$8.16	\$5.49	\$13.03	\$1.24
Discount Rate (%)	3.98	2.50	5.49	0.76
Life of Initial Construction Alternative (years)	10.73	7.01	14.99	2.15
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.32	\$3.21	\$3.41	\$0.05
Life of 1st Rehabilitation Alternative (years)	10.69	7.01	14.99	2.10
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.31	\$3.21	\$3.41	\$0.05

ALTERNATIVE 2: MISSISSIPPI INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,353,583.32	\$910,605.86	\$2,142,922.63	\$204,933.27
Life-Cycle Cost (\$/sq. yd.)	\$9.61	\$6.47	\$15.22	\$1.46
Discount Rate (%)	3.98	2.50	5.49	0.76
Life of Initial Construction Alternative (years)	8.24	5.00	12.00	1.80
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.20	\$3.10	\$3.30	\$0.05
Life of 1st Rehabilitation Alternative (years)	8.27	5.00	11.98	1.79
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.20	\$3.10	\$3.30	\$0.05

Mississippi Interstate



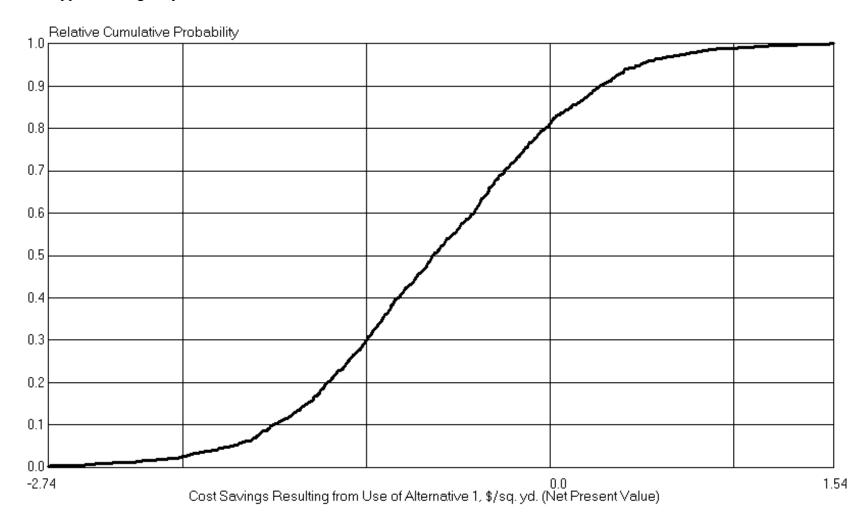
ALTERNATIVE 1: MISSISSIPPI STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,062,107.18	\$831,111.62	\$1,413,418.93	\$101,908.78
Life-Cycle Cost (\$/sq. yd.)	\$7.54	\$5.90	\$10.04	\$0.72
Discount Rate (%)	3.99	2.50	5.50	0.77
Life of Initial Construction Alternative (years)	14.67	12.00	16.99	1.34
Unit Cost of Initial Construction Alternative	\$3.31	\$3.21	\$3.41	\$0.05
	75.5	***	+2111	+
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	8.01	6.00	9.99	1.02
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$0.90	\$0.80	\$1.00	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	8.01	6.00	9.99	1.00
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$0.90	\$0.80	\$1.00	\$0.05
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Life of 1st Rehabilitation Alternative (years)	14.77	12.01	16.99	1.34
Unit Cost of 1st Rehabilitation Alternative	\$3.31	\$3.21	\$3.41	\$0.05

ALTERNATIVE 2: MISSISSIPPI STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,149,716.30	\$886,503.32	\$1,585,051.33	\$119,883.88
Life-Cycle Cost (\$/sq. yd.)	\$8.17	\$6.30	\$11.26	\$0.85
Discount Rate (%)	3.99	2.50	5.50	0.77
Discount Nate (70)	3.33	2.50	3.30	0.77
Life of Initial Construction Alternative (years)	13.01	10.00	16.00	1.54
Unit Cost of Initial Construction Alternative (years)	\$3.20	\$3.10	\$3.30	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	6.97	5.01	8.99	1.03
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$0.90	\$0.80	\$1.00	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	7.03	5.00	9.00	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$0.90	\$0.80	\$1.00	\$0.05
Life of 1st Rehabilitation Alternative (years)	13.03	10.01	15.96	1.54
Unit Cost of 1st Rehabilitation Alternative	\$3.20	\$3.10	\$3.30	\$0.05

Mississippi State Highway



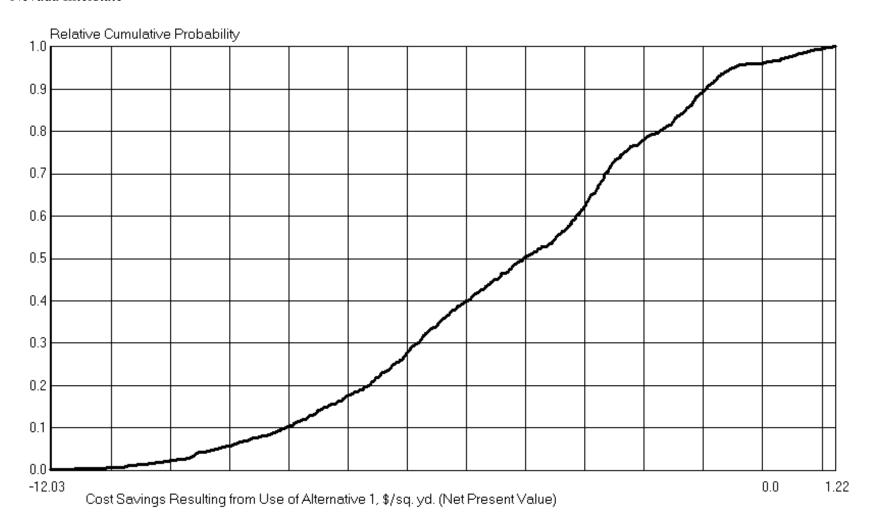
ALTERNATIVE 1: NEVADA INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,768,028.50	\$1,380,099.28	\$2,302,186.97	\$195,133.57
Life-Cycle Cost (\$/sq. yd.)	\$12.56	\$9.80	\$16.35	\$1.39
Discount Rate (%)	3.82	2.51	5.47	0.76
151500dH Pitato (70)	0.02	2.01	0.11	0.70
Life of Initial Construction Alternative (years)	7.99	7.00	9.00	0.52
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$4.05	\$3.93	\$4.17	\$0.06
Life of 1st Rehabilitation Alternative (years)	7.92	7.00	9.00	0.50
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$4.05	\$3.93	\$4.17	\$0.06

ALTERNATIVE 2: NEVADA INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,373,296.30	\$1,487,526.48	\$3,680,811.15	\$391,959.32
Life-Cycle Cost (\$/sq. yd.)	\$16.86	\$10.56	\$26.14	\$2.78
Discount Rate (%)	3.82	2.51	5.47	0.76
Life of Initial Construction Alternative (years)	4.88	3.00	7.00	1.05
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.60	\$3.49	\$3.71	\$0.06
Life of 1st Rehabilitation Alternative (years)	4.85	3.00	6.99	1.06
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.60	\$3.49	\$3.71	\$0.06

Nevada Interstate



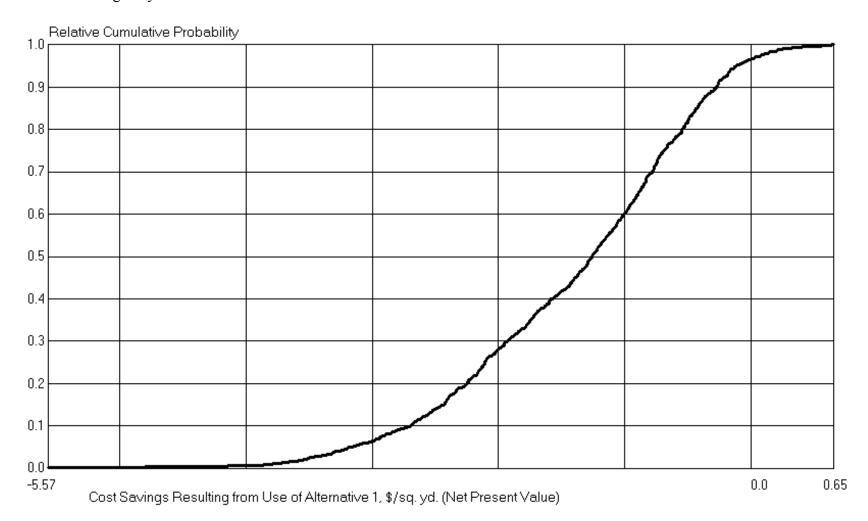
ALTERNATIVE 1: NEVADA STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,471,431.96	\$1,106,519.01	\$1,854,413.00	\$148,512.95
Life-Cycle Cost (\$/sq. yd.)	\$10.45	\$7.86	\$13.17	\$1.05
Discount Rate (%)	\$3.97	\$2.51	\$5.50	\$0.78
Life of Initial Construction Alternative (years)	12.03	10.02	14.00	1.02
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$4.05	\$3.93	\$4.17	\$0.06
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	\$4.00	\$3.01	\$4.99	\$0.50
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.40	\$0.30	\$0.50	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	\$4.00	\$3.01	\$4.99	\$0.52
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.40	\$0.30	\$0.50	\$0.05
Life of 1st Rehabilitation Alternative (years)	\$11.93	\$10.00	\$13.99	\$1.01
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$4.05	\$3.93	\$4.17	\$0.06

ALTERNATIVE 2: NEVADA STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,670,203.22	\$1,267,300.21	\$2,265,888.08	\$178,811.91
Life-Cycle Cost (\$/sq. yd.)	\$11.86	\$9.00	\$16.09	\$1.27
Discount Rate (%)	3.97	2.51	5.50	0.78
Life of Initial Construction Alternative (years)	8.03	6.01	9.99	1.03
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$3.60	\$3.49	\$3.71	\$0.06
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.01	3.00	5.00	0.51
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.40	\$0.30	\$0.50	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.00	3.00	5.00	0.51
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.40	\$0.30	\$0.50	\$0.05
Life of 1st Rehabilitation Alternative (years)	8.05	6.02	9.98	1.00
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$3.60	\$3.49	\$3.71	\$0.06

Nevada State Highway



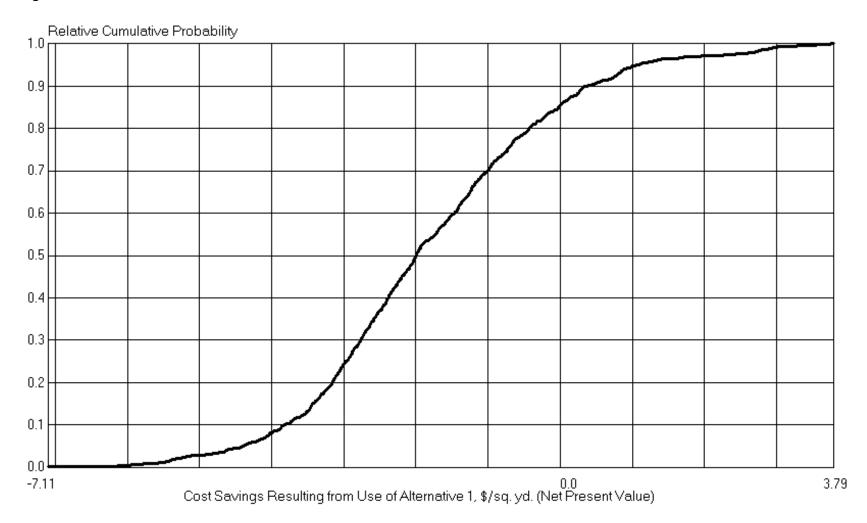
ALTERNATIVE 1: OREGON INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,792,255.31	\$1,384,866.04	\$2,553,593.93	\$202,510.44
Life-Cycle Cost (\$/sq. yd.)	\$12.73	\$9.84	\$18.14	\$1.44
Discount Rate (%)	4.01	2.51	5.50	0.77
Life of Initial Construction Alternative (years)	15.04	10.00	19.94	2.57
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$6.43	\$6.24	\$6.62	\$0.10
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	10.04	8.00	12.00	1.01
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.40	\$0.35	\$0.45	\$0.03
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	9.98	8.00	11.99	1.02
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.40	\$0.35	\$0.45	\$0.03
Life of 1st Rehabilitation Alternative (years)	15.09	10.00	19.99	2.52
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$6.43	\$6.24	\$6.62	\$0.10

ALTERNATIVE 2: OREGON INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,045,814.71	\$1,497,211.73	\$2,973,779.85	\$223,527.00
Life-Cycle Cost (\$/sq. yd.)	\$14.53	\$10.63	\$21.12	\$1.59
Discount Rate (%)	4.01	2.51	5.50	0.77
Life of Initial Construction Alternative (years)	11.73	8.00	14.99	1.84
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$6.10	\$5.92	\$6.28	\$0.09
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	7.03	5.00	8.99	1.03
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$0.40	\$0.35	\$0.45	\$0.03
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	7.00	5.01	9.00	1.01
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$0.40	\$0.35	\$0.45	\$0.02
Life of 1st Rehabilitation Alternative (years)	11.64	8.01	14.99	1.86
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$6.10	\$5.92	\$6.28	\$0.09

Oregon Interstate



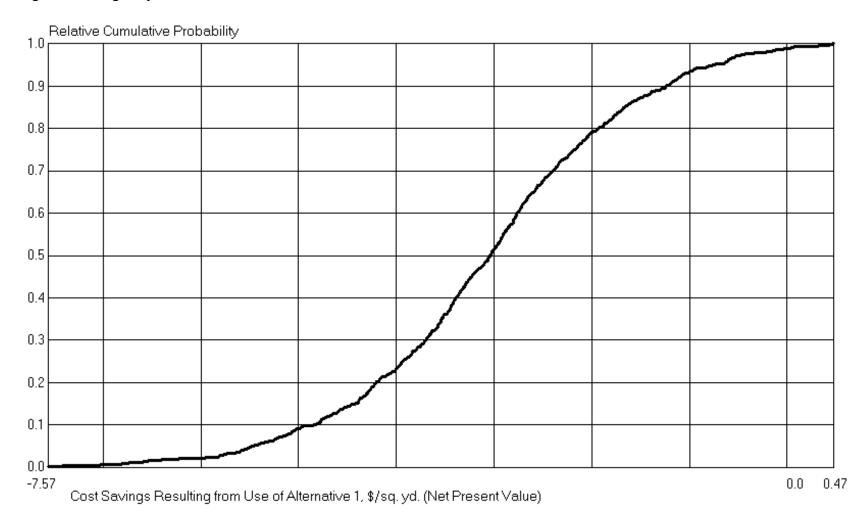
ALTERNATIVE 1: OREGON STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,772,792.20	\$1,460,196.44	\$2,250,368.99	\$152,240.94
Life-Cycle Cost (\$/sd. yd.)	\$12.59	\$10.37	\$15.98	\$1.08
Discount Rate (%)	4.08	2.50	5.49	0.76
Life of Initial Construction Alternative (years)	17.37	15.00	20.00	1.34
Unit Cost of Initial Construction Alternative	\$6.43	\$6.24	\$6.62	\$0.10
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	8.69	6.00	11.00	1.33
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$1.01	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	8.66	6.03	11.00	1.32
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$1.02	\$0.80	\$1.25	\$0.12
Life of 1st Rehabilitation Alternative (years)	17.34	15.03	19.98	1.35
Unit Cost of 1st Rehabilitation Alternative	\$6.43	\$6.24	\$6.62	\$0.10

ALTERNATIVE 2: OREGON STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,205,442.30	\$1,607,196.50	\$3,086,280.30	\$238,082.75
Life-Cycle Cost (\$/sd. yd.)	\$15.66	\$11.41	\$21.92	\$1.69
Discount Rate (%)	4.08	2.50	5.49	0.76
Life of Initial Construction Alternative (years)	11.69	8.01	15.00	1.86
Unit Cost of Initial Construction Alternative (years)	\$6.10	\$5.92	\$6.28	\$0.09
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	6.06	4.00	7.99	1.01
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative	\$1.02	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.96	4.01	7.99	1.05
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s)	\$1.02	\$0.80	\$1.25	\$0.12
Life of 1st Rehabilitation Alternative (years)	11.61	8.01	14.99	1.87
Unit Cost of 1st Rehabilitation Alternative	\$6.10	\$5.92	\$6.28	\$0.09

Oregon State Highway



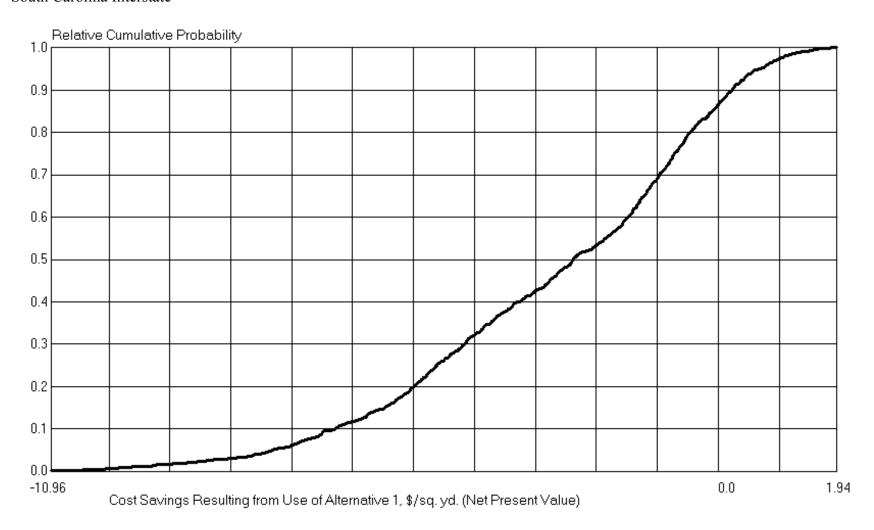
ALTERNATIVE 1: SOUTH CAROLINA INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,974,661.70	\$2,244,099.78	\$3,844,346.38	\$329,801.31
Life-Cycle Cost (\$/sq. yd)	\$21.13	\$15.94	\$27.30	\$2.34
Discount Rate (%)	3.98	2.50	5.50	0.75
Life of Initial Construction Alternative (years)	12.37	10.01	14.99	1.32
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$9.69	\$9.40	\$9.98	\$0.15
Life of 1st Rehabilitation Alternative (years)	12.30	10.01	14.98	1.30
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$9.69	\$9.40	\$9.98	\$0.15

ALTERNATIVE 2: SOUTH CAROLINA INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,360,835.37	\$2,618,711.99	\$4,510,986.06	\$353,798.07
Life-Cycle Cost (\$/sq. yd)	\$23.87	\$18.60	\$32.04	\$2.51
Discount Rate (%)	3.98	2.50	5.50	0.75
Life of Initial Construction Alternative (years)	9.98	8.01	11.99	1.01
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$9.48	\$9.18	\$9.75	\$0.14
Life of 1st Rehabilitation Alternative (years)	10.00	8.00	12.00	1.01
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$9.46	\$9.18	\$9.75	\$0.15

South Carolina Interstate



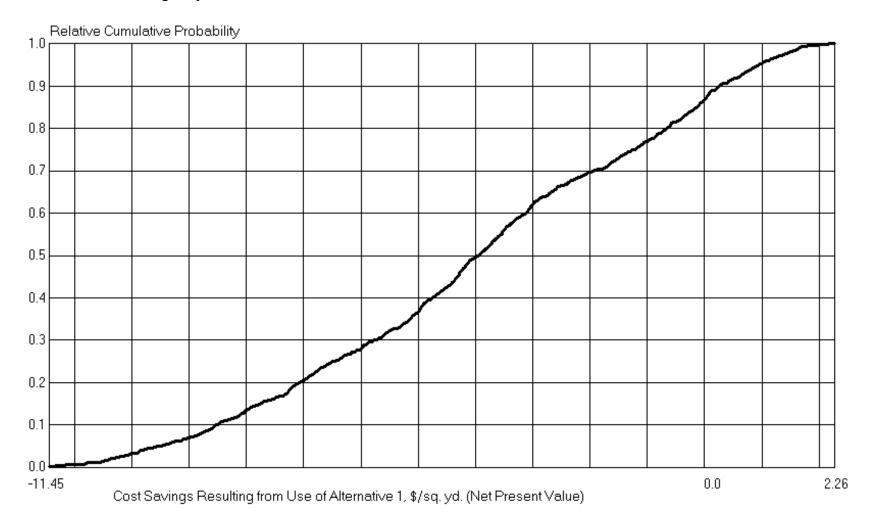
ALTERNATIVE 1: SOUTH CAROLINA STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,404,305.12	\$2,642,493.09	\$4,620,058.01	\$393,039.01
Life-Cycle Cost (\$/sq. yd.)	\$24.18	\$18.77	\$32.81	\$2.79
Discount Rate (%)	4.03	2.50	5.50	0.75
Life of Initial Construction Alternative (years)	10.00	8.01	11.99	1.02
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$9.68	\$9.40	\$9.98	\$0.15
Life of 1st Rehabilitation Alternative (years)	10.00	8.01	12.00	1.01
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$9.69	\$9.40	\$9.98	\$0.15

ALTERNATIVE 2: SOUTH CAROLINA STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,965,555.06	\$2,991,842.99	\$5,449,805.31	\$440,751.62
Life-Cycle Cost (\$/sq. yd.)	\$28.16	\$21.25	\$38.71	\$3.13
Discount Rate (%)	4.03	2.50	5.50	0.75
Life of Initial Construction Alternative (years)	7.99	6.02	10.00	1.05
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$9.47	\$9.18	\$9.75	\$0.15
Life of 1st Rehabilitation Alternative (years)	7.93	6.00	10.00	1.02
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$9.47	\$9.18	\$9.75	\$0.15

South Carolina State Highway



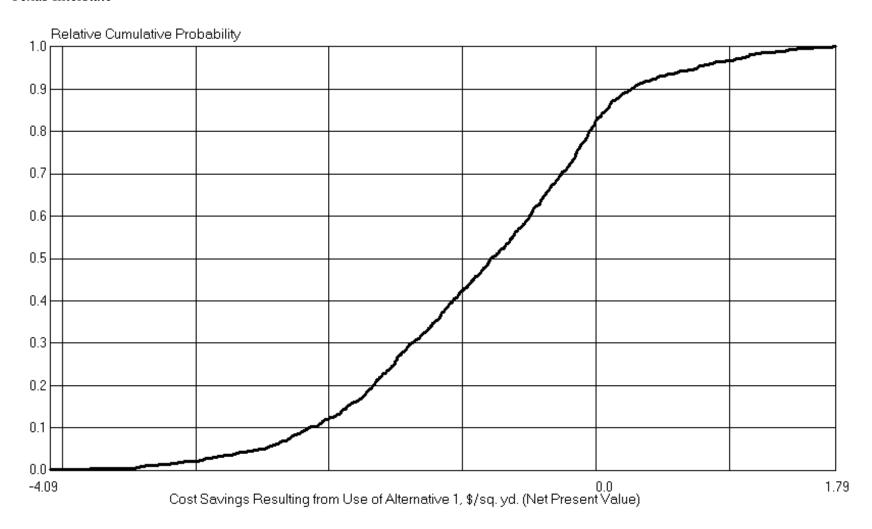
ALTERNATIVE 1: TEXAS INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,168,813.02	\$881,100.71	\$1,660,215.78	\$140,762.98
Life-Cycle Cost (\$/sq. yd)	\$8.30	\$6.26	\$11.79	\$1.00
Discount Data (0/)	4.04	2.50	5.50	0.77
Discount Rate (%)	4.01	2.50	5.50	0.77
Life of Initial Construction Alternative (years)	11.63	8.02	14.96	1.84
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$3.48	\$3.38	\$3.58	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	10.02	9.00	11.00	0.52
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$0.30	\$0.20	\$0.40	\$0.05
	, 2 2 2	* -	* -	*
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	9.99	9.00	11.00	0.52
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$0.30	\$0.20	\$0.40	\$0.05
Life of 1st Rehabilitation Alternative (years)	11.69	8.01	14.98	1.89
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$3.48	\$3.38	\$3.58	\$0.05

ALTERNATIVE 2: TEXAS INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,287,512.57	\$1,008,731.40	\$1,846,381.44	\$134,918.62
Life-Cycle Cost (\$/sq. yd)	\$9.14	\$7.16	\$13.11	\$0.96
Discount Rate (%)	4.01	2.50	5.50	0.77
Life of Initial Construction Alternative (years)	9.69	7.01	12.00	1.33
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$3.37	\$3.27	\$3.47	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	8.00	7.01	8.99	0.52
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$0.30	\$0.20	\$0.40	\$0.05
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	7.98	7.00	9.00	0.51
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$0.30	\$0.20	\$0.40	\$0.05
Life of 1st Rehabilitation Alternative (years)	9.78	7.01	12.00	1.34
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$3.37	\$3.27	\$3.47	\$0.05

Texas Interstate



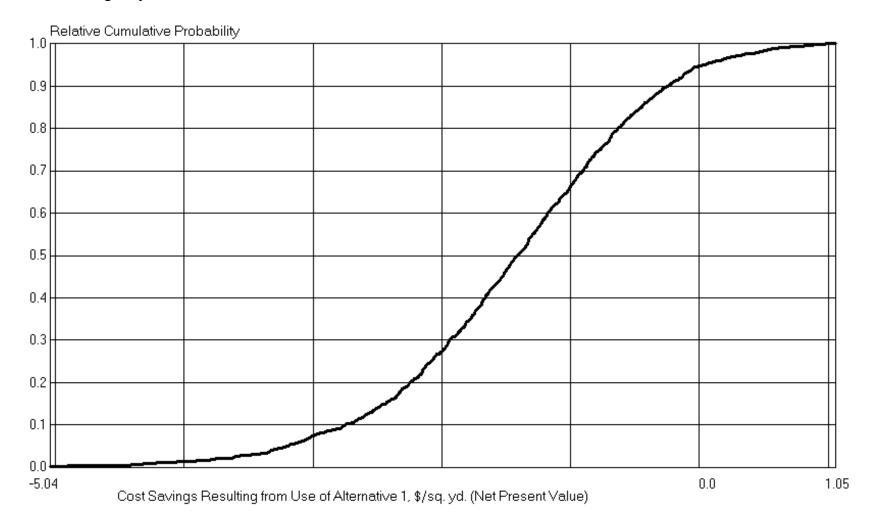
ALTERNATIVE 1: TEXAS STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,329,895.56	\$1,009,939.25	\$1,801,134.62	\$146,545.48
Life-Cycle Cost (\$/sq. yd)	\$9.45	\$7.17	\$12.79	\$1.04
Discount Rate (%)	4.06	2.50	5.49	0.79
Life of Initial Construction Alternative (years)	12.39	10.00	14.99	1.36
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$3.48	\$3.38	\$3.58	\$0.05
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	6.03	5.00	7.00	0.51
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$1.02	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	6.02	5.00	7.00	0.52
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$1.01	\$0.80	\$1.25	\$0.12
Life of 1st Rehabilitation Alternative (years)	12.32	10.00	14.99	1.39
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$3.48	\$3.38	\$3.58	\$0.05

ALTERNATIVE 2: TEXAS STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$1,535,510.57	\$1,086,083.35	\$2,094,657.98	\$171,493.85
Life-Cycle Cost (\$/sq. yd)	\$10.91	\$7.71	\$14.88	\$1.22
Discount Rate (%)	4.06	2.50	5.49	0.79
Discount Nate (70)	4.00	2.50	3.49	0.79
Life of Initial Construction Alternative (years)	9.91	8.00	12.00	1.01
Unit Cost of Initial Construction Alternative (\$/sq. yd)	\$3.37	\$3.27	\$3.47	\$0.05
Life of Maintanana Tracture and Applied to Initial Construction Alternative (const	5.07	2.04	0.00	1.00
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	5.07	3.01	6.99	1.06
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd)	\$1.01	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	4.98	3.00	7.00	1.04
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd)	\$1.02	\$0.80	\$1.25	\$0.12
Life of Ast Debut West's Alleges they (see see)	0.07	0.00	44.00	4.00
Life of 1st Rehabilitation Alternative (years)	9.97	8.00	11.99	1.06
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd)	\$3.37	\$3.27	\$3.47	\$0.05

Texas State Highway



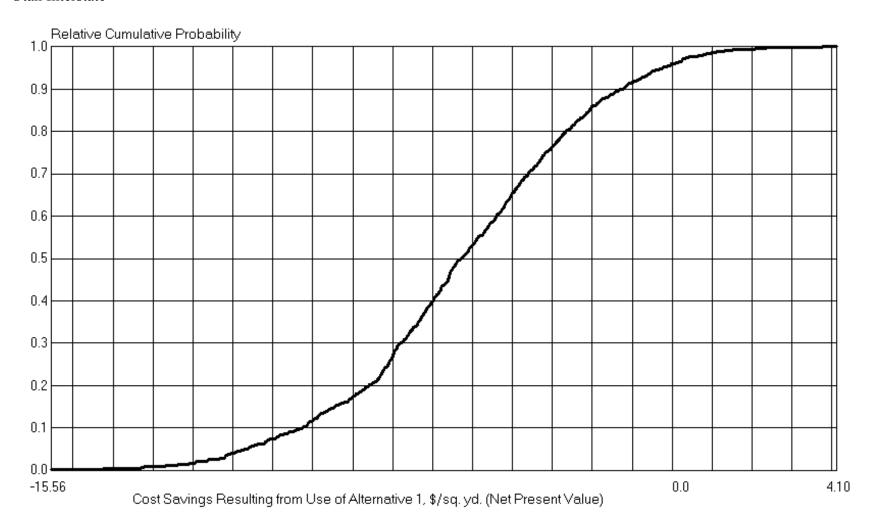
ALTERNATIVE 1: UTAH INTERSTATE PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,831,193.81	\$2,137,233.46	\$3,895,225.34	\$330,969.50
Life-Cycle Cost (\$/sq. yd.)	\$20.11	\$15.18	\$27.66	\$2.35
Discount Rate (%)	3.97	2.50	5.49	0.77
Life of Initial Construction Alternative (years)	20.00	15.02	24.95	2.56
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.79	\$8.53	\$9.05	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.95	3.00	6.99	1.00
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$2.04	\$1.98	\$2.10	\$0.03
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.06	3.00	6.98	1.00
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$2.04	\$1.98	\$2.10	\$0.03
Life of 1st Rehabilitation Alternative (years)	19.97	15.02	24.99	2.56
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.80	\$8.53	\$9.05	\$0.14

ALTERNATIVE 2: UTAH INTERSTATE PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$3,569,713.71	\$2,391,708.84	\$5,069,002.25	\$431,109.46
Life-Cycle Cost (\$/sq. yd.)	\$25.35	\$16.99	\$36.00	\$3.06
Discount Rate (%)	3.97	2.50	5.49	0.77
Life of Initial Construction Alternative (years)	10.72	7.00	14.96	2.12
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$8.35	\$8.09	\$8.59	\$0.13
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.94	3.01	7.00	1.05
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.95	\$1.89	\$2.01	\$0.03
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.02	3.01	6.99	1.06
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.95	\$1.89	\$2.01	\$0.03
Life of 1st Rehabilitation Alternative (years)	10.82	7.01	14.96	2.17
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$8.34	\$8.09	\$8.59	\$0.13

Utah Interstate



ALTERNATIVE 1: UTAH STATE HIGHWAY PROBABILISTIC (LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,634,526.67	\$1,973,730.23	\$3,766,431.76	\$312,527.38
Life-Cycle Cost (\$/sq. yd.)	\$18.71	\$14.02	\$26.75	\$2.22
Discount Rate (%)	3.88	2.50	5.50	0.78
Life of Initial Construction Alternative (years)	20.18	15.00	24.98	2.60
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$7.89	\$7.65	\$8.13	\$0.12
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.99	3.01	7.00	1.00
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$2.04	\$1.98	\$2.10	\$0.03
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.04	3.01	6.99	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$2.04	\$1.98	\$2.10	\$0.03
Life of 1st Rehabilitation Alternative (years)	20.02	15.01	24.89	2.60
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$7.89	\$7.65	\$8.13	\$0.12

ALTERNATIVE 2: UTAH STATE HIGHWAY PROBABILISTIC (NOT LIME-TREATED)

				Standard
Description	Mean	Minimum	Maximum	Deviation
Life-Cycle Cost (\$)	\$2,958,852.54	\$2,092,641.01	\$4,351,207.22	\$374,615.97
Life-Cycle Cost (\$/sq. yd.)	\$21.01	\$14.86	\$30.90	\$2.66
Discount Rate (%)	3.88	2.50	5.50	0.78
Life of Initial Construction Alternative (years)	10.63	7.00	15.00	2.12
Unit Cost of Initial Construction Alternative (\$/sq. yd.)	\$7.50	\$7.28	\$7.72	\$0.11
Life of Maintenance Treatment Applied to Initial Construction Alternative (years)	4.99	3.01	7.00	1.04
Unit Cost of Maintenance Treatment Applied to Initial Construction Alternative (\$/sq. yd.)	\$1.02	\$0.80	\$1.25	\$0.12
Life of Maintenance Treatment Applied to Rehabilitation Alternative(s) (years)	5.06	3.00	7.00	1.03
Unit Cost of Maintenance Treatment Applied to Rehabilitation Alternative(s) (\$/sq. yd.)	\$1.01	\$0.80	\$1.25	\$0.11
Life of 1st Rehabilitation Alternative (years)	10.77	7.00	14.95	2.23
Unit Cost of 1st Rehabilitation Alternative (\$/sq. yd.)	\$7.51	\$7.28	\$7.72	\$0.11

Utah State Highway

