



Calendar Year 2016 Report on

Life-Cycle Cost Analyses

January 2017



Prepared by

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The cost of preparing this report is less than \$5,000.

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Legislative Request

This report is required by [Minn. Stat. 174.185](#), which requires a life-cycle cost analysis for every project in the reconditioning, resurfacing and road repair funding categories constructed after July 1, 2011. The LCCA is a comparison of life-cycle costs among competing paving materials using equal design lives and equal comparison periods. Documentation required by the statute includes:

- Lowest life-cycle cost
- Alternatives considered
- Chosen strategy
- Documented justification, if the chosen strategy isn't the low cost

174.185 PAVEMENT LIFE-CYCLE COST ANALYSIS.

Subd. 1. Definitions.

For the purposes of this section, the following definitions apply.

- (a) "Life-cycle cost" is the sum of the cost of the initial pavement project and all anticipated costs for maintenance, repair, and resurfacing over the life of the pavement. Anticipated costs must be based on Minnesota's actual or reasonably projected maintenance, repair, and resurfacing schedules, and costs determined by the Department of Transportation district personnel based upon recently awarded local projects and experience with local material costs.
- (b) "Life-cycle cost analysis" is a comparison of life-cycle costs among competing paving materials using equal design lives and equal comparison periods.

Subd. 2. Required analysis.

For each project in the reconditioning, resurfacing and road repair funding categories, the commissioner shall perform a life-cycle cost analysis and shall document the lowest life-cycle costs and all alternatives considered. The commissioner shall document the chosen pavement strategy and, if the lowest life cycle is not selected, document the justification for the chosen strategy. A life-cycle cost analysis is required for projects to be constructed after July 1, 2011. For projects to be constructed prior to July 1, 2011, when feasible, the department will use its best efforts to perform life-cycle cost analyses.

Subd. 3. Report.

The commissioner shall report annually to the chairs and ranking minority members of the senate and house of representatives committees with jurisdiction over transportation finance beginning on January 1, 2012, the results of the analyses required in subdivision 2.

Life-cycle Cost Analysis Report

Implementation

[Minn. Stat. 174.185](#) requires a life-cycle cost analysis for every project in the reconditioning, resurfacing and road repair funding categories constructed after July 1, 2011.

MnDOT first implemented a LCCA process for roadway rehabilitation projects in 1999. The LCCA process was modified in 2010 to meet the specific requirements of legislation and was presented in [Technical Memorandum 10-04-MAT-01](#). After the technical memorandum expired, the LCCA process, with some modifications, was incorporated into the MnDOT Pavement Design Manual which went into effect October 31st, 2014.

The LCCA process, which is consistent with Federal Highway Administration guidelines, is performed on all pavement projects regardless of funding category, but only the results of projects in the reconditioning, resurfacing and road repair funding categories are included in this report. The LCCA process limits the requirement to perform a LCCA to projects with more than 60,000 square yards of pavement (formerly 30,000 square yards in the technical memorandum) and to projects that include placing more than two-inch thickness of pavement material. Thin overlays (two inches or less) are considered short-term preventive maintenance and do not have a viable concrete alternative with an equal design life.

The LCCA process requires the inclusion of at least one portland cement concrete and one hot-mix asphalt alternate with equal design lives. To best determine the most cost effective design, the LCCA may include additional alternatives with other design lives.

Technical Memorandum 10-04-MAT-01 was superseded by the updated Pavement Design Manual when it was signed on October 31st, 2014; however, some LCCAs for projects constructed this year were already completed and this report will follow the LCCA procedure that was in effect at the time of the completion of each project's LCCA.

Results

In 2016, 32 construction projects were in the reconditioning, resurfacing and road repair funding categories and required a LCCA according to Technical Memorandum 10-04-MAT-01 or the MnDOT Pavement Design Manual. A LCCA was not provided for one project (SP 7608-19) which used the design-build process.

The results of the 31 LCCAs are as follows:

- Hot-mix asphalt was the low-cost option for 29 construction projects and all were selected for construction.
- Portland cement concrete was the low-cost option for two construction projects and one was selected for construction.
- One project had a portland cement concrete option as the low cost option but a HMA option was selected for construction instead. Documented justification for selecting other than the low-cost option is provided.
- In previous years the selected option of several projects was chosen using the alternate bidding process. This year no projects used the alternate bidding process.

A table of LCCA results and copies of the LCCAs submitted by MnDOT districts are attached.

Discussion

Hot-mix asphalt is most often the low-cost option in the submitted LCCAs. Portland cement concrete options usually have a greater initial cost than hot-mix asphalt, but become competitive by having lower maintenance costs over the life of the pavement. However, the relatively short design lives of these rehabilitation-type projects do not allow portland cement concrete options to exploit this relative advantage. Portland cement concrete options with longer design lives than hot-mix asphalt alternates are more competitive than the portland cement concrete options with the equal design lives required by the statute.

Recently, procedures were developed to implement two new portland cement concrete pavement design programs. These new programs resulted in substantially thinner pavement designs that reduce the initial cost of constructing portland cement concrete pavements and increase competitiveness. In addition, a research project has been started to develop a new procedure to design portland cement concrete pavements that are built on top of existing portland cement concrete pavements.

To create competition and to get the most cost-effective pavement, MnDOT continues to use the alternate bidding process on projects that are likely to have competitive hot-mix asphalt and portland cement concrete options. No projects in the reconditioning, resurfacing and road repair funding categories used the alternate bidding process this year.

The alternate bidding process is similar to using an LCCA to determine the low-cost option. However, instead of using an estimate for the initial cost of an option, alternate bidding uses actual bid prices. The process is as follows:

1. MnDOT lets a project with two options, one hot-mix asphalt and one portland cement concrete.

2. MnDOT calculates a maintenance factor. This is the difference between the maintenance costs of the two options.
3. Each contractor bids on either of the two options.
4. MnDOT adjusts the bids by adding the maintenance factor to the bids of the option with the greater maintenance costs.
5. MnDOT selects the bid with the lowest adjusted bid.

Conclusion

MnDOT implemented the requirements of [Minn. Stat. 174.185](#) and provided the required results in this report. MnDOT will continue to work to ensure that all future projects meet the requirements of the legislation. In addition, MnDOT is innovating new pavement design methods to design the most cost-effective pavement structure.

Appendix A: Summary of LCCA Results

State Project Number (SP#)	Existing Pavement Type	Exception for low-cost option?	Design Life (in years)	Option Description	Present Worth	Optional Material (1)	Selected Option (2)	Alternate Bid? (3)
0305-34	PCC	No	13	HMA Overlay	\$8,174,164.00	HMA	X	No
			20	HMA Overlay	\$6,010,575.00	HMA		
			20	PCC Overlay	\$13,021,861.00	PCC		
0507-14	HMA	No	20	PCC over FDR	\$5,623,358.00	PCC	X	No
			20	HMA over FDR	\$3,487,636.00	HMA		
			35	PCC over FDR	\$4,130,586.00	PCC		
0605-16	PCC	No	20	HMA Overlay	\$6,634,083.00	HMA	X	No
			20	PCC Overlay	\$12,658,213.00	PCC		
0803-43	PCC	No	20	New HMA	\$14,291,462.00	HMA	X	No
			20	PCC Overlay	\$8,625,001.00	PCC		
			35	PCC Overlay	\$6,864,707.00	PCC		
0807-14	HMA	No	14	HMA Overlay	\$3,244,027.00	HMA	X	No
			20	HMA Overlay	\$3,397,449.00	HMA		
			20	PCC Overlay	\$3,972,689.00	PCC		
0902-12	HMA	No	15	HMA Overlay	\$4,132,198.00	HMA	X	No
			20	PCC overlay	\$6,291,637.00	PCC		
			20	HMA over FDR	\$5,099,600.00	HMA		
1802-51	HMA	No	15	HMA Overlay	\$2,386,576.00	HMA	X	No
			20	PCC Overlay	\$3,487,969.00	PCC		
			20	HMA over FDR	\$2,942,518.00	HMA		
1921-98	PCC	No	19	HMA Overlay	\$2,853,616.00	HMA	X	No
			20	HMA over Rubblized	\$3,147,719.00	HMA		
			20	PCC Overlay	\$3,518,166.00	PCC		
2506-75	HMA	No	17	HMA Overlay	\$12,124,681.00	HMA	X	No
			20	HMA Overlay	\$12,938,899.00	HMA		
			20	PCC Overlay	\$20,026,129.00	PCC		
2601-19	HMA	No	20	HMA Overlay	\$6,596,473.00	HMA	X	No
			20	PCC Overlay	\$10,817,307.00	HMA		
2772-105	PCC	No	19	HMA Overlay	\$3,084,642.00	HMA	X	No
			20	HMA over Rubblization	\$6,240,785.00	HMA		
			20	PCC Overlay	\$4,044,625.00	PCC		
2801-87	HMA	No	15	HMA Overlay	\$1,426,265.00	HMA	X	No
			20	HMA Overlay	\$1,435,870.00	HMA		
			20	PCC Overlay	\$1,965,109.00	PCC		
3505-19	HMA	No	20	HMA Overlay	\$4,724,098.00	HMA	X	No
			20	PCC Overlay	\$13,859,166.00	PCC		

State Project Number (SP#)	Existing Pavement Type	Exception for low-cost option?	Design Life (in years)	Option Description	Present Worth	Optional Material (1)	Selected Option (2)	Alternate Bid? (3)
3614-20	HMA	No	15	HMA Overlay	\$4,685,619.00	HMA	X	No
			20	HMA on FDR	\$12,163,235.00	HMA		
			20	New PCC	\$14,621,698.00	PCC		
4101-89	HMA	No	15	HMA Overlay	\$3,148,943.00	HMA	X	No
			20	PCC Overlay	\$4,371,281.00	PCC		
			20	HMA over FDR	\$3,791,054.00	HMA		
4680-126	PCC	No	15	HMA Overlay	\$8,277,617.00	HMA	X	No
			20	PCC Overlay	\$10,317,891.00	PCC		
			20	HMA Overlay	\$8,299,064.00	HMA		
5880-180	HMA	No	20	PCC over FDR	\$18,619,515.00	PCC	X	No
			20	HMA over FDR	\$13,833,410.00	HMA		
			35	PCC over FDR	\$16,217,146.00	PCC		
6284-166	PCC	No	14	HMA Overlay	\$5,086,061.00	HMA	X	No
			20	PCC Overlay	\$10,357,692.00	PCC		
			20	HMA on Rubblization	\$9,661,163.00	HMA		
6407-89	HMA	No	17	HMA Overlay	\$2,300,977.00	HMA	X	No
			20	HMA over FDR	\$3,018,614.00	HMA		
			20	PCC Overlay	\$3,661,703.00	PCC		
6501-12	HMA	No	18	HMA overlay	\$4,469,452.00	HMA	X	No
			20	PCC Overlay	\$6,788,331.00	PCC		
			20	HMA on FDR	\$6,150,286.00	HMA		
6607-49	HMA	Yes	15	HMA Overlay	\$6,668,013.00	HMA	X	No
			20	PCC Overlay	\$8,579,067.00	PCC		
			20	HMA on CIR	\$6,327,016.00	HMA		
6910-96	PCC	No	15	HMA Overlay	\$976,850.00	HMA	X	No
			20	New HMA	\$1,942,330.00	HMA		
			20	New PCC	\$2,029,799.00	PCC		
			35	New PCC	\$2,089,533.00	PCC		
6917-142	PCC	No	15	HMA Overlay	\$4,081,476.00	HMA	X	No
			20	New PCC	\$6,040,545.00	PCC		
			20	NEW HMA/SFDR	\$5,461,731.00	HMA		
6947-50	PCC	No	15	HMA Overlay	\$7,219,370.00	HMA	X	No
			20	New HMA	\$11,204,829.00	HMA		
			20	New PCC	\$13,990,691.00	PCC		
7318-39	HMA	No	14	HMA Overlay	\$9,965,340.00	HMA	X	No
			20	PCC Overlay	\$11,355,580.00	PCC		
			20	HMA on FDR	\$12,644,470.00	HMA		

State Project Number (SP#)	Existing Pavement Type	Exception for low-cost option?	Design Life (in years)	Option Description	Present Worth	Optional Material (1)	Selected Option (2)	Alternate Bid? (3)
7323-12	HMA	No	20	PCC over FDR	\$11,834,083.00	PCC	X	No
			20	HMA over FDR	\$8,259,839.00	HMA		
			35	PCC Over FDR	\$8,749,127.00	PCC		
7380-239	PCC	No	20	PCC Overlay	\$4,318,977.00	PCC	X	No
		20	New HMA	\$6,041,069.00	HMA			
		35	PCC Overlay	\$3,730,836.00	PCC			
7605-89	HMA	No	18	HMA Overlay	\$575,533.00	HMA	X	No
			18	PCC Overlay	\$613,734.00	PCC		
			18	PCC Overlay	\$850,845.00	PCC		
7608-19		LCCA Not Provided - Design Build Project						No
7609-10	HMA	No	20	HMA Overlay	\$235,714.00	HMA	X	No
			20	PCC Overlay	\$434,750.00	PCC		
7709-16	HMA	No	13	HMA Overlay	\$3,790,209.00	HMA	X	No
		15	HMA Overlay	\$3,071,209.00	HMA			
		20	PCC Overlay	\$3,941,654.00	PCC			
8101-57	PCC	No	15	HMA overlay	\$6,141,538.00	HMA	X	No
			20	PCC Overlay	\$6,392,040.00	PCC		
			20	New HMA	\$8,617,363.00	HMA		

(1) **Option material** - The pavement material that each option utilizes.

(2) **Selected Option**- This is marked (X) if the pavement option was selected to be constructed.

If the project uses alternate bidding, more than one option will be marked and the constructed option will be the low-cost option as determined by alternate bidding.

(3) **Alternate Bidding?** - 'Yes' if the project used alternate bidding to select which option to construct.

Definitions:

HMA = Hot-Mix Asphalt

PCC = Portland Cement Concrete

FDR = Full-Depth Reclamation (recycle existing HMA and Base to use as a new base)

CIR = Cold-in-Place Recycling (Recycle a layer of existing HMA with Cold-Mix Asphalt)

CPR = Concrete Pavement Repair

Rubblize = Break the existing PCC into pieces to act as the new base for HMA pavement

Crack & Seat = Crack and compact the existing PCC pavement to delay reflective cracking in an HMA overlay

Appendix B: Copies of LCCAs

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
SP0305-34	35
Highway	Discount Rate
TH 59	1.58%
Date	CLEAR ALL
10/20/2016	
Performed By	
Andrea Azary	

D4 - 2016/2017 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	TH 59 SP 0305-34 1.5" M&OL	Mill 1.5 " fill 3"	6" UBOL	22.1 Miles
Net Present Cost	\$8,174,164.28	\$6,010,574.73	\$13,021,860.83	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 8,174,164.28	\$ 6,010,574.73	\$ 13,021,860.83	Total
% of Low Cost	136.0%	100.0%	216.6%	22.1

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	TH 59 SP 0305-34 1.5" M&OL	Mill 1.5 " fill 3"	6" UBOL	22.1 Miles
Net Present Cost	\$6,008,446.54	\$2,677,399.39	\$4,749,380.27	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 6,008,446.54	\$ 2,677,399.39	\$ 4,749,380.27	Total
Bid Adjustment Factor	\$ 3,331,047.15	\$ -	\$ 2,071,980.87	22.1

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	22.09			1	22.09			1	22.09		
ALT	Description			ALT	Description			ALT	Description		
1		TH 59 SP 0305-34 1.5" M&OL		2		Mill 1.5 " fill 3"		3		6" UBOL	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	
HMA				HMA				PCC			
Primary Category				Primary Category				Primary Category			
Overlay, DL =13 to 17 years				Overlay, DL > 17 years				6'X6' ±5.5" Thickness			
Secondary Category				Secondary Category				Secondary Category			
Rural				Rural				Design Life = 20 Years			
ShoulderCategory		DELETE		ShoulderCategory		DELETE		ShoulderCategory		DELETE	
Bituminous				Bituminous				Thin Bit			
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	1 1/2" Mill & Fill	\$ 98,040.64	\$ 98,040.64	0	Mill 1. 5 and fill 3 in	\$ 150,890.69	\$ 150,890.69	0	6" UBOL	\$ 374,489.84	\$ 374,489.84
1			\$ -	1		\$ -	\$ -	1			\$ -
2			\$ -	2		\$ -	\$ -	2			\$ -
3	Crack Treatment	\$ 2,112.00	\$ 2,014.97	3	Crack Treatment	\$ 2,112.00	\$ 2,014.97	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 7,716.84	\$ 6,914.83	7	Seal	\$ 7,716.84	\$ 6,914.83	7			\$ -
8			\$ -	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12			\$ -	12			\$ -
13	ML Overlay 3.5"	\$ 173,573.75	\$ 141,571.99	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16	Crack Treatment	\$ 2,112.00	\$ 1,643.47	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	Seal	\$ 7,716.84	\$ 5,639.95	20	ML Overlay 3.5"	\$ 173,573.75	\$ 126,858.59	20	1st CPR	\$ 294,174.75	\$ 215,001.37
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 2,112.00	\$ 1,472.67	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25	ML Overlay 3.5"	\$ 173,573.75	\$ 117,294.82	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 7,716.84	\$ 5,053.80	27			\$ -
28	Crack Treatment	\$ 2,112.00	\$ 1,361.65	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32	Seal	\$ 7,716.84	\$ 4,672.79	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (15,779.43)	\$ (9,115.99)	35	Remaining Life	\$ (36,541.84)	\$ (21,110.72)	35	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile			\$ 370,039.13	LCCA - Net Present Cost/ per Mile			\$ 272,094.83	LCCA - Net Present Cost/ per Mile			\$ 589,491.21
Maintenance - Net Present Cost/per Mile			\$ 271,998.49	Maintenance - Net Present Cost/per Mile			\$ 121,204.14	Maintenance - Net Present Cost/per Mile			\$ 215,001.37
Net Present Cost for Segment			\$ 8,174,164.28	Net Present Cost for Segment			\$ 6,010,574.73	Net Present Cost for Segment			\$ 13,021,860.83
Maintenance - Net Present Cost for Segment			\$ 6,008,446.54	Maintenance - Net Present Cost for Segment			\$ 2,677,399.39	Maintenance - Net Present Cost for Segment			\$ 4,749,380.27
Equivalent Annual Cost			305,839.45	Equivalent Annual Cost			224,887.93	Equivalent Annual Cost			487,217.85
Total Lane Width				Total Lane Width				Total Lane Width			
24				24				24			
# of Lanes				# of Lanes				# of Lanes			
2				2				2			
Analysis Period				Analysis Period				Analysis Period			
35				35				35			
Total Shldr Width				Total Shldr Width				Total Shldr Width			
# of Shldrs				# of Shldrs				# of Shldrs			
ML Mix				ML Mix				ML Mix			
16				16				16			
Width of Rounding Aggregate				Width of Rounding Aggregate				Width of Rounding Aggregate			
white/ >7 milliom				white/ >7 milliom				white/ >7 milliom			
SL Mix				SL Mix				SL Mix			
1.5				1.5				1.5			
N				N				N			
WEARING COURSE MIXTURE (				WEARING COURSE MIXTURE (				WEARING COURSE MIXTURE (
Sealed/UTBWC				Sealed/UTBWC				Sealed/UTBWC			
ML Thickness				ML Thickness				ML Thickness			
N				N				N			
ML Top Lift / joint spacing				ML Top Lift / joint spacing				ML Top Lift / joint spacing			
# Dowels per Lane				# Dowels per Lane				# Dowels per Lane			
1.5				3				6			
Design Life				Design Life				Design Life			
Shldr Thickness				Shldr Thickness				Shldr Thickness			
13				20				3			
1.5				3				3			

35-Year Analysis Period

50 - Year

50-Year Analysis Period

Project Number	Analysis Period
SP 0507-14	50
Highway	Discount Rate
	1.74%
Date	
Performed By	CLEAR ALL

District 3 - 2015/2016 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	FDR w/4" HMA ML & Shld.	FDR w/6" PCC ML & PCC Shld	FDR w/6" PCC ML & Bit Shld.	5.3	
Net Present Cost	\$3,487,635.71	\$5,623,357.50	\$4,130,585.90	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 3,487,635.71	\$ 5,623,357.50	\$ 4,130,585.90	Total	
% of Low Cost	100.0%	161.2%	118.4%	5.3	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	FDR w/4" HMA ML & Shld.	FDR w/6" PCC ML & PCC Shld	FDR w/6" PCC ML & Bit Shld.	5.3	
Net Present Cost	\$1,740,232.73	\$2,256,329.18	\$1,222,529.49	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 1,740,232.73	\$ 2,256,329.18	\$ 1,222,529.49	Total	
Bid Adjustment Factor	\$ 517,703.24	\$ 1,033,799.68	\$ -	5.3	

Segment 1																	
SEG		Length				SEG		Length				SEG		Length			
1		5.307				1		5.307				1		5.307			
ALT				Description		ALT				Description		ALT		Description			
1				FDR w/4" HMA ML & Shld.		2				FDR w/6" PCC ML & PCC Shld		3		FDR w/6" PCC ML & Bit Shld.			
Pavement Type				CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type				CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type					
HMA						PCC						PCC					
Primary Category						Primary Category						Primary Category					
20 Year HMA						≥12 Joint spacing						≥12 Joint spacing					
Secondary Category						Secondary Category						Secondary Category					
Rural						Design Life = 20 Years						Design Life 35 Years					
ShoulderCategory						ShoulderCategory						ShoulderCategory					
Bituminous						PCC						Thin Bit					
Notes:						Notes:						Notes:					
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	X	X	Year	Activity	Cost	Pres. Cost/per Mile	X	X	Year	Activity	Cost	Pres. Cost/per Mile		
0	FDR w/4" HMA	\$ 329,263.80	\$ 329,263.80			0	FDR w/ 6" PCC ML & Shld	\$ 634,450.41	\$ 634,450.41			0	FDR w/6" PCC ML & Bit Shld	\$ 547,966.16	\$ 547,966.16		
1		\$ -	\$ -			1		\$ -	\$ -			1		\$ -	\$ -		
2		\$ -	\$ -			2		\$ -	\$ -			2		\$ -	\$ -		
3		\$ -	\$ -			3		\$ -	\$ -			3		\$ -	\$ -		
4		\$ -	\$ -			4		\$ -	\$ -			4		\$ -	\$ -		
5		\$ -	\$ -			5		\$ -	\$ -			5		\$ -	\$ -		
6		\$ -	\$ -			6		\$ -	\$ -			6		\$ -	\$ -		
7		\$ -	\$ -			7		\$ -	\$ -			7		\$ -	\$ -		
8	Crack Treatment	\$ 1,056.00	\$ 919.88			8		\$ -	\$ -			8		\$ -	\$ -		
9		\$ -	\$ -			9		\$ -	\$ -			9		\$ -	\$ -		
10		\$ -	\$ -			10		\$ -	\$ -			10		\$ -	\$ -		
11		\$ -	\$ -			11		\$ -	\$ -			11		\$ -	\$ -		
12	Seal	\$ 11,894.00	\$ 9,670.02			12		\$ -	\$ -			12		\$ -	\$ -		
13		\$ -	\$ -			13		\$ -	\$ -			13		\$ -	\$ -		
14		\$ -	\$ -			14		\$ -	\$ -			14		\$ -	\$ -		
15		\$ -	\$ -			15		\$ -	\$ -			15		\$ -	\$ -		
16		\$ -	\$ -			16		\$ -	\$ -			16		\$ -	\$ -		
17		\$ -	\$ -			17		\$ -	\$ -			17		\$ -	\$ -		
18		\$ -	\$ -			18		\$ -	\$ -			18		\$ -	\$ -		
19		\$ -	\$ -			19		\$ -	\$ -			19		\$ -	\$ -		
20	ML Overlay 4	\$ 279,794.25	\$ 198,154.58			20	1st CPR	\$ 217,077.08	\$ 153,737.32			20	1st CPR	\$ 195,057.06	\$ 138,142.40		
21		\$ -	\$ -			21		\$ -	\$ -			21		\$ -	\$ -		
22		\$ -	\$ -			22		\$ -	\$ -			22		\$ -	\$ -		
23	Crack Treatment	\$ 2,112.00	\$ 1,420.31			23		\$ -	\$ -			23		\$ -	\$ -		
24		\$ -	\$ -			24		\$ -	\$ -			24		\$ -	\$ -		
25		\$ -	\$ -			25		\$ -	\$ -			25		\$ -	\$ -		
26		\$ -	\$ -			26		\$ -	\$ -			26		\$ -	\$ -		
27	Seal	\$ 8,101.01	\$ 5,084.67			27		\$ -	\$ -			27		\$ -	\$ -		
28		\$ -	\$ -			28		\$ -	\$ -			28		\$ -	\$ -		
29		\$ -	\$ -			29		\$ -	\$ -			29		\$ -	\$ -		
30		\$ -	\$ -			30		\$ -	\$ -			30		\$ -	\$ -		
31		\$ -	\$ -			31		\$ -	\$ -			31		\$ -	\$ -		
32		\$ -	\$ -			32		\$ -	\$ -			32		\$ -	\$ -		
33		\$ -	\$ -			33		\$ -	\$ -			33		\$ -	\$ -		
34		\$ -	\$ -			34		\$ -	\$ -			34		\$ -	\$ -		
35		\$ -	\$ -			35	Remove and Replace	\$ 615,157.60	\$ 336,337.84			35	2nd CPR	\$ 168,667.89	\$ 92,219.29		
36		\$ -	\$ -			36		\$ -	\$ -			36		\$ -	\$ -		
37	ML Overlay 3.5"	\$ 251,372.51	\$ 132,777.24			37		\$ -	\$ -			37		\$ -	\$ -		
38		\$ -	\$ -			38		\$ -	\$ -			38		\$ -	\$ -		
39		\$ -	\$ -			39		\$ -	\$ -			39		\$ -	\$ -		
40	Crack Treatment	\$ 2,112.00	\$ 1,059.31			40		\$ -	\$ -			40		\$ -	\$ -		
41		\$ -	\$ -			41		\$ -	\$ -			41		\$ -	\$ -		
42		\$ -	\$ -			42		\$ -	\$ -			42		\$ -	\$ -		
43		\$ -	\$ -			43		\$ -	\$ -			43		\$ -	\$ -		
44	Chip Seal	\$ 8,101.01	\$ 3,792.30			44		\$ -	\$ -			44		\$ -	\$ -		
45		\$ -	\$ -			45		\$ -	\$ -			45		\$ -	\$ -		
46		\$ -	\$ -			46		\$ -	\$ -			46		\$ -	\$ -		
47		\$ -	\$ -			47		\$ -	\$ -			47		\$ -	\$ -		
48		\$ -	\$ -			48		\$ -	\$ -			48		\$ -	\$ -		
49		\$ -	\$ -			49		\$ -	\$ -			49		\$ -	\$ -		
50	4/17 Remaining Life	\$ (59,146.47)	\$ (24,965.61)			50	5/20 Remaining	\$ (153,789.40)	\$ (64,914.20)			50	0/0 Remaining	\$ -	\$ -		
LCCA - Net Present Cost/ per Mile				\$ 657,176.51		LCCA - Net Present Cost/ per Mile				\$ 1,059,611.36		LCCA - Net Present Cost/ per Mile				\$ 778,327.85	
Maintenance - Net Present Cost/per Mile				\$ 327,912.71		Maintenance - Net Present Cost/per Mile				\$ 425,160.95		Maintenance - Net Present Cost/per Mile				\$ 230,361.69	
Net Present Cost for Segment				\$ 3,487,635.71		Net Present Cost for Segment				\$ 5,623,357.50		Net Present Cost for Segment				\$ 4,130,585.90	
Maintenance - Net Present Cost for Segment				\$ 1,740,232.73		Maintenance - Net Present Cost for Segment				\$ 2,256,329.18		Maintenance - Net Present Cost for Segment				\$ 1,222,529.49	
Equivalent Annual Cost				105,008.92		Equivalent Annual Cost				169,313.18		Equivalent Annual Cost				124,367.45	

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	50	26	2	50	26	2	50
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
10	2	TYPE SP 9.5 WEARING COURSE MIXTURE (3.C)	8	2		8	2	
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
10	N	TYPE SP 9.5 WEARING COURSE MIXTURE (3.C)	10	N		10	N	TYPE SP 12.5 WEARING COURSE MIXTURE (2.B)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			Y	6		Y	6	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
2			12	11		12	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
20	4		6	6		3	3	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
0605-16	35
Highway	Discount Rate
28	1.58%
Date	CLEAR ALL
Performed By	

D4 - 2016/2017 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	2" MILL 3" OVERLAY	6" UNBONDED OVERLAY		22.6	
Net Present Cost	\$6,634,082.80	\$12,658,212.76		Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 6,634,082.80	\$ 12,658,212.76	\$ -	Total	
% of Low Cost	100.0%	190.8%	0.0%	22.6	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	2" MILL 3" OVERLAY	6" UNBONDED OVERLAY		22.6	
Net Present Cost	\$3,042,803.22	\$4,123,769.58		Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 3,042,803.22	\$ 4,123,769.58	\$ -	Total	
Bid Adjustment Factor	\$ -	\$ 1,080,966.36	\$ -	22.6	

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	22.606			1	22.606			1	22.606		
ALT	Description			ALT	Description			ALT	Description		
1		2" MILL 3" OVERLAY		2		6" UNBONDED OVERLAY		3			
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
HMA				PCC							
Primary Category				6'X6' ≥5.5" Thickness				Primary Category			
20 Year HMA				Secondary Category				Secondary Category			
Secondary Category				Design Life = 20 Years				ShoulderCategory			
Rural				ShoulderCategory				ShoulderCategory			
ShoulderCategory		DELETE		Aggregate		DELETE		Aggregate			
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	2" MILL, 3" OL	\$ 158,864.00	\$ 158,864.00	0	6" UNBONDED OVERLAY	\$ 377,530.00	\$ 377,530.00	0			\$ -
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7			\$ -
8	Crack Treatment	\$ 1,232.00	\$ 1,086.79	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12	Seal	\$ 12,727.14	\$ 10,544.65	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	ML Overlay 3.5	\$ 175,228.20	\$ 128,067.76	20	1st CPR	\$ 249,594.40	\$ 182,419.25	20			\$ -
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23	Crack Treatment	\$ 2,464.00	\$ 1,718.11	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27	Seal	\$ 7,778.03	\$ 5,093.87	27			\$ -	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	2/17 Remaining Life	\$ (20,615.08)	\$ (11,909.62)	35	0/0 Remaining	\$ -	\$ -	35			\$ -
LCCA - Net Present Cost/ per Mile			\$ 293,465.58	LCCA - Net Present Cost/ per Mile			\$ 559,949.25	LCCA - Net Present Cost/ per Mile			\$ -
Maintenance - Net Present Cost/per Mile			\$ 134,601.58	Maintenance - Net Present Cost/per Mile			\$ 182,419.25	Maintenance - Net Present Cost/per Mile			\$ -
Net Present Cost for Segment			\$ 6,634,082.80	Net Present Cost for Segment			\$ 12,658,212.76	Net Present Cost for Segment			\$ -
Maintenance - Net Present Cost for Segment			\$ 3,042,803.22	Maintenance - Net Present Cost for Segment			\$ 4,123,769.58	Maintenance - Net Present Cost for Segment			\$ -
Equivalent Annual Cost			248,216.72	Equivalent Annual Cost			473,611.82	Equivalent Annual Cost			-
Total Lane Width				Total Lane Width				Total Lane Width			
28				28				28			
# of Lanes				# of Lanes				# of Lanes			
2				2				2			
Analysis Period				Analysis Period				Analysis Period			
35				35				35			
Total Shldr Width				Total Shldr Width				Total Shldr Width			
# of Shldrs				# of Shldrs				# of Shldrs			
ML Mix				ML Mix				ML Mix			
16				16				16			
Width of Rounding Aggregate				Width of Rounding Aggregate				Width of Rounding Aggregate			
white/ >7 milliom				white/ >7 milliom				white/ >7 milliom			
SL Mix				SL Mix				SL Mix			
8				8				8			
Sealed/UTBWC				Sealed/UTBWC				Sealed/UTBWC			
ML Thickness				ML Thickness				ML Thickness			
N				Y				6			
ML Top Lift / joint spacing				# Dowels per Lane				# Dowels per Lane			
1.5				6				0			
Design Life				Shldr Thickness				Shldr Thickness			
20				4							

35-Year Analysis Period

50-Year Analysis Period

50 - Year

Project Number	Analysis Period
0803-43	50
Highway	Discount Rate
14	1.74%
Date	CLEAR ALL
1/5/2016	
Performed By	
Caleb Fenske	

District 7 - 2015/2016 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	Bit Reconstruct	Unbonded Concrete Overlay	Unbonded Concrete Overlay/doweled	12.9	
Net Present Cost	\$14,291,462.18	\$6,864,706.88	\$8,625,001.12	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 14,291,462.18	\$ 6,864,706.88	\$ 8,625,001.12	Total	
% of Low Cost	208.2%	100.0%	125.6%	12.9	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	Bit Reconstruct	Unbonded Concrete Overlay	Unbonded Concrete Overlay/doweled	12.9	
Net Present Cost	\$3,934,600.40	\$2,451,858.67	\$4,212,152.91	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 3,934,600.40	\$ 2,451,858.67	\$ 4,212,152.91	Total	
Bid Adjustment Factor	\$ 1,482,741.73	\$ -	\$ 1,760,294.23	12.9	

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	12.9			1	12.9			1	12.9		
ALT	Description			ALT	Description			ALT	Description		
1		Bit Reconstruct		2		Unbonded Concrete Overlay		3		Unbonded Concrete Overlay/doweled	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7">CLICK HERE TO EDIT THIS ALTERNATE</td> <th colspan="2">Pavement Type<td rowspan="7"></td></th>		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7"></td>					
HMA			PCC			PCC					
Primary Category			≥12 Joint spacing			Primary Category					
20 Year HMA			Secondary Category			Secondary Category					
Secondary Category			Design Life 35 Years			Design Life = 20 Years					
Rural			ShoulderCategory			ShoulderCategory					
ShoulderCategory			Aggregate			Aggregate					
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	Bit Reconstruct	\$ 802,857.50	\$ 802,857.50	0	35 yr UBOL	\$ 342,081.26	\$ 342,081.26	0	UBOL	\$ 342,081.26	\$ 342,081.26
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7			\$ -
8	Crack Treatment	\$ 1,232.00	\$ 1,073.19	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12	Seal	\$ 12,873.70	\$ 10,466.52	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	ML Overlay 4	\$ 258,269.12	\$ 182,910.15	20	1st CPR	\$ 135,927.17	\$ 96,265.71	20	1st CPR	\$ 198,171.76	\$ 140,348.28
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23	Crack Treatment	\$ 2,464.00	\$ 1,657.03	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27	Seal	\$ 8,864.63	\$ 5,563.95	27			\$ -	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35			\$ -	35	2nd CPR	\$ 171,560.56	\$ 93,800.85	35	Remove and Replace	\$ 421,949.58	\$ 230,701.22
36			\$ -	36			\$ -	36			\$ -
37	ML Overlay 3.5"	\$ 228,382.24	\$ 120,633.58	37			\$ -	37			\$ -
38			\$ -	38			\$ -	38			\$ -
39			\$ -	39			\$ -	39			\$ -
40	Crack Treatment	\$ 2,464.00	\$ 1,235.87	40			\$ -	40			\$ -
41			\$ -	41			\$ -	41			\$ -
42			\$ -	42			\$ -	42			\$ -
43			\$ -	43			\$ -	43			\$ -
44	Chip Seal	\$ 8,864.63	\$ 4,149.77	44			\$ -	44			\$ -
45			\$ -	45			\$ -	45			\$ -
46			\$ -	46			\$ -	46			\$ -
47			\$ -	47			\$ -	47			\$ -
48			\$ -	48			\$ -	48			\$ -
49			\$ -	49			\$ -	49			\$ -
50	4/17 Remaining Life	\$ (53,737.00)	\$ (22,682.28)	50	0/0 Remaining	\$ -	\$ -	50	5/20 Remaining	\$ (105,487.40)	\$ (44,526.02)
LCCA - Net Present Cost/ per Mile		\$ 1,107,865.29		LCCA - Net Present Cost/ per Mile		\$ 532,147.82		LCCA - Net Present Cost/ per Mile		\$ 668,604.74	
Maintenance - Net Present Cost/per Mile		\$ 305,007.78		Maintenance - Net Present Cost/per Mile		\$ 190,066.56		Maintenance - Net Present Cost/per Mile		\$ 326,523.48	
Net Present Cost for Segment		\$ 14,291,462.18		Net Present Cost for Segment		\$ 6,864,706.88		Net Present Cost for Segment		\$ 8,625,001.12	
Maintenance - Net Present Cost for Segment		\$ 3,934,600.40		Maintenance - Net Present Cost for Segment		\$ 2,451,858.67		Maintenance - Net Present Cost for Segment		\$ 4,212,152.91	
Equivalent Annual Cost		430,300.40		Equivalent Annual Cost		206,688.86		Equivalent Annual Cost		259,689.41	

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
28	2	50	28	2	50	28	2	50
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
8	2	WEARING COURSE MIXTURE (	8	2	WEARING COURSE MIXTURE (	8	2	WEARING COURSE MIXTURE (
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
3	N	0	3	N		3	N	
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			N	6		N	6	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
2			12	6		12	6	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
20	2		35	2		20	2	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
0807-14	35
Highway	Discount Rate
68	2.00%
Date	CLEAR ALL
6/16/2015	
Performed By	
Caleb Fenske	

District 7 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	4" BCOA 20 yr	4.5" Bit Overlay 20yr	2" M & OL W/Underseal	7.5
Net Present Cost	\$3,972,689.11	\$3,397,449.37	\$3,244,027.13	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 3,972,689.11	\$ 3,397,449.37	\$ 3,244,027.13	Total
% of Low Cost	122.5%	104.7%	100.0%	7.5

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	4" BCOA 20 yr	4.5" Bit Overlay 20yr	2" M & OL W/Underseal	7.5
Net Present Cost	\$1,979,863.44	\$1,267,710.37	\$2,105,883.76	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,979,863.44	\$ 1,267,710.37	\$ 2,105,883.76	Total
Bid Adjustment Factor	\$ 712,153.07	\$ -	\$ 836,173.39	7.5

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	7.5			1	7.5			1	7.5		
ALT	Description			ALT	Description			ALT	Description		
1		4" BCOA 20 yr		2		4.5" Bit Overlay 20yr		3		2" M & OL W/Underseal	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
PCC				HMA				HMA			
Primary Category				20 Year HMA				Overlay, DL =13 to 17 years			
6'X6" ≤ 5.0" Thickness				Secondary Category				Rural			
Design Life = 20 Years				ShoulderCategory				Aggregate			
ShoulderCategory				Aggregate				Aggregate			
Aggregate				Aggregate				Aggregate			
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	bcoa	\$ 265,710.09	\$ 265,710.09	0	Thick Bit OL	\$ 283,965.20	\$ 283,965.20	0	Thin Ol W/underseal	\$ 151,752.45	\$ 151,752.45
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3	Crack Treatment	\$ 1,675.52	\$ 1,578.88
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7	Seal	\$ 8,439.13	\$ 7,346.77
8			\$ -	8	Crack Treatment	\$ 837.76	\$ 715.02	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12	Seal	\$ 12,752.26	\$ 10,055.07	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14	ML Overlay 3.5"	\$ 220,774.52	\$ 167,319.49
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17	Crack Treatment	\$ 1,675.52	\$ 1,196.59
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	1st CPR	\$ 328,165.71	\$ 220,846.11	20	ML Overlay 4	\$ 247,907.85	\$ 166,834.87	20			\$ -
21			\$ -	21			\$ -	21	Seal	\$ 8,439.13	\$ 5,567.94
22			\$ -	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 1,675.52	\$ 1,062.54	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 8,439.13	\$ 4,944.17	27	ML Overlay 3.5"	\$ 220,774.52	\$ 129,343.41
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30	Remove and Replace	\$ 349,345.23	\$ 192,863.33	30			\$ -	30	Crack Treatment	\$ 1,675.52	\$ 925.01
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34	Seal	\$ 8,439.13	\$ 4,304.20
35	30/35 Remaining	\$ (299,438.77)	\$ (149,727.65)	35	2/17 Remaining Life	\$ (29,165.63)	\$ (14,583.62)	35	Remaining Life	\$ (73,591.51)	\$ (36,797.78)
LCCA - Net Present Cost/ per Mile			\$ 529,691.88	LCCA - Net Present Cost/ per Mile			\$ 452,993.25	LCCA - Net Present Cost/ per Mile			\$ 432,536.95
Maintenance - Net Present Cost/per Mile			\$ 263,981.79	Maintenance - Net Present Cost/per Mile			\$ 169,028.05	Maintenance - Net Present Cost/per Mile			\$ 280,784.50
Net Present Cost for Segment			\$ 3,972,689.11	Net Present Cost for Segment			\$ 3,397,449.37	Net Present Cost for Segment			\$ 3,244,027.13
Maintenance - Net Present Cost for Segment			\$ 1,979,863.44	Maintenance - Net Present Cost for Segment			\$ 1,267,710.37	Maintenance - Net Present Cost for Segment			\$ 2,105,883.76
Equivalent Annual Cost			158,916.34	Equivalent Annual Cost			135,905.48	Equivalent Annual Cost			129,768.25
Total Lane Width		# of Lanes	Analysis Period	Total Lane Width		# of Lanes	Analysis Period	Total Lane Width		# of Lanes	Analysis Period
28		2	35	28		2	35	28		2	35
Total Shldr Width		# of Shldrs	ML Mix	Total Shldr Width		# of Shldrs	ML Mix	Total Shldr Width		# of Shldrs	ML Mix
14		2		14		2	2.5 Wearing Course (4,E)	14		2	2.5 Wearing Course (4,E)
Width of Rounding Aggregate		white/ >7 milliom	SL Mix	Width of Rounding Aggregate		white/ >7 milliom	SL Mix	Width of Rounding Aggregate		white/ >7 milliom	SL Mix
Y		4		14		N		18		N	
Sealed/UTBWC		ML Thickness		Sealed/UTBWC		ML Thickness		Sealed/UTBWC		ML Thickness	
Y		4		N				N			
ML Top Lift / joint spacing		# Dowels per Lane		ML Top Lift / joint spacing		# Dowels per Lane		ML Top Lift / joint spacing		# Dowels per Lane	
6				2				2			
Design Life		Shldr Thickness		Design Life		Shldr Thickness		Design Life		Shldr Thickness	
		2		20		2.5		14		0	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
0902-12	35
Highway	Discount Rate
27	1.74%
Date	CLEAR ALL
7/7/2016	
Performed By	
Garver	

District 1 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	M&O	Reclaim	BCOA	9.4
Net Present Cost	\$4,132,197.54	\$5,099,599.50	\$6,291,636.78	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 4,132,197.54	\$ 5,099,599.50	\$ 6,291,636.78	Total
% of Low Cost	100.0%	123.4%	152.3%	9.4

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	M&O	Reclaim	BCOA	9.4
Net Present Cost	\$2,606,563.65	\$1,940,267.28	\$2,970,207.90	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 2,606,563.65	\$ 1,940,267.28	\$ 2,970,207.90	Total
Bid Adjustment Factor	\$ 666,296.37	\$ -	\$ 1,029,940.62	9.4

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	9.41			1	9.41			1	9.41		
ALT	Description			ALT	Description			ALT	Description		
1		M&O		2		Reclaim		3		BCOA	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7">CLICK HERE TO EDIT THIS ALTERNATE</td> <th colspan="2">Pavement Type<td rowspan="7"></td></th>		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7"></td>					
HMA			HMA			PCC					
Primary Category			Primary Category			Primary Category					
Overlay, DL =13 to 17 years			20 Year HMA			6'X6' ≤ 5.0" Thickness					
Secondary Category			Secondary Category			Secondary Category					
Rural			Rural			Design Life = 20 Years					
ShoulderCategory			ShoulderCategory			ShoulderCategory					
Bituminous			Bituminous			PCC					
Notes:			Notes:			Notes:					
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	M&O	\$ 162,129.00	\$ 162,129.00	0	Reclaim	\$ 335,742.00	\$ 335,742.00	0	BCOA	\$ 352,968.00	\$ 352,968.00
1			\$ -	1		\$ -	\$ -	1			\$ -
2			\$ -	2		\$ -	\$ -	2			\$ -
3	Crack Treatment	\$ 2,112.00	\$ 2,005.48	3		\$ -	\$ -	3			\$ -
4			\$ -	4		\$ -	\$ -	4			\$ -
5			\$ -	5		\$ -	\$ -	5			\$ -
6			\$ -	6		\$ -	\$ -	6			\$ -
7	Seal	\$ 7,890.49	\$ 6,992.98	7		\$ -	\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 1,056.00	\$ 919.88	8			\$ -
9			\$ -	9		\$ -	\$ -	9			\$ -
10			\$ -	10		\$ -	\$ -	10			\$ -
11			\$ -	11		\$ -	\$ -	11			\$ -
12			\$ -	12	Seal	\$ 11,632.54	\$ 9,457.45	12			\$ -
13			\$ -	13		\$ -	\$ -	13			\$ -
14			\$ -	14		\$ -	\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 239,707.15	\$ 185,056.77	15		\$ -	\$ -	15			\$ -
16			\$ -	16		\$ -	\$ -	16			\$ -
17			\$ -	17		\$ -	\$ -	17			\$ -
18	Crack Treatment	\$ 2,112.00	\$ 1,548.26	18		\$ -	\$ -	18			\$ -
19			\$ -	19		\$ -	\$ -	19			\$ -
20			\$ -	20	ML Overlay 5	\$ 294,213.89	\$ 208,366.79	20	1st CPR	\$ 383,812.00	\$ 271,821.55
21			\$ -	21		\$ -	\$ -	21			\$ -
22	Seal	\$ 7,890.49	\$ 5,398.66	22		\$ -	\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 2,112.00	\$ 1,420.31	23			\$ -
24			\$ -	24		\$ -	\$ -	24			\$ -
25			\$ -	25		\$ -	\$ -	25			\$ -
26			\$ -	26		\$ -	\$ -	26			\$ -
27			\$ -	27	Seal	\$ 7,890.49	\$ 4,952.53	27			\$ -
28			\$ -	28		\$ -	\$ -	28			\$ -
29	ML Overlay 3.5"	\$ 239,707.15	\$ 145,351.90	29		\$ -	\$ -	29			\$ -
30			\$ -	30		\$ -	\$ -	30	Remove and Replace	\$ 344,084.38	\$ 205,075.11
31			\$ -	31		\$ -	\$ -	31			\$ -
32	Crack Treatment	\$ 2,112.00	\$ 1,216.07	32		\$ -	\$ -	32			\$ -
33			\$ -	33		\$ -	\$ -	33			\$ -
34			\$ -	34		\$ -	\$ -	34			\$ -
35	Remaining Life	\$ (129,073.08)	\$ (70,570.79)	35	2/17 Remaining Life	\$ (34,613.40)	\$ (18,924.90)	35	30/35 Remaining	\$ (294,929.46)	\$ (161,252.89)
LCCA - Net Present Cost/ per Mile			\$ 439,128.32	LCCA - Net Present Cost/ per Mile			\$ 541,934.06	LCCA - Net Present Cost/ per Mile			\$ 668,611.77
Maintenance - Net Present Cost/per Mile			\$ 276,999.32	Maintenance - Net Present Cost/per Mile			\$ 206,192.06	Maintenance - Net Present Cost/per Mile			\$ 315,643.77
Net Present Cost for Segment			\$ 4,132,197.54	Net Present Cost for Segment			\$ 5,099,599.50	Net Present Cost for Segment			\$ 6,291,636.78
Maintenance - Net Present Cost for Segment			\$ 2,606,563.65	Maintenance - Net Present Cost for Segment			\$ 1,940,267.28	Maintenance - Net Present Cost for Segment			\$ 2,970,207.90
Equivalent Annual Cost			158,632.86	Equivalent Annual Cost			195,770.91	Equivalent Annual Cost			241,532.59
Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35			
Total Shldr Width 8 # of Shldrs 2 ML Mix				Total Shldr Width 8 # of Shldrs 2 ML Mix				Total Shldr Width 8 # of Shldrs 2 ML Mix			
Width of Rounding Aggregate 1.5 white/ >7 milliom SL Mix				Width of Rounding Aggregate 1.5 white/ >7 milliom SL Mix				Width of Rounding Aggregate 1.5 white/ >7 milliom SL Mix			
Sealed/UTBWC N ML Thickness				Sealed/UTBWC N ML Thickness				Sealed/UTBWC N ML Thickness			
ML Top Lift / joint spacing 3 # Dowels per Lane				ML Top Lift / joint spacing 3 # Dowels per Lane				ML Top Lift / joint spacing 3 # Dowels per Lane			
Design Life 15 Shldr Thickness 3				Design Life 20 Shldr Thickness 5				Design Life 6 Shldr Thickness 4.5			

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
1802-51	35
Highway	Discount Rate
6	1.74%
Date	CLEAR ALL
10/30/2015	
Performed By	
Darren Nelson	

District 3 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2" ML M&F and 1.5" Full Width OL	2" FW Mill and 6" FDR, 5" Bit	2" Mill & 4.5" Conc WT	5.7 Miles
Net Present Cost	\$2,386,575.83	\$2,942,518.39	\$3,487,969.40	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 2,386,575.83	\$ 2,942,518.39	\$ 3,487,969.40	Total
% of Low Cost	100.0%	123.3%	146.1%	5.7

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2" ML M&F and 1.5" Full Width OL	2" FW Mill and 6" FDR, 5" Bit	2" Mill & 4.5" Conc WT	5.7 Miles
Net Present Cost	\$1,361,487.83	\$1,000,562.59	\$1,784,991.80	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 1,361,487.83	\$ 1,000,562.59	\$ 1,784,991.80	Total
Bid Adjustment Factor	\$ 360,925.24	\$ -	\$ 784,429.20	5.7

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	5.7			1	5.7			1	5.7		
ALT	Description			ALT	Description			ALT	Description		
1		2" ML M&F and 1.5" Full Width OL		2		2" FW Mill and 6" FDR, 5" Bit		3		2" Mill & 4.5" Conc WT	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
HMA				HMA				PCC			
Primary Category				Primary Category				Primary Category			
Overlay, DL=13 to 17 years				20 Year HMA				6'X6" ≤ 5.0" Thickness			
Secondary Category				Secondary Category				Secondary Category			
Rural				Rural				Design Life = 20 Years			
ShoulderCategory				ShoulderCategory				ShoulderCategory			
Bituminous		Bituminous		Bituminous		Thick Bit					
Notes:				Notes:				Notes:			
Shoulders will get a 1.5" Bituminous Overlay				Shoulders will be 3" Bituminous				Shoulders will be 4.5" Bituminous			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	2" ML M&F, 1.5" FW OL	\$ 179,840.00	\$ 179,840.00	0	2" Mill, 6" FDR, 5" Bit	\$ 340,694.00	\$ 340,694.00	0	2" Mill & 4.5" Conc WT	\$ 298,768.00	\$ 298,768.00
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 2,200.00	\$ 2,089.04	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 8,561.62	\$ 7,587.77	7			\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 1,056.00	\$ 919.88	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12	Seal	\$ 12,094.60	\$ 9,833.10	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 203,364.68	\$ 156,999.95	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18	Crack Treatment	\$ 2,200.00	\$ 1,612.77	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20			\$ -	20	ML Overlay 3.5	\$ 245,665.16	\$ 173,983.83	20	1st CPR	\$ 381,646.62	\$ 270,287.99
21			\$ -	21			\$ -	21			\$ -
22	Seal	\$ 8,561.62	\$ 5,857.85	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 2,112.00	\$ 1,420.31	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 8,256.47	\$ 5,182.24	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29	ML Overlay 3.5"	\$ 203,364.68	\$ 123,314.82	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30	Remove and Replace	\$ 336,595.61	\$ 200,611.78
31			\$ -	31			\$ -	31			\$ -
32	Crack Treatment	\$ 2,200.00	\$ 1,266.74	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (109,504.06)	\$ (59,871.42)	35	2/17 Remaining Life	\$ (28,901.78)	\$ (15,802.07)	35	30/35 Remaining	\$ (288,510.52)	\$ (157,743.32)
LCCA - Net Present Cost/ per Mile			\$ 418,697.51	LCCA - Net Present Cost/ per Mile			\$ 516,231.30	LCCA - Net Present Cost/ per Mile			\$ 611,924.46
Maintenance - Net Present Cost/per Mile			\$ 238,857.51	Maintenance - Net Present Cost/per Mile			\$ 175,537.30	Maintenance - Net Present Cost/per Mile			\$ 313,156.46
Net Present Cost for Segment			\$ 2,386,575.83	Net Present Cost for Segment			\$ 2,942,518.39	Net Present Cost for Segment			\$ 3,487,969.40
Maintenance - Net Present Cost for Segment			\$ 1,361,487.83	Maintenance - Net Present Cost for Segment			\$ 1,000,562.59	Maintenance - Net Present Cost for Segment			\$ 1,784,991.80
Equivalent Annual Cost			91,619.38	Equivalent Annual Cost			112,961.71	Equivalent Annual Cost			133,901.29
Total Lane Width				Total Lane Width				Total Lane Width			
25				24				24			
2				2				2			
Total Shldr Width				Total Shldr Width				Total Shldr Width			
12				12				12			
Width of Rounding Aggregate				Width of Rounding Aggregate				Width of Rounding Aggregate			
white/ >7 milliom				white/ >7 milliom				white/ >7 milliom			
4				4				4			
N				N				Y			
Sealed/UTBWC				Sealed/UTBWC				Sealed/UTBWC			
ML Thickness				ML Thickness				ML Thickness			
N				N				N			
ML Top Lift / joint spacing				ML Top Lift / joint spacing				ML Top Lift / joint spacing			
# Dowels per Lane				# Dowels per Lane				# Dowels per Lane			
1.5				1.5				6			
Design Life				Design Life				Design Life			
15				20				20			
Shldr Thickness				Shldr Thickness				Shldr Thickness			
1.5				3				4.5			

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
1921-98	35
Highway	Discount Rate
MN 3	2.00%
Date	CLEAR ALL
4/30/2015	
Performed By	
KY	

Metro - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2" Mill, 3.5" Overlay	6" Mill, 6" Con Overlay	6" M & 5" O over 6" Rubblized Con	4.4 Miles
Net Present Cost	\$2,853,616.18	\$3,518,165.65	\$3,147,719.26	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 2,853,616.18	\$ 3,518,165.65	\$ 3,147,719.26	Total
% of Low Cost	100.0%	123.3%	110.3%	4.4

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2" Mill, 3.5" Overlay	6" Mill, 6" Con Overlay	6" M & 5" O over 6" Rubblized Con	4.4 Miles
Net Present Cost	\$1,195,463.60	\$601,063.28	\$905,901.11	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 1,195,463.60	\$ 601,063.28	\$ 905,901.11	Total
Bid Adjustment Factor	\$ 594,400.32	\$ -	\$ 304,837.83	4.4

Segment 1															
SEG	Length			SEG	Length			SEG	Length						
1	4.358			1	4.358			1	4.358						
ALT	Description			ALT	Description			ALT	Description						
1		2" Mill, 3.5" Overlay		2		6" Mill, 6" Con Overlay		3		6" M & 5" O over 6" Rubblized Con					
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type							
HMA				PCC				HMA							
Primary Category				Primary Category				Primary Category							
Overlay, DL > 17 years				≥12 Joint spacing				20 Year HMA							
Secondary Category				Secondary Category				Secondary Category							
Urban				Design Life = 20 Years				Rural							
ShoulderCategory				ShoulderCategory				ShoulderCategory				ShoulderCategory			
Thin		PCC		Bituminous											
Notes:				Notes:				Notes:							
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile				
0	B1 - Option 1	\$ 380,484.76	\$ 380,484.76	0	C1 - Option 2	\$ 669,367.23	\$ 669,367.23	0	B2 - Option 3	\$ 514,414.45	\$ 514,414.45				
1	Crack Treatment	\$ 1,712.13	\$ -	1			\$ -	1			\$ -				
2			\$ -	2			\$ -	2			\$ -				
3			\$ 1,613.38	3			\$ -	3			\$ -				
4			\$ -	4			\$ -	4			\$ -				
5	Seal	\$ 12,221.44	\$ -	5			\$ -	5			\$ -				
6			\$ -	6			\$ -	6			\$ -				
7			\$ 10,639.50	7			\$ -	7			\$ -				
8			\$ -	8			\$ -	8			\$ 856.06	8	\$ 730.64		
9			\$ -	9	1st CPR	\$ 204,944.57	\$ -	9	ML Overlay 4	\$ 302,145.28	\$ -				
10			\$ -	10			\$ -	10			\$ -				
11			\$ -	11			\$ -	11			\$ -				
12			\$ -	12			\$ -	12			\$ 16,910.08	12	\$ 13,333.48		
13			\$ -	13			\$ -	13			\$ -				
14			\$ -	14			\$ -	14			\$ -				
15			\$ -	15			\$ -	15			\$ -				
16			\$ -	16			\$ -	16			\$ -				
17			\$ -	17			\$ -	17			\$ -				
18			\$ -	18			\$ -	18			\$ -				
19			\$ 275,989.24	19			\$ -	19			\$ -				
20			\$ -	20			\$ 137,921.82	20			\$ 203,335.11				
21	Crack Treatment	\$ 1,712.13	\$ -	21			\$ -	21			\$ -				
22			\$ 1,107.47	22			\$ -	22			\$ -				
23			\$ -	23			\$ -	23			\$ 1,712.13	23	\$ 1,085.76		
24			\$ -	24			\$ -	24			\$ -	24	\$ -		
25	Seal	\$ 12,221.44	\$ -	25			\$ -	25			\$ -				
26			\$ 7,303.28	26			\$ -	26			\$ -				
27			\$ -	27			\$ -	27			\$ 12,221.44	27	\$ 7,160.08		
28			\$ -	28			\$ -	28			\$ -	28	\$ -		
29			\$ -	29			\$ -	29			\$ -				
30			\$ -	30			\$ -	30			\$ -				
31			\$ -	31			\$ -	31			\$ -				
32			\$ -	32			\$ -	32			\$ -				
33	Remaining Life	\$ (44,673.80)	\$ -	33			\$ -	33			\$ -				
34			\$ -	34			\$ -	34			\$ -				
35			\$ (22,338.13)	35	0/0 Remaining	\$ -	\$ -	35	2/17 Remaining Life	\$ (35,546.50)	\$ (17,774.23)				
LCCA - Net Present Cost/ per Mile				\$ 654,799.49	LCCA - Net Present Cost/ per Mile				\$ 807,289.04	LCCA - Net Present Cost/ per Mile				\$ 722,285.28	
Maintenance - Net Present Cost/per Mile				\$ 274,314.73	Maintenance - Net Present Cost/per Mile				\$ 137,921.82	Maintenance - Net Present Cost/per Mile				\$ 207,870.84	
Net Present Cost for Segment				\$ 2,853,616.18	Net Present Cost for Segment				\$ 3,518,165.65	Net Present Cost for Segment				\$ 3,147,719.26	
Maintenance - Net Present Cost for Segment				\$ 1,195,463.60	Maintenance - Net Present Cost for Segment				\$ 601,063.28	Maintenance - Net Present Cost for Segment				\$ 905,901.11	
Equivalent Annual Cost				114,150.95	Equivalent Annual Cost				140,734.40	Equivalent Annual Cost				125,915.72	
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	
24				2	24				2	24				2	
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	
20				2	20				2	20				2	
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	
1.5				N	1.5				N	1.5				N	
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	
N					Y				6	N					
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	
2					15				11	2					
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness	
19				4	20				6	20				4	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
SP 2506-72	35
Highway	Discount Rate
T.H. 52 NB From Pine Island to Cannon Falls	1.74%
Date	CLEAR ALL
3/15/2016	
Performed By	
TRM	

District 6 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1.5" Mill & 3" Bit. OL	3" Mill & 4.5" Bit. OL	6" Whitetopping	27.4
Net Present Cost	\$12,124,681.47	\$12,938,899.38	\$20,026,128.54	
Segment #2				0.0
Net Present Cost				
Segment #3				0.0
Net Present Cost				
Segment #4				0.0
Net Present Cost				
Segment #5				0.0
Net Present Cost				
Segment #6				0.0
Net Present Cost				
Segment #7				0.0
Net Present Cost				
Segment #8				0.0
Net Present Cost				
Project Net Present Cost	\$ 12,124,681.47	\$ 12,938,899.38	\$ 20,026,128.54	Total
% of Low Cost	100.0%	106.7%	165.2%	27.4

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1.5" Mill & 3" Bit. OL	3" Mill & 4.5" Bit. OL	6" Whitetopping	27.4
Net Present Cost	\$6,126,479.53	\$4,462,708.96	\$6,135,604.93	
Segment #2				0.0
Net Present Cost				
Segment #3				0.0
Net Present Cost				
Segment #4				0.0
Net Present Cost				
Segment #5				0.0
Net Present Cost				
Segment #6				0.0
Net Present Cost				
Segment #7				0.0
Net Present Cost				
Segment #8				0.0
Net Present Cost				
Project Net Present Cost	\$ 6,126,479.53	\$ 4,462,708.96	\$ 6,135,604.93	Total
Bid Adjustment Factor	\$ 1,663,770.56	\$ -	\$ 1,672,895.96	27.4

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	27.38			1	27.38			1	27.38		
ALT	Description			ALT	Description			ALT	Description		
1		1.5" Mill & 3" Bit. OL		2		3" Mill & 4.5" Bit. OL		3		6" Whitetopping	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type					
HMA			HMA			PCC					
Primary Category			Primary Category			Primary Category					
Overlay, DL =13 to 17 years			Overlay, DL > 17 years			6'X6' ≥5.5" Thickness					
Secondary Category			Secondary Category			Secondary Category					
Rural			Rural			Design Life = 20 Years					
ShoulderCategory			ShoulderCategory			ShoulderCategory					
Bituminous			Bituminous			Thin Bit					
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0		\$ 219,072.39	\$ 219,072.39	0		\$ 309,575.98	\$ 309,575.98	0		\$ 507,323.73	\$ 507,323.73
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 1,909.25	\$ 1,812.96	3	Crack Treatment	\$ 1,909.25	\$ 1,812.96	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 8,960.99	\$ 7,941.70	7	Seal	\$ 8,960.99	\$ 7,941.70	7			\$ -
8			\$ -	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17	ML Overlay 3.5"	\$ 246,713.96	\$ 184,006.96	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	Crack Treatment	\$ 1,909.25	\$ 1,352.16	20	ML Overlay 3.5"	\$ 246,713.96	\$ 174,726.61	20	1st CPR	\$ 316,416.13	\$ 224,090.76
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 1,909.25	\$ 1,283.96	23			\$ -
24	Seal	\$ 8,960.99	\$ 5,923.17	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 8,960.99	\$ 5,624.44	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33	ML Overlay 3.5"	\$ 246,713.96	\$ 139,626.07	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (213,818.76)	\$ (116,905.56)	35	Remaining Life	\$ (51,939.78)	\$ (28,398.11)	35	0/0 Remaining	\$ -	\$ -

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	35	24	2	35	24	2	35
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
14	2	WEARING COURSE MIXTURE (	14	2	WEARING COURSE MIXTURE (	14	2	WEARING COURSE MIXTURE (
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
3	N	WEARING COURSE MIXTURE (	3	N	WEARING COURSE MIXTURE (	3	N	WEARING COURSE MIXTURE (
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			N			N		
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.5			1.5			6		
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
17	4.5		20	4.5		20	3	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
2601-19	35
Highway	Discount Rate
9	1.58%
Date	CLEAR ALL
Performed By	

D4 - 2016/2017 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	3" MILL AND FILL	5" WHITETOP		18.5 Miles	
Net Present Cost	\$6,596,473.44	\$10,817,306.98			
Segment #2				0.0 Miles	
Net Present Cost					
Segment #3				0.0 Miles	
Net Present Cost					
Segment #4				0.0 Miles	
Net Present Cost					
Segment #5				0.0 Miles	
Net Present Cost					
Segment #6				0.0 Miles	
Net Present Cost					
Segment #7				0.0 Miles	
Net Present Cost					
Segment #8				0.0 Miles	
Net Present Cost					
Project Net Present Cost	\$ 6,596,473.44	\$ 10,817,306.98	\$ -	Total	
% of Low Cost	100.0%	164.0%	0.0%	18.5	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	3" MILL AND FILL	5" WHITETOP		18.5 Miles	
Net Present Cost	\$2,341,473.44	\$6,838,844.98			
Segment #2				0.0 Miles	
Net Present Cost					
Segment #3				0.0 Miles	
Net Present Cost					
Segment #4				0.0 Miles	
Net Present Cost					
Segment #5				0.0 Miles	
Net Present Cost					
Segment #6				0.0 Miles	
Net Present Cost					
Segment #7				0.0 Miles	
Net Present Cost					
Segment #8				0.0 Miles	
Net Present Cost					
Project Net Present Cost	\$ 2,341,473.44	\$ 6,838,844.98	\$ -	Total	
Bid Adjustment Factor	\$ -	\$ 4,497,371.54	\$ -	18.5	

Segment 1														
SEG	Length			SEG	Length			SEG	Length					
1	18.5			1	18.5			1	18.5					
ALT	Description			ALT	Description			ALT	Description					
1		3" MILL AND FILL		2		5" WHITETOP		3						
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE				
HMA				PCC										
Primary Category				6'X6' ≤ 5.0" Thickness				Primary Category						
Secondary Category				Design Life = 20 Years				Secondary Category						
ShoulderCategory				ShoulderCategory				ShoulderCategory						
Aggregate		DELETE		Aggregate		DELETE		Aggregate		DELETE				
Notes:				Notes:				Notes:						
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile			
0	3" MILL & FILL	\$ 230,000.00	\$ 230,000.00	0	5" WHITETOP	\$ 215,052.00	\$ 215,052.00	0			\$ -			
1			\$ -	1			\$ -	1			\$ -			
2			\$ -	2			\$ -	2			\$ -			
3			\$ -	3			\$ -	3			\$ -			
4			\$ -	4			\$ -	4			\$ -			
5			\$ -	5			\$ -	5			\$ -			
6			\$ -	6			\$ -	6			\$ -			
7			\$ -	7			\$ -	7			\$ -			
8	Crack Treatment	\$ 1,232.00	\$ 1,086.79	8			\$ -	8			\$ -			
9			\$ -	9			\$ -	9			\$ -			
10			\$ -	10			\$ -	10			\$ -			
11			\$ -	11			\$ -	11			\$ -			
12	Seal	\$ 12,727.14	\$ 10,544.65	12			\$ -	12			\$ -			
13			\$ -	13			\$ -	13			\$ -			
14			\$ -	14			\$ -	14			\$ -			
15			\$ -	15			\$ -	15			\$ -			
16			\$ -	16			\$ -	16			\$ -			
17			\$ -	17			\$ -	17			\$ -			
18			\$ -	18			\$ -	18			\$ -			
19			\$ -	19			\$ -	19			\$ -			
20	ML Overlay 3.5	\$ 163,106.48	\$ 119,208.45	20	1st CPR	\$ 419,856.80	\$ 306,857.70	20			\$ -			
21			\$ -	21			\$ -	21			\$ -			
22			\$ -	22			\$ -	22			\$ -			
23	Crack Treatment	\$ 2,464.00	\$ 1,718.11	23			\$ -	23			\$ -			
24			\$ -	24			\$ -	24			\$ -			
25			\$ -	25			\$ -	25			\$ -			
26			\$ -	26			\$ -	26			\$ -			
27	Seal	\$ 7,778.03	\$ 5,093.87	27			\$ -	27			\$ -			
28			\$ -	28			\$ -	28			\$ -			
29			\$ -	29			\$ -	29			\$ -			
30			\$ -	30	Remove and Replace	\$ 484,510.77	\$ 302,731.20	30			\$ -			
31			\$ -	31			\$ -	31			\$ -			
32			\$ -	32			\$ -	32			\$ -			
33			\$ -	33			\$ -	33			\$ -			
34			\$ -	34			\$ -	34			\$ -			
35	2/17 Remaining Life	\$ (19,189.00)	\$ (11,085.75)	35	30/35 Remaining	\$ (415,294.95)	\$ (239,921.60)	35			\$ -			
LCCA - Net Present Cost/ per Mile				\$ 356,566.13	LCCA - Net Present Cost/ per Mile				\$ 584,719.30	LCCA - Net Present Cost/ per Mile		\$ -		
Maintenance - Net Present Cost/per Mile				\$ 126,566.13	Maintenance - Net Present Cost/per Mile				\$ 369,667.30	Maintenance - Net Present Cost/per Mile		\$ -		
Net Present Cost for Segment				\$ 6,596,473.44	Net Present Cost for Segment				\$ 10,817,306.98	Net Present Cost for Segment		\$ -		
Maintenance - Net Present Cost for Segment				\$ 2,341,473.44	Maintenance - Net Present Cost for Segment				\$ 6,838,844.98	Maintenance - Net Present Cost for Segment		\$ -		
Equivalent Annual Cost				246,809.55	Equivalent Annual Cost				404,733.64	Equivalent Annual Cost		-		
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes
28				2	28				2	28				2
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs
3				2	3				2	3				2
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom
1.5				N	1.5				Y	1.5				Y
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness
N					Y				5	Y				5
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane
1.5					6				0	6				0
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness
20				1.5	20				5	20				5



Project Number	Analysis Period
2772-105	35
Highway	Discount Rate
	2.00%
Date	CLEAR ALL
Performed By	

Metro - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	19YR M&O	20YR Rubblization	20YR UBOL	5.2
Net Present Cost	\$3,084,642.06	\$6,240,785.11	\$4,044,625.48	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 3,084,642.06	\$ 6,240,785.11	\$ 4,044,625.48	Total
% of Low Cost	100.0%	202.3%	131.1%	5.2

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	19YR M&O	20YR Rubblization	20YR UBOL	5.2
Net Present Cost	\$1,040,880.35	\$785,809.97	\$456,590.44	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,040,880.35	\$ 785,809.97	\$ 456,590.44	Total
Bid Adjustment Factor	\$ 584,289.92	\$ 329,219.54	\$ -	5.2

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	5.233			1	5.233			1	5.233		
ALT	Description			ALT	Description			ALT	Description		
1		19YR M&O		2		20YR Rubblization		3		20YR UBOL	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type					
HMA			HMA			PCC					
Primary Category			20 Year HMA			≥12 Joint spacing					
Overlay, DL > 17 years			Secondary Category			Design Life = 20 Years					
Secondary Category			Urban			ShoulderCategory					
Urban			Thick			PCC					
ShoulderCategory											
Thick											
Notes: Length calculated from RP 128.121 to RP 130.922 w/ exception from RP 128.363 to RP 128.732 (SB Only). (130.922-128.121)*2-(128.732-128.363) = 5.233 MI				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	Original Construction	\$ 390,552.59	\$ 390,552.59	0	Original Construction	\$ 1,042,418.33	\$ 1,042,418.33	0	Original Construction	\$ 685,655.46	\$ 685,655.46
1			\$ -	1		\$ -	\$ -	1			\$ -
2			\$ -	2		\$ -	\$ -	2			\$ -
3	Crack Treatment	\$ 1,712.13	\$ 1,613.38	3		\$ -	\$ -	3			\$ -
4			\$ -	4		\$ -	\$ -	4			\$ -
5			\$ -	5		\$ -	\$ -	5			\$ -
6			\$ -	6		\$ -	\$ -	6			\$ -
7	Seal	\$ -	\$ -	7		\$ -	\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 856.06	\$ 730.64	8			\$ -
9			\$ -	9		\$ -	\$ -	9			\$ -
10			\$ -	10		\$ -	\$ -	10			\$ -
11			\$ -	11		\$ -	\$ -	11			\$ -
12			\$ -	12	Seal	\$ 4,466.88	\$ 3,522.10	12			\$ -
13			\$ -	13		\$ -	\$ -	13			\$ -
14			\$ -	14		\$ -	\$ -	14			\$ -
15			\$ -	15		\$ -	\$ -	15			\$ -
16			\$ -	16		\$ -	\$ -	16			\$ -
17			\$ -	17		\$ -	\$ -	17			\$ -
18			\$ -	18		\$ -	\$ -	18			\$ -
19	ML Mill 3.5"	\$ 310,976.10	\$ 213,463.56	19		\$ -	\$ -	19			\$ -
20			\$ -	20	ML Mill 3.0"	\$ 235,817.17	\$ 158,698.20	20	1st CPR	\$ 129,652.09	\$ 87,252.14
21			\$ -	21		\$ -	\$ -	21			\$ -
22	Crack Treatment	\$ 1,712.13	\$ 1,107.47	22		\$ -	\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 1,712.13	\$ 1,085.76	23			\$ -
24			\$ -	24		\$ -	\$ -	24			\$ -
25			\$ -	25		\$ -	\$ -	25			\$ -
26	Seal	\$ -	\$ -	26		\$ -	\$ -	26			\$ -
27			\$ -	27	Seal	\$ -	\$ -	27			\$ -
28			\$ -	28		\$ -	\$ -	28			\$ -
29			\$ -	29		\$ -	\$ -	29			\$ -
30			\$ -	30		\$ -	\$ -	30			\$ -
31			\$ -	31		\$ -	\$ -	31			\$ -
32			\$ -	32		\$ -	\$ -	32			\$ -
33			\$ -	33		\$ -	\$ -	33			\$ -
34			\$ -	34		\$ -	\$ -	34			\$ -
35	Remaining Life	\$ (34,552.90)	\$ (17,277.40)	35	2/17 Remaining Life	\$ (27,743.20)	\$ (13,872.36)	35	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile			\$ 589,459.60	LCCA - Net Present Cost/ per Mile			\$ 1,192,582.67	LCCA - Net Present Cost/ per Mile			\$ 772,907.60
Maintenance - Net Present Cost/per Mile			\$ 198,907.00	Maintenance - Net Present Cost/per Mile			\$ 150,164.34	Maintenance - Net Present Cost/per Mile			\$ 87,252.14
Net Present Cost for Segment			\$ 3,084,642.06	Net Present Cost for Segment			\$ 6,240,785.11	Net Present Cost for Segment			\$ 4,044,625.48
Maintenance - Net Present Cost for Segment			\$ 1,040,880.35	Maintenance - Net Present Cost for Segment			\$ 785,809.97	Maintenance - Net Present Cost for Segment			\$ 456,590.44

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	35	24	2	35	24	2	35
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
10	1	12.5 Wearing Course (4,C)	10	1	12.5 Wearing Course (4,C)	10	2	
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
	Y	12.5 Wearing Course (3,B)		Y	12.5 Wearing Course (3,B)		N	
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
Y			N			Y	9.5	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.75			2			15	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
19	4		20	7			9.5	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
S.P. 2801-87 & 2805-72	35
Highway	Discount Rate
16 & 61	1.74%
Date	CLEAR ALL
12/2/2015	
Performed By	
TRM	

District 6 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1.5" Mill & 3" Bit. Overlay	6" Whitetopping	3" Mill & 5" Bit. Overlay	3.0
Net Present Cost	\$1,423,265.27	\$1,965,109.26	\$1,435,870.40	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,423,265.27	\$ 1,965,109.26	\$ 1,435,870.40	Total
% of Low Cost	100.0%	138.1%	100.9%	3.0

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1.5" Mill & 3" Bit. Overlay	6" Whitetopping	3" Mill & 5" Bit. Overlay	3.0
Net Present Cost	\$808,586.85	\$597,324.14	\$462,074.73	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 808,586.85	\$ 597,324.14	\$ 462,074.73	Total
Bid Adjustment Factor	\$ 346,512.12	\$ 135,249.41	\$ -	3.0

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	3.034			1	3.034			1	3.034		
ALT	Description			ALT	Description			ALT	Description		
1		1.5" Mill & 3" Bit. Overlay		2		6" Whitetopping		3		3" Mill & 5" Bit. Overlay	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	
HMA				PCC				HMA			
Primary Category				Primary Category				Primary Category			
Overlay, DL =13 to 17 years				≥12 Joint spacing				Overlay, DL > 17 years			
Secondary Category				Secondary Category				Secondary Category			
Rural				Design Life = 20 Years				Rural			
ShoulderCategory				ShoulderCategory				ShoulderCategory			
Bituminous				Thin Bit				Bituminous			
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0		\$ 202,596.71	\$ 202,596.71	0		\$ 450,819.09	\$ 450,819.09	0		\$ 320,961.00	\$ 320,961.00
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 1,909.25	\$ 1,812.96	3			\$ -	3	Crack Treatment	\$ 1,909.25	\$ 1,812.96
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 8,766.31	\$ 7,769.17	7			\$ -	7	Seal	\$ 8,766.31	\$ 7,769.17
8			\$ -	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 229,182.67	\$ 176,931.75	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18	Crack Treatment	\$ 1,909.25	\$ 1,399.62	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20			\$ -	20	1st CPR	\$ 277,989.99	\$ 196,876.78	20	ML Overlay 3.5"	\$ 229,182.67	\$ 162,310.68
21			\$ -	21			\$ -	21			\$ -
22	Seal	\$ 8,766.31	\$ 5,997.89	22			\$ -	22			\$ -
23			\$ -	23			\$ -	23	Crack Treatment	\$ 1,909.25	\$ 1,283.96
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27			\$ -	27	Seal	\$ 8,766.31	\$ 5,502.25
28			\$ -	28			\$ -	28			\$ -
29	ML Overlay 3.5"	\$ 229,182.67	\$ 138,970.14	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32	Crack Treatment	\$ 1,909.25	\$ 1,099.33	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (123,406.05)	\$ (67,472.34)	35	0/0 Remaining	\$ -	\$ -	35	Remaining Life	\$ (48,248.98)	\$ (26,380.16)
LCCA - Net Present Cost/ per Mile			\$ 469,105.23	LCCA - Net Present Cost/ per Mile			\$ 647,695.87	LCCA - Net Present Cost/ per Mile			\$ 473,259.86
Maintenance - Net Present Cost/per Mile			\$ 266,508.52	Maintenance - Net Present Cost/per Mile			\$ 196,876.78	Maintenance - Net Present Cost/per Mile			\$ 152,298.86
Net Present Cost for Segment			\$ 1,423,265.27	Net Present Cost for Segment			\$ 1,965,109.26	Net Present Cost for Segment			\$ 1,435,870.40
Maintenance - Net Present Cost for Segment			\$ 808,586.85	Maintenance - Net Present Cost for Segment			\$ 597,324.14	Maintenance - Net Present Cost for Segment			\$ 462,074.73
Equivalent Annual Cost			54,638.40	Equivalent Annual Cost			75,439.50	Equivalent Annual Cost			55,122.30
Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35			
Total Shldr Width 12 # of Shldrs 2 ML Mix WEARING COURSE MIXTURE (				Total Shldr Width 12 # of Shldrs 2 ML Mix WEARING COURSE MIXTURE (				Total Shldr Width 12 # of Shldrs 2 ML Mix WEARING COURSE M			
Width of Rounding Aggregate 3 white/ >7 milliom SL Mix WEARING COURSE MIXTURE (2,B)				Width of Rounding Aggregate 3 white/ >7 milliom SL Mix WEARING COURSE MIXTURE (				Width of Rounding Aggregate 3 white/ >7 milliom SL Mix WEARING COURSE M			
Sealed/UTBWC N ML Thickness				Sealed/UTBWC Y 6 ML Thickness				Sealed/UTBWC N ML Thickness			
ML Top Lift / joint spacing 1.5 # Dowels per Lane				ML Top Lift / joint spacing 12 # Dowels per Lane				ML Top Lift / joint spacing 2 # Dowels per Lane			
Design Life 15 Shldr Thickness 1.5				Design Life 12 Shldr Thickness 3				Design Life 20 Shldr Thickness 2			

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
3505-19	35
Highway	Discount Rate
59	2.00%
Date	CLEAR ALL
5/15/2015	
Performed By	
ko	

District 2 - 2014/2015 prices	

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" mill & of	5" BCOA		17.4
Net Present Cost	\$4,724,098.38	\$13,859,165.78		Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 4,724,098.38	\$ 13,859,165.78	\$ -	Total
% of Low Cost	100.0%	293.4%	0.0%	17.4

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" mill & ol	5" BCOA		17.4 Miles
Net Present Cost	\$2,177,970.28	\$6,019,586.91		
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 2,177,970.28	\$ 6,019,586.91	\$ -	Total
Bid Adjustment Factor	\$ -	\$ 3,841,616.63	\$ -	17.4

[illegible]

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
3614-20	35
Highway	Discount Rate
217	2.00%
Date	CLEAR ALL
10/27/2015	
Performed By	
Chris Morris	

District 1 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Mill & Overlay	Reclaim & Overlay	6" PCC	16.6
Net Present Cost	\$4,685,619.42	\$12,163,235.04	\$14,621,698.07	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 4,685,619.42	\$ 12,163,235.04	\$ 14,621,698.07	Total
% of Low Cost	100.0%	259.6%	312.1%	16.6

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Mill & Overlay	Reclaim & Overlay	6" PCC	16.6
Net Present Cost	\$2,963,153.88	\$2,047,795.91	\$2,688,915.39	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 2,963,153.88	\$ 2,047,795.91	\$ 2,688,915.39	Total
Bid Adjustment Factor	\$ 915,357.97	\$ -	\$ 641,119.48	16.6

Segment 1														
SEG	Length			SEG	Length			SEG	Length					
1	16.647			1	16.647			1	16.647					
ALT	Description			ALT	Description			ALT	Description					
1		Mill & Overlay		2		Reclaim & Overlay		3		6" PCC				
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type						
HMA				HMA				PCC						
Primary Category				Primary Category				Primary Category						
Overlay, DL =13 to 17 years				20 Year HMA				6'X6' ≥5.5" Thickness						
Secondary Category				Secondary Category				Secondary Category						
Rural				Rural				Design Life = 20 Years						
ShoulderCategory				ShoulderCategory				ShoulderCategory				ShoulderCategory		
Bituminous		Bituminous		Bituminous		PCC		PCC		PCC				
Notes:				Notes:				Notes:						
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile			
0	2" M & O	\$ 103,470.03	\$ 103,470.03	0	Rec & Overlay	\$ 607,643.37	\$ 607,643.37	0	6" PCC	\$ 716,812.80	\$ 716,812.80			
1	Crack Treatment	\$ 2,568.19	\$ -	1			\$ -	1			\$ -			
2			\$ -	2			\$ -	2			\$ -			
3			\$ 2,420.06	3			\$ -	3			\$ -			
4			\$ -	4			\$ -	4			\$ -			
5	Seal	\$ 6,717.82	\$ -	5			\$ -	5			\$ -			
6			\$ -	6			\$ -	6			\$ -			
7			\$ 5,848.27	7			\$ -	7			\$ -			
8			\$ -	8			\$ 1,284.10	8			\$ 1,095.96			
9			\$ -	9			\$ -	9			\$ -			
10			\$ -	10			\$ -	10			\$ -			
11			\$ -	11			\$ -	11			\$ -			
12			\$ -	12			\$ 8,224.94	12			\$ -			
13	ML Overlay 3.5"	\$ 156,454.43	\$ -	13			\$ -	13			\$ -			
14			\$ -	14			\$ -	14			\$ -			
15			\$ 116,247.94	15			\$ -	15			\$ -			
16			\$ -	16			\$ -	16			\$ -			
17	Crack Treatment	\$ 2,568.19	\$ -	17			\$ -	17			\$ -			
18			\$ 1,798.14	18			\$ -	18			\$ -			
19			\$ -	19			\$ -	19			\$ -			
20			\$ -	20			\$ 176,062.22	20			\$ 118,484.83			
21	Seal	\$ 6,717.82	\$ -	21			\$ -	21	1st CPR	\$ 240,018.43	\$ -			
22			\$ 4,345.35	22			\$ -	22			\$ -			
23			\$ -	23			\$ 1,628.63	23			\$ -			
24			\$ -	24			\$ -	24			\$ -			
25			\$ -	25			\$ -	25			\$ -			
26			\$ -	26			\$ -	26			\$ -			
27			\$ -	27			\$ 3,935.71	27			\$ -			
28			\$ -	28			\$ -	28			\$ -			
29	ML Overlay 3.5"	\$ 156,454.43	\$ 88,101.41	29			\$ -	29			\$ -			
30			\$ -	30			\$ -	30			\$ -			
31			\$ -	31			\$ -	31			\$ -			
32			\$ 1,362.77	32			\$ -	32			\$ -			
33	Crack Treatment	\$ 2,568.19	\$ -	33			\$ -	33			\$ -			
34			\$ -	34			\$ -	34			\$ -			
35			\$ -	35			\$ -	35			\$ -			
35	Remaining Life	\$ (84,244.69)	\$ (42,124.67)	35	2/17 Remaining Life	\$ (20,713.20)	\$ (10,357.17)	35	0/0 Remaining	\$ -	\$ -			
LCCA - Net Present Cost/ per Mile			\$ 281,469.30	LCCA - Net Present Cost/ per Mile			\$ 730,656.28	LCCA - Net Present Cost/ per Mile			\$ 878,338.32			
Maintenance - Net Present Cost/per Mile			\$ 177,999.27	Maintenance - Net Present Cost/per Mile			\$ 123,012.91	Maintenance - Net Present Cost/per Mile			\$ 161,525.52			
Net Present Cost for Segment			\$ 4,685,619.42	Net Present Cost for Segment			\$ 12,163,235.04	Net Present Cost for Segment			\$ 14,621,698.07			
Maintenance - Net Present Cost for Segment			\$ 2,963,153.88	Maintenance - Net Present Cost for Segment			\$ 2,047,795.91	Maintenance - Net Present Cost for Segment			\$ 2,688,915.39			
Equivalent Annual Cost			187,435.13	Equivalent Annual Cost			486,556.27	Equivalent Annual Cost			584,900.23			
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes
24				2	24				2	24				2
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs
1				ML Mix	1				ML Mix	1				ML Mix
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom
1				SL Mix	1				SL Mix	1				SL Mix
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness
N					N					N				
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane
2					1.5					6				
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness
15				2	20				3	6				6

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
4101-89	35
Highway	Discount Rate
14	2.00%
Date	CLEAR ALL
5/26/2015	
Performed By	
Cody Brand	

District 8 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill and Overlay	12" FDR and 4" Bituminous	5" Mill and 4.5" Whitetopping	8.3 Miles
Net Present Cost	\$3,148,942.56	\$3,791,053.77	\$4,371,280.79	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 3,148,942.56	\$ 3,791,053.77	\$ 4,371,280.79	Total
% of Low Cost	100.0%	120.4%	138.8%	8.3

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill and Overlay	12" FDR and 4" Bituminous	5" Mill and 4.5" Whitetopping	8.3 Miles
Net Present Cost	\$1,746,718.87	\$1,361,575.32	\$2,263,513.56	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 1,746,718.87	\$ 1,361,575.32	\$ 2,263,513.56	Total
Bid Adjustment Factor	\$ 385,143.55	\$ -	\$ 901,938.24	8.3

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	8.255			1	8.255			1	8.255		
ALT	Description			ALT	Description			ALT	Description		
1		3" Mill and Overlay		2		12" FDR and 4" Bituminous		3		5" Mill and 4.5" Whitetopping	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
HMA				HMA				PCC			
Primary Category				Primary Category				Primary Category			
Overlay, DL=13 to 17 years				20 Year HMA				6'X6" ≤ 5.0" Thickness			
Secondary Category				Secondary Category				Secondary Category			
Rural				Rural				Design Life = 20 Years			
ShoulderCategory				ShoulderCategory				ShoulderCategory			
Aggregate		Aggregate		Aggregate		Aggregate		Aggregate		Aggregate	
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	3" Mill and Overlay	\$ 169,863.56	\$ 169,863.56	0	12" FDR and 4" Bit.	\$ 294,303.87	\$ 294,303.87	0	5" Mill and 4.5" PCC	\$ 255,332.19	\$ 255,332.19
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 1,675.52	\$ 1,578.88	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 8,047.82	\$ 7,006.11	7			\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 837.76	\$ 715.02	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12	Seal	\$ 12,360.94	\$ 9,746.52	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 188,779.94	\$ 140,266.28	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18	Crack Treatment	\$ 1,675.52	\$ 1,173.13	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20			\$ -	20	ML Overlay 4	\$ 242,126.19	\$ 162,943.98	20	1st CPR	\$ 337,316.54	\$ 227,004.36
21			\$ -	21			\$ -	21			\$ -
22	Seal	\$ 8,047.82	\$ 5,205.64	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 1,675.52	\$ 1,062.54	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 8,047.82	\$ 4,714.91	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29	ML Overlay 3.5"	\$ 188,779.94	\$ 106,304.31	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30	Remove and Replace	\$ 382,218.57	\$ 211,011.75
31			\$ -	31			\$ -	31			\$ -
32	Crack Treatment	\$ 1,675.52	\$ 889.09	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (101,650.74)	\$ (50,828.18)	35	2/17 Remaining Life	\$ (28,485.43)	\$ (14,243.50)	35	30/35 Remaining	\$ (327,615.92)	\$ (163,817.01)
LCCA - Net Present Cost/ per Mile			\$ 381,458.82	LCCA - Net Present Cost/ per Mile			\$ 459,243.34	LCCA - Net Present Cost/ per Mile			\$ 529,531.29
Maintenance - Net Present Cost/per Mile			\$ 211,595.26	Maintenance - Net Present Cost/per Mile			\$ 164,939.47	Maintenance - Net Present Cost/per Mile			\$ 274,199.10
Net Present Cost for Segment			\$ 3,148,942.56	Net Present Cost for Segment			\$ 3,791,053.77	Net Present Cost for Segment			\$ 4,371,280.79
Maintenance - Net Present Cost for Segment			\$ 1,746,718.87	Maintenance - Net Present Cost for Segment			\$ 1,361,575.32	Maintenance - Net Present Cost for Segment			\$ 2,263,513.56
Equivalent Annual Cost			125,964.66	Equivalent Annual Cost			151,650.53	Equivalent Annual Cost			174,860.89

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
28	2	35	28	2	35	28	2	35
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
10	2	12.5 Wearing Course (3,B)	10	2	12.5 Wearing Course (3,C)	10	2	
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
0			0			0	Y	
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
	3			4		N	4.5	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.5			2			6	0	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
15	1		20	4		20	4	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

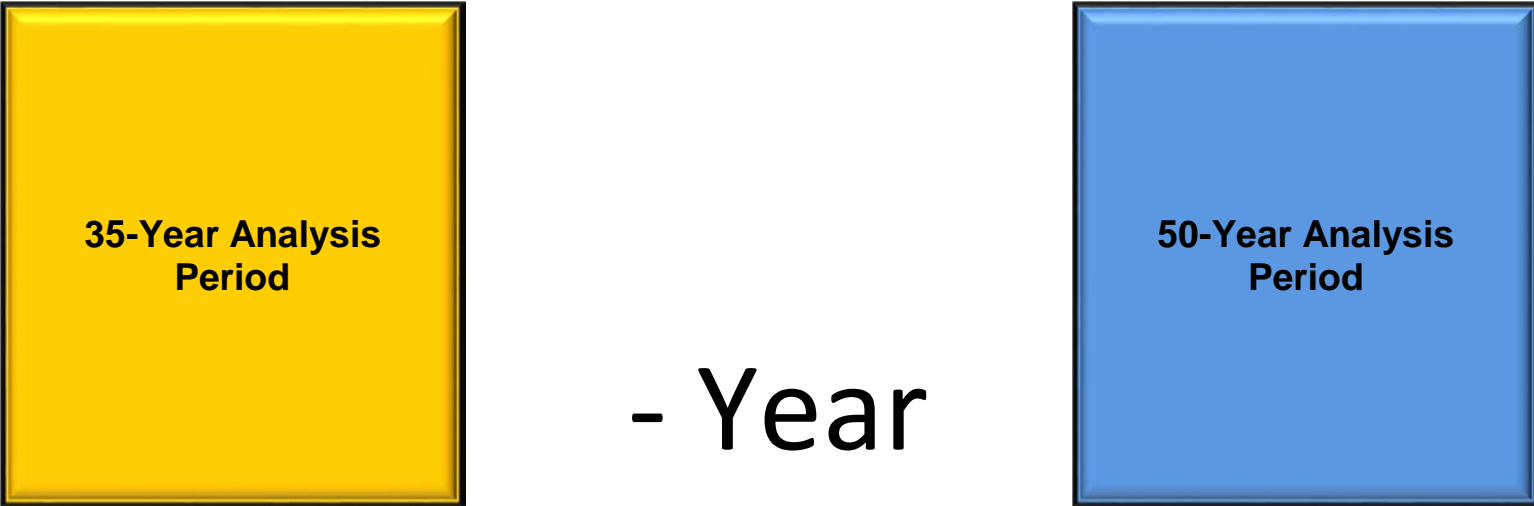
Project Number	Analysis Period
4680-126	35
Highway	Discount Rate
90	1.74%
Date	CLEAR ALL
10/30/2015	
Performed By	
Caleb Fenske	

District 6 - 2015/2016 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	15yr - mill2", pave 3.5" bituminous	20yr - mill2" pave 5"	20yr - mill4" 1"PASSRC 7" concrete	14.3	
Net Present Cost	\$8,277,617.02	\$8,299,063.50	\$10,317,890.89	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 8,277,617.02	\$ 8,299,063.50	\$ 10,317,890.89	Total	
% of Low Cost	100.0%	100.3%	124.6%	14.3	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	15yr - mill2", pave 3.5" bituminous	20yr - mill2" pave 5"	20yr - mill4" 1"PASSRC 7" concrete	14.3	
Net Present Cost	\$4,343,968.88	\$2,623,875.84	\$2,808,330.12	Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ 4,343,968.88	\$ 2,623,875.84	\$ 2,808,330.12	Total	
Bid Adjustment Factor	\$ 1,720,093.04	\$ -	\$ 184,454.28	14.3	

Segment 1														
SEG	Length			SEG	Length			SEG	Length					
1	14.3			1	14.3			1	14.3					
ALT	Description			ALT	Description			ALT	Description					
1		15yr - mill2", pave 3.5" bituminous		2		20yr - mill2" pave 5"		3		20yr - mill4" 1"PASSRC 7" concrete				
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		PCC						
HMA			HMA											
Primary Category			Primary Category											
Overlay, DL =13 to 17 years			20 Year HMA											
Secondary Category			Secondary Category											
Rural			Rural											
ShoulderCategory		Bituminous	ShoulderCategory		Bituminous	ShoulderCategory		Thick Bit						
Bituminous			Bituminous											
Notes:				Notes:				Notes:						
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile			
0	Med M&OL	\$ 275,080.29	\$ 275,080.29	0	Thick M&OL	\$ 396,866.27	\$ 396,866.27	0	UBOL	\$ 525,144.11	\$ 525,144.11			
1			\$ -	1			\$ -	1			\$ -			
2			\$ -	2			\$ -	2			\$ -			
3	Crack Treatment	\$ 2,307.01	\$ 2,190.65	3			\$ -	3			\$ -			
4			\$ -	4			\$ -	4			\$ -			
5			\$ -	5			\$ -	5			\$ -			
6			\$ -	6			\$ -	6			\$ -			
7	Seal	\$ -	\$ -	7			\$ -	7			\$ -			
8			\$ -	8	Crack Treatment	\$ 1,153.50	\$ 1,004.81	8			\$ -			
9			\$ -	9			\$ -	9			\$ -			
10			\$ -	10			\$ -	10			\$ -			
11			\$ -	11			\$ -	11			\$ -			
12			\$ -	12	Seal	\$ 4,406.59	\$ 3,582.63	12			\$ -			
13			\$ -	13			\$ -	13			\$ -			
14			\$ -	14			\$ -	14			\$ -			
15	ML Overlay 3.5"	\$ 275,432.83	\$ 212,637.43	15			\$ -	15			\$ -			
16			\$ -	16			\$ -	16			\$ -			
17			\$ -	17			\$ -	17			\$ -			
18	Crack Treatment	\$ 2,307.01	\$ 1,691.21	18			\$ -	18			\$ -			
19			\$ -	19			\$ -	19			\$ -			
20			\$ -	20	ML Overlay 3.5	\$ 275,432.83	\$ 195,065.76	20	1st CPR	\$ 277,298.03	\$ 196,386.72			
21			\$ -	21			\$ -	21			\$ -			
22	Seal	\$ -	\$ -	22			\$ -	22			\$ -			
23			\$ -	23	Crack Treatment	\$ 2,307.01	\$ 1,551.46	23			\$ -			
24			\$ -	24			\$ -	24			\$ -			
25			\$ -	25			\$ -	25			\$ -			
26			\$ -	26			\$ -	26			\$ -			
27			\$ -	27	Seal	\$ -	\$ -	27			\$ -			
28			\$ -	28			\$ -	28			\$ -			
29	ML Overlay 3.5"	\$ 275,432.83	\$ 167,014.99	29			\$ -	29			\$ -			
30			\$ -	30			\$ -	30			\$ -			
31			\$ -	31			\$ -	31			\$ -			
32	Crack Treatment	\$ 2,307.01	\$ 1,328.35	32			\$ -	32			\$ -			
33			\$ -	33			\$ -	33			\$ -			
34			\$ -	34			\$ -	34			\$ -			
35	Remaining Life	\$ (148,309.99)	\$ (81,088.59)	35	2/17 Remaining Life	\$ (32,403.86)	\$ (17,716.83)	35	0/0 Remaining	\$ -	\$ -			
LCCA - Net Present Cost/ per Mile			\$ 578,854.34	LCCA - Net Present Cost/ per Mile			\$ 580,354.09	LCCA - Net Present Cost/ per Mile			\$ 721,530.83			
Maintenance - Net Present Cost/per Mile			\$ 303,774.05	Maintenance - Net Present Cost/per Mile			\$ 183,487.82	Maintenance - Net Present Cost/per Mile			\$ 196,386.72			
Net Present Cost for Segment			\$ 8,277,617.02	Net Present Cost for Segment			\$ 8,299,063.50	Net Present Cost for Segment			\$ 10,317,890.89			
Maintenance - Net Present Cost for Segment			\$ 4,343,968.88	Maintenance - Net Present Cost for Segment			\$ 2,623,875.84	Maintenance - Net Present Cost for Segment			\$ 2,808,330.12			
Equivalent Annual Cost			317,773.31	Equivalent Annual Cost			318,596.63	Equivalent Annual Cost			396,098.34			
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes
29				2	29				2	29				2
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs
9				1	9				1	9				1
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom
1.5				Y	1.5				Y	1.5				Y
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness
N					N					N				
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane
1.5					1.5					12				22
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness
15				1.5	20				3	4				



Project Number	Analysis Period
5890-180	50
Highway	Discount Rate
135 Rp 202-211	1.74%
Date	CLEAR ALL
12/21/2015	
Performed By	
Garver	

District 1 - 2015/2016 prices

LCCA SUMMARY						
	Alternate #1	Alternate #2	Alternate #3	Length		
Segment #1				18.6		
Net Present Cost				Miles		
Segment #2				0.0		
Net Present Cost				Miles		
Segment #3				0.0		
Net Present Cost				Miles		
Segment #4				0.0		
Net Present Cost				Miles		
Segment #5				0.0		
Net Present Cost				Miles		
Segment #6				0.0		
Net Present Cost				Miles		
Segment #7				0.0		
Net Present Cost				Miles		
Segment #8				0.0		
Net Present Cost				Miles		
Project Net Present Cost	\$ -	\$ -	\$ -	Total		
% of Low Cost	#NUM!	#NUM!	#NUM!	18.6		

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1				18.6	
Net Present Cost				Miles	
Segment #2				0.0	
Net Present Cost				Miles	
Segment #3				0.0	
Net Present Cost				Miles	
Segment #4				0.0	
Net Present Cost				Miles	
Segment #5				0.0	
Net Present Cost				Miles	
Segment #6				0.0	
Net Present Cost				Miles	
Segment #7				0.0	
Net Present Cost				Miles	
Segment #8				0.0	
Net Present Cost				Miles	
Project Net Present Cost	\$ -	\$ -	\$ -	Total	
Bid Adjustment Factor	\$ -	\$ -	\$ -	18.6	

Segment 1											
SEG		Length		SEG		Length		SEG		Length	
1		18.64		1		18.64		1		18.64	
ALT		Description		ALT		Description		ALT		Description	
1		20 year Bit		2		20 year concrete		3		35 year concrete	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
HMA				PCC				PCC			
Primary Category				≥12 Joint spacing				Primary Category			
20 Year HMA				Secondary Category				≥12 Joint spacing			
Secondary Category				Design Life = 20 Years				Secondary Category			
Rural				ShoulderCategory				Design Life 35 Years			
ShoulderCategory				Thick Bit				ShoulderCategory				Thick Bit
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	Construction	\$ 481,288.00	\$ 481,288.00	0	Construction	\$ 609,791.00	\$ 609,791.00	0	Construction	\$ 655,612.00	\$ 655,612.00
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7			\$ -
8	Crack Treatment	\$ 1,188.00	\$ -	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12	Seal	\$ 13,183.68	\$ -	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	ML Overlay 4	\$ 217,307.97	\$ -	20	1st CPR	\$ 240,618.28	\$ -	20	1st CPR	\$ 171,545.50	\$ -
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23	Crack Treatment	\$ 2,376.00	\$ -	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27	Seal	\$ 8,952.03	\$ -	27			\$ -	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35			\$ -	35	Remove and Replace	\$ 495,665.10	\$ -	35	2nd CPR	\$ 169,941.14	\$ -
36			\$ -	36			\$ -	36			\$ -
37	ML Overlay 3.5"	\$ 192,576.28	\$ -	37			\$ -	37			\$ -
38			\$ -	38			\$ -	38			\$ -
39			\$ -	39			\$ -	39			\$ -
40	Crack Treatment	\$ 2,376.00	\$ -	40			\$ -	40			\$ -
41			\$ -	41			\$ -	41			\$ -
42			\$ -	42			\$ -	42			\$ -
43			\$ -	43			\$ -	43			\$ -
44	Chip Seal	\$ 8,952.03	\$ -	44			\$ -	44			\$ -
45			\$ -	45			\$ -	45			\$ -
46			\$ -	46			\$ -	46			\$ -
47			\$ -	47			\$ -	47			\$ -
48			\$ -	48			\$ -	48			\$ -
49			\$ -	49			\$ -	49			\$ -
50	4/17 Remaining Life	\$ (45,312.07)	\$ -	50	5/20 Remaining	\$ (123,916.27)	\$ -	50	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile		\$ 481,288.00		LCCA - Net Present Cost/ per Mile		\$ 609,791.00		LCCA - Net Present Cost/ per Mile		\$ 655,612.00	
Maintenance - Net Present Cost/per Mile		\$ -		Maintenance - Net Present Cost/per Mile		\$ -		Maintenance - Net Present Cost/per Mile		\$ -	
Net Present Cost for Segment		\$ 8,971,208.32		Net Present Cost for Segment		\$ 11,366,504.24		Net Present Cost for Segment		\$ 12,220,607.68	
Maintenance - Net Present Cost for Segment		\$ -		Maintenance - Net Present Cost for Segment		\$ -		Maintenance - Net Present Cost for Segment		\$ -	
Equivalent Annual Cost		#DIV/0!		Equivalent Annual Cost		#DIV/0!		Equivalent Annual Cost		#DIV/0!	

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
27	2	50	28	2	50	28	2	50
Total Shldr Width	# of Shldr	ML Mix	Total Shldr Width	# of Shldr	ML Mix	Total Shldr Width	# of Shldr	ML Mix
10	1	WEARING COURSE MIXTURE (	9	1	SL Mix	9	1	SL Mix
Width of Rounding Aggregate	white/ >7 milliom		Width of Rounding Aggregate	white/ >7 milliom		Width of Rounding Aggregate	white/ >7 milliom	
1.5	N	WEARING COURSE MIXTURE (	1.5	N	WEARING COURSE MIXTURE (	1.5	N	WEARING COURSE MIXTURE (3,B)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			N	7.5		N	8	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
2.0			15	11		15	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
20	4		2			2		

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
SP 6284-166	35
Highway	Discount Rate
I-35W	2.00%
Date	CLEAR ALL
6/5/2015	
Performed By	
T. Clyne	

Metro - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Bit M&O	Rubblize + Bit OL	UBOL	3.5
Net Present Cost	\$5,086,060.64	\$9,661,163.44	\$10,357,691.80	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 5,086,060.64	\$ 9,661,163.44	\$ 10,357,691.80	Total
% of Low Cost	100.0%	190.0%	203.6%	3.5

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Bit M&O	Rubblize + Bit OL	UBOL	3.5
Net Present Cost	\$3,117,724.28	\$1,652,781.70	\$1,423,938.76	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 3,117,724.28	\$ 1,652,781.70	\$ 1,423,938.76	Total
Bid Adjustment Factor	\$ 1,693,785.52	\$ 228,842.94	\$ -	3.5

Segment 1															
SEG Length				SEG Length				SEG Length							
1 3.479				1 3.479				1 3.479							
ALT Description				ALT Description				ALT Description							
1 Bit M&O				2 Rubblize + Bit OL				3 UBOL							
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type							
HMA				PCC											
Primary Category				Primary Category											
Overlay, DL =13 to 17 years				≥12 Joint spacing											
Secondary Category				Secondary Category											
Urban				Design Life = 20 Years											
ShoulderCategory				ShoulderCategory											
Thick				Thick				PCC							
Notes:				Notes:				Notes:							
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile				
0	M&O	\$ 565,776.48	\$ 565,776.48	0	Rubblize + Bit OL	\$ 2,301,920.59	\$ 2,301,920.59	0	UBOL	\$ 2,567,908.32	\$ 2,567,908.32				
1			\$ -	1		\$ -	\$ -	1			\$ -				
2			\$ -	2		\$ -	\$ -	2			\$ -				
3	Crack Treatment	\$ 5,136.38	\$ 4,840.13	3		\$ -	\$ -	3			\$ -				
4			\$ -	4		\$ -	\$ -	4			\$ -				
5			\$ -	5		\$ -	\$ -	5			\$ -				
6			\$ -	6		\$ -	\$ -	6			\$ -				
7	Seal	\$ -	\$ -	7		\$ -	\$ -	7			\$ -				
8			\$ -	8	Crack Treatment	\$ 2,568.19	\$ 2,191.93	8			\$ -				
9			\$ -	9		\$ -	\$ -	9			\$ -				
10			\$ -	10		\$ -	\$ -	10			\$ -				
11			\$ -	11		\$ -	\$ -	11			\$ -				
12			\$ -	12	Seal	\$ 13,356.29	\$ 10,531.34	12			\$ -				
13			\$ -	13		\$ -	\$ -	13			\$ -				
14	ML Overlay 3.5"	\$ 711,542.05	\$ 539,259.95	14		\$ -	\$ -	14			\$ -				
15			\$ -	15		\$ -	\$ -	15			\$ -				
16			\$ -	16		\$ -	\$ -	16			\$ -				
17	Crack Treatment	\$ 5,136.38	\$ 3,668.21	17		\$ -	\$ -	17			\$ -				
18			\$ -	18		\$ -	\$ -	18			\$ -				
19			\$ -	19		\$ -	\$ -	19			\$ -				
20			\$ -	20	ML Mill 3.0"	\$ 747,532.88	\$ 503,068.20	20	1st CPR	\$ 608,191.46	\$ 409,295.42				
21	Seal	\$ -	\$ -	21		\$ -	\$ -	21			\$ -				
22			\$ -	22		\$ -	\$ -	22			\$ -				
23			\$ -	23	Crack Treatment	\$ 5,136.38	\$ 3,257.27	23			\$ -				
24			\$ -	24		\$ -	\$ -	24			\$ -				
25			\$ -	25		\$ -	\$ -	25			\$ -				
26			\$ -	26		\$ -	\$ -	26			\$ -				
27	ML Overlay 4.0"	\$ 824,338.63	\$ 482,948.72	27	Seal	\$ -	\$ -	27			\$ -				
28			\$ -	28		\$ -	\$ -	28			\$ -				
29			\$ -	29		\$ -	\$ -	29			\$ -				
30	Crack Treatment	\$ 5,136.38	\$ 2,835.65	30		\$ -	\$ -	30			\$ -				
31			\$ -	31		\$ -	\$ -	31			\$ -				
32			\$ -	32		\$ -	\$ -	32			\$ -				
33			\$ -	33		\$ -	\$ -	33			\$ -				
34	Seal	\$ -	\$ -	34		\$ -	\$ -	34			\$ -				
35	Remaining Life	\$ (274,779.54)	\$ (137,397.36)	35	2/17 Remaining Life	\$ (87,945.04)	\$ (43,974.95)	35	0/0 Remaining	\$ -	\$ -				
LCCA - Net Present Cost/ per Mile				\$ 1,461,931.77	LCCA - Net Present Cost/ per Mile				\$ 2,776,994.38	LCCA - Net Present Cost/ per Mile				\$ 2,977,203.74	
Maintenance - Net Present Cost/per Mile				\$ 896,155.30	Maintenance - Net Present Cost/per Mile				\$ 475,073.79	Maintenance - Net Present Cost/per Mile				\$ 409,295.42	
Net Present Cost for Segment				\$ 5,086,060.64	Net Present Cost for Segment				\$ 9,661,163.44	Net Present Cost for Segment				\$ 10,357,691.80	
Maintenance - Net Present Cost for Segment				\$ 3,117,724.28	Maintenance - Net Present Cost for Segment				\$ 1,652,781.70	Maintenance - Net Present Cost for Segment				\$ 1,423,938.76	
Equivalent Annual Cost				203,453.66	Equivalent Annual Cost				386,467.88	Equivalent Annual Cost				414,330.55	
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	
72				6	72				6	72				6	
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	
28				4	28				4	28				4	
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	
N					N					Y				9.5	
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	
2.25					2					15				11	
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness	
14				6	20				4	9.5					

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
6407-89	35
Highway	Discount Rate
	2.00%
Date	CLEAR ALL
Performed By	

District 8 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill and Overlay (Urban)	FDR and 4" Overlay (Urban)	4.5" PCC Overlay (Urban)	0.6 Miles
Net Present Cost	\$250,574.32	\$341,650.76	\$403,647.29	
Segment #2				6.2 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 250,574.32	\$ 341,650.76	\$ 403,647.29	Total
% of Low Cost	100.0%	136.3%	161.1%	6.8

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill and Overlay (Urban)	FDR and 4" Overlay (Urban)	4.5" PCC Overlay (Urban)	0.6 Miles
Net Present Cost	\$123,650.15	\$97,831.58	\$183,013.31	
Segment #2				6.2 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 123,650.15	\$ 97,831.58	\$ 183,013.31	Total
Bid Adjustment Factor	\$ 25,818.57	\$ -	\$ 85,181.74	6.8

Segment 1												
SEG	Length			SEG	Length			SEG	Length			
1	0.609			1	0.609			1	0.609			
ALT	Description			ALT	Description			ALT	Description			
1		3" Mill and Overlay (Urban)		2		FDR and 4" Overlay (Urban)		3		4.5" PCC Overlay (Urban)		
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type				
HMA				HMA				PCC				
Primary Category				Primary Category				Primary Category				
Overlay, DL =13 to 17 years				20 Year HMA				6'X6" ≤ 5.0" Thickness				
Secondary Category				Secondary Category				Secondary Category				
Urban				Urban				Design Life = 20 Years				
ShoulderCategory				ShoulderCategory				ShoulderCategory				ShoulderCategory
Thick		Thick		Thick		Thick Bit						
Notes:				Notes:				Notes:				
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	
0	3" Mill and Overlay	\$ 208,414.07	\$ 208,414.07	0	FDR and 4" Overlay	\$ 400,359.91	\$ 400,359.91	0	4.5" PCC Overlay	\$ 362,288.96	\$ 362,288.96	
1			\$ -	1			\$ -	1			\$ -	
2			\$ -	2			\$ -	2			\$ -	
3	Crack Treatment	\$ 1,436.16	\$ 1,353.33	3			\$ -	3			\$ -	
4			\$ -	4			\$ -	4			\$ -	
5			\$ -	5			\$ -	5			\$ -	
6			\$ -	6			\$ -	6			\$ -	
7	Seal	\$ 8,644.05	\$ 7,525.17	7			\$ -	7			\$ -	
8			\$ -	8	Crack Treatment	\$ 718.08	\$ 612.87	8			\$ -	
9			\$ -	9			\$ -	9			\$ -	
10			\$ -	10			\$ -	10			\$ -	
11			\$ -	11			\$ -	11			\$ -	
12			\$ -	12	Seal	\$ 12,847.89	\$ 10,130.47	12			\$ -	
13			\$ -	13			\$ -	13			\$ -	
14			\$ -	14			\$ -	14			\$ -	
15			\$ -	15			\$ -	15			\$ -	
16			\$ -	16			\$ -	16			\$ -	
17	ML Overlay 3.5"	\$ 230,466.07	\$ 164,590.24	17			\$ -	17			\$ -	
18			\$ -	18			\$ -	18			\$ -	
19			\$ -	19			\$ -	19			\$ -	
20	Crack Treatment	\$ 1,436.16	\$ 966.49	20	ML Mill 3.0"	\$ 234,349.82	\$ 157,710.71	20	1st CPR	\$ 337,631.93	\$ 227,216.61	
21			\$ -	21			\$ -	21			\$ -	
22			\$ -	22			\$ -	22			\$ -	
23			\$ -	23	Crack Treatment	\$ 1,436.16	\$ 910.75	23			\$ -	
24	Seal	\$ 8,644.05	\$ 5,374.19	24			\$ -	24			\$ -	
25			\$ -	25			\$ -	25			\$ -	
26			\$ -	26			\$ -	26			\$ -	
27			\$ -	27	Seal	\$ 8,644.05	\$ 5,064.22	27			\$ -	
28			\$ -	28			\$ -	28			\$ -	
29			\$ -	29			\$ -	29			\$ -	
30			\$ -	30			\$ -	30	Remove and Replace	\$ 593,621.33	\$ 327,721.06	
31			\$ -	31			\$ -	31			\$ -	
32			\$ -	32			\$ -	32			\$ -	
33	ML Overlay 4.0"	\$ 267,390.47	\$ 139,104.21	33			\$ -	33			\$ -	
34			\$ -	34			\$ -	34			\$ -	
35	Remaining Life	\$ (231,738.41)	\$ (115,875.60)	35	2/17 Remaining Life	\$ (27,570.57)	\$ (13,786.04)	35	30/35 Remaining	\$ (508,818.28)	\$ (254,423.19)	
LCCA - Net Present Cost/ per Mile				\$ 411,452.09	LCCA - Net Present Cost/ per Mile				\$ 561,002.89	LCCA - Net Present Cost/ per Mile		\$ 662,803.43
Maintenance - Net Present Cost/per Mile				\$ 203,038.02	Maintenance - Net Present Cost/per Mile				\$ 160,642.98	Maintenance - Net Present Cost/per Mile		\$ 300,514.47
Net Present Cost for Segment				\$ 250,574.32	Net Present Cost for Segment				\$ 341,650.76	Net Present Cost for Segment		\$ 403,647.29
Maintenance - Net Present Cost for Segment				\$ 123,650.15	Maintenance - Net Present Cost for Segment				\$ 97,831.58	Maintenance - Net Present Cost for Segment		\$ 183,013.31
Equivalent Annual Cost				10,023.53	Equivalent Annual Cost				13,666.79	Equivalent Annual Cost		16,146.78
Total Lane Width		# of Lanes	Analysis Period	Total Lane Width		# of Lanes	Analysis Period	Total Lane Width		# of Lanes	Analysis Period	
24		2	35	24		2	35	28		2	35	
Total Shldr Width		# of Shldrs	ML Mix	Total Shldr Width		# of Shldrs	ML Mix	Total Shldr Width		# of Shldrs	ML Mix	
20		2	12.5 Wearing Course (3,B)	20		2	12.5 Wearing Course (3,C)	16		2	SL Mix	
Width of Rounding Aggregate		white/ >7 milliom	SL Mix	Width of Rounding Aggregate		white/ >7 milliom	SL Mix	Width of Rounding Aggregate		white/ >7 milliom	SL Mix	
0		N	12.5 Wearing Course (3,B)	0		N	12.5 Wearing Course (3,C)	0		Y	12.5 Wearing Course (3,B)	
Sealed/UTBWC		ML Thickness		Sealed/UTBWC		ML Thickness		Sealed/UTBWC		ML Thickness		
N		7		N		4		N		4.5		
ML Top Lift / joint spacing		# Dowels per Lane		ML Top Lift / joint spacing		# Dowels per Lane		ML Top Lift / joint spacing		# Dowels per Lane		
1.5		0		2		0		6		0		
Design Life		Shldr Thickness		Design Life		Shldr Thickness		Design Life		Shldr Thickness		
17		4.5		20		4		20		6		

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
6501-12	35
Highway	Discount Rate
	1.74%
Date	CLEAR ALL
Performed By	

District 8 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2.5" Mill and 4" Overlay	4" Mill and 4" Whitetopping	4" Mill, 9" FDR, 4" Overlay	5.7 Miles
Net Present Cost	\$2,059,685.07	\$2,995,483.89	\$2,482,404.34	
Segment #2				7.7 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 2,059,685.07	\$ 2,995,483.89	\$ 2,482,404.34	Total
% of Low Cost	100.0%	145.4%	120.5%	13.4

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	2.5" Mill and 4" Overlay	4" Mill and 4" Whitetopping	4" Mill, 9" FDR, 4" Overlay	5.7 Miles
Net Present Cost	\$900,527.55	\$1,808,733.88	\$908,631.43	
Segment #2				7.7 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 900,527.55	\$ 1,808,733.88	\$ 908,631.43	Total
Bid Adjustment Factor	\$ -	\$ 908,206.33	\$ 8,103.88	13.4

Segment 1																							
SEG				Length				SEG				Length											
1				5.688				1				5.688											
ALT				Description				ALT				Description											
1				2.5" Mill and 4" Overlay				2				4" Mill and 4" Whitetopping											
3				4" Mill, 9" FDR, 4" Overlay				3				4" Mill, 9" FDR, 4" Overlay											
Pavement Type				CLICK HERE TO EDIT THIS ALTERNATE				Pavement Type				CLICK HERE TO EDIT THIS ALTERNATE											
HMA								PCC															
Primary Category								Primary Category															
Overlay, DL > 17 years								6'X6' ≤ 5.0" Thickness															
Secondary Category								Secondary Category															
Rural								Design Life = 20 Years															
ShoulderCategory								ShoulderCategory															
Aggregate				Aggregate				Aggregate				Aggregate											
Notes: Considered 2' shoulder as mainline				Notes: Considered 2' shoulder as mainline				Notes: Considered 2' shoulder as mainline				Notes: Considered 2' shoulder as mainline											
Year				Activity				Cost/per Mile				Pres. Cost/per Mile											
0				2.5" Mill and 4" Overlay				\$ 203,790.00				\$ 203,790.00											
1								\$ -				\$ -											
2								\$ -				\$ -											
3				Crack Treatment				\$ 2,464.00				\$ 2,339.73											
4								\$ -				\$ -											
5								\$ -				\$ -											
6								\$ -				\$ -											
7				Seal				\$ 8,733.73				\$ 7,740.29											
8								\$ -				\$ -											
9								\$ -				\$ -											
10								\$ -				\$ -											
11								\$ -				\$ -											
12								\$ -				\$ -											
13								\$ -				\$ -											
14								\$ -				\$ -											
15								\$ -				\$ -											
16								\$ -				\$ -											
17								\$ -				\$ -											
18				ML Overlay 3.5"				\$ 192,137.27				\$ 140,851.16											
19								\$ -				\$ -											
20								\$ -				\$ -											
21				Crack Treatment				\$ 2,464.00				\$ 1,715.20											
22								\$ -				\$ -											
23								\$ -				\$ -											
24								\$ -				\$ -											
25				Seal				\$ 8,733.73				\$ 5,674.22											
26								\$ -				\$ -											
27								\$ -				\$ -											
28								\$ -				\$ -											
29								\$ -				\$ -											
30								\$ -				\$ -											
31								\$ -				\$ -											
32								\$ -				\$ -											
33								\$ -				\$ -											
34								\$ -				\$ -											
35				Remaining Life				\$ -				\$ -											
LCCA - Net Present Cost/ per Mile				\$ 362,110.60				LCCA - Net Present Cost/ per Mile				\$ 526,632.19											
Maintenance - Net Present Cost/per Mile				\$ 158,320.60				Maintenance - Net Present Cost/per Mile				\$ 317,991.19											
Net Present Cost for Segment				\$ 2,059,685.07				Net Present Cost for Segment				\$ 2,995,483.89											
Maintenance - Net Present Cost for Segment				\$ 900,527.55				Maintenance - Net Present Cost for Segment				\$ 1,808,733.88											
Equivalent Annual Cost				79,070.21				Equivalent Annual Cost				114,995.03											
Total Lane Width				# of Lanes				Analysis Period				Total Lane Width				# of Lanes				Analysis Period			
28				2				35				28				2				35			
Total Shldr Width				# of Shldrs				ML Mix				Total Shldr Width				# of Shldrs				ML Mix			
16				2				WEARING COURSE MIXTURE (16				2				WEARING COURSE M			
Width of Rounding Aggregate				white/ >7 milliom				SL Mix				Width of Rounding Aggregate				white/ >7 milliom				SL Mix			
0				N								0				N							
Sealed/UTBWC				ML Thickness								Sealed/UTBWC				ML Thickness							
N												N											
ML Top Lift / joint spacing				# Dowels per Lane								ML Top Lift / joint spacing				# Dowels per Lane							
2												2											
Design Life				Shldr Thickness								Design Life				Shldr Thickness							
18				1.5								20				1.5							

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
6607-49 & 2511-49	35
Highway	Discount Rate
T.H. 60 From T.H. 21 to CSAH 12(Kenyon)	1.74%
Date	CLEAR ALL
3/25/2016	
Performed By	
TRM	

District 6 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill & 3" Bit. OL	3" Mill & 3" Bit. OL	3" Mill & 3" Bit. OL	1.0
Net Present Cost	\$721,135.34	\$721,135.34	\$721,135.34	Miles
Segment #2				12.5
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 721,135.34	\$ 721,135.34	\$ 721,135.34	Total
% of Low Cost	100.0%	100.0%	100.0%	13.5

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill & 3" Bit. OL	3" Mill & 3" Bit. OL	3" Mill & 3" Bit. OL	1.0
Net Present Cost	\$362,455.21	\$362,455.21	\$362,455.21	Miles
Segment #2				12.5
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 362,455.21	\$ 362,455.21	\$ 362,455.21	Total
Bid Adjustment Factor	\$ -	\$ -	\$ -	13.5

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	1.027			1	1.027			1	1.027		
ALT	Description			ALT	Description			ALT	Description		
1		3" Mill & 3" Bit. OL		2		3" Mill & 3" Bit. OL		3		3" Mill & 3" Bit. OL	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type <td colspan="2" rowspan="7"></td>			
HMA				HMA				HMA			
Primary Category				Primary Category				Primary Category			
Overlay, DL =13 to 17 years				Overlay, DL =13 to 17 years				Overlay, DL =13 to 17 years			
Secondary Category				Secondary Category				Secondary Category			
Urban				Urban				Urban			
ShoulderCategory				ShoulderCategory				ShoulderCategory			
Thick		Thick		Thick		Thick		Thick		Thick	
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0		\$ 349,250.38	\$ 349,250.38	0		\$ 349,250.38	\$ 349,250.38	0		\$ 349,250.38	\$ 349,250.38
1			\$ -	1		\$ -	\$ -	1			\$ -
2			\$ -	2		\$ -	\$ -	2			\$ -
3	Crack Treatment	\$ 1,909.25	\$ 1,812.96	3	Crack Treatment	\$ 1,909.25	\$ 1,812.96	3	Crack Treatment	\$ 1,909.25	\$ 1,812.96
4			\$ -	4		\$ -	\$ -	4			\$ -
5			\$ -	5		\$ -	\$ -	5			\$ -
6			\$ -	6		\$ -	\$ -	6			\$ -
7	Seal	\$ 9,934.37	\$ 8,804.37	7	Seal	\$ 9,934.37	\$ 8,804.37	7	Seal	\$ 9,934.37	\$ 8,804.37
8			\$ -	8		\$ -	\$ -	8			\$ -
9			\$ -	9		\$ -	\$ -	9			\$ -
10			\$ -	10		\$ -	\$ -	10			\$ -
11			\$ -	11		\$ -	\$ -	11			\$ -
12			\$ -	12		\$ -	\$ -	12			\$ -
13			\$ -	13		\$ -	\$ -	13			\$ -
14			\$ -	14		\$ -	\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 289,824.17	\$ 223,747.71	15	ML Overlay 3.5"	\$ 289,824.17	\$ 223,747.71	15	ML Overlay 3.5"	\$ 289,824.17	\$ 223,747.71
16			\$ -	16		\$ -	\$ -	16			\$ -
17			\$ -	17		\$ -	\$ -	17			\$ -
18	Crack Treatment	\$ 1,909.25	\$ 1,399.62	18	Crack Treatment	\$ 1,909.25	\$ 1,399.62	18	Crack Treatment	\$ 1,909.25	\$ 1,399.62
19			\$ -	19		\$ -	\$ -	19			\$ -
20			\$ -	20		\$ -	\$ -	20			\$ -
21			\$ -	21		\$ -	\$ -	21			\$ -
22	Seal	\$ 9,934.37	\$ 6,797.08	22	Seal	\$ 9,934.37	\$ 6,797.08	22	Seal	\$ 9,934.37	\$ 6,797.08
23			\$ -	23		\$ -	\$ -	23			\$ -
24			\$ -	24		\$ -	\$ -	24			\$ -
25			\$ -	25		\$ -	\$ -	25			\$ -
26			\$ -	26		\$ -	\$ -	26			\$ -
27			\$ -	27		\$ -	\$ -	27			\$ -
28			\$ -	28		\$ -	\$ -	28			\$ -
29	ML Overlay 4.0"	\$ 350,244.01	\$ 212,378.45	29	ML Overlay 4.0"	\$ 350,244.01	\$ 212,378.45	29	ML Overlay 4.0"	\$ 350,244.01	\$ 212,378.45
30			\$ -	30		\$ -	\$ -	30			\$ -
31			\$ -	31		\$ -	\$ -	31			\$ -
32	Crack Treatment	\$ 1,909.25	\$ 1,099.33	32	Crack Treatment	\$ 1,909.25	\$ 1,099.33	32	Crack Treatment	\$ 1,909.25	\$ 1,099.33
33			\$ -	33		\$ -	\$ -	33			\$ -
34			\$ -	34		\$ -	\$ -	34			\$ -
35	Remaining Life	\$ (188,592.93)	\$ (103,113.31)	35	Remaining Life	\$ (188,592.93)	\$ (103,113.31)	35	Remaining Life	\$ (188,592.93)	\$ (103,113.31)
LCCA - Net Present Cost/ per Mile			\$ 702,176.58	LCCA - Net Present Cost/ per Mile			\$ 702,176.58	LCCA - Net Present Cost/ per Mile			\$ 702,176.58
Maintenance - Net Present Cost/per Mile			\$ 352,926.20	Maintenance - Net Present Cost/per Mile			\$ 352,926.20	Maintenance - Net Present Cost/per Mile			\$ 352,926.20
Net Present Cost for Segment			\$ 721,135.34	Net Present Cost for Segment			\$ 721,135.34	Net Present Cost for Segment			\$ 721,135.34
Maintenance - Net Present Cost for Segment			\$ 362,455.21	Maintenance - Net Present Cost for Segment			\$ 362,455.21	Maintenance - Net Present Cost for Segment			\$ 362,455.21
Equivalent Annual Cost			27,684.00	Equivalent Annual Cost			27,684.00	Equivalent Annual Cost			27,684.00

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	35	24	2	35	24	2	35
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
24	2	WEARING COURSE MIXTURE (	24	2	WEARING COURSE MIXTURE (	24	2	WEARING COURSE MIXTURE (3,B)
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
N	N	WEARING COURSE MIXTURE (	N	N	WEARING COURSE MIXTURE (	N	N	WEARING COURSE MIXTURE (3,B)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N	N		N	N		N	11	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.5	1.5		1.5	1.5		1.5	1.5	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
15	11		15	11		15	11	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
6910-96	35
Highway	Discount Rate
	2.00%
Date	CLEAR ALL
Performed By	

District 1 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Mill & Overlay	Reclaim & Overlay	20 year Conc	1.6
Net Present Cost	\$976,849.79	\$1,942,330.38	\$2,029,798.64	Miles
Segment #2				1.6
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 976,849.79	\$ 1,942,330.38	\$ 2,029,798.64	Total
% of Low Cost	100.0%	198.8%	207.8%	3.1

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	Mill & Overlay	Reclaim & Overlay	20 year Conc	1.6
Net Present Cost	\$655,456.62	\$339,344.66	\$400,656.36	Miles
Segment #2				1.6
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 655,456.62	\$ 339,344.66	\$ 400,656.36	Total
Bid Adjustment Factor	\$ 316,111.96	\$ -	\$ 61,311.70	3.1

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	1.56899999999996			1	1.56899999999996			1	1.56899999999996		
ALT	Description			ALT	Description			ALT	Description		
1		Mill & Overlay		2		Reclaim & Overlay		3		20 year Conc	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7"></td>					
HMA			HMA			PCC					
Primary Category			Primary Category			Primary Category					
Overlay, DL =13 to 17 years			20 Year HMA			≥12 Joint spacing					
Secondary Category			Secondary Category			Secondary Category					
Urban			Urban			Design Life = 20 Years					
ShoulderCategory			ShoulderCategory			ShoulderCategory					
Thin			Thick			PCC					
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	3.0" Mill & Overlay	\$204,839.50	\$ 204,839.50	0	Reclaim & Overlay	\$ 1,021,660.75	\$ 1,021,660.75	0	Concrete 20 year	\$ 1,038,331.60	\$ 1,038,331.60
1			\$ -	1		\$ -	\$ -	1			\$ -
2			\$ -	2		\$ -	\$ -	2			\$ -
3	Crack Treatment	\$ 5,136.38	\$ 4,840.13	3		\$ -	\$ -	3			\$ -
4			\$ -	4		\$ -	\$ -	4			\$ -
5			\$ -	5		\$ -	\$ -	5			\$ -
6			\$ -	6		\$ -	\$ -	6			\$ -
7	Seal	\$ 13,322.39	\$ 11,597.94	7		\$ -	\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 2,568.19	\$ 2,191.93	8			\$ -
9			\$ -	9		\$ -	\$ -	9			\$ -
10			\$ -	10		\$ -	\$ -	10			\$ -
11			\$ -	11		\$ -	\$ -	11			\$ -
12			\$ -	12	Seal	\$ 20,716.31	\$ 16,334.67	12			\$ -
13			\$ -	13		\$ -	\$ -	13			\$ -
14			\$ -	14		\$ -	\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 358,088.43	\$ 266,064.98	15		\$ -	\$ -	15			\$ -
16			\$ -	16		\$ -	\$ -	16			\$ -
17			\$ -	17		\$ -	\$ -	17			\$ -
18	Crack Treatment	\$ 5,136.38	\$ 3,596.29	18		\$ -	\$ -	18			\$ -
19			\$ -	19		\$ -	\$ -	19			\$ -
20			\$ -	20	ML Mill 3.0"	\$ 303,986.91	\$ 204,574.47	20	1st CPR	\$ 379,448.23	\$ 255,357.78
21			\$ -	21		\$ -	\$ -	21			\$ -
22	Seal	\$ 13,322.39	\$ 8,617.44	22		\$ -	\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 5,136.38	\$ 3,257.27	23			\$ -
24			\$ -	24		\$ -	\$ -	24			\$ -
25			\$ -	25		\$ -	\$ -	25			\$ -
26			\$ -	26		\$ -	\$ -	26			\$ -
27			\$ -	27	Seal	\$ 13,322.39	\$ 7,805.08	27			\$ -
28			\$ -	28		\$ -	\$ -	28			\$ -
29	ML Overlay 4.0"	\$ 409,410.37	\$ 230,544.02	29		\$ -	\$ -	29			\$ -
30			\$ -	30		\$ -	\$ -	30			\$ -
31			\$ -	31		\$ -	\$ -	31			\$ -
32	Crack Treatment	\$ 5,136.38	\$ 2,725.54	32		\$ -	\$ -	32			\$ -
33			\$ -	33		\$ -	\$ -	33			\$ -
34			\$ -	34		\$ -	\$ -	34			\$ -
35	Remaining Life	\$ (220,451.74)	\$ (110,231.96)	35	2/17 Remaining Life	\$ (35,763.17)	\$ (17,882.57)	35	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile			\$ 622,593.88	LCCA - Net Present Cost/ per Mile			\$ 1,237,941.61	LCCA - Net Present Cost/ per Mile			\$ 1,293,689.38
Maintenance - Net Present Cost/per Mile			\$ 417,754.38	Maintenance - Net Present Cost/per Mile			\$ 216,280.85	Maintenance - Net Present Cost/per Mile			\$ 255,357.78
Net Present Cost for Segment			\$ 976,849.79	Net Present Cost for Segment			\$ 1,942,330.38	Net Present Cost for Segment			\$ 2,029,798.64
Maintenance - Net Present Cost for Segment			\$ 655,456.62	Maintenance - Net Present Cost for Segment			\$ 339,344.66	Maintenance - Net Present Cost for Segment			\$ 400,656.36

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
48	4	35	48	4	35	48	4	35
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
0	2	12.5 Wearing Course (3,C)	0	2	12.5 Wearing Course (3,C)	0	2	12.5 Wearing Course (3,C)
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
N	N	12.5 Wearing Course (3,C)	N	N	12.5 Wearing Course (3,C)	N	N	12.5 Wearing Course (3,C)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N	N		N	N		Y	6	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.5	1.5		1.5	1.5		12	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
15	1.5		20	1.5		6	6	

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
6917-142	35
Highway	Discount Rate
	1.74%
Date	CLEAR ALL
Performed By	

District 1 - 2015/2016 prices

Preliminary, segment limits need to be tied down.

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	M&O	New HMA	PCC	2.7
Net Present Cost	\$1,757,394.83	\$2,805,312.62	\$2,773,255.23	Miles
Segment #2				3.6
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,757,394.83	\$ 2,805,312.62	\$ 2,773,255.23	Total
% of Low Cost	100.0%	159.6%	157.8%	6.2

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	M&O	New HMA	PCC	2.7
Net Present Cost	\$707,581.43	\$488,232.12	\$509,503.33	Miles
Segment #2				3.6
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 707,581.43	\$ 488,232.12	\$ 509,503.33	Total
Bid Adjustment Factor	\$ 219,349.31	\$ -	\$ 21,271.21	6.2

Segment 1														
SEG	Length			SEG	Length			SEG	Length					
1	2.65			1	2.65			1	2.65					
ALT	Description			ALT	Description			ALT	Description					
1		M&O		2		New HMA		3		PCC				
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		PCC						
HMA			HMA											
Primary Category			Primary Category			Primary Category								
Overlay, DL =13 to 17 years			20 Year HMA			≥12 Joint spacing								
Secondary Category			Secondary Category			Secondary Category								
Rural			Rural			Design Life = 20 Years								
ShoulderCategory			ShoulderCategory			ShoulderCategory								
Bituminous		Bituminous		Thin Bit										
Notes:				Notes:				Notes:						
Mill 2in and OL 5in.				Subcut 30in. Place 6in. HMA- 5in. CL5 - 19in. Sel Gran.				Subcut 24in. - 7in. PCC - 5in. CL6						
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile			
0	Mill 2 & OL	\$ 396,156.00	\$ 396,156.00	0	R&R	\$ 874,370.00	\$ 874,370.00	0	PCC 20 yr.	\$ 854,246.00	\$ 854,246.00			
1			\$ -	1			\$ -	1			\$ -			
2			\$ -	2			\$ -	2			\$ -			
3	Crack Treatment	\$ 2,112.00	\$ 2,005.48	3			\$ -	3			\$ -			
4			\$ -	4			\$ -	4			\$ -			
5			\$ -	5			\$ -	5			\$ -			
6			\$ -	6			\$ -	6			\$ -			
7	Seal	\$ 8,116.17	\$ 7,192.99	7			\$ -	7			\$ -			
8			\$ -	8	Crack Treatment	\$ 1,056.00	\$ 919.88	8			\$ -			
9			\$ -	9			\$ -	9			\$ -			
10			\$ -	10			\$ -	10			\$ -			
11			\$ -	11			\$ -	11			\$ -			
12			\$ -	12	Seal	\$ 11,923.74	\$ 9,694.19	12			\$ -			
13			\$ -	13			\$ -	13			\$ -			
14			\$ -	14			\$ -	14			\$ -			
15	ML Overlay 3.5"	\$ 230,166.49	\$ 177,691.28	15			\$ -	15			\$ -			
16			\$ -	16			\$ -	16			\$ -			
17			\$ -	17			\$ -	17			\$ -			
18	Crack Treatment	\$ 2,112.00	\$ 1,548.26	18			\$ -	18			\$ -			
19			\$ -	19			\$ -	19			\$ -			
20			\$ -	20	ML Overlay 4	\$ 259,531.16	\$ 183,803.95	20	1st CPR	\$ 271,478.73	\$ 192,265.41			
21			\$ -	21			\$ -	21			\$ -			
22	Seal	\$ 8,116.17	\$ 5,553.07	22			\$ -	22			\$ -			
23			\$ -	23	Crack Treatment	\$ 2,112.00	\$ 1,420.31	23			\$ -			
24			\$ -	24			\$ -	24			\$ -			
25			\$ -	25			\$ -	25			\$ -			
26			\$ -	26			\$ -	26			\$ -			
27			\$ -	27	Seal	\$ 8,116.17	\$ 5,094.18	27			\$ -			
28			\$ -	28			\$ -	28			\$ -			
29	ML Overlay 3.5"	\$ 230,166.49	\$ 139,566.71	29			\$ -	29			\$ -			
30			\$ -	30			\$ -	30			\$ -			
31			\$ -	31			\$ -	31			\$ -			
32	Crack Treatment	\$ 2,112.00	\$ 1,216.07	32			\$ -	32			\$ -			
33			\$ -	33			\$ -	33			\$ -			
34			\$ -	34			\$ -	34			\$ -			
35	Remaining Life	\$ (123,935.80)	\$ (67,761.99)	35	2/17 Remaining Life	\$ (30,533.08)	\$ (16,693.98)	35	0/0 Remaining	\$ -	\$ -			
LCCA - Net Present Cost/ per Mile			\$ 663,167.86	LCCA - Net Present Cost/ per Mile			\$ 1,058,608.54	LCCA - Net Present Cost/ per Mile			\$ 1,046,511.41			
Maintenance - Net Present Cost/per Mile			\$ 267,011.86	Maintenance - Net Present Cost/ per Mile			\$ 184,238.54	Maintenance - Net Present Cost/ per Mile			\$ 192,265.41			
Net Present Cost for Segment			\$ 1,757,394.83	Net Present Cost for Segment			\$ 2,805,312.62	Net Present Cost for Segment			\$ 2,773,255.23			
Maintenance - Net Present Cost for Segment			\$ 707,581.43	Maintenance - Net Present Cost for Segment			\$ 488,232.12	Maintenance - Net Present Cost for Segment			\$ 509,503.33			
Equivalent Annual Cost			67,465.45	Equivalent Annual Cost			107,694.46	Equivalent Annual Cost			106,463.79			
Total Lane Width				# of Lanes	Total Lane Width				# of Lanes	Total Lane Width				# of Lanes
24				2	24				2	27				2
Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs	Total Shldr Width				# of Shldrs
11				2	11				2	11				2
Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom	Width of Rounding Aggregate				white/ >7 milliom
1.5				N	1.5				N	1.5				N
Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness	Sealed/UTBWC				ML Thickness
N					N					N				7
ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane	ML Top Lift / joint spacing				# Dowels per Lane
2					2					15				11
Design Life				Shldr Thickness	Design Life				Shldr Thickness	Design Life				Shldr Thickness
15				3	20				4					3

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
SP 6947-50	35
Highway	Discount Rate
TH 37	1.58%
Date	CLEAR ALL
8/18/2016	
Performed By	
Amy Thorson	

D1 - 2016/2017 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill, 3" Overlay	20 Year HMA	PCC	19.0 Miles
Net Present Cost	\$7,219,370.54	\$11,204,828.97	\$13,990,690.82	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 7,219,370.54	\$ 11,204,828.97	\$ 13,990,690.82	Total
% of Low Cost	100.0%	155.2%	193.8%	19.0

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	3" Mill, 3" Overlay	20 Year HMA	PCC	19.0 Miles
Net Present Cost	\$4,584,792.54	\$3,198,532.97	\$3,574,016.82	
Segment #2				0.0 Miles
Net Present Cost				
Segment #3				0.0 Miles
Net Present Cost				
Segment #4				0.0 Miles
Net Present Cost				
Segment #5				0.0 Miles
Net Present Cost				
Segment #6				0.0 Miles
Net Present Cost				
Segment #7				0.0 Miles
Net Present Cost				
Segment #8				0.0 Miles
Net Present Cost				
Project Net Present Cost	\$ 4,584,792.54	\$ 3,198,532.97	\$ 3,574,016.82	Total
Bid Adjustment Factor	\$ 1,386,259.57	\$ -	\$ 375,483.85	19.0

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	19			1	19			1	19		
ALT	Description			ALT	Description			ALT	Description		
1		3" Mill, 3" Overlay		2		20 Year HMA		3		PCC	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type			
HMA				HMA				PCC			
Primary Category				Primary Category				Primary Category			
Overlay, DL =13 to 17 years				20 Year HMA				≥12 Joint spacing			
Secondary Category				Secondary Category				Secondary Category			
Rural				Rural				Design Life = 20 Years			
ShoulderCategory		DELETE		ShoulderCategory		DELETE		ShoulderCategory		Thick Bit	
Bituminous				Bituminous							
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0		\$ 138,662.00	\$ 138,662.00	0		\$ 421,384.00	\$ 421,384.00	0		\$ 548,246.00	\$ 548,246.00
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 2,112.00	\$ 2,014.97	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 11,227.46	\$ 10,060.60	7			\$ -	7			\$ -
8			\$ -	8	Crack Treatment	\$ 1,056.00	\$ 931.53	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12	Seal	\$ 15,838.87	\$ 13,122.78	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 196,042.93	\$ 154,963.02	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18	Crack Treatment	\$ 2,112.00	\$ 1,592.74	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20			\$ -	20	ML Overlay 4	\$ 219,436.90	\$ 160,378.26	20	1st CPR	\$ 257,375.48	\$ 188,106.15
21			\$ -	21			\$ -	21			\$ -
22	Seal	\$ 11,227.46	\$ 7,952.45	22			\$ -	22			\$ -
23			\$ -	23	Crack Treatment	\$ 2,112.00	\$ 1,472.67	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27	Seal	\$ 11,227.46	\$ 7,352.92	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29	ML Overlay 3.5"	\$ 196,042.93	\$ 124,426.58	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32	Crack Treatment	\$ 2,112.00	\$ 1,278.88	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (105,561.58)	\$ (60,984.38)	35	2/17 Remaining Life	\$ (25,816.11)	\$ (14,914.32)	35	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile			\$ 379,966.87	LCCA - Net Present Cost/ per Mile			\$ 589,727.84	LCCA - Net Present Cost/ per Mile			\$ 736,352.15
Maintenance - Net Present Cost/per Mile			\$ 241,304.87	Maintenance - Net Present Cost/ per Mile			\$ 168,343.84	Maintenance - Net Present Cost/ per Mile			\$ 188,106.15
Net Present Cost for Segment			\$ 7,219,370.54	Net Present Cost for Segment			\$ 11,204,828.97	Net Present Cost for Segment			\$ 13,990,690.82
Maintenance - Net Present Cost for Segment			\$ 4,584,792.54	Maintenance - Net Present Cost for Segment			\$ 3,198,532.97	Maintenance - Net Present Cost for Segment			\$ 3,574,016.82
Equivalent Annual Cost			270,115.48	Equivalent Annual Cost			419,232.92	Equivalent Annual Cost			523,466.99
Total Lane Width				Total Lane Width				Total Lane Width			
24				24				26			
2				2				2			
Analysis Period				Analysis Period				Analysis Period			
35				35				35			
Total Shldr Width				Total Shldr Width				Total Shldr Width			
16				16				18			
# of Shldrs				# of Shldrs				# of Shldrs			
2				2				2			
ML Mix				ML Mix				ML Mix			
Width of Rounding Aggregate				Width of Rounding Aggregate				Width of Rounding Aggregate			
white/ >7 milliom				white/ >7 milliom				white/ >7 milliom			
SL Mix				SL Mix				SL Mix			
0				1.5				1.5			
N				N				N			
VEARING COURSE MIXTURE (3				VEARING COURSE MIXTURE (3				VEARING COURSE MIXTURE (3			
Sealed/UTBWC				Sealed/UTBWC				Sealed/UTBWC			
ML Thickness				ML Thickness				ML Thickness			
N				N				N			
3				6				6			
ML Top Lift / joint spacing				ML Top Lift / joint spacing				ML Top Lift / joint spacing			
# Dowels per Lane				# Dowels per Lane				# Dowels per Lane			
1.5				2				15			
Design Life				Design Life				Design Life			
Shldr Thickness				Shldr Thickness				Shldr Thickness			
15				20				3			
0				3				3			

35-Year Analysis Period

35 - Year

50-Year Analysis Period

Project Number	Analysis Period
7318.39	35
Highway	Discount Rate
US71	2.00%
Date	
1/15/2015	
Performed By	
Eric Schiller	
CLEAR ALL	

District 3 - 2014/2015 prices

LCCA SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	HMA: 2" Mill & 3.5" Overlay Full Width	HMA20: FDR, Mill 4" Full Width,	PCC20: 4.0" White topping, Mill 4"	19.0	Miles
Net Present Cost	\$9,965,340.10	\$12,644,469.59	\$11,355,579.59		
Segment #2				0.0	Miles
Net Present Cost					
Segment #3				0.0	Miles
Net Present Cost					
Segment #4				0.0	Miles
Net Present Cost					
Segment #5				0.0	Miles
Net Present Cost					
Segment #6				0.0	Miles
Net Present Cost					
Segment #7				0.0	Miles
Net Present Cost					
Segment #8				0.0	Miles
Net Present Cost					
Project Net Present Cost	\$ 9,965,340.10	\$ 12,644,469.59	\$ 11,355,579.59	Total	
% of Low Cost	100.0%	126.9%	114.0%	19.0	

BID ADJUSTMENT FACTOR SUMMARY					
	Alternate #1	Alternate #2	Alternate #3	Length	
Segment #1	HMA: 2" Mill & 3.5" Overlay Full Width	HMA20: FDR, Mill 4" Full Width,	PCC20: 4.0" White topping, Mill 4"	19.0	Miles
Net Present Cost	\$5,062,283.88	\$3,318,427.33	\$5,872,191.45		
Segment #2				0.0	Miles
Net Present Cost					
Segment #3				0.0	Miles
Net Present Cost					
Segment #4				0.0	Miles
Net Present Cost					
Segment #5				0.0	Miles
Net Present Cost					
Segment #6				0.0	Miles
Net Present Cost					
Segment #7				0.0	Miles
Net Present Cost					
Segment #8				0.0	Miles
Net Present Cost					
Project Net Present Cost	\$ 5,062,283.88	\$ 3,318,427.33	\$ 5,872,191.45	Total	
Bid Adjustment Factor	\$ 1,743,856.55	\$ -	\$ 2,553,764.12	19.0	

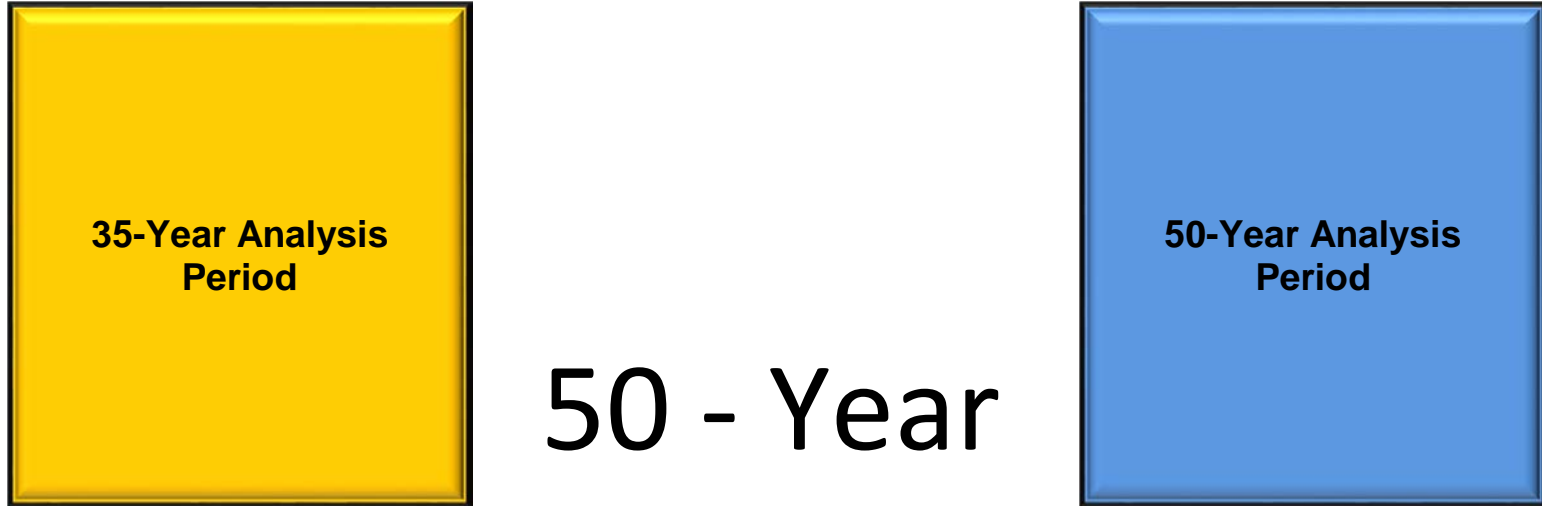
Segment 1				
SEG	Length		SEG	Length
1	19		1	19
ALT	Description		ALT	Description
1	HMA: 2" Mill & 3.5" Overlay Full Width		2	HMA20: FDR, Mill 4" Full Width, Pave 6.5" ML & 4" Shld with
Pavement Type			Pavement Type	
HMA			HMA	
Primary Category			Primary Category	
Overlay, DL =13 to 17 years			20 Year HMA	
Secondary Category			Secondary Category	
Rural			Rural	
ShoulderCategory			ShoulderCategory	
Bituminous			Bituminous	
Notes:			Notes:	

CLICK HERE TO EDIT THIS ALTERNATE

Year	Activity	Cost/Slper Mile	Pres. Cost/Slper Mile	X	X	Year	Activity	Cost	Pres. Cost/Slper Mile	X	X
0	2" Mill & 3.5" Overlay Full Width	\$ 258,055.59	\$ 258,055.59			0	FDR, Mill 4" Full Width, Pave 6.5" ML & 4" Shld with 2.5" Agg Base	\$ 490,844.33	\$ 490,844.33		
1		\$ -	\$ -			1		\$ -	\$ -		
2		\$ -	\$ -			2		\$ -	\$ -		
3	Crack Treatment	\$ 2,568.19	\$ 2,420.06			3		\$ -	\$ -		
4		\$ -	\$ -			4		\$ -	\$ -		
5		\$ -	\$ -			5		\$ -	\$ -		
6		\$ -	\$ -			6		\$ -	\$ -		
7	Seal	\$ 7,722.11	\$ 6,722.57			7		\$ -	\$ -		
8		\$ -	\$ -			8	Crack Treatment	\$ 1,284.10	\$ 1,095.96		
9		\$ -	\$ -			9		\$ -	\$ -		
10		\$ -	\$ -			10		\$ -	\$ -		
11		\$ -	\$ -			11		\$ -	\$ -		
12		\$ -	\$ -			12	Seal	\$ 11,886.07	\$ 9,372.09		
13		\$ -	\$ -			13		\$ -	\$ -		
14	ML Overlay 3.5"	\$ 208,152.37	\$ 157,753.48			14		\$ -	\$ -		
15		\$ -	\$ -			15		\$ -	\$ -		
16		\$ -	\$ -			16		\$ -	\$ -		
17	Crack Treatment	\$ 2,568.19	\$ 1,834.11			17		\$ -	\$ -		
18		\$ -	\$ -			18		\$ -	\$ -		
19		\$ -	\$ -			19		\$ -	\$ -		
20		\$ -	\$ -			20	ML Overlay 4	\$ 257,322.63	\$ 173,170.75		
21	Seal	\$ 7,722.11	\$ 5,094.86			21		\$ -	\$ -		
22		\$ -	\$ -			22		\$ -	\$ -		
23		\$ -	\$ -			23	Crack Treatment	\$ 2,568.19	\$ 1,628.63		
24		\$ -	\$ -			24		\$ -	\$ -		
25		\$ -	\$ -			25		\$ -	\$ -		
26		\$ -	\$ -			26		\$ -	\$ -		
27	ML Overlay 4.0"	\$ 208,152.37	\$ 121,948.57			27	Seal	\$ 7,722.11	\$ 4,524.09		
28		\$ -	\$ -			28		\$ -	\$ -		
29		\$ -	\$ -			29		\$ -	\$ -		
30	Crack Treatment	\$ 2,568.19	\$ 1,417.82			30		\$ -	\$ -		
31		\$ -	\$ -			31		\$ -	\$ -		
32		\$ -	\$ -			32		\$ -	\$ -		
33		\$ -	\$ -			33		\$ -	\$ -		
34	Seal	\$ 7,722.11	\$ 3,938.50			34		\$ -	\$ -		
35	Remaining Life	\$ (69,384.12)	\$ (34,693.98)			35	2/17 Remaining Life	\$ (30,273.25)	\$ (15,137.46)		

LCCA - Net Present Cost/ per Mile		\$ 524,491.58	LCCA - Net Present Cost/ per Mile		\$ 665,498.40	LCCA - Net Present Cost/ per Mile		\$ 597,662.08
Maintenance - Net Present Cost/Slper Mile		\$ 266,435.99	Maintenance - Net Present Cost/Slper Mile		\$ 174,654.07	Maintenance - Net Present Cost/Slper Mile		\$ 309,062.71
Net Present Cost for Segment		\$ 9,965,340.10	Net Present Cost for Segment		\$ 12,644,469.59	Net Present Cost for Segment		\$ 11,355,579.59
Maintenance - Net Present Cost for Segment		\$ 5,062,283.88	Maintenance - Net Present Cost for Segment		\$ 3,318,427.33	Maintenance - Net Present Cost for Segment		\$ 5,872,191.45

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	35	24	2	35	24	2	35
Total Shldr Width	# of Shldr	ML Mix	Total Shldr Width	# of Shldr	ML Mix	Total Shldr Width	# of Shldr	ML Mix
12	2	SP 12.5 Wearing Course (4,B)	12	2	TYPE SP 9.5 Wearing Course (3,F)	12	2	ML Mix
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
3.0	N	SP 12.5 Wearing Course (4,B)	3	N	TYPE SP 9.5 Wearing Course (2,A)	3	Y	TYPE SP 9.5 Wearing Course (2,A)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			N			Y	4	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
1.5			2			6	0	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
14	5.5		20	4			4	



Project Number	Analysis Period
7323-12	50
Highway	Discount Rate
	1.74%
Date	CLEAR ALL
Performed By	

District 3 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	FDR w/4" HMA ML & Shld.	FDR w/6" PCC ML & PCC Shld	FDR w/6" PCC ML & Bit Shld.	14.3
Net Present Cost	\$8,259,839.39	\$11,834,083.00	\$8,749,127.00	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 8,259,839.39	\$ 11,834,083.00	\$ 8,749,127.00	Total
% of Low Cost	100.0%	143.3%	105.9%	14.3

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	FDR w/4" HMA ML & Shld.	FDR w/6" PCC ML & PCC Shld	FDR w/6" PCC ML & Bit Shld.	14.3
Net Present Cost	\$4,264,305.55	\$5,702,712.20	\$2,959,337.00	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 4,264,305.55	\$ 5,702,712.20	\$ 2,959,337.00	Total
Bid Adjustment Factor	\$ 1,304,968.55	\$ 2,743,375.20	\$ -	14.3

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	14.267			1	14.267			1	14.267		
ALT	Description			ALT	Description			ALT	Description		
1		FDR w/4" HMA ML & Shld.		2		FDR w/6" PCC ML & PCC Shld		3		FDR w/6" PCC ML & Bit Shld.	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type					
HMA			PCC			PCC					
Primary Category			Primary Category			Primary Category					
20 Year HMA			≥12 Joint spacing			≥12 Joint spacing					
Secondary Category			Secondary Category			Secondary Category					
Rural			Design Life = 20 Years			Design Life 35 Years					
ShoulderCategory			ShoulderCategory			ShoulderCategory					
Bituminous		PCC		Thin Bit							
Notes:			Notes:			Notes:					
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	FDR w/4" HMA	\$ 280,054.24	\$ 280,054.24	0	FDR w/ 6" PCC ML & Shld	\$ 429,758.94	\$ 429,758.94	0	FDR w/6" PCC ML & Bit Shld	\$ 405,816.92	\$ 405,816.92
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7			\$ -
8	Crack Treatment	\$ 1,056.00	\$ 919.88	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12	Seal	\$ 11,292.23	\$ 9,180.77	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	ML Overlay 4	\$ 255,153.24	\$ 180,703.44	20	1st CPR	\$ 217,077.08	\$ 153,737.32	20	1st CPR	\$ 162,752.21	\$ 115,263.61
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23	Crack Treatment	\$ 2,112.00	\$ 1,420.31	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27	Seal	\$ 7,634.64	\$ 4,791.94	27			\$ -	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35			\$ -	35	Remove and Replace	\$ 557,483.15	\$ 304,804.30	35	2nd CPR	\$ 168,562.58	\$ 92,161.71
36			\$ -	36			\$ -	36			\$ -
37	ML Overlay 3.5"	\$ 226,731.50	\$ 119,761.64	37			\$ -	37			\$ -
38			\$ -	38			\$ -	38			\$ -
39			\$ -	39			\$ -	39			\$ -
40	Crack Treatment	\$ 2,112.00	\$ 1,059.31	40			\$ -	40			\$ -
41			\$ -	41			\$ -	41			\$ -
42			\$ -	42			\$ -	42			\$ -
43			\$ -	43			\$ -	43			\$ -
44	Chip Seal	\$ 7,634.64	\$ 3,573.98	44			\$ -	44			\$ -
45			\$ -	45			\$ -	45			\$ -
46			\$ -	46			\$ -	46			\$ -
47			\$ -	47			\$ -	47			\$ -
48			\$ -	48			\$ -	48			\$ -
49			\$ -	49			\$ -	49			\$ -
50	4/17 Remaining Life	\$ (53,348.59)	\$ (22,518.33)	50	5/20 Remaining	\$ (139,370.79)	\$ (58,828.14)	50	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile		\$ 578,947.18		LCCA - Net Present Cost/ per Mile		\$ 829,472.42		LCCA - Net Present Cost/ per Mile		\$ 613,242.24	
Maintenance - Net Present Cost/per Mile		\$ 298,892.94		Maintenance - Net Present Cost/per Mile		\$ 399,713.48		Maintenance - Net Present Cost/per Mile		\$ 207,425.32	
Net Present Cost for Segment		\$ 8,259,839.39		Net Present Cost for Segment		\$ 11,834,083.00		Net Present Cost for Segment		\$ 8,749,127.00	
Maintenance - Net Present Cost for Segment		\$ 4,264,305.55		Maintenance - Net Present Cost for Segment		\$ 5,702,712.20		Maintenance - Net Present Cost for Segment		\$ 2,959,337.00	
Equivalent Annual Cost		248,694.79		Equivalent Annual Cost		356,311.38		Equivalent Annual Cost		263,426.71	

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
24	2	50	26	2	50	26	2	50
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
4	2	VEARING COURSE MIXTURE (3	4	2	VEARING COURSE MIXTURE (3	4	2	VEARING COURSE MIXTURE (3
Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
1.5	N	VEARING COURSE MIXTURE (3	1.5	N	VEARING COURSE MIXTURE (3	1.5	N	VEARING COURSE MIXTURE (3
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N			Y	6		Y	6	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
2			12	11		12	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
20	4			6			3	

35-Year Analysis Period

50-Year Analysis Period

50 - Year

Project Number	Analysis Period
7380-239	50
Highway	Discount Rate
94	2.00%
Date	CLEAR ALL
2/23/2015	
Performed By	
Scott Zeidler	

District 3 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1				4.5
Net Present Cost	\$6,041,068.95	\$4,318,977.40	\$3,730,836.66	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 6,041,068.95	\$ 4,318,977.40	\$ 3,730,836.66	Total
% of Low Cost	161.9%	115.8%	100.0%	4.5

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1				4.5
Net Present Cost	\$1,213,481.77	\$1,639,607.53	\$907,211.30	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,213,481.77	\$ 1,639,607.53	\$ 907,211.30	Total
Bid Adjustment Factor	\$ 306,270.47	\$ 732,396.24	\$ -	4.5

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	4.486			1	4.486			1	4.486		
ALT	Description			ALT	Description			ALT	Description		
1				2				3			
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type					
HMA			PCC			PCC					
Primary Category			Primary Category			Primary Category					
20 Year HMA			≥12 Joint spacing			≥12 Joint spacing					
Secondary Category			Secondary Category			Secondary Category					
Rural			Design Life = 20 Years			Design Life 35 Years					
ShoulderCategory			ShoulderCategory			ShoulderCategory					
Bituminous			Thick Bit			Thick Bit					
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	9.5" Bit, 14" Agg, 15" Sel	\$ 1,076,145.16	\$ 1,076,145.16	0	8.0" UBCO	\$ 597,273.71	\$ 597,273.71	0	8.5" UBCO	\$ 629,430.53	\$ 629,430.53
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3			\$ -	3			\$ -	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7			\$ -	7			\$ -	7			\$ -
8	Crack Treatment	\$ 1,498.11	\$ 1,278.62	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12	Seal	\$ 4,781.29	\$ 3,770.01	12			\$ -	12			\$ -
13			\$ -	13			\$ -	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15			\$ -	15			\$ -	15			\$ -
16			\$ -	16			\$ -	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18			\$ -	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20	ML Overlay 4	\$ 257,084.36	\$ 173,010.40	20	1st CPR	\$ 235,678.26	\$ 158,604.71	20	1st CPR	\$ 167,760.43	\$ 112,897.96
21			\$ -	21			\$ -	21			\$ -
22			\$ -	22			\$ -	22			\$ -
23	Crack Treatment	\$ 2,996.22	\$ 1,900.07	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25			\$ -	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27	Seal	\$ -	\$ -	27			\$ -	27			\$ -
28			\$ -	28			\$ -	28			\$ -
29			\$ -	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32			\$ -	32			\$ -	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35			\$ -	35	Remove and Replace	\$ 508,146.45	\$ 254,087.26	35	2nd CPR	\$ 178,657.57	\$ 89,333.72
36			\$ -	36			\$ -	36			\$ -
37	ML Overlay 3.5"	\$ 226,830.59	\$ 109,017.26	37			\$ -	37			\$ -
38			\$ -	38			\$ -	38			\$ -
39			\$ -	39			\$ -	39			\$ -
40	Crack Treatment	\$ 2,996.22	\$ 1,356.96	40			\$ -	40			\$ -
41			\$ -	41			\$ -	41			\$ -
42			\$ -	42			\$ -	42			\$ -
43			\$ -	43			\$ -	43			\$ -
44	Chip Seal	\$ -	\$ -	44			\$ -	44			\$ -
45			\$ -	45			\$ -	45			\$ -
46			\$ -	46			\$ -	46			\$ -
47			\$ -	47			\$ -	47			\$ -
48			\$ -	48			\$ -	48			\$ -
49			\$ -	49			\$ -	49			\$ -
50	4/17 Remaining Life	\$ (53,371.90)	\$ (19,829.15)	50	5/20 Remaining	\$ (127,036.61)	\$ (47,197.64)	50	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile		\$ 1,346,649.34		LCCA - Net Present Cost/ per Mile		\$ 962,768.03		LCCA - Net Present Cost/ per Mile		\$ 831,662.21	
Maintenance - Net Present Cost/per Mile		\$ 270,504.18		Maintenance - Net Present Cost/per Mile		\$ 365,494.32		Maintenance - Net Present Cost/per Mile		\$ 202,231.68	
Net Present Cost for Segment		\$ 6,041,068.95		Net Present Cost for Segment		\$ 4,318,977.40		Net Present Cost for Segment		\$ 3,730,836.66	
Maintenance - Net Present Cost for Segment		\$ 1,213,481.77		Maintenance - Net Present Cost for Segment		\$ 1,639,607.53		Maintenance - Net Present Cost for Segment		\$ 907,211.30	

Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period	Total Lane Width	# of Lanes	Analysis Period
28	2	50	29	2	50	29	2	50
Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix	Total Shldr Width	# of Shldrs	ML Mix
10	1	SL Mix	9	1	SL Mix	9	1	SL Mix
Width of Rounding Aggregate	white/ >7 milliom	SP 9.5 Wearing Course (4,C)	Width of Rounding Aggregate	white/ >7 milliom	SL Mix	Width of Rounding Aggregate	white/ >7 milliom	SL Mix
1.5	Y	12.5 Wearing Course (3,B)	1.5	N	12.5 Wearing Course (3,B)	1.5	N	2.5 Non WE Course (3,B)
Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness		Sealed/UTBWC	ML Thickness	
N	9.5		Y	8.5		Y	8.5	
ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane		ML Top Lift / joint spacing	# Dowels per Lane	
2			15	11		15	11	
Design Life	Shldr Thickness		Design Life	Shldr Thickness		Design Life	Shldr Thickness	
20	4		20	4		35	4	

AT LEAST ONE BITUMINOUS & ONE PCC OPTION WITH EQUAL DESIGN LIVES IS REQUIRED

District4

Performed BySJ

Analysis Period35

Discount Rate2.2

Project Number7609-10

Date3/3/2014

Funding Category▼

Low Cost Option #1

Chosen Option #1

#	Description	Cost/Mile
AA	Crack Treatment	\$ 2,000
AB	Surface Treatment	\$ 20,000
AC	1.5" Overlay	
AD	2" Overlay	
AE	3" Overlay	
AF	4" Overlay	
AG	4.5" Overlay	240000
AH	2" Mill & 2" Overlay	
AI	1.5" Mill & 3" Overlay	
AJ	2" Mill & 3" Overlay	
AK	3" Mill & 3" Overlay	132000
AL	2" Mill & 4.5" Overlay	
AM	3" Mill & 4.5" Overlay	
AN	Reseal Joints (6'X6')	
AO	Reseal Joints (15')	
AP	Minor CPR (6'X6')	
AQ	Minor CPR (15')	125000
AR	Major CPR (6'X6')	100000
AS	Minor CPR (15')	
AT	CIR w/New Structure	
AU	FDR w/New Structure	
AV	SFDR w/New Structure	
AW	New Concrete Structure	
AX	Concrete Whitetopping	
AY	Unbonded Concrete Overlay	
AZ	New Bituminous Structure	436000
BA	Major CPR	200000
BB	Minor CPR	100000
BC		
BD		
BE		
BF		
BG		
BH		
BI		
BJ		
BK		
BL		
BM		
BN		
BP		
BQ		
BR		
BS		
BT		
BU		
BV		
BW		
BX		
BY		
BZ		

Yellow Cells are unprotected for input.
Light Blue contain Formulas but are unprotected.
White Cells are protected from input.

OPTION #1					OPTION #2					OPTION #3				
DESCRIPTION					DESCRIPTION					DESCRIPTION				
3" Mill and 3" Bituminous Overlay					6" Whitetopping									
		DESIGN LIFE		TYPE			DESIGN LIFE		TYPE			DESIGN LIFE		TYPE
		20					20							
Year	#	Life	Description	Cost/Mile	Year	#	Life	Description	Cost/Mile	Year	#	Life	Description	Cost/Mile
0			Initial Cost	\$ 131,371	0			Initial Cost	\$ 253,271	0				
1				\$ -	1				\$ -	1				\$ -
2				\$ -	2				\$ -	2				\$ -
3	AA	3	Crack Treatment	\$ 2,000	3				\$ -	3				\$ -
4				\$ -	4				\$ -	4				\$ -
5				\$ -	5				\$ -	5				\$ -
6	AB	14	Surface Treatment	\$ 20,000	6				\$ -	6				\$ -
7				\$ -	7				\$ -	7				\$ -
8				\$ -	8				\$ -	8				\$ -
9				\$ -	9				\$ -	9				\$ -
10				\$ -	10				\$ -	10				\$ -
11				\$ -	11				\$ -	11				\$ -
12				\$ -	12				\$ -	12				\$ -
13				\$ -	13				\$ -	13				\$ -
14				\$ -	14				\$ -	14				\$ -
15				\$ -	15				\$ -	15				\$ -
16				\$ -	16				\$ -	16				\$ -
17				\$ -	17				\$ -	17				\$ -
18				\$ -	18				\$ -	18				\$ -
19				\$ -	19				\$ -	19				\$ -
20	AK	19	3" Mill & 3" Overlay	\$ 132,000	20	BA	10	Major CPR	\$ 200,000	20				\$ -
21				\$ -	21				\$ -	21				\$ -
22				\$ -	22				\$ -	22				\$ -
23	AA	3	Crack Treatment	\$ 2,000	23				\$ -	23				\$ -
24				\$ -	24				\$ -	24				\$ -
25				\$ -	25				\$ -	25				\$ -
26	AB	13	Surface Treatment	\$ 20,000	26				\$ -	26				\$ -
27				\$ -	27				\$ -	27				\$ -
28				\$ -	28				\$ -	28				\$ -
29				\$ -	29				\$ -	29				\$ -
30				\$ -	30	BB	5	Minor CPR	\$ 100,000	30				\$ -
31				\$ -	31				\$ -	31				\$ -
32				\$ -	32				\$ -	32				\$ -
33				\$ -	33				\$ -	33				\$ -
34				\$ -	34				\$ -	34				\$ -
35			Remaining Service Life Value**	\$ (28,000)	35			Remaining Service Life Value**		35			Remaining Service Life Value**	\$ -

35-Year Analysis Period

50-Year Analysis Period

35 - Year

Project Number	Analysis Period
7709-16	35
Highway	Discount Rate
71	2.00%
Date	CLEAR ALL
6/17/2015	
Performed By	
Scott Zeidler	

District 3 - 2014/2015 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1 & Fill on Center 25' and 1 1/2" Overlay Full	3" Mill & Overlay (Full Width)	4.0" Whitetopping	7.9
Net Present Cost	\$3,071,208.54	\$3,790,208.82	\$3,941,654.32	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 3,071,208.54	\$ 3,790,208.82	\$ 3,941,654.32	Total
% of Low Cost	100.0%	123.4%	128.3%	7.9

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	1 & Fill on Center 25' and 1 1/2" Overlay Full	3" Mill & Overlay (Full Width)	4.0" Whitetopping	7.9
Net Present Cost	\$1,608,534.28	\$2,070,381.83	\$1,500,087.04	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 1,608,534.28	\$ 2,070,381.83	\$ 1,500,087.04	Total
Bid Adjustment Factor	\$ 108,447.25	\$ 570,294.79	\$ -	7.9

Segment 1											
SEG	Length			SEG	Length			SEG	Length		
1	7.9			1	7.9			1	7.9		
ALT	Description			ALT	Description			ALT	Description		
1		2" Mill & Fill on Center 25' and 1 1/2" Overlay		2		3" Mill & Overlay (Full Width)		3		4.0" Whitetopping	
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE		Pavement Type <td colspan="2" rowspan="7"></td>			
HMA				HMA				PCC			
Primary Category				Primary Category				Primary Category			
Overlay, DL =13 to 17 years				Overlay, DL =13 to 17 years				≥12 Joint spacing			
Secondary Category				Secondary Category				Secondary Category			
Rural				Rural				Design Life = 20 Years			
ShoulderCategory				ShoulderCategory				ShoulderCategory			
Bituminous		Bituminous		Bituminous		Thin Bit					
Notes:				Notes:				Notes:			
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile
0	on Center 24' w/1 1/2" Overlay	\$ 185,148.64	\$ 185,148.64	0	3" Mill & Overlay Full Width	\$ 217,699.62	\$ 217,699.62	0	4.0" White Topping	\$ 309,059.15	\$ 309,059.15
1			\$ -	1			\$ -	1			\$ -
2			\$ -	2			\$ -	2			\$ -
3	Crack Treatment	\$ 2,568.19	\$ 2,420.06	3	Crack Treatment	\$ 2,568.19	\$ 2,420.06	3			\$ -
4			\$ -	4			\$ -	4			\$ -
5			\$ -	5			\$ -	5			\$ -
6			\$ -	6			\$ -	6			\$ -
7	Seal	\$ 7,986.18	\$ 6,952.45	7	Seal	\$ 7,986.18	\$ 6,952.45	7			\$ -
8			\$ -	8			\$ -	8			\$ -
9			\$ -	9			\$ -	9			\$ -
10			\$ -	10			\$ -	10			\$ -
11			\$ -	11			\$ -	11			\$ -
12			\$ -	12			\$ -	12			\$ -
13			\$ -	13	ML Overlay 3.5"	\$ 179,299.90	\$ 138,604.65	13			\$ -
14			\$ -	14			\$ -	14			\$ -
15	ML Overlay 3.5"	\$ 179,299.90	\$ 133,222.47	15			\$ -	15			\$ -
16			\$ -	16	Crack Treatment	\$ 2,568.19	\$ 1,870.79	16			\$ -
17			\$ -	17			\$ -	17			\$ -
18	Crack Treatment	\$ 2,568.19	\$ 1,798.14	18			\$ -	18			\$ -
19			\$ -	19			\$ -	19			\$ -
20			\$ -	20	Seal	\$ 7,986.18	\$ 5,374.47	20	1st CPR	\$ 282,158.28	\$ 189,884.44
21			\$ -	21			\$ -	21			\$ -
22	Seal	\$ 7,986.18	\$ 5,165.77	22			\$ -	22			\$ -
23			\$ -	23			\$ -	23			\$ -
24			\$ -	24			\$ -	24			\$ -
25			\$ -	25	ML Overlay 3.5"	\$ 179,299.90	\$ 109,288.82	25			\$ -
26			\$ -	26			\$ -	26			\$ -
27			\$ -	27			\$ -	27			\$ -
28			\$ -	28	Crack Treatment	\$ 2,568.19	\$ 1,475.10	28			\$ -
29	ML Overlay 3.5"	\$ 179,299.90	\$ 100,965.98	29			\$ -	29			\$ -
30			\$ -	30			\$ -	30			\$ -
31			\$ -	31			\$ -	31			\$ -
32	Crack Treatment	\$ 2,568.19	\$ 1,362.77	32	Seal	\$ 7,986.18	\$ 4,237.73	32			\$ -
33			\$ -	33			\$ -	33			\$ -
34			\$ -	34			\$ -	34			\$ -
35	Remaining Life	\$ (96,546.10)	\$ (48,275.72)	35	Remaining Life	\$ (16,299.99)	\$ (8,150.45)	35	0/0 Remaining	\$ -	\$ -
LCCA - Net Present Cost/ per Mile			\$ 388,760.57	LCCA - Net Present Cost/ per Mile			\$ 479,773.27	LCCA - Net Present Cost/ per Mile			\$ 498,943.59
Maintenance - Net Present Cost/per Mile			\$ 203,611.93	Maintenance - Net Present Cost/per Mile			\$ 262,073.65	Maintenance - Net Present Cost/per Mile			\$ 189,884.44
Net Present Cost for Segment			\$ 3,071,208.54	Net Present Cost for Segment			\$ 3,790,208.82	Net Present Cost for Segment			\$ 3,941,654.32
Maintenance - Net Present Cost for Segment			\$ 1,608,534.28	Maintenance - Net Present Cost for Segment			\$ 2,070,381.83	Maintenance - Net Present Cost for Segment			\$ 1,500,087.04
Equivalent Annual Cost			122,855.13	Equivalent Annual Cost			151,616.73	Equivalent Annual Cost			157,674.88
Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35				Total Lane Width 24 # of Lanes 2 Analysis Period 35			
Total Shldr Width 16 # of Shldrs 2 ML Mix 3P 9.5 Wearing Course (3,B)				Total Shldr Width 16 # of Shldrs 2 ML Mix 3P 9.5 Wearing Course (3,B)				Total Shldr Width 16 # of Shldrs 2 ML Mix 3P 9.5 Wearing Course (3,B)			
Width of Rounding Aggregate 1.5 white/ >7 milliom N 12.5 Wearing Course (3,B)				Width of Rounding Aggregate 1.5 white/ >7 milliom N 12.5 Wearing Course (3,B)				Width of Rounding Aggregate 1.5 white/ >7 milliom Y SL Mix			
Sealed/UTBWC ML Thickness				Sealed/UTBWC ML Thickness				Sealed/UTBWC ML Thickness			
N				N				Y			
ML Top Lift / joint spacing # Dowels per Lane				ML Top Lift / joint spacing # Dowels per Lane				ML Top Lift / joint spacing # Dowels per Lane			
3.5				1.5				12			
Design Life Shldr Thickness				Design Life Shldr Thickness				Design Life Shldr Thickness			
15 1.5				13 3				3			



Project Number	Analysis Period
8101-57	35
Highway	Discount Rate
13	1.74%
Date	CLEAR ALL
12/4/2015	
Performed By	
C Fanske	

District 6 - 2015/2016 prices

LCCA SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	15 yr med M&OL	20yr new bit	20yr UBOL	10.9
Net Present Cost	\$6,141,538.28	\$8,617,363.22	\$6,392,040.27	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 6,141,538.28	\$ 8,617,363.22	\$ 6,392,040.27	Total
% of Low Cost	100.0%	140.3%	104.1%	10.9

BID ADJUSTMENT FACTOR SUMMARY				
	Alternate #1	Alternate #2	Alternate #3	Length
Segment #1	15 yr med M&OL	20yr new bit	20yr UBOL	10.9
Net Present Cost	\$3,006,536.20	\$2,661,467.52	\$1,816,360.66	Miles
Segment #2				0.0
Net Present Cost				Miles
Segment #3				0.0
Net Present Cost				Miles
Segment #4				0.0
Net Present Cost				Miles
Segment #5				0.0
Net Present Cost				Miles
Segment #6				0.0
Net Present Cost				Miles
Segment #7				0.0
Net Present Cost				Miles
Segment #8				0.0
Net Present Cost				Miles
Project Net Present Cost	\$ 3,006,536.20	\$ 2,661,467.52	\$ 1,816,360.66	Total
Bid Adjustment Factor	\$ 1,190,175.53	\$ 845,106.85	\$ -	10.9

Segment 1												
SEG	Length			SEG	Length			SEG	Length			
1	10.9			1	10.9			1	10.9			
ALT	Description			ALT	Description			ALT	Description			
1		15 yr med M&OL		2		20yr new bit		3		20yr UBOL		
Pavement Type		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7">CLICK HERE TO EDIT THIS ALTERNATE</td> <th colspan="2">Pavement Type<td rowspan="7"></td></th>		CLICK HERE TO EDIT THIS ALTERNATE	Pavement Type <td rowspan="7"></td>						
HMA			HMA			PCC						
Primary Category			Primary Category			Primary Category						
Overlay, DL =13 to 17 years			20 Year HMA			≥12 Joint spacing						
Secondary Category			Secondary Category			Secondary Category						
Rural			Rural			Design Life = 20 Years						
ShoulderCategory			ShoulderCategory			ShoulderCategory						
Aggregate			Aggregate			Aggregate						
Notes:				Notes:				Notes:				
Year	Activity	Cost/per Mile	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	Year	Activity	Cost	Pres. Cost/per Mile	
0	Med m&ol	\$ 287,614.87	\$ 287,614.87	0	New Bit	\$ 546,412.45	\$ 546,412.45	0	UBOL	\$ 419,787.12	\$ 419,787.12	
1			\$ -	1			\$ -	1			\$ -	
2			\$ -	2			\$ -	2			\$ -	
3	Crack Treatment	\$ 2,227.46	\$ 2,115.11	3			\$ -	3			\$ -	
4			\$ -	4			\$ -	4			\$ -	
5			\$ -	5			\$ -	5			\$ -	
6			\$ -	6			\$ -	6			\$ -	
7	Seal	\$ 8,864.63	\$ 7,856.30	7			\$ -	7			\$ -	
8			\$ -	8	Crack Treatment	\$ 1,113.73	\$ 970.16	8			\$ -	
9			\$ -	9			\$ -	9			\$ -	
10			\$ -	10			\$ -	10			\$ -	
11			\$ -	11			\$ -	11			\$ -	
12			\$ -	12	Seal	\$ 12,873.70	\$ 10,466.52	12			\$ -	
13			\$ -	13			\$ -	13			\$ -	
14			\$ -	14			\$ -	14			\$ -	
15	ML Overlay 3.5"	\$ 236,975.65	\$ 182,948.02	15			\$ -	15			\$ -	
16			\$ -	16			\$ -	16			\$ -	
17			\$ -	17			\$ -	17			\$ -	
18	Crack Treatment	\$ 2,227.46	\$ 1,632.89	18			\$ -	18			\$ -	
19			\$ -	19			\$ -	19			\$ -	
20			\$ -	20	ML Overlay 4	\$ 350,482.42	\$ 248,217.03	20	1st CPR	\$ 235,293.68	\$ 166,638.59	
21			\$ -	21			\$ -	21			\$ -	
22	Seal	\$ 8,864.63	\$ 6,065.16	22			\$ -	22			\$ -	
23			\$ -	23	Crack Treatment	\$ 2,227.46	\$ 1,497.96	23			\$ -	
24			\$ -	24			\$ -	24			\$ -	
25			\$ -	25			\$ -	25			\$ -	
26			\$ -	26			\$ -	26			\$ -	
27			\$ -	27	Seal	\$ 8,864.63	\$ 5,563.95	27			\$ -	
28			\$ -	28			\$ -	28			\$ -	
29	ML Overlay 3.5"	\$ 236,975.65	\$ 143,695.60	29			\$ -	29			\$ -	
30			\$ -	30			\$ -	30			\$ -	
31			\$ -	31			\$ -	31			\$ -	
32	Crack Treatment	\$ 2,227.46	\$ 1,282.55	32			\$ -	32			\$ -	
33			\$ -	33			\$ -	33			\$ -	
34			\$ -	34			\$ -	34			\$ -	
35	Remaining Life	\$ (127,602.27)	\$ (69,766.63)	35	2/17 Remaining Life	\$ (41,233.23)	\$ (22,544.29)	35	0/0 Remaining	\$ -	\$ -	
LCCA - Net Present Cost/ per Mile				\$ 563,443.88	LCCA - Net Present Cost/ per Mile				\$ 790,583.78	LCCA - Net Present Cost/ per Mile		\$ 586,425.71
Maintenance - Net Present Cost/per Mile				\$ 275,829.01	Maintenance - Net Present Cost/per Mile				\$ 244,171.33	Maintenance - Net Present Cost/per Mile		\$ 166,638.59
Net Present Cost for Segment				\$ 6,141,538.28	Net Present Cost for Segment				\$ 8,617,363.22	Net Present Cost for Segment		\$ 6,392,040.27
Maintenance - Net Present Cost for Segment				\$ 3,006,536.20	Maintenance - Net Present Cost for Segment				\$ 2,661,467.52	Maintenance - Net Present Cost for Segment		\$ 1,816,360.66
Equivalent Annual Cost				235,770.39	Equivalent Annual Cost				330,815.99	Equivalent Annual Cost		245,387.02

Appendix C: Copies of LCCA Exceptions

LCCA EXCEPTION

SP 6607-49 & 2511-49-T.H. 60 From Faribault to Kenyon

A Life Cycle Cost Analysis was performed in accordance with Tech Memo No. 07-17-MAT-01.

Both PCC and HMA alternatives were considered.

The lowest LCCA fix is 4" CIR(Cold Inplace Recycling) & 3" Bituminous Overlay

The Preservation fix selected by our District is 2" Bituminous Mill and 3.5" Overlay

LCCA is a project specific tool used in selecting preservation treatments. The District program is selected based on: Total project costs, preservation performance, material availability, available funding, traffic impacts, safety needs and other considerations.

Factors considered in this Preservation Project selection include:

This section of T.H. 60 has a traffic volume of 3000 ADT and 3,813,000-35yr. CESALS). It has a RQI rating of 2.8-2.9 and SR rating of 3.3-3.4 in 2015. This road was reconstructed in the 1990's and the pavement is all BFD(Bituminous Full Depth). The road was cored and determined that the bituminous was still in good condition underneath. Because of this relatively recent new reconstruction the SR is still quite high but the RQI has started to drop. This project will restore the RQI to an acceptable level again. A CIR project was not selected because the bituminous road core is still in relatively good condition and the district has a lack of funds to do a longer term rehabilitation on this lower ADT road.

I concur with the selected Preservation Project:



Transportation District Engineer

For