



ENGINEERING DEPARTMENT

MEMORANDUM

TO: City of La Porte – City Council Members

FROM: Nicholas Minich, Director of Engineering

DATE: May 16, 2016

RE: **DRAFT 5-Year Pavement Management Program**

Project Background

In October 2015 the Board of Public Works and Safety signed a contract with the team of CHA Consulting & Lochmueller Group to perform a pavement management study for the City. This study included Project Research; a Pavement Inventory (using the PASER rating method); Development of an Asset Management System for Streets; Estimation of Project Costs; a 5-year Pavement Improvement Plan; and Development of a Design Template for efficient in-house design of federal aid paving projects. Funds for this project came from INDOT Group II funds through NIRPC, with the local match funds provided from the City's America's Best Communities Award. One of the primary reasons this project was initiated was to make available federal funds for street maintenance that were not previously available.

Pavement Inventory

All City streets were assessed based on the PASER rating method, which is the INDOT preferred rating method. The Average PASER Rating (APR) for the City was 4.6; which correlates to "Fair".

Pavement (Asset) Management System

The City selected to use the Roadsoft Pavement Management System, this system was developed by the State of Michigan's LTAP and has a proven track record of success. This system was used to optimize investment in pavement over the next 5 years. From this optimization (based on funding w/ wheel tax) we see a potential increase in APR from 4.6 to between 5.5 and 5.7.

Attachments:

1. PASER Rating System Summary
2. City PASER Rating Summary
3. PASER Rating Map
4. 5-YR Funding Plan
5. 5-YR Plan Summary (w/wheel tax)
6. 5-YR Plan (w/o wheel tax)
7. 2016 Paving Plan
8. 2017 Paving Plan
9. 2018 Paving Plan
10. 2019 Paving Plan
11. 2020 Paving Plan

Rating system

Surface rating	Visible distress*	General condition/ treatment measures
10 Excellent	None.	New construction.
9 Excellent	None.	Recent overlay. Like new.
8 Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
7 Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4"– 1/2") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6 Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4"– 1/2"). Transverse cracks (open 1/4"– 1/2"), some spaced less than 10'. First sign of block cracking. Slight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5 Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2" or more) show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2")
4 Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3 Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (greater than 1/2" but less than 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2 Very Poor	Alligator cracking (over 25% of surface). Severe rutting or distortions (2" or more deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1 Failed	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

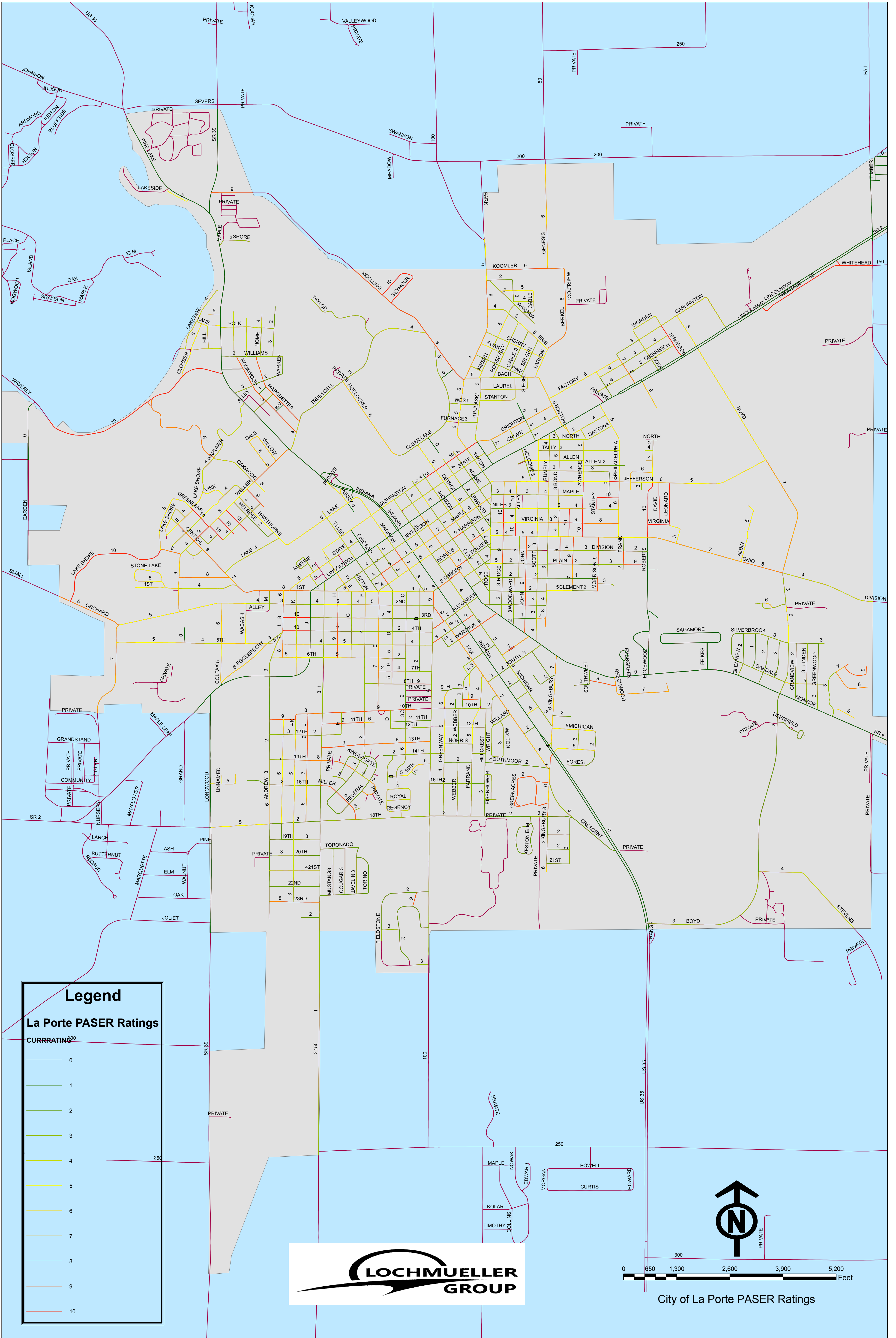
* Individual pavements will not have all of the types of distress listed for any particular rating. They may have only one or two types.

Current Surface Rating Mileage Summary

Surface Subtype	PASER Rating											Total Centerline Mileage	APR*
	10	9	8	7	6	5	4	3	2	1	Not Rated		
Asphalt-Standard	5.289	7.647	4.716	5.168	5.489	17.188	16.768	27.359	17.239	0.548	0.000	107.411	4.643
Concrete-Standard	0.000	0.000	0.108	0.000	0.000	0.424	1.199	0.126	0.000	0.000	0.000	1.857	4.393
Gravel-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.556	0.000	0.000	0.000	0.000	0.556	4.000
Total Centerline Mileage	5.289	7.647	4.824	5.168	5.489	17.612	18.523	27.485	17.23	0.548	0.000	109.824	4.635

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

City of La Porte



La Porte

5-Year Plan - Mileage Breakdown

Roadway Improvements:	2016	2017	2018	2019	2020	5-Year Totals
Arterial Roadways	(Lane-miles)	(Lane-miles)	(Lane-miles)	(Lane-miles)	(Lane-miles)	
Reconstruction	0.96	0	0	0	0	0.96
Rehab (Structural Improvements)	3.2	0	0	0	0	3.2
Preventative Maintenance	4.63	3.03	0	0	1	8.66
subtotal	8.79	3.03	0	0	1	12.82
Major Collectors						
Reconstruction	1.82	0	0	0	0	1.82
Rehab (Structural Improvements)	2.37	3.4	0.85	1.71	1	9.33
Preventative Maintenance	4.53	5.5	4.13	0	1.75	15.91
subtotal	8.72	8.9	4.98	1.71	2.75	27.06
Minor Collectors						
Reconstruction	0	0	0	0	0	0
Rehab (Structural Improvements)	2.77	2.28	1.36	2.5	1.2	10.11
Preventative Maintenance	2.94	4.48	2.01	0	1	10.43
subtotal	5.71	6.76	3.37	2.5	2.2	20.54
Local Roads						
Reconstruction	0.83	0	1	1	2	4.83
Rehab (Structural Improvements)	2	10.32	6.4	6	5	29.72
Preventative Maintenance	8.6	5.75	6.68	0	0	21.03
subtotal	11.43	16.07	14.08	7	7	55.58
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Total	34.65	34.76	22.43	11.21	12.95	116
Budget	\$ 1,906,498.00	\$ 1,640,628.00	\$ 1,265,000.00	\$ 985,000.00	\$ 985,000.00	

Summary of Miles by Treatment

Reconstruction	7.61 Lane-Miles
Rehab (Structural Improvements)	52.36 Lane-Miles
Preventative Maintenance	56.03 Lane-Miles

* This chart does not account for crack sealing of roadways to be done by the Street Department utilizing alternate funding sources

La Porte

5-Year Plan - Mileage Breakdown

No Wheel Tax

Roadway Improvements:	2016	2017	2018	2019	2020	5-Year Totals
Arterial Roadways	(Lane-miles)	(Lane-miles)	(Lane-miles)	(Lane-miles)	(Lane-miles)	
Reconstruction	0.96	0	0	0	0	0.96
Rehab (Structural Improvements)	3.2	0	0	0	0	3.2
Preventative Maintenance	4.63	3.03	0	0	1	8.66
subtotal	8.79	3.03	0	0	1	12.82
Major Collectors						
Reconstruction	1.82	0	0	0	0	1.82
Rehab (Structural Improvements)	2.37	0.5	1	1.71	1	6.58
Preventative Maintenance	4.53	5.1	1.25	0	1.75	12.63
subtotal	8.72	5.6	2.25	1.71	2.75	21.03
Minor Collectors						
Reconstruction	0	0	0	0	0	0
Rehab (Structural Improvements)	2.77	0	0	2.55	0	5.32
Preventative Maintenance	2.94	4.48	2.01	0	1	10.43
subtotal	5.71	4.48	2.01	2.55	1	15.75
Local Roads						
Reconstruction	0.83	0	0	0	0	0.83
Rehab (Structural Improvements)	2	3.4	0	2	4	11.4
Preventative Maintenance	8.6	5	7.43	0	2.28	23.31
subtotal	11.43	8.4	7.43	2	6.28	35.54
Total	34.65	21.51	11.69	6.26	11.03	85.14
Budget	\$ 1,906,498.00	\$ 640,628.00	\$ 265,000.00	\$ 485,000.00	\$ 485,000.00	

Summary of Miles by Treatment

Reconstruction	3.61 Lane-Miles
Rehab (Structural Improvements)	26.50 Lane-Miles
Preventative Maintenance	55.03 Lane-Miles

* This chart does not account for crack sealing of roadways to be done by the Street Department utilizing alternate funding sources

5-YR FUNDING PLAN (W/WHEEL TAX)					
	2016	2017	2018	2019	2020
Trash Impact Fee	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00
"Wheel Tax"		\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00
CEDIT	\$ 500,000.00				
2016 LOIT Reserves	\$ 608,249.00				
Local Road & Bridge Grant	\$ 608,249.00	\$ 500,000.00	\$ 500,000.00		
CDBG			\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
Group 2 STP		\$ 450,628.00		\$ 220,000.00	\$ 220,000.00
	\$ 1,906,498.00	\$ 1,640,628.00	\$ 1,265,000.00	\$ 985,000.00	\$ 985,000.00

5-YR FUNDING PLAN (NO WHEEL TAX)					
	2016	2017	2018	2019	2020
Trash Impact Fee	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00	\$ 190,000.00
CEDIT	\$ 500,000.00				
2016 LOIT Reserves	\$ 608,249.00				
Local Road & Bridge Grant	\$ 608,249.00				
CDBG			\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
Group 2 STP		\$ 450,628.00		\$ 220,000.00	\$ 220,000.00
	\$ 1,906,498.00	\$ 640,628.00	\$ 265,000.00	\$ 485,000.00	\$ 485,000.00

City of La Porte

DRAFT 5-Year Pavement Management Plan

2016 - Identified Roads for Improvement

Year	Road	Segment from	Segment to	NFC	Current PASER	Treatment	Length	Avg Width	Area (SY)	Total Cost
2016	18th	Andrew	I	Arterial	2	6" HMA Recon	1230	30	4100	\$ 95,940.00
2016	Boyd	US 35	SR 4	Arterial	various	Sealcoat +	7932	30	26440	\$ 66,100.00
2016	I	1st	10th	Arterial	3	4" Mill/Resurf	2988	30	9960	\$ 155,376.00
2016	Jefferson	Tyler	Rose	Arterial	3	4" Mill/Resurf	1241	30	4140	\$ 64,584.00
2016	Jefferson	Tyler	Rose	Arterial	4	1.5" Mill/Resurf	2540	30	8470	\$ 79,618.00
2016	Jefferson	Rose	Boyd	Arterial	5	Sealcoat +	6214	30	20720	\$ 51,800.00
2016	Jefferson	Rose	Boyd	Arterial	6	Sealcoat	426	30	1420	\$ 1,420.00
2016	Rose	Maple	Jefferson	Arterial	2	6" HMA Recon	364	30	1220	\$ 28,548.00
2016	Tyler	Washington	1st	Arterial	2	6" HMA Recon	945	30	3150	\$ 73,710.00
2016	Tyler	Washington	1st	Arterial	4	1.5" Mill/Resurf	665	30	2220	\$ 20,868.00
2016	Washington	US 35	Jackson	Arterial	4	1.5" Mill/Resurf	945	30	3150	\$ 29,610.00
2016	Washington	US 35	Jackson	Arterial	5	Sealcoat +	354	30	1180	\$ 2,950.00
2016	Tipton/Park	Washington	McClung	Arterial	6	Sealcoat	1326	30	4420	\$ 4,420.00
2016	Maple	Michigan	Rose	Arterial	6	Sealcoat	1373	30	4580	\$ 4,580.00
2016	Park	Furnace	West	Arterial	5	Sealcoat +	438	30	1460	\$ 3,650.00
2016	Keston Elm	18th	18th	Local	3	1.5" Mill/Resurf	2181	25	6060	\$ 63,630.00
2016	Michigan	Washington	Lincolnway	Major Coll	3	1.5" Mill/Resurf	669	29.5	2200	\$ 23,100.00
2016	Andrews	SR 2	6th	Major Coll	3	1.5" Mill/Resurf	480	29.5	1580	\$ 16,590.00
2016	Andrews	6th	L st	Major Coll	4	1.5" Mill/Resurf	682	29.5	2240	\$ 21,056.00
2016	Andrews	14th	SR 2	Major Coll	2	5" HMA Recon	2043	29.5	6700	\$ 130,650.00
2016	I	City Limits	18th	Major Coll	2	5" HMA Recon	1985	29.5	6510	\$ 126,945.00
2016	I	City Limits	18th	Major Coll	3	1.5" Mill/Resurf	709	29.5	2330	\$ 24,465.00
2016	Lawrence	Jefferson	North	Major Coll	4	1.5" Mill/Resurf	253	29.5	830	\$ 7,802.00
2016	Lawrence	Jefferson	North	Major Coll	5	Sealcoat +	766	29.5	2520	\$ 6,300.00
2016	North	Lawrence	Boston	Major Coll	4	1.5" Mill/Resurf	264	29.5	870	\$ 8,178.00
2016	Roberts	Division	Ohio	Major Coll	5	Sealcoat +	333	29.5	1100	\$ 2,750.00
2016	Rose	Monroe	Maple	Major Coll	2	5" HMA Recon	781	29.5	2560	\$ 49,920.00
2016	Rose	Monroe	Maple	Major Coll	3	1.5" Mill/Resurf	924	29.5	3030	\$ 31,815.00
2016	Rose	Monroe	Maple	Major Coll	4	1.5" Mill/Resurf	1067	29.5	3500	\$ 32,900.00
2016	State	Michigan	Tipton	Major Coll	4	1.5" Mill/Resurf	1870	29.5	6130	\$ 57,622.00
2016	State	Michigan	Tipton	Major Coll	5	Sealcoat +	306	29.5	1010	\$ 2,525.00
2016	2nd	Zigler	Colfax	Major Coll	5	Sealcoat +	2577	29.5	8450	\$ 21,125.00
2016	Weller	2nd	Central	Major Coll	6	Sealcoat	1410	29.5	4630	\$ 4,630.00
2016	Ohio	Rose	Roberts	Major Coll	5	Sealcoat +	3163	29.5	10370	\$ 25,925.00
2016	Factory	Boston	Darrow	Minor Coll	5	Sealcoat +	1975	26	5710	\$ 14,275.00
2016	Lake	Hawthorne	Perry	Minor Coll	5	Sealcoat +	1811	26	5240	\$ 13,100.00

City of La Porte

***DRAFT* 5-Year Pavement Management Plan**

2016 - Identified Roads for Improvement

2016	Hawthorne	Lake	Fairfield	Minor Coll	5	Sealcoat +	1183	26	3420	\$ 8,550.00
2016	State	1st	Teegarden	Minor Coll	5	Sealcoat +	1200	26	3470	\$ 8,675.00
2016	Erie	Roosevelt	Berkel	Minor Coll	5	Sealcoat +	972	26	2810	\$ 7,025.00
2016	Erie	Park	Berkel	Minor Coll	3	1.5" Mill/Resurf	971	26	2810	\$ 29,505.00
2016	Erie	Park	Berkel	Minor Coll	4	1.5" Mill/Resurf	544	26	1580	\$ 14,852.00
2016	Erie	Park	Berkel	Minor Coll	5	Sealcoat +	327	26	950	\$ 2,375.00
2016	Fieldstone	A st	A st	Minor Coll	3	1.5" Mill/Resurf	3835	26	11080	\$ 116,340.00
2016	Niesen	Bach	Erie	Minor Coll	4	1.5" Mill/Resurf	918	26	2660	\$ 25,004.00
2016	Niesen	Bach	Erie	Minor Coll	5	Sealcoat +	813	26	2350	\$ 5,875.00
2016	Allen	Lawrence	Dead End	Local	3	1.5" Mill/Resurf	1003	25	2790	\$ 29,295.00
2016	Allen	Dead End	Lawrence	Local	3	1.5" Mill/Resurf	196	25	550	\$ 5,775.00
2016	Allen	Dead End	Lawrence	Local	4	1.5" Mill/Resurf	840	25	2340	\$ 21,996.00
2016	Allen	Dead End	Lawrence	Local	5	Sealcoat +	586	25	1630	\$ 4,075.00
2016	Ridge	Monroe	Plain	Local	3	1.5" Mill/Resurf	1289	25	3590	\$ 37,695.00
2016	F	Maple Garden	13th	Local	3	1.5" Mill/Resurf	1442	25	4010	\$ 42,105.00
2016	Federal	Maple Garden	Fairfield	Local	3	1.5" Mill/Resurf	1574	25	4380	\$ 45,990.00
2016	Kingsporte Ave	F	Circle Dr	Local	4	1.5" Mill/Resurf	439	25	1220	\$ 11,468.00
2016	Clay	Lincolnway	State	Local	5	Sealcoat +	333	25	930	\$ 2,325.00
2016	Clay	State	Dead-end	Local	3	1.5" Mill/Resurf	454	25	1270	\$ 13,335.00
2016	Wabash	5th	2nd	Local	5	Sealcoat +	982	25	2730	\$ 6,825.00
2016	Stone Lake	Jurisdiction	1st	Local	5	Sealcoat +	1864	25	5180	\$ 12,950.00
2016	1st	dead-end	weller	Local	5	Sealcoat +	1062	25	2950	\$ 7,375.00
2016	Illinois	Upper Lake Shore	Greenleaf	Local	5	Sealcoat +	898	25	2500	\$ 6,250.00
2016	Vine	Pennsylvania	Lake Shore	Local	5	Sealcoat +	592	25	1650	\$ 4,125.00
2016	Pennsylvania	Greenleaf	Vine	Local	5	Sealcoat +	797	25	2220	\$ 5,550.00
2016	L	10th	18th	Local	5	Sealcoat +	2534	25	7040	\$ 17,600.00
2016	K	SR 2	5th	Local	5	Sealcoat +	766	25	2130	\$ 5,325.00
2016	K	18th	12th	Local	5	Sealcoat +	2144	25	5960	\$ 14,900.00
2016	15th	A	Phil	Local	6	Sealcoat	533	25	1490	\$ 1,490.00
2016	15th	Phil	C	Local	5	Sealcoat +	396	25	1100	\$ 2,750.00
2016	Toronto	Warsaw	Cable	Local	5	Sealcoat +	798	25	2220	\$ 5,550.00
2016	Closser	Waverly	Lane	Local	5	Sealcoat +	1378	25	3830	\$ 9,575.00
2016	Lakeside	Dead-end	Pine Lake	Local	5	Sealcoat +	634	25	1770	\$ 4,425.00
									Total	\$1,905,427.00
2016 Budget =							\$1,906,498.00	% of budget	100%	

City of La Porte

***DRAFT* 5-Year Pavement Management Plan**

2017-Identified Roads for Improvement

Year	Road	Segment from	Segment to	NFC	Current PASER	Treatment	Length	Avg Width	Area (SY)	Total Cost
2017	Boyd	SR 4	Ohio	Arterial	various	Sealcoat +	2994	30	9980	\$ 24,950.00
2017	Kingsbury	Greenacres	Graceland	Arterial	6	Sealcoat	2424	30	8080	\$ 8,080.00
2017	18th	SR 39	Andrew	Arterial	5	Sealcoat +	1441	30	4810	\$ 12,025.00
2017	Boyd	Lincolnway	Jefferson	Arterial	5	Sealcoat +	3195	30	10650	\$ 26,625.00
2017	Fail Rd	Lincolnway	Jurisdiction Line	Arterial	5	Sealcoat +	1932	30	6440	\$ 16,100.00
2017	Maple	Michigan	Indiana	Arterial	5	Sealcoat +	343	30	1150	\$ 2,875.00
2017	1st	I	Jefferson	Major Coll	5	Sealcoat +	296	29.5	980	\$ 2,450.00
2017	A st	10th	2nd	Major Coll	3	1.5" Mill/Resurf	2538	29.5	8320	\$ 87,360.00
2017	Michigan	Harrison	Kingsbury	Major Coll	3	1.5" Mill/Resurf	3664	29.5	12010	\$ 126,105.00
2017	Michigan	Harrison	Kingsbury	Major Coll	4	1.5" Mill/Resurf	1483	29.5	4870	\$ 45,778.00
2017	Edgewood	Division	Ohio	Major Coll	5	Sealcoat +	333	29.5	1100	\$ 2,750.00
2017	Michigan	Maple	Lincolnway	Major Coll	3	1.5" Mill/Resurf	635	29.5	2090	\$ 21,945.00
2017	6th	I	G	Major Coll	5	Sealcoat +	676	29.5	2220	\$ 5,550.00
2017	Colfax	SR 2	5th	Major Coll	5	Sealcoat +	961	29.5	3150	\$ 7,875.00
2017	Larson	Bach	Berkel	Major Coll	5	Sealcoat +	739	29.5	2430	\$ 6,075.00
2017	Madison	Lincoln Hwy	Perry	Major Coll	5	Sealcoat +	1516	29.5	4970	\$ 12,425.00
2017	Park	Niesen	Koomler	Major Coll	5	Sealcoat +	1003	29.5	3290	\$ 8,225.00
2017	Philadelphia	Ohio	Lincoln Hwy	Major Coll	5	Sealcoat +	2350	29.5	7710	\$ 19,275.00
2017	Philadelphia	Ohio	Lincoln Hwy	Major Coll	6	Sealcoat	1025	29.5	3360	\$ 3,360.00
2017	State	Detroit	Linwood	Major Coll	5	Sealcoat +	306	29.5	1010	\$ 2,525.00
2017	Andrew	18th	16th	Major Coll	6	Sealcoat	956	29.5	3140	\$ 3,140.00
2017	Boston	North	Bach	Major Coll	6	Sealcoat	1949	29.5	6390	\$ 6,390.00
2017	Colfax	5th	2nd	Major Coll	6	Sealcoat	988	29.5	3240	\$ 3,240.00
2017	Philadelphia	Virginia	Jefferson	Major Coll	6	Sealcoat	1024	29.5	3360	\$ 3,360.00
2017	Genesis	Koomler	Jurisdiction Line	Major Coll	6	Sealcoat	2550	29.5	8360	\$ 8,360.00
2017	L	2nd	1st	Major Coll	6	Sealcoat	333	29.5	1100	\$ 1,100.00
2017	Michigan	Harrison	Maple	Major Coll	6	Sealcoat	312	29.5	1030	\$ 1,030.00
2017	Fox	Southmoor	Marion	Major Coll	6	Sealcoat	1014	29.5	3330	\$ 3,330.00
2017	Fox	Plummer	Alexander	Major Coll	6	Sealcoat	280	29.5	920	\$ 920.00
2017	Lake St	Central Ave	Hawthorne	Minor Coll	4	1.5" Mill/Resurf	1573	26	4550	\$ 42,770.00
2017	Lake Shore Dr	Oakwood	Pine Lake Ave	Minor Coll	4	1.5" Mill/Resurf	2086	26	6030	\$ 56,682.00
2017	5th	Zigler	Colfax	Minor Coll	4	1.5" Mill/Resurf	913	26	2640	\$ 24,816.00
2017	5th	Zigler	Colfax	Minor Coll	5	Sealcoat +	1658	26	4790	\$ 11,975.00
2017	2nd	Wabash	L st	Minor Coll	3	1.5" Mill/Resurf	333	26	970	\$ 10,185.00
2017	2nd	Wabash	L st	Minor Coll	4	1.5" Mill/Resurf	576	26	1670	\$ 15,698.00

City of La Porte

***DRAFT* 5-Year Pavement Management Plan**

2017-Identified Roads for Improvement

2017	Edgewood	Monroe	Roberts	Minor Coll	4	1.5" Mill/Resurf	544	26	1580	\$	14,852.00
2017	Edgewood	Monroe	Roberts	Minor Coll	5	Sealcoat +	1025	26	2970	\$	7,425.00
2017	Roberts	Edgewood	Division	Minor Coll	5	Sealcoat +	1447	26	4190	\$	10,475.00
2017	5th	Wabash	G	Minor Coll	5	Sealcoat +	1199	26	3470	\$	8,675.00
2017	2nd	Colfax	Wabash	Minor Coll	5	Sealcoat +	597	26	1730	\$	4,325.00
2017	F	3rd	2nd	Minor Coll	5	Sealcoat +	328	26	950	\$	2,375.00
2017	Harrison	Chicago	Michigan	Minor Coll	5	Sealcoat +	1288	26	3730	\$	9,325.00
2017	Detroit	Maple	Clear Lake	Minor Coll	5	Sealcoat +	1727	26	4990	\$	12,475.00
2017	Bach	Park	Neisen	Minor Coll	5	Sealcoat +	343	26	1000	\$	2,500.00
2017	Industrial	Darlington	Boyd	Minor Coll	5	Sealcoat +	893	26	2580	\$	6,450.00
2017	Farrand	Norris	10th	Minor Coll	5	Sealcoat +	913	26	2640	\$	6,600.00
2017	Monroe	Lincolnway	Washington	Local	3	1.5" Mill/Resurf	671	25	1870	\$	19,635.00
2017	Mustang	Corvette	Toronado	Local	3	1.5" Mill/Resurf	1141	25	3170	\$	33,285.00
2017	Cougar	Corvette	Toronado	Local	3	1.5" Mill/Resurf	1141	25	3170	\$	33,285.00
2017	20th	Andrew	I	Local	3	1.5" Mill/Resurf	650	25	1810	\$	19,005.00
2017	Talley	Scott	Lawrence	Local	3	1.5" Mill/Resurf	597	25	1660	\$	17,430.00
2017	Talley	Lawrence	Philadelphia	Local	4	1.5" Mill/Resurf	877	25	2440	\$	22,936.00
2017	Oberreich	Dead-End	Burson	Local	4	1.5" Mill/Resurf	1542	25	4290	\$	40,326.00
2017	Oberreich	Dead-End	Burson	Local	3	1.5" Mill/Resurf	650	25	1810	\$	19,005.00
2017	Planett	Bosserman	Burson	Local	4	1.5" Mill/Resurf	1299	25	3610	\$	33,934.00
2017	Planett	Bosserman	Burson	Local	3	1.5" Mill/Resurf	650	25	1810	\$	19,005.00
2017	Adams	Lincolnway	dead-end	Local	3	1.5" Mill/Resurf	818	25	2280	\$	23,940.00
2017	Linwood	Lincolnway	dead-end	Local	4	1.5" Mill/Resurf	818	25	2280	\$	21,432.00
2017	Jackson	Lincolnway	dead-end	Local	4	1.5" Mill/Resurf	787	25	2190	\$	20,586.00
2017	Warsaw	Niesen	Dead-End	Local	3	1.5" Mill/Resurf	1525	25	4240	\$	44,520.00
2017	Cable	Pine	Erie	Local	3	1.5" Mill/Resurf	1061	25	2950	\$	30,975.00
2017	Belden	Bach	Erie	Local	3	1.5" Mill/Resurf	993	25	2760	\$	28,980.00
2017	Pine	Park	Belden	Local	3	1.5" Mill/Resurf	1230	25	3420	\$	35,910.00
2017	Roosevelt	Bach	Erie	Local	4	1.5" Mill/Resurf	1494	25	4150	\$	39,010.00
2017	Cherry	Park	Larson	Local	4	1.5" Mill/Resurf	618	25	1720	\$	16,168.00
2017	Oak	Park	Roosevelt	Local	4	1.5" Mill/Resurf	306	25	850	\$	7,990.00
2017	Ellis	Park	Niesen	Local	4	1.5" Mill/Resurf	306	25	850	\$	7,990.00
2017	Rockwood	Williams	Dead-End	Local	4	1.5" Mill/Resurf	1099	25	3060	\$	28,764.00
2017	Haviland	Williams	Dead-End	Local	4	1.5" Mill/Resurf	930	25	2590	\$	24,346.00
2017	Home	Williams	Dead-End	Local	3	1.5" Mill/Resurf	1045	25	2910	\$	30,555.00
2017	Fremont	Williams	dead-end	Local	3	1.5" Mill/Resurf	533	25	1490	\$	15,645.00
2017	Polk	Pine Lake	Fremont	Local	4	1.5" Mill/Resurf	1310	25	3640	\$	34,216.00

City of La Porte

***DRAFT* 5-Year Pavement Management Plan**

2017-Identified Roads for Improvement

2017	Orchard Bluff	Dead-End	Pine Lake Ave	Local	4	1.5" Mill/Resurf	985	25	2740	\$	25,756.00
2017	Hill	Orchard Bluff	Dead-End	Local	4	1.5" Mill/Resurf	555	25	1550	\$	14,570.00
2017	Lane	Lakeside	Closser	Local	4	1.5" Mill/Resurf	127	25	360	\$	3,384.00
2017	Lakeside	Orchard Bluff	Dead-End	Local	4	1.5" Mill/Resurf	1679	25	4670	\$	43,898.00
2017	6th	Andrew	J	Local	5	Sealcoat +	939	25	2610	\$	6,525.00
2017	2nd	I	E	Local	5	Sealcoat +	1009	25	2810	\$	7,025.00
2017	3rd	G	F	Local	5	Sealcoat +	333	25	930	\$	2,325.00
2017	D	8th	5th	Local	5	Sealcoat +	639	25	1780	\$	4,450.00
2017	Michigan	Kingsbury	Forest	Local	5	Sealcoat +	1065	25	2960	\$	7,400.00
2017	Woodlawn	Indiana	Forest	Local	5	Sealcoat +	1040	25	2890	\$	7,225.00
2017	Albin	Ohio	Dead-End	Local	5	Sealcoat +	1458	25	4050	\$	10,125.00
2017	Niles	Woodward	Stanley Ct	Local	5	Sealcoat +	1392	25	3870	\$	9,675.00
2017	Rumely	Maple	Jefferson	Local	5	Sealcoat +	343	25	960	\$	2,400.00
2017	Scott	Ohio	Lincoln Hwy	Local	5	Sealcoat +	2361	25	6560	\$	16,400.00
2017	Cherry	Park	Larson	Local	5	Sealcoat +	924	25	2570	\$	6,425.00
2017	Oak	Park	Roosevelt	Local	5	Sealcoat +	306	25	850	\$	2,125.00
2017	Larson	Bach	Berkel	Local	5	Sealcoat +	740	25	2060	\$	5,150.00

Total	\$	1,564,557.00
inflation		4%
Total cost (2017\$)	\$	1,627,200.00
% of Budget		99%

City of La Porte

* DRAFT* 5-Year Pavement Management Plan

2018 - Identified Roads For Improvement

Year	Road	Segment from	Segment to	NFC	Current PASER	Treatment	Length	Avg Width	Area (SY)	Total Cost
2018	Andrews	16th	14th	Major Coll	3	1.5" Mill/Resurf	618	29.5	2030	\$ 21,315.00
2018	F st	10th	8th	Major Coll	3	1.5" Mill/Resurf	1309	29.5	4300	\$ 45,150.00
2018	6th	J	I	Major Coll	3	1.5" Mill/Resurf	327	29.5	1080	\$ 11,340.00
2018	10th	A st	Wright	Major Coll	3	1.5" Mill/Resurf	1484	29.5	4870	\$ 51,135.00
2018	Wright	10th	Fox	Major Coll	3	1.5" Mill/Resurf	370	29.5	1220	\$ 12,810.00
2018	6th	G	F	Major Coll	4	1.5" Mill/Resurf	333	29.5	1100	\$ 10,340.00
2018	Weller	Greenleaf	Oakwood	Major Coll	5	Sealcoat +	1547	29.5	5080	\$ 12,700.00
2018	6th	I	G	Major Coll	5	Sealcoat +	676	29.5	2220	\$ 5,550.00
2018	A st	City limits	10th	Major Coll	3	1.5" Mill/Resurf	6458	29.5	21170	\$222,285.00
2018	Lake Shore Dr	Craven	Oakwood	Minor Coll	4	1.5" Mill/Resurf	950	26	2750	\$ 25,850.00
2018	Lake Shore Dr	Craven	Oakwood	Minor Coll	5	Sealcoat +	2308	26	6670	\$ 16,675.00
									Total	\$435,150.00
									inflation	4%
									Total Cost (2018\$)	\$470,658.24
									% of Budget	37%

2018

Based on available funding in 2018 the following additional work can be performed:

Additional Roads will be identified based on additional pavement rating following the 2017 construction season

Arterial		Lane Miles	Cost
P = 5	SealCoat +		0
P = 6	Sealcoat		0 \$ -
Major Collector		Lane Miles	
P = 4	1.5" Mill/Resurf		
P = 5	SealCoat +		0
P = 6	Sealcoat		0
Minor Collector		Lane Miles	
P = 4	1.5" Mill/Resurf	1	\$ 71,700.00
P = 5	SealCoat +	0	
P = 6	Sealcoat	1.14	\$ 8,700.00
Local		Lane Miles	
P = 2	4" HMA Recon	1	\$ 121,000.00
P = 3	1.5" Mill/Resurf	3	\$ 231,000.00
P = 4	1.5" Mill/Resurf	3.4	\$ 234,400.00
P = 5	SealCoat +	6.25	\$ 114,600.00
P = 6	Sealcoat	0.43	\$ 3,150.00
		Total	\$ 784,550.00
		Identified Road funding total	\$ 470,658.24
		Year Total	\$ 1,255,208.24

City of La Porte

5-Year Pavement Management Plan

Roads Identified for Improvement are all addressed in years 2016-2018

Available funds for 2019 and 2020 are \$985,000/year

Roads identified by NFC, PASER rating, and length to be improved

Additional Roads will be identified based on additional pavement rating following the 2017 construction season

2019

Arterial		Cost/Lane-Mile	Lane Miles	Cost
P = 2	6" HMA Recon	\$ 205,920.00	0	\$ -
P = 3	4" Mill/Resurf	\$ 137,280.00	0	\$ -
P = 4	1.5" Mill/Resurf	\$ 82,720.00	0	\$ -
P = 5	SealCoat +	\$ 22,000.00	0	\$ -
P = 6	Sealcoat	\$ 8,800.00	0	\$ -
Major Collector		Cost/Lane-Mile	Lane Miles	
P = 2	5" HMA Recon	\$ 168,740.00	0	\$ -
P = 3	1.5" Mill/Resurf	\$ 90,860.00	0	\$ -
P = 4	1.5" Mill/Resurf	\$ 81,341.00	1.71	\$ 139,093.11
P = 5	SealCoat +	\$ 21,633.00	0	\$ -
P = 6	Sealcoat	\$ 8,653.00	0	\$ -
Minor Collector		Cost/Lane-Mile	Lane Miles	
P = 2	5" HMA Recon	\$ 148,720.00	0	\$ -
P = 3	1.5" Mill/Resurf	\$ 80,080.00	0	\$ -
P = 4	1.5" Mill/Resurf	\$ 71,691.00	2.5	\$ 179,227.50
P = 5	SealCoat +	\$ 19,067.00	0	\$ -
P = 6	Sealcoat	\$ 7,627.00	0	\$ -
Local		Cost/Lane-Mile	Lane Miles	
P = 2	4" HMA Recon	\$ 121,000.00	1	\$ 121,000.00
P = 3	1.5" Mill/Resurf	\$ 77,000.00	3	\$ 231,000.00
P = 4	1.5" Mill/Resurf	\$ 68,933.00	3	\$ 206,799.00
P = 5	SealCoat +	\$ 18,333.00	0	\$ -
P = 6	Sealcoat	\$ 7,333.00	0	\$ -
Total				\$ 877,119.61
inflation 4%/				\$ 986,640.27

City of La Porte

5-Year Pavement Management Plan

Roads Identified for Improvement are all addressed in years 2016-2018

Available funds for 2019 and 2020 are \$985,000/year

Roads identified by NFC, PASER rating, and length to be improved

Additional Roads will be identified based on additional pavement rating following the 2017 construction season

2020

Arterial		Cost/Lane-Mile	Lane Miles	Cost
P = 2	6" HMA Recon	\$ 205,920.00	0	\$ -
P = 3	4" Mill/Resurf	\$ 137,280.00	0	\$ -
P = 4	1.5" Mill/Resurf	\$ 82,720.00	0	\$ -
P = 5	SealCoat +	\$ 22,000.00	0	\$ -
P = 6	Sealcoat	\$ 8,800.00	1	\$ 8,800.00
Major Collector		Cost/Lane-Mile	Lane Miles	
P = 2	5" HMA Recon	\$ 168,740.00	0	\$ -
P = 3	1.5" Mill/Resurf	\$ 90,860.00	1	\$ 90,860.00
P = 4	1.5" Mill/Resurf	\$ 81,341.00	0	\$ -
P = 5	SealCoat +	\$ 21,633.00	0	\$ -
P = 6	Sealcoat	\$ 8,653.00	1.75	\$ 15,142.75
Minor Collector		Cost/Lane-Mile	Lane Miles	
P = 2	5" HMA Recon	\$ 148,720.00	0	\$ -
P = 3	1.5" Mill/Resurf	\$ 80,080.00	1.2	\$ 96,096.00
P = 4	1.5" Mill/Resurf	\$ 71,691.00	0	\$ -
P = 5	SealCoat +	\$ 19,067.00	0	\$ -
P = 6	Sealcoat	\$ 7,627.00	1	\$ 7,627.00
Local		Cost/Lane-Mile	Lane Miles	
P = 2	4" HMA Recon	\$ 121,000.00	2	\$ 242,000.00
P = 3	1.5" Mill/Resurf	\$ 77,000.00	5	\$ 385,000.00
P = 4	1.5" Mill/Resurf	\$ 68,933.00	0	\$ -
P = 5	SealCoat +	\$ 18,333.00	0	\$ -
P = 6	Sealcoat	\$ 7,333.00	0	\$ -
Total				\$ 845,525.75
inflation 4%/yr				\$ 989,145.54