City of Blue Lake

Pavement Management Update (2016-17) – Final Report
October 2017

NCE

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Background

The Humboldt County Association of Governments (HCAOG) is the designated Regional Transportation Planning Agency (RTPA), and is responsible for developing regional transportation. As part of this process a Pavement Management Program(PMP) is needed to assist in determining the future transportation needs of the region.

A PMP is a tool designed to assist cities and counties with answering typical pavement network questions such as:

- What does the City's pavement network consist of? How many miles of streets are in a jurisdiction? What is the total pavement area of these public streets?
- What is the existing condition of the public street pavement network? Is this an acceptable level for the City? If not, what is an acceptable level? How much additional funding is needed to achieve an acceptable level? How much is needed to maintain the public street pavement at this level?
- How will the condition of the pavement network respond over time under existing funding levels?
- What maintenance strategies are needed to maintain or improve current pavement conditions?
- What maintenance activities or treatments have occurred in the past on any given street?
- What impact would either additional funding, or a decrease in funding, have on the condition of the overall pavement network?
- What are the maintenance priorities under different budget constraints?

Nichols Consulting Engineers, Chtd. (NCE) was selected by HCAOG to update the City's StreetSaver PMP. Field surveys were completed in February 2017 and all survey data was entered into the City's PMP. NCE also reviewed the preventive maintenance and rehabilitation decision tree and updated the costs. Then, a budget needs analysis was performed, followed by three budgetary scenarios.

Purpose

The purpose of this report is to assist decision makers in utilizing the results of the StreetSaver Pavement Management Program (PMP). Specifically, this report assesses the adequacy of ideal and projected revenues to meet the maintenance needs recommended for the City. It also maximizes the return from expenditures by:

1) Implementing a multi-year street rehabilitation and maintenance program
2) Developing a preventive maintenance program
3) Selecting the most cost effective repairs

This report examines the overall condition of the street network and highlights options for improving the current network level pavement condition index (PCI). These options are developed by conducting "what if" analyses. By varying the budget amounts available for pavement maintenance and repair, the impacts of different funding strategies on the City's streets over the next ten years were determined.

Network Description

The City of Blue Lake oversees the repair and maintenance of approximately 7.1 centerline miles of pavement, or 74 pavement sections. Table 1 below summarizes the network by functional class.

Table 1: Network Summary Statistics for City-Maintained Sections

Functional Class	Sections	Centerline Miles	Lane Miles	% of the Entire Network (by Pavement Area)
Collector	2	0.4	0.8	5.6%
Residential/Local	72	6.7	13.4	94.4%
Total	**74**	**7.1**	**14.2**	**100%**

The network replacement cost of the City maintained sections is approximately $8.9 million. This cost is defined as the full reconstruction of all pavement sections in the City's pavement network and does not include related infrastructure assets, such as sidewalks, signals, markings, signs, etc.

A listing of all pavement sections in the network and their corresponding current PCI and attribute data is included in Appendix A.

Pavement Current Condition

The pavement condition index, or PCI, is a measurement of the pavement condition and ranges from 0 to 100. A newly constructed street will have a PCI of 100, while a failed street will have a PCI of 25 or less. **The average 2017 PCI of the City's entire street network is 53, with a remaining service life of approximately 14 years**. Note that these values are projected and area-weighted calculations from StreetSaver. The remaining service life for the network is based on the projection that if no further funding were allocated to pavements, the network will reach "Very Poor/Failed" condition in approximately 14 years.

Figure 1 below illustrates the definitions of the five pavement condition categories. Note that the StreetSaver Maintenance and Rehabilitation Decision Tree in Appendix B assigns different condition category titles from those in Figure 1.

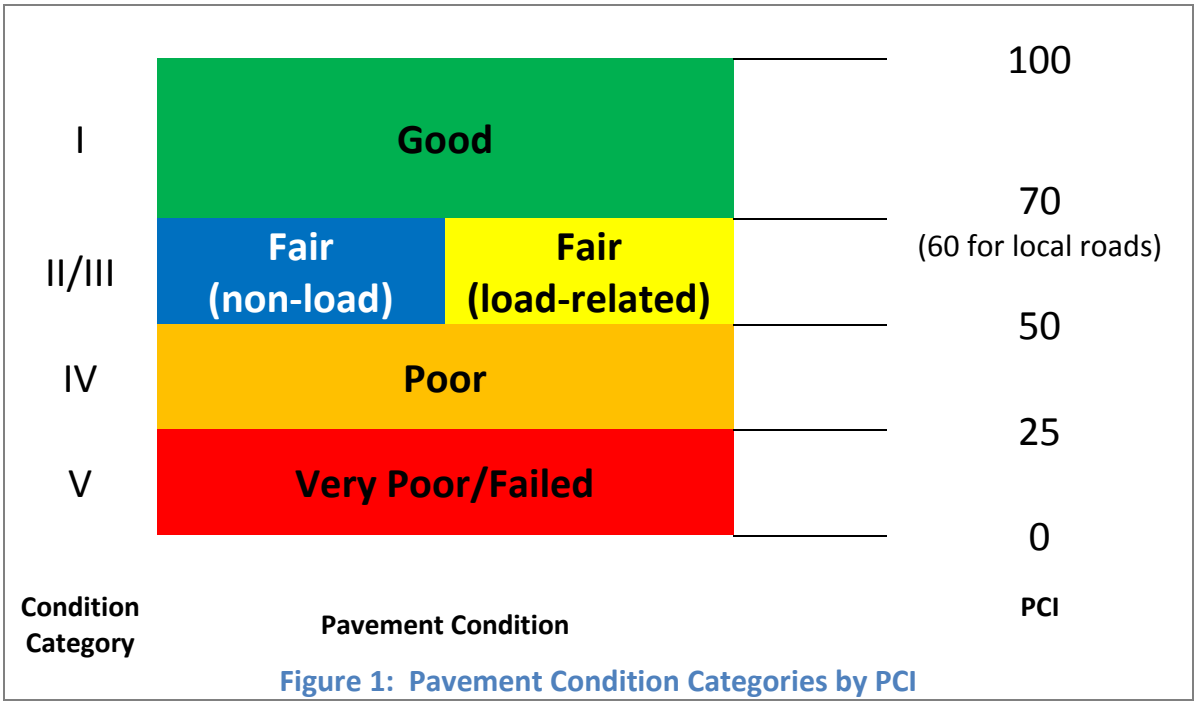


Figure 1: Pavement Condition Categories by PCI

Figure 2 includes representative photos showing streets with different PCIs.

Figure 2: Streets with Different PCIs

Table 2 below provides the pavement condition breakdown for the network by PCI range or condition category. About 47.3% of the entire City's streets for 2017 are in the "Good" condition category. Conversely, 39.2% of the pavement area falls in the "Poor" or "Very Poor/Failed" condition categories.

Table 2: 2017 Pavement Condition Breakdowns by Area (Entire Network)

Condition Category	PCI Range	Collector (%)	Residential	Entire Network (%)
Good (I)	70-100	5.6%	41.7%	47.3%
Fair (II/III)	50-69	0%	13.5%	13.5%
Poor (IV)	25-49	0%	16.2%	16.2%
Very Poor/Failed (V)	<25	0%	23.0%	23.0%
Total		**5.6%**	**94.4%**	**100%**

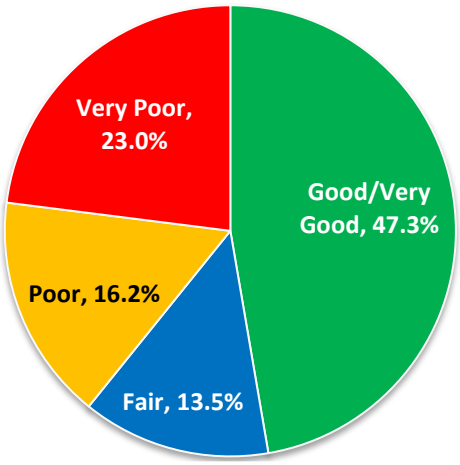


Figure 3: Pavement Condition Summary by Condition Categories (Entire Network by Area, 2017)

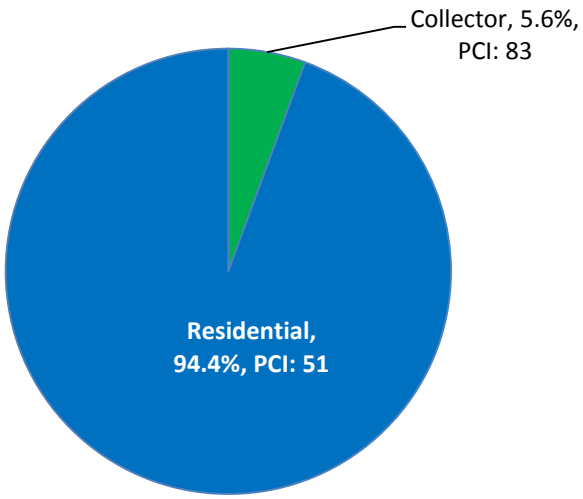


Figure 4: Pavement Condition Summary by Functional Classification (Entire Network by Area, 2017)

Maintenance and Rehabilitation

Historically, the City has utilized a program of crack sealing, base repairs, and overlays as maintenance and rehabilitation strategies. As the pavement condition deteriorates base repairs and asphalt overlays have been applied. Digouts or base repairs are typically used as treatment by itself or as preparation prior to overlays and surface seals as necessary. These treatments are formalized in the maintenance and rehabilitation Decision Tree shown in Appendix B.

Figure 5 demonstrates that pavement maintenance follows the old colloquial saying of "pay me now, or pay me more later". History has shown that it costs much less to maintain streets in good condition than to repair streets that have failed. By allowing pavements to deteriorate, streets that once cost $2.50 per square yard ($/sy) to slurry seal may soon cost $43.00/sy to overlay or $86.00/sy to reconstruct. In other words, significant delays in repairs can cost over 35 times more.

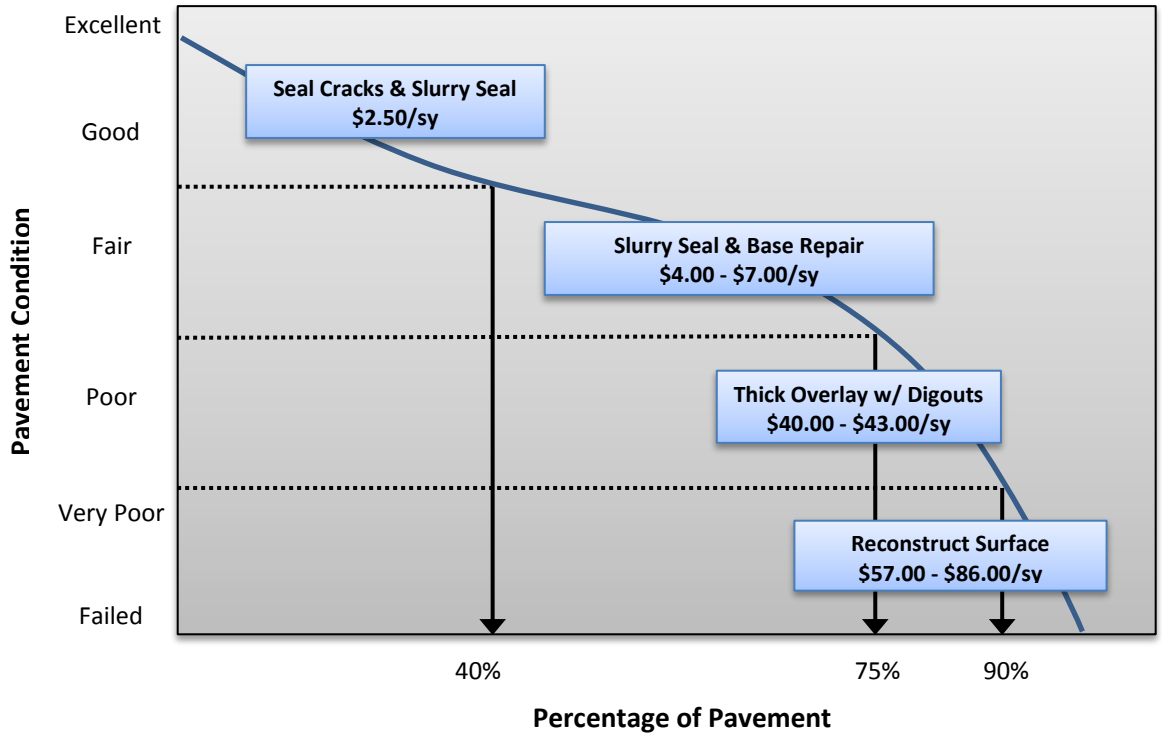


Figure 5: Costs of Maintaining Pavements over Time

Budget Needs

Based on the principle that it costs less to maintain streets in good condition than those in bad condition, the PMP strives to develop a maintenance strategy that will improve the overall condition of the network to an optimal PCI and then sustain it at that level. In addition, there is currently $1.5 million of deferred maintenance. If the maintenance needs are not addressed, the quality of the street network will inevitably decline. In order to correct these deficiencies, a cost effective funding and maintenance and rehabilitation strategy must be implemented.

The first step in developing a cost effective maintenance and rehabilitation strategy is to determine the maintenance "needs" of the pavement network. Using the StreetSaver budget needs module, the maintenance needs over the next ten years were estimated to be approximately $2.7 million. If the City of Blue Lake follows the strategy recommended by the program, the average network PCI will increase to 80 by 2026. If, however, no maintenance is applied over the next ten years, already distressed streets will continue to deteriorate, and the network PCI will drop to 35 by 2026. The results of the budget needs analysis are summarized in Table 3 below.

Table 3: Summary Results from Needs Analysis

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
PCI Treated	80	78	77	75	74	73	75	75	77	80	--
PCI Untreated	52	50	48	46	44	43	41	39	37	35	--
Needs ($Thousands)	1,477	55	43	21	38	90	281	135	253	311	2,704

The results of the budget needs analysis represent the ideal funding strategy recommended by the StreetSaver PMP. Note that the more than half is “front-loaded” since deferring repairs will cost more later. Of the $2.7 million in maintenance needs shown, approximately $0.9 million (32%) is earmarked for preventive maintenance and approximately $1.8 (68%) is allocated for the more costly rehabilitation and reconstruction treatments.

Budget Scenarios

Having determined the maintenance needs of the street network, the next step in developing a cost effective maintenance and rehabilitation strategy is to conduct several "what-if" analyses. Using StreetSaver's budget scenario module, the impacts of various budget "scenarios" may be evaluated. The program projects the effects of the different scenarios on pavement condition index (PCI), deferred maintenance (unfunded backlog), and average remaining service life of the network. By examining the effects on these indicators, the advantages and disadvantages of different funding levels and maintenance strategies become clear.

Scenario 1: Increase PCI to 70 - In order to improve the overall condition of the pavement network, the city requires $2.2 million over ten years to increase the PCI to 70. This scenario will also allow the City to reduce the deferred maintenance slightly to $0.7 million by 2026.

Scenario 2: Maintain Current PCI – In this scenario, the goal is to maintain the current PCI at 53 by over the ten year analysis period. The deferred maintenance increases to $1.9 million by the end of 2026.

Scenario 3: City Budget ($34,000 annually) – This scenario shows the impact of the City's annual budget of $34,000 from 2017 to 2026. Note that this includes RMRA funding[1] which is estimated to be $21,814 in FY 18/19. The current PCI will decreases by 8 points to 45 over the ten year analysis period. Additionally, the deferred maintenance will increase by $1 million to $2.5 million by 2026.

Note: Deferred maintenance (also known as unfunded backlog) consists of pavement maintenance that is needed, but cannot be performed due to lack of funding. Shrinking budgets have forced many cities and counties to defer much needed pavement maintenance. By deferring maintenance, not only does the frequency of citizens' complaints about the condition of the network increase, but the cost to repair these streets rises as well. More detailed results of the budget needs scenarios may be found in Appendix C.

Appendix E contains maps generated from the GIS Toolbox in StreetSaver, which illustrate the results of each scenario. The maps show the entire pavement network, highlighting the color-coded condition category of each pavement section throughout the network in 2026 for each budget scenario. A map illustrating the present conditions is also provided for comparison.

[1] Road Maintenance and Rehabilitation Account (RMRA - Streets and Highways Code Sec 2030 et sec. – also known as Senate Bill 1) includes funds from the taxes enacted by the Road Repair and Accountability Act of 2017. The first full year of funding will be FY2018-19 and the City is expected to receive $21,814 annually.

Scenario 1: Increase PCI to 70

Over the next ten years, a total of $2.2 million is required to increase the network PCI to 70. By 2026, approximately 81.3% of the network will be in "Good" condition, a 34% increase from 2017 (47.3%). The deferred maintenance will decrease to $0.7 million by 2026. The remaining service life of the overall network is projected to increase to 23 years by 2026. The results are summarized in Table 4 and Figure 6.

Table 4: Summary Results for Scenario 1

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	106	152	166	278	170	270	210	316	223	298	2,189
Deferred Maintenance ($ Thousands)	1,371	1,299	1,215	976	910	671	845	569	555	655	--
PCI	55	56	57	60	61	63	65	67	69	70	--
Remaining Service Life (Years)	15	16	16	17	18	19	19	21	22	23	--

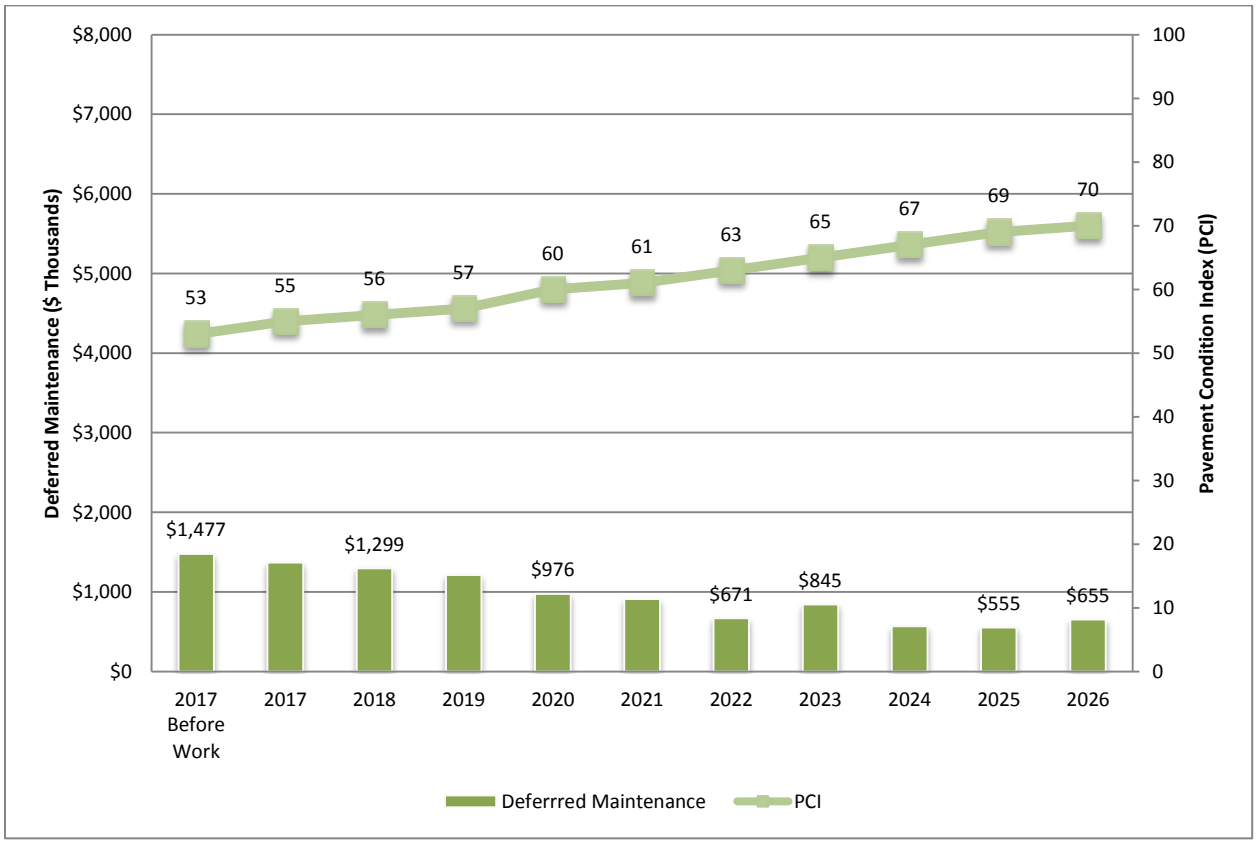


Figure 6: PCI vs Deferred Maintenance for Scenario 1

Scenario 2: Maintain Current PCI

Over the next ten years, a total of $960,000 is required to maintain the network PCI at 53. By 2026, approximately 52% of the network will be in "Good" condition, a 4.7% increase from 2017 (47.3%). The deferred maintenance will increase to $1.9 million, and the remaining service life is projected to increase to 15.1 years by 2026. The results are summarized in Table 5 and Figure 7.

Table 5: Summary Results for Scenario 2

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	28	94	90	122	85	104	129	141	61	106	960
Deferred Maintenance ($ Thousands)	1,449	1,438	1,450	1,375	1,401	1,343	1,618	1,540	1,678	1,945	--
PCI	53	53	53	54	53	53	53	54	53	53	--
Remaining Service Life (Years)	14	14	14	14	14	14	15	15	15	15	--

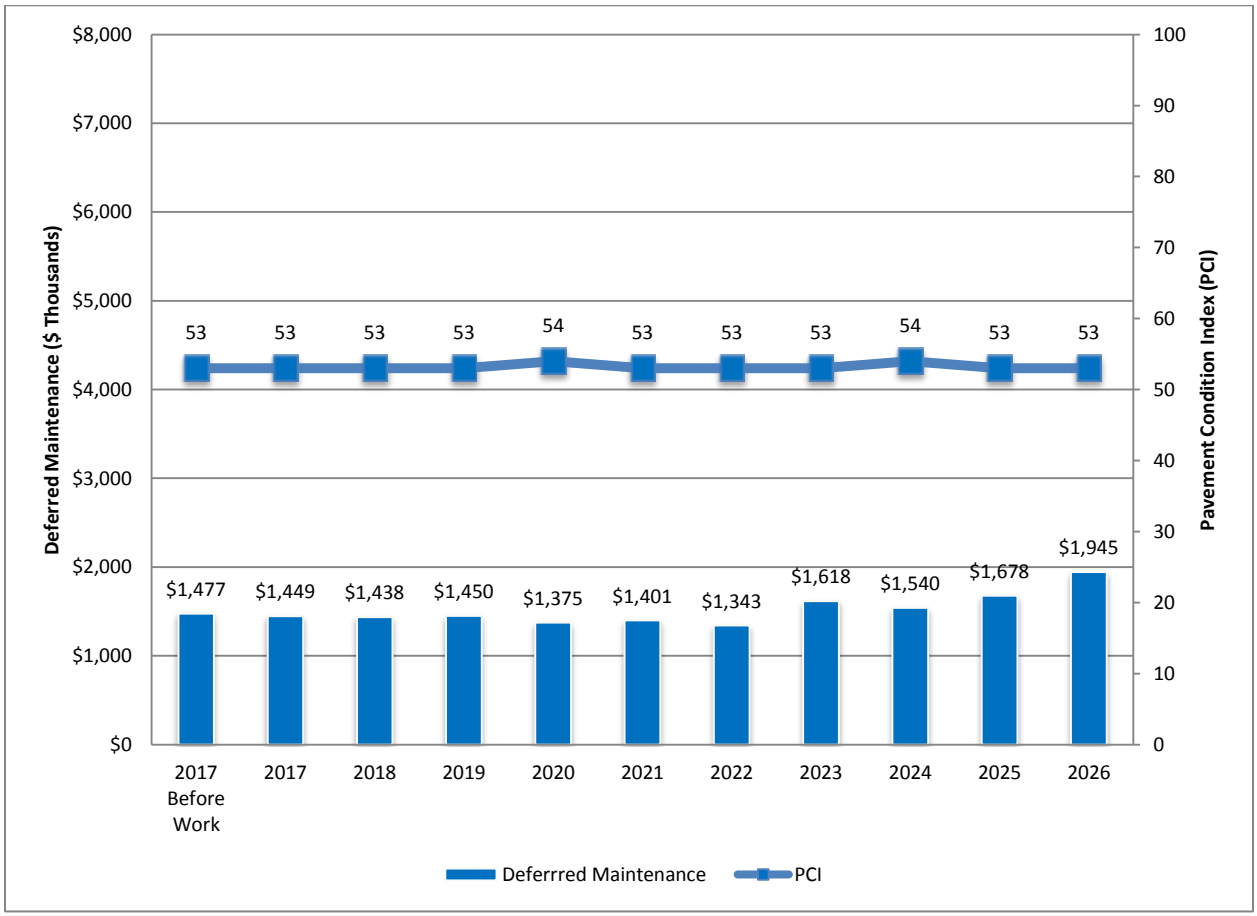


Figure 7: PCI vs Deferred Maintenance for Scenario 2

Scenario 3: City's Budget

This scenario assumes City's current annual funding is $34,000 in 2017 and RMRA funding will add $21,814 in 2019. The results indicate that the network PCI will decrease to 45 and the deferred maintenance will increase to $2.5 million by 2026. The remaining service life will decrease to 12 years. The results are summarized in Table 6 and Figure 8. Appendix D provides a list of sections selected for treatment for this scenario.

Table 6: Summary Results for Scenario 3

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	34	41	56	56	56	56	56	56	56	56	523
Deferred Maintenance ($ Thousands)	1,443	1,485	1,521	1,517	1,580	1,590	1,951	1,974	2,123	2,479	--
PCI	53	52	51	50	50	49	48	47	46	45	--
Remaining Service Life (Years)	14	14	13	13	13	13	12	12	12	12	--

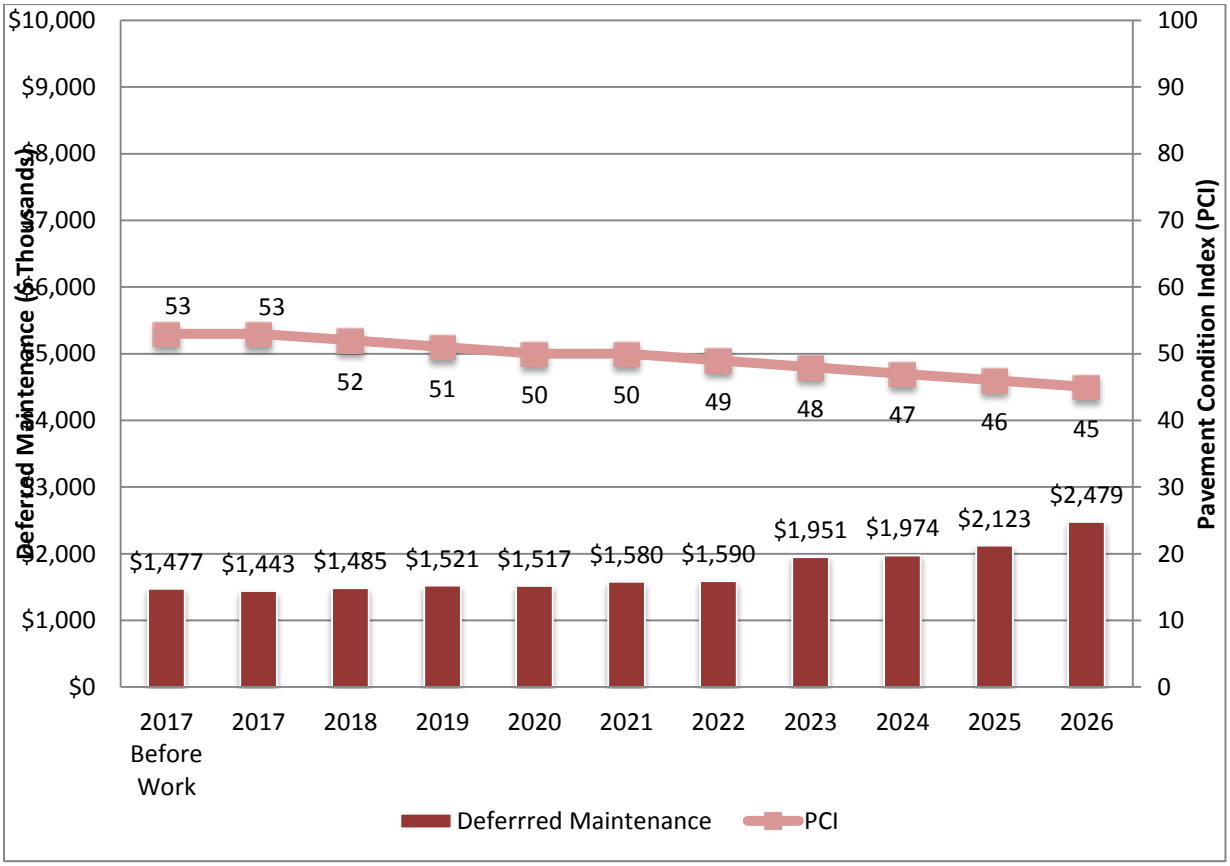


Figure 8: PCI vs Deferred Maintenance for Scenario 3

Scenario Comparisons

Figure 9 below illustrates the change in PCI over time for the different budget scenarios. As previously noted, Scenario 1 will increase the PCI by 70 by 2026; Scenario 2 will maintain the current PCI of 53 over the next ten years and Scenario 3 (City Budget) will deteriorate to 45 after ten years.

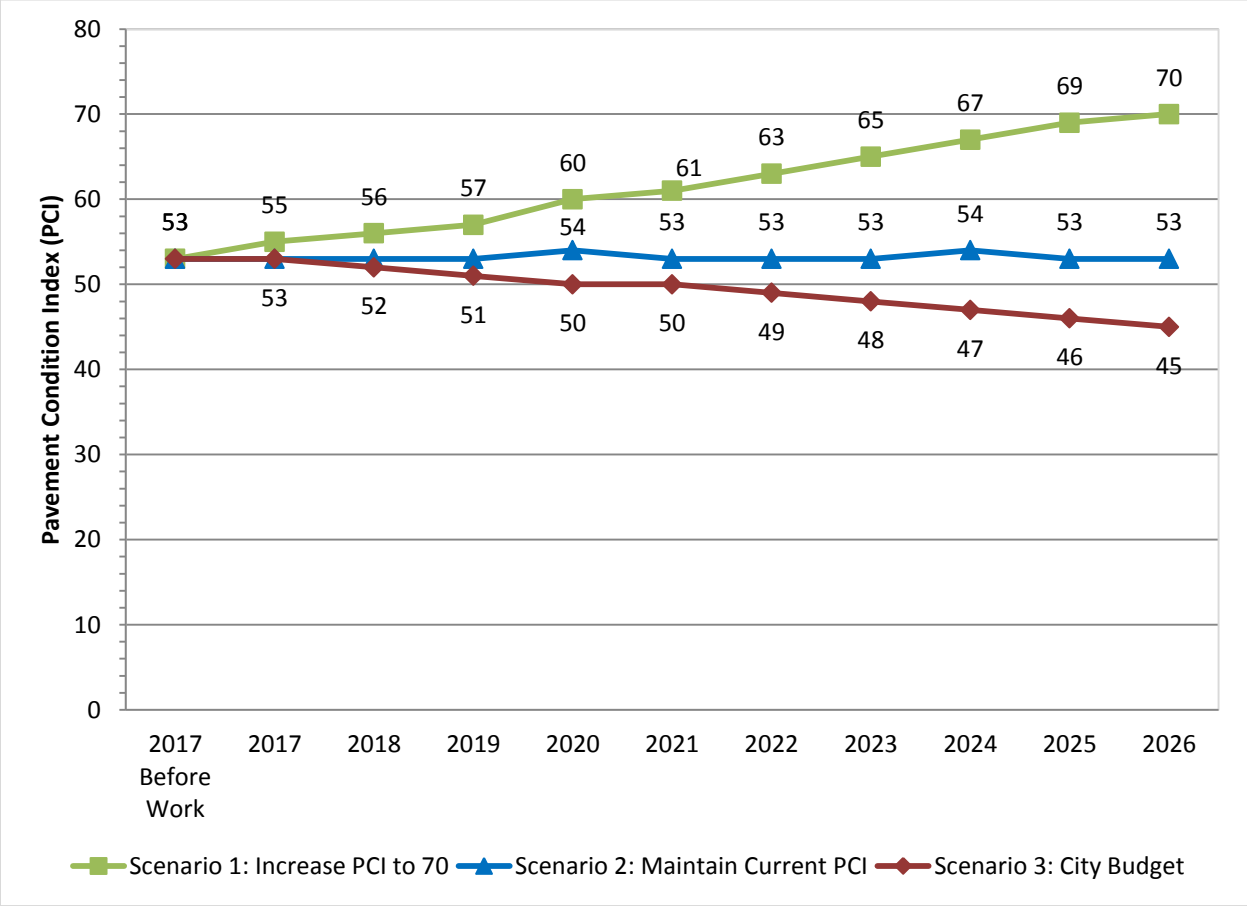


Figure 9: Annual Pavement Condition Index by Scenario

Figure 10 illustrates the change in deferred maintenance over time for the different budget scenarios. Note that Scenario 1 will decrease the deferred maintenance to $655,000. Scenario 2 will increase the deferred maintenance by approximately 32% to $1.95 million and Scenario 3 increases the deferred maintenance to $2.5 million.

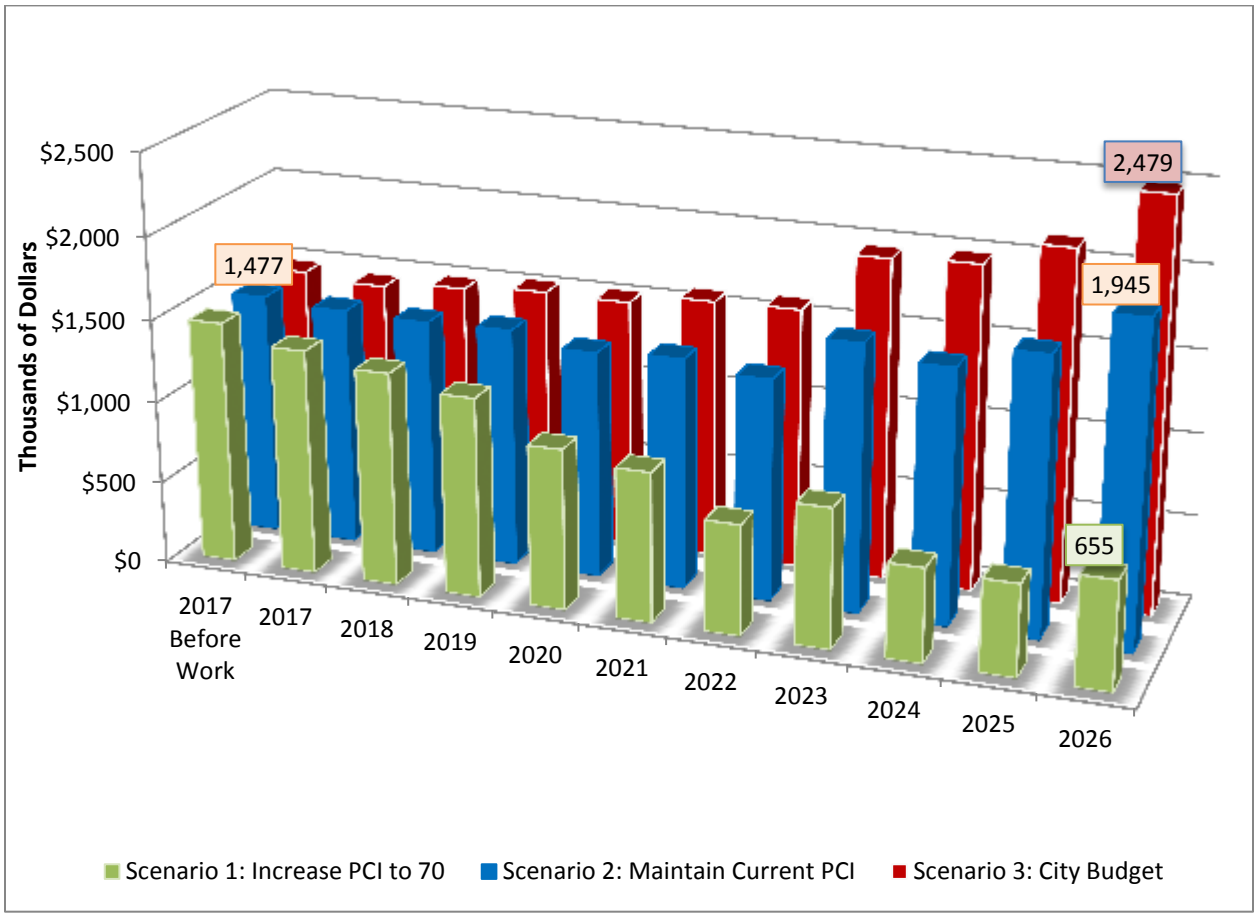
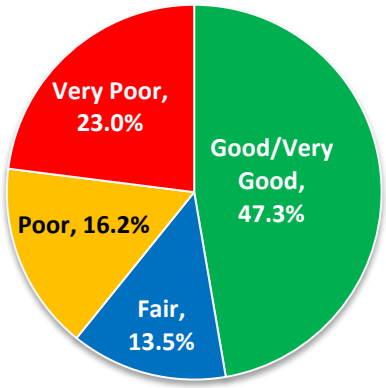
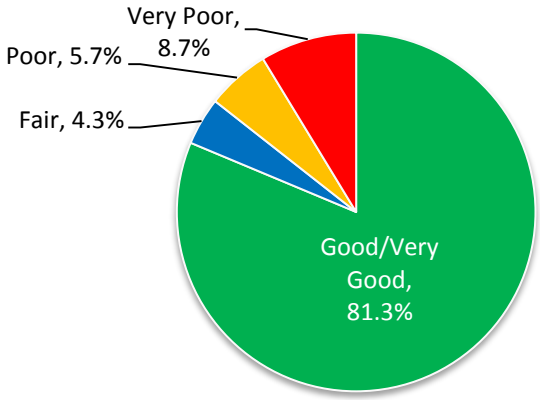


Figure 10: Annual Deferred Maintenance by Scenario

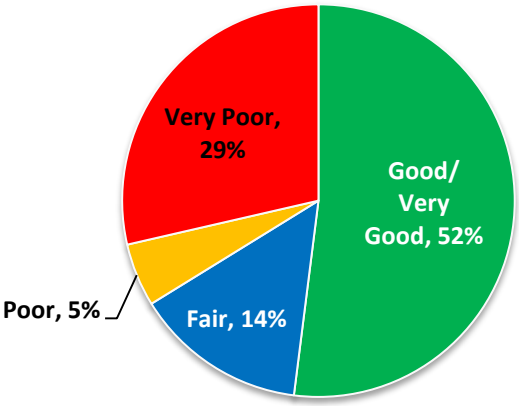
Figure 11 illustrates the pavement condition changes under various scenarios. Currently, 47.3% of the network is in the "Good" condition category and 39.2% in "Poor" or "Very Poor/Failed" condition categories. In general, as more funding is available, the network obviously improves. Under Scenario 1, it is projected that the network in "Good" condition will increase significantly from 47.3% to 81.3% by 2026. In addition, the street network in the "Very Poor/Failed" and "Poor" condition categories will decrease by 24.8% to 14.4% by 2026. For Scenario 2, the pavement network in the "Good" condition category will increase to 52% in 2026 and the portion of the street network in the "Very Poor/Failed" and "Poor" condition categories will decrease to 34% by 2026. For Scenario 3, it is projected that the portion of roads in "Good" condition will increase to 50%. However, the portion of roads in "Poor" or "Very Poor/Failed" condition will also increase to 43.7% by 2026.



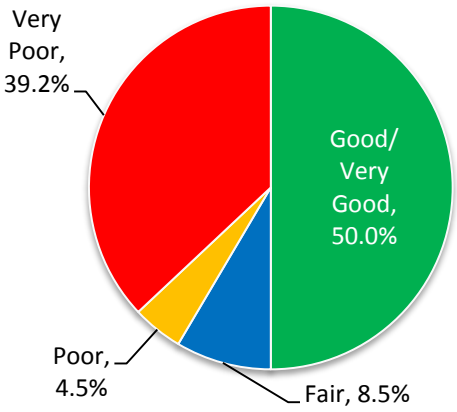
Current Condition 2017



2026 Condition (Scenario 1-Increase PCI to 70)



2026 Condition (Scenario 2-Maintain Current PCI)



2026 Condition (Scenario 3-City Budget)

Figure 11: Pavement Condition Changes under Scenarios 1-3

Summary and Recommendations

To summarize, the City of Blue Lake has a substantial investment of $8.9 million in their entire paved network. Overall, the network is in "Fair" condition with a 2017 network PCI of 53. Of the 7.1 centerline miles, approximately 60.8% currently fall into the "Fair" or "Good" condition categories.

The City's PCI is projected to decrease to 45 under the current funding levels, and the deferred maintenance will grow to $2.5 million by 2026. The City needs approximately $2.7 million to repair essentially all streets. By doing so, streets then can be maintained in good condition with preventive maintenance.

Clearly, the most desirable scenario would to eliminate the deferred maintenance but may not be achievable for most agencies. However, the goal should be to offer residents a safe and functional pavement network without unduly increasing the maintenance burden in the future.

A. Pavement Budget

The recommended scenario for the City of Blue Lake is presented in Scenario 1, which requires a total budget of $2.2 million. This plan will increase the PCI to 70 by 2026 and will also increase the pavement sections that are in "Good" condition to 81.3%. In addition, the deferred maintenance will decrease to $0.7 million by 2026.

B. Pavement Maintenance Strategies

The City's pavement maintenance strategies should include seals, overlays, and reconstruction. Crack sealing, one of the least expensive treatments, can keep moisture out of pavements and prevent the underlying aggregate base from premature failures. Slurry seals are also cost-effective for pavements currently in good condition.

Therefore, we recommend that the City continue with well-funded preventive maintenance program. This is necessary to at least maintain the portion of the street network that is in "Good" condition and avoid escalating the deferred maintenance even more.

C. Maintenance and Rehabilitation Decision Tree

The maintenance and rehabilitation Decision Tree and the associated unit costs should be reviewed and updated annually to reflect new construction techniques/repairs and changing costs so the budget analysis results can be reliable and accurate.

D. Next Steps

To summarize, we recommend that the City undertake the following steps:

- Implement/ maintain a preventive maintenance strategy.
- Determine other funding sources to at least maintain the current pavement condition. Examples of some funding sources are listed below:

Federal Funding Sources

- Community Development Block Grants (CDBG)
- Congestion Mitigation & Air Quality Improvement (CMAQ)
- Secure Rural Schools and Community Self-Determination Act
- Surface Transportation Block Grant Program
- Highway Safety Improvement Program (HSIP)
- HSIP High Risk Rural Roads Set-Aside (HR3)

State Funding Sources

- Active Transportation Program (ATP) which now includes the Bicycle Transportation Account (BTA) and Safe Routes to Schools (SR2S)
- State Transportation Improvement Program (STIP)
- AB 2766 (vehicle surcharge)
- Vehicle License Fees (VLF)
- CalRecycle grants
- Transportation Development Act (TDA)
- Traffic Safety Fund
- Transportation Uniform Mitigation Fee (TUMF)

Local/Regional Funding Sources

- Local sales taxes
- Development impact fees
- General funds
- Various assessment districts – lighting, maintenance, flood control, special assessments, community facility districts
- Traffic impact fees
- Traffic safety/circulation fees
- Utilities e.g., stormwater, water, wastewater enterprise funds
- Transportation mitigation fees
- Flood Control Districts
- Enterprise Funds (solid waste and water)
- Parcel/property taxes

- Vehicle registration fees
- Vehicle code fines
- Underground impact fees
- Solid waste funds
- Transient Occupancy Taxes (TOT)

APPENDIX A

Section Description Inventory

Section Description Inventory Report

This report lists a variety of section description information for each of the City's pavement sections. It lists the street and section identifiers, limits, functional class, surface type, number of lanes, lengths, widths, Inspected 2017 PCI, and area identifier.

All of the City's pavement sections are included in the report. The report is sorted alphabetically by Street Name and Section ID. The field descriptions in this report are listed below:

COLUMN	DESCRIPTION
Street ID	Street Identification - A code up to ten characters/digits to identify the street. Generally, the street name is truncated to six characters. The Street ID should be unique for each street.
Section ID	Section Identification - A code up to ten characters/digits to identify the section number. The Section ID must be unique for each section of one street.
Street Name	Street Name - The name of the street as indicated by street signs in the field.
Begin Location	Beginning limit of the section.
End Location	Ending limit of the section.
Lanes	Number of travel lanes.
Length (ft)	Length of the section in feet.
Width (ft)	Average width of the section in feet.
Surface Type (ST)	Surface Type (A = AC Pavement, O = AC Overlay of AC Pavement, C = AC Overlay of PCC Pavement, P = PCC Pavement, ST = Surface treatment over gravel base/subgrade).
Functional Class (FC)	Functional Classification (C = Collector, R = Residential).
PCI Date	The last inspection date or rehabilitation date.
PCI	Average PCI for the section. The value is projected for 2017 and is based on the last calculated PCI (i.e. from inspection or maintenance data).

Section Description Inventory
Sorted by Street Name

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-1STAVE	010	1ST AVEUNE - B-1STAVE	GREENWOOD RD	G STREET	2	222	36	A	R	12/3/2016	60
B-1STAVE	020	1ST AVEUNE - B-1STAVE	G ST	H ST	2	300	44	A	R	12/3/2016	67
B-1STAVE	030	1ST AVEUNE - B-1STAVE	H ST	I ST	2	289	44	A	R	12/3/2016	43
B-1STAVE	040	1ST AVEUNE - B-1STAVE	I ST	RAILROAD AVE	2	296	26	A	R	12/3/2016	49
B-2NDAVE	010	2ND AVENUE - B-2NDAVE	BROAD ST	G ST	2	286	34	A	R	10/16/2009	5
B-2NDAVE	020	2ND AVENUE - B-2NDAVE	H STREET	I STREET	2	286	36	A	R	10/16/2009	37
B-2NDAVE	030	2ND AVENUE - B-2NDAVE	I STREET	J STREET	2	287	22	A	R	12/3/2016	36
B-2NDAVE	040	2ND AVENUE - B-2NDAVE	J STREET	EAST END	2	258	20	A	R	10/16/2009	37
B-3RDAVE	010	3RD AVENUE - B-3RDAVE	H STREET	I STREET	2	279	34	A	R	10/16/2009	44
B-3RDAVE	020	3RD AVENUE - B-3RDAVE	I STREET	J STREET	2	289	51	A	R	12/3/2016	62
B-3RDAVE	030	3RD AVENUE - B-3RDAVE	J STREET	K STREET	2	371	29	A	R	12/3/2016	38
B-3RDAVE	040	3RD AVENUE - B-3RDAVE	K STREET	RAILROAD AVENUE	2	137	40	A	R	12/3/2016	94
B-4THAVE	010	4TH AVENUE - B-4THAVE	H ST	K ST	2	938	32	A	R	12/3/2016	93
B-5THAVE	010	5TH AVENUE - B-5THAVE	I ST	K ST	2	642	29	A	R	12/3/2016	70
B-AST	010	A STREET - B-AST	GREENWOOD AVE	HARTMAN ST	2	1040	22	A	R	12/3/2016	52
B-ACACDR	010	ACACIA DRIVE - B-ACACDR	S END	ACACIA DR	2	148	36	A	R	12/3/2016	87
B-ACACDR	020	ACACIA DRIVE - B-ACACDR	ACACIA DR	PARK AVE	2	185	34	A	R	10/16/2009	28
B-ACACDR	030	ACACIA DRIVE - B-ACACDR	PARK AVE	BLUE LAKE BLVD	2	857	36	A	R	10/16/2009	21
B-ACACDR	040	ACACIA DRIVE - B-ACACDR	ACACIA DR	E CDS	2	160	28	A	R	10/16/2009	25
B-BST	010	B STREET - B-BST	GREENWOOD AVE	BROAD ST	2	608	26	A	R	12/3/2016	90
B-BST	020	B STREET - B-BST	BROAD ST	E END	2	345	26	A	R	12/3/2016	61
B-BLKAVE	010	BLUE LAKE AVE - B-BLKAVE	GELY ST	E END	2	211	22	A	R	12/3/2016	65
B-BLBLVD	010	BLUE LAKE BOULEVARD - B-BLBLVD	ACACIA DR	371FT N/O RAILROAD AVE	2	1598	30	A	C	12/3/2016	84
B-BLBLVD	020	BLUE LAKE BOULEVARD - B-BLBLVD	783 E/O GREENWOOD DR	HARTMAN ST	2	503	30	A	C	12/3/2016	85
B-BROAST	010	BROAD STREET - B-BROAST	2ND AVE	B ST	2	503	36	A	R	12/3/2016	55
B-BROAST	020	BROAD STREET - B-BROAST	B ST	C ST	2	272	22	A	R	10/16/2009	16
B-BRODLN	010	BRODERICK LANE - B-BRODLN	CHARTIN RD	RAILROAD AVE	2	506	24	A	R	12/3/2016	72
B-CST	010	C STREET - B-CST	GREENWOOD AVE	BROAD ST	2	609	16	A	R	10/16/2009	12
B-CHARRD	010	CHARTIN ROAD - B-CHARRD	S END	CHARTIN RD	3	186	40	A	R	12/3/2016	82
B-CHARRD	020	CHARTIN ROAD - B-CHARRD	CHARTIN RD	RANCHERIA RD	2	674	22	A	R	12/3/2016	86
B-CHARRD	030	CHARTIN ROAD - B-CHARRD	RANCHERIA RD	BRODRERIC LN	2	1082	28	A	R	12/3/2016	64
B-CHARRD	040	CHARTIN ROAD - B-CHARRD	BRODERICK LN	E END	2	681	34	A	R	12/3/2016	76
B-EST	010	E STREET - B-EST	RAILROAD AVE	I ST	2	319	22	A	R	10/16/2009	30
B-EVERST	010	EVERGREEN STREET - B-EVERST	K ST	ACACIA DR	2	570	38	A	R	12/3/2016	46
B-FST	010	F STREET - B-FST	RAILROAD AVE	2ND AVE	2	593	25	A	R	10/16/2009	43
B-GST	010	G STREET - B-GST	S RAILROAD AVE	RAILROAD AVE	2	83	48	A	R	12/3/2016	93

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-GST	020	G STREET - B-GST	RAILROAD AVE	2ND AVE	2	599	46	A	R	12/3/2016	62
B-GST	030	G STREET - B-GST	2ND AVE	A ST	2	443	32	A	R	10/16/2009	34
B-GELYST	010	GELY STREET - B-GELYST	CHARTIN RD	S RAILROAD AVE	2	302	20	A	R	12/3/2016	63
B-GRWDRD	010	GREENWOOD ROAD - B-GRWDRD	RAILROAD AVE	BLUE LAKE BLVD	2	1330	37	A	R	12/3/2016	48
B-HST	010	H STREET - B-HST	RAILROAD AVE	1ST AVE	2	213	39	A	R	12/3/2016	60
B-HST	020	H STREET - B-HST	1ST AVE	2ND AVE	2	307	43	A	R	12/3/2016	57
B-HST	030	H STREET - B-HST	2ND AVE	3RD AVE	2	306	36	A	R	12/3/2016	79
B-HST	040	H STREET - B-HST	3 AVE	4TH AVE	2	290	15	A	R	12/3/2016	93
B-HARTST	010	HARTMAN STREET - B-HARTST	A ST	BLUE LAKE BLVD	2	558	22	A	R	10/16/2009	30
B-HATCRD	010	HATCHERY ROAD - B-HATCRD	S RAILROAD AVE	BLUE LAKE BLVD	2	296	40	A	R	12/3/2016	61
B-HATCRD	020	HATCHERY ROAD - B-HATCRD	S CITY LIMIT	S RAILROAD AVE	2	849	37	A	R	12/3/2016	69
B-IST	010	I STREET - B-IST	1ST AVE	4TH AVE	2	891	48	A	R	12/3/2016	60
B-IST	020	I STREET - B-IST	4TH AVE	BLUE LAKE BLVD	2	512	20	A	R	12/3/2016	75
B-JST	010	J STREET - B-JST	2ND AVE	BLUE LAKE BLVD	2	1274	20	A	R	12/3/2016	42
B-KST	010	K STREET - B-KST	3RD AVE	4TH AVE	2	296	20	A	R	12/3/2016	90
B-KST	020	K STREET - B-KST	4TH AVE	5TH AVE	2	315	41	A	R	12/3/2016	69
B-KST	030	K STREET - B-KST	5TH AVE	EVERGREEN ST	2	142	20	A	R	12/3/2016	70
B-LEEVCT	010	LEEVERLEN COURT - B-LEEVCT	RAYMAR AVE	E CDS	2	202	37	A	R	12/3/2016	73
B-MONWAY	010	MONDA WAY - B-MONWAY	TAYLOR WAY	N CDS	2	284	36	A	R	12/3/2016	85
B-PARAVE	010	PARK AVENNUE - B-PARAVE	ACACIA DR	ACACIA DR	2	872	34	A	R	10/19/2009	33
B-PIEAVE	010	PIERSALL AVENUE - B-PIEAVE	W END	REDWOOD AVE	2	196	17	A	R	10/19/2009	24
B-RRDAVE	010	RAILROAD AVENUE - B-RRDAVE	GREENWOOD AVE	G ST	2	617	37	A	R	10/19/2009	32
B-RRDAVE	020	RAILROAD AVENUE - B-RRDAVE	G ST	H ST	2	314	31	A	R	12/3/2016	70
B-RRDAVE	030	RAILROAD AVENUE - B-RRDAVE	H ST	1ST AVE	2	645	24	A	R	10/19/2009	30
B-RRDAVE	040	RAILROAD AVENUE - B-RRDAVE	1ST AVE	400FT E/O 1ST AVE	2	421	24	A	R	10/19/2009	43
B-RRDAVE	050	RAILROAD AVENUE - B-RRDAVE	400FT E/O 1ST AVE	E CITY LIMIT	2	970	28	A	R	12/3/2016	90
B-RANCLN	010	RANCHERIA LANE - B-RANCLN	W CITY LIMIT	CHARTIN RD	2	299	40	A	R	12/3/2016	88
B-RAYAVE	010	RAYMAR AVENUE - B-RAYAVE	RAILROAD AVE	EVERGREEN ST	2	490	37	A	R	10/19/2009	41
B-RAYAVE	020	RAYMAR AVENUE - B-RAYAVE	EVERGREEN ST	BLUE LAKE BLVD	2	404	37	A	R	12/3/2016	91
B-RWDAVE	010	REDWOOD AVENUE - B-RWDAVE	PIERSALL AVE	S CDS	2	449	22	A	R	12/3/2016	56
B-RWDAVE	020	REDWOOD AVENUE - B-RWDAVE	RAILROAD AVE	PIERSALL AVE	2	383	19	A	R	12/3/2016	54
B-ROUSCT	010	ROUSS COURT - B-ROUSCT	RAYMAR AVENUE	EAST CDS	2	224	37	A	R	12/3/2016	76
B-SHAMLN	010	SHAMROCK LANE - B-SHAMLN	EAST END	RAILROAD AVE	2	292	24	A	R	12/3/2016	84
B-SRRAVE	010	SOUTH RAILROAD AVENUE - B-SRRAVE	CHARTIN RD	G ST	2	2390	20	A	R	12/3/2016	43
B-SRRAVE	020	SOUTH RAILROAD AVENUE - B-SRRAVE	G ST	HATCHERY RD	2	200	34	A	R	12/3/2016	64
B-TAYWAY	010	TAYLOR WAY - B-TAYWAY	WEST END	MONDA WAY	2	747	37	A	R	12/3/2016	73

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-TAYWAY	020	TAYLOR WAY - B-TAYWAY	MONDA WAY	HATCHERY RD	2	651	36	A	R	12/3/2016	73
B-WAHLST	010	WAHL STREET - B-WAHLST	1ST AVENUE	C STREET	2	863	21	A	R	10/19/2009	17

Section Description Inventory
Sorted by Descending PCI

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-3RDAVE	040	3RD AVENUE - B-3RDAVE	K STREET	RAILROAD AVENUE	2	137	40	A	R	12/3/2016	94
B-4THAVE	010	4TH AVENUE - B-4THAVE	H ST	K ST	2	938	32	A	R	12/3/2016	93
B-GST	010	G STREET - B-GST	S RAILROAD AVE	RAILROAD AVE	2	83	48	A	R	12/3/2016	93
B-HST	040	H STREET - B-HST	3 AVE	4TH AVE	2	290	15	A	R	12/3/2016	93
B-RAYAVE	020	RAYMAR AVENUE - B-RAYAVE	EVERGREEN ST	BLUE LAKE BLVD	2	404	37	A	R	12/3/2016	91
B-BST	010	B STREET - B-BST	GREENWOOD AVE	BROAD ST	2	608	26	A	R	12/3/2016	90
B-KST	010	K STREET - B-KST	3RD AVE	4TH AVE	2	296	20	A	R	12/3/2016	90
B-RRDAVE	050	RAILROAD AVENUE - B-RRDAVE	400FT E/O 1ST AVE	E CITY LIMIT	2	970	28	A	R	12/3/2016	90
B-RANCLN	010	RANCHERIA LANE - B-RANCLN	W CITY LIMIT	CHARTIN RD	2	299	40	A	R	12/3/2016	88
B-ACACDR	010	ACACIA DRIVE - B-ACACDR	S END	ACACIA DR	2	148	36	A	R	12/3/2016	87
B-CHARRD	020	CHARTIN ROAD - B-CHARRD	CHARTIN RD	RANCHERIA RD	2	674	22	A	R	12/3/2016	86
B-BLBLVD	020	BLUE LAKE BOULEVARD - B-BLBLVD	783 E/O GREENWOOD DR	HARTMAN ST	2	503	30	A	C	12/3/2016	85
B-MONWAY	010	MONDA WAY - B-MONWAY	TAYLOR WAY	N CDS	2	284	36	A	R	12/3/2016	85
B-BLBLVD	010	BLUE LAKE BOULEVARD - B-BLBLVD	ACACIA DR	371FT N/O RAILROAD AVE	2	1598	30	A	C	12/3/2016	84
B-SHAMLN	010	SHAMROCK LANE - B-SHAMLN	EAST END	RAILROAD AVE	2	292	24	A	R	12/3/2016	84
B-CHARRD	010	CHARTIN ROAD - B-CHARRD	S END	CHARTIN RD	3	186	40	A	R	12/3/2016	82
B-HST	030	H STREET - B-HST	2ND AVE	3RD AVE	2	306	36	A	R	12/3/2016	79
B-CHARRD	040	CHARTIN ROAD - B-CHARRD	BRODERICK LN	E END	2	681	34	A	R	12/3/2016	76
B-ROUSCT	010	ROUSS COURT - B-ROUSCT	RAYMAR AVENUE	EAST CDS	2	224	37	A	R	12/3/2016	76
B-IST	020	I STREET - B-IST	4TH AVE	BLUE LAKE BLVD	2	512	20	A	R	12/3/2016	75
B-LEEVCT	010	LEEVERLEN COURT - B-LEEVCT	RAYMAR AVE	E CDS	2	202	37	A	R	12/3/2016	73
B-TAYWAY	010	TAYLOR WAY - B-TAYWAY	WEST END	MONDA WAY	2	747	37	A	R	12/3/2016	73
B-TAYWAY	020	TAYLOR WAY - B-TAYWAY	MONDA WAY	HATCHERY RD	2	651	36	A	R	12/3/2016	73
B-BRODLN	010	BRODERICK LANE - B-BRODLN	CHARTIN RD	RAILROAD AVE	2	506	24	A	R	12/3/2016	72
B-5THAVE	010	5TH AVENUE - B-5THAVE	I ST	K ST	2	642	29	A	R	12/3/2016	70
B-KST	030	K STREET - B-KST	5TH AVE	EVERGREEN ST	2	142	20	A	R	12/3/2016	70
B-RRDAVE	020	RAILROAD AVENUE - B-RRDAVE	G ST	H ST	2	314	31	A	R	12/3/2016	70
B-HATCRD	020	HATCHERY ROAD - B-HATCRD	S CITY LIMIT	S RAILROAD AVE	2	849	37	A	R	12/3/2016	69
B-KST	020	K STREET - B-KST	4TH AVE	5TH AVE	2	315	41	A	R	12/3/2016	69
B-1STAVE	020	1ST AVEUNE - B-1STAVE	G ST	H ST	2	300	44	A	R	12/3/2016	67
B-BLKAVE	010	BLUE LAKE AVE - B-BLKAVE	GELY ST	E END	2	211	22	A	R	12/3/2016	65
B-CHARRD	030	CHARTIN ROAD - B-CHARRD	RANCHERIA RD	BRODRERIC LN	2	1082	28	A	R	12/3/2016	64
B-SRRAVE	020	SOUTH RAILROAD AVENUE - B-SRRAVE	G ST	HATCHERY RD	2	200	34	A	R	12/3/2016	64
B-GELYST	010	GELY STREET - B-GELYST	CHARTIN RD	S RAILROAD AVE	2	302	20	A	R	12/3/2016	63
B-3RDAVE	020	3RD AVENUE - B-3RDAVE	I STREET	J STREET	2	289	51	A	R	12/3/2016	62
B-GST	020	G STREET - B-GST	RAILROAD AVE	2ND AVE	2	599	46	A	R	12/3/2016	62

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-BST	020	B STREET - B-BST	BROAD ST	E END	2	345	26	A	R	12/3/2016	61
B-HATCRD	010	HATCHERY ROAD - B-HATCRD	S RAILROAD AVE	BLUE LAKE BLVD	2	296	40	A	R	12/3/2016	61
B-1STAVE	010	1ST AVEUNE - B-1STAVE	GREENWOOD RD	G STREET	2	222	36	A	R	12/3/2016	60
B-HST	010	H STREET - B-HST	RAILROAD AVE	1ST AVE	2	213	39	A	R	12/3/2016	60
B-IST	010	I STREET - B-IST	1ST AVE	4TH AVE	2	891	48	A	R	12/3/2016	60
B-HST	020	H STREET - B-HST	1ST AVE	2ND AVE	2	307	43	A	R	12/3/2016	57
B-RWDAVE	010	REDWOOD AVENUE - B-RWDAVE	PIERSALL AVE	S CDS	2	449	22	A	R	12/3/2016	56
B-BROAST	010	BROAD STREET - B-BROAST	2ND AVE	B ST	2	503	36	A	R	12/3/2016	55
B-RWDAVE	020	REDWOOD AVENUE - B-RWDAVE	RAILROAD AVE	PIERSALL AVE	2	383	19	A	R	12/3/2016	54
B-AST	010	A STREET - B-AST	GREENWOOD AVE	HARTMAN ST	2	1040	22	A	R	12/3/2016	52
B-1STAVE	040	1ST AVEUNE - B-1STAVE	I ST	RAILROAD AVE	2	296	26	A	R	12/3/2016	49
B-GRWDRD	010	GREENWOOD ROAD - B-GRWDRD	RAILROAD AVE	BLUE LAKE BLVD	2	1330	37	A	R	12/3/2016	48
B-EVERST	010	EVERGREEN STREET - B-EVERST	K ST	ACACIA DR	2	570	38	A	R	12/3/2016	46
B-3RDAVE	010	3RD AVENUE - B-3RDAVE	H STREET	I STREET	2	279	34	A	R	10/16/2009	44
B-FST	010	F STREET - B-FST	RAILROAD AVE	2ND AVE	2	593	25	A	R	10/16/2009	43
B-RRDAVE	040	RAILROAD AVENUE - B-RRDAVE	1ST AVE	400FT E/O 1ST AVE	2	421	24	A	R	10/19/2009	43
B-1STAVE	030	1ST AVEUNE - B-1STAVE	H ST	I ST	2	289	44	A	R	12/3/2016	43
B-SRRAVE	010	SOUTH RAILROAD AVENUE - B-SRRAVE	CHARTIN RD	G ST	2	2390	20	A	R	12/3/2016	43
B-JST	010	J STREET - B-JST	2ND AVE	BLUE LAKE BLVD	2	1274	20	A	R	12/3/2016	42
B-RAYAVE	010	RAYMAR AVENUE - B-RAYAVE	RAILROAD AVE	EVERGREEN ST	2	490	37	A	R	10/19/2009	41
B-3RDAVE	030	3RD AVENUE - B-3RDAVE	J STREET	K STREET	2	371	29	A	R	12/3/2016	38
B-2NDAVE	020	2ND AVENUE - B-2NDAVE	H STREET	I STREET	2	286	36	A	R	10/16/2009	37
B-2NDAVE	040	2ND AVENUE - B-2NDAVE	J STREET	EAST END	2	258	20	A	R	10/16/2009	37
B-2NDAVE	030	2ND AVENUE - B-2NDAVE	I STREET	J STREET	2	287	22	A	R	12/3/2016	36
B-GST	030	G STREET - B-GST	2ND AVE	A ST	2	443	32	A	R	10/16/2009	34
B-PARAVE	010	PARK AVENNUE - B-PARAVE	ACACIA DR	ACACIA DR	2	872	34	A	R	10/19/2009	33
B-RRDAVE	010	RAILROAD AVENUE - B-RRDAVE	GREENWOOD AVE	G ST	2	617	37	A	R	10/19/2009	32
B-EST	010	E STREET - B-EST	RAILROAD AVE	I ST	2	319	22	A	R	10/16/2009	30
B-HARTST	010	HARTMAN STREET - B-HARTST	A ST	BLUE LAKE BLVD	2	558	22	A	R	10/16/2009	30
B-RRDAVE	030	RAILROAD AVENUE - B-RRDAVE	H ST	1ST AVE	2	645	24	A	R	10/19/2009	30
B-ACACDR	020	ACACIA DRIVE - B-ACACDR	ACACIA DR	PARK AVE	2	185	34	A	R	10/16/2009	28
B-ACACDR	040	ACACIA DRIVE - B-ACACDR	ACACIA DR	E CDS	2	160	28	A	R	10/16/2009	25
B-PIEAVE	010	PIERSALL AVENUE - B-PIEAVE	W END	REDWOOD AVE	2	196	17	A	R	10/19/2009	24
B-ACACDR	030	ACACIA DRIVE - B-ACACDR	PARK AVE	BLUE LAKE BLVD	2	857	36	A	R	10/16/2009	21
B-WAHLST	010	WAHL STREET - B-WAHLST	1ST AVENUE	C STREET	2	863	21	A	R	10/19/2009	17
B-BROAST	020	BROAD STREET - B-BROAST	B ST	C ST	2	272	22	A	R	10/16/2009	16

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
B-CST	010	C STREET - B-CST	GREENWOOD AVE	BROAD ST	2	609	16	A	R	10/16/2009	12
B-2NDAVE	010	2ND AVENUE - B-2NDAVE	BROAD ST	G ST	2	286	34	A	R	10/16/2009	5

APPENDIX B

Maintenance and Rehabilitation Decision Tree

Maintenance and Rehabilitation (M&R) Decision Tree

This report presents the current maintenance and rehabilitation decision tree that exists in the database. The decision tree forms the basis for all of the budgetary computations that are included in this volume. ***Changes to the decision tree will make the results in the budget reports invalid.*** All pavement treatment unit costs relevant to the street types in the database were updated.

The decision tree lists the treatments and costs selected for preventive maintenance and rehabilitation activities. Each line represents a specific combination of functional classification and surface type.

The preventive maintenance portion of the report is identified as Condition Category I – Very Good. All preventive maintenance treatment listings are assigned only to sections in Condition Category I where the PCI $\geq$ 70. Sections with PCI values less than 70 are assigned to treatments listed in Categories II through V.

In the preventive maintenance category (PCI $\geq$ 70), a time sequence is used to identify the appropriate treatment and cost. Each preventive maintenance treatment description consists of three parts: 1) a CRACK treatment, 2) a SURFACE treatment, and 3) a RESTORATION treatment. These three parts allow the user to specify one of three different preventive maintenance treatments depending on the prior maintenance history of the section.

1. The CRACK treatment part can be used to specify the most frequent type of preventive maintenance activity planned (typically crack seals).
2. The SURFACE treatment part can be used to specify more extensive and less frequent preventive maintenance activities, such as chip seals or slurry seals. For example, a crack seal can be specified on a 3-year cycle with a slurry seal specified after 5 years.
3. The RESTORATION part can be used to specify a surface restoration treatment (such as an overlay) to be performed after a specified number of surface treatments. For example, after a certain number of successive slurry seals, an overlay can be specified instead of another slurry seal.

Rehabilitation treatments are assigned to sections in Condition Categories II through V (PCI less than 70). Each line is defined by a specific combination of functional classification, surface type, and condition category.

COLUMN	**DESCRIPTION**
Functional Class	Functional Classification identifying the branch number.
Surface	Surface Type identifying the branch number.
Condition Category	Condition Category (I through V).
Treatment Type	First Row (Crack Treatment) indicates localized treatment (e.g. crack sealing). Second Row (Surface Treatment) indicates surface treatment (e.g. slurry sealing). Third Row (Restoration Treatment) indicates surface restoration (e.g. overlay).
Treatment	Name of treatments from the "Treatment Descriptions" report.

COLUMN	DESCRIPTION
Yrs. Between Crack Seals	First Row - number of years between successive treatment applications specified in the first row (i.e. CRACK treatment).
Yrs. Between Surface Seals	Second Row - number of years between successive treatment applications specified in the second row (i.e. SURFACE treatment).
Number of Sequential Seals	Number of times that the treatment application in the second row (i.e. SURFACE treatment) will be performed prior to performing the treatment application in the third row.

Note that the treatments assigned to each section should not be blindly followed in preparing a street maintenance program. Engineering judgment and project level analysis should be applied to ensure that the treatment is appropriate and cost effective for the section.

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	3		
			Surface Treatment	SLURRY SEAL	$2.50		6	
			Restoration Treatment	DO NOTHING	$0.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	3		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$1.11			
		III - Good, Load Related		DO NOTHING	$1.51			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$14.00			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.67			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	DO NOTHING	$0.00			3
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$1.11			
		III - Good, Load Related		DO NOTHING	$1.51			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THIN AC OVERLAY(1.5 INCHES)	$7.47			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.47			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00		9	
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00		9	
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	DO NOTHING	$0.00			3
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$1.11			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	AC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		THIN AC OVERLAY(1.5 INCHES)	$3.99			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$5.97			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	AC/AC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		DOUBLE CHIP SEAL	$1.52			
		III - Good, Load Related		HEATER SCARIFY & OVERLAY	$5.95			
		IV - Poor		HEATER SCARIFY & OVERLAY	$6.14			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	AC/PCC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		DOUBLE CHIP SEAL	$1.52			
		III - Good, Load Related		HEATER SCARIFY & OVERLAY	$5.95			
		IV - Poor		HEATER SCARIFY & OVERLAY	$6.14			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$1.11			
		III - Good, Load Related		DO NOTHING	$1.51			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 04/18/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

APPENDIX C

Budget Needs

Projected PCI / Cost Summary

Preventative Treatment / Cost Summary

Rehabilitation Treatment / Cost Summary

Budget Needs Reports

The purpose of this module is to answer the question: ***If the City had all the money in the world, what sections should be fixed and how much will it cost?*** Based on the Maintenance & Rehabilitation (M&R) decision tree and the PCIs of the sections, the program will then select a maintenance or rehabilitation action and compute the total costs over a period of ten years. The Budget Needs represents the "ideal world" funding levels, while the Budget Scenarios reports in the next section represent the most "cost effective" prioritization possible for the actual funding levels.

A budget needs analysis has been performed. The summary results from the analysis are shown below. An interest rate of 3% and an inflation factor of 3% were used to project the costs for the next ten years. This report shows the total ten-year budget that would be required to meet the City's standards as exemplified in the M&R decision tree.

As indicated in the report, with a budget of 2.7 million dollars over the next ten years the PCI of the street network will improve from the current level of 53 to 80 by 2026. If no treatments are programmed, the weighted average PCI is projected to deteriorate from 53 to 35 by 2026.

Budget Needs reports included in this volume are listed below:

- Projected PCI/Cost Summary
- Preventative Maintenance Treatment/Cost Summary
- Rehabilitation Treatment/Cost Summary

Needs - Projected PCI/Cost Summary

This report summarizes and projects the City's network PCI values over a ten-year period, both with and without treatments applied. These costs are based on those in the M&R decision tree. It also projects the costs over a ten-year period.

COLUMN	DESCRIPTION
Year	Year in the analysis period.
PCI Treated	Projected network average PCI with all needed treatments applied.
PCI Untreated	Projected network average PCI without any treatments applied.
PM Cost	Total preventive maintenance treatment cost.
Rehab Cost	Total rehabilitation treatment cost.
Cost	The budget required for each year in the analysis period to meet the City's standard as shown on the M&R decision tree.
Total Cost	Total budget required over a ten-year period.

Needs - Projected PCI/Cost Summary

Inflation Rate = 3.00 %

Printed: 04/18/2017

Year	PCI Treated	PCI Untreated	PM Cost	Rehab Cost	Cost
2017	80	52	$60,215	$1,416,324	$1,476,539
2018	78	50	$2,129	$53,094	$55,223
2019	77	48	$20,641	$21,865	$42,506
2020	75	46	$3,104	$17,481	$20,585
2021	74	44	$6,302	$31,865	$38,167
2022	73	43	$45,637	$44,280	$89,917
2023	75	41	$205,899	$75,500	$281,399
2024	75	39	$104,232	$31,267	$135,499
2025	77	37	$226,829	$26,108	$252,937
2026	80	35	$202,115	$108,729	$310,844

% PM	PM Total Cost	Rehab Total Cost	Total Cost
32.44%	$877,103	$1,826,513	$2,703,616

Needs - Preventive Maintenance Treatment/Cost Summary

This report summarizes each preventive maintenance treatment type, quantity of pavement affected, and total costs over the ten-year period. It also summarizes the total quantities and costs over the next ten years.

COLUMN	DESCRIPTION
Treatment	Type of preventive maintenance treatments needed.
Year	Year in the analysis period (i.e. 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026).
Area Treated	Quantities in linear feet (Seal Cracks) or square yard (Slurry Seal).
Cost	Maintenance treatment cost.

Needs - Preventive Maintenance
Treatment/Cost Summary

Inflation Rate = 3.00 % Printed: 04/18/2017

Treatment	Year	Area Treated		Cost
1.5" AC OVERLAY	2022	1,897	sq.yd.	$41,785
	2023	8,142.22	sq.yd.	$184,724
	2024	3,819.56	sq.yd.	$89,255
	2025	6,322.89	sq.yd.	$152,184
	2026	3,350.78	sq.yd.	$83,069
	Total	23,532.44		$551,017
SLURRY SEAL	2017	24,083.67	sq.yd.	$60,215
	2018	826.67	sq.yd.	$2,129
	2019	7,782	sq.yd.	$20,641
	2020	1,136	sq.yd.	$3,104
	2021	2,239.56	sq.yd.	$6,302
	2022	1,328.89	sq.yd.	$3,852
	2023	7,092.89	sq.yd.	$21,175
	2024	4,870	sq.yd.	$14,977
	2025	23,567.89	sq.yd.	$74,645
	2026	36,491.89	sq.yd.	$119,046
	Total	109,419.44		$326,086
	Total Quantity	132,951.89		$877,103

Needs - Rehabilitation Treatment/Cost Summary

This report summarizes each rehabilitation treatment type, quantity of pavement affected, and total costs over the ten-year period. It also summarizes the total quantities and costs over the next ten years.

COLUMN	DESCRIPTION
Treatment	Type of rehabilitation treatments needed.
Year	Year in the analysis period (i.e. 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026).
Area Treated	Quantities in square yard.
Cost	Rehabilitation treatment cost.

Needs - Rehabilitation
Treatment/Cost Summary

Inflation Rate = 3.00 % Printed: 04/18/2017

Treatment	Year		Area Treated		Cost
2" AC OVERLAY W/ DIGOUTS	2017		28,661.89	sq.yd.	$1,146,482
		Total	28,661.89	sq.yd.	$1,146,482
SLURRY SEAL W/ DIGOUTS	2017		16,802.33	sq.yd.	$68,021
	2018		11,383	sq.yd.	$53,094
	2019		4,121.78	sq.yd.	$21,865
	2020		808.56	sq.yd.	$4,418
	2025		4,121.78	sq.yd.	$26,108
	2026		9,391	sq.yd.	$49,016
		Total	46,628.44	sq.yd.	$222,522
SURFACE TREATMENT (CAPE OR SLURRY)	2017		20,181.67	sq.yd.	$201,821
	2020		1,195.44	sq.yd.	$13,063
	2021		2,831.11	sq.yd.	$31,865
	2022		3,819.56	sq.yd.	$44,280
	2023		6,322.89	sq.yd.	$75,500
	2024		2,542.22	sq.yd.	$31,267
	2026		4,576.33	sq.yd.	$59,713
		Total	41,469.22	sq.yd.	$457,509

Total Cost $1,826,513

Scenarios 1 - 3

Scenario 1: Increase PCI to 70
($2.2 million over ten years)
Cost Summary Report
Network Condition Summary Report

Target-Driven Scenarios - Cost Summary

Interest: 3% Inflation: 3% Printed: 04/18/2017

Scenario: Blue Lake - Incresae PCI to 70

Objective: Minimum Network Average PCI Target: By Year

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	55	Year 2	56	Year 3	57	Year 4	59
Year 5	60	Year 6	62	Year 7	64	Year 8	66
Year 9	68	Year 10	70				

Year		Rehabilitation	Preventive Maintenance		Total Cost	Deferred
2017	II	$45,761	Non-Project	$60,215	$105,976	$1,370,552
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$45,761				
	Project	$0				
2018	II	$30,417	Non-Project	$2,129	$152,285	$1,299,355
	III	$4,165	Project	$0		
	IV	$0				
	V	$115,574				
	Total	$150,156				
	Project	$0				
2019	II	$0	Non-Project	$20,641	$166,175	$1,214,668
	III	$21,865	Project	$0		
	IV	$0				
	V	$123,669				
	Total	$145,534				
	Project	$0				
2020	II	$0	Non-Project	$3,104	$277,969	$976,247
	III	$0	Project	$0		
	IV	$0				
	V	$274,865				
	Total	$274,865				
	Project	$0				
2021	II	$0	Non-Project	$6,302	$170,417	$910,025
	III	$4,551	Project	$0		
	IV	$0				
	V	$159,564				
	Total	$164,115				
	Project	$0				

Year		Rehabilitation	Preventive Maintenance		Total Cost	Deferred
2022	II	$0	Non-Project	$3,852	$270,399	$670,779
	III	$0				
	IV	$0	Project	$0		
	V	$266,547				
	Total	$266,547				
	Project	$0				
2023	II	$0	Non-Project	$21,175	$209,810	$844,548
	III	$0				
	IV	$0	Project	$0		
	V	$188,635				
	Total	$188,635				
	Project	$0				
2024	II	$0	Non-Project	$14,977	$316,314	$568,549
	III	$0				
	IV	$0	Project	$0		
	V	$301,337				
	Total	$301,337				
	Project	$0				
2025	II	$0	Non-Project	$74,645	$222,701	$555,118
	III	$26,108				
	IV	$0	Project	$0		
	V	$121,948				
	Total	$148,056				
	Project	$0				
2026	II	$49,016	Non-Project	$25,543	$298,100	$655,441
	III	$0				
	IV	$0	Project	$0		
	V	$223,541				
	Total	$272,557				
	Project	$0				

Summary

Functional Class	Rehabilitation	Prev. Maint.
Collector	$0	$41,421
Residential/Local	$1,957,563	$191,162
Total:	$1,957,563	$232,583

Grand Total: $2,190,146

Target-Driven Scenarios
Network Condition Summary

Interest: 3% Inflation: 3% Printed: 04/20/2017

Scenario: Blue Lake - Incresae PCI to 70

Objective: Minimum Network Average PCI Target: By Year

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	55	Year 2	56	Year 3	57	Year 4	59
Year 5	60	Year 6	62	Year 7	64	Year 8	66
Year 9	68	Year 10	70				

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment
2017	52	55
2018	50	56
2019	48	57
2020	46	60
2021	44	61
2022	43	63
2023	41	65
2024	39	67
2025	37	69
2026	35	70

Percent Network Area by Functional Classification and Condition Class

Condition in base year 2017, prior to applying treatments.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	41.6%	0.0%	47.3%
II / III	0.0%	0.0%	13.5%	0.0%	13.5%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	50.8%	0.0%	56.5%
II / III	0.0%	0.0%	4.3%	0.0%	4.3%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	75.7%	0.0%	81.3%
II / III	0.0%	0.0%	4.3%	0.0%	4.3%
IV	0.0%	0.0%	5.7%	0.0%	5.7%
V	0.0%	0.0%	8.7%	0.0%	8.7%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Scenario 2: Maintain Current PCI
($960,000 over ten years)
Cost Summary Report
Network Condition Summary Report

Target-Driven Scenarios - Cost Summary

Interest: 3% Inflation: 3% Printed: 04/18/2017

Scenario: Blue Lake - Maintain Current PCI (53)

Objective: Minimum Network Average PCI Target: Overall 53

Year	Rehabilitation		Preventive Maintenance		Total Cost	Deferred
2017	II	$0	Non-Project	$27,845	$27,845	$1,448,677
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$0				
	Project	$0				
2018	II	$58,696	Non-Project	$35,472	$94,168	$1,437,944
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$58,696				
	Project	$0				
2019	II	$10,883	Non-Project	$20,641	$90,224	$1,450,462
	III	$21,865	Project	$0		
	IV	$0				
	V	$36,835				
	Total	$69,583				
	Project	$0				
2020	II	$0	Non-Project	$3,104	$121,858	$1,375,225
	III	$0	Project	$0		
	IV	$0				
	V	$118,754				
	Total	$118,754				
	Project	$0				
2021	II	$0	Non-Project	$6,302	$85,339	$1,401,499
	III	$0	Project	$0		
	IV	$0				
	V	$79,037				
	Total	$79,037				
	Project	$0				
2022	II	$0	Non-Project	$3,852	$104,159	$1,343,237
	III	$0	Project	$0		
	IV	$0				
	V	$100,307				
	Total	$100,307				
	Project	$0				

Year		Rehabilitation	Preventive Maintenance		Total Cost	Deferred
2023	II	$0	Non-Project	$21,175	$129,436	$1,617,552
	III	$0				
	IV	$0	Project	$0		
	V	$108,261				
	Total	$108,261				
	Project	$0				
2024	II	$0	Non-Project	$14,977	$140,889	$1,540,168
	III	$0				
	IV	$0	Project	$0		
	V	$125,912				
	Total	$125,912				
	Project	$0				
2025	II	$0	Non-Project	$35,272	$61,380	$1,677,833
	III	$26,108				
	IV	$0	Project	$0		
	V	$0				
	Total	$26,108				
	Project	$0				
2026	II	$0	Non-Project	$61,311	$105,941	$1,945,356
	III	$0				
	IV	$0	Project	$0		
	V	$44,630				
	Total	$44,630				
	Project	$0				

Summary

Functional Class	Rehabilitation	Prev. Maint.
Collector	$0	$41,421
Residential/Local	$731,288	$188,530
Total:	$731,288	$229,951

Grand Total: $961,239

Scenario: Blue Lake - Maintain Current PCI (53)

Objective: Minimum Network Average PCI Target: Overall 53

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment
2017	52	53
2018	50	53
2019	48	53
2020	46	54
2021	44	53
2022	43	53
2023	41	53
2024	39	54
2025	37	53
2026	35	53

Percent Network Area by Functional Classification and Condition Class

Condition in base year 2017, prior to applying treatments.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	41.6%	0.0%	47.3%
II / III	0.0%	0.0%	13.5%	0.0%	13.5%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	41.6%	0.0%	47.3%
II / III	0.0%	0.0%	13.5%	0.0%	13.5%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	46.3%	0.0%	52.0%
II / III	0.0%	0.0%	14.2%	0.0%	14.2%
IV	0.0%	0.0%	5.2%	0.0%	5.2%
V	0.0%	0.0%	28.6%	0.0%	28.6%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Scenario 3: City's Budget
($56,000 per year)
Cost Summary Report
Network Condition Summary Report

Scenarios - Cost Summary

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year	PM	Budget	Rehabilitation			Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2017	20%	$34,000	II	$26,753	Non-Project	$7,225	$0	$1,442,546	Funded	$0
			III	$0					Unmet	$27,708
			IV	$0	Project	$0				
			V	$0						
			Total	$26,753						
			Project	$0						
2018	20%	$41,272	II	$30,417	Non-Project	$10,100	$0	$1,485,274	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$30,417						
			Project	$0						
2019	20%	$55,814	II	$20,166	Non-Project	$13,593	$0	$1,521,004	Funded	$0
			III	$21,865					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$42,031						
			Project	$0						
2020	20%	$55,814	II	$2,255	Non-Project	$10,518	$645	$1,516,570	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$41,243						
			Total	$43,498						
			Project	$0						
2021	20%	$55,814	II	$6,603	Non-Project	$16,655	$0	$1,580,056	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$31,585						
			Total	$38,188						
			Project	$0						
2022	20%	$55,814	II	$25,779	Non-Project	$11,920	$0	$1,589,747	Funded	$0
			III	$8,318					Unmet	$30,974
			IV	$9,374	Project	$0				
			V	$0						
			Total	$43,471						
			Project	$0						

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2023	20%	$55,814	II $0	Non-Project	$16,217	$0	$1,951,296	Funded	$0
			III $4,828					Unmet	$0
			IV $0	Project	$0				
			V $33,381						
			Total $38,209						
			Project $0						
2024	20%	$55,814	II $12,811	Non-Project	$18,211	$0	$1,974,106	Funded	$0
			III $0					Unmet	$0
			IV $0	Project	$0				
			V $24,489						
			Total $37,300						
			Project $0						
2025	20%	$55,814	II $0	Non-Project	$11,080	$83	$2,122,862	Funded	$0
			III $26,108					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $26,108						
			Project $0						
2026	20%	$55,814	II $21,522	Non-Project	$13,862	$0	$2,479,020	Funded	$0
			III $0					Unmet	$811
			IV $19,139	Project	$0				
			V $0						
			Total $40,661						
			Project $0						

Summary

Functional Class	Rehabilitation	Prev. Maint.	Funded Stop Gap	Unmet Stop Gap
Collector	$0	$24,906	$0	$0
Residential/Local	$366,636	$104,475	$0	$59,493
Grand Total:	$366,636	$129,381	$0	$59,493

Scenarios - Network Condition Summary

Interest: 3% Inflation: 3% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	$34,000	20%	2021	$55,814	20%	2025	$55,814	20%
2018	$41,272	20%	2022	$55,814	20%	2026	$55,814	20%
2019	$55,814	20%	2023	$55,814	20%			
2020	$55,814	20%	2024	$55,814	20%			

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2017	52	53	0.52	1.05
2018	50	52	0.55	1.09
2019	48	51	0.69	1.41
2020	46	50	0.32	0.65
2021	44	50	0.44	0.88
2022	43	49	0.65	1.31
2023	41	48	0.46	0.92
2024	39	47	0.48	0.96
2025	37	46	0.45	0.89
2026	35	45	0.49	0.97

Percent Network Area by Functional Class and Condition Category

Condition in base year 2017, prior to applying treatments.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	41.6%	0.0%	47.3%
II / III	0.0%	0.0%	13.5%	0.0%	13.5%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	47.0%	0.0%	52.6%
II / III	0.0%	0.0%	8.1%	0.0%	8.1%
IV	0.0%	0.0%	16.2%	0.0%	16.2%
V	0.0%	0.0%	23.0%	0.0%	23.0%
Total	0.0%	5.6%	94.4%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	5.6%	44.3%	0.0%	50.0%
II / III	0.0%	0.0%	8.5%	0.0%	8.5%
IV	0.0%	0.0%	4.5%	0.0%	4.5%
V	0.0%	0.0%	36.9%	0.0%	36.9%

Total	0.0%	5.6%	94.4%	0.0%	100.0%

APPENDIX D

Sections Selected for Treatment:
City Budget (Scenario 3)

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	$34,000	20%	2021	$55,814	20%	2025	$55,814	20%
2018	$41,272	20%	2022	$55,814	20%	2026	$55,814	20%
2019	$55,814	20%	2023	$55,814	20%			
2020	$55,814	20%	2024	$55,814	20%			

Year: 2017

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
1ST AVEUNE	GREENWOOD RD	G STREET	B-1STAVE	010	222	36	7,992	12/3/2016	60	R	AC	69	$3,552	24,432	SLURRY SEAL W/ DIGOUTS
B STREET	BROAD ST	E END	B-BST	020	345	26	8,970	12/3/2016	61	R	AC	70	$3,987	24,625	SLURRY SEAL W/ DIGOUTS
HATCHERY ROAD	S RAILROAD AVE	BLUE LAKE BLVD	B-HATCRD	010	296	40	11,840	12/3/2016	61	R	AC	70	$5,263	24,625	SLURRY SEAL W/ DIGOUTS
H STREET	RAILROAD AVE	1ST AVE	B-HST	010	213	39	8,307	12/3/2016	60	R	AC	69	$3,692	24,432	SLURRY SEAL W/ DIGOUTS
H STREET	1ST AVE	2ND AVE	B-HST	020	307	43	13,201	12/3/2016	57	R	AC	67	$5,868	23,921	SLURRY SEAL W/ DIGOUTS
REDWOOD AVENUE	PIERSALL AVE	S CDS	B-RWDAVE	010	449	22	9,878	12/3/2016	56	R	AC	66	$4,391	23,712	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$26,753		
I STREET	4TH AVE	BLUE LAKE BLVD	B-IST	020	512	20	10,240	12/3/2016	75	R	AC	82	$2,845	42,638	SLURRY SEAL
LEEVERLEN COURT	RAYMAR AVE	E CDS	B-LEEVCT	010	202	37	7,474	12/3/2016	73	R	AC	80	$2,077	42,678	SLURRY SEAL
ROUSS COURT	RAYMAR AVENUE	EAST CDS	B-ROUSCT	010	224	37	8,288	12/3/2016	76	R	AC	83	$2,303	42,531	SLURRY SEAL
									Treatment Total				$7,225		
				Year 2017 Area Total			86,190		Year 2017 Total				$33,978		

Year: 2018

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
3RD AVENUE	I STREET	J STREET	B-3RDAVE	020	289	51	14,739	12/3/2016	62	R	AC	69	$6,748	23,738	SLURRY SEAL W/ DIGOUTS
BROAD STREET	2ND AVE	B ST	B-BROAST	010	503	36	18,108	12/3/2016	55	R	AC	64	$8,290	22,588	SLURRY SEAL W/ DIGOUTS
GELY STREET	CHARTIN RD	S RAILROAD AVE	B-GELYST	010	302	20	6,040	12/3/2016	63	R	AC	70	$2,765	23,930	SLURRY SEAL W/ DIGOUTS
G STREET	RAILROAD AVE	2ND AVE	B-GST	020	599	46	27,554	12/3/2016	62	R	AC	69	$12,614	23,738	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$30,417		

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year: 2018

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
BRODERICK LANE	CHARTIN RD	RAILROAD AVE	B-BRODLN	010	506	24	12,144	12/3/2016	72	R	AC	78	$3,475	40,947	SLURRY SEAL
CHARTIN ROAD	BRODERICK LN	E END	B-CHARRD	040	681	34	23,154	12/3/2016	76	R	AC	81	$6,625	41,473	SLURRY SEAL
											Treatment Total		$10,100		
				Year 2018 Area Total			101,739				Year 2018 Total		$40,517		

Year: 2019

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
CHARTIN ROAD	RANCHERIA RD	BRODERIC LN	B-CHARRD	030	1,082	28	30,296	12/3/2016	64	R	AC	69	$17,857	18,458	SLURRY SEAL W/ DIGOUTS
I STREET	1ST AVE	4TH AVE	B-IST	010	891	48	42,768	12/3/2016	60	R	AC	66	$20,166	22,357	SLURRY SEAL W/ DIGOUTS
SOUTH RAILROAD AVENUE	G ST	HATCHERY RD	B-SRRAVE	020	200	34	6,800	12/3/2016	64	R	AC	69	$4,008	18,458	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$42,031		
BLUE LAKE BOULEVARD	783 E/O GREENWOOD DR	HARTMAN ST	B-BLBLVD	020	503	30	15,090	12/3/2016	85	RMaC	AC	87	$4,447	44,809	SLURRY SEAL
CHARTIN ROAD	S END	CHARTIN RD	B-CHARRD	010	186	40	7,440	12/3/2016	82	R	AC	85	$2,193	38,996	SLURRY SEAL
H STREET	2ND AVE	3RD AVE	B-HST	030	306	36	11,016	12/3/2016	79	R	AC	83	$3,247	40,092	SLURRY SEAL
K STREET	5TH AVE	EVERGREEN ST	B-KST	030	142	20	2,840	12/3/2016	70	R	AC	75	$837	38,761	SLURRY SEAL
RAILROAD AVENUE	G ST	H ST	B-RRDAVE	020	314	31	9,734	12/3/2016	70	R	AC	75	$2,869	38,761	SLURRY SEAL
											Treatment Total		$13,593		
				Year 2019 Area Total			125,984				Year 2019 Total		$55,624		

Year: 2020

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
2ND AVENUE	J STREET	EAST END	B-2NDAVE	040	258	20	5,160	10/16/2009	37	R	AC	100	$25,060	10,816	2" AC OVERLAY W/ DIGOUTS
PIERSALL AVENUE	W END	REDWOOD AVE	B-PIEAVE	010	196	17	3,332	10/19/2009	24	R	AC	100	$16,183	10,816	2" AC OVERLAY W/ DIGOUTS
											Treatment Total		$41,243		

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year: 2020

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
BLUE LAKE AVE	GELY ST	E END	B-BLKAVE	010	211	22	4,642	12/3/2016	65	R	AC	69	$2,255	22,259	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$2,255		
SHAMROCK LANE	EAST END	RAILROAD AVE	B-SHAMLN	010	292	24	7,008	12/3/2016	84	R	AC	86	$2,128	37,622	SLURRY SEAL
TAYLOR WAY	WEST END	MONDA WAY	B-TAYWAY	010	747	37	27,639	12/3/2016	73	R	AC	76	$8,390	38,078	SLURRY SEAL
									Treatment Total				$10,518		
				Year 2020 Area Total			47,781		Year 2020 Total				$54,016		

Year: 2021

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
2ND AVENUE	I STREET	J STREET	B-2NDAVE	030	287	22	6,314	12/3/2016	36	R	AC	100	$31,585	10,501	2" AC OVERLAY W/ DIGOUTS
									Treatment Total				$31,585		
1ST AVEUNE	G ST	H ST	B-1STAVE	020	300	44	13,200	12/3/2016	67	R	AC	69	$6,603	21,648	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$6,603		
ACACIA DRIVE	S END	ACACIA DR	B-ACACDR	010	148	36	5,328	12/3/2016	87	R	AC	87	$1,666	35,624	SLURRY SEAL
BLUE LAKE BOULEVARD	ACACIA DR	371FT N/O RAILROAD AVE	B-BLBLVD	010	1,598	30	47,940	12/3/2016	84	RMaC	AC	82	$14,989	39,564	SLURRY SEAL
									Treatment Total				$16,655		
				Year 2021 Area Total			72,782		Year 2021 Total				$54,843		

Year: 2022

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
5TH AVENUE	I ST	K ST	B-5THAVE	010	642	29	18,618	12/3/2016	70	R	AC	70	$9,593	21,249	SLURRY SEAL W/ DIGOUTS
HATCHERY ROAD	S CITY LIMIT	S RAILROAD AVE	B-HATCRD	020	849	37	31,413	12/3/2016	69	R	AC	69	$16,186	21,063	SLURRY SEAL W/ DIGOUTS
K STREET	4TH AVE	5TH AVE	B-KST	020	315	41	12,915	12/3/2016	69	R	AC	69	$8,318	16,850	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$34,097		

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year: 2022

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
REDWOOD AVENUE	RAILROAD AVE	PIERSALL AVE	B-RWDAVE	020	383	19	7,277	12/3/2016	54	R	AC	58	$9,374	7,511	SURFACE TREATMENT (CAPE OR SLURRY)
											Treatment Total		$9,374		
CHARTIN ROAD	CHARTIN RD	RANCHERIA RD	B-CHARRD	020	674	22	14,828	12/3/2016	86	R	AC	85	$4,775	36,076	SLURRY SEAL
MONDA WAY	TAYLOR WAY	N CDS	B-MONWAY	010	284	36	10,224	12/3/2016	85	R	AC	84	$3,293	36,379	SLURRY SEAL
RANCHERIA LANE	W CITY LIMIT	CHARTIN RD	B-RANCLN	010	299	40	11,960	12/3/2016	88	R	AC	86	$3,852	35,065	SLURRY SEAL
											Treatment Total		$11,920		
				Year 2022 Area Total			107,235				Year 2022 Total		$55,391		

Year: 2023

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
ACACIA DRIVE	ACACIA DR	PARK AVE	B-ACACDR	020	185	34	6,290	10/16/2009	28	R	AC	100	$33,381	9,899	2" AC OVERLAY W/ DIGOUTS
											Treatment Total		$33,381		
REDWOOD AVENUE	RAILROAD AVE	PIERSALL AVE	B-RWDAVE	020	383	19	7,277	12/3/2016	54	R	AC	67	$4,828	16,088	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$4,828		
B STREET	GREENWOOD AVE	BROAD ST	B-BST	010	608	26	15,808	12/3/2016	90	R	AC	86	$5,244	33,986	SLURRY SEAL
K STREET	3RD AVE	4TH AVE	B-KST	010	296	20	5,920	12/3/2016	90	R	AC	86	$1,964	33,986	SLURRY SEAL
RAILROAD AVENUE	400FT E/O 1ST AVE	E CITY LIMIT	B-RRDAVE	050	970	28	27,160	12/3/2016	90	R	AC	86	$9,009	33,986	SLURRY SEAL
											Treatment Total		$16,217		
				Year 2023 Area Total			62,455				Year 2023 Total		$54,426		

Year: 2024

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
ACACIA DRIVE	ACACIA DR	E CDS	B-ACACDR	040	160	28	4,480	10/16/2009	25	R	AC	100	$24,489	9,610	2" AC OVERLAY W/ DIGOUTS

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

									Treatment Total				$24,489		
TAYLOR WAY	MONDA WAY	HATCHERY RD	B-TAYWAY	020	651	36	23,436	12/3/2016	73	R	AC	70	$12,811	19,974	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$12,811		
4TH AVENUE	H ST	K ST	B-4THAVE	010	938	32	30,016	12/3/2016	93	R	AC	87	$10,255	32,731	SLURRY SEAL
G STREET	S RAILROAD AVE	RAILROAD AVE	B-GST	010	83	48	3,984	12/3/2016	93	R	AC	87	$1,362	32,731	SLURRY SEAL
H STREET	3 AVE	4TH AVE	B-HST	040	290	15	4,350	12/3/2016	93	R	AC	87	$1,487	32,731	SLURRY SEAL
RAYMAR AVENUE	EVERGREEN ST	BLUE LAKE BLVD	B-RAYAVE	020	404	37	14,948	12/3/2016	91	R	AC	86	$5,107	33,493	SLURRY SEAL
									Treatment Total				$18,211		
				Year 2024 Area Total			81,214		Year 2024 Total				$55,511		

Year: 2025

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
CHARTIN ROAD	RANCHERIA RD	BRODRERIC LN	B-CHARRD	030	1,082	28	30,296	12/3/2016	64	R	AC	69	$21,322	15,467	SLURRY SEAL W/ DIGOUTS
SOUTH RAILROAD AVENUE	G ST	HATCHERY RD	B-SRRAVE	020	200	34	6,800	12/3/2016	64	R	AC	69	$4,786	15,467	SLURRY SEAL W/ DIGOUTS
									Treatment Total				$26,108		
3RD AVENUE	K STREET	RAILROAD AVENUE	B-3RDAVE	040	137	40	5,480	12/3/2016	94	R	AC	86	$1,929	32,455	SLURRY SEAL
I STREET	4TH AVE	BLUE LAKE BLVD	B-IST	020	512	20	10,240	12/3/2016	75	R	AC	78	$3,604	33,401	SLURRY SEAL
LEEVERLEN COURT	RAYMAR AVE	E CDS	B-LEEVCT	010	202	37	7,474	12/3/2016	73	R	AC	77	$2,630	33,028	SLURRY SEAL
ROUSS COURT	RAYMAR AVENUE	EAST CDS	B-ROUSCT	010	224	37	8,288	12/3/2016	76	R	AC	79	$2,917	33,515	SLURRY SEAL
									Treatment Total				$11,080		
				Year 2025 Area Total			68,578		Year 2025 Total				$37,188		

Year: 2026

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
1ST AVEUNE	GREENWOOD RD	G STREET	B-1STAVE	010	222	36	7,992	12/3/2016	60	R	AC	65	$4,635	17,965	SLURRY SEAL W/ DIGOUTS
B STREET	BROAD ST	E END	B-BST	020	345	26	8,970	12/3/2016	61	R	AC	66	$5,202	18,086	SLURRY SEAL W/ DIGOUTS

** - Treatment from Project Selection

Scenarios Criteria: Area ID = B - Blue Lake

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/04/2017

Scenario: Blue Lake - City Budget

Year: 2026

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp PCI	FC	Surf Type	PCI	Cost	Rating	Treatment
HATCHERY ROAD	S RAILROAD AVE	BLUE LAKE BLVD	B-HATCRD	010	296	40	11,840	12/3/2016	61	R	AC	66	$6,867	18,086	SLURRY SEAL W/ DIGOUTS
H STREET	RAILROAD AVE	1ST AVE	B-HST	010	213	39	8,307	12/3/2016	60	R	AC	65	$4,818	17,965	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$21,522		
H STREET	1ST AVE	2ND AVE	B-HST	020	307	43	13,201	12/3/2016	57	R	AC	63	$19,139	7,053	SURFACE TREATMENT (CAPE OR SLURRY)
											Treatment Total		$19,139		
BLUE LAKE BOULEVARD	783 E/O GREENWOOD DR	HARTMAN ST	B-BLBLVD	020	503	30	15,090	12/3/2016	85	RMaC	AC	80	$5,470	32,938	SLURRY SEAL
CHARTIN ROAD	BRODERICK LN	E END	B-CHARRD	040	681	34	23,154	12/3/2016	76	R	AC	78	$8,392	32,292	SLURRY SEAL
											Treatment Total		$13,862		
				Year 2026 Area Total			88,554				Year 2026 Total		$54,523		
				Total Section Area:			842,512				Grand Total		$496,017		

APPENDIX E

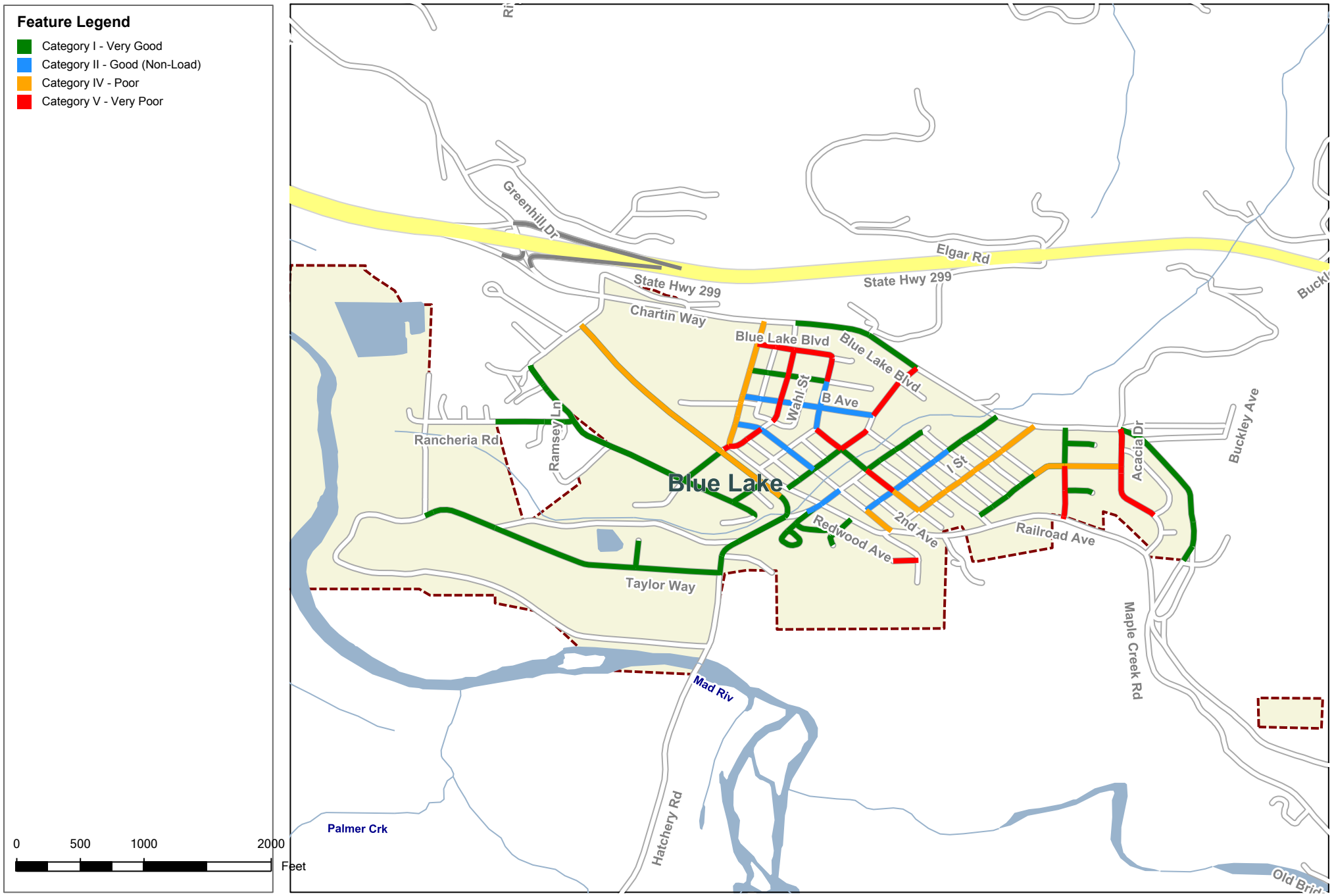
PCI GIS Maps

PCI GIS Map
Current Pavement Conditions
(2017)

HCAOG

Current PCI Condition

Printed: 4/18/2017



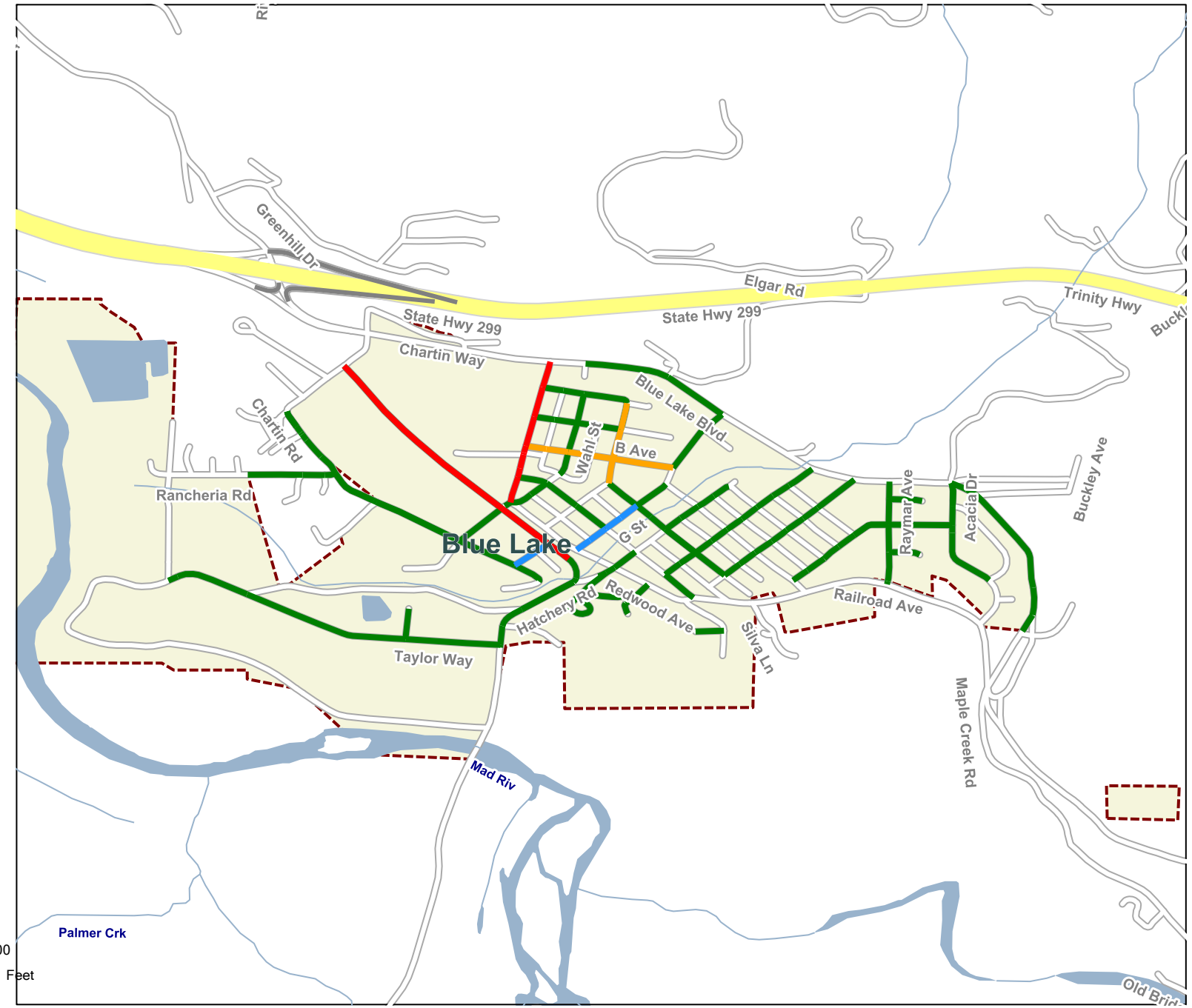
PCI GIS Map
Scenario 1: Increase PCI to 70 (2026)

HCAOG Target-Driven Scenario PCI Condition

Blue Lake - Incresae PCI to 70 - 2026 Project Period - Total Rehab: $272,557 - Printed: 4/18/2017

Feature Legend

- Category I - Very Good
- Category II - Good (Non-Load)
- Category IV - Poor
- Category V - Very Poor

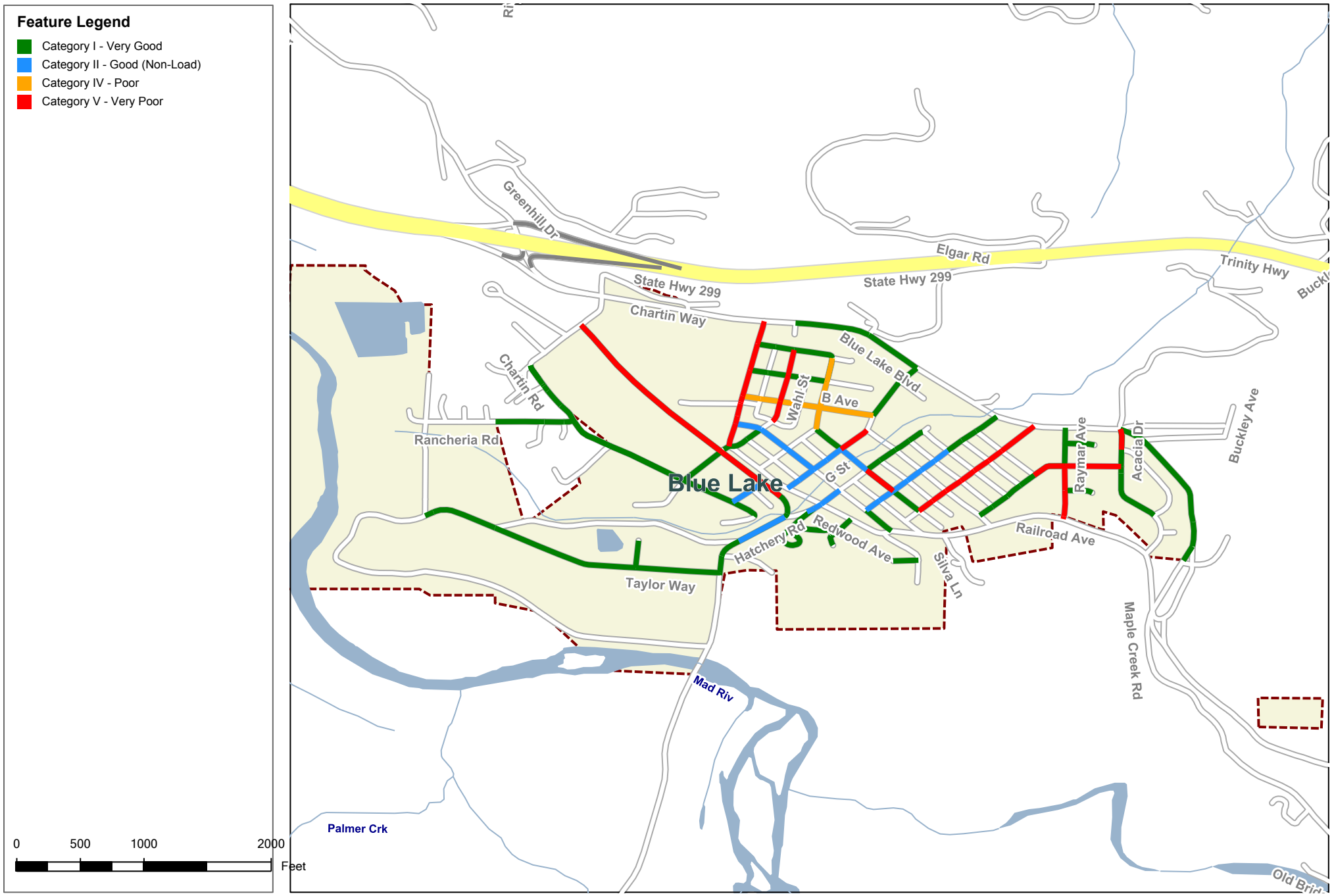


0 500 1000 2000 Feet

PCI GIS Map
Scenario 2: Maintain Current PCI
(2026)

HCAOG Target-Driven Scenario PCI Condition

Blue Lake - Maintain Current PCI (53) - 2026 Project Period - Total Rehab: $44,630 - Printed: 4/18/2017



PCI GIS Map
Scenario 3: City's Budget
(2026)

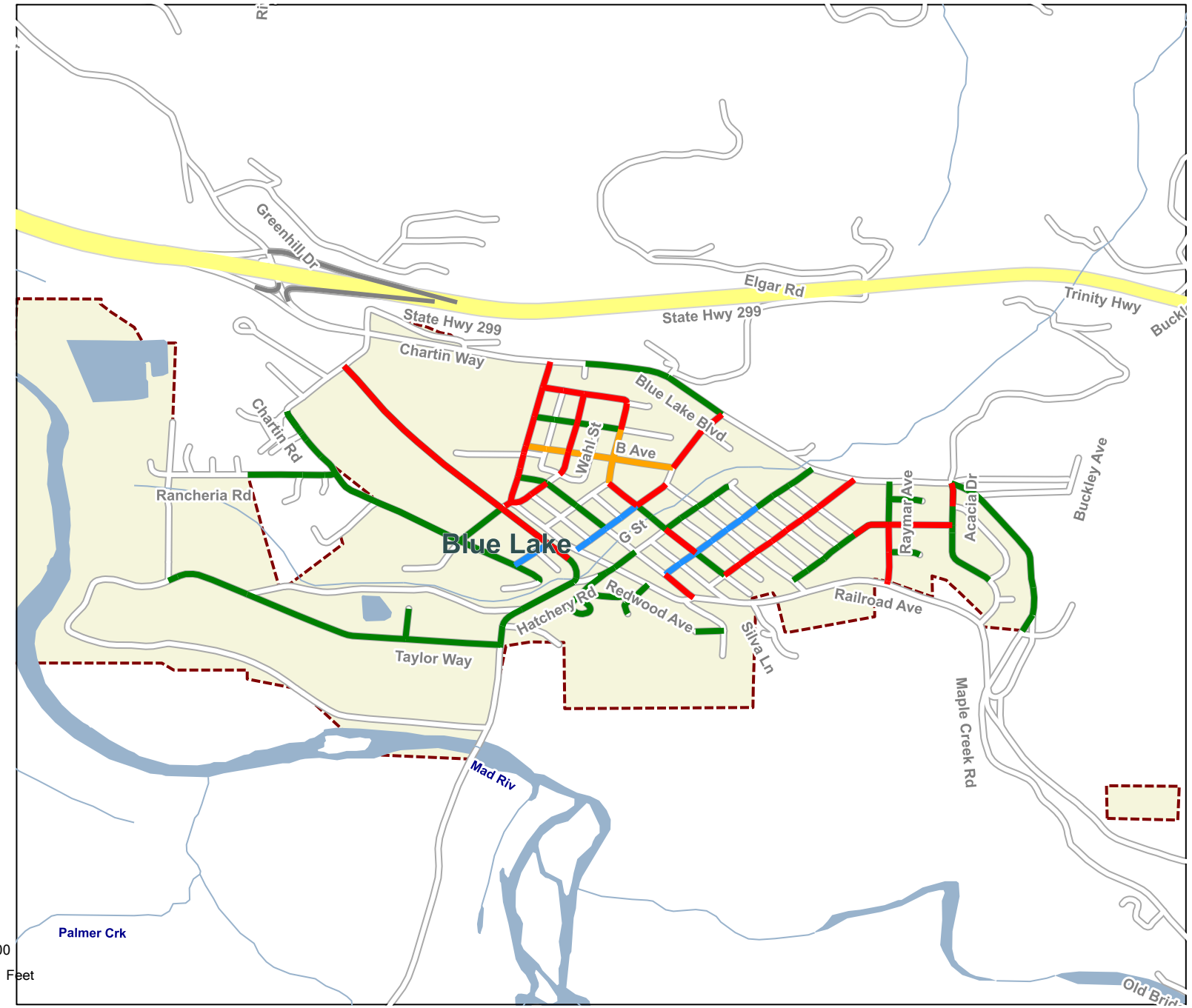
HCAOG

Scenario PCI Condition

Blue Lake - City Budget - 2026 Project Period - Total Rehab: $40,661 - Printed: 10/4/2017

Feature Legend

- Category I - Very Good
- Category II - Good (Non-Load)
- Category IV - Poor
- Category V - Very Poor



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