



# City of Rio Dell

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



Richmond, CA

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Richmond, CA 94804



## City of Rio Dell

675 Wildwood Avenue  
Rio Dell, CA 95562



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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 plans. 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 in 2016. 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 Rio Dell oversees the repair and maintenance of approximately 13.9 centerline miles of pavement, or 109 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	5	1.0	2.1	7.5%
Residential/Local	104	12.9	26.4	92.5%
<b>Total</b>	<b>109</b>	<b>13.9</b>	<b>28.5</b>	<b>100%</b>

The network replacement cost of the City maintained sections is approximately \$14.1 million. This cost is defined as the full reconstruction of all pavement sections in the City 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 51, with a remaining service life of approximately 15 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 was allocated to pavements, the network will reach “Very Poor/Failed” condition in approximately 15 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 and throughout the executive summary.

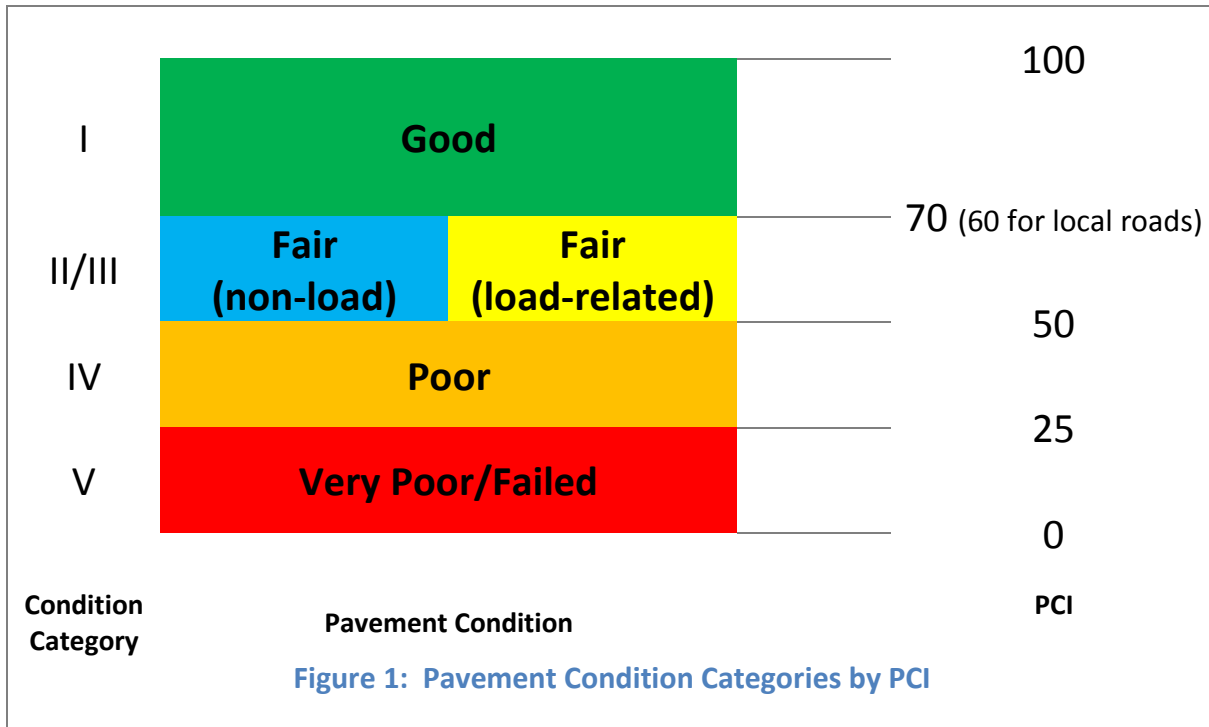




Figure 2 includes representative photos showing streets with different PCIs.



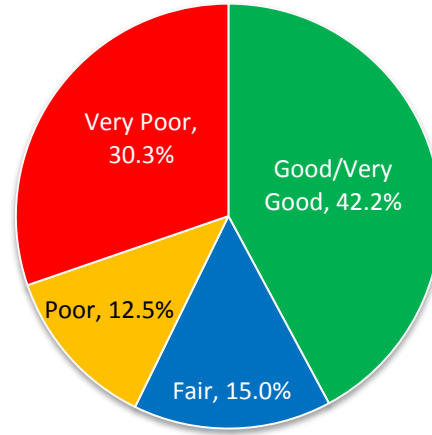
Figure 2: Streets with Different PCIs

Table 2 below provides the pavement condition breakdown for the network by PCI ranges or condition category. About 42.2% of the entire City’s streets in 2017 are in the “Good” condition category. Conversely, 42.8% of the pavement area falls in the “Poor” or “Very Poor/Failed” condition categories.

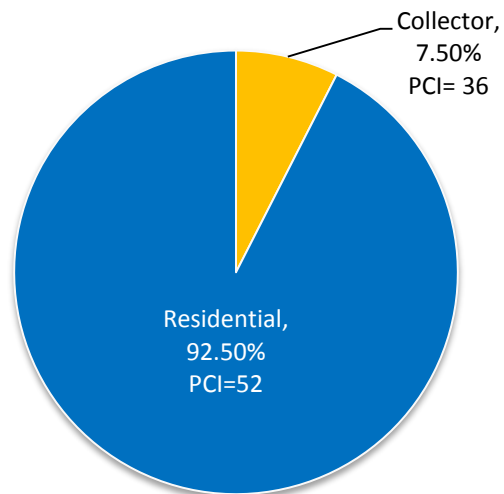
Table 2: 2017 Pavement Condition Breakdowns by Area (Entire Network)

Condition Category	PCI Range	Collector (%)	Residential	Entire Network (%)
<b>Good (I)</b>	70-100	0.0%	42.2%	42.2%
<b>Fair (II/III)</b>	50-69	2.3%	12.7%	15.0%
<b>Poor (IV)</b>	25-49	2.0%	10.5%	12.5%
<b>Very Poor/Failed (V)</b>	<25	3.2%	27.1%	30.3%
<b>Total</b>		<b>7.5%</b>	<b>92.5%</b>	<b>100%</b>





**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 a 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.

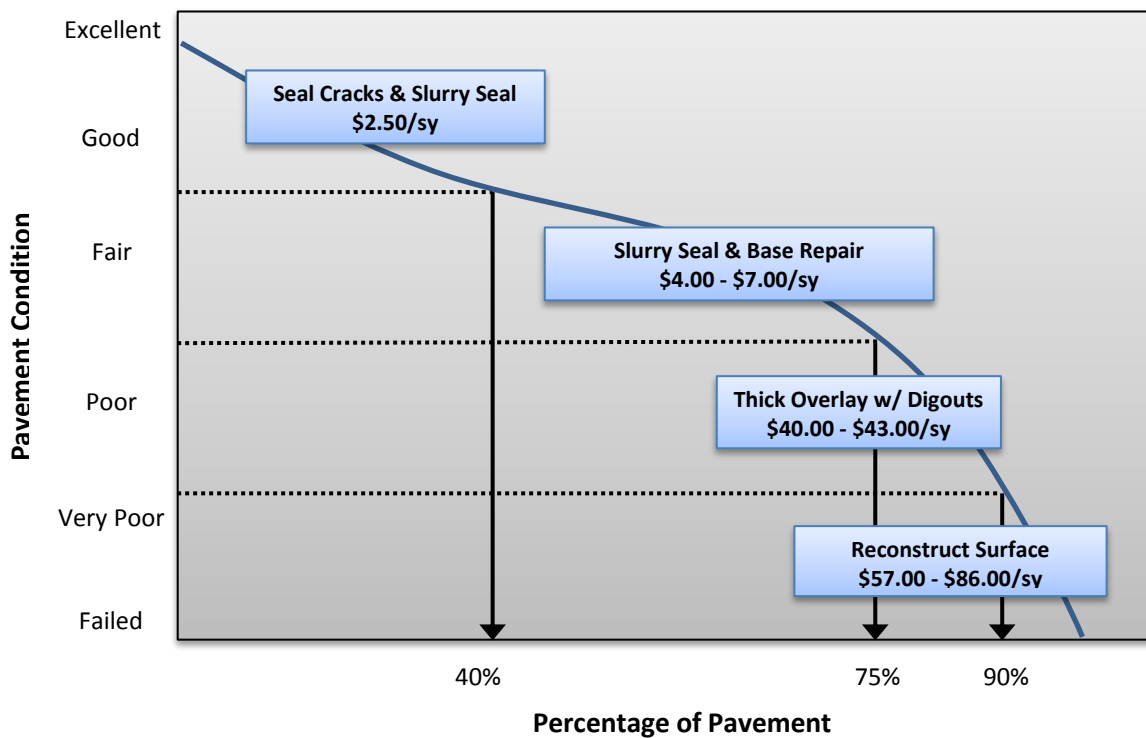


Figure 5: Costs of Maintaining Pavements over Time



## 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 \$3.6 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, maintenance needs over the next ten years were estimated to be approximately \$5.5 million for the entire network. If the City of Rio Dell follows the strategy recommended by the program, the average network PCI will increase to 82 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	85	82	80	78	77	78	77	78	80	82	--
PCI Untreated	51	49	47	45	43	42	40	38	37	35	--
Needs (\$Thousands)	3,584	71	14	0	40	317	123	370	536	482	5,537

The results of the budget needs analysis represent the ideal funding strategy recommended by the StreetSaver PMP. Of the \$5.5 million in maintenance needs shown, approximately \$1.2 million (22%) is earmarked for preventive maintenance and approximately \$4.3 million (78%) 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** – This scenario’s goal is to increase the City’s current PCI of 51 to 70 by 2026. The City will require \$4.3 million over the next ten years. By 2026, the deferred maintenance will decrease to \$1.6 million.

**Scenario 2: Maintain Current PCI (\$1.7 million)** – In this scenario, the goal is to maintain the current network PCI of 51 over of the next ten years. The deferred maintenance will increase to \$4.3 million by the end of 2026.

**Scenario 3: Existing Funding (RMRA)<sup>1</sup>**– This scenario shows the impact of RMRA funding over the next ten years. The network PCI will decrease to 40 and the deferred maintenance will increase to \$5.9 million.

Note: The deferred maintenance 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 from the budget 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 color-coded condition of each pavement section for each budget scenario. A map illustrating the present condition is also provided for comparison.

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<sup>1</sup> Road Maintenance and Rehabilitation Account (RMRA – Streets and Highway 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 \$58,000 annually.

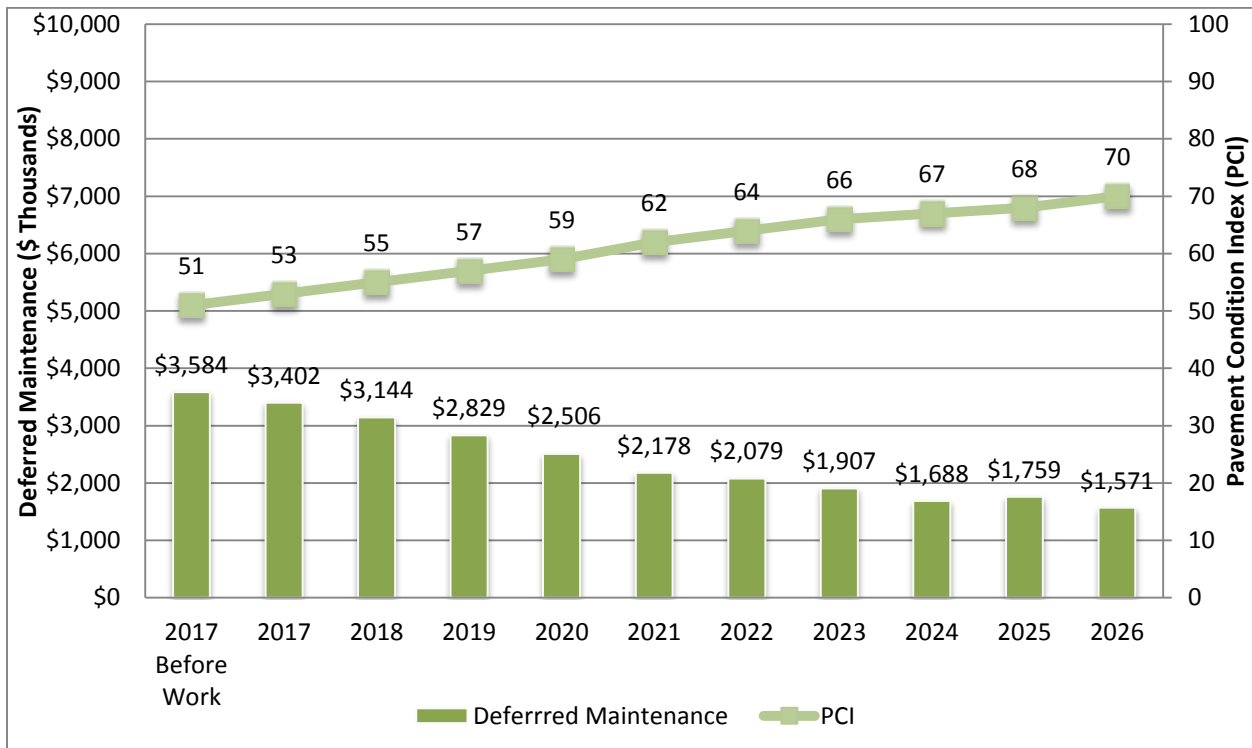


### Scenario 1: Increase PCI to 70

This scenario increases the current PCI to 70 by 2026 and will require \$4.3 million over the next ten years. Approximately 9% of the budget is allocated to preventive maintenance treatments and 91% to rehabilitation and reconstruction treatments. The results indicate that the percentage of the pavement network in the “Good” condition category will increase to 84.7% by 2026. The deferred maintenance will decrease to \$1.6 million, and the remaining service life will increase to 24 years. The results for Scenario 1 are summarized in Table 4 and Figure 6. Appendix D provides a list of sections selected for treatment by the StreetSaver Program for this scenario.

**Table 4: Summary Results for Scenario 1**

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
<b>Budget (\$ Thousands)</b>	182	582	416	408	476	401	558	359	313	614	4,309
<b>Deferred Maintenance (\$ Thousands)</b>	3,402	3,144	2,829	2,506	2,178	2,079	1,907	1,688	1,759	1,571	--
<b>PCI</b>	53	55	57	59	62	64	66	67	68	70	--
<b>Remaining Service Life (Years)</b>	16	17	18	19	20	21	21	22	23	24	--



**Figure 6: PCI vs Deferred Maintenance for Scenario 1**

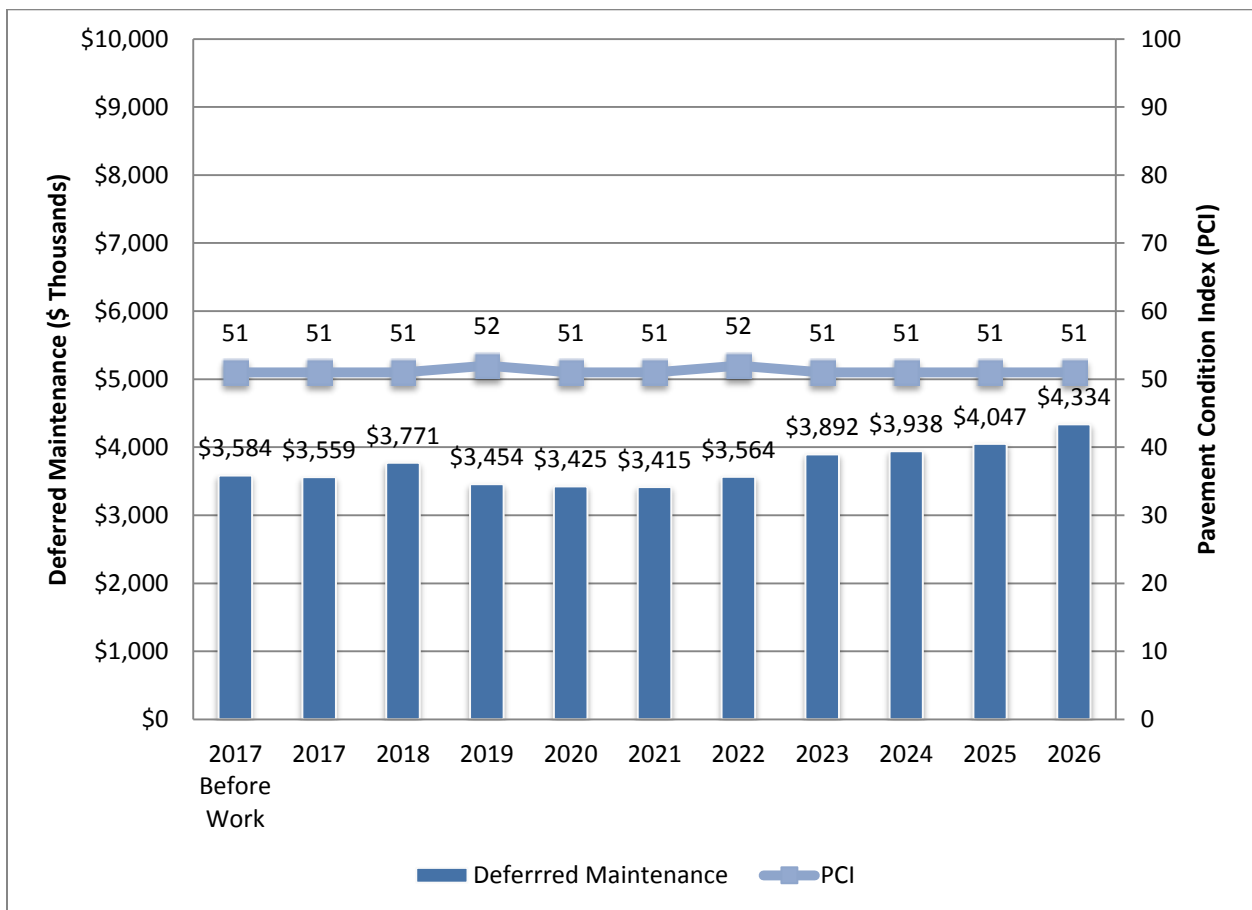


### Scenario 2: Maintain Current PCI

Over the next ten years, a total of \$1.7 million is required to maintain the current network PCI of 51. By 2026, approximately 51.3% of the network will be in “Good” condition. The deferred maintenance will increase to \$4.3 million, and the remaining service life is projected to increase to 16 years. The results of the budget scenario analysis for Scenario 2 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
<b>Budget (\$ Thousands)</b>	25	150	437	133	184	191	103	154	197	152	1,726
<b>Deferred Maintenance (\$ Thousands)</b>	3,559	3,771	3,454	3,425	3,415	3,564	3,892	3,938	4,047	4,334	--
<b>PCI</b>	51	51	52	51	51	52	51	51	51	51	--
<b>Remaining Service Life (Years)</b>	15	15	15	15	15	16	15	16	16	16	--



**Figure 7: PCI vs Deferred Maintenance for Scenario 2**



### Scenario 3: Existing Funding (RMRA)

The City is expected to receive as much as \$58,000 annually from RMRA. The results indicate that the network PCI will decrease to 40 and the deferred maintenance will increase significantly to \$5.9 million by 2026. The remaining service life will decrease to 11 years. The results are summarized in Table 6 and Figure 8.

Table 6: Summary Results for Scenario 3

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget (\$ Thousands)	0	19	58	58	58	58	58	58	58	58	483
Deferred Maintenance (\$ Thousands)	3,584	3,928	4,034	4,107	4,245	4,566	5,177	5,357	5,621	5,899	--
PCI	51	49	48	47	46	45	44	43	41	40	--
Remaining Service Life (Years)	14	14	14	13	13	12	12	12	11	11	--

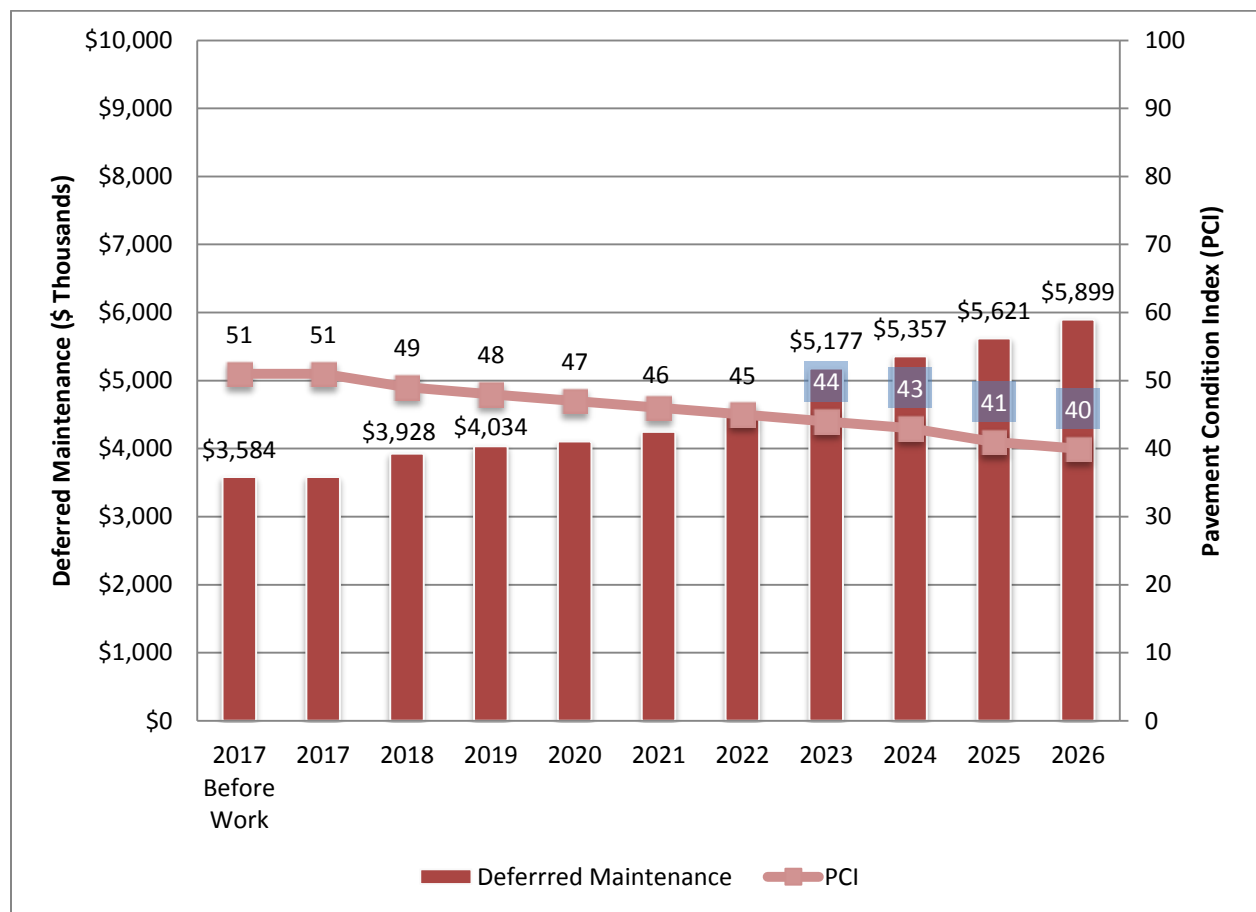


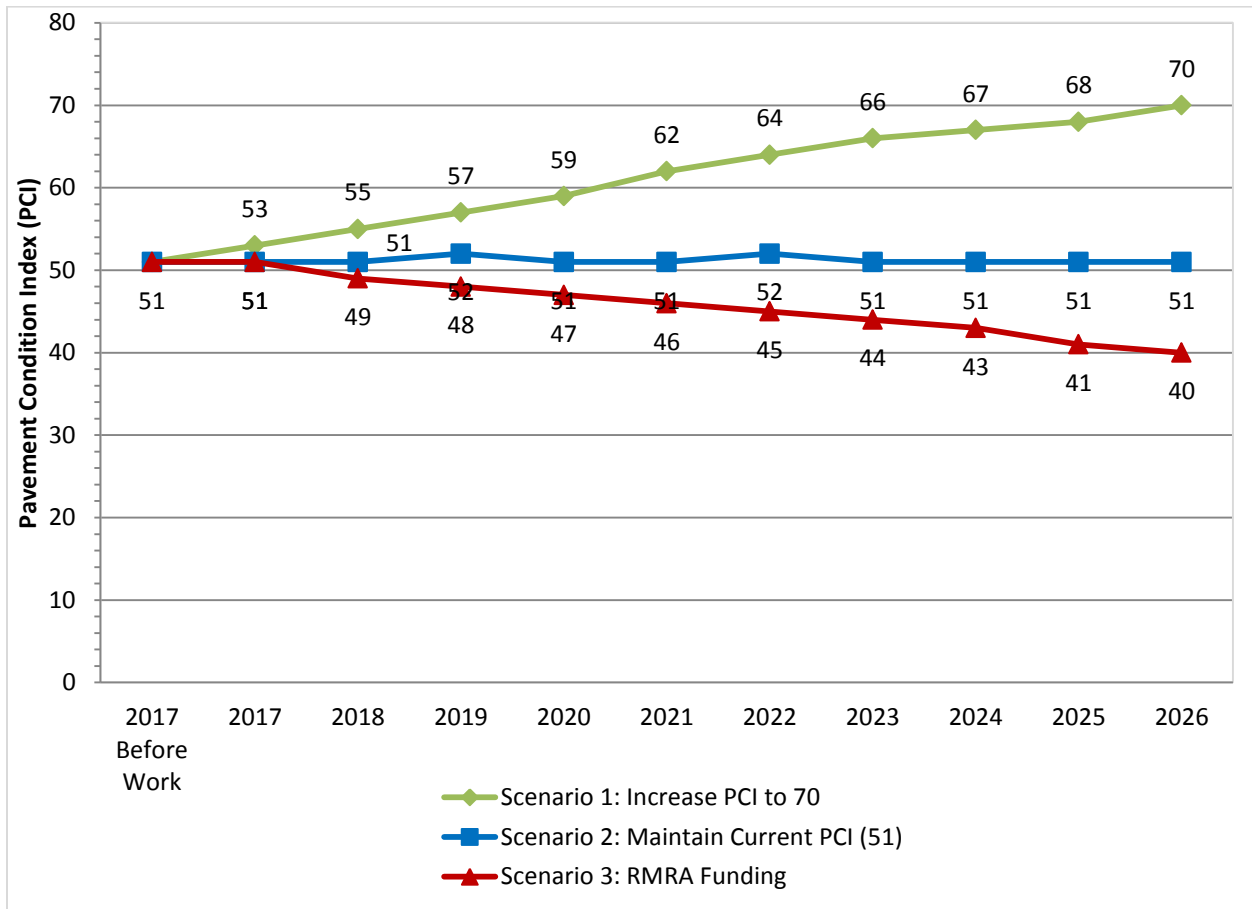
Figure 8: PCI vs Deferred Maintenance for Scenario 3



## Scenario Comparisons

The following two figures graphically illustrate the annual changes in PCI and deferred maintenance for each scenario.

Figure 9 illustrates the change in PCI over time for the different budget scenarios. As noted previously, Scenario 1 (Increase PCI) will ultimately reach a PCI of 70 after ten years; Scenario 2 (Maintain Current PCI) will maintain the 2017 PCI of 51; and Scenario 3 (Existing Funding) will decrease PCI to 40 by 2026.



**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 for Scenario 1 (Increase PCI), the deferred maintenance decreases to \$1.6 million; Scenario 2 (Maintain Current PCI) will increase the deferred maintenance by approximately 21% and Scenario 3 (Existing Funding) will increase the deferred maintenance to \$5.9 million by 2026.



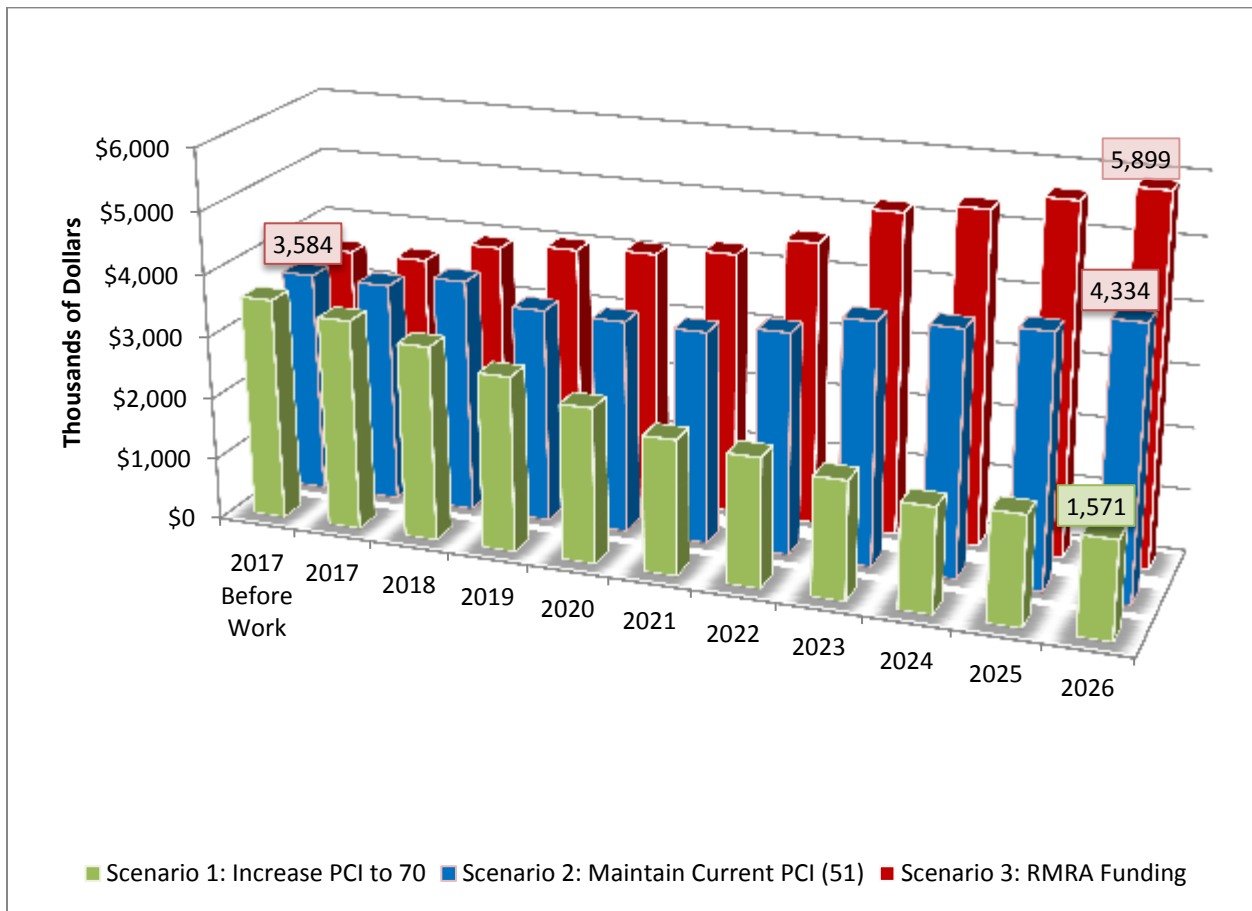


Figure 10: Annual Deferred Maintenance by Scenario



Figure 11 illustrates the pavement condition changes under various scenarios. Currently 42.2% of the network is in the “Good” condition category and 42.8% in “Poor” and “Very Poor/Failed” condition categories. For Scenario 1 (Increase PCI to 70), the portion of roads network in “Good” condition will increase to 82.7%. Conversely, the portion of roads in “Poor” or “Very Poor/Failed” condition will decrease to 17%. Under Scenario 2 the portion of the network in “Good” condition will increase to 51.3%, the street network in the “Very Poor/Failed” and “Poor” condition categories will decrease to 38.7% by 2026. Under Scenario 3 (RMRA Funding) almost half of the network will fall into the “Very Poor/Failed” and “Poor” condition categories.

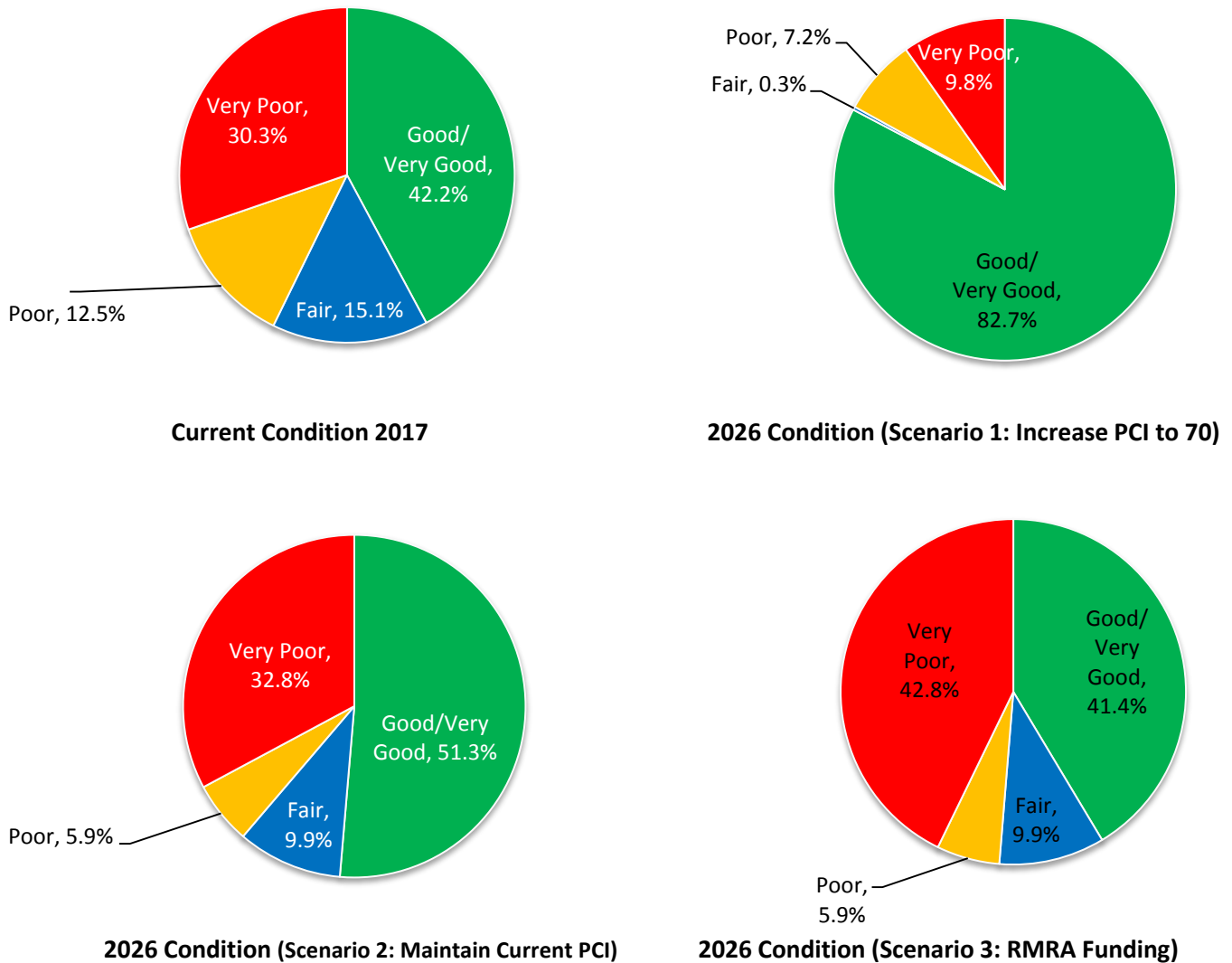


Figure 11: Pavement Condition Changes under Scenarios 1-3



## Summary and Recommendations

To summarize, the City of Rio Dell has a substantial investment of \$14.1 million in their entire paved network. Overall, the network is in “Fair” condition with a 2017 network PCI of 51. Of the 13.9 centerline miles, approximately 57.3% of the streets currently fall into the “Fair” or “Good” condition categories.

The City’s PCI is projected to decrease to 40, and the deferred maintenance will increase to \$5.9 million by 2026. The City needs to spend approximately \$5.5 million in pavement maintenance and rehabilitation over the next ten year, to essentially repair all streets. By doing so, streets then can be maintained in good condition with on-going preventive maintenance.

Clearly, the most desirable scenario is Scenario 1. The goal is to offer residents a safe and functional pavement network without unduly increasing the maintenance burden in the future.

## Recommendations

### A. Pavement Budget

The recommended scenario for the City of Rio Dell is presented in Scenario 1 (Increase PCI to 70), which requires a total budget of \$4.3 million over ten years. This plan will also increase the percentage of pavement sections that are in “Good” condition to 82.7%. In addition, the overall deferred maintenance will be reduced to \$1.6 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:

<b>COLUMN</b>	<b>DESCRIPTION</b>
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
R-1STAVE	010	1ST AVENUE - R-1STAVE	EDWARDS DR	BERKELEY ST	2	590	21	A	R	12/4/2016	50
R-1STAVE	020	1ST AVENUE - R-1STAVE	BERKELEY ST	COLUMBUS ST	2	728	21	A	R	12/4/2016	74
R-1STAVE	030	1ST AVENUE - R-1STAVE	COLUMBUS ST	ELKO ST	2	1030	20	A	R	12/4/2016	84
R-2NDAVE	010	2ND AVENUE - R-2NDAVE	ATLANTA ST	COLUMBUS ST	2	1095	29	A	R	12/4/2016	76
R-2NDAVE	020	2ND AVENUE - R-2NDAVE	COLUMBUS ST	ELKO ST	2	1030	31	A	R	10/19/2009	31
R-2NDAVE	030	2ND AVENUE - R-2NDAVE	ELKO ST	DAVIS ST	2	181	20	A	R	10/19/2009	22
R-3RDAVE	010	3RD AVENUE - R-3RDAVE	MEADOW BRIDGE DR	BERKELEY ST	2	258	27	A	R	12/4/2016	88
R-3RDAVE	020	3RD AVENUE - R-3RDAVE	BERKELEY ST	N END	2	146	22	A	R	12/4/2016	84
R-3RDAVE	030	3RD AVENUE - R-3RDAVE	COLUMBUS ST	DAVIS ST	2	1002	26	A	R	12/4/2016	92
R-4THAVE	010	4TH AVENUE - R-4THAVE	EAST END OF PAVEMENT	DAVIS ST	2	759	20	A	R	12/4/2016	92
R-ALPINE	010	ALPINE - R-ALPINE	SOUTH END	MONUMENT RD	2	170	11	A	R	10/19/2009	32
R-ASHST	010	ASH STREET - R-ASHST	PACIFIC AVE	WILDWOOD AVE	2	840	22	A	R	12/4/2016	86
R-ATLAST	010	ATLANTA STREET - R-ATLAST	1ST AVE	2ND AVE	2	234	12	A	R	12/4/2016	75
R-BELAVE	010	BELLEVIEW AVENUE - R-BELAVE	WILDWOOD AVE	1116 E/O RIVER ST	2	1337	37	A	C	12/4/2016	54
R-BELAVE	015	BELLEVIEW AVENUE - R-BELAVE	1116 E/O RIVER ST	RIVER ST	2	1116	37	A	C	12/4/2016	52
R-BELAVE	020	BELLEVIEW AVENUE - R-BELAVE	RIVER RD	SPRING ST	2	825	23	A	C	10/19/2009	34
R-BELAVE	030	BELLEVIEW AVENUE - R-BELAVE	SPRING ST	WOODLAND AVE	2	1133	22	A	C	10/19/2009	54
R-BELAVE	035	BELLEVIEW AVENUE - R-BELAVE	WOODLAND AVE	WEST CITY LIMIT	2	1032	22	A	C	10/19/2009	54
R-BERKST	010	BERKELEY STREET - R-BERKST	WILDWOOD AVE	END OF PAVEMENT	2	814	26	A	R	12/4/2016	70
R-BIRCST	010	BIRCH STREET - R-BIRCST	PACIFIC AVE	SEQUOIA AVE	2	455	29	A	R	12/4/2016	88
R-BRIDST	010	BRIDGE STREET - R-BRIDST	WILDWOOD AVE	EDWARDS DR	2	278	26	A	R	12/4/2016	63
R-BUTCST	010	BUTCHER STREET - R-BUTCST	PACIFIC AVE	RIO DELL AVE	2	303	21	A	R	10/19/2009	24
R-CEDAST	010	CEDAR STREET - R-CEDAST	PACIFIC AVE	WILDWOOD AVE	2	657	28	A	R	10/19/2009	36
R-CENTST	010	CENTER STREET - R-CENTST	WILDWOOD AVE	IRELAND AVE	2	1555	29	A	R	12/4/2016	81
R-CENTST	020	CENTER STREET - R-CENTST	IRELAND ST	EAST CDS	2	127	27	A	R	12/4/2016	60
R-CENTST	030	CENTER STREET - R-CENTST	PAINTER ST	RIGBY AVE	2	617	26	A	R	10/19/2009	40
R-CHAAVE	010	CHASE AVENUE - R-CHAAVE	CENTER ST	PAINTER ST	2	387	18	O	R	12/4/2016	92
R-CHERLN	010	CHERRY LANE - R-CHERLN	MONUMENT RD	ORCHARD PL	2	782	16	A	R	10/19/2009	39
R-COLUST	010	COLUMBUS STREET - R-COLUST	WILDWOOD AVE	3RD AVE	2	744	29	A	R	12/4/2016	80
R-CREEST	010	CREEK STREET - R-CREEST	SOUTH END	NALLY LN	2	347	12	A	R	12/4/2016	62
R-CURTLN	010	CURTIS LANE - R-CURTLN	PAINTER ST	NORTH END	2	743	20	A	R	12/4/2016	71
R-DAVIST	010	DAVIS STREET - R-DAVIST	WILDWOOD AVE	IRELAND ST	2	1364	37	A	R	12/4/2016	43
R-DAVIST	020	DAVIS STREET - R-DAVIST	IRELAND ST	RIGBY AVE	2	942	26	A	R	12/4/2016	48
R-DAVIST	030	DAVIS STREET - R-DAVIST	RIGBY AVE	EAST END	2	1584	26	A	R	12/4/2016	39
R-DIXIST	010	DIXIE STREET - R-DIXIST	WILDWOOD AVE	3RD AVE	2	745	17	A	R	10/19/2009	31
R-DIXIST	020	DIXIE STREET - R-DIXIST	3RD AVE	4TH AVE	2	243	24	A	R	12/4/2016	90

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-DIXIST	030	DIXIE STREET - R-DIXIST	4TH AVE	DAVIS ST	2	348	18	A	R	10/19/2009	21
R-DOUGST	010	DOUGLAS STREET - R-DOUGST	WESTEND	VIEW AVE	2	371	17	A	R	12/4/2016	92
R-DOUGST	020	DOUGLAS STREET - R-DOUGST	VIEW AVE	PACIFIC ST	2	248	30	A	R	12/4/2016	87
R-DOUGST	030	DOUGLAS STREET - R-DOUGST	PACIFIC ST	WILDWOOD AVE	2	472	30	A	R	12/4/2016	90
R-EDWADR	010	EDWARDS DRIVE - R-EDWADR	WILDWOOD AVE	BRIDGE ST	2	270	28	A	R	10/19/2009	43
R-EDWADR	020	EDWARDS DRIVE - R-EDWADR	BRIDGE ST	END OF PAVEMENT	2	1780	24	A	R	12/4/2016	58
R-EELAVE	010	EELOA AVENUE - R-EELAVE	WEST CDS	N PACIFIC DR	2	1057	25	A	R	12/4/2016	57
R-EELAVE	020	EELOA AVENUE - R-EELAVE	N PACIFIC DR	SCENIC WAY	2	676	26	A	R	10/19/2009	40
R-EELAVE	030	EELOA AVENUE - R-EELAVE	SCENIC WAY	FERN ST	2	869	25	A	R	10/19/2009	44
R-ELKOST	010	ELKO STREET - R-ELKOST	WILDWOOD AVE	2ND AVE	2	574	21	A	R	12/4/2016	74
R-ELMST	010	ELM STREET - R-ELMST	PACIFIC AVE	WILDWOOD AVE	2	381	20	A	R	10/19/2009	17
R-FERNST	010	FERN STREET - R-FERNST	EELOA AVE	RIVERSIDE DR	2	657	21	A	R	10/19/2009	32
R-FERNST	020	FERN STREET - R-FERNST	FERN ST	RIVERSIDE DR	2	657	21	A	R	12/4/2016	51
R-GRHERD	010	GRAYLAND HEIGHTS ROAD - R-GRHERD	S. SEQUOIA AVE	GRAYLAND HEIGHTS RD	2	1527	36	A	R	12/4/2016	89
R-GUNNLN	010	GUNNERSON LANE - R-GUNNLN	S CDS	HILLTOP DR	2	595	27	A	R	12/4/2016	53
R-GUNNLN	020	GUNNERSON LANE - R-GUNNLN	HILLTOP DR	DAVIS ST	2	606	39	A	R	12/4/2016	55
R-HILLDR	010	HILLTOP DRIVE - R-HILLDR	GUNNERSON LN	RIO DELL PUBLIC WORKS EXT	2	397	19	A	R	12/4/2016	87
R-IREAVE	010	IRELAND AVENUE - R-IREAVE	DAVIS ST	CENTER ST	2	1012	35	A	R	10/19/2009	15
R-IREAVE	020	IRELAND AVENUE - R-IREAVE	CENTER ST	PAINTER ST	2	386	34	A	R	10/19/2009	16
R-KELLST	010	KELLEY STREET - R-KELLST	VIEW AVE	PACIFIC AVE	2	244	27	A	R	12/4/2016	88
R-MARTDR	010	MARTIN DRIVE - R-MARTDR	RIVERSIDE DR	N CDS	2	264	34	A	R	12/4/2016	52
R-MAYAVE	010	MAY AVENUE - R-MAYAVE	PAINTER DT	NORTH ST	2	539	33	A	R	12/4/2016	92
R-MEABRDR	010	MEADOW BRIDGE DRIVE - R-MEABRDR	EDWARDS DR	3RD AVE	2	1072	35	A	R	12/4/2016	90
R-MILLCT	010	MILLER COURT - R-MILLCT	S CDS	RIVERSIDE DR	2	628	36	A	R	12/4/2016	82
R-MONURD	010	MONUMENT ROUD - R-MONURD	WEST CITY LIMIT	CHERRY LN	2	1602	19	A	R	12/4/2016	90
R-MONURD	020	MONUMENT ROUD - R-MONURD	CHERRY LN	PACIFIC ST	2	305	24	A	R	12/4/2016	90
R-MONURD	030	MONUMENT ROUD - R-MONURD	PACIFIC ST	S SEQUOIA AVE	2	494	23	A	R	12/4/2016	90
R-MONURD	040	MONUMENT ROUD - R-MONURD	S SEQUOIA AVE	WILDWOOD AVE	2	783	28	A	R	12/4/2016	42
R-NALLLN	010	NALLY LANE - R-NALLLN	WEST END	CREEK ST	2	121	10	A	R	12/4/2016	59
R-OGLAVE	010	OGLE AVENUE - R-OGLAVE	BELLEVIEW AVE	TOLMAN PL	2	1015	27	A	R	10/19/2009	19
R-OGLAVE	020	OGLE AVENUE - R-OGLAVE	TOLMAN PL	RIVER RD	2	1383	20	A	R	10/19/2009	23
R-ORCHPL	010	ORCHARD PLACE - R-ORCHPL	CHERRY LN	ORCHARD ST	2	169	18	A	R	10/19/2009	27
R-ORCHST	010	ORCHARD STREET - R-ORCHST	MONUMENT RD	ORCHARD PL	2	696	26	A	R	10/19/2009	38
R-PACAVE	010	PACIFIC AVENUE - R-PACAVE	MONUMENT AVE	KELLY ST	2	1256	21	A	R	12/4/2016	88
R-PACAVE	020	PACIFIC AVENUE - R-PACAVE	KELLY ST	W DAVIS ST	2	793	20	A	R	12/4/2016	88
R-PACAVE	030	PACIFIC AVENUE - R-PACAVE	W DAVIS ST	W CENTER ST	2	732	20	A	R	12/4/2016	70

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-PACAVE	040	PACIFIC AVENUE - R-PACAVE	W CENTER ST	BELLEVIEW AVE	2	1218	25	A	R	12/4/2016	61
R-PAINST	010	PAINTER STREET - R-PAINST	WILDWOOD AVE	87' W CHASE AVE	2	622	29	A	R	12/4/2016	69
R-PAINST	020	PAINTER STREET - R-PAINST	258' E CHASE AVE	IRELAND ST	2	545	29	A	R	12/4/2016	38
R-PAINST	025	PAINTER STREET - R-PAINST	87' W CHASE AVE	258' E CHASE AVE	2	320	29	O	R	12/4/2016	92
R-PAINST	030	PAINTER STREET - R-PAINST	IRELAND ST	CENTER DR	2	510	38	A	R	12/4/2016	66
R-PAINST	040	PAINTER STREET - R-PAINST	CENTER DR	5' W BLUFF PLACE	2	480	38	A	R	12/4/2016	60
R-PAINST	050	PAINTER STREET - R-PAINST	5' W BUFF PLACE	215' E CURTIS LANE	2	355	38	O	R	12/4/2016	92
R-PAINST	060	PAINTER STREET - R-PAINST	215' E CURTIS LANE	E END	2	840	38	A	R	12/4/2016	53
R-PINEST	010	PINE STREET - R-PINEST	W END	MAY AVE	2	561	31	A	R	12/4/2016	92
R-RIGAVE	010	RIGBY AVENUE - R-RIGAVE	S END	DAVIS ST	2	1184	25	A	R	12/4/2016	55
R-RIGAVE	020	RIGBY AVENUE - R-RIGAVE	DAVIS ST	CENTER ST	2	1036	28	A	R	10/19/2009	19
R-RIGAVE	030	RIGBY AVENUE - R-RIGAVE	CENTER ST	PAINTER ST	2	382	18	A	R	12/4/2016	40
R-RIDAVE	010	RIO DELL AVENUE - R-RIDAVE	W CENTER ST	TOWNSEND ST	2	716	18	A	R	10/19/2009	16
R-RIDAVE	020	RIO DELL AVENUE - R-RIDAVE	TOWNSEND ST	BUTCHER ST	2	289	15	A	R	12/4/2016	87
R-RIVEST	010	RIVER STREET - R-RIVEST	OGLE AVE	BELLEVIEW AVE	2	230	26	A	R	10/19/2009	27
R-RIVEDR	010	RIVERSIDE DRIVE - R-RIVEDR	PAINTER ST	EAGLE PRAIRIE RD	2	610	34	A	R	12/4/2016	60
R-RIVEDR	020	RIVERSIDE DRIVE - R-RIVEDR	EAGLE PRAIRIE RD	FERN ST	2	1337	39	A	R	10/19/2009	33
R-RIVEDR	030	RIVERSIDE DRIVE - R-RIVEDR	FERN ST	NW CDS	2	1056	32	A	R	12/4/2016	46
R-ROSELN	010	ROSE LANE - R-ROSELN	MONUMENT RD	N END	2	160	17	A	R	12/4/2016	87
R-SCEWAY	010	SCENIC WAY - R-SCEWAY	HIGHWAY 101 NB ON RAMP	EELOA AVE	2	211	76	A	R	12/4/2016	65
R-SEQUEST	010	SEQUOIA STREET - R-SEQUEST	MONUMENT AVE	CEDAR ST	2	808	30	A	R	12/4/2016	88
R-SIDEST	010	SIDE STREET - R-SIDEST	PACIFIC AVE	WILDWOOD AVE	2	866	29	A	R	12/4/2016	65
R-SSEQST	010	SOUTH SEQUOIA STREET - R-SSEQST	GRAYLAND HEIGHTS RD	MONUMENT RD	2	514	24	A	R	12/4/2016	88
R-SPRIST	010	SPRING STREET - R-SPRIST	OGLE AVE	BELLEVIEW AVE	2	304	21	A	R	10/19/2009	17
R-TYMECT	010	TYME COURT - R-TYMECT	W CDS	MILLER CT	2	79	40	A	R	12/4/2016	81
R-VIEWST	010	VIEW STREET - R-VIEWST	DOUGLAS ST	KELLEY ST	2	325	21	A	R	10/19/2009	16
R-WCENST	010	WEST CENTER STREET - R-WCENST	PACIFIC AVE	RIO DELL AVE	2	283	24	O	R	12/4/2016	92
R-WCENST	020	WEST CENTER STREET - R-WCENST	RIO DELL AVE	WILDWOOD AVE	2	179	25	A	R	12/4/2016	92
R-WDAVIST	010	WEST DAVIS STREET - R-WDAVIST	PACIFIC AVE	WILDWOOD AVE	2	363	36	A	R	12/4/2016	60
R-WPAINST	020	WEST PAINTER STREET - R-WPAINST	PACIFIC AVE	50' W RIO DELL AVE	2	285	17	A	R	10/19/2009	27
R-WPAINST	030	WEST PAINTER STREET - R-WPAINST	50' W RIO DELL AVE	62' E RIO DELL AVE	2	112	17	O	R	12/4/2016	92
R-WPAINST	040	WEST PAINTER STREET - R-WPAINST	62' E RIO DELL AVE	WILDWOOD AVE	2	100	17	A	R	10/19/2009	27
R-WTOWST	010	WEST TOWNSEND STREET - R-TOWST	RIO DELL AVE	PACIFIC AVE	2	288	25	A	R	10/19/2009	29
R-WILAVE	010	WILDWOOD AVENUE - R-WILAVE	BRIDGE ST	CEDAR ST	3	1207	66	A	R	10/19/2009	26
R-WILAVE	015	WILDWOOD AVENUE - R-WILAVE	CEDAR ST	136FT N/O ELM ST	3	891	66	A	R	10/19/2009	26
R-WILAVE	020	WILDWOOD AVENUE - R-WILAVE	136FT NORTH OF ELM ST	DAVIS ST	3	678	60	A	R	12/4/2016	92

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-WILAVE	030	WILDWOOD AVENUE - R-WILAVE	DAVIS ST	PAINTER ST	2	1256	38	A	R	12/4/2016	92
R-WILAVE	040	WILDWOOD AVENUE - R-WILAVE	PAINTER ST	HIGHWAY 101 NB ON RAMP	2	1567	38	A	R	12/4/2016	92

**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
R-3RDAVE	030	3RD AVENUE - R-3RDAVE	COLUMBUS ST	DAVIS ST	2	1002	26	A	R	12/4/2016	92
R-4THAVE	010	4TH AVENUE - R-4THAVE	EAST END OF PAVEMENT	DAVIS ST	2	759	20	A	R	12/4/2016	92
R-CHAAVE	010	CHASE AVENUE - R-CHAAVE	CENTER ST	PAINTER ST	2	387	18	O	R	12/4/2016	92
R-DOUGST	010	DOUGLAS STREET - R-DOUGST	WESTEND	VIEW AVE	2	371	17	A	R	12/4/2016	92
R-MAYAVE	010	MAY AVENUE - R-MAYAVE	PAINTER DT	NORTH ST	2	539	33	A	R	12/4/2016	92
R-PAINST	025	PAINTER STREET - R-PAINST	87' W CHASE AVE	258' E CHASE AVE	2	320	29	O	R	12/4/2016	92
R-PAINST	050	PAINTER STREET - R-PAINST	5' W BUFF PLACE	215' E CURTIS LANE	2	355	38	O	R	12/4/2016	92
R-PINEST	010	PINE STREET - R-PINEST	W END	MAY AVE	2	561	31	A	R	12/4/2016	92
R-WCENST	010	WEST CENTER STREET - R-WCENST	PACIFIC AVE	RIO DELL AVE	2	283	24	O	R	12/4/2016	92
R-WCENST	020	WEST CENTER STREET - R-WCENST	RIO DELL AVE	WILDWOOD AVE	2	179	25	A	R	12/4/2016	92
R-WILAVE	020	WILDWOOD AVENUE - R-WILAVE	136FT NORTH OF ELM ST	DAVIS ST	3	678	60	A	R	12/4/2016	92
R-WILAVE	030	WILDWOOD AVENUE - R-WILAVE	DAVIS ST	PAINTER ST	2	1256	38	A	R	12/4/2016	92
R-WILAVE	040	WILDWOOD AVENUE - R-WILAVE	PAINTER ST	HIGHWAY 101 NB ON RAMP	2	1567	38	A	R	12/4/2016	92
R-WPAINST	030	WEST PAINTER STREET - R-WPAIST	50' W RIO DELL AVE	62' E RIO DELL AVE	2	112	17	O	R	12/4/2016	92
R-DIXIST	020	DIXIE STREET - R-DIXIST	3RD AVE	4TH AVE	2	243	24	A	R	12/4/2016	90
R-DOUGST	030	DOUGLAS STREET - R-DOUGST	PACIFIC ST	WILDWOOD AVE	2	472	30	A	R	12/4/2016	90
R-MEABRDR	010	MEADOW BRIDGE DRIVE - R-MEABRDR	EDWARDS DR	3RD AVE	2	1072	35	A	R	12/4/2016	90
R-MONURD	010	MONUMENT ROUD - R-MONURD	WEST CITY LIMIT	CHERRY LN	2	1602	19	A	R	12/4/2016	90
R-MONURD	020	MONUMENT ROUD - R-MONURD	CHERRY LN	PACIFIC ST	2	305	24	A	R	12/4/2016	90
R-MONURD	030	MONUMENT ROUD - R-MONURD	PACIFIC ST	S SEQUOIA AVE	2	494	23	A	R	12/4/2016	90
R-GRHERD	010	GRAYLAND HEIGHTS ROAD - R-GRHERD	S. SEQUOIA AVE	GRAYLAND HEIGHTS RD	2	1527	36	A	R	12/4/2016	89
R-3RDAVE	010	3RD AVENUE - R-3RDAVE	MEADOW BRIDGE DR	BERKELEY ST	2	258	27	A	R	12/4/2016	88
R-BIRCST	010	BIRCH STREET - R-BIRCST	PACIFIC AVE	SEQUOIA AVE	2	455	29	A	R	12/4/2016	88
R-KELLST	010	KELLEY STREET - R-KELLST	VIEW AVE	PACIFIC AVE	2	244	27	A	R	12/4/2016	88
R-PACAVE	010	PACIFIC AVENUE - R-PACAVE	MONUMENT AVE	KELLY ST	2	1256	21	A	R	12/4/2016	88
R-PACAVE	020	PACIFIC AVENUE - R-PACAVE	KELLY ST	W DAVIS ST	2	793	20	A	R	12/4/2016	88
R-SEQUEST	010	SEQUOIA STREET - R-SEQUEST	MONUMENT AVE	CEDAR ST	2	808	30	A	R	12/4/2016	88
R-SSEQST	010	SOUTH SEQUOIA STREET - R-SSEQST	GRAYLAND HEIGHTS RD	MONUMENT RD	2	514	24	A	R	12/4/2016	88
R-DOUGST	020	DOUGLAS STREET - R-DOUGST	VIEW AVE	PACIFIC ST	2	248	30	A	R	12/4/2016	87
R-HILLDR	010	HILLTOP DRIVE - R-HILLDR	GUNNERSON LN	RIO DELL PUBLIC WORKS EXT	2	397	19	A	R	12/4/2016	87
R-RIDAVE	020	RIO DELL AVENUE - R-RIDAVE	TOWNSEND ST	BUTCHER ST	2	289	15	A	R	12/4/2016	87
R-ROSELN	010	ROSE LANE - R-ROSELN	MONUMENT RD	N END	2	160	17	A	R	12/4/2016	87
R-ASHST	010	ASH STREET - R-ASHST	PACIFIC AVE	WILDWOOD AVE	2	840	22	A	R	12/4/2016	86
R-1STAVE	030	1ST AVENUE - R-1STAVE	COLUMBUS ST	ELKO ST	2	1030	20	A	R	12/4/2016	84
R-3RDAVE	020	3RD AVENUE - R-3RDAVE	BERKELEY ST	N END	2	146	22	A	R	12/4/2016	84
R-MILLCT	010	MILLER COURT - R-MILLCT	S CDS	RIVERSIDE DR	2	628	36	A	R	12/4/2016	82

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-CENTST	010	CENTER STREET - R-CENTST	WILDWOOD AVE	IRELAND AVE	2	1555	29	A	R	12/4/2016	81
R-TYMECT	010	TYME COURT - R-TYMECT	W CDS	MILLER CT	2	79	40	A	R	12/4/2016	81
R-COLUST	010	COLUMBUS STREET - R-COLUST	WILDWOOD AVE	3RD AVE	2	744	29	A	R	12/4/2016	80
R-2NDAVE	010	2ND AVENUE - R-2NDAVE	ATLANTA ST	COLUMBUS ST	2	1095	29	A	R	12/4/2016	76
R-ATLAST	010	ATLANTA STREET - R-ATLAST	1ST AVE	2ND AVE	2	234	12	A	R	12/4/2016	75
R-1STAVE	020	1ST AVENUE - R-1STAVE	BERKELEY ST	COLUMBUS ST	2	728	21	A	R	12/4/2016	74
R-ELKOST	010	ELKO STREET - R-ELKOST	WILDWOOD AVE	2ND AVE	2	574	21	A	R	12/4/2016	74
R-CURTLN	010	CURTIS LANE - R-CURTLN	PAINTER ST	NORTH END	2	743	20	A	R	12/4/2016	71
R-BERKST	010	BERKELEY STREET - R-BERKST	WILDWOOD AVE	END OF PAVEMENT	2	814	26	A	R	12/4/2016	70
R-PACAVE	030	PACIFIC AVENUE - R-PACAVE	W DAVIS ST	W CENTER ST	2	732	20	A	R	12/4/2016	70
R-PAINST	010	PAINTER STREET - R-PAINST	WILDWOOD AVE	87' W CHASE AVE	2	622	29	A	R	12/4/2016	69
R-PAINST	030	PAINTER STREET - R-PAINST	IRELAND ST	CENTER DR	2	510	38	A	R	12/4/2016	66
R-SIDEST	010	SIDE STREET - R-SIDEST	PACIFIC AVE	WILDWOOD AVE	2	866	29	A	R	12/4/2016	65
R-SCEWAY	010	SCENIC WAY - R-SCEWAY	HIGHWAY 101 NB ON RAMP	EELOA AVE	2	211	76	A	R	12/4/2016	65
R-BRIDST	010	BRIDGE STREET - R-BRIDST	WILDWOOD AVE	EDWARDS DR	2	278	26	A	R	12/4/2016	63
R-CREEST	010	CREEK STREET - R-CREEST	SOUTH END	NALLY LN	2	347	12	A	R	12/4/2016	62
R-PACAVE	040	PACIFIC AVENUE - R-PACAVE	W CENTER ST	BELLEVIEW AVE	2	1218	25	A	R	12/4/2016	61
R-CENTST	020	CENTER STREET - R-CENTST	IRELAND ST	EAST CDS	2	127	27	A	R	12/4/2016	60
R-PAINST	040	PAINTER STREET - R-PAINST	CENTER DR	5' W BLUFF PLACE	2	480	38	A	R	12/4/2016	60
R-RIVEDR	010	RIVERSIDE DRIVE - R-RIVEDR	PAINTER ST	EAGLE PRAIRIE RD	2	610	34	A	R	12/4/2016	60
R-WDAVIST	010	WEST DAVIS STREET - R-WDAVIST	PACIFIC AVE	WILDWOOD AVE	2	363	36	A	R	12/4/2016	60
R-NALLLN	010	NALLY LANE - R-NALLLN	WEST END	CREEK ST	2	121	10	A	R	12/4/2016	59
R-EDWADR	020	EDWARDS DRIVE - R-EDWADR	BRIDGE ST	END OF PAVEMENT	2	1780	24	A	R	12/4/2016	58
R-EELAVE	010	EELOA AVENUE - R-EELAVE	WEST CDS	N PACIFIC DR	2	1057	25	A	R	12/4/2016	57
R-GUNNLN	020	GUNNERSON LANE - R-GUNNLN	HILLTOP DR	DAVIS ST	2	606	39	A	R	12/4/2016	55
R-RIGAVE	010	RIGBY AVENUE - R-RIGAVE	S END	DAVIS ST	2	1184	25	A	R	12/4/2016	55
R-BELAVE	010	BELLEVIEW AVENUE - R-BELAVE	WILDWOOD AVE	1116 E/O RIVER ST	2	1337	37	A	C	12/4/2016	54
R-BELAVE	030	BELLEVIEW AVENUE - R-BELAVE	SPRING ST	WOODLAND AVE	2	1133	22	A	C	10/19/2009	54
R-BELAVE	035	BELLEVIEW AVENUE - R-BELAVE	WOODLAND AVE	WEST CITY LIMIT	2	1032	22	A	C	10/19/2009	54
R-GUNNLN	010	GUNNERSON LANE - R-GUNNLN	S CDS	HILLTOP DR	2	595	27	A	R	12/4/2016	53
R-PAINST	060	PAINTER STREET - R-PAINST	215' E CURTIS LANE	E END	2	840	38	A	R	12/4/2016	53
R-BELAVE	015	BELLEVIEW AVENUE - R-BELAVE	1116 E/O RIVER ST	RIVER ST	2	1116	37	A	C	12/4/2016	52
R-MARTDR	010	MARTIN DRIVE - R-MARTDR	RIVERSIDE DR	N CDS	2	264	34	A	R	12/4/2016	52
R-FERNST	020	FERN STREET - R-FERNST	FERN ST	RIVERSIDE DR	2	657	21	A	R	12/4/2016	51
R-1STAVE	010	1ST AVENUE - R-1STAVE	EDWARDS DR	BERKELEY ST	2	590	21	A	R	12/4/2016	50
R-DAVIST	020	DAVIS STREET - R-DAVIST	IRELAND ST	RIGBY AVE	2	942	26	A	R	12/4/2016	48



Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-RIVEDR	030	RIVERSIDE DRIVE - R-RIVEDR	FERN ST	NW CDS	2	1056	32	A	R	12/4/2016	46
R-EELAVE	030	EELOA AVENUE - R-EELAVE	SCENIC WAY	FERN ST	2	869	25	A	R	10/19/2009	44
R-DAVIST	010	DAVIS STREET - R-DAVIST	WILDWOOD AVE	IRELAND ST	2	1364	37	A	R	12/4/2016	43
R-EDWADR	010	EDWARDS DRIVE - R-EDWADR	WILDWOOD AVE	BRIDGE ST	2	270	28	A	R	10/19/2009	43
R-MONURD	040	MONUMENT ROUD - R-MONURD	S SEQUOIA AVE	WILDWOOD AVE	2	783	28	A	R	12/4/2016	42
R-RIGAVE	030	RIGBY AVENUE - R-RIGAVE	CENTER ST	PAINTER ST	2	382	18	A	R	12/4/2016	40
R-CENTST	030	CENTER STREET - R-CENTST	PAINTER ST	RIGBY AVE	2	617	26	A	R	10/19/2009	40
R-EELAVE	020	EELOA AVENUE - R-EELAVE	N PACIFIC DR	SCENIC WAY	2	676	26	A	R	10/19/2009	40
R-DAVIST	030	DAVIS STREET - R-DAVIST	RIGBY AVE	EAST END	2	1584	26	A	R	12/4/2016	39
R-CHERLN	010	CHERRY LANE - R-CHERLN	MONUMENT RD	ORCHARD PL	2	782	16	A	R	10/19/2009	39
R-PAINST	020	PAINTER STREET - R-PAINST	258' E CHASE AVE	IRELAND ST	2	545	29	A	R	12/4/2016	38
R-ORCHST	010	ORCHARD STREET - R-ORCHST	MONUMENT RD	ORCHARD PL	2	696	26	A	R	10/19/2009	38
R-CEDAST	010	CEDAR STREET - R-CEDAST	PACIFIC AVE	WILDWOOD AVE	2	657	28	A	R	10/19/2009	36
R-BELAVE	020	BELLEVIEW AVENUE - R-BELAVE	RIVER RD	SPRING ST	2	825	23	A	C	10/19/2009	34
R-RIVEDR	020	RIVERSIDE DRIVE - R-RIVEDR	EAGLE PRAIRIE RD	FERN ST	2	1337	39	A	R	10/19/2009	33
R-ALPINE	010	ALPINE - R-ALPINE	SOUTH END	MONUMENT RD	2	170	11	A	R	10/19/2009	32
R-FERNST	010	FERN STREET - R-FERNST	EELOA AVE	RIVERSIDE DR	2	657	21	A	R	10/19/2009	32
R-2NDAVE	020	2ND AVENUE - R-2NDAVE	COLUMBUS ST	ELKO ST	2	1030	31	A	R	10/19/2009	31
R-DIXIST	010	DIXIE STREET - R-DIXIST	WILDWOOD AVE	3RD AVE	2	745	17	A	R	10/19/2009	31
R-WTOWST	010	WEST TOWNSEND STREET - R-TOWST	RIO DELL AVE	PACIFIC AVE	2	288	25	A	R	10/19/2009	29
R-ORCHPL	010	ORCHARD PLACE - R-ORCHPL	CHERRY LN	ORCHARD ST	2	169	18	A	R	10/19/2009	27
R-RIVEST	010	RIVER STREET - R-RIVEST	OGLE AVE	BELLEVIEW AVE	2	230	26	A	R	10/19/2009	27
R-WPAINST	020	WEST PAINTER STREET - R-WPAIST	PACIFIC AVE	50' W RIO DELL AVE	2	285	17	A	R	10/19/2009	27
R-WPAINST	040	WEST PAINTER STREET - R-WPAIST	62' E RIO DELL AVE	WILDWOOD AVE	2	100	17	A	R	10/19/2009	27
R-WILAVE	010	WILDWOOD AVENUE - R-WILAVE	BRIDGE ST	CEDAR ST	3	1207	66	A	R	10/19/2009	26
R-WILAVE	015	WILDWOOD AVENUE - R-WILAVE	CEDAR ST	136FT N/O ELM ST	3	891	66	A	R	10/19/2009	26
R-BUTCST	010	BUTCHER STREET - R-BUTCST	PACIFIC AVE	RIO DELL AVE	2	303	21	A	R	10/19/2009	24
R-OGLAVE	020	OGLE AVENUE - R-OGLAVE	TOLMAN PL	RIVER RD	2	1383	20	A	R	10/19/2009	23
R-2NDAVE	030	2ND AVENUE - R-2NDAVE	ELKO ST	DAVIS ST	2	181	20	A	R	10/19/2009	22
R-DIXIST	030	DIXIE STREET - R-DIXIST	4TH AVE	DAVIS ST	2	348	18	A	R	10/19/2009	21
R-OGLAVE	010	OGLE AVENUE - R-OGLAVE	BELLEVIEW AVE	TOLMAN PL	2	1015	27	A	R	10/19/2009	19
R-RIGAVE	020	RIGBY AVENUE - R-RIGAVE	DAVIS ST	CENTER ST	2	1036	28	A	R	10/19/2009	19
R-ELMST	010	ELM STREET - R-ELMST	PACIFIC AVE	WILDWOOD AVE	2	381	20	A	R	10/19/2009	17
R-SPRIST	010	SPRING STREET - R-SPRIST	OGLE AVE	BELLEVIEW AVE	2	304	21	A	R	10/19/2009	17
R-IREAVE	020	IRELAND AVENUE - R-IREAVE	CENTER ST	PAINTER ST	2	386	34	A	R	10/19/2009	16
R-RIDAVE	010	RIO DELL AVENUE - R-RIDAVE	W CENTER ST	TOWNSEND ST	2	716	18	A	R	10/19/2009	16

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
R-VIEWST	010	VIEW STREET - R-VIEWST	DOUGLAS ST	KELLEY ST	2	325	21	A	R	10/19/2009	16
R-IREAVE	010	IRELAND AVENUE - R-IREAVE	DAVIS ST	CENTER ST	2	1012	35	A	R	10/19/2009	15

## **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


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


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

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 5.54 million dollars over the next ten years the PCI of the street network will improve from the current level of 51 to 82 by 2021. If no treatments are programmed, the weighted average PCI is projected to deteriorate from 51 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.

<b>COLUMN</b>	<b>DESCRIPTION</b>
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: 04/17/2017

Year	PCI Treated	PCI Untreated	PM Cost	Rehab Cost	Cost	
2017	85	51	\$68,042	\$3,516,056	\$3,584,098	
2018	82	49	\$6,469	\$64,884	\$71,353	
2019	80	47	\$7,018	\$7,303	\$14,321	
2020	78	45	\$0	\$0	\$0	
2021	77	43	\$12,671	\$27,418	\$40,089	
2022	78	42	\$208,002	\$108,534	\$316,536	
2023	77	40	\$90,636	\$32,495	\$123,131	
2024	78	38	\$335,974	\$33,966	\$369,940	
2025	80	37	\$189,515	\$346,056	\$535,571	
2026	82	35	\$276,852	\$205,359	\$482,211	
			<b>% PM</b>	<b>PM Total Cost</b>	<b>Rehab Total Cost</b>	<b>Total Cost</b>
			21.58%	\$1,195,179	\$4,342,071	\$5,537,250

## 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.

<b>COLUMN</b>	<b>DESCRIPTION</b>
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: 04/17/2017

Treatment	Year	Area Treated	Cost
1.5" AC OVERLAY	2022	7,096.11 sq.yd.	\$156,302
	2023	2,436 sq.yd.	\$55,266
	2024	9,362.22 sq.yd.	\$218,774
	2025	4,098 sq.yd.	\$98,634
	2026	2,530.33 sq.yd.	\$62,730
	Total	25,522.67	\$591,706
SLURRY SEAL	2017	27,214.67 sq.yd.	\$68,042
	2018	2,512 sq.yd.	\$6,469
	2019	2,645.78 sq.yd.	\$7,018
	2021	4,502 sq.yd.	\$12,671
	2022	17,837 sq.yd.	\$51,700
	2023	11,848 sq.yd.	\$35,370
	2024	38,115.89 sq.yd.	\$117,200
	2025	28,694.44 sq.yd.	\$90,881
	2026	65,637.33 sq.yd.	\$214,122
	Total	199,007.11	\$603,473
Total Quantity		224,529.78	\$1,195,179

## 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.

<b>COLUMN</b>	<b>DESCRIPTION</b>
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: 04/17/2017

Treatment	Year	Area Treated		Cost
2" AC OVERLAY W/ DIGOUTS	2017	67,713.33	sq.yd.	\$2,708,543
	2025	5,496.56	sq.yd.	\$278,515
	Total	73,209.89	sq.yd.	\$2,987,058
SLURRY SEAL W/ DIGOUTS	2017	35,105.11	sq.yd.	\$140,425
	2018	13,858.44	sq.yd.	\$64,884
	2019	1,376.67	sq.yd.	\$7,303
	2024	462.67	sq.yd.	\$2,846
	2026	17,219	sq.yd.	\$89,872
Total	68,021.89	sq.yd.	\$305,330	
SURFACE TREATMENT (CAPE OR SLURRY)	2017	24,525.33	sq.yd.	\$245,256
	2021	2,436	sq.yd.	\$27,418
	2022	9,362.22	sq.yd.	\$108,534
	2023	2,721.33	sq.yd.	\$32,495
	2024	2,530.33	sq.yd.	\$31,120
	2025	5,331.67	sq.yd.	\$67,541
	2026	8,851	sq.yd.	\$115,487
Total	55,757.89	sq.yd.	\$627,851	
THICK AC OVERLAY(2.5 INCHES)	2017	7,400.56	sq.yd.	\$421,832
	Total	7,400.56	sq.yd.	\$421,832
Total Cost				\$4,342,071

## **Scenarios 1 - 3**



**Scenario 1: Increase PCI to 70**  
**(\$4.3 million over ten years)**  
Cost Summary Report  
Network Condition Summary Report

**Scenario: Rio Dell - Increase PCI to 70**

**Objective: Minimum Network Average PCI**

**Target: By Year**

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	53	Year 2	55	Year 3	57	Year 4	59
Year 5	61	Year 6	63	Year 7	65	Year 8	67
Year 9	68	Year 10	70				

Year	Rehabilitation	Preventive Maintenance	Total Cost	Deferred		
2017	II	\$114,448	Non-Project	\$68,042	\$182,490	\$3,401,594
	III	\$0	Project	\$0		
	IV	\$0				
	V	\$0				
	<b>Total</b>	<b>\$114,448</b>				
	Project	\$0				
2018	II	\$3,309	Non-Project	\$6,469	\$581,849	\$3,143,936
	III	\$2,383	Project	\$0		
	IV	\$415,485				
	V	\$154,203				
	<b>Total</b>	<b>\$575,380</b>				
	Project	\$0				
2019	II	\$0	Non-Project	\$7,018	\$416,191	\$2,829,086
	III	\$0	Project	\$0		
	IV	\$0				
	V	\$409,173				
	<b>Total</b>	<b>\$409,173</b>				
	Project	\$0				
2020	II	\$0	Non-Project	\$0	\$407,503	\$2,506,460
	III	\$0	Project	\$0		
	IV	\$0				
	V	\$407,503				
	<b>Total</b>	<b>\$407,503</b>				
	Project	\$0				
2021	II	\$0	Non-Project	\$12,671	\$475,857	\$2,177,766
	III	\$0	Project	\$0		
	IV	\$0				
	V	\$463,186				
	<b>Total</b>	<b>\$463,186</b>				
	Project	\$0				

Year		Rehabilitation		Preventive Maintenance	Total Cost	Deferred	
2022	II	\$0		Non-Project	\$51,700	\$401,101	
	III	\$0		Project	\$0		
	IV	\$0					
	V	\$349,401					
	<b>Total</b>	<b>\$349,401</b>					\$2,079,413
Project	\$0						
2023	II	\$0		Non-Project	\$35,370	\$558,250	
	III	\$0		Project	\$0		
	IV	\$0					
	V	\$522,880					
	<b>Total</b>	<b>\$522,880</b>					\$1,907,050
Project	\$0						
2024	II	\$0		Non-Project	\$80,337	\$359,047	
	III	\$2,846		Project	\$0		
	IV	\$0					
	V	\$275,864					
	<b>Total</b>	<b>\$278,710</b>					\$1,688,398
Project	\$0						
2025	II	\$0		Non-Project	\$122,819	\$313,071	
	III	\$0		Project	\$0		
	IV	\$0					
	V	\$190,252					
	<b>Total</b>	<b>\$190,252</b>					\$1,759,026
Project	\$0						
2026	II	\$89,872		Non-Project	\$8,194	\$614,322	
	III	\$0		Project	\$0		
	IV	\$0					
	V	\$516,256					
	<b>Total</b>	<b>\$606,128</b>					\$1,571,435
Project	\$0						

Functional Class	Rehabilitation	Prev. Maint.	Summary
Collector	\$415,485	\$31,938	
Residential/Local	\$3,501,576	\$360,682	
<b>Total:</b>	<b>\$3,917,061</b>	<b>\$392,620</b>	<b>Grand Total: \$4,309,681</b>

Scenario: Rio Dell - Increase PCI to 70									
Objective: Minimum Network Average PCI						Target: By Year			
Year	Value	Year	Value	Year	Value	Year	Value	Year	Value
Year 1	53	Year 2	55	Year 3	57	Year 4	59	Year 5	61
Year 6	63	Year 7	65	Year 8	67	Year 9	68	Year 10	70

### Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment
2017	51	53
2018	49	55
2019	47	57
2020	45	59
2021	43	62
2022	42	64
2023	40	66
2024	38	67
2025	37	68
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%	0.0%	42.2%	0.0%	42.2%
II / III	0.0%	2.4%	12.7%	0.0%	15.1%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
<b>Total</b>	<b>0.0%</b>	<b>7.5%</b>	<b>92.5%</b>	<b>0.0%</b>	<b>100.0%</b>

Condition in year 2017 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	0.0%	54.4%	0.0%	54.4%
II / III	0.0%	2.4%	0.4%	0.0%	2.8%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
<b>Total</b>	<b>0.0%</b>	<b>7.5%</b>	<b>92.5%</b>	<b>0.0%</b>	<b>100.0%</b>

Condition in year 2026 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	4.3%	78.4%	0.0%	82.7%
II / III	0.0%	0.0%	0.3%	0.0%	0.3%
IV	0.0%	0.0%	7.2%	0.0%	7.2%
V	0.0%	3.2%	6.6%	0.0%	9.8%
<b>Total</b>	<b>0.0%</b>	<b>7.5%</b>	<b>92.5%</b>	<b>0.0%</b>	<b>100.0%</b>

**Scenario 2: Maintain Current PCI**  
**(\$1.7 million over ten years)**  
Cost Summary Report  
Network Condition Summary Report

Scenario: Rio Dell - Maintain Current PCI (51)

Objective: Minimum Network Average PCI

Target: Overall 51

Year	Rehabilitation	Preventive Maintenance	Total Cost	Deferred	
2017	II	\$0	Non-Project	\$25,392	\$3,558,685
	III	\$0	Project	\$0	
	IV	\$0			
	V	\$0			
	<b>Total</b>	<b>\$0</b>			
	Project	\$0			
2018	II	\$99,226	Non-Project	\$50,399	\$3,770,916
	III	\$0	Project	\$0	
	IV	\$0			
	V	\$0			
	<b>Total</b>	<b>\$99,226</b>			
	Project	\$0			
2019	II	\$0	Non-Project	\$7,018	\$3,453,641
	III	\$2,455	Project	\$0	
	IV	\$427,949			
	V	\$0			
	<b>Total</b>	<b>\$430,404</b>			
	Project	\$0			
2020	II	\$0	Non-Project	\$0	\$3,424,566
	III	\$0	Project	\$0	
	IV	\$0			
	V	\$132,690			
	<b>Total</b>	<b>\$132,690</b>			
	Project	\$0			
2021	II	\$0	Non-Project	\$12,671	\$3,414,862
	III	\$0	Project	\$0	
	IV	\$0			
	V	\$171,741			
	<b>Total</b>	<b>\$171,741</b>			
	Project	\$0			
2022	II	\$0	Non-Project	\$51,700	\$3,563,868
	III	\$0	Project	\$0	
	IV	\$0			
	V	\$139,155			
	<b>Total</b>	<b>\$139,155</b>			
	Project	\$0			

Year		Rehabilitation		Preventive Maintenance	Total Cost	Deferred
2023	II	\$0		Non-Project	\$35,370	\$102,582
	III	\$0		Project	\$0	
	IV	\$0				
	V	\$67,212				
	<b>Total</b>	<b>\$67,212</b>				
	Project	\$0				
2024	II	\$0		Non-Project	\$80,337	\$153,631
	III	\$2,846		Project	\$0	
	IV	\$0				
	V	\$70,448				
	<b>Total</b>	<b>\$73,294</b>				
	Project	\$0				
2025	II	\$0		Non-Project	\$45,691	\$197,260
	III	\$0		Project	\$0	
	IV	\$0				
	V	\$151,569				
	<b>Total</b>	<b>\$151,569</b>				
	Project	\$0				
2026	II	\$0		Non-Project	\$80,610	\$152,460
	III	\$0		Project	\$0	
	IV	\$0				
	V	\$71,850				
	<b>Total</b>	<b>\$71,850</b>				
	Project	\$0				

Functional Class	Rehabilitation	Prev. Maint.	Summary
Collector	\$427,949	\$32,896	
Residential/Local	\$909,192	\$356,292	
<b>Total:</b>	<b>\$1,337,141</b>	<b>\$389,188</b>	<b>Grand Total: \$1,726,329</b>

Scenario: Rio Dell - Maintain Current PCI (51)

Objective: Minimum Network Average PCI

Target: Overall 51

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment
2017	51	51
2018	49	51
2019	47	52
2020	45	51
2021	43	51
2022	42	52
2023	40	51
2024	38	51
2025	37	51
2026	35	51

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%	0.0%	42.2%	0.0%	42.2%
II / III	0.0%	2.4%	12.7%	0.0%	15.1%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
Total	0.0%	7.5%	92.5%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	0.0%	42.2%	0.0%	42.2%
II / III	0.0%	2.4%	12.7%	0.0%	15.1%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
Total	0.0%	7.5%	92.5%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	4.3%	47.0%	0.0%	51.3%
II / III	0.0%	0.0%	9.9%	0.0%	9.9%
IV	0.0%	0.0%	5.9%	0.0%	5.9%
V	0.0%	3.2%	29.6%	0.0%	32.8%
Total	0.0%	7.5%	92.5%	0.0%	100.0%



**Scenario 3: Existing Funding (RMRA)**  
**(\$483,000 over ten years)**  
Cost Summary Report  
Network Condition Summary Report

# Scenarios - Cost Summary

Interest: 3.00%

Inflation: 3.00%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred	Stop Gap		
2017	20%	\$0	II	\$0	Non-Project	\$0	\$0	\$3,584,075	Funded	\$0
			III	\$0					Unmet	\$65,397
			IV	\$0	Project	\$0				
			V	\$0						
			Total	\$0						
			Project	\$0						
2018	20%	\$19,301	II	\$13,783	Non-Project	\$5,179	\$0	\$3,927,723	Funded	\$0
			III	\$0					Unmet	\$62
			IV	\$0	Project	\$0				
			V	\$0						
			Total	\$13,783						
			Project	\$0						
2019	20%	\$57,899	II	\$42,760	Non-Project	\$11,238	\$342	\$4,033,775	Funded	\$0
			III	\$2,455					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$0						
			Total	\$45,215						
			Project	\$0						
2020	20%	\$57,899	II	\$42,358	Non-Project	\$13,413	\$0	\$4,107,124	Funded	\$0
			III	\$0					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$0						
			Total	\$42,358						
			Project	\$0						
2021	20%	\$57,899	II	\$0	Non-Project	\$14,950	\$0	\$4,244,673	Funded	\$0
			III	\$0					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$42,681						
			Total	\$42,681						
			Project	\$0						
2022	20%	\$57,899	II	\$16,838	Non-Project	\$17,411	\$0	\$4,565,917	Funded	\$0
			III	\$13,631					Unmet	\$78,378
			IV	\$0	Project	\$0				
			V	\$8,759						
			Total	\$39,228						
			Project	\$0						

Year	PM	Budget	Rehabilitation	Preventative Maintenance	Surplus PM	Deferred	Stop Gap			
2023	20%	\$57,899	II	\$7,887	Non-Project	\$15,573	\$0	\$5,176,833	Funded	\$0
			III	\$0					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$33,768						
			Total	\$41,655						
Project	\$0									
2024	20%	\$57,899	II	\$0	Non-Project	\$20,815	\$0	\$5,357,419	Funded	\$0
			III	\$2,846					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$34,240						
			Total	\$37,086						
Project	\$0									
2025	20%	\$57,899	II	\$0	Non-Project	\$15,745	\$0	\$5,620,701	Funded	\$0
			III	\$8,484					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$33,668						
			Total	\$42,152						
Project	\$0									
2026	20%	\$57,899	II	\$0	Non-Project	\$13,277	\$0	\$5,899,176	Funded	\$0
			III	\$0					Unmet	\$0
			IV	\$0	Project	\$0				
			V	\$43,841						
			Total	\$43,841						
Project	\$0									

Summary				
Functional Class	Rehabilitation	Prev. Maint.	Funded Stop Gap	Unmet Stop Gap
Collector	\$0	\$0	\$0	\$16,435
Residential/Local	\$347,999	\$127,601	\$0	\$127,402
<b>Grand Total:</b>	<b>\$347,999</b>	<b>\$127,601</b>	<b>\$0</b>	<b>\$143,837</b>

# Scenarios - Network Condition Summary

Interest: 3%

Inflation: 3%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	\$0	20%	2021	\$57,899	20%	2025	\$57,899	20%
2018	\$19,301	20%	2022	\$57,899	20%	2026	\$57,899	20%
2019	\$57,899	20%	2023	\$57,899	20%			
2020	\$57,899	20%	2024	\$57,899	20%			

## Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2017	51	51	0	0
2018	49	49	0.37	0.75
2019	47	48	0.93	1.86
2020	45	47	0.86	1.72
2021	43	46	0.42	0.85
2022	42	45	0.91	1.81
2023	40	44	0.58	1.17
2024	38	43	0.60	1.20
2025	37	41	0.50	1.00
2026	35	40	0.34	0.68

## 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%	0.0%	42.2%	0.0%	42.2%
II / III	0.0%	2.4%	12.7%	0.0%	15.1%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
Total	0.0%	7.5%	92.5%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	0.0%	42.2%	0.0%	42.2%
II / III	0.0%	2.4%	12.7%	0.0%	15.1%
IV	0.0%	2.0%	10.5%	0.0%	12.5%
V	0.0%	3.2%	27.1%	0.0%	30.3%
Total	0.0%	7.5%	92.5%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	0.0%	41.4%	0.0%	41.4%
II / III	0.0%	0.0%	9.9%	0.0%	9.9%
IV	0.0%	0.0%	5.9%	0.0%	5.9%
V	0.0%	7.5%	35.2%	0.0%	42.7%

# Scenarios - Network Condition Summary

Interest: 3%

Inflation: 3%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

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Total	0.0%	7.5%	92.5%	0.0%	100.0%
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## **APPENDIX D**

**Sections Selected for Treatment:  
Existing Funding (Scenario 3)**

# Scenarios - Sections Selected for Treatment

Interest: 3.00%

Inflation: 3.00%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	\$0	20%	2021	\$57,899	20%	2025	\$57,899	20%
2018	\$19,301	20%	2022	\$57,899	20%	2026	\$57,899	20%
2019	\$57,899	20%	2023	\$57,899	20%			
2020	\$57,899	20%	2024	\$57,899	20%			

## 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
BRIDGE STREET	WILDWOOD AVE	EDWARDS DR	R-BRIDST	010	278	26	7,228	12/4/2016	63	R	AC	70	\$3,309	23,931	SLURRY SEAL W/ DIGOUTS	
CENTER STREET	IRELAND ST	EAST CDS	R-CENTST	020	127	27	3,429	12/4/2016	60	R	AC	68	\$1,570	23,368	SLURRY SEAL W/ DIGOUTS	
NALLY LANE	WEST END	CREEK ST	R-NALLLN	010	121	10	1,210	12/4/2016	59	R	AC	67	\$554	23,226	SLURRY SEAL W/ DIGOUTS	
PAINTER STREET	CENTER DR	5' W BLUFF PLACE	R-PAINST	040	480	38	18,240	12/4/2016	60	R	AC	68	\$8,350	23,368	SLURRY SEAL W/ DIGOUTS	
<b>Treatment Total</b>													<b>\$13,783</b>			
1ST AVENUE	BERKELEY ST	COLUMBUS ST	R-1STAVE	020	728	21	15,288	12/4/2016	74	R	AC	80	\$4,375	41,328	SLURRY SEAL	
ATLANTA STREET	1ST AVE	2ND AVE	R-ATLAST	010	234	12	2,808	12/4/2016	75	R	AC	81	\$804	41,406	SLURRY SEAL	
<b>Treatment Total</b>													<b>\$5,179</b>			
<b>Year 2018 Area Total</b>							<b>48,203</b>	<b>Year 2018 Total</b>					<b>\$18,962</b>			

## 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
CREEK STREET	SOUTH END	NALLY LN	R-CREEST	010	347	12	4,164	12/4/2016	62	R	AC	68	\$2,455	18,161	SLURRY SEAL W/ DIGOUTS	
EEOA AVENUE	WEST CDS	N PACIFIC DR	R-EELAVE	010	1,057	25	26,425	12/4/2016	57	R	AC	64	\$12,460	21,928	SLURRY SEAL W/ DIGOUTS	
PACIFIC AVENUE	W CENTER ST	BELLEVIEW AVE	R-PACAVE	040	1,218	25	30,450	12/4/2016	61	R	AC	67	\$14,358	22,558	SLURRY SEAL W/ DIGOUTS	
RIVERSIDE DRIVE	PAINTER ST	EAGLE PRAIRIE RD	R-RIVEDR	010	610	34	20,740	12/4/2016	60	R	AC	66	\$9,780	22,359	SLURRY SEAL W/ DIGOUTS	
WEST DAVIS STREET	PACIFIC AVE	WILDWOOD AVE	R-WDAVIST	010	363	36	13,068	12/4/2016	60	R	AC	66	\$6,162	22,359	SLURRY SEAL W/ DIGOUTS	
<b>Treatment Total</b>													<b>\$45,215</b>			
2ND AVENUE	ATLANTA ST	COLUMBUS ST	R-2NDAVE	010	1,095	29	31,755	12/4/2016	76	R	AC	80	\$9,359	40,213	SLURRY SEAL	
3RD AVENUE	BERKELEY ST	N END	R-3RDAVE	020	146	22	3,212	12/4/2016	84	R	AC	87	\$947	37,547	SLURRY SEAL	

\*\* - Treatment from Project Selection

Scenarios Criteria: Area ID = R - Rio Dell



# Scenarios - Sections Selected for Treatment

Interest: 3.00%

Inflation: 3.00%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

## Year: 2019

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp	Surf	PCI	Cost	Rating	Treatment	
									Insp	FC	Type	PCI			
TYME COURT	W CDS	MILLER CT	R-TYMECT	010	79	40	3,160	12/4/2016	81	R	AC	84	\$932	39,521	SLURRY SEAL
Treatment Total												\$11,238			
Year 2020 Area Total							132,974	Year 2020 Total					\$56,453		

## Year: 2020

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp	Surf	PCI	Cost	Rating	Treatment	
									Insp	FC	Type	PCI			
EDWARDS DRIVE	BRIDGE ST	END OF PAVEMENT	R-EDWADR	020	1,780	24	42,720	12/4/2016	58	R	AC	63	\$20,748	21,149	SLURRY SEAL W/ DIGOUTS
PAINTER STREET	IRELAND ST	CENTER DR	R-PAINST	030	510	38	19,380	12/4/2016	66	R	AC	70	\$9,413	22,438	SLURRY SEAL W/ DIGOUTS
SIDE STREET	PACIFIC AVE	WILDWOOD AVE	R-SIDEST	010	866	29	25,114	12/4/2016	65	R	AC	69	\$12,197	22,260	SLURRY SEAL W/ DIGOUTS
Treatment Total												\$42,358			
COLUMBUS STREET	WILDWOOD AVE	3RD AVE	R-COLUST	010	744	29	21,576	12/4/2016	80	R	AC	82	\$6,550	38,968	SLURRY SEAL
MILLER COURT	S CDS	RIVERSIDE DR	R-MILLCT	010	628	36	22,608	12/4/2016	82	R	AC	84	\$6,863	38,526	SLURRY SEAL
Treatment Total												\$13,413			
Year 2020 Area Total							131,398	Year 2020 Total					\$55,771		

## Year: 2021

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	Last Insp	Last Insp	Surf	PCI	Cost	Rating	Treatment	
									Insp	FC	Type	PCI			
2ND AVENUE	ELKO ST	DAVIS ST	R-2NDAVE	030	181	20	3,620	10/19/2009	22	R	AC	100	\$18,109	10,501	2" AC OVERLAY W/ DIGOUTS
ALPINE	SOUTH END	MONUMENT RD	R-ALPINE	010	170	11	1,870	10/19/2009	32	R	AC	100	\$9,355	10,501	2" AC OVERLAY W/ DIGOUTS
ORCHARD PLACE	CHERRY LN	ORCHARD ST	R-ORCHPL	010	169	18	3,042	10/19/2009	27	R	AC	100	\$15,217	10,501	2" AC OVERLAY W/ DIGOUTS
Treatment Total												\$42,681			
CENTER STREET	WILDWOOD AVE	IRELAND AVE	R-CENTST	010	1,555	29	45,095	12/4/2016	81	R	AC	82	\$14,099	37,934	SLURRY SEAL
ROSE LANE	MONUMENT RD N END		R-ROSELN	010	160	17	2,720	12/4/2016	87	R	AC	87	\$851	35,620	SLURRY SEAL

\*\* - Treatment from Project Selection

Scenarios Criteria: Area ID = R - Rio Dell

## Scenarios - Sections Selected for Treatment

Interest: 3.00%      Inflation: 3.00%      Printed: 10/04/2017  
Scenario: Rio Dell - RMRA Funding

	Treatment Total	\$14,950
Year 2021 Area Total	56,347	Year 2021 Total
		\$57,631

### 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
WEST PAINTER STREET	62' E RIO DELL AVE	WILDWOOD AVE	R-WPAINST	040	100	17	1,700	10/19/2009	27	R	AC	100	\$8,759	10,195	2" AC OVERLAY W/ DIGOUTS	
													Treatment Total	\$8,759		
BERKELEY STREET	WILDWOOD AVE	END OF PAVEMENT	R-BERKST	010	814	26	21,164	12/4/2016	70	R	AC	70	\$13,631	17,000	SLURRY SEAL W/ DIGOUTS	
PACIFIC AVENUE	W DAVIS ST	W CENTER ST	R-PACAVE	030	732	20	14,640	12/4/2016	70	R	AC	70	\$7,544	21,250	SLURRY SEAL W/ DIGOUTS	
PAINTER STREET	WILDWOOD AVE	87' W CHASE AVE	R-PAINST	010	622	29	18,038	12/4/2016	69	R	AC	69	\$9,294	21,064	SLURRY SEAL W/ DIGOUTS	
													Treatment Total	\$30,469		
1ST AVENUE	COLUMBUS ST	ELKO ST	R-1STAVE	030	1,030	20	20,600	12/4/2016	84	R	AC	83	\$6,634	36,676	SLURRY SEAL	
ASH STREET	PACIFIC AVE	WILDWOOD AVE	R-ASHST	010	840	22	18,480	12/4/2016	86	R	AC	85	\$5,951	36,074	SLURRY SEAL	
DOUGLAS STREET	VIEW AVE	PACIFIC ST	R-DOUGST	020	248	30	7,440	12/4/2016	87	R	AC	85	\$2,396	35,613	SLURRY SEAL	
HILLTOP DRIVE	GUNNERSON LN	RIO DELL PUBLIC WORKS EXT	R-HILLDR	010	397	19	7,543	12/4/2016	87	R	AC	85	\$2,430	35,613	SLURRY SEAL	
													Treatment Total	\$17,411		
Year 2022 Area Total					109,605			Year 2022 Total				\$56,639				

### 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
BUTCHER STREET	PACIFIC AVE	RIO DELL AVE	R-BUTCST	010	303	21	6,363	10/19/2009	24	R	AC	100	\$33,768	9,899	2" AC OVERLAY W/ DIGOUTS	
													Treatment Total	\$33,768		
CURTIS LANE	PAINTER ST	NORTH END	R-CURT LN	010	743	20	14,860	12/4/2016	71	R	AC	69	\$7,887	20,505	SLURRY SEAL W/ DIGOUTS	
													Treatment Total	\$7,887		
3RD AVENUE	MEADOW BRIDGE DR	BERKELEY ST	R-3RDAVE	010	258	27	6,966	12/4/2016	88	R	AC	85	\$2,311	34,907	SLURRY SEAL	

\*\* - Treatment from Project Selection  
Scenarios Criteria: Area ID = R - Rio Dell

## Scenarios - Sections Selected for Treatment

Interest: 3.00%

Inflation: 3.00%

Printed: 10/04/2017

Scenario: Rio Dell - RMRA Funding

### 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
BIRCH STREET	PACIFIC AVE	SEQUOIA AVE	R-BIRCST	010	455	29	13,195	12/4/2016	88	R	AC	85	\$4,377	34,907	SLURRY SEAL	
KELLEY STREET	VIEW AVE	PACIFIC AVE	R-KELLST	010	244	27	6,588	12/4/2016	88	R	AC	85	\$2,186	34,907	SLURRY SEAL	
PACIFIC AVENUE	KELLY ST	W DAVIS ST	R-PACAVE	020	793	20	15,860	12/4/2016	88	R	AC	85	\$5,261	34,907	SLURRY SEAL	
RIO DELL AVENUE	TOWNSEND ST	BUTCHER ST	R-RIDAVE	020	289	15	4,335	12/4/2016	87	R	AC	84	\$1,438	35,232	SLURRY SEAL	
<b>Treatment Total</b>													<b>\$15,573</b>			
<b>Year 2023 Area Total</b>							<b>68,167</b>	<b>Year 2023 Total</b>					<b>\$57,228</b>			

### 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
DIXIE STREET	4TH AVE	DAVIS ST	R-DIXIST	030	348	18	6,264	10/19/2009	21	R	AC	100	\$34,240	9,610	2" AC OVERLAY W/ DIGOUTS	
<b>Treatment Total</b>													<b>\$34,240</b>			
CREEK STREET	SOUTH END	NALLY LN	R-CREEST	010	347	12	4,164	12/4/2016	62	R	AC	70	\$2,846	15,942	SLURRY SEAL W/ DIGOUTS	
<b>Treatment Total</b>													<b>\$2,846</b>			
DIXIE STREET	3RD AVE	4TH AVE	R-DIXIST	020	243	24	5,832	12/4/2016	90	R	AC	85	\$1,993	33,851	SLURRY SEAL	
PACIFIC AVENUE	MONUMENT AVE	KELLY ST	R-PACAVE	010	1,256	21	26,376	12/4/2016	88	R	AC	84	\$9,011	34,400	SLURRY SEAL	
SEQUOIA STREET	MONUMENT AVE	CEDAR ST	R-SEQUEST	010	808	30	24,240	12/4/2016	88	R	AC	84	\$8,282	34,400	SLURRY SEAL	
WEST CENTER STREET	RIO DELL AVE	WILDWOOD AVE	R-WCENST	020	179	25	4,475	12/4/2016	92	R	AC	86	\$1,529	33,102	SLURRY SEAL	
<b>Treatment Total</b>													<b>\$20,815</b>			
<b>Year 2024 Area Total</b>							<b>71,351</b>	<b>Year 2024 Total</b>					<b>\$57,901</b>			

### 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
RIVER STREET	OGLE AVE	BELLEVIEW AVE	R-RIVEST	010	230	26	5,980	10/19/2009	27	R	AC	100	\$33,668	9,330	2" AC OVERLAY W/ DIGOUTS	
<b>Treatment Total</b>													<b>\$33,668</b>			
ELKO STREET	WILDWOOD AVE	2ND AVE	R-ELKOST	010	574	21	12,054	12/4/2016	74	R	AC	69	\$8,484	15,423	SLURRY SEAL W/ DIGOUTS	

\*\* - Treatment from Project Selection

## Scenarios - Sections Selected for Treatment

Interest: 3.00%      Inflation: 3.00%      Printed: 10/04/2017  
Scenario: Rio Dell - RMRA Funding

													Treatment Total	\$8,484			
CHASE AVENUE	CENTER ST	PAINTER ST	R-CHAAVE	010	387	18	6,966	12/4/2016	92	R	AC/AC	86	\$2,452	33,966	SLURRY SEAL		
DOUGLAS STREET	WESTEND	VIEW AVE	R-DOUGST	010	371	17	6,307	12/4/2016	92	R	AC	85	\$2,220	32,939	SLURRY SEAL		
PAINTER STREET	87' W CHASE AVE	258' E CHASE AVE	R-PAINST	025	320	29	9,280	12/4/2016	92	R	AC/AC	86	\$3,266	33,966	SLURRY SEAL		
PAINTER STREET	5' W BUFF PLACE	215' E CURTIS LANE	R-PAINST	050	355	38	13,490	12/4/2016	92	R	AC/AC	86	\$4,747	33,966	SLURRY SEAL		
WEST CENTER STREET	PACIFIC AVE	RIO DELL AVE	R-WCENST	010	283	24	6,792	12/4/2016	92	R	AC/AC	86	\$2,390	33,966	SLURRY SEAL		
WEST PAINTER STREET	50' W RIO DELL AVE	62' E RIO DELL AVE	R-WPAINST	030	112	17	1,904	12/4/2016	92	R	AC/AC	86	\$670	33,966	SLURRY SEAL		
													Treatment Total	\$15,745			
<b>Year 2025 Area Total</b>					<b>62,773</b>								Year 2025 Total	\$57,897			

### 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	
EDWARDS DRIVE	WILDWOOD AVE	BRIDGE ST	R-EDWADR	010	270	28	7,560	10/19/2009	43	R	AC	100	\$43,841	9,059	2" AC OVERLAY W/ DIGOUTS		
													Treatment Total	\$43,841			
ATLANTA STREET	1ST AVE	2ND AVE	R-ATLAST	010	234	12	2,808	12/4/2016	75	R	AC	77	\$1,018	32,166	SLURRY SEAL		
DOUGLAS STREET	PACIFIC ST	WILDWOOD AVE	R-DOUGST	030	472	30	14,160	12/4/2016	90	R	AC	82	\$5,133	32,637	SLURRY SEAL		
MONUMENT ROUD	CHERRY LN	PACIFIC ST	R-MONURD	020	305	24	7,320	12/4/2016	90	R	AC	82	\$2,654	32,637	SLURRY SEAL		
SOUTH SEQUOIA STREET	GRAYLAND HEIGHTS RD	MONUMENT RD	R-SSEQST	010	514	24	12,336	12/4/2016	88	R	AC	81	\$4,472	32,675	SLURRY SEAL		
													Treatment Total	\$13,277			
<b>Year 2026 Area Total</b>					<b>44,184</b>								Year 2026 Total	\$57,118			
<b>Total Section Area:</b>					<b>725,002</b>								Grand Total	\$475,600			

\*\* - Treatment from Project Selection

Scenarios Criteria: Area ID = R - Rio Dell

## **APPENDIX E**

## **PCI GIS Maps**

**PCI GIS Map  
Current Pavement Conditions  
(2017)**

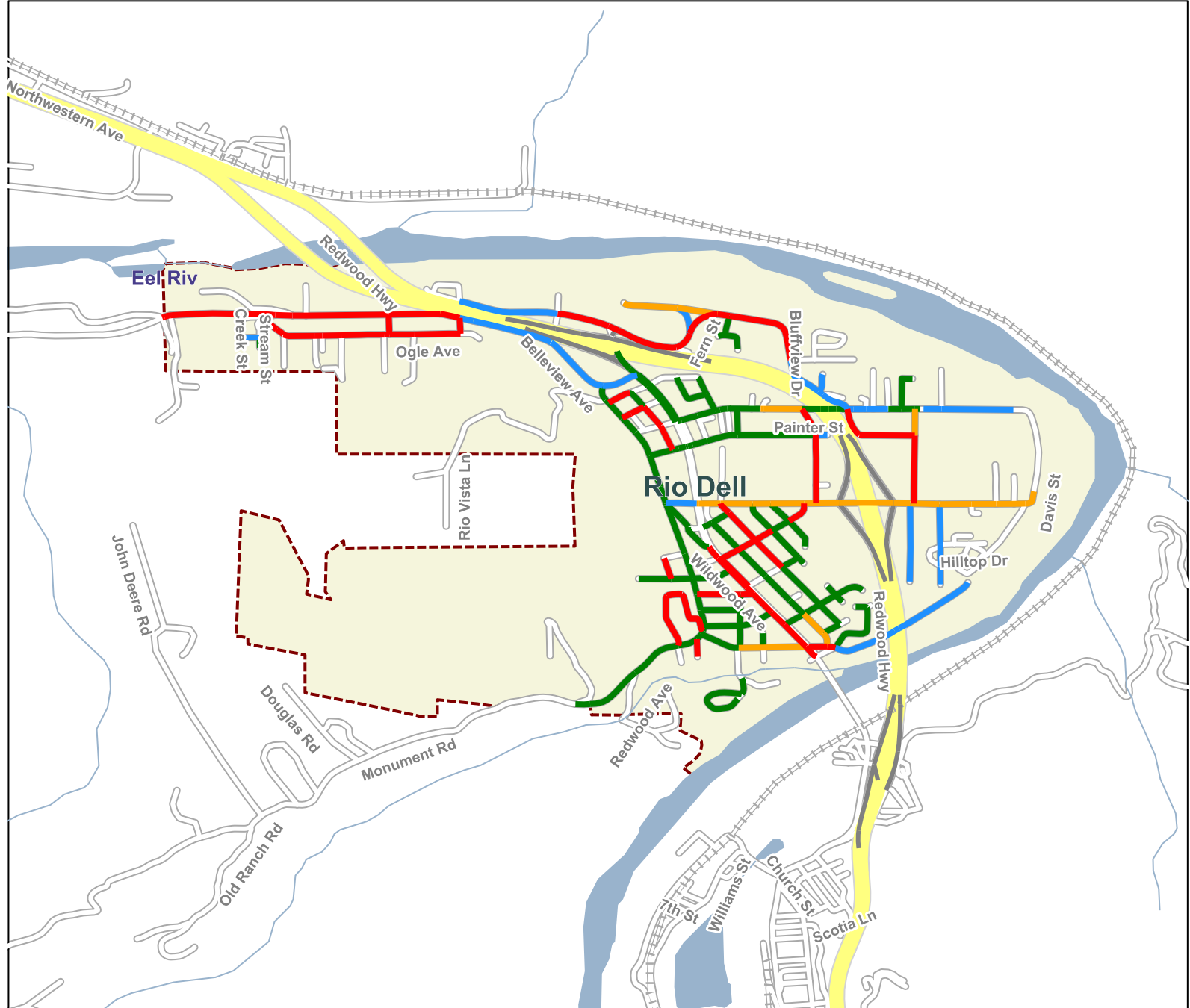


# Current PCI Condition

Printed: 4/17/2017

### Feature Legend

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





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

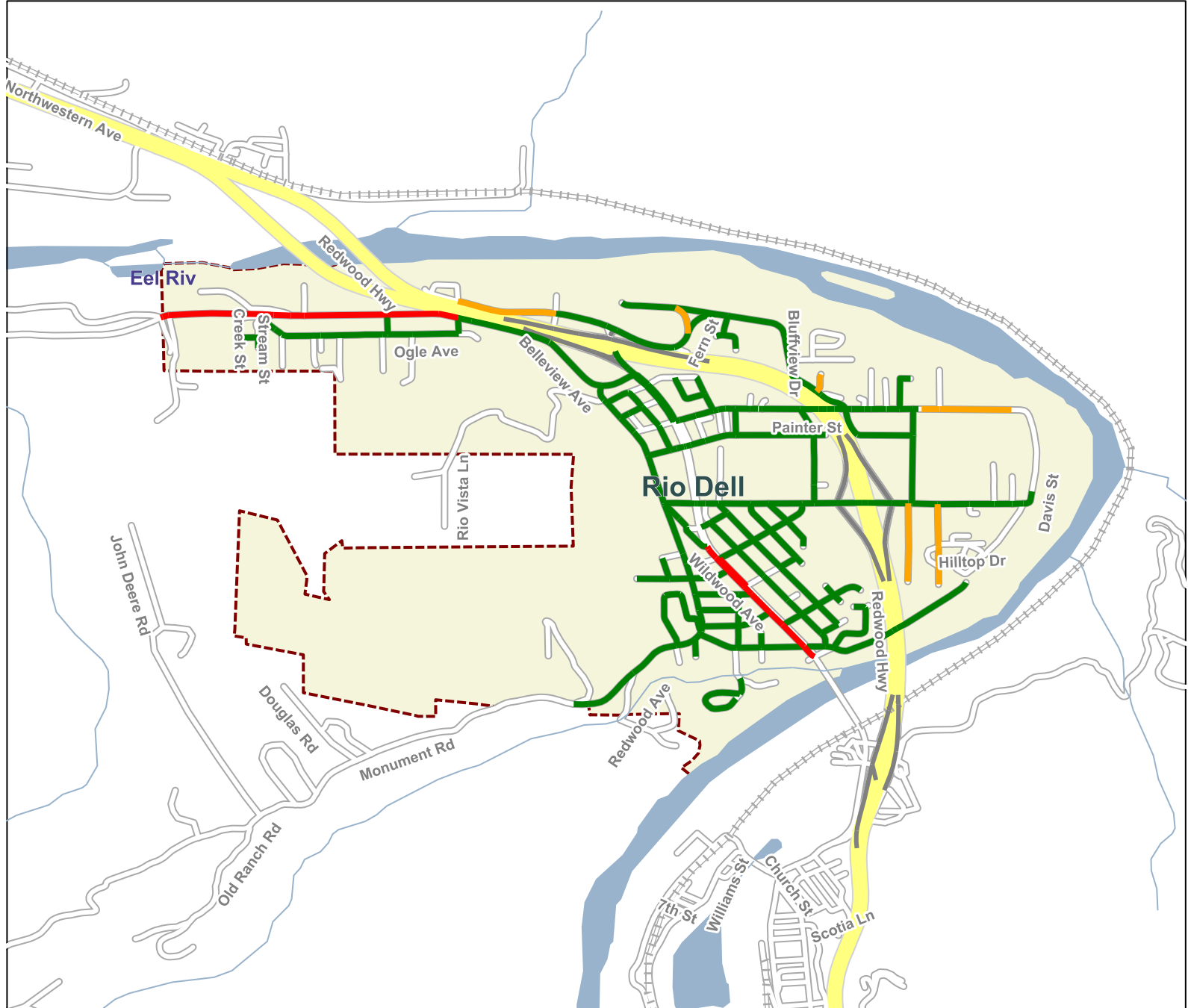


# HCAOG Target-Driven Scenario PCI Condition

Rio Dell - Increase PCI to 70 - 2026 Project Period - Total Rehab: \$606,128 - Printed: 4/17/2017

### Feature Legend

- Category I - Very Good
- Category IV - Poor
- Category V - Very Poor



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

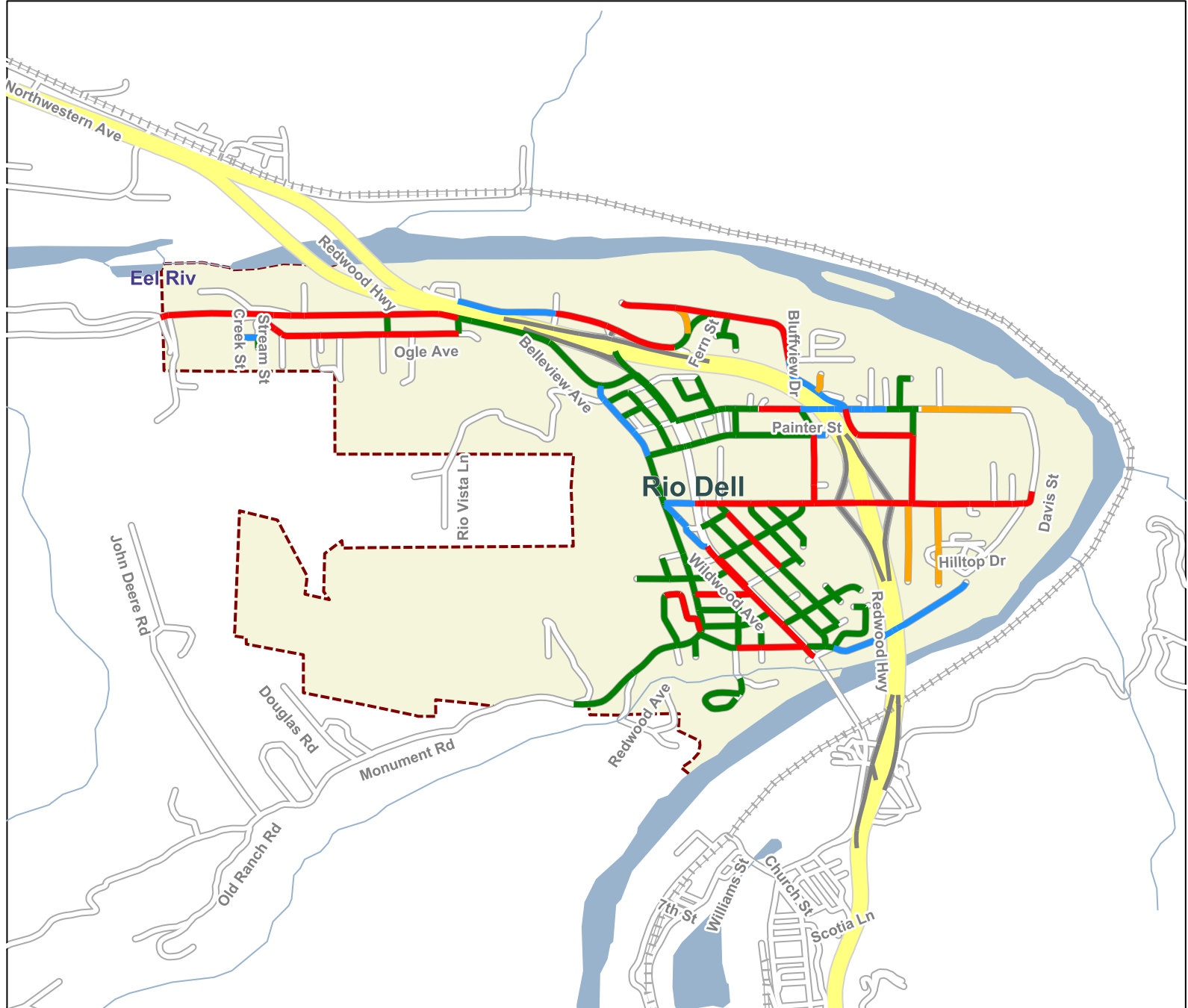


# HCAOG Target-Driven Scenario PCI Condition

Rio Dell - Maintain Current PCI (51) - 2026 Project Period - Total Rehab: \$71,850 - Printed: 4/17/2017

## Feature Legend

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



**PCI GIS Map  
Scenario 3: Existing Funding  
(2026)**



# HCAOG

# Scenario PCI Condition

Rio Dell - RMRA Funding - 2026 Project Period - Total Rehab: \$43,841 - Printed: 10/4/2017

### Feature Legend

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

