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## **2017 Pavement Assessment Report**

**Elbert County, Colorado**

December 2017

prepared for

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**Elbert County Department of Public Works**

215 Comanche Street  
Kiowa, CO 80117

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# TABLE OF CONTENTS

|            |   |           |
|------------|---|-----------|
| <b>1.0</b> | <b>INTRODUCTION</b>                                     | <b>1</b>  |
| 1.1        | Report Intent and Objective                             | 1         |
| 1.2        | Report Content  | 1         |
| <b>2.0</b> | <b>PAVEMENT ASSESSMENT METHODOLOGY</b>                  | <b>2</b>  |
| 2.1        | PAVER™7   | 3         |
| <b>3.0</b> | <b>PCI ASSESSMENT</b>                                   | <b>4</b>  |
| 3.1        | County Road PCI Results                                 | 4         |
| 3.2        | Subdivision Road PCI Results                            | 5         |
| <b>4.0</b> | <b>2017 PCI RESULTS</b>                                 | <b>6</b>  |
| 4.1        | County Roads  | 6         |
| 4.2        | Subdivision Roads                                       | 7         |
| <b>5.0</b> | <b>ROAD MAINTENANCE AND IMPROVEMENT TECHNIQUES</b>      | <b>8</b>  |
| <b>6.0</b> | <b>ROAD MAINTENANCE AND IMPROVEMENT RECOMMENDATIONS</b> | <b>10</b> |
| 6.1        | County Road Recommendations                             | 10        |
| 6.2        | Subdivision Road Recommendations                        | 11        |
| 6.3        | 2018-2019 Capital Improvement Plan Recommendations      | 12        |

**Appendix A** – D6433-09, Standard Practice for Roads and Parking Lots Pavement Condition Index Survey

**Appendix B** – 2010 and 2017 PCI Maps

**Appendix C** – 2017 PCI Results – County Roads

**Appendix D** – 2017 PCI Results – Subdivision Roads

## 1.0 INTRODUCTION

This 2017 Pavement Assessment Report (hereinafter referred to as “Report”) is prepared for the Elbert County Department of Public Works (DPW), for road maintenance and capital improvement planning purposes. As such, this Report includes an assessment of all paved county roads and residential subdivision roads; and a recommended maintenance and/or improvement strategy based on the assessment. The 2017 pavement assessment described in this Report also serves as a follow up to a similar report prepared for the DPW in 2010. Information from the 2010 report is included for comparison purposes and to assist DPW with its decision-making process regarding short-term and long-term road maintenance and improvement planning. All road surface evaluations completed for this Report were performed based on applicable American Society for Testing of Materials (ASTM) standards. No geotechnical or structural capacity tests were performed.

### 1.1 Report Intent and Objective

The intent of this Report is to evaluate the physical condition of roughly 165 miles of paved road surface within Elbert County and help determine how best to protect and maintain this County infrastructure investment. The objective of the Report is to classify each road according to its condition to help assist the DPW in determining the hierarchy of maintenance and repair from most critical to least critical. Maintenance and improvement strategies are recommended based on the overall physical condition of each road, or segments of roads. In addition to the pavement assessment methodology and findings, this Report also includes pavement repair/replacement cost estimates which may be used as a basis for short-term and long-term decision making regarding roadway maintenance and improvement.

### 1.2 Report Content

This Report includes: a description of the 2017 pavement assessment methodology and the computer software used to compute the pavement condition index for each county road and subdivision; a comparison of 2010 and 2017 pavement condition index results; 2017 results for each county road and subdivision; a recommended 5-year road maintenance plan based on the 2017 results; and cost estimates for the 5-year maintenance plan.

Report appendices include: the ASTM standard used to complete the road assessment (Appendix A); maps summarizing the 2010 and 2017 road assessment results (Appendix B); 2017 county road assessment results (Appendix C); and subdivision road assessment results (Appendix D).

## 2.0 PAVEMENT ASSESSMENT METHODOLOGY

The ASTM standard used to assess Elbert County paved roads is identified as D6433-09, Standard Practice for Roads and Parking Lots Pavement Condition Index Survey. The pavement condition index (PCI) is a subjective method of evaluation that measures two conditions: the type, extent and severity of pavement surface distresses (typically cracks and rutting); and the smoothness and ride comfort of the road. The PCI is based on visual road surface inspection and observation that rates the condition of pavement and provides a numerical rating system where 0 is the worst possible pavement condition and 100 is the best. A description of the PCI rating system and a description of typical associated pavement conditions is summarized in Table 1 below.

Table 1 – PCI Summary

| PCI Range | Classification | Approx. Life | Pavement Description   |
|-----------|----------------|--------------|--|
| 86 - 100  | Good           | 25-20 years  | New pavement. Minimal weathering and minor cracks. Minimal, routine maintenance suggested.                                 |
| 71 - 85   | Satisfactory   | 20-15 years  | Minor distresses beginning to develop. Low weathering. Routine maintenance required.                                       |
| 55 - 70   | Fair           | 15-12 years  | Intermediate distresses. Low-medium weathering. Intermediate rehab required.   |
| 41 - 56   | Poor           | 12-10 years  | Intermediate distresses. Medium weathering. Ride quality affected. Intermediate rehab required.                            |
| 26 - 40   | Very Poor      | 10-7 years   | Advanced distresses. Medium-high weathering. Ride quality affected. Advanced rehab required. Full Reconstruction possible. |
| 11 - 25   | Serious        | 7-5 years    | Advanced distresses. High weathering. Ride quality severely affected. Requires full reconstruction.                        |
| 0 - 10    | Failed         | 5-0 years    | Extreme distresses and rough pavement. Requires full reconstruction or conversion to gravel road.                          |

The road assessment is based on a visual inspection of various pavement distress types requiring a significant amount of field data used to calculate a numerical PCI value, which rates the surface condition of the pavement. Each individual distress type has a specific measurement procedure and criteria for determining the severity level, which is further described in Appendix A. Each distress type is measured and categorized into a severity level of either low, medium or high. The ASTM D6433-09 quantifies the following 19 distress types for asphalt-paved roads.

1. **Alligator Cracking** – Due to traffic loading, form smaller cracks with sharp angles. Measured by area (ft<sup>2</sup>).
2. **Bleeding** – Sticky, bituminous glass like film, excessive amount of asphalt/tar on the surface.
3. **Block Cracking** – Interconnected cracks divide pavement into rectangular pieces, caused by shrinkage, daily temperature cycling. Not load associated. Typically larger areas. Measured by area (ft<sup>2</sup>)
4. **Bumps & Sags** – upward & downward displacements. Buckling or bulging of pavement. Frost Heave. Not considered swelling, shoves, or corrugation. Measured in linear feet.
5. **Corrugation** – Wash-boarding, series of ripples at regular intervals. Ridges are perpendicular to traffic direction. Measured by area (ft<sup>2</sup>). Use straight edge.
6. **Depression** – localized depressions in pavement caused by foundation settlement. Areas with ponding water, look for water stains. Measured by Area (ft<sup>2</sup>).
7. **Edge Cracking** – Cracks parallel to and within 1.5 ft of the edge. Due to traffic load and frost-weaken base or subgrade. Measured in linear feet (ft).
8. **Lane Shoulder Drop Off** – Difference in elevation between shoulder edge and pavement. Caused by shoulder erosion & settlement. Measure in linear feet (ft).

9. **Longitudinal & Transverse Cracking** – Parallel to centerline. Caused by poorly constructed lane joint, temperature shrinkage. Cracks are perpendicular to centerline. Measured in linear feet (ft).
10. **Patching & Utility Cut** – Area that has been replaced with new material. Considered defect no matter how well its performing. Distresses found within a patch are not recorded, however should be taken into account in determining the patch severity level. Measured by Area (ft<sup>2</sup>) and ride quality.
11. **Polished Aggregate** – Repeated traffic applications. No rough, angular aggregate to provide skid resistance. Smooth to the touch. Small aggregate at the surface. Measured by Area (ft<sup>2</sup>).
12. **Potholes** – Bowl shaped depressions. Potholes can be created by high-severity alligator cracking. Measured by counting the number that are low, medium, high and recorded separately. Severity based on depth and diameter when diameter is greater than 30". Record size and depth of all potholes.
13. **Railroad Crossing** – Bumps around or between tracks. Measured by area (ft<sup>2</sup>).
14. **Rutting** – Surface depression in wheel path, uplift may occur along sides of rut. Measured by area (ft<sup>2</sup>).
15. **Shoving** – Where asphalt pavements abut PCC pavement. PCC pavement increases in length causes push of asphalt. Measured by area (ft<sup>2</sup>).
16. **Slippage Cracking** – Crescent or half-moon shaped cracks, usually transverse to travel. Produced by braking or turning wheels. Pavement slides or deforms. Occurs in overlaps, when there is a poor bond between pavement layers. Measured by area (ft<sup>2</sup>).
17. **Swell** – upward bulge in pavement, a long, gradual wave more than 10 feet long. Measured by Area (ft<sup>2</sup>).
18. **Raveling** – dislodging of coarse aggregate. Insufficient binder, poor mix quality, insufficient compaction, stripping. Measured by area (ft<sup>2</sup>).
19. **Weathering (Surface Wear)** – The wearing away of asphalt binder and fine aggregate matrix. Dislodging of aggregate is covered in Raveling. Surface Wear is caused by oxidation, inadequate compaction, insufficient asphalt content, excessive natural sand, surface water erosion, and traffic. Weathering occurs faster in areas with high solar radiation. Measured by area (ft<sup>2</sup>).

For the 2010 pavement condition assessment, PCI scores were calculated manually in accordance with methodology outlined in ASTM D6433-09. For the 2017 assessment, Elbert County DPW upgraded its pavement assessment procedure by implementing the use of PAVER™7 computer software. The software was purchased from Colorado State University, an authorized administrator of PAVER™7. A brief description of PAVER™7 follows.

## 2.1 PAVER™7

The PCI method of quantifying pavement conditions was developed by the U.S. Army Corps of Engineers. PAVER™7 software is one of several applications that compute the PCI score based on data that is input for each road. To satisfy the PAVER™7 data input requirements, the roads in Elbert County were divided into branches, sections and samples. Each paved road in Elbert County is considered a “branch”. Each branch is then divided into “sections”. County road branches were divided into sections that are approximately one mile in length. Subdivision branches were divided into sections that spanned from one intersection to another intersection or dead end. A “sample” is a 100-foot length of pavement which is visually inspected for the 19 types of pavement distress/deterioration. Multiple samples are taken within each section to determine a PCI score for the section. The PCI scores of the sections are used to determine an overall PCI score for the branch. Appendix C and D include PCI results for county roads and residential subdivision roads, respectively.

### 3.0 PCI ASSESSMENT

The first Elbert County PCI assessment was conducted in summer 2010 and at that time, there were approximately 150 miles of paved roads (88 miles of county roads and 62 miles of residential subdivision roads) included in the assessment. Figure 1 (Appendix B) illustrates the results of the 2010 assessment. The second PCI assessment was conducted in summer 2017. This assessment included 168 miles of paved roads, which included in all roads in the 2010 assessment and an additional 16 miles of county roads and 2 miles of residential subdivision roads constructed between 2010 and 2017. Figure 2 (Appendix B) illustrates the results of the 2017 assessment. A comparison of the 2010 and 2017 results is presented below.

#### 3.1 County Road PCI Results

There are currently 25 paved county roads in Elbert County totaling 104 miles. Based on the 2010 pavement condition assessment, the associated PCI scores ranged between **82** (CR 5 – North) and **0** (CR 124) with an average PCI score of **55**. Based on this analysis, the DPW initiated a road maintenance and improvement program that included: crack sealing and shouldering (all roads); chip sealing (segments of CR 1, CR 13, CR 21, CR 29, CR 166, CR 186, Elbert Road and Kiowa-Bennett Road); subgrade restoration and patching (all roads); and full restoration (CR 9-15). In addition, several gravel road segments were paved (4 miles of Kiowa-Bennett Road, 4 miles of CR 194, 2 miles of CR 45, 4 miles of CR 29, and 2 miles of CR 17-21) between 2010 and 2017. As a result of this maintenance and improvement program, the PCI score for all county roads increased with scores ranging between **95** (CR 9-15) and **57** (CR 186) with an average PCI score of **79**. Table 2 summarizes the 2010 and 2017 PCI scores and ranking.

Table 2 – PCI Summary for County Roads

| County Road ID     | 2010 PCI | 2010 Classification | Rank | 2017 PCI | 2017 Classification | Rank |
|--------------------|----------|---------------------|------|----------|---------------------|------|
| CR 1 – Delbert Rd  | 41       | Poor                | 19   | 81       | Satisfactory        | 12   |
| CR 5 (North)       | 82       | Satisfactory        | 1    | 87       | Good                | 6    |
| CR 5 (South)       | 50       | Poor                | 14   | 71       | Satisfactory        | 21   |
| CR 9-15            | 41       | Poor                | 19   | 94       | Good                | 1    |
| CR 13              | 33       | Very Poor           | 22   | 68       | Fair                | 23   |
| CR 17-21           | 60       | Fair                | 9    | 70       | Fair                | 22   |
| CR 21              | 58       | Fair                | 11   | 88       | Good                | 5    |
| CR 29              | 60       | Fair                | 9    | 86       | Good                | 8    |
| CR 33              | 71       | Satisfactory        | 6    | 81       | Satisfactory        | 12   |
| CR 45              | 63       | Fair                | 8    | 83       | Satisfactory        | 9    |
| CR 106             | N/A      | -----               | --   | 87       | Good                | 6    |
| CR 124             | 0        | Failed              | 24   | 58       | Fair                | 24   |
| CR 125             | 49       | Poor                | 15   | 74       | Satisfactory        | 17   |
| CR 132             | 38       | Very Poor           | 21   | 93       | Good                | 2    |
| CR 142             | 53       | Poor                | 13   | 75       | Satisfactory        | 16   |
| CR 146             | 49       | Poor                | 15   | 73       | Satisfactory        | 18   |
| CR 150             | 81       | Satisfactory        | 2    | 78       | Satisfactory        | 15   |
| CR 154             | 81       | Satisfactory        | 2    | 90       | Good                | 3    |
| CR 158             | 70       | Fair                | 7    | 83       | Satisfactory        | 9    |
| CR 166             | 47       | Poor                | 18   | 73       | Satisfactory        | 18   |
| CR 174             | 74       | Satisfactory        | 5    | 72       | Satisfactory        | 20   |
| CR 186             | 49       | Poor                | 15   | 57       | Fair                | 25   |
| CR 194             | 28       | Very Poor           | 23   | 89       | Good                | 4    |
| Elbert Road        | 56       | Fair                | 57   | 82       | Satisfactory        | 11   |
| Kiowa-Bennett Road | 81       | Satisfactory        | 2    | 81       | Satisfactory        | 12   |

### 3.2 Subdivision Road PCI Results

There are 17 residential subdivision in Elbert County with a total of 64 miles of paved roads. Based on the 2010 pavement condition assessment, the subdivision PCI scores ranged between **95** (Fox Wood Ranches) and **48** (Stage Run) with an average PCI score of **76**. Given the higher PCI scores compared to county road PCI scores, the subdivision road maintenance plan was not changed. Subdivision roads continued to be maintained by regular crack sealing and shouldering and addressing structural issues such as potholes, on an as-needed basis, by subgrade restoration with patching. As a result, the average PCI score for subdivision roads remained about the same (average PCI score of **78**). Table 3 summarizes the 2010 and 2017 PCI scores and ranking.

Table 3 – PCI Summary for Subdivision Roads

| Subdivision ID     | 2010 PCI | 2010 Classification | Rank | 2017 PCI | 2017 Classification | Rank |
|--------------------|----------|---------------------|------|----------|---------------------|------|
| Amanda Pines       | 78       | Satisfactory        | 90   | 80       | Satisfactory        | 10   |
| Britanie Ridge     | 91       | Good                | 3    | 83       | Satisfactory        | 6    |
| Coyote Hills       | 82       | Satisfactory        | 7    | 77       | Satisfactory        | 11   |
| Cimarron           | 49       | Poor                | 16   | 67       | Fair                | 15   |
| Deer Creek Estates | 81       | Satisfactory        | 8    | 83       | Satisfactory        | 6    |
| Deer Creek Farms   | 68       | Fair                | 13   | 62       | Fair                | 16   |
| Elk Horn Ranch     | 88       | Good                | 5    | 82       | Satisfactory        | 8    |
| Fox Wood Ranches   | 95       | Good                | 1    | 86       | Good                | 4    |
| Meadow Station     | 93       | Good                | 2    | 85       | Good                | 5    |
| Overland           | 73       | Fair                | 12   | 89       | Good                | 1    |
| Outback Estates    | 58       | Fair                | 15   | 71       | Satisfactory        | 14   |
| Southern Hills     | 68       | Fair                | 13   | 89       | Good                | 1    |
| Sky Rim            | 78       | Satisfactory        | 9    | 77       | Satisfactory        | 11   |
| Stage Run          | 48       | Poor                | 17   | 47       | Poor                | 17   |
| Spring Valley      | 86       | Good                | 6    | 87       | Good                | 3    |
| TNM Ranches        | 74       | Satisfactory        | 11   | 72       | Satisfactory        | 13   |
| Wild Pointe        | 91       | Good                | 3    | 82       | Good                | 8    |

## 4.0 2017 PCI RESULTS

Appendix C and D include the 2017 pavement condition assessment results for each county road and residential subdivision road. A summary of the results are included below for county roads and subdivision roads.

### 4.1 County Roads

2017 county road PCI scores ranged from **94** (CR 9-15) to **57** (CR 186). Table 4 illustrates the aggregate PCI score, rank, and section classification for each road. Of the 104 sections (or miles) of road that were assessed, 43 sections are classified as good (PCI score between 86-100), 41 sections are classified as satisfactory (PCI score between 71-85), 16 sections are classified as fair (PCI score between 56-70) and 4 sections are classified as poor (PCI score between 41-55). There were no county road sections classified as very poor (PCI scores between 26-40), Serious (PCI score between 11-25) or failed (PCI score between 0-10).

Table 4 – 2017 PCI Classification for County Roads

| COUNTY ROAD INFORMATION |     |      |                |                    | NUMBER OF ROAD SECTIONS OF EACH PCI CLASSIFICATION |                      |              |              |                   |                 |               |
|-------------------------|-----|------|----------------|--------------------|--|----------------------|--------------|--------------|-------------------|-----------------|---------------|
| Road                    | PCI | Rank | Length (ft)    | Number of Sections | Good (86-100)                                      | Satisfactory (71-85) | Fair (56-70) | Poor (41-55) | Very Poor (26-40) | Serious (11-25) | Failed (0-10) |
| CR 1 - Delbert          | 81  | 12   | 26,533         | 5                  |  | 5                    |              |              |                   |                 |               |
| CR 5 (North)            | 87  | 6    | 5,730          | 2                  | 2  |                      |              |              |                   |                 |               |
| CR 5 (South)            | 71  | 21   | 4,100          | 1                  | 1  |                      |              |              |                   |                 |               |
| CR 9-15                 | 94  | 1    | 8,445          | 2                  | 2  |                      |              |              |                   |                 |               |
| CR 13                   | 68  | 23   | 41,875         | 8                  |  | 3                    | 4            | 1            |                   |                 |               |
| CR 17-21                | 70  | 22   | 47,950         | 8                  | 2  | 1                    | 5            |              |                   |                 |               |
| CR 21                   | 88  | 5    | 36,638         | 7                  | 4  | 3                    |              |              |                   |                 |               |
| CR 29                   | 86  | 8    | 38,609         | 6                  | 4  | 2                    |              |              |                   |                 |               |
| CR 33                   | 81  | 12   | 1,280          | 1                  |  | 1                    |              |              |                   |                 |               |
| CR 45                   | 83  | 9    | 20,200         | 4                  | 2  | 2                    |              |              |                   |                 |               |
| CR 106                  | 87  | 6    | 10,569         | 2                  | 2  |                      |              |              |                   |                 |               |
| CR 124                  | 58  | 24   | 4,140          | 1                  |  |                      | 1            |              |                   |                 |               |
| CR 125                  | 74  | 17   | 5,280          | 1                  |  | 1                    |              |              |                   |                 |               |
| CR 132                  | 93  | 2    | 8,575          | 2                  | 2  |                      |              |              |                   |                 |               |
| CR 142                  | 75  | 16   | 3,050          | 1                  |  | 1                    |              |              |                   |                 |               |
| CR 146                  | 73  | 18   | 5,100          | 1                  |  | 1                    |              |              |                   |                 |               |
| CR 150                  | 78  | 15   | 10,158         | 2                  |  | 2                    |              |              |                   |                 |               |
| CR 154                  | 90  | 3    | 4,860          | 1                  | 1  |                      |              |              |                   |                 |               |
| CR 158                  | 83  | 9    | 15,740         | 3                  |  | 2                    | 1            |              |                   |                 |               |
| CR 166                  | 73  | 18   | 36,540         | 6                  | 1  | 2                    | 2            | 1            |                   |                 |               |
| CR 174                  | 72  | 20   | 940            | 1                  |  | 1                    |              |              |                   |                 |               |
| CR 186                  | 57  | 25   | 21,943         | 4                  |  | 1                    | 1            | 2            |                   |                 |               |
| CR 194                  | 89  | 4    | 22,086         | 5                  | 5  |                      |              |              |                   |                 |               |
| Elbert Road             | 82  | 11   | 84,864         | 14                 | 8  | 5                    | 1            |              |                   |                 |               |
| Kiowa-Bennett           | 81  | 12   | 85,064         | 16                 | 4  | 8                    | 1            |              |                   |                 |               |
| <b>Totals</b>           |     |      | <b>550,269</b> | <b>104</b>         | <b>43</b>  | <b>41</b>            | <b>16</b>    | <b>4</b>     | <b>0</b>          | <b>0</b>        | <b>0</b>      |

## 4.2 Subdivision Roads

2017 subdivision road PCI scores ranged from **89** (Overland and Southern Hills) to **47** (Stage Run). Table 5 illustrates the aggregate PCI score, rank, and segment classification for each subdivision. Of the 276 road sections (varying in length) that were assessed, 70 sections are classified as good (PCI score between 86-100), 142 sections are classified as satisfactory (PCI score between 71-85), 37 sections are classified as fair (PCI score between 56-70), 17 sections are classified as poor (PCI score between 41-55), and 10 sections are classified as very poor. There were no subdivision road sections classified as Serious (PCI score between 11-25) or failed (PCI score between 0-10).

Table 5 – 2017 PCI Classification for Subdivision Roads

| SUBDIVISION ROAD INFORMATION |     |      |                |                    | NUMBER OF ROAD SECTIONS OF EACH PCI CLASSIFICATION |                      |              |              |                   |                 |               |
|------------------------------|-----|------|----------------|--------------------|--|----------------------|--------------|--------------|-------------------|-----------------|---------------|
| Subdivision                  | PCI | Rank | Length (ft)    | Number of Sections | Good (86-100)                                      | Satisfactory (71-85) | Fair (56-70) | Poor (41-55) | Very Poor (26-40) | Serious (11-25) | Failed (0-10) |
| Amanda Pines                 | 80  | 10   | 21,010         | 20                 | 4  | 14                   | 2            |              |                   |                 |               |
| Britanie Ridge               | 83  | 6    | 18,860         | 17                 | 7  | 10                   |              |              |                   |                 |               |
| Coyote Hills                 | 77  | 11   | 7,165          | 3                  |  | 3                    |              |              |                   |                 |               |
| Cimarron                     | 67  | 15   | 8,740          | 8                  |  | 3                    | 3            | 2            |                   |                 |               |
| Deer Creek Estates           | 83  | 6    | 11,115         | 8                  | 5  | 2                    | 1            |              |                   |                 |               |
| Deer Creek Farms             | 62  | 16   | 25,909         | 41                 | 2  | 13                   | 14           | 8            | 4                 |                 |               |
| Elkhorn Ranch                | 82  | 8    | 64,850         | 31                 | 3  | 28                   |              |              |                   |                 |               |
| Foxwood Ranches              | 86  | 4    | 12,755         | 3                  | 1  | 2                    |              |              |                   |                 |               |
| Meadow Station               | 85  | 5    | 23,090         | 10                 | 4  | 6                    |              |              |                   |                 |               |
| Overland                     | 89  | 1    | 8,305          | 8                  | 6  | 2                    |              |              |                   |                 |               |
| Outback Estates              | 71  | 14   | 5,255          | 6                  | 1  |                      | 5            |              |                   |                 |               |
| Southern Hills               | 89  | 1    | 1,325          | 1                  | 1  |                      |              |              |                   |                 |               |
| Sky Rim                      | 77  | 11   | 19,005         | 14                 |  | 10                   | 3            | 1            |                   |                 |               |
| Stage Run                    | 47  | 17   | 20,760         | 17                 |  | 1                    | 4            | 6            | 6                 |                 |               |
| Spring Valley                | 87  | 3    | 38,645         | 47                 | 24   | 23                   |              |              |                   |                 |               |
| TNM Ranches                  | 72  | 13   | 2,830          | 1                  |  | 1                    |              |              |                   |                 |               |
| Wild Pointe                  | 82  | 8    | 45,630         | 41                 | 12   | 24                   | 5            |              |                   |                 |               |
| <b>Totals</b>                |     |      | <b>335,249</b> | <b>276</b>         | <b>70</b>  | <b>142</b>           | <b>37</b>    | <b>17</b>    | <b>10</b>         |                 |               |

## 5.0 ROAD MAINTENANCE AND IMPROVEMENT TECHNIQUES

The DPW has an on-going road maintenance program that includes: crack sealing; shouldering, subgrade repair and patching; and chip sealing. On a more limited basis, roads are improved by transitioning from gravel and/or chip seal surface to full depth asphalt-paved surface or composite section. A description of each maintenance or improvement technique and estimated unit cost is as follows.

### *Crack Seal*

Pavement cracking is an inevitable occurrence over the lifetime of any paved road. Crack sealing is a routine technique used to temporarily treat roadway cracks. It is also a necessary step prior to more advanced rehabilitation techniques. Crack sealing prevents moisture from infiltrating the pavement crack and causing more extensive problems such as potholes and road subgrade failure. Crack sealing is achieved by applying a flexible rubberized asphalt that prevents water infiltration and moves with the pavement as the crack expands and contracts. The approximate cost of crack sealing depends on the width, depth and number of cracks requiring treatment.

Crack sealing cost is estimated to vary from \$0.5 to \$6 per linear foot of road.

### *Shouldering*

Shouldering is the process of installing an aggregate material (e.g., recycled asphalt, gravel) at the edge of pavement at the shoulder when there is a vertical drop-off. This process increases the safety of driving conditions by providing a consistent transition from the paved road surface to the outside limit of travel lanes. The process is done only in areas where there is a noticeable drop-off (>1") and is typically completed concurrently with crack sealing.

Shouldering cost is estimated to vary from \$1 to \$2 per linear foot of road.

### *Chip Seal*

Chip seal is a maintenance technique that extends the life of a typical county road pavement surface for approximately 5 years. Prior to chip sealing a road segment, required crack sealing and subgrade restoration and patching are completed. The road segment is then swept prior to the application of an asphalt-based emulsion. Crushed granite (3/8" chips) is then applied and rolled over the asphalt-based emulsion. A fog sealant is then sprayed uniformly over the top of the chips. Excess chips are swept away prior to the final step of road striping.

Chip seal cost is estimated to vary from \$2.75 to \$3.25 per square yard of road surface.

### *Slurry Seal*

Slurry seal is a maintenance technique for road experiencing less traffic volume (such as a subdivision road) that extend the life of road surfaces for approximately 5 years. It is a mixture of asphalt emulsion and finer-grained aggregate. Prior to slurry sealing a road segment, required crack sealing and subgrade restoration and patching are completed. Slurry seal is then applied by a truck with a squeegee or spray applicator.

Slurry seal cost is estimated to vary from \$2.15 to \$2.50 per square yard of road surface.

### *Asphalt Rejuvenator*

Asphalt Rejuvenator is the application of petroleum-based products (e.g., AsPen™, Anova) to penetrate the pavement surface and replace the binders that have been lost over time due to oxidation, weathering, etc.. It is an ideal treatment for pavement with medium to high weathering. Crack sealant is applied to pavement cracks prior to the asphalt rejuvenator application.

Asphalt Rejuvenator cost is estimated to vary from \$1.25 to \$1.75 per square yard of road surface.

### *Mill & Overlay*

Milling is the process of removing and recycling of the top layer (typically 2") of asphalt. Overlay is the application of a new layer of asphalt pavement over existing or milled asphalt pavement. When the existing asphalt pavement has enough depth, a road in very poor condition can be rehabilitated with milling and overlay. In some cases, the existing asphalt does not have enough depth to be milled. In this case, the existing asphalt is crack sealed and an overlay is applied.

Mill and overlay cost is estimated to vary from \$25 to \$40 per square yard of roadway surface.

### *Full Reconstruction*

In Elbert County, transitioning a gravel, chip sealed or asphalt-paved surface with a serious or failed PCI score may be considered for full reconstruction. Full reconstruction of county roads typically includes chemically treating subgrade soils with Portland cement or lime and installing 4"-5" of asphalt over the treated subgrade. Full reconstruction of subdivision roads has not been performed in Elbert County to date but would be similar to county road reconstruction if completed. In addition to road improvements, drainage improvements are also included in full reconstruction projects.

Full reconstruction cost is estimated to vary from \$45 to \$70 per square yard of roadway surface.

## 6.0 ROAD MAINTENANCE AND IMPROVEMENT RECOMMENDATIONS

Several factors are considered when determining what maintenance and improvement procedure should be applied to existing pavement. These factors include pavement type, PCI score, age, depth, weathering, subgrade conditions, and previously completed maintenance or improvement applications. Table 6 summarizes maintenance/improvement procedures that may be considered based upon PCI score and other factors listed above.

Table 6 – Typical Maintenance and Improvement Procedure

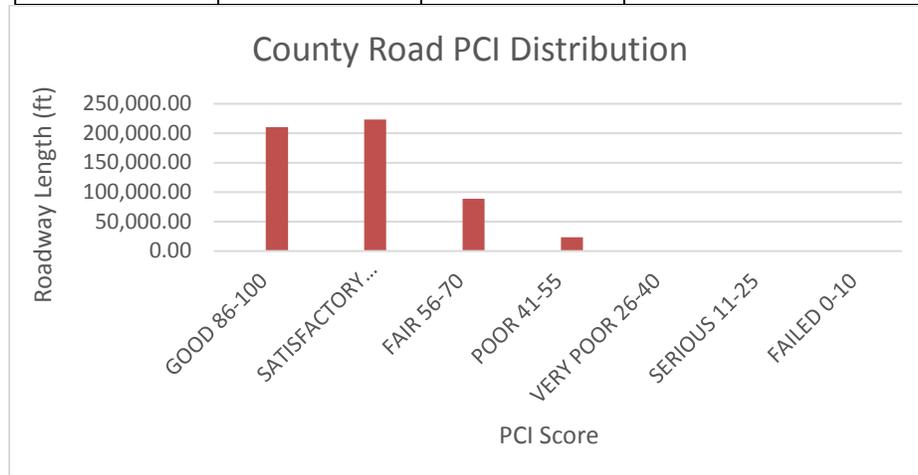
| PCI RANGE | PCI CLASSIFICATION | RECOMMENDED MAINTENANCE/IMPROVEMENT  |
|-----------|--------------------|--|
| 86 - 100  | GOOD               | Crack Seal, Shouldering  |
| 71 - 85   | SATISFACTORY       | Crack Seal, Shouldering, Asphalt Rejuvenator   |
| 55 - 70   | FAIR               | Crack Seal, Shouldering, Asphalt Rejuvenator, Slurry Seal, Chip Seal                   |
| 41 - 56   | POOR               | Crack Seal, Shouldering, Asphalt Patch, Chip Seal, Mill & Overlay                      |
| 26 - 40   | VERY POOR          | Crack Seal, Shouldering, Asphalt Patch, Chip Seal, Mill & Overlay, Full Reconstruction |
| 11 - 25   | SERIOUS            | Full Reconstruction, Convert to Gravel   |
| 0 - 10    | FAILED             | Full Reconstruction, Convert to Gravel   |

### 6.1 County Road Recommendations

Based on the 2017 pavement assessment results, approximately 80 percent of county roads achieved a PCI classification of Good (38.6 percent) or Satisfactory (40.9 percent). Approximately 20 percent of county roads achieved a PCI classification of Fair (16.2 percent) or Poor (4.3 Percent). Table 7 summarizes the PCI score and road length and percentage associated with each PCI classification.

Table 7 - County Road PCI Score Summary

| PCI Range | PCI Classification | Length (ft) | Percent Coverage |
|-----------|--------------------|-------------|------------------|
| 86 - 100  | GOOD               | 210,306     | 38.6%            |
| 71 - 85   | SATISFACTORY       | 222,954     | 40.9%            |
| 55 - 70   | FAIR               | 88,516      | 16.2%            |
| 41 - 56   | POOR               | 23,211      | 4.3%             |
| 26 - 40   | VERY POOR          | 0           | 0%               |
| 11 - 25   | SERIOUS            | 0           | 0%               |
| 0 - 10    | FAILED             | 0           | 0%               |



Based on the county road pavement assessment, it's recommended that the DPW continue its crack sealing and shouldering program on all roads. It's further recommended that county roads with segments that achieved a PCI classification of Fair (CR 13, CR 17-21, CR 124, CR 158, CR 166, CR 186, Elbert Road and Kiowa-Bennett Road) be further inspected to determine if additional road maintenance procedures such as a chip seal or asphalt rejuvenator application are warranted. County roads with segments that achieved a PCI classification of Poor (CR 13, CR 166, CR 186) should be considered as part of the 2018 or 2019 DPW capital improvement plan for county roads.

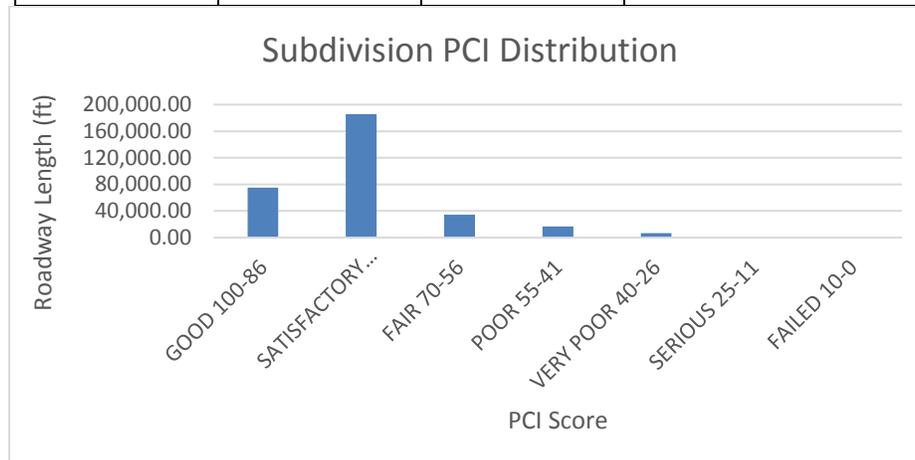
Maps of each county road that identify PCI scores for each road section (mile segments) are included in Appendix C. Using the CR 186 map as an example, there are 3 PCI classifications for the approximately 4 miles of CR 186 included in the pavement assessment. Approximately 1 mile is classified as Fair (Delbert Road to Bristle Cone Court), approximately 2 miles are classified as Poor (Bristle Cone Court to Elkhorn Street), and approximately 1 mile is classified as satisfactory. Should the DPW plan improvement activities along CR 186, the 2 miles with a PCI classification of Poor should be considered a priority.

## 6.2 Subdivision Road Recommendations

Based on the 2017 pavement assessment results, approximately 82 percent of subdivision roads achieved a PCI classification of Good (23.8 percent) or Satisfactory (57.9 percent). Approximately 18 percent of county roads achieved a PCI classification of Fair (11 percent), Poor (5.3 Percent) or Very Poor (2 percent). Table 8 summarizes the PCI score and road length and percentage associated with each PCI classification.

Table 8 – Subdivision Road PCI Score Summary

| PCI Range | PCI Classification | Length (ft) | Percent Coverage |
|-----------|--------------------|-------------|------------------|
| 86 - 100  | GOOD               | 75,220      | 23.8%            |
| 71 - 85   | SATISFACTORY       | 182,919     | 57.9%            |
| 55 - 70   | FAIR               | 34,665      | 11.0%            |
| 41 - 56   | POOR               | 16,610      | 5.3%             |
| 26 - 40   | VERY POOR          | 6,690       | 2.0%             |
| 11 - 25   | SERIOUS            | 0           | 0%               |
| 0 - 10    | FAILED             | 0           | 0%               |



Based on the subdivision road pavement assessment, it's recommended that the DPW continue its crack sealing and shouldering program on all roads. It's further recommended that subdivisions with road segments that achieved a PCI classification of Fair (Amanda Pines, Cimarron, Deer Creek Estates, Deer Creek Farms, Outback Estates, Sky Rim, Stage Run and Wild Pointe), be further inspected to determine if additional road maintenance procedures such as a slurry seal or asphalt rejuvenator application are warranted. Subdivision roads with segments that achieved a PCI classification of Poor or Very Poor (Cimarron, Deer Creek Farms, Outback Estates, Sky Rim and Stage Run) should be considered as part of the 2018 or 2019 DPW capital improvement plan for subdivision roads.

Maps of each subdivision road identify PCI scores for each road section (segment length varies). These maps are included in Appendix C. As an example, the Outback Estates map illustrates the segments that are classified as: Fair (Sunset Ave from CR 29 to Eagle Nest Cir) and Good (Sunset Ave from Eagle Nest Circle to the end of Sunset Ave). Should the DPW plan maintenance activities along Sunset Ave, a slurry seal from CR 29 to Eagle Nest Circle may be considered.

### 6.3 Capital Improvement Plan Recommendations

Table 9 includes DPW capital improvement plan recommendations for 2018-2019.

Table 9 – Recommended 2018-2019 CIP for County Roads and Subdivision Roads

| Year | Road or Subdivision | PCI Class.    | Location  | Length (ft.) | Maintenance/Improvement                        | Estimated Cost |
|------|---------------------|---------------|---|--------------|--|----------------|
| 2018 | Cimarron            | Poor          | Cimarron Tr. between CR 142 and Morgan Tr.  | 1,290        | Crack Seal, Shouldering, Slurry Seal           | \$9,000        |
| 2018 | Cimarron            | Poor          | Cimarron Tr. Between Palomino Tr. And Morgan Tr.  | 825          | Crack Seal, Shouldering, Slurry Seal           | \$6,000        |
| 2018 | Deer Creek Farms    | Poor, V. Poor | Deer Ridge Cir, Meadowlark Ct, Countryside Cir, Apple Field Cir, Golden Field Cir, Pine Meadow Ave., Segments of Deer Creek Dr. | 7,455        | Crack Seal, Shouldering, Slurry Seal           | \$124,250      |
| 2018 | Sky Rim             | Poor          | Delbert Rd to Frasier Fir   | 850          | Crack Seal, Shouldering                        | \$19,000       |
| 2018 | Stage Run           | Poor, V. Poor | Segments of Cherokee Tr., Wagon Wheel Tr. And Rawhide Cir, Arabian Tr., Broken Arrow Cir., Stagecoach Cir.,                     | 12,610       | Crack Seal, Shouldering, Patching, Slurry Seal | \$210,200      |
| 2019 | CR 13               | Poor          | South of CR 158   | 5,280        | Crack Seal, Shouldering                        | \$10,000       |
| 2019 | CR 166              | Poor          | East of Delbert Rd  | 5,280        | Crack Seal, Shouldering                        | \$12,500       |
| 2019 | CR 186              | Poor          | Bristle Cone Ct to Elkhorn St (2 mi.)   | 10,560       | Crack Seal, Chip Seal                          | \$90,000       |

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## *Appendix A*

**ASTM D6433-09**

**Standard Practice for Roads and  
Parking Lots Pavement Condition  
Index Survey**



# Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys<sup>1</sup>

This standard is issued under the fixed designation D6433; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (<sup>ε</sup>) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This practice covers the determination of roads and parking lots pavement condition through visual surveys using the Pavement Condition Index (PCI) method of quantifying pavement condition.

1.2 The PCI for roads and parking lots was developed by the U.S. Army Corps of Engineers (1, 2). It is further verified and adopted by DOD and APWA.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are given in Section 6.

## 2 Terminology

### 2.1 Definitions of Terms Specific to This Standard:

2.1.1 *additional sample*—a sample unit inspected in addition to the random sample units to include nonrepresentative sample units in the determination of the pavement condition. This includes very poor or excellent samples that are not typical of the section and sample units, which contain an unusual distress such as a utility cut. If a sample unit containing an unusual distress is chosen at random it should be counted as an additional sample unit and another random sample unit should be chosen. If every sample unit is surveyed, then there are no additional sample units.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee E17 on Vehicle - Pavement Systems and is the direct responsibility of Subcommittee E17.42 on Pavement Testing and Evaluation. Current edition approved Nov. 1, 2009. Published December 2009. Originally approved in 1999. Last previous edition approved in 2007 as D6433 – 07. DOI: 10.1520/D6433-09.

<sup>2</sup> The boldface numbers in parentheses refer to the list of references at the end of this standard.

2.1.2 *asphalt concrete (AC) surface*—aggregate mixture with an asphalt cement binder. This term also refers to surfaces constructed of coal tars and natural tars for purposes of this practice.

2.1.3 *pavement branch*—a branch is an identifiable part of the pavement network that is a single entity and has a distinct function. For example, each roadway or parking area is a separate branch.

2.1.4 *pavement condition index (PCI)*—a numerical rating of the pavement condition that ranges from 0 to 100 with 0 being the worst possible condition and 100 being the best possible condition.

2.1.5 *pavement condition rating*—a verbal description of pavement condition as a function of the PCI value that varies from “failed” to “excellent” as shown in Fig. 1.

2.1.6 *pavement distress*—external indicators of pavement deterioration caused by loading, environmental factors, construction deficiencies, or a combination thereof. Typical distresses are cracks, rutting, and weathering of the pavement surface. Distress types and severity levels detailed in Appendix X1 for AC, and Appendix X2 for PCC pavements must be used to obtain an accurate PCI value.

2.1.7 *pavement sample unit*—a subdivision of a pavement section that has a standard size range: 20 contiguous slabs (68 slabs if the total number of slabs in the section is not evenly divided by 20 or to accommodate specific field condition) for PCC pavement, and 2500 contiguous square feet, 6 1000 ft<sup>2</sup> (225 6 90 m<sup>2</sup>), if the pavement is not evenly divided by 2500 or to accommodate specific field condition, for AC pavement.

2.1.8 *pavement section*—a contiguous pavement area having uniform construction, maintenance, usage history, and condition. A section should have the same traffic volume and load intensity.

2.1.9 *portland cement concrete (PCC) pavement*— aggregate mixture with portland cement binder including nonreinforced and reinforced jointed pavement.

2.1.10 *random sample*—a sample unit of the pavement section selected for inspection by random sampling techniques, such as a random number table or systematic random procedure.

|     | Standard PCI™<br>Rating Scale | Suggested<br>Colors |
|-----|-------------------------------|---------------------|
| 100 | <b>Good</b>                   | <b>Dark Green</b>   |
| 85  | <b>Satisfactory</b>           | <b>Light Green</b>  |
| 70  | <b>Fair</b>                   | <b>Yellow</b>       |
| 55  | <b>Poor</b>                   | <b>Light Red</b>    |
| 40  | <b>Very Poor</b>              | <b>Medium Red</b>   |
| 25  | <b>Serious</b>                | <b>Dark Red</b>     |
| 10  | <b>Failed</b>                 | <b>Dark Grey</b>    |
| 0   |                               |                     |

FIG. 1 Pavement Condition Index (PCI), Rating Scale, and Suggested Colors

**5. Apparatus**

5.1 *Data Sheets*, or other field recording instruments that record at a minimum the following information: date, location, branch, section, sample unit size, slab number and size, distress types, severity levels, quantities, and names of surveyors. Example data sheets for AC and PCC pavements are shown in Figs. 2 and 3.

5.2 *Hand Odometer Wheel*, that reads to the nearest 0.1 ft (30 mm).

5.3 *Straightedge or String Line*, (AC only), 10 ft (3 m).

5.4 *Scale*, 12 in. (300 mm) that reads to 1/8 in. (3 mm) or better.

Additional 12-in. (300 mm) ruler or straightedge is needed to measure faulting in PCC pavements.

5.5 *Layout Plan*, for network to be inspected.

**6. Hazards**

6.1 Traffic is a hazard as inspectors may walk on the pavement to perform the condition survey.

FIG. 2 & 3 Not Applicable

**3. Summary of Practice**

1 The pavement is divided into branches that are divided into sections. Each section is divided into sample units. The type and severity of pavement distress is assessed by visual inspection of the pavement sample units. The quantity of the distress is measured as described in Appendix X1 and Appendix X2. The distress data are used to calculate the PCI for each sample unit. The PCI of the pavement section is determined based on the PCI of the inspected sample units within the section.

**4. Summary of Practice**

4.1 The PCI is a numerical indicator that rates the surface condition of the pavement. The PCI provides a measure of the present condition of the pavement based on the distress observed on the surface of the pavement, which also indicates the structural integrity and surface operational condition (localized roughness and safety). The PCI cannot measure structural capacity nor does it provide direct measurement of skid resistance or roughness. It provides an objective and rational basis for determining maintenance and repair needs and priorities. Continuous monitoring of the PCI is used to establish the rate of pavement deterioration, which permits early identification of major rehabilitation needs. The PCI provides feedback on pavement performance for validation or improvement of current pavement design and maintenance procedures.



## 8. Inspection Procedure

8.1 The definitions and guidelines for quantifying distresses for PCI determination are given in Appendix X1 for AC pavements. Using this test method, inspectors should identify distress types accurately 95 % of the time. Linear measurements should be considered accurate when they are within 10 % if remeasured, and area measurements should be considered accurate when they are within 20 % if remeasured. Distress severities that one determines based on ride quality are considered subjective.

8.2 *Asphalt Concrete (AC) Surfaced Pavement*— Individually inspect each sample unit chosen. Sketch the sample unit, including orientation. Record the branch and section number and the number and type of the sample unit (random or additional). Record the sample unit size measured with the hand odometer. Conduct the distress inspection by walking over the sidewalk/shoulder of the sample unit being surveyed, measuring the quantity of each severity level of every distress type present, and recording the data. Each distress must correspond in type and severity to that described in Appendix X1. The method of measurement is included with each distress description. Repeat this procedure for each sample unit to be inspected. A copy of a Blank Flexible Pavement Condition Survey Data Sheet for Sample Unit is included in Fig. 2.

## 9. Calculation of PCI for Asphalt Concrete (AC) Pavement

9.1 Add up the total quantity of each distress type at each severity level, and record them in the “Total Severities” section. For example, Fig. 4 shows five entries for the Distress Type 1, “Alligator Cracking”: 5L, 4L, 4L, 8H, and 6H. The distress at each severity level is summed and entered in the “Total Severity” section as 13 ft<sup>2</sup> (1.2 m<sup>2</sup>) of low severity and 14 ft<sup>2</sup> (1.3 m<sup>2</sup>) of medium severity. The units for the quantities may be either in square feet (square meters), linear feet (meters), or number of occurrences, depending on the distress type.

9.2 Divide the total quantity of each distress type at each severity level from 9.1 by the total area of the sample unit and multiply by 100 to obtain the percent density of each distress type and severity.

9.3 Determine the deduct value (DV) for each distress type and severity level combination from the distress deduct value curves in Appendix X3.

9.4 Determine the maximum corrected deduct value (CDV). The procedure for determining maximum CDV from individual DVs is identical for both AC and PCC pavement types.

9.5 The following procedure must be used to determine the maximum CDV.

9.5.1 If none or only one individual deduct value is greater than two, the total value is used in place of the maximum CDV in determining the PCI; otherwise, maximum CDV must be determined using the procedure described in 9.5.2-9.5.5.

9.5.2 List the individual deduct values in descending order. For example, in Fig. 4 this will be 25.1, 23.4, 17.9, 11.2, 7.9, 7.5, 6.9, and 5.3.

9.5.3 Determine the allowable number of deducts,  $m$ , from Fig. 5, or using the following formula (see Eq 4):

$$m = 1 + \frac{1 - 9/98(100 - HDV)}{10} \quad (4)$$

where:  $m$  = allowable number of deducts including fractions (must be less than or equal to ten), and HDV = highest individual deduct value. (For the example in Fig. 4,  $m = 1 + (9/98)(100 - 25.1) = 7.9$ ).





# Adjustment of Number of Deduct Values

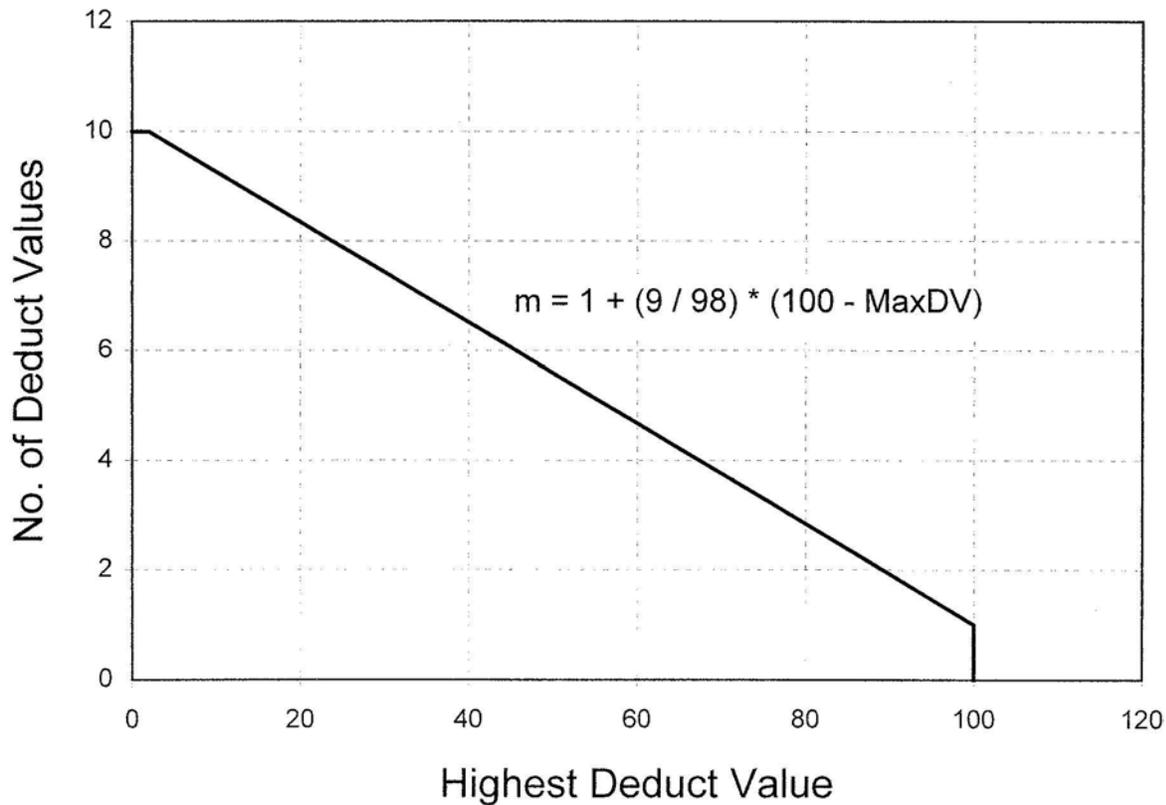


FIG. 5 Adjustment of Number of Deduct Values

9.5.4 The number of individual deduct values is reduced to the  $m$  largest deduct values, including the fractional part. For the example in Fig. 6, the values are 25.1, 23.4, 17.9, 11.2, 7.9, 7.5, 6.9, and 4.8 (the 4.8 is obtained by multiplying 5.3 by  $(7.9 - 7 = 0.9)$ ). If less than  $m$  deduct values are available, all of the deduct values are used.

9.5.5 Determine maximum CDV iteratively, as shown in Fig. 6.

9.5.5.1 Determine total deduct value by summing individual deduct values. The total deduct value is obtained by adding the individual deduct values in 9.5.4, that is, 104.7.

9.5.5.2 Determine  $q$  as the number of deducts with a value greater than 2.0. For example, in Fig. 6,  $q = 8$ .

9.5.5.3 Determine the CDV from total deduct value and  $q$  by looking up the appropriate correction curve for AC pavements in Fig. X4.15 in Appendix X3.

9.5.5.4 Reduce the smallest individual deduct value greater than 2.0 to 2.0 and repeat 9.5.5.1-9.5.5.3 until  $q = 1$ .

9.5.5.5 Maximum CDV is the largest of the CDVs.

9.6 Calculate PCI by subtracting the maximum CDV from 100:  $\text{PCI} = 100 - \text{max CDV}$ .

9.7 Fig. 6 shows a summary of PCI calculation for the example AC pavement data in Fig. 4. A blank PCI calculation form is included in Fig. 2.



$m = 1 + (9/98)(100 - 25.1) = 7.9 < 8$   
 Use highest 7 deducts and 0.9 of eighth deduct.  
 $0.9 \times 5.3 = 4.8$

| #  | Deduct Values |      |      |      |     |     |     |     | Total | q | CDV  |
|----|---------------|------|------|------|-----|-----|-----|-----|-------|---|------|
| 1  | 25.1          | 23.4 | 17.9 | 11.2 | 7.9 | 7.5 | 6.9 | 4.8 | 104.7 | 8 | 51.0 |
| 2  | 25.1          | 23.4 | 17.9 | 11.2 | 7.9 | 7.5 | 6.9 | 2   | 101.9 | 7 | 50.0 |
| 3  | 25.1          | 23.4 | 17.9 | 11.2 | 7.9 | 7.5 | 2   | 2   | 96.0  | 6 | 46.0 |
| 4  | 25.1          | 23.4 | 17.9 | 11.2 | 7.9 | 2   | 2   | 2   | 90.5  | 5 | 47.0 |
| 5  | 25.1          | 23.4 | 17.9 | 11.2 | 2   | 2   | 2   | 2   | 84.6  | 4 | 48.0 |
| 6  | 25.1          | 23.4 | 17.9 | 2    | 2   | 2   | 2   | 2   | 75.4  | 3 | 48.0 |
| 7  | 25.1          | 23.4 | 2    | 2    | 2   | 2   | 2   | 2   | 59.5  | 2 | 44.0 |
| 8  | 25.1          | 2    | 2    | 2    | 2   | 2   | 2   | 2   | 38.1  | 1 | 38.0 |
| 9  |               |      |      |      |     |     |     |     |       |   |      |
| 10 |               |      |      |      |     |     |     |     |       |   |      |

Max CDV = 51  
 PCI = 100 - Max CDV = 49  
 Rating = FAIR

FIG. 6 Calculation of Corrected PCI Value—Flexible Pavement

**APPENDIXES (Nonmandatory**

**Information) X1. Distress in**

**Asphalt Pavements**

X1.1 During the field condition surveys and validation of the PCI, several questions are commonly asked about the identification and measurement of some of the distresses. The answers to these questions for each distress are included under the heading "How to Measure." For convenience, however, the most frequently raised issues are addressed below:

X1.1.1 If alligator cracking and rutting occur in the same area, each is recorded separately at its respective severity level.

X1.1.2 If bleeding is counted, polished aggregate is not counted in the same area.

X1.1.3 Spalling as used herein is the further breaking of pavement or loss of materials around cracks or joints.

X1.1.4 If a crack does not have the same severity level along its entire length, each portion of the crack having a different severity level should be recorded separately. If, however, the different levels of severity in a portion of a crack



cannot be easily divided, that portion should be rated at the highest severity level present.

X1.1.5 If any distress, including cracking and potholes, is found in a patched area, it is not recorded; its effect on the patch, however, is considered in determining the severity level of the patch.

X1.1.6 A significant amount of polished aggregate should be present before it is counted.

X1.1.7 A distress is said to be raveled if the area surrounding the distress is broken (sometimes to the extent that pieces are removed).

X1.2 The reader should note that the items above are general issues and do not stand alone as inspection criteria. To properly measure each distress type, the inspector must be familiar with its individual measurement criteria.

X1.3 Nineteen distress types for asphalt-surfaced pavements are listed alphabetically in this manual.

### RIDE QUALITY

X1.4 Ride quality must be evaluated in order to establish a severity level for the following distress types:

X1.4.1 Bumps.

X1.4.2 Corrugation.

X1.4.3 Railroad crossings.

X1.4.4 Shoving.

X1.4.5 Swells.

X1.4.6 To determine the effect these distresses have on ride quality, the inspector should drive at the normal operating speed and use the following severity-level definitions of ride quality:

X1.4.6.1 **L**—Low. Vehicle vibrations, for example, from corrugation, are noticeable, but no reduction in speed is necessary for comfort or safety. Individual bumps or settlements, or both, cause the vehicle to bounce slightly, but create little discomfort.

X1.4.6.2 **M**—Medium. Vehicle vibrations are significant and some reduction in speed is necessary for safety and comfort. Individual bumps or settlements, or both, cause the vehicle to bounce significantly, creating some discomfort.

X1.4.6.3 **H**—High. Vehicle vibrations are so excessive that speed must be reduced considerably for safety and comfort. Individual bumps or settlements, or both, cause the vehicle to bounce excessively, creating substantial discomfort, safety hazard, or high potential vehicle damage.

X1.4.7 The inspector should drive at the posted speed in a sedan that is representative of cars typically seen in local traffic. Pavement sections near stop signs should be rated at a deceleration speed appropriate for the intersection.

### ALLIGATOR CRACKING (FATIGUE)

X1.5 *Description*—Alligator or fatigue cracking is a series of interconnecting cracks caused by fatigue failure of the asphalt concrete surface under repeated traffic loading. Cracking begins at the bottom of the asphalt surface, or stabilized base, where tensile stress and strain are highest under a wheel load. The cracks propagate to the surface initially as a series of

parallel longitudinal cracks. After repeated traffic loading, the cracks connect, forming many sided, sharp-angled pieces that develop a pattern resembling chicken wire or the skin of an alligator. The pieces are generally less than 0.5 m (1.5 ft) on the longest side. Alligator cracking occurs only in areas subjected to repeated traffic loading, such as wheel paths. Pattern-type cracking that occurs over an entire area not subjected to loading is called “block cracking,” which is not a load-associated distress.

X1.5.1 *Severity Levels:*

X1.5.1.1 **L**—Fine, longitudinal hairline cracks running parallel to each other with no, or only a few interconnecting cracks. The cracks are not spalled (Fig. X1.1).

X1.5.1.2 **M**—Further development of light alligator cracks into a pattern or network of cracks that may be lightly spalled (Fig. X1.2).

X1.5.1.3 **H**—Network or pattern cracking has progressed so that the pieces are well defined and spalled at the edges. Some of the pieces may rock under traffic (Fig. X1.3).

X1.5.2 *How to Measure*—Alligator cracking is measured in square meters (square feet) of surface area. The major difficulty in measuring this type of distress is that two or three levels of severity often exist within one distressed area. If these portions can be easily distinguished from each other, they should be measured and recorded separately; however, if the different levels of severity cannot be divided easily, the entire area should be rated at the highest severity present. If alligator cracking and rutting occur in the same area, each is recorded separately as its respective severity level.

### BLEEDING

X1.6 *Description*—Bleeding is a film of bituminous material on the pavement surface that creates a shiny, glasslike, reflecting surface that usually becomes quite sticky. Bleeding is caused by excessive amounts of asphaltic cement or tars in the mix, excess application of a bituminous sealant, or low air void content, or a combination thereof. It occurs when asphalt fills the voids of the mix during hot weather and then expands onto the pavement surface. Since the bleeding process is not reversible during cold weather, asphalt or tar will accumulate on the surface.



FIG. X1.1 Low-Severity Alligator Cracking



FIG. X1.2 Medium-Severity Alligator Cracking



FIG. X1.5 Medium-Severity Bleeding



FIG. X1.3 High-Severity Alligator Cracking

*X1.6.1 Severity Levels:*

X1.6.1.1 **L**—Bleeding only has occurred to a very slight degree and is noticeable only during a few days of the year. Asphalt does not stick to shoes or vehicles (Fig. X1.4).

X1.6.1.2 **M**—Bleeding has occurred to the extent that asphalt sticks to shoes and vehicles during only a few weeks of the year (Fig. X1.5).



FIG. X1.4 Low-Severity Bleeding

X1.6.1.3 **H**—Bleeding has occurred extensively and considerable asphalt sticks to shoes and vehicles during at least several weeks of the year (Fig. X1.6).

X1.6.2 *How to Measure*—Bleeding is measured in square meters (square feet) of surface area. If bleeding is counted, polished aggregate should not be counted.

**BLOCK CRACKING**

X1.7 *Description*—Block cracks are interconnected cracks that divide the pavement into approximately rectangular pieces. The blocks may range in size from approximately 0.3 by 0.3 m (1 by 1 ft) to 3 by 3 m (10 by 10 ft). Block cracking is caused mainly by shrinkage of the asphalt concrete and daily temperature cycling, which results in daily stress/strain cycling. It is not load-associated. Block cracking usually indicates that the asphalt has hardened significantly. Block cracking normally occurs over a large portion of the pavement area,



FIG. X1.6 High-Severity Bleeding



but sometimes will occur only in nontraffic areas. This type of distress differs from alligator cracking in that alligator cracks form smaller, many-sided pieces with sharp angles. Also, unlike block, alligator cracks are caused by repeated traffic loadings, and therefore, are found only in traffic areas, that is, wheel paths.

*X1.7.1 Severity Levels:*

X1.7.1.1 **L**—Blocks are defined by low-severity<sup>3</sup> cracks (Fig. X1.7).

X1.7.1.2 **M**—Blocks are defined by medium-severity<sup>3</sup> cracks (Fig. X1.8).

X1.7.1.3 **H**—Blocks are defined by high-severity<sup>3</sup> cracks (Fig. X1.9).

X1.7.2 *How to Measure*—Block cracking is measured in m<sup>2</sup> (ft<sup>2</sup>) of surface area. It usually occurs at one severity level in a given pavement section; however, if areas of different severity levels can be distinguished easily from one another, they should be measured and recorded separately.

**BUMPS AND SAGS**

*X1.8 Description:*

X1.8.1 Bumps are small, localized, upward displacements of the pavement surface. They are different from shoves in that shoves are caused by unstable pavement. Bumps, on the other hand, can be caused by several factors, including:

X1.8.1.1 Buckling or bulging of underlying PCC slabs in AC overlay over PCC pavement.

X1.8.1.2 Frost heave (ice, lens growth).

X1.8.1.3 Infiltration and buildup of material in a crack in combination with traffic loading (sometimes called “tenting”).

X1.8.1.4 Sags are small, abrupt, downward displacements of the pavement surface. If bumps appear in a pattern perpendicular to traffic flow and are spaced at less than 3 m (10 ft), the distress is called corrugation. Distortion and displacement that occur over large areas of the pavement surface, causing large or long dips, or both, in the pavement should be recorded as “swelling.”

*X1.8.2 Severity Levels:*

<sup>3</sup> See definitions of longitudinal transverse cracking within Appendix X2.10.



**FIG. X1.8 Medium-Severity Block Cracking**



**FIG. X1.9 High-Severity Block Cracking**

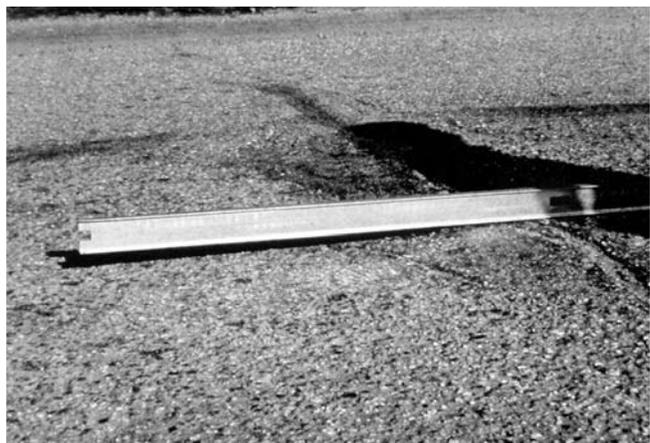
X1.8.2.1 **L**—Bump or sag causes low-severity ride quality (Fig. X1.10).

X1.8.2.2 **M**—Bump or sag causes medium-severity ride quality (Fig. X1.11).

X1.8.2.3 **H**—Bump or sag causes high-severity ride quality (Fig. X1.12).



**FIG. X1.7 Low-Severity Block Cracking**



**FIG. X1.10 Low-Severity Bumps and Sags**



FIG. X1.11 Medium-Severity Bumps and Sags



FIG. X1.13 Low-Severity Corrugation



FIG. X1.12 High-Severity Bumps and Sags



FIG. X1.14 Medium-Severity Corrugation

X1.8.3 *How to Measure*—Bumps or sags are measured in linear meters (feet). If the bump occurs in combination with a crack, the crack also is recorded.

### CORRUGATION

X1.9 *Description*—Corrugation, also known as “washboarding”, is a series of closely spaced ridges and valleys (ripples) occurring at fairly regular intervals, usually less than 3 m (10 ft) along the pavement. The ridges are perpendicular to the traffic direction. This type of distress usually is caused by traffic action combined with an unstable pavement surface or base.

X1.9.1 *Severity Levels:*

X1.9.1.1 **L**—Corrugation produces low-severity ride quality (Fig. X1.13).

X1.9.1.2 **M**—Corrugation produces medium-severity ride quality (Fig. X1.14).

X1.9.1.3 **H**—Corrugation produces high-severity ride quality (Fig. X1.15).

X1.9.2 *How to Measure*—Corrugation is measured in square meters (square feet) of surface area.

### DEPRESSION

X1.10 *Description*—Depressions are localized pavement

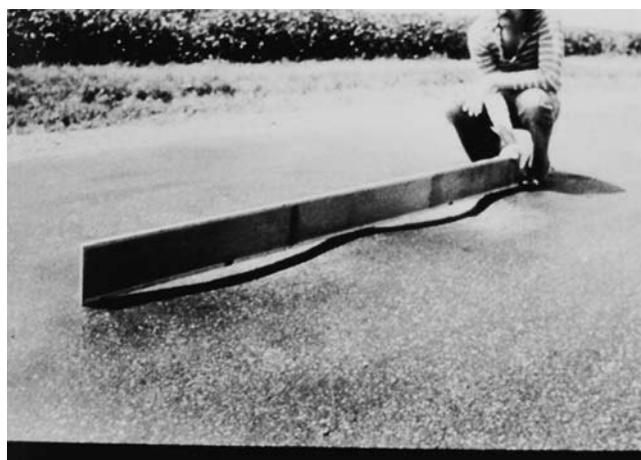


FIG. X1.15 High-Severity Corrugation

surface areas with elevations slightly lower than those of the surrounding pavement. In many instances, light depressions are not noticeable until after a rain, when ponding water creates a “birdbath” area; on dry pavement, depressions can be spotted by looking for stains caused by ponding water. Depressions are created by settlement of the foundation soil or are a result of



improper construction. Depressions cause some roughness, and when deep enough or filled with water, can cause hydroplaning.

X1.10.1 *Severity Levels (Maximum Depth of Depression):*

X1.10.1.1 **L**—13 to 25 mm ( $\frac{1}{2}$  to 1 in.) (Fig. X1.16).

X1.10.1.2 **M**—25 to 50 mm (1 to 2 in.) (Fig. X1.17).

X1.10.1.3 **H**—More than 50 mm (2 in.) (Fig. X1.18).

X1.10.2 *How to Measure*—Depressions are measured in square meters (square feet) of surface area.

### EDGE CRACKING

X1.11 *Description*—Edge cracks are parallel to and usually within 0.3 to 0.5 m (1 to 1.5 ft) of the outer edge of the pavement. This distress is accelerated by traffic loading and can be caused by frost-weakened base or subgrade near the edge of the pavement. The area between the crack and pavement edge is classified as raveled if it is broken up (sometimes to the extent that pieces are removed).

X1.11.1 *Severity Levels:*

X1.11.1.1 **L**—Low or medium cracking with no breakup or raveling (Fig. X1.19).

X1.11.1.2 **M**—Medium cracks with some breakup and raveling (Fig. X1.20).

X1.11.1.3 **H**—Considerable breakup or raveling along the edge (Fig. X1.21).

X1.11.2 *How to Measure*—Edge cracking is measure in linear meters (feet).

### JOINT REFLECTION CRACKING (From Longitudinal and Transverse PCC Slabs)

X1.12 *Description*—This distress occurs only on asphalt-surfaced pavements that have been laid over a PCC slab. It does not include reflection cracks from any other type of base, that is, cement- or lime-stabilized; these cracks are caused mainly by thermal- or moisture-induced movement of the PCC slab beneath the AC surface. This distress is not load-related; however, traffic loading may cause a breakdown of the AC surface near the crack. If the pavement is fragmented along a



FIG. X1.17 Medium-Severity Depression



FIG. X1.18 High-Severity Depression



FIG. X1.19 Low-Severity Edge Cracking



FIG. X1.16 Low-Severity Depression

crack, the crack is said to be spalled. A knowledge of slab dimension beneath the AC surface will help to identify these distresses.

X1.12.1 *Severity Levels:*

X1.12.1.1 **L**—One of the following conditions exists (Fig. X1.22): Nonfilled crack width is less than 10 mm ( $\frac{3}{8}$  in.), or filled crack of any width (filler in satisfactory condition).



FIG. X1.20 Medium-Severity Edge Cracking



FIG. X1.21 High-Severity Edge Cracking



FIG. X1.22 Low-Severity Joint Reflection Cracking

X1.12.1.2 **M**—One of the following conditions exists (Fig. X1.23): Nonfilled crack width is greater than or equal to 10 mm ( $\frac{3}{8}$  in.) and less than 75 mm (3 in.); nonfilled crack less than or equal to 75 mm (3 in.) surrounded by light secondary cracking; or, filled crack of any width surrounded by light secondary cracking.



FIG. X1.23 Medium-Severity Joint Reflection Cracking

X1.12.1.3 **H**—One of the following conditions exists (Fig. X1.24): Any crack filled or nonfilled surrounded by medium- or high-severity secondary cracking; nonfilled cracks greater than 75 mm (3 in.); or, a crack of any width where approximately 100 mm (4 in.) of pavement around the crack are severely raveled or broken.

X1.12.2 *How to Measure*—Joint reflection cracking is measured in linear meters (feet). The length and severity level of each crack should be identified and recorded separately. For example, a crack that is 15 m (50 ft) long may have 3 m (10 ft)



FIG. X1.24 High-Severity Joint Reflection Cracking



of high severity cracks, which are all recorded separately. If a bump occurs at the reflection crack, it is recorded also.

### LANE/SHOULDER DROP-OFF

**X1.13 Description**—Lane/shoulder drop-off is a difference in elevation between the pavement edge and the shoulder. This distress is caused by shoulder erosion, shoulder settlement, or by building up the roadway without adjusting the shoulder level.

#### X1.13.1 Severity Levels:

**X1.13.1.1 L**—The difference in elevation between the pavement edge and shoulder is  $> 25$  mm (1 in.) and  $< 50$  mm (2 in.) (Fig. X1.25).

**X1.13.1.2 M**—The difference in elevation is  $> 50$  mm (2 in.) and  $< 100$  mm (4 in.) (Fig. X1.26).

**X1.13.1.3 H**—The difference in elevation is  $> 100$  mm (4 in.) (Fig. X1.27).

**X1.13.2 How to Measure**—Lane/shoulder drop-off is measured in linear meters (feet).

### LONGITUDINAL AND TRANSVERSE CRACKING (Non-PCC Slab Joint Reflective)

#### X1.14 Description:

**X1.14.1** Longitudinal cracks are parallel to the pavement's centerline or laydown direction. They may be caused by:

**X1.14.1.1 A** poorly constructed paving lane joint.

**X1.14.1.2** Shrinkage of the AC surface due to low temperatures or hardening of the asphalt, or daily temperature cycling, or both.

**X1.14.1.3 A** reflective crack caused by cracking beneath the surface course, including cracks in PCC slabs, but not PCC joints.

**X1.14.1.4** Transverse cracks extend across the pavement at approximately right angles to the pavement centerline or direction of laydown. These types of cracks are not usually load-associated.

#### X1.14.2 Severity Levels:

**X1.14.2.1 L**—One of the following conditions exists (Fig. X1.28): nonfilled crack width is less than 10 mm ( $\frac{3}{8}$  in.), or filled crack of any width (filler in satisfactory condition).



FIG. X1.25 Low-Severity Lane/Shoulder Drop-Off



FIG. X1.26 Medium-Severity Lane/Shoulder Drop-Off

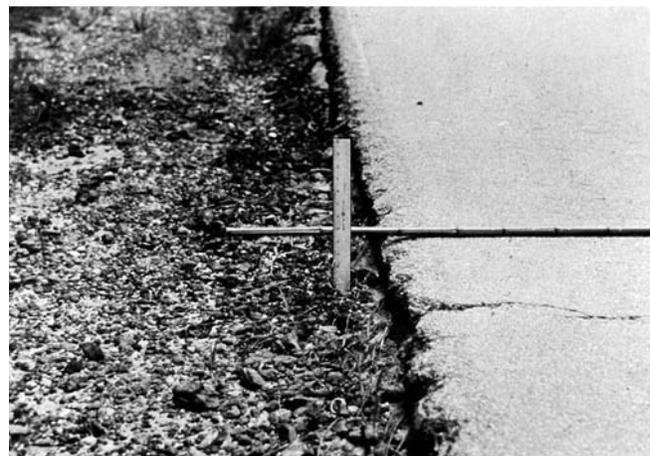


FIG. X1.27 High-Severity Lane/Shoulder Drop-Off



FIG. X1.28 Low-Severity Longitudinal and Transverse Cracking

**X1.14.2.2 M**—One of the following conditions exists (Fig. X1.29): nonfilled crack width is greater than or equal to 10 mm and less than 75 mm ( $\frac{3}{8}$  to 3 in.); nonfilled crack is less than or equal to 75 mm (3 in.) surrounded by light and random cracking; or, filled crack is of any width surrounded by light random cracking.



FIG. X1.29 Medium-Severity Longitudinal and Transverse Cracking



FIG. X1.31 Low-Severity Patching and Utility Cut Patching

X1.14.2.3 **H**—One of the following conditions exists (Fig. X1.30): any crack filled or nonfilled surrounded by medium-or high-severity random cracking; nonfilled crack greater than 75 mm (3 in.); or, a crack of any width where approximately 100 mm (4 in.) of pavement around the crack is severely broken.

X1.14.3 *How to Measure*—Longitudinal and transverse cracks are measured in linear meters (feet). The length and severity of each crack should be recorded. If the crack does not have the same severity level along its entire length, each portion of the crack having a different severity level should be recorded separately.

### PATCHING AND UTILITY CUT PATCHING

X1.15 *Description*—A patch is an area of pavement that has been replaced with new material to repair the existing pavement. A patch is considered a defect no matter how well it is performing (a patched area or adjacent area usually does not perform as well as an original pavement section). Generally, some roughness is associated with this distress.

#### X1.15.1 *Severity Levels:*

X1.15.1.1 **L**—Patch is in good condition and satisfactory. Ride quality is rated as low severity or better (Fig. X1.31).

X1.15.1.2 **M**—Patch is moderately deteriorated, or ride quality is rated as medium severity, or both (Fig. X1.32).

X1.15.1.3 **H**—Patch is badly deteriorated, or ride quality is rated as high severity, or both; needs replacement soon (Fig. X1.33).

X1.15.2 *How to Measure*—Patching is rated in ft<sup>2</sup> of surface area; however, if a single patch has areas of differing severity, these areas should be measured and recorded separately. For example, a 2.5 m<sup>2</sup> (27.0 ft<sup>2</sup>) patch may have 1 m<sup>2</sup> (11 ft<sup>2</sup>) of medium severity and 1.5 m<sup>2</sup> (16 ft<sup>2</sup>) of low severity. These areas would be recorded separately. Any distress found in a patched area will not be recorded; however, its effect on the patch will be considered when determining the patch's severity level. No other distresses, for example, are recorded within a patch. Even if the patch material is shoving or cracking, the area is rated only as a patch. If a large amount of pavement has been replaced, it should not be recorded as a patch but considered as new pavement, for example, replacement of a complete intersection.

### POLISHED AGGREGATE

X1.16 *Description*—This distress is caused by repeated traffic applications. Polished aggregate is present when close



FIG. X1.30 High-Severity Longitudinal and Transverse Cracking



FIG. X1.32 Medium-Severity Patching and Utility Cut Patching



FIG. X1.33 High-Severity Patching and Utility Cut Patching

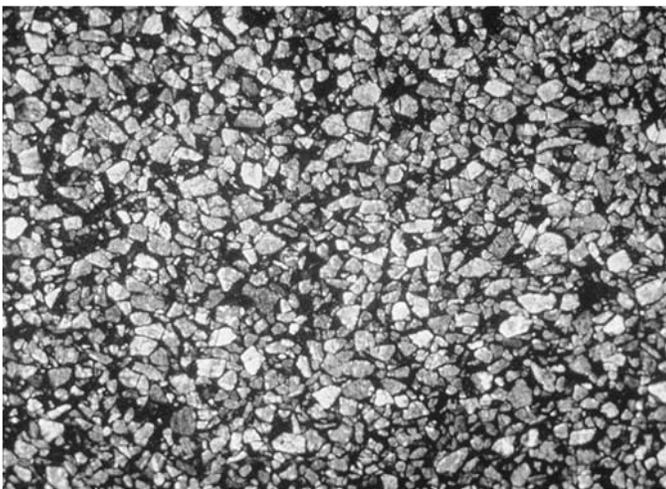
examination of a pavement reveals that the portion of aggregate extending above the asphalt is either very small, or there are no rough or angular aggregate particles to provide good skid resistance. When the aggregate in the surface becomes smooth to the touch, adhesion with vehicle tires is considerably reduced. When the portion of aggregate extending above the surface is small, the pavement texture does not significantly contribute to reducing vehicle speed. Polished aggregate should be counted when close examination reveals that the aggregate extending above the asphalt is negligible, and the surface aggregate is smooth to the touch. This type of distress is indicated when the number on a skid resistance test is low or has dropped significantly from a previous rating.

**X1.16.1 Severity Levels**—No degrees of severity are defined; however, the degree of polishing should be clearly evident in the sample unit in that the aggregate surface should be smooth to the touch (Fig. X1.34).

**X1.16.2 How to Measure**—Polished aggregate is measured in square meters (square feet) of surface area. If bleeding is counted, polished aggregate should not be counted.

### POTHOLES

**X1.17 Description**—Potholes are small—usually less than



750 mm (30 in.) in diameter—bowl-shaped depressions in the pavement surface. They generally have sharp edges and vertical sides near the top of the hole. When holes are created by high-severity alligator cracking, they should be identified as potholes, not as weathering.

#### X1.17.1 Severity Levels:

**X1.17.1.1** The levels of severity for potholes less than 750 mm (30 in.) in diameter are based on both the diameter and the depth of the pothole, according to Table X1.1.

**X1.17.1.2** If the pothole is more than 750 mm (30 in.) in diameter, the area should be determined in square feet and divided by 0.5 m<sup>2</sup> (5.5 ft<sup>2</sup>) find the equivalent number of holes. If the depth is 25 mm (1 in.) or less, the holes are considered medium-severity. If the depth is more than 25 mm (1 in.), they are considered high-severity (Figs. X1.35-X1.37).

**X1.17.2 How to Measure**—Potholes are measured by counting the number that are low-, medium-, and high-severity and recording them separately.

### RAILROAD CROSSING

**X1.18 Description**—Railroad crossing defects are depressions or bumps around, or between tracks, or both.

#### X1.18.1 Severity Levels:

**X1.18.1.1 L**—Railroad crossing causes low-severity ride quality (Fig. X1.38).

**X1.18.1.2 M**—Railroad crossing causes medium-severity ride quality (Fig. X1.39).

**X1.18.1.3 H**—Railroad crossing causes high-severity ride quality (Fig. X1.40).

**X1.18.2 How to Measure**—The area of the crossing is measured in square meters (square feet) of surface area. If the crossing does not affect ride quality, it should not be counted. Any large bump created by the tracks should be counted as part of the crossing.

### RUTTING

**X1.19 Description**—A rut is a surface depression in the wheel paths. Pavement uplift may occur along the sides of the rut, but, in many instances, ruts are noticeable only after a rainfall when the paths are filled with water. Rutting stems from a permanent deformation in any of the pavement layers or subgrades, usually caused by consolidated or lateral movement of the materials due to traffic load.

#### X1.19.1 Severity Levels (Mean Rut Depth):

**X1.19.1.1 L**—6 to 13 mm (<sup>1</sup>/<sub>4</sub> to <sup>1</sup>/<sub>2</sub> in.) (Fig. X1.41).

**X1.19.1.2 M**—>13 to 25 mm (><sup>1</sup>/<sub>2</sub> to 1 in.) (Fig. X1.42).



FIG. X1.35 Low-Severity Pothole



FIG. X1.38 Low-Severity Railroad Crossing



FIG. X1.36 Medium-Severity Pothole



FIG. X1.39 Medium-Severity Railroad Crossing



FIG. X1.37 High-Severity Pothole



FIG. X1.40 High-Severity Railroad Crossing

X1.19.1.3 H—>25 mm (>1 in.) (Fig. X1.43).

X1.19.2 *How to Measure*—Rutting is measured in square meters (square feet) of surface area, and its severity is determined by the mean depth of the rut (see X1.19.1.1- X1.19.1.3). The mean rut depth is calculated by laying a straight edge across the rut, measuring its depth, then using

measurements taken along the length of the rut to compute its mean depth in millimeters.

## SHOVING

X1.20 *Description*

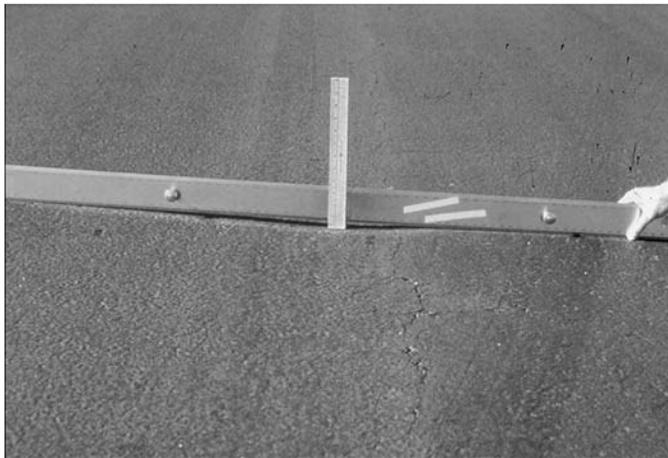


FIG. X1.41 Low-Severity Rutting



FIG. X1.42 Medium-Severity Rutting



FIG. X1.43 High-Severity Rutting

X1.20.1 Shoving is a permanent, longitudinal displacement of a localized area of the pavement surface caused by traffic loading. When traffic pushes against the pavement, it produces a short, abrupt wave in the pavement surface. This distress normally occurs only in unstable liquid asphalt mix (cutback or emulsion) pavements.

X1.20.2 Shoves also occur where asphalt pavements abut PCC pavements. The PCC pavements increase in length and push the asphalt pavement, causing the shoving.

X1.20.3 *Severity Levels:*

X1.20.3.1 **L**—Shove causes low-severity ride quality (Fig. X1.44).

X1.20.3.2 **M**—Shove causes medium-severity ride quality (Fig. X1.45).

X1.20.3.3 **H**—Shove causes high-severity ride quality (Fig. X1.46).

X1.20.4 *How to Measure*—Shoves are measured in square meters (feet) of surface area. Shoves occurring in patches are considered in rating the patch, not as a separate distress.

## SLIPPAGE CRACKING

X1.21 *Description*—Slippage cracks are crescent or half-moon shaped cracks, usually transverse to the direction of travel. They are produced when braking or turning wheels cause the pavement surface to slide or deform. This distress usually occurs in overlaps when there is a poor bond between the surface and the next layer of the pavement structure.

X1.21.1 *Severity Level:*

X1.21.1.1 **L**—Average crack width is  $< 10$  mm ( $\frac{3}{8}$  in.) (Fig. X1.47).

X1.21.1.2 **M**—One of the following conditions exists (Fig. X1.48): average crack width is  $\geq 10$  and  $< 40$  mm ( $\frac{3}{8}$  and  $< 1\frac{1}{2}$  in.); or the area around the crack is moderately spalled, or surrounded with secondary cracks.

X1.21.1.3 **H**—One of the following conditions exists (Fig. X1.49): the average crack width is  $> 40$  mm ( $1\frac{1}{2}$  in.) or the area around the crack is broken into easily removed pieces.

X1.21.2 *How to Measure*—The area associated with a given slippage crack is measured in square meters (square feet) and rated according to the highest level of severity in the area.

## SWELL

X1.22 *Description*—Swell is characterized by an upward bulge in the pavement's surface, a long, gradual wave more



FIG. X1.44 Low-Severity Shoving



FIG. X1.45 Medium-Severity Shoving



FIG. X1.48 Medium-Severity Slippage Cracking



FIG. X1.46 High-Severity Shoving

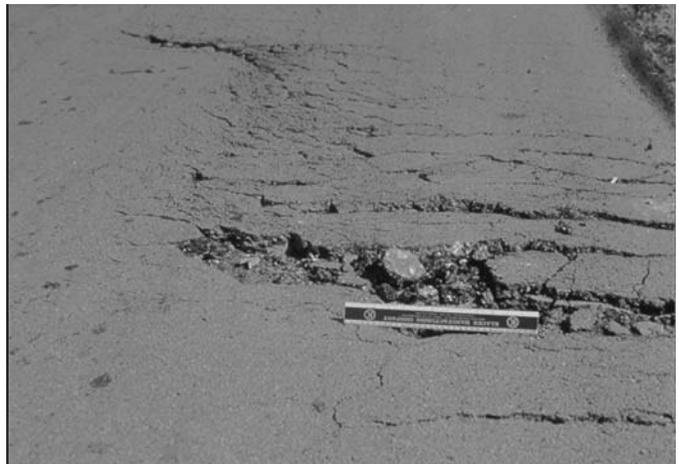


FIG. X1.49 High-Severity Slippage Cracking



FIG. X1.47 Low-Severity Slippage Cracking



FIG. X1.50 Example Swell. Severity level is based on ride quality criteria.

than 3 m (10 ft) long (Fig. X1.50). Swelling can be accompanied by surface cracking. This distress usually is caused by frost action in the subgrade or by swelling soil.

**X1.22.1 Severity Level:**

**X1.22.1.1 L**—Swell causes low-severity ride quality. Low-severity swells are not always easy to see but can be detected

by driving at the speed limit over the pavement section. An upward motion will occur at the swell if it is present.

**X1.22.1.2 M**—Swell causes medium-severity ride quality.

**X1.22.1.3 H**—Swell causes high-severity ride quality.



X1.22.2 *How to Measure*—The surface area of the swell is measured in square meters (square feet).

## RAVELING

X1.23 *Description*—Raveling is the dislodging of coarse aggregate particles. Raveling may be caused by insufficient asphalt binder, poor mixture quality, insufficient compaction, segregation, or stripping.

X1.23.1 *Dense Mix Severity Levels*—As used herein, coarse aggregate refers to predominant coarse aggregate size of the asphalt mix, and aggregate clusters refers to when more than one adjoining coarse aggregate piece is missing. If in doubt about a severity level, three representative areas of one square yard each (square meters) should be examined and the number of missing aggregate particles/clusters is counted.

X1.23.1.1 **M**—Considerable loss of coarse aggregate, greater than 20 per square yard (square meter), or clusters of missing coarse aggregate are present (or both) (see Fig. X1.51).

X1.23.1.2 **H**—Surface is very rough and pitted, may be completely removed in places (see Fig. X1.52).

X1.23.2 *How to Measure*—Raveling is measured in square feet (square meters) of surface area. Mechanical damage caused by such things as hook drags, tire rims, or snowplows is counted as raveling. If raveling is present weathering (surface wear) is not recorded.

## WEATHERING (SURFACE WEAR)—DENSE MIX ASPHALT

X1.24 *Description*—The wearing away of the asphalt binder and fine aggregate matrix.

### X1.24.1 *Severity Levels:*

As used herein, coarse aggregate refers to predominant coarse aggregate size of the asphalt mix. Loss or dislodging of coarse aggregate is covered under Raveling. Surface wear is normally caused by oxidation, inadequate compaction, insuf-



FIG. X1.51 Medium-Severity Raveling



FIG. X1.52 High-Severity Raveling

ficient asphalt content, excessive natural sand, surface water erosion, and traffic. Weathering occurs faster in areas with high solar radiation.

X1.24.1.1 **L**—Asphalt surface beginning to show signs of aging which may be accelerated by climatic conditions. Loss is the fine aggregate matrix is noticeable and may be accompanied by fading of the asphalt color. Edges of the coarse aggregates are beginning to be exposed (less than 1 mm or 0.05 inches). Pavement may be relatively new (as new as 6 months old) (see Fig. X1.53).

X1.24.1.2 **M**—Loss of fine aggregate matrix is noticeable and edges of coarse aggregate have been exposed up to ¼ width (of the longest side) of the coarse aggregate due to the loss of fine aggregate matrix (see Fig. X1.54).

X1.24.1.3 **H**—Edges of coarse aggregate have been exposed greater than ¼ width (of the longest side) of the coarse aggregate. There is considerable loss of fine aggregate matrix leading to potential or some loss of coarse aggregate (see Fig. X1.55).

X1.24.2 *How to Measure*—Surface wear is measured in square feet (square metre). Surface wear is not recorded where medium or high severity (or both) raveling is recorded.



FIG. X1.53 Low-Severity Weathering (Surface Wear)



**FIG. X1.54 Medium-Severity Weathering (Surface Wear)**



**FIG. X1.55 High-Severity Weathering (Surface Wear)**

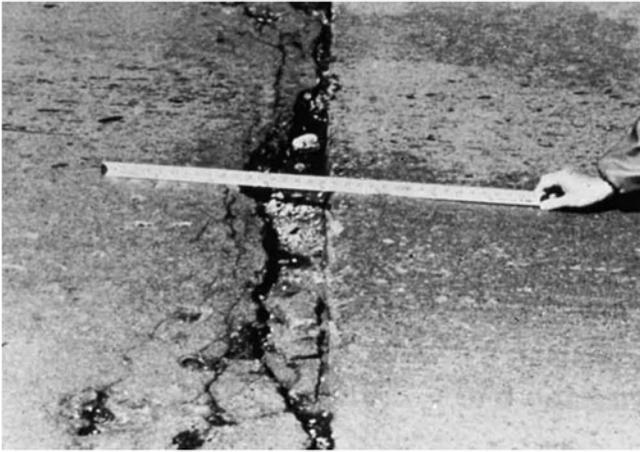


FIG. X2.50 High-Severity Spalling, Joint

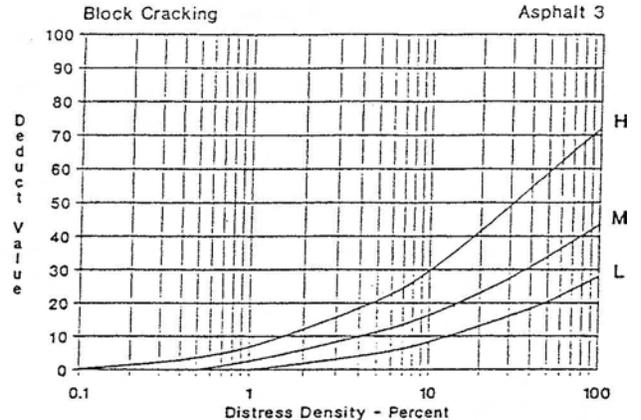


FIG. X3.3 Block Cracking

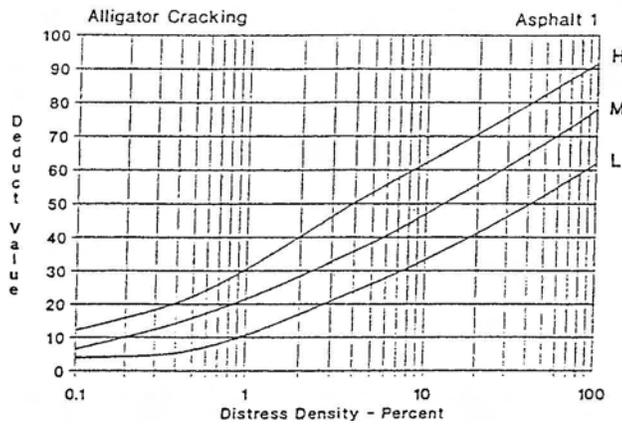


FIG. X3.1 Alligator Cracking

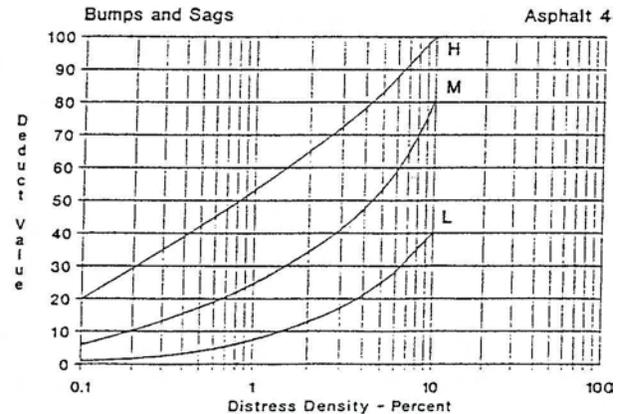


FIG. X3.4 Bumps and Sags

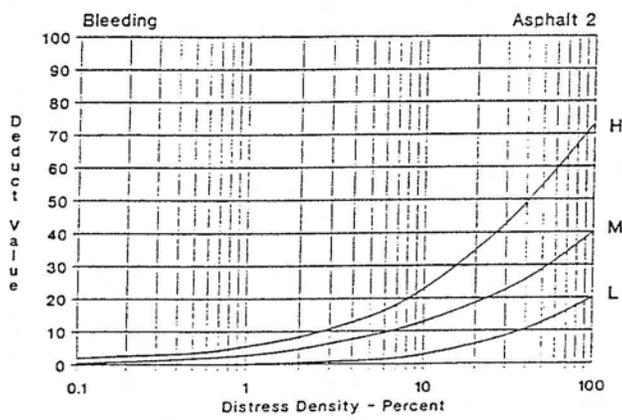


FIG. X3.2 Bleeding

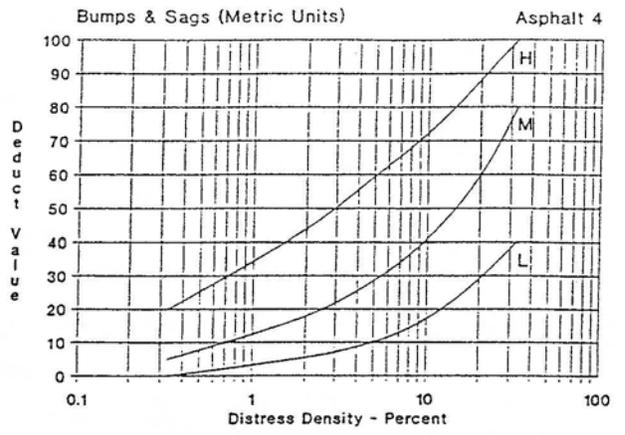


FIG. X3.5 Bumps and Sags (Metric units)

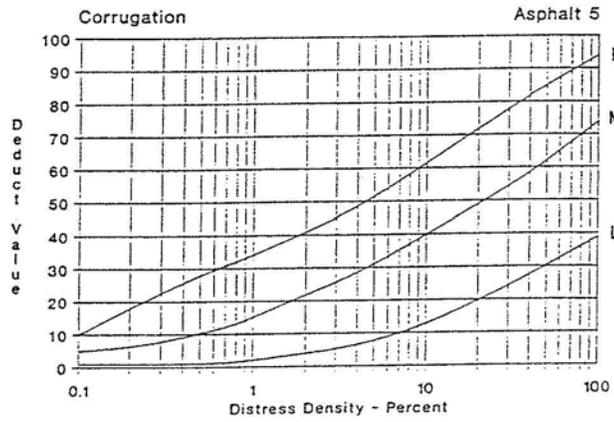


FIG. X3.6 Corrugation

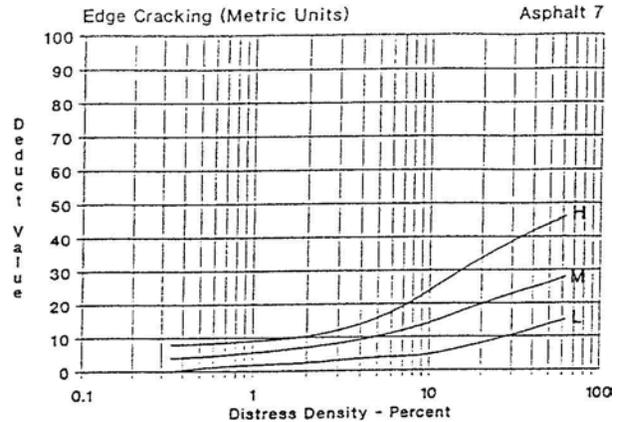


FIG. X3.9 Edge Cracking (metric units)

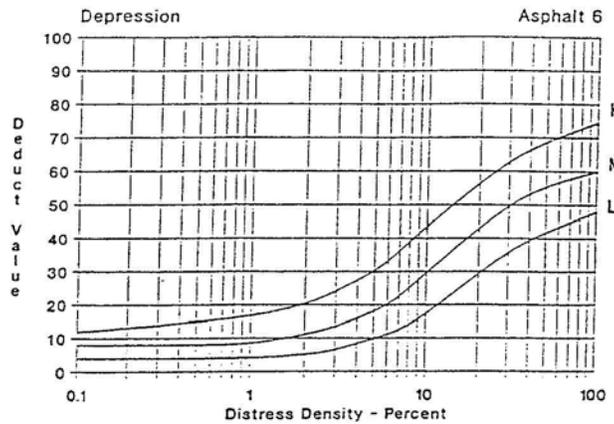


FIG. X3.7 Depression

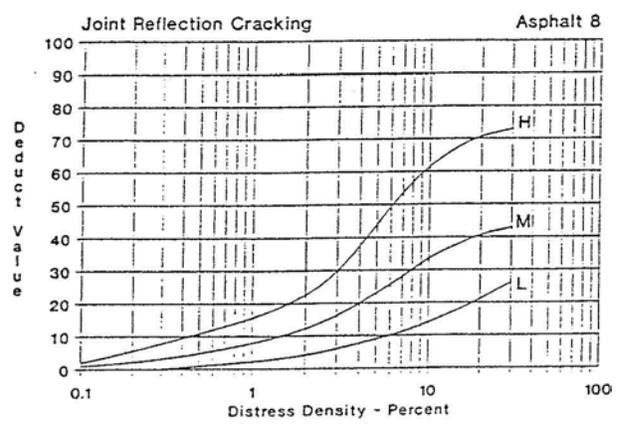


FIG. X3.10 Joint Reflection Cracking

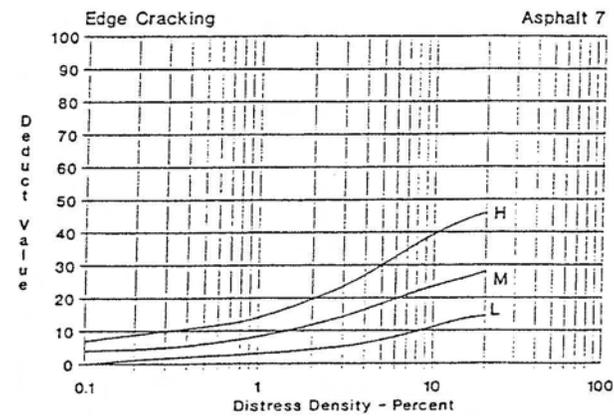


FIG. X3.8 Edge Cracking

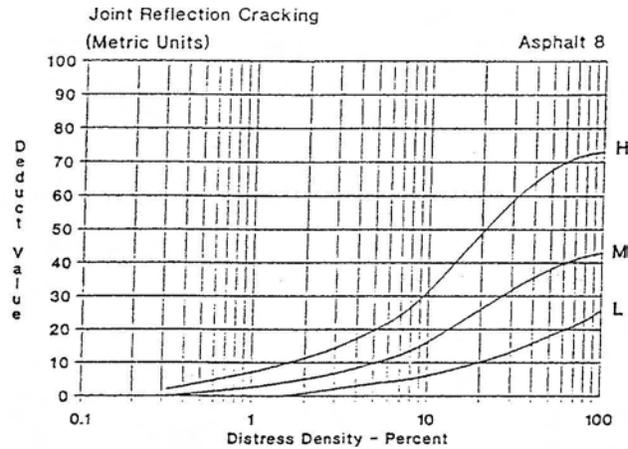


FIG. X3.11 Joint Reflection Cracking (metric units)

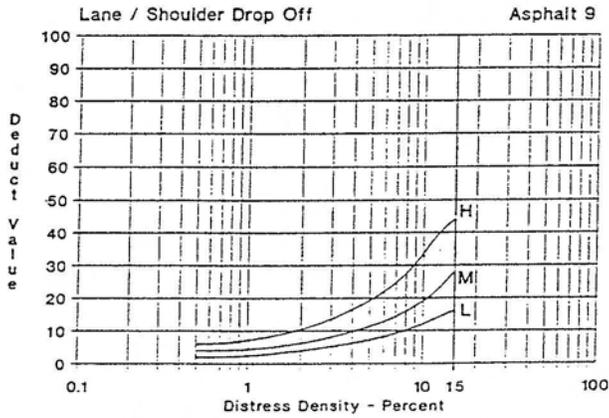


FIG. X3.12 Lane/Shoulder Drop-Off

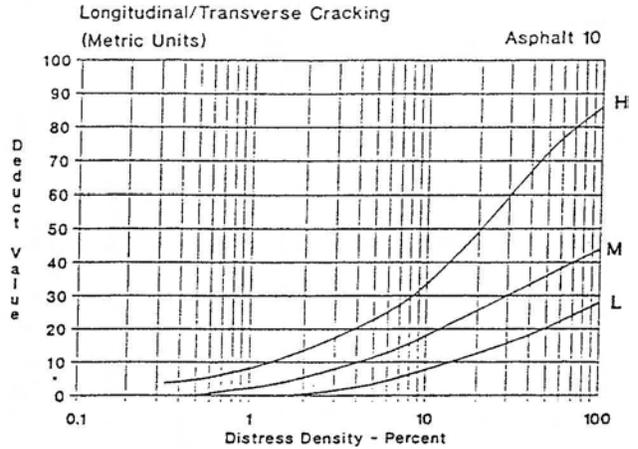


FIG. X3.15 Longitudinal/Transverse Cracking (metric units)

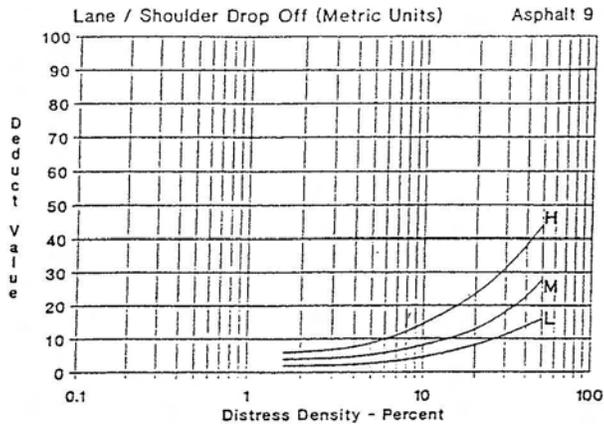


FIG. X3.13 Lane/Shoulder Drop-Off (metric units)

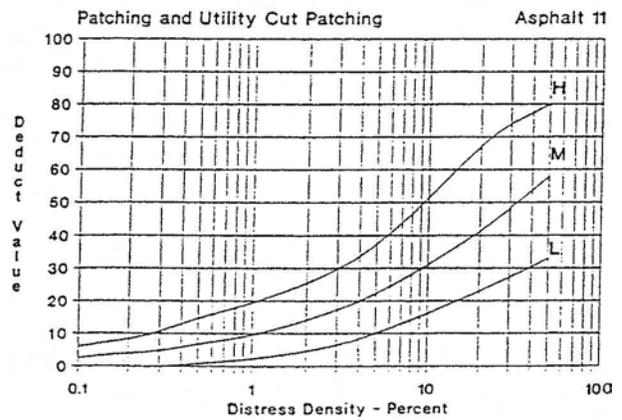


FIG. X3.16 Patching and Utility Cut Patching

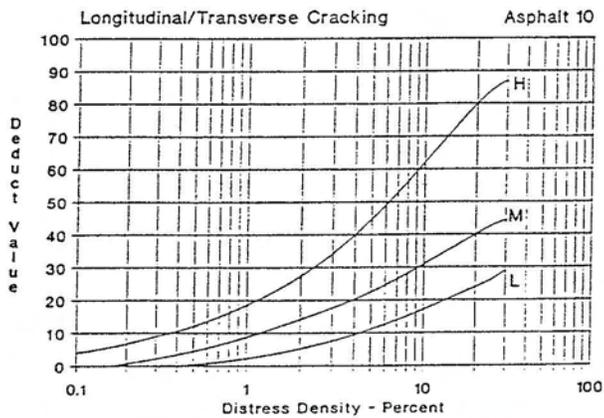


FIG. X3.14 Longitudinal/Transverse Cracking

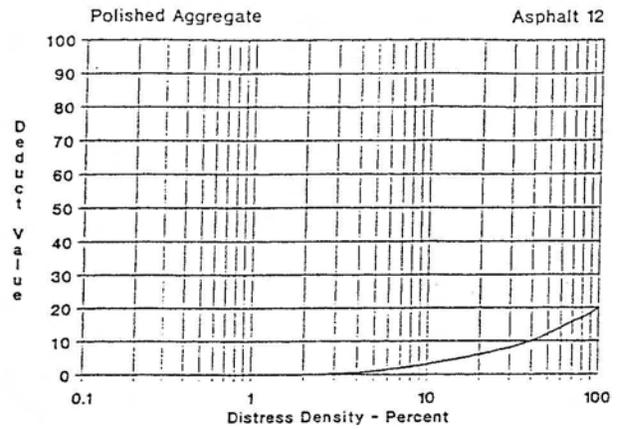


FIG. X3.17 Polished Aggregate

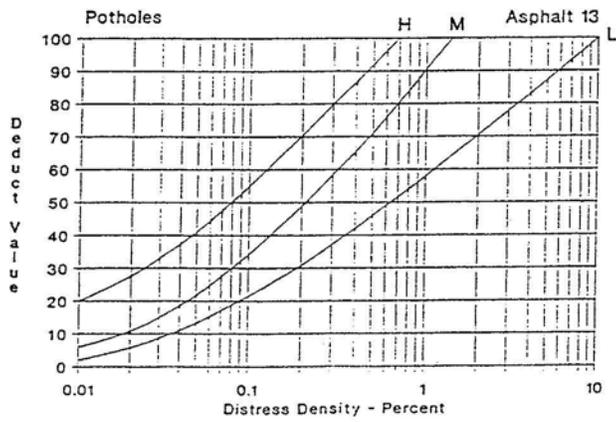


FIG. X3.18 Potholes

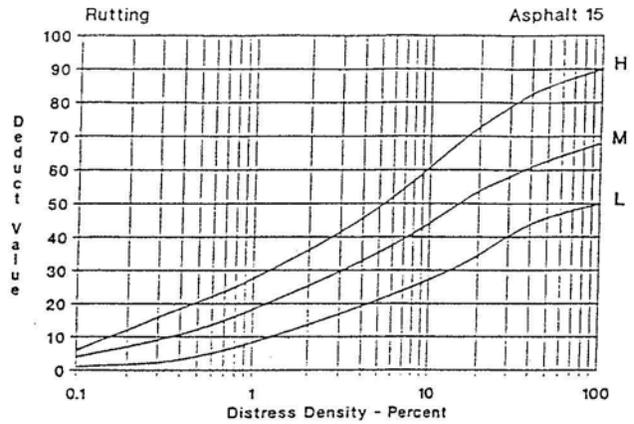


FIG. X3.21 Rutting

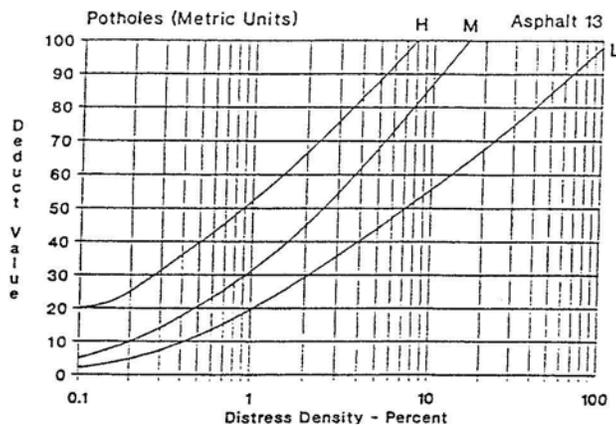


FIG. X3.19 Potholes (metric units)

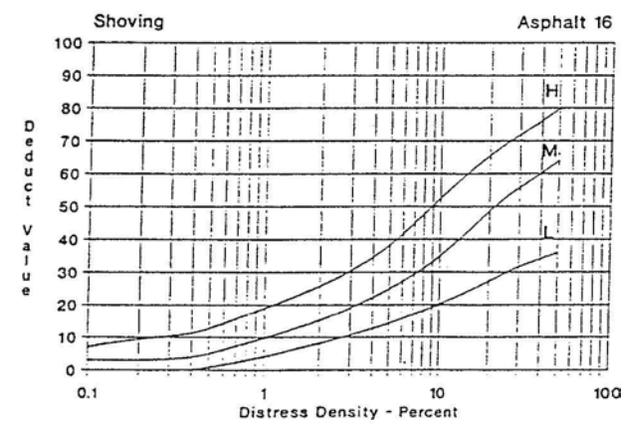


FIG. X3.22 Shoving

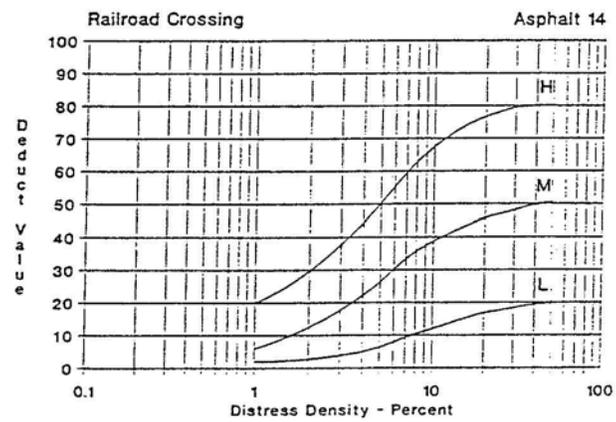


FIG. X3.20 Railroad Crossing

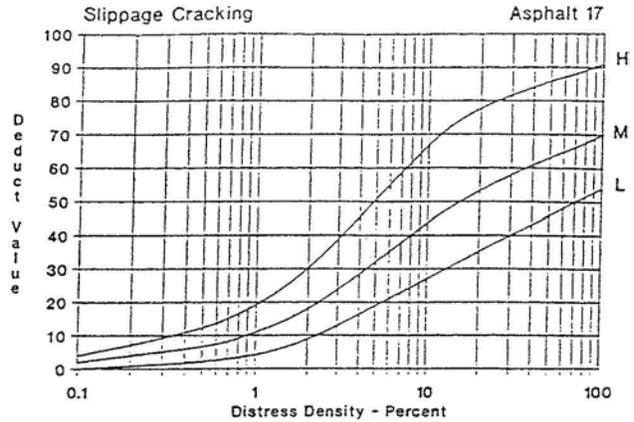


FIG. X3.23 Slippage Cracking

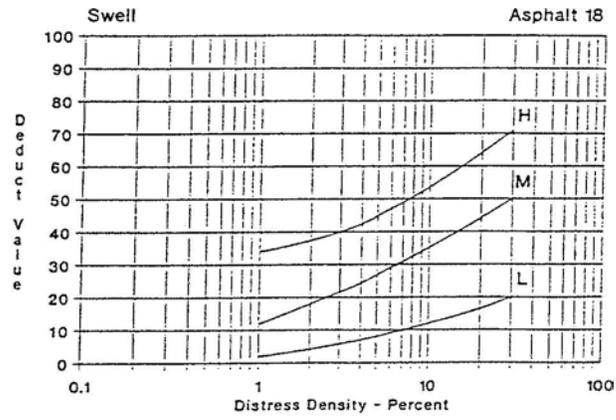


FIG. X3.24 Swell

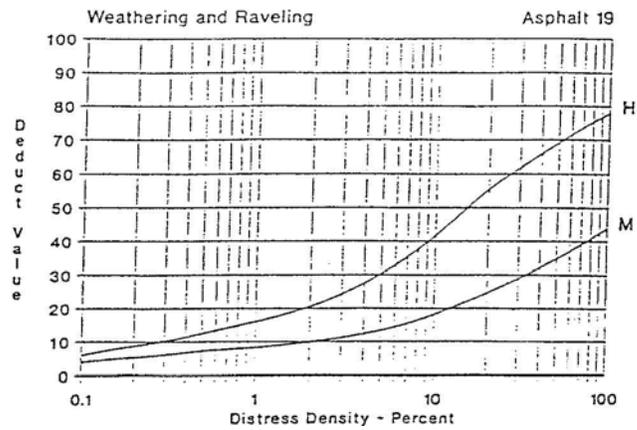


FIG. X3.25 Raveling

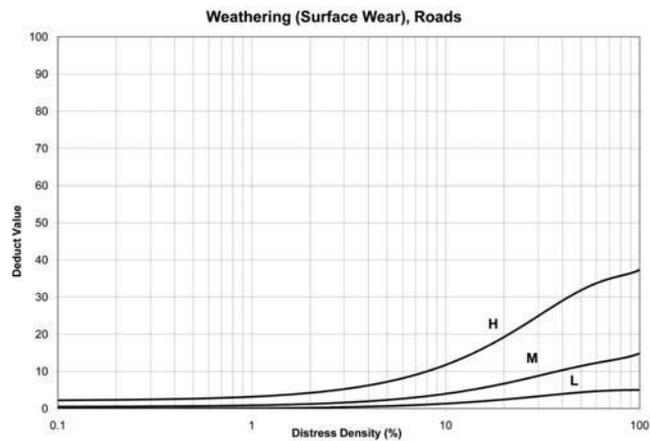


FIG. X3.26 Weathering

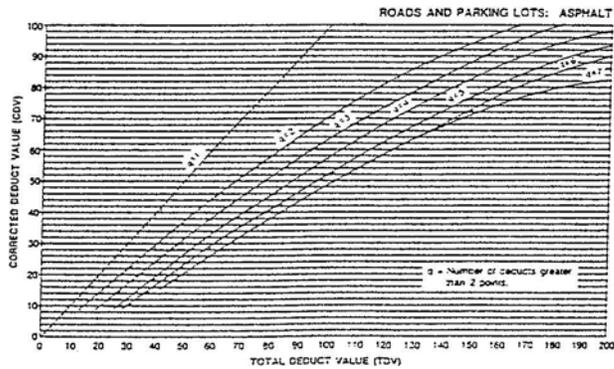


FIG. X3.27 Total Deduct Value

#### X4. DEDUCT VALUE CURVES FOR CONCRETE

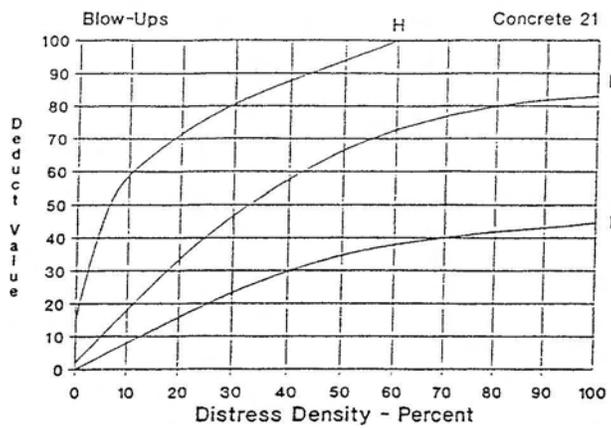


FIG. X4.1 Blowups

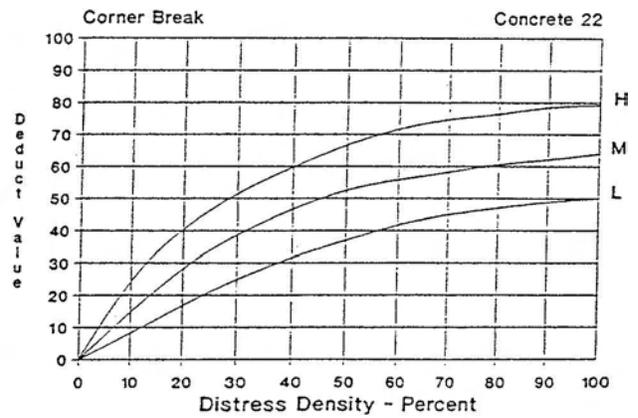


FIG. X4.2 Corner Break

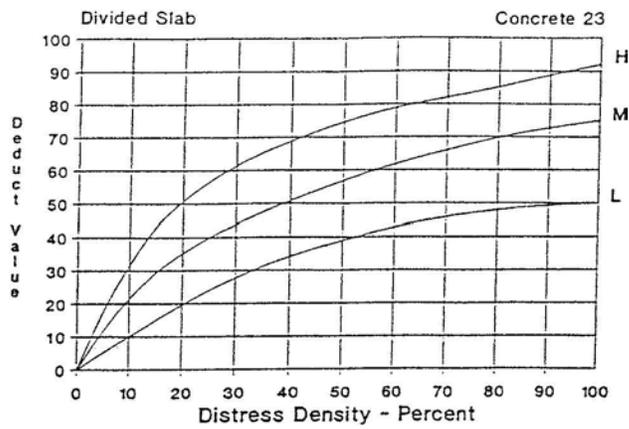
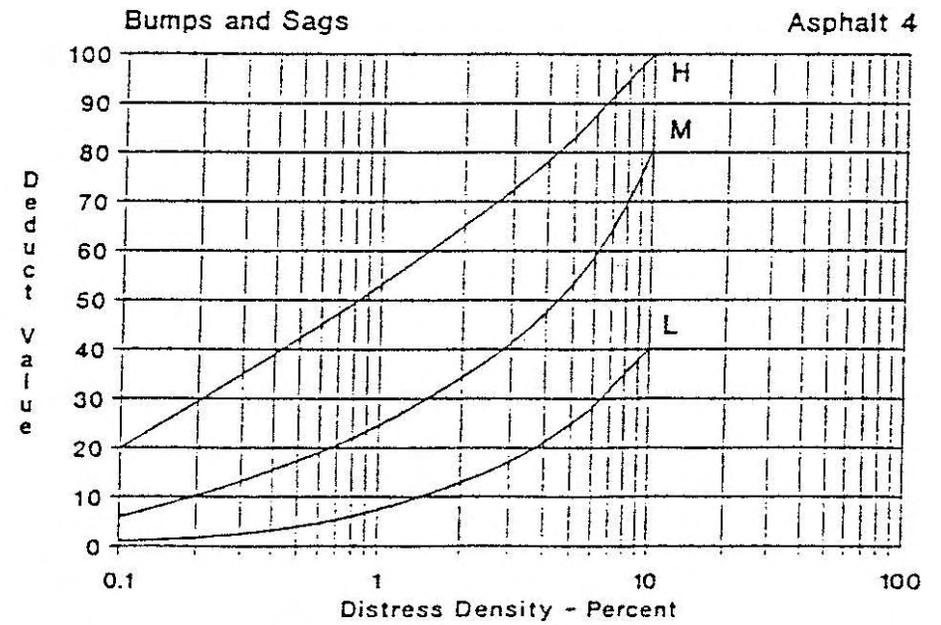
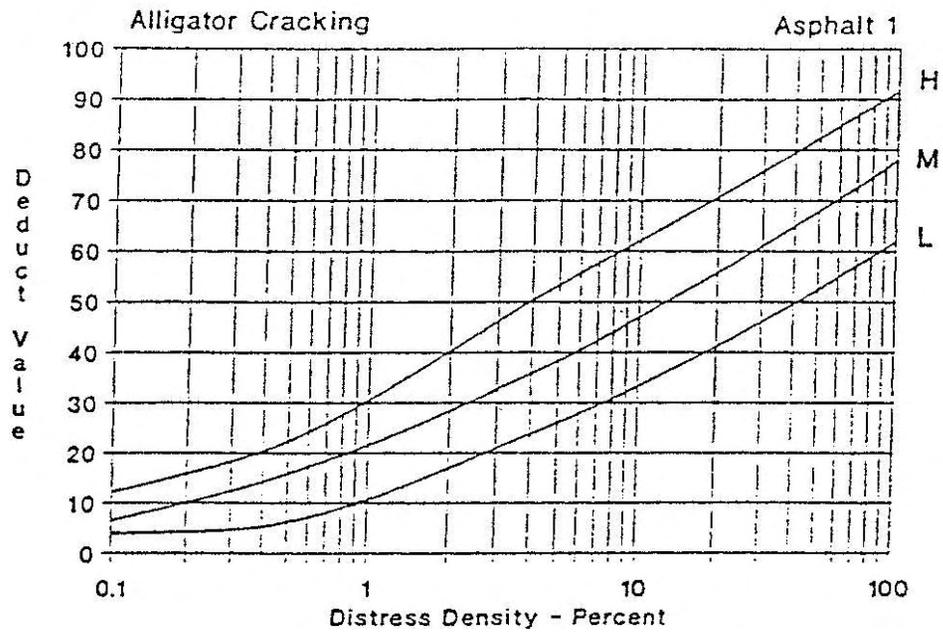


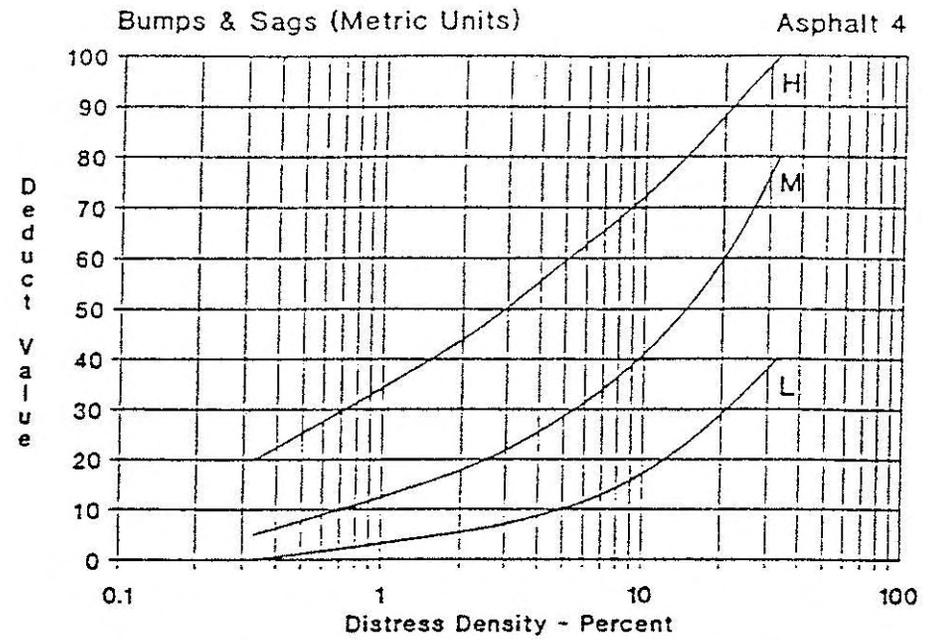
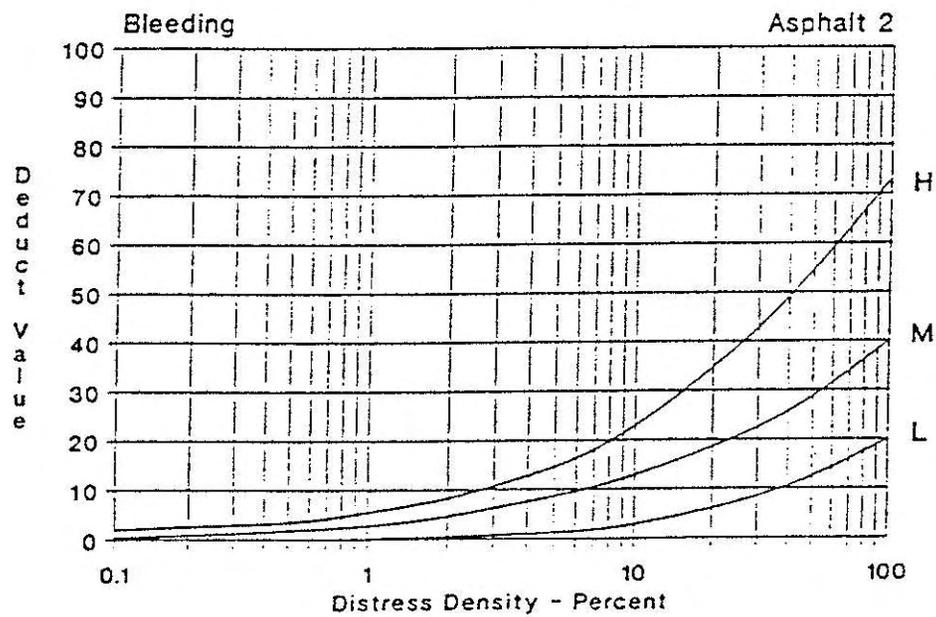
FIG. X4.3 Divided Slab

## **APPENDIX A**

### **DEDUCT VALUE CURVES FOR ASPHALT**



**FIG. X3.4 Bumps and Sags**



**FIG. X3.5 Bumps and Sags (Metric units)**

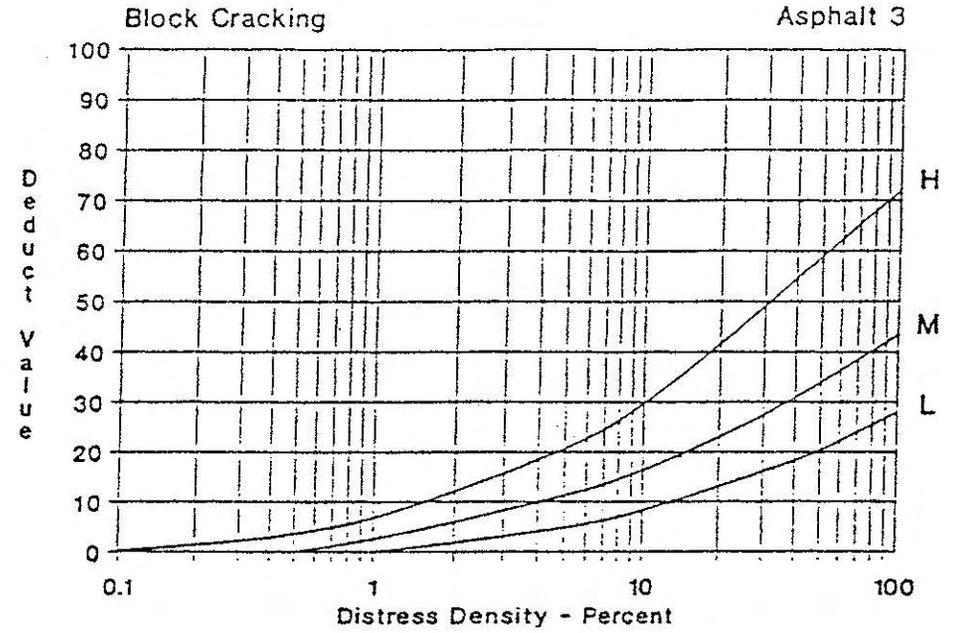
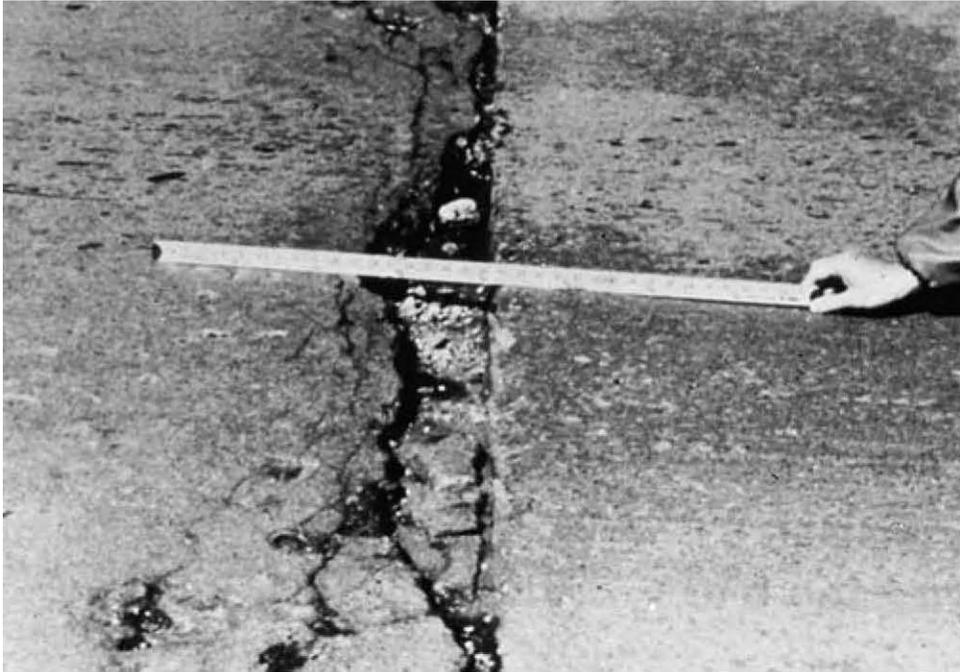


FIG. X3.3 Block Cracking

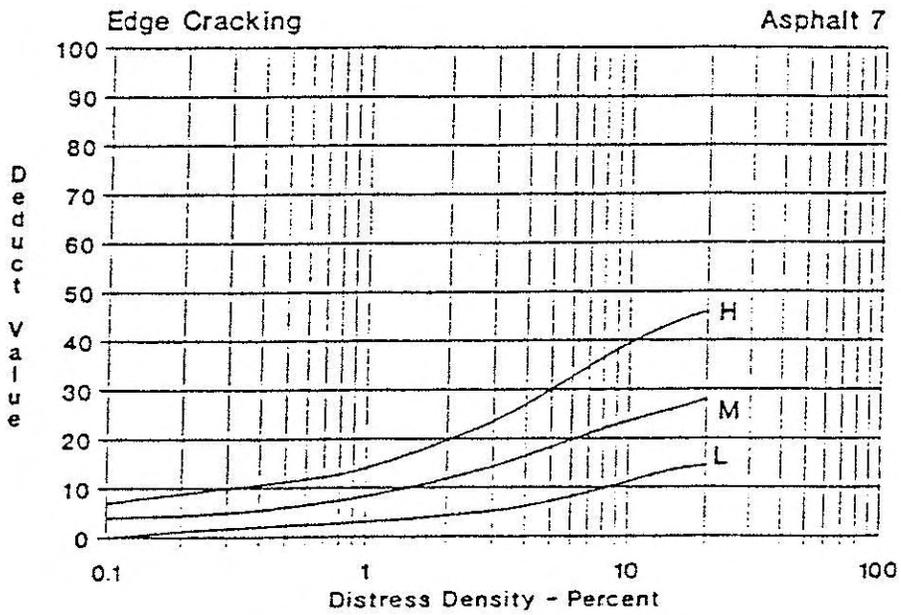
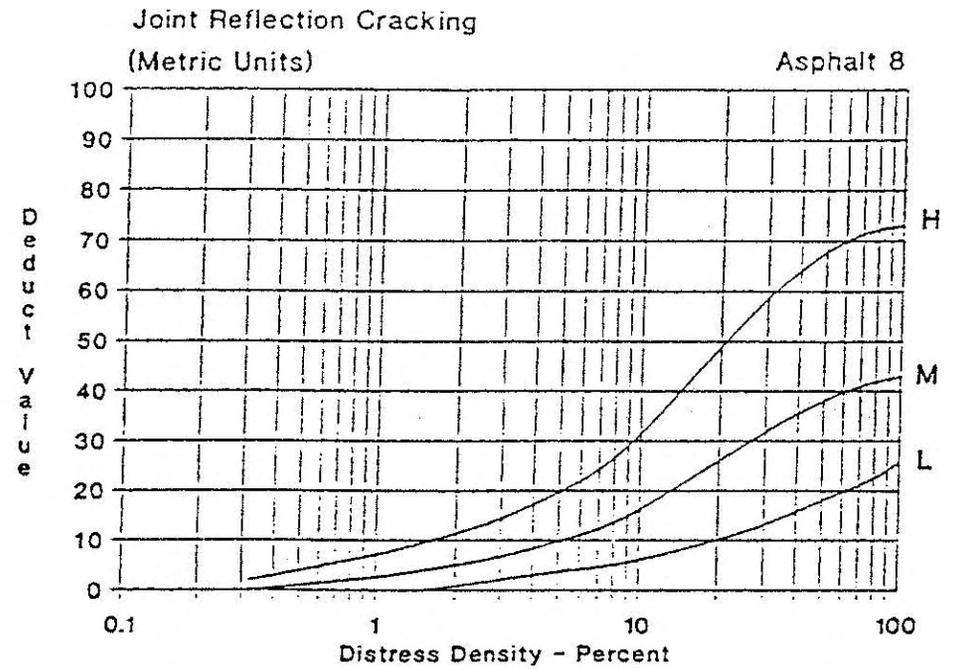
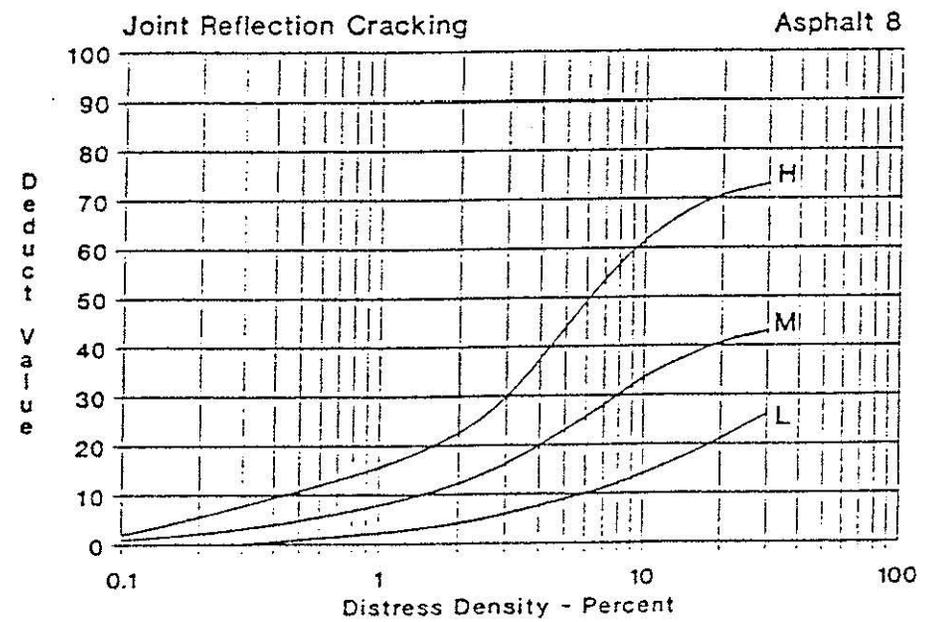
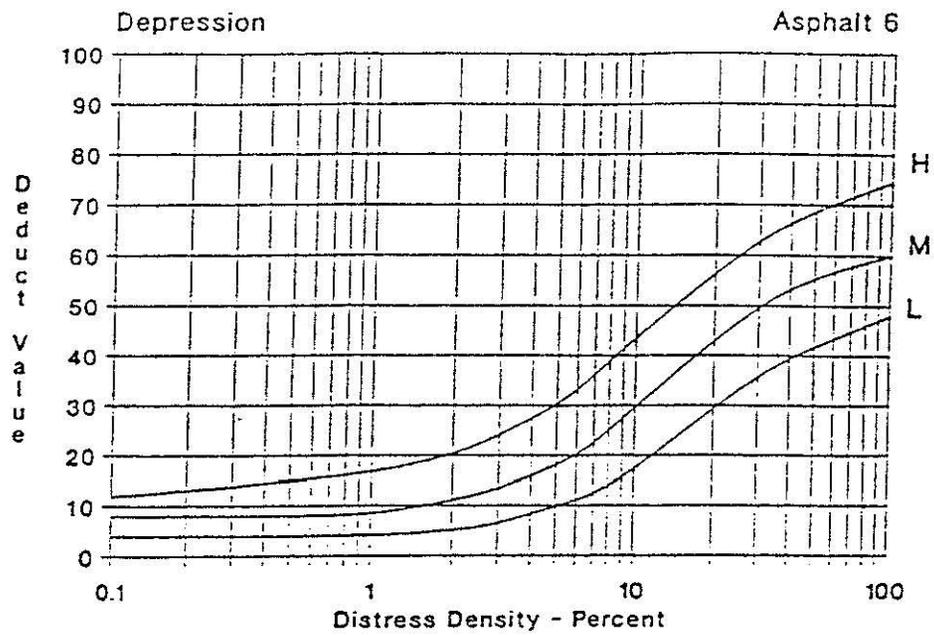


FIG. X3.8 Edge Cracking





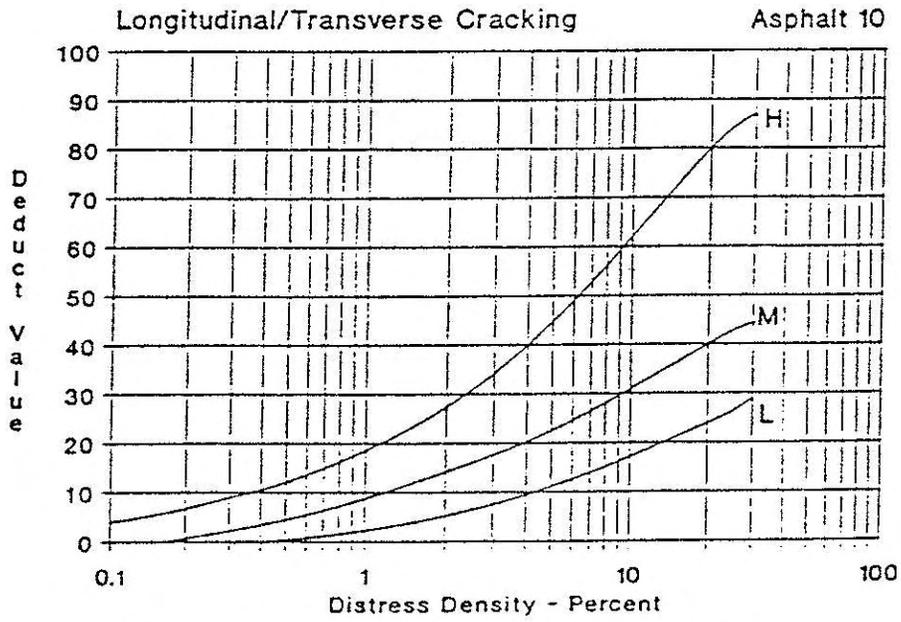
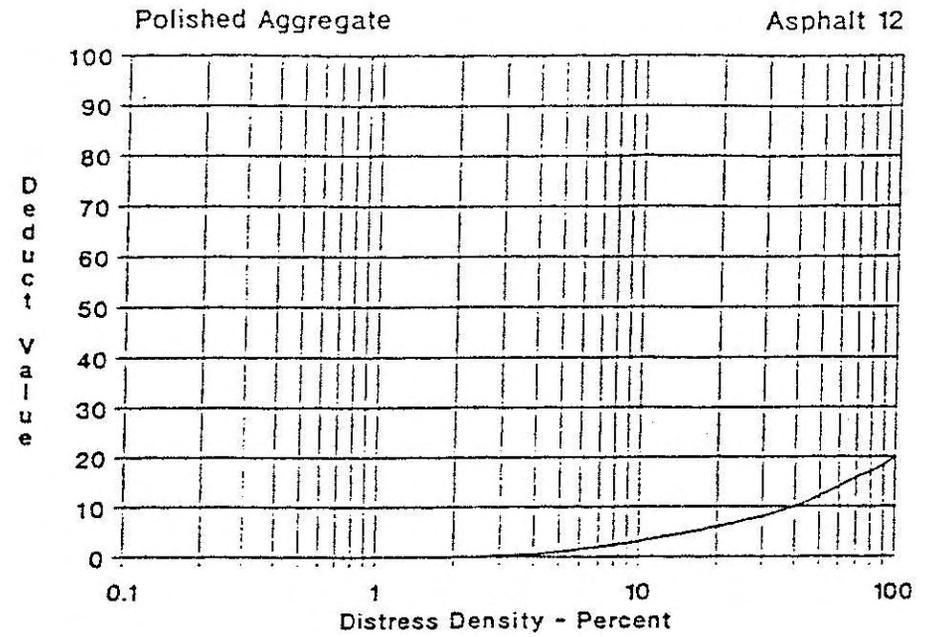


FIG. X3.14 Longitudinal/Transverse Cracking



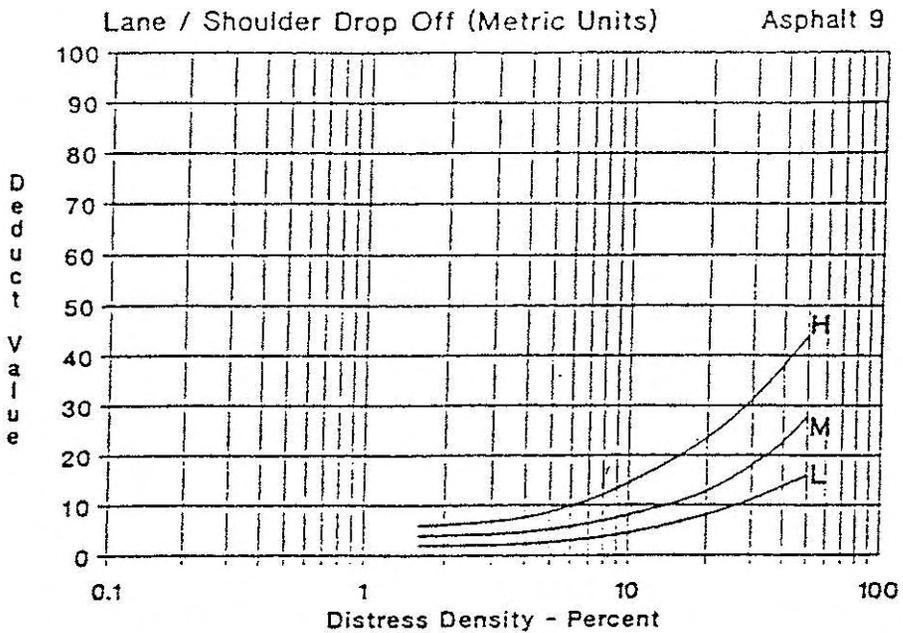
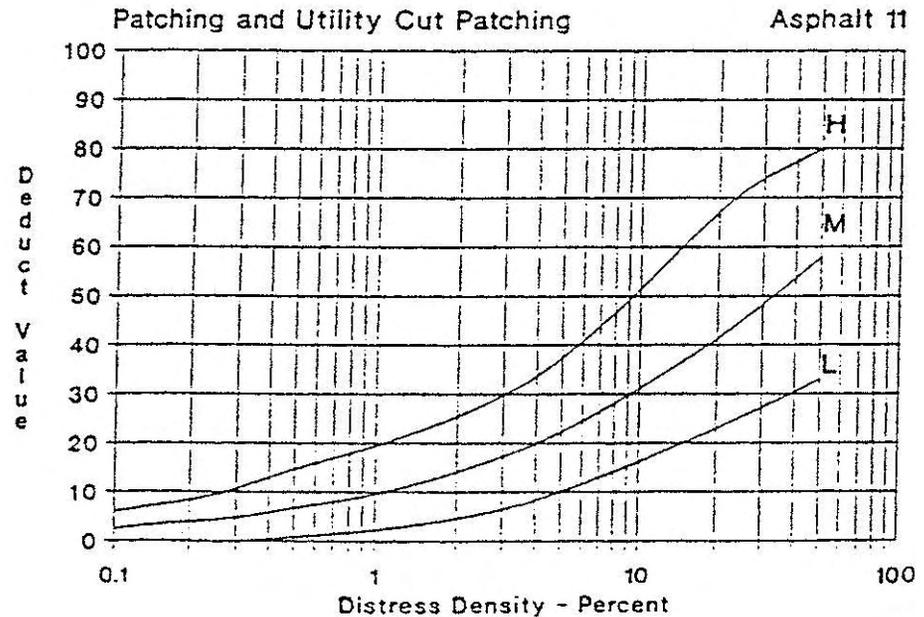
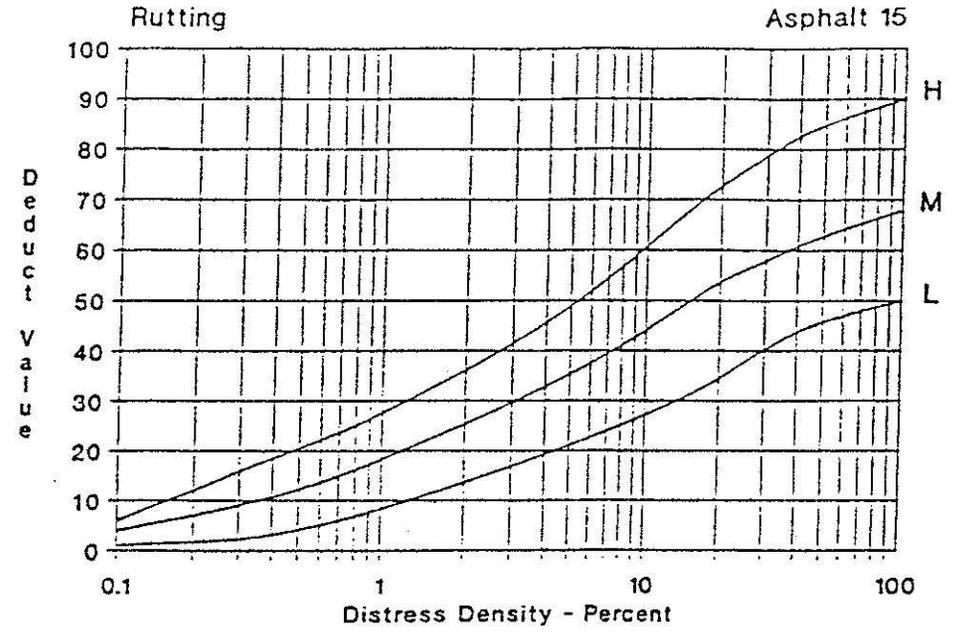
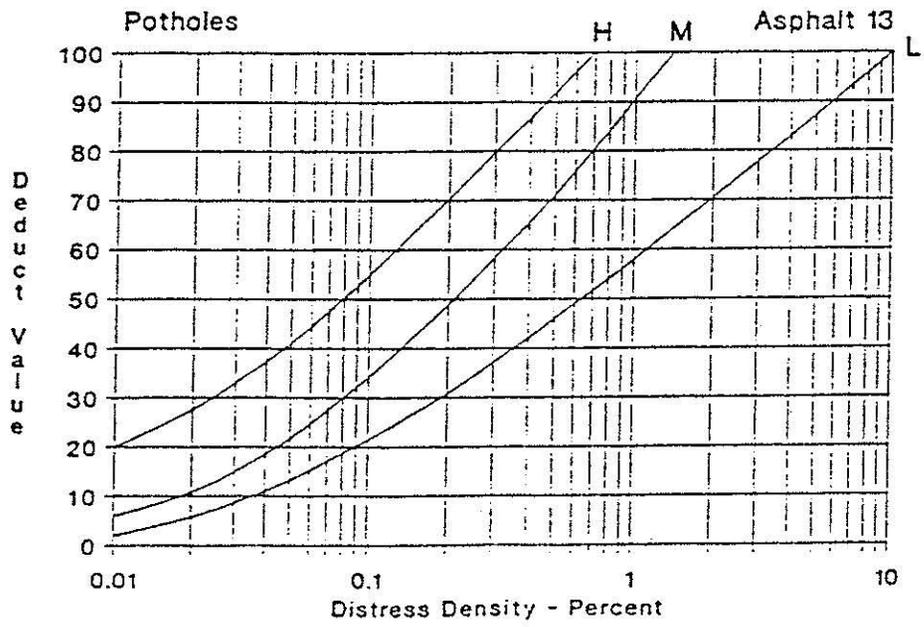


FIG. X3.13 Lane/Shoulder Drop-Off (metric units)





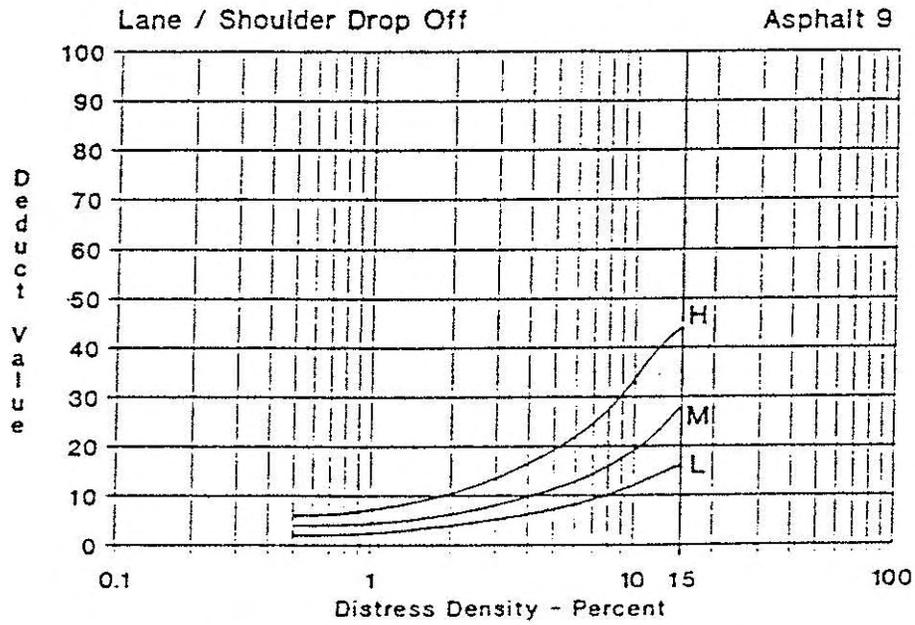
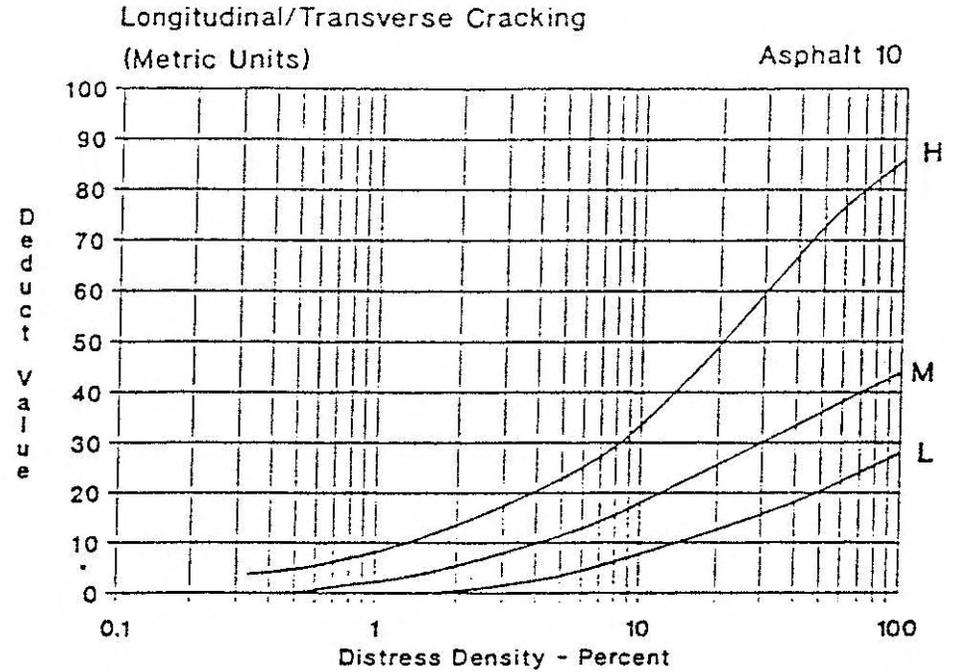
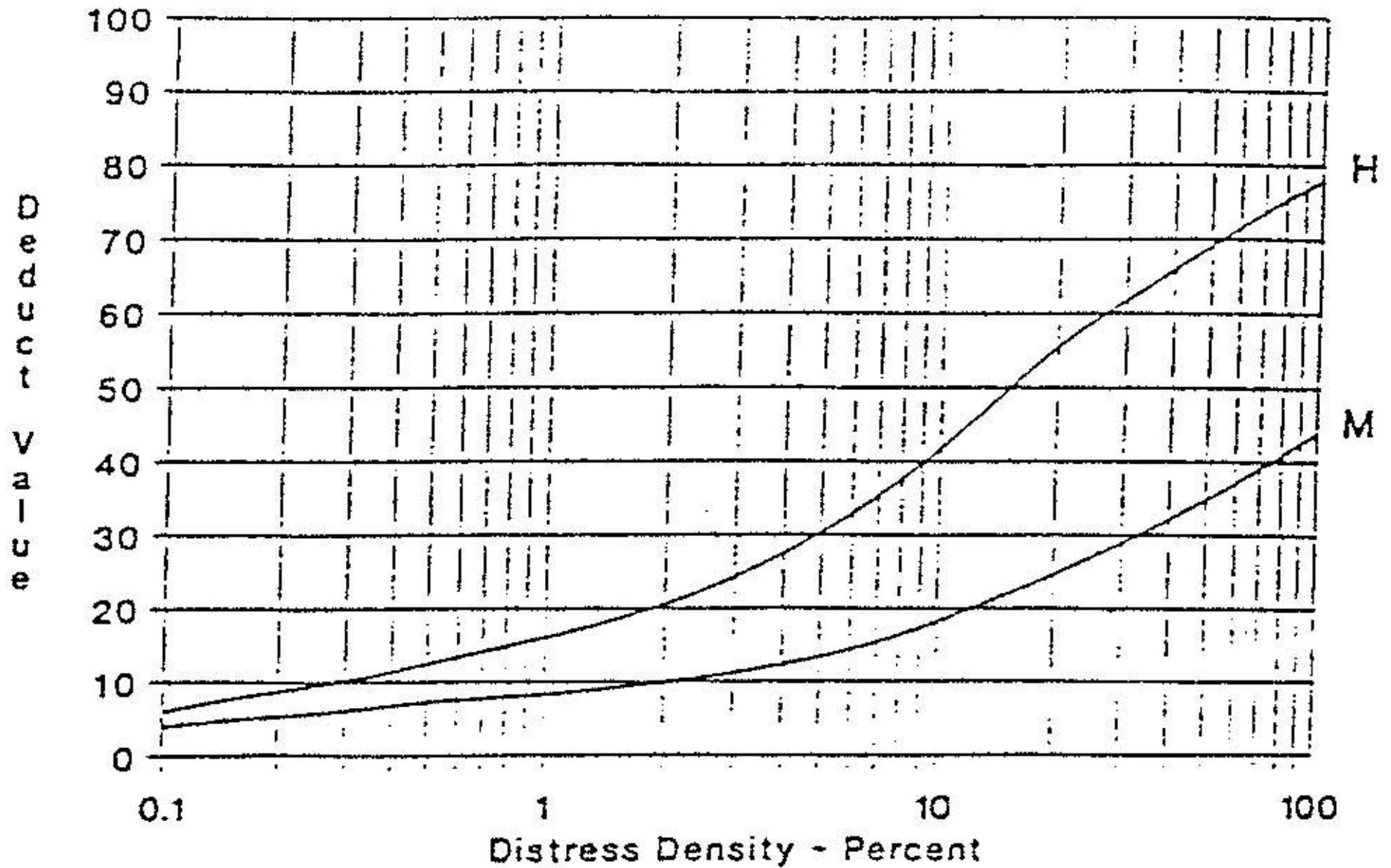


FIG. X3.12 Lane/Shoulder Drop-Off

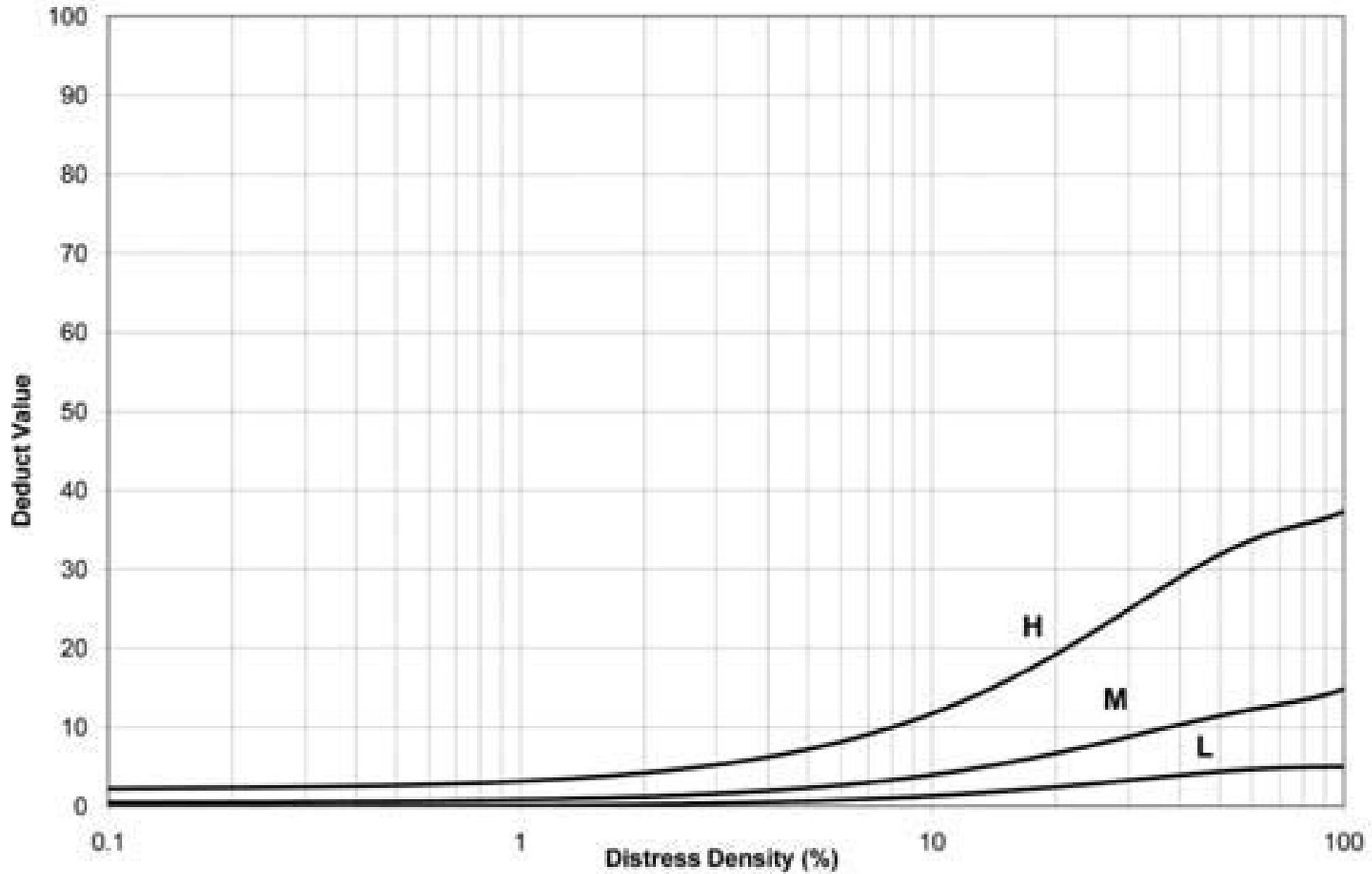


# Weathering and Raveling

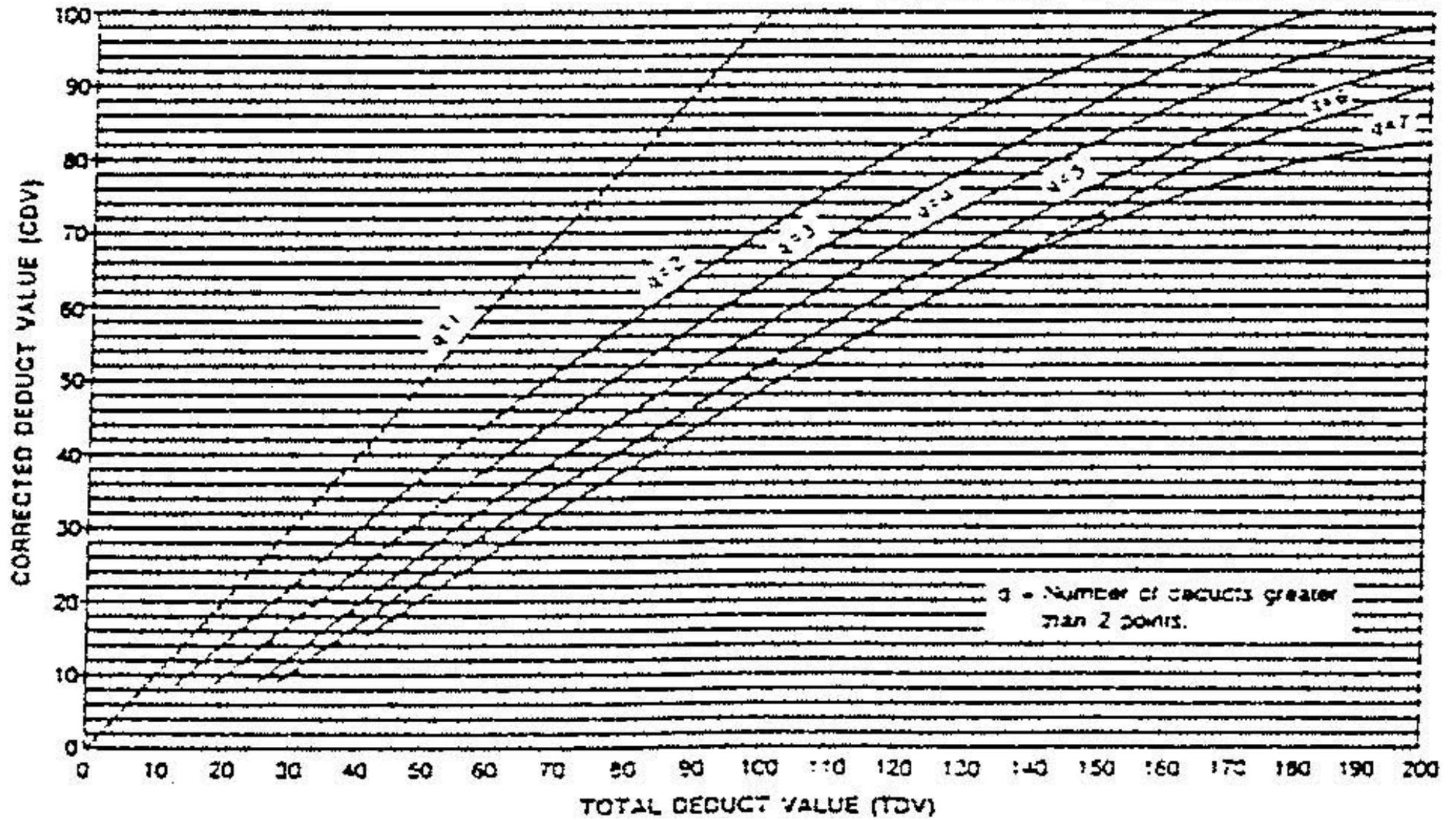
Asphalt 19



# Weathering (Surface Wear), Roads



# ROADS AND PARKING LOTS: ASPHALT



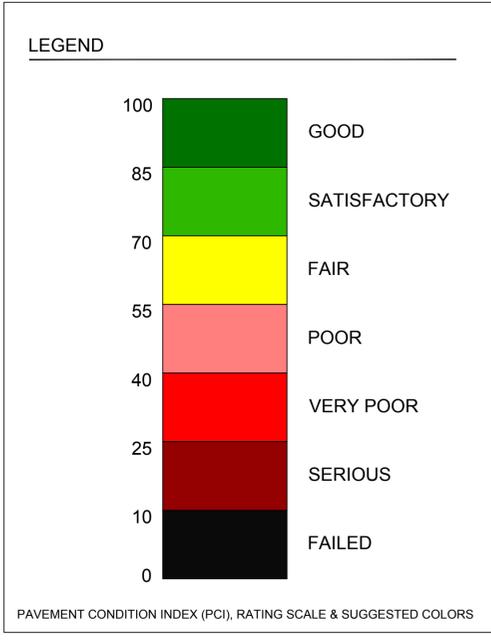
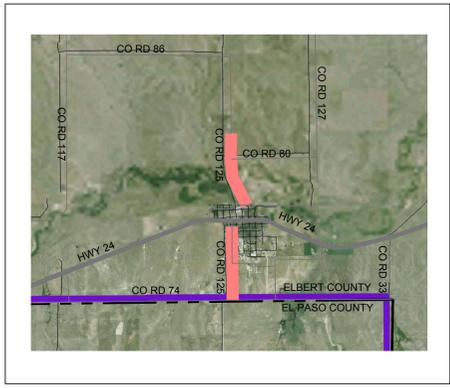
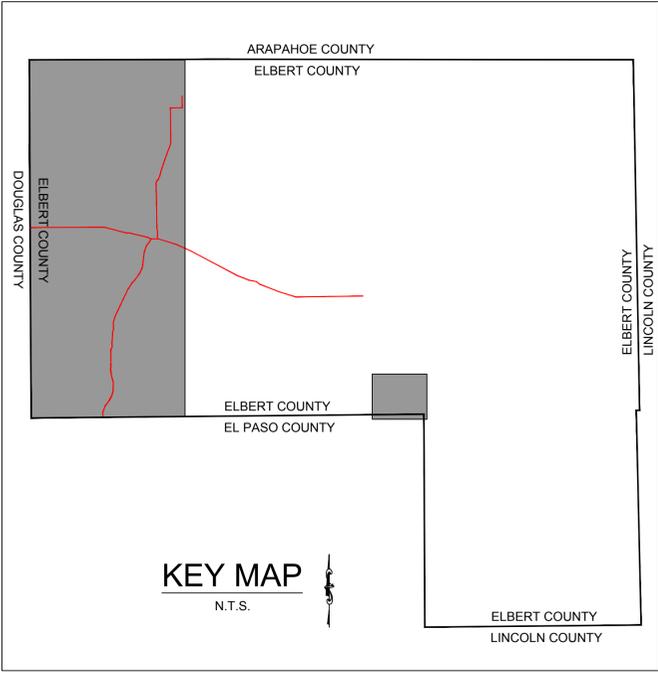
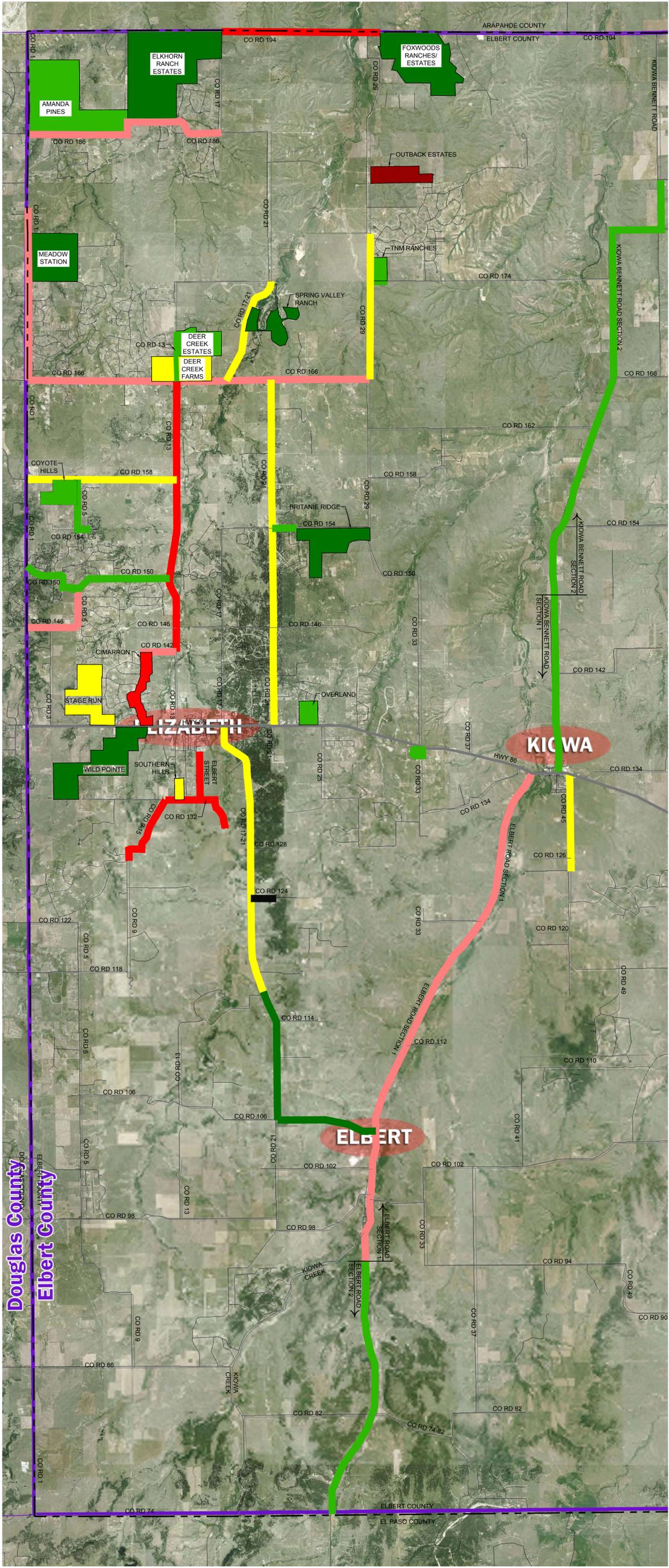
**ENERTIA**

CONSULTING  
GROUP

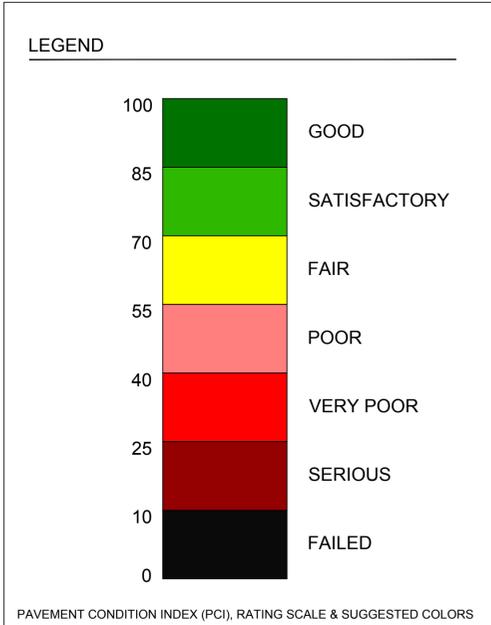
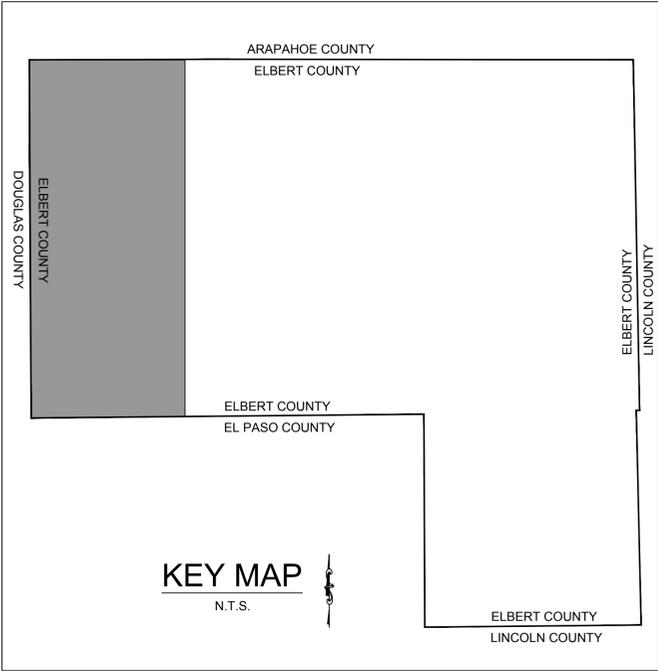
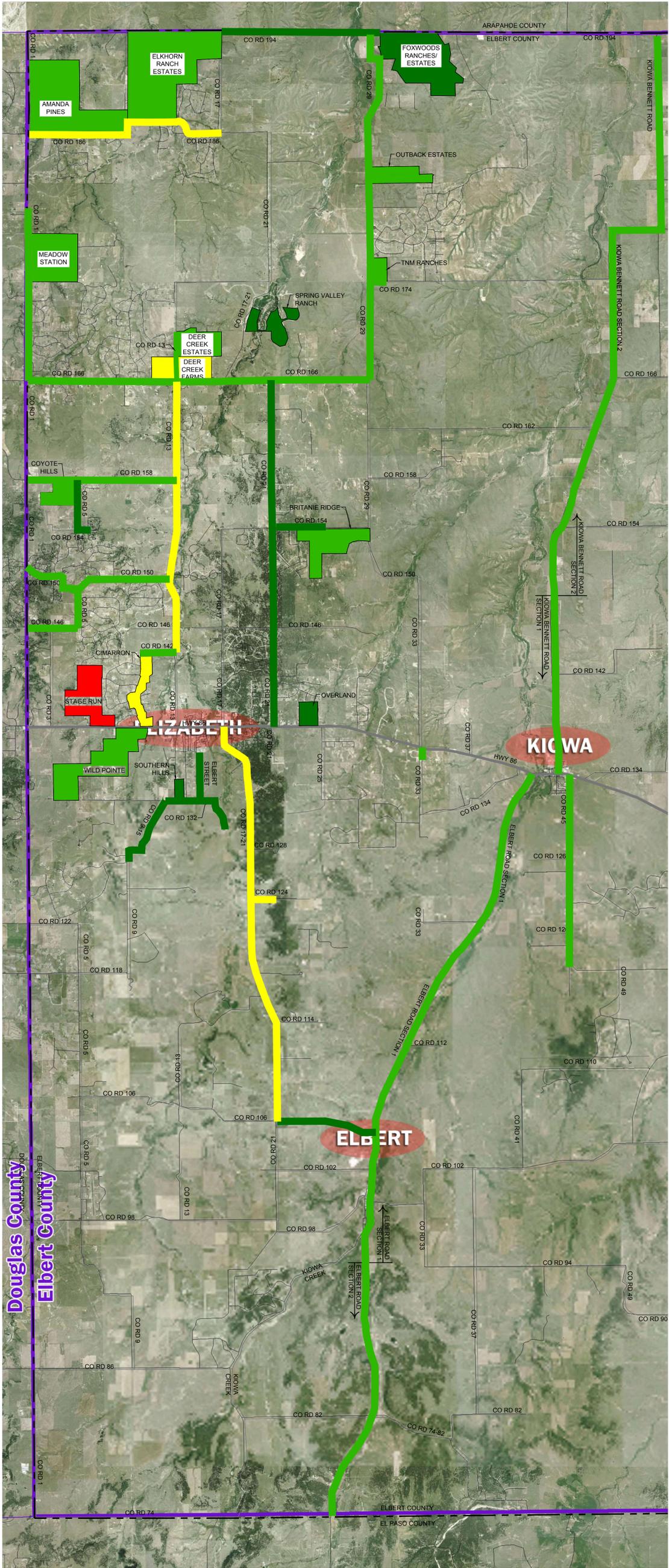


*Appendix B*

2010 and 2017 PCI Maps



|       |     |      |             |                                 |  |  |   |          |      |    |     |     |     |    |      |
|-------|-----|------|-------------|---------------------------------|--|--|---|----------|------|----|-----|-----|-----|----|------|
| SHEET | DWG | PROJ | DATE        | VERIFY SCALE                    | PHASE 1 & 2<br>PAVEMENT EVALUATION<br>FIGURE 2 | ELBERT COUNTY<br>ROAD & BRIDGE<br>DEPARTMENT | ENERTIA<br>CONSULTING<br>GROUP                | REVISION |      |    |     |     |     | BY | APVD |
|       |     |      |             |                                 |  |  |   | NO.      | DATE | DR | BWS | CHK | JSO |    |      |
|       |     |      | AUGUST 2010 | BARIS ONE INCH ON 0' PLAN SCALE |  | 218 CHEYENNE STREET<br>KIOWA, CO 80117       | 1437 LARIMER STREET<br>DENVER, COLORADO 80202 |          |      |    |     |     |     |    |      |



DATE: AUGUST 2010  
 PROJ: BARRIS ONE INCH ON 0  
 DWG: 11  
 SHEET: 11

**2017 PHASE 1  
 PAVEMENT EVALUATION  
 FIGURE 2**

**ELBERT COUNTY  
 ROAD & BRIDGE  
 DEPARTMENT**  
 218 CHEYENNE STREET  
 KIOWA, CO 80117



| NO.  | DATE | REVISION |     |     | BY  | APVD |
|------|------|----------|-----|-----|-----|------|
| DSGN | BWS  | DR       | BWS | CHK | JSO | APVD |
|      |      |          |     |     | JSO |      |

**ENERTIA**

CONSULTING  
GROUP



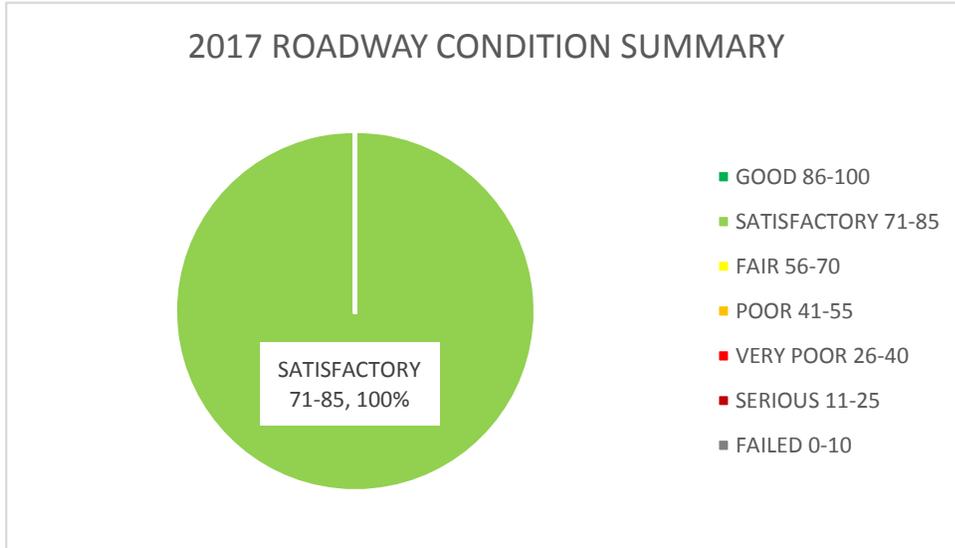
## *Appendix C*

**PCI Results – County Roads**

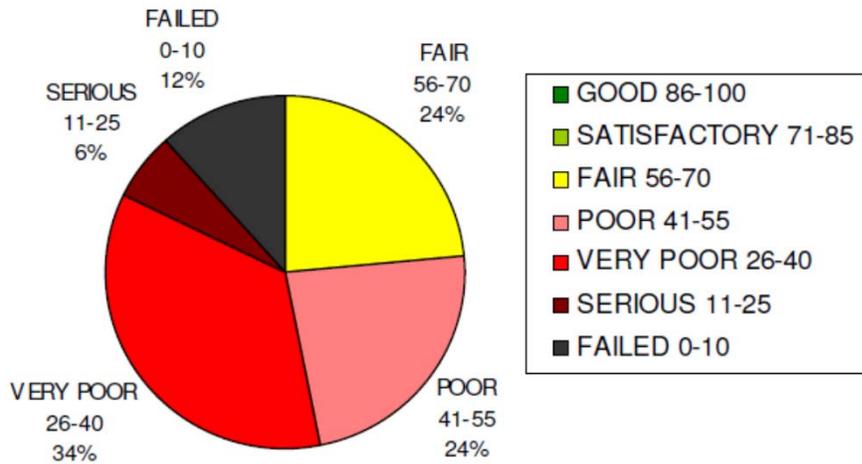
**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 1  
 INSPECTION DATE: 7/12/2017

| STREET NAME   | SECTION | FROM   | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------|---------|--------|--------|-------------|----------|----------|
| County Road 1 | 10      | CR 186 | M1     | 5,280.      | 43.00    | 80.00    |
| County Road 1 | 20      | M1     | M2     | 5,280.      | 39.00    | 85.00    |
| County Road 1 | 30      | M2     | M3     | 5,280.      | 33.00    | 83.00    |
| County Road 1 | 40      | M3     | M4     | 5,280.      | 46.00    | 81.00    |
| County Road 1 | 50      | M4     | CR 166 | 5,412.7     | 39.00    | 74.00    |
| OVERALL       |         |        |        | 26,532.7    | 41.00    | 81.00    |



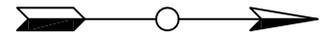
### 2010 ROADWAY CONDITION SUMMARY





**COUNTY ROAD 1 (DELBERT) - 2017 PCI**

SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 1  
 INSPECTION DATE: 7/12/2017

| STREET NAME   | SECTION | FROM   | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST  | 2023 PROJ. PCI |
|---------------|---------|--------|--------|-------------|----------|----------|-----------------|------------|-------------|----------------|
| County Road 1 | 20      | M1     | M2     | 5,280.      | 39.00    | 85.00    | 2022            | CR, ED     | \$ 2,428.80 | 80.00          |
| County Road 1 | 30      | M2     | M3     | 5,280.      | 33.00    | 83.00    | 2022            | CR, ED     | \$ 2,428.80 | 78.00          |
| County Road 1 | 40      | M3     | M4     | 5,280.      | 46.00    | 81.00    | 2022            | CR, ED     | \$ 2,428.80 | 76.00          |
| County Road 1 | 10      | CR 186 | M1     | 5,280.      | 43.00    | 80.00    | 2022            | CR, ED     | \$ 2,428.80 | 75.00          |
| County Road 1 | 50      | M4     | CR 166 | 5,412.7     | 39.00    | 74.00    | 2022            | CR, ED, CS | \$49,381.87 | 84.00          |
| OVERALL       |         |        |        | 26,532.7    | 41.00    | 81.00    |                 |            | \$59,097.07 |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 1**

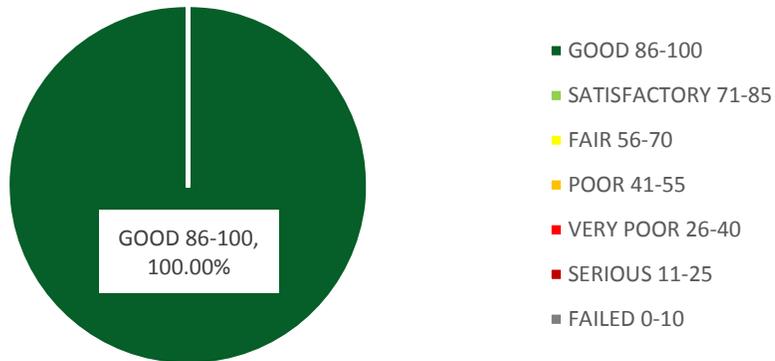


**ROADWAY ASPHALT CONDITION SUMMARY**

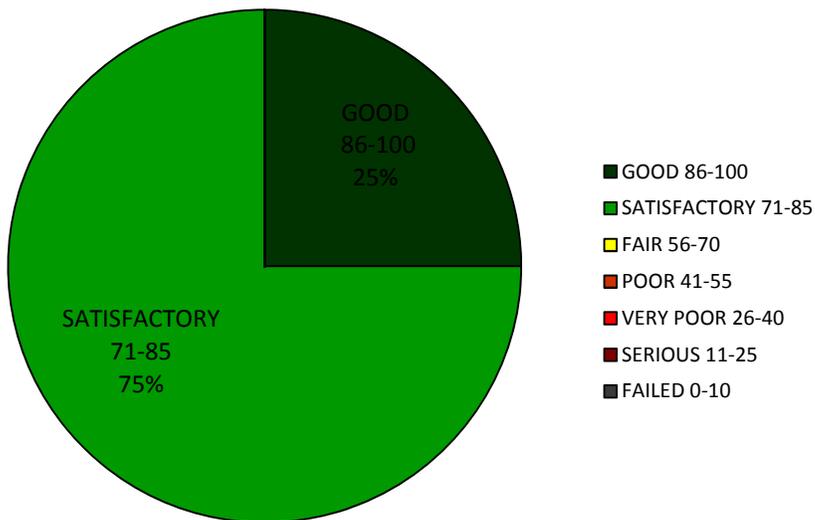
COUNTY ROAD: 5 (NORTH)  
 INSPECTION DATE: 7/12/2017

| STREET NAME         | SECTION | FROM       | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------------|---------|------------|-------------|-------------|----------|----------|
| County Road 5 North | 10      | Hilltop Rd | M1          | 5,280.      | 80.00    | 87.00    |
| County Road 5 North | 20      | M1         | Starling Ln | 450.        | 84.00    | 86.00    |
| OVERALL             |         |            |             | 5,730.      | 82.00    | 87.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**





**COUNTY ROAD 158 & 5 (NORTH) - 2017 PCI**  
 SCALE: N.T.S.



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 5 (NORTH)

INSPECTION DATE: 7/12/2017

| STREET NAME         | SECTION | FROM       | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|---------------------|---------|------------|-------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 5 North | 10      | Hilltop Rd | M1          | 5,280.      | 80.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| County Road 5 North | 20      | M1         | Starling Ln | 450.        | 84.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| OVERALL             |         |            |             |             | 82.00    | 87.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 5 (NORTH)**

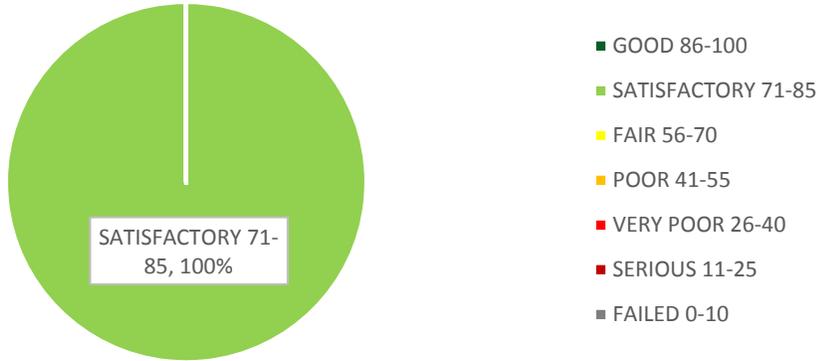


**ROADWAY ASPHALT CONDITION SUMMARY**

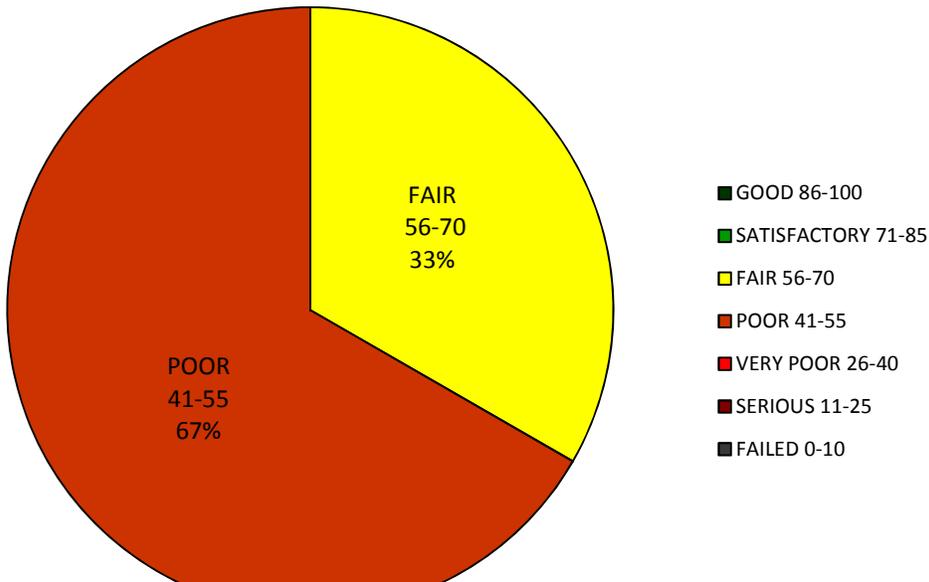
COUNTY ROAD: 5 (SOUTH)  
 INSPECTION DATE: 7/13/2017

| STREET NAME         | SECTION | FROM      | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------------|---------|-----------|-------------|-------------|----------|----------|
| County Road 5 South | 10      | Coyote Dr | Pawnee Pkwy | 4,100.      | 50.00    | 71.00    |
| OVERALL             |         |           |             | 4,100.      | 50.00    | 71.00    |

**2017 ROADWAY CONDITION SUMMARY**



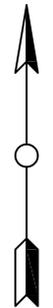
**2010 - ROADWAY CONDITIONS SUMMARY**





COUNTY ROAD 150, 5 (SOUTH) & 146 - 2017 PCI  
 SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 5 (SOUTH)

INSPECTION DATE: 7/13/2017

| STREET NAME         | SECTION | FROM      | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|---------------------|---------|-----------|-------------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| County Road 5 South | 10      | Coyote Dr | Pawnee Pkwy | 4,100.      | 50.00    | 71.00    | 2021            | CR, ED, CS | \$ 36,429.87        | 83.00          |
| <b>OVERALL</b>      |         |           |             | 4,100.      | 50.00    | 71.00    |                 |            | <b>\$ 36,429.87</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 5 (SOUTH)**

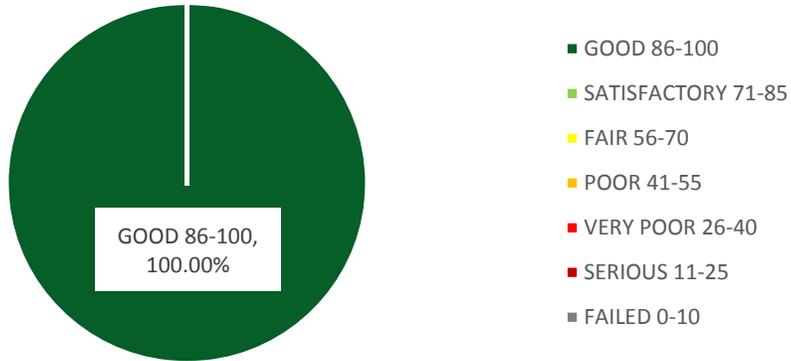


**ROADWAY ASPHALT CONDITION SUMMARY**

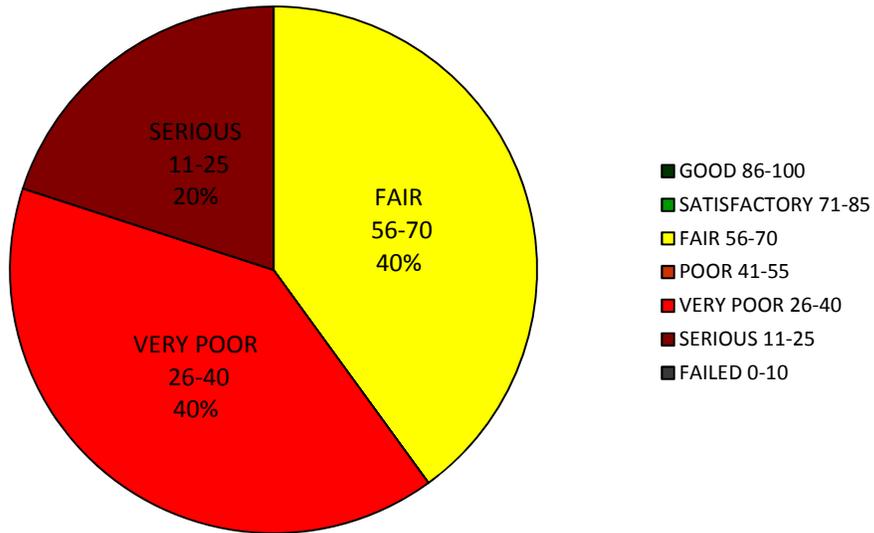
COUNTY ROAD: 9-15  
 INSPECTION DATE: 7/13/2017

| STREET NAME      | SECTION | FROM   | TO           | LENGTH (FT) | 2010 PCI | 2017 PCI |
|------------------|---------|--------|--------------|-------------|----------|----------|
| County Road 9-15 | 10      | CR 132 | M1           | 5,280.      | 41.00    | 94.00    |
| County Road 9-15 | 20      | M1     | Stage Run Tr | 3,165.      | 41.00    | 94.00    |
| OVERALL          |         |        |              |             | 41.00    | 94.00    |

**2017 ROADWAY CONDITION SUMMARY**

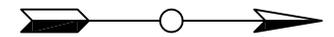


**2010 ROADWAY CONDITIONS SUMMARY**





ELBERT STREET, COUNTY ROAD 132 & 9-15 - 2017 PCI  
SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 9-15

INSPECTION DATE: 7/13/2017

| STREET NAME      | SECTION | FROM   | TO           | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|------------------|---------|--------|--------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 9-15 | 10      | CR 132 | M1           | 5,280.      | 41.00    | 94.00    | TBD             | ----  | ----       | 89.00          |
| County Road 9-15 | 20      | M1     | Stage Run Tr | 3,165.      | 41.00    | 94.00    | TBD             | ----  | ----       | 89.00          |
| OVERALL          |         |        |              |             | 41.00    | 94.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**ELBERT STREET / COUNTY ROAD 132 / COUNTY ROAD 9-15**

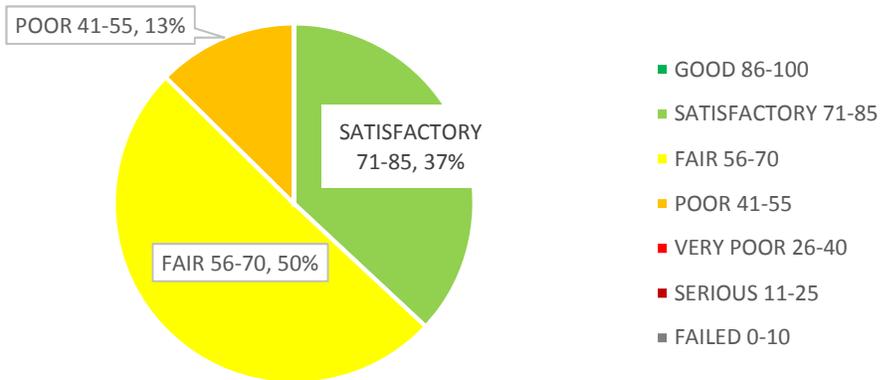


**ROADWAY ASPHALT CONDITION SUMMARY**

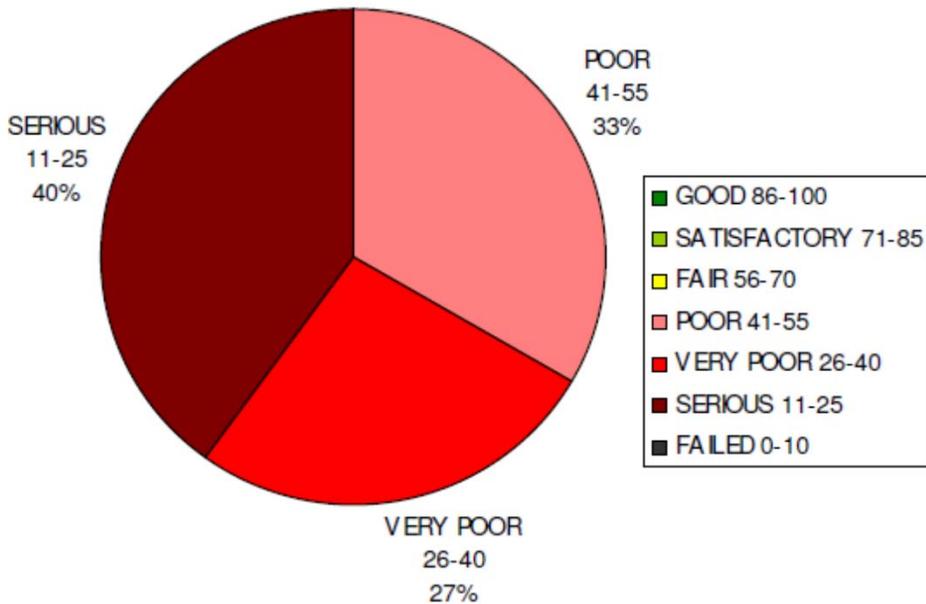
COUNTY ROAD: 13  
 INSPECTION DATE: 7/13/2017

| STREET NAME    | SECTION | FROM | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------|---------|------|-------|-------------|----------|----------|
| County Road 13 | 01      | End  | M1    | 5,280.      | 38.00    | 76.00    |
| County Road 13 | 02      | M1   | M2    | 5,280.      | 30.00    | 64.00    |
| County Road 13 | 03      | M2   | M3    | 5,280.      | 30.00    | 62.00    |
| County Road 13 | 04      | M3   | M4    | 5,280.      | 25.00    | 53.00    |
| County Road 13 | 05      | M4   | M5    | 5,280.      | 33.00    | 80.00    |
| County Road 13 | 06      | M5   | M6    | 5,280.      | 33.00    | 64.00    |
| County Road 13 | 07      | M6   | M7    | 5,280.      | 33.00    | 63.00    |
| County Road 13 | 08      | M7   | CR 86 | 4,915.      | 33.00    | 79.00    |
| OVERALL        |         |      |       | 41,875.     | 33.00    | 68.00    |

**2017 ROADWAY CONDITION SUMMARY**



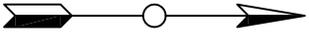
**2010 ROADWAY CONDITION SUMMARY**





**COUNTY ROAD 13 & 142 - 2017 PCI**

SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 13

INSPECTION DATE: 7/13/2017

| STREET NAME    | SECTION | FROM | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST           | 2023 PROJ. PCI |
|----------------|---------|------|-------|-------------|----------|----------|-----------------|------------|----------------------|----------------|
| County Road 13 | 05      | M4   | M5    | 5,280.      | 33.00    | 80.00    | 2019            | CR, ED     | \$ 2,238.72          | 76.00          |
| County Road 13 | 08      | M7   | CR 86 | 4,915.      | 33.00    | 79.00    | 2019            | CR, ED, CS | \$ 41,331.87         | 81.00          |
| County Road 13 | 01      | End  | M1    | 5,280.      | 38.00    | 76.00    | 2019            | CR, ED, CS | \$ 44,401.28         | 81.00          |
| County Road 13 | 02      | M1   | M2    | 5,280.      | 30.00    | 64.00    | 2019            | CR, ED, CS | \$ 44,401.28         | 81.00          |
| County Road 13 | 06      | M5   | M6    | 5,280.      | 33.00    | 64.00    | 2019            | CR, ED, CS | \$ 44,401.28         | 81.00          |
| County Road 13 | 07      | M6   | M7    | 5,280.      | 33.00    | 63.00    | 2019            | CR, ED, CS | \$ 44,401.28         | 81.00          |
| County Road 13 | 03      | M2   | M3    | 5,280.      | 30.00    | 62.00    | 2019            | CR, ED, CS | \$ 44,401.28         | 81.00          |
| County Road 13 | 04      | M3   | M4    | 5,280.      | 25.00    | 53.00    | 2019            | CR, ED, CS | \$ 46,640.00         | 81.00          |
| <b>OVERALL</b> |         |      |       | 41,875.     | 33.00    | 68.00    |                 |            | <b>\$ 312,216.99</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 13**



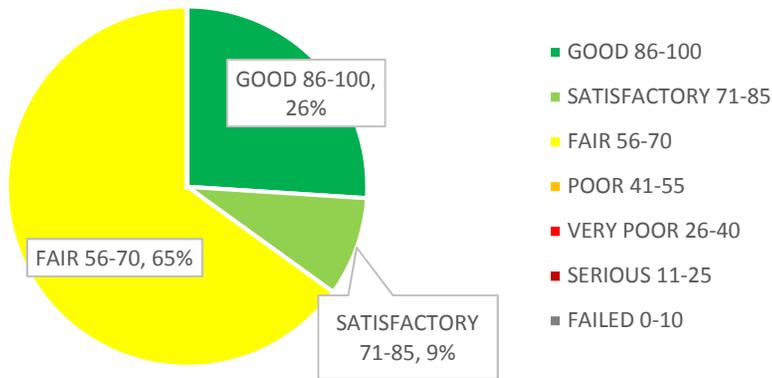
**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 17-21

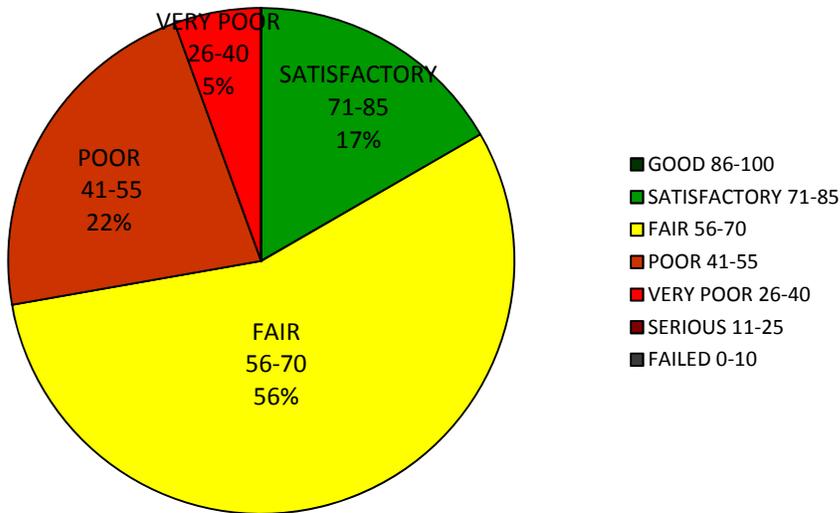
INSPECTION DATE: 7/14/2017

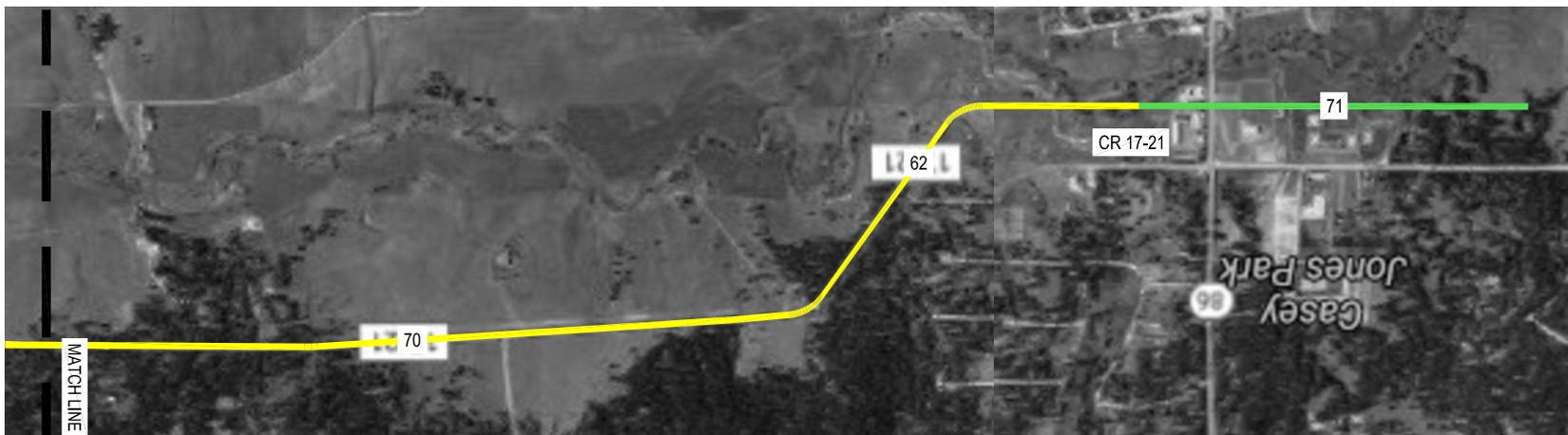
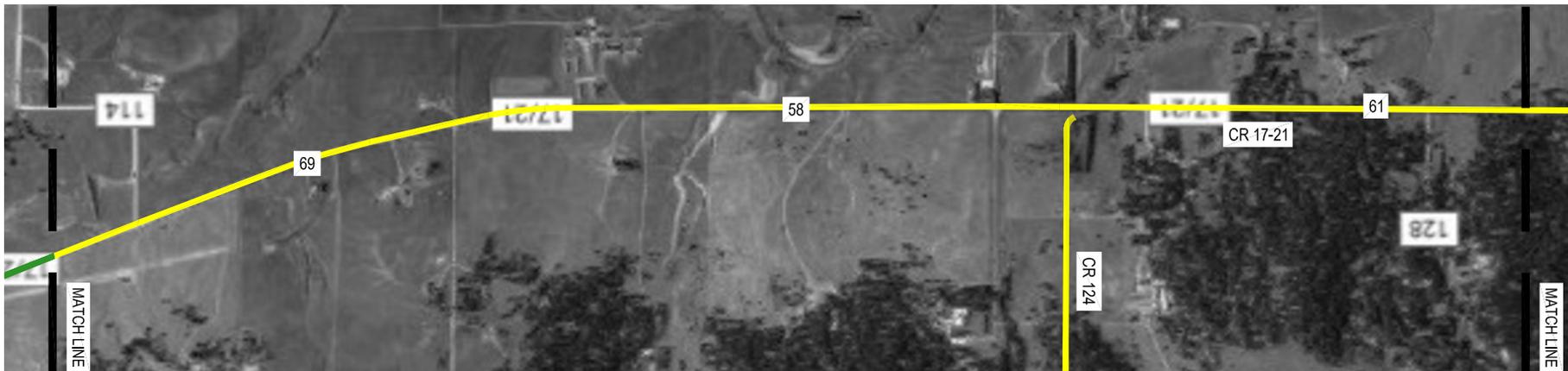
| STREET NAME       | SECTION | FROM         | TO     | LENGTH (FT)      | 2010 PCI     | 2017 PCI     |
|-------------------|---------|--------------|--------|------------------|--------------|--------------|
| County Road 17-21 | 10      | BONNIE RIDGE | HWY 86 | 4,289.86         | 60.00        | 71.00        |
| County Road 17-21 | 30      | HWY 86       | M1     | 6,237.13         | 60.00        | 86.00        |
| County Road 17-21 | 40      | M2           | M3     | 6,237.13         | 60.00        | 86.00        |
| County Road 17-21 | 50      | M3           | M4     | 6,237.13         | 60.00        | 69.00        |
| County Road 17-21 | 60      | M4           | M5     | 6,237.13         | 60.00        | 58.00        |
| County Road 17-21 | 70      | M5           | M6     | 6,237.13         | 60.00        | 61.00        |
| County Road 17-21 | 80      | M6           | M7     | 6,237.13         | 60.00        | 70.00        |
| County Road 17-21 | 90      | M7           | CR 106 | 6,237.13         | 60.00        | 62.00        |
| <b>OVERALL</b>    |         |              |        | <b>47,949.77</b> | <b>60.00</b> | <b>70.00</b> |

**2017 ROADWAY CONDITION SUMMARY**



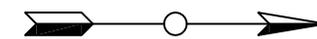
**2010 ROADWAY CONDITIONS SUMMARY**





**COUNTY ROAD 17-21 - 2017 PCI**

SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 17-21

INSPECTION DATE: 7/14/2017

| STREET NAME       | SECTION | FROM         | TO     | LENGTH (FT)      | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB      | REHAB COST           | 2023 PROJ. PCI |
|-------------------|---------|--------------|--------|------------------|--------------|--------------|-----------------|------------|----------------------|----------------|
| County Road 17-21 | 30      | HWY 86       | M1     | 6,237.13         | 60.00        | 86.00        | 2020            | CR, ED     | \$ 2,719.39          | 83.00          |
| County Road 17-21 | 40      | M2           | M3     | 6,237.13         | 60.00        | 86.00        | 2020            | CR, ED     | \$ 2,719.39          | 83.00          |
| County Road 17-21 | 10      | BONNIE RIDGE | HWY 86 | 4,289.86         | 60.00        | 71.00        | 2020            | CR, ED, CS | \$ 37,095.85         | 82.00          |
| County Road 17-21 | 80      | M6           | M7     | 6,237.13         | 60.00        | 70.00        | 2020            | CR, ED, CS | \$ 53,934.54         | 82.00          |
| County Road 17-21 | 50      | M3           | M4     | 6,237.13         | 60.00        | 69.00        | 2020            | CR, ED, CS | \$ 53,934.54         | 82.00          |
| County Road 17-21 | 90      | M7           | CR 106 | 6,237.13         | 60.00        | 62.00        | 2020            | CR, ED, CS | \$ 53,934.54         | 82.00          |
| County Road 17-21 | 70      | M5           | M6     | 6,237.13         | 60.00        | 61.00        | 2020            | CR, ED, CS | \$ 53,934.54         | 82.00          |
| County Road 17-21 | 60      | M4           | M5     | 6,237.13         | 60.00        | 58.00        | 2020            | CR, ED, CS | \$ 56,653.93         | 82.00          |
| <b>OVERALL</b>    |         |              |        | <b>47,949.77</b> | <b>60.00</b> | <b>70.00</b> |                 |            | <b>\$ 314,926.73</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 17-21**

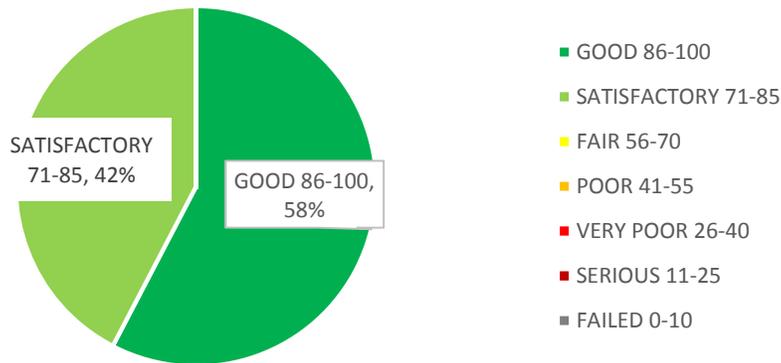


**ROADWAY ASPHALT CONDITION SUMMARY**

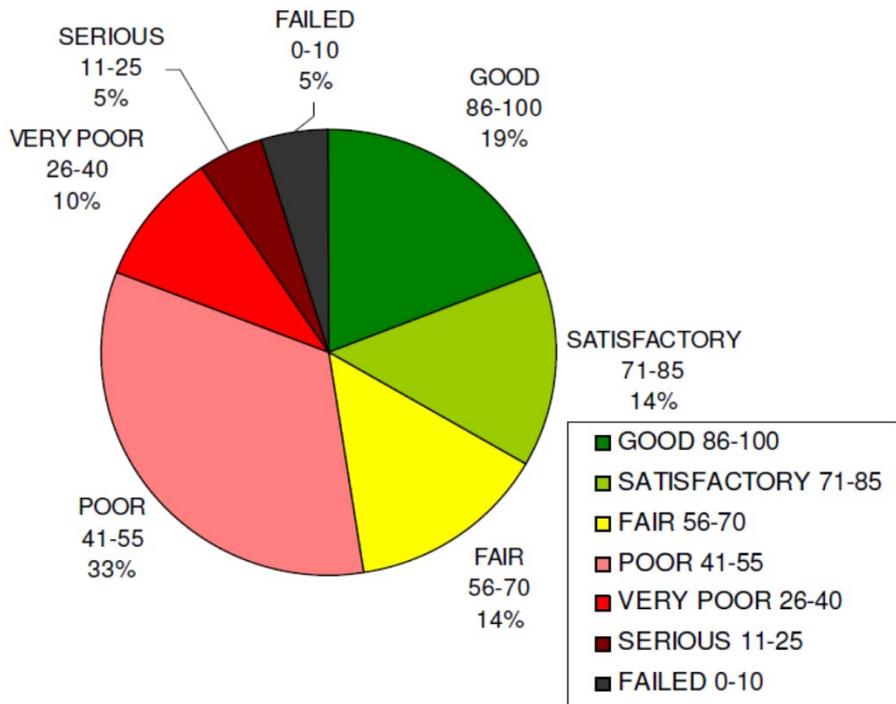
COUNTY ROAD: 21  
 INSPECTION DATE: 7/13/2017

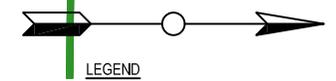
| STREET NAME    | SECTION | FROM   | TO     | LENGTH (FT)     | 2010 PCI     | 2017 PCI     |
|----------------|---------|--------|--------|-----------------|--------------|--------------|
| County Road 21 | 10      | CR 166 | M1     | 5,280.          | 54.00        | 89.00        |
| County Road 21 | 20      | M1     | M2     | 5,280.          | 57.00        | 92.00        |
| County Road 21 | 30      | M2     | M3     | 5,280.          | 46.00        | 92.00        |
| County Road 21 | 40      | M3     | M4     | 5,280.          | 74.00        | 93.00        |
| County Road 21 | 50      | M4     | M5     | 5,280.          | 69.00        | 85.00        |
| County Road 21 | 60      | M5     | M6     | 5,280.          | 47.00        | 80.00        |
| County Road 21 | 70      | M6     | HWY 86 | 4,957.5         | 61.00        | 82.00        |
| <b>OVERALL</b> |         |        |        | <b>36,637.5</b> | <b>58.00</b> | <b>88.00</b> |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

COUNTY ROAD 21 & 154 - 2017 PCI

SCALE: N.T.S.

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 21  
 INSPECTION DATE: 7/13/2017

| STREET NAME    | SECTION | FROM   | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------|---------|--------|--------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 21 | 10      | CR 166 | M1     | 5,280.      | 54.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| County Road 21 | 20      | M1     | M2     | 5,280.      | 57.00    | 92.00    | TBD             | ----  | ----       | 87.00          |
| County Road 21 | 30      | M2     | M3     | 5,280.      | 46.00    | 92.00    | TBD             | ----  | ----       | 87.00          |
| County Road 21 | 40      | M3     | M4     | 5,280.      | 74.00    | 93.00    | TBD             | ----  | ----       | 88.00          |
| County Road 21 | 50      | M4     | M5     | 5,280.      | 69.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| County Road 21 | 60      | M5     | M6     | 5,280.      | 47.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| County Road 21 | 70      | M6     | HWY 86 | 4,957.5     | 61.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| OVERALL        |         |        |        |             | 58.00    | 88.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 21**

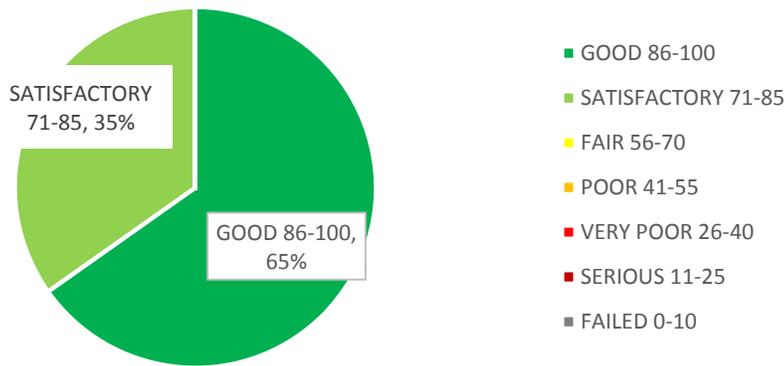


**ROADWAY ASPHALT CONDITION SUMMARY**

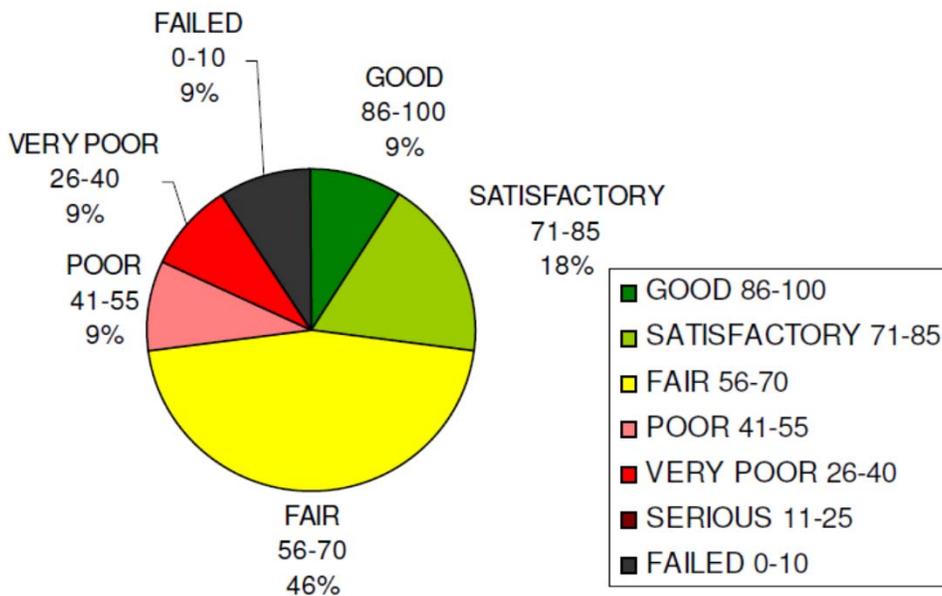
COUNTY ROAD: 29  
 INSPECTION DATE: 7/12/2017

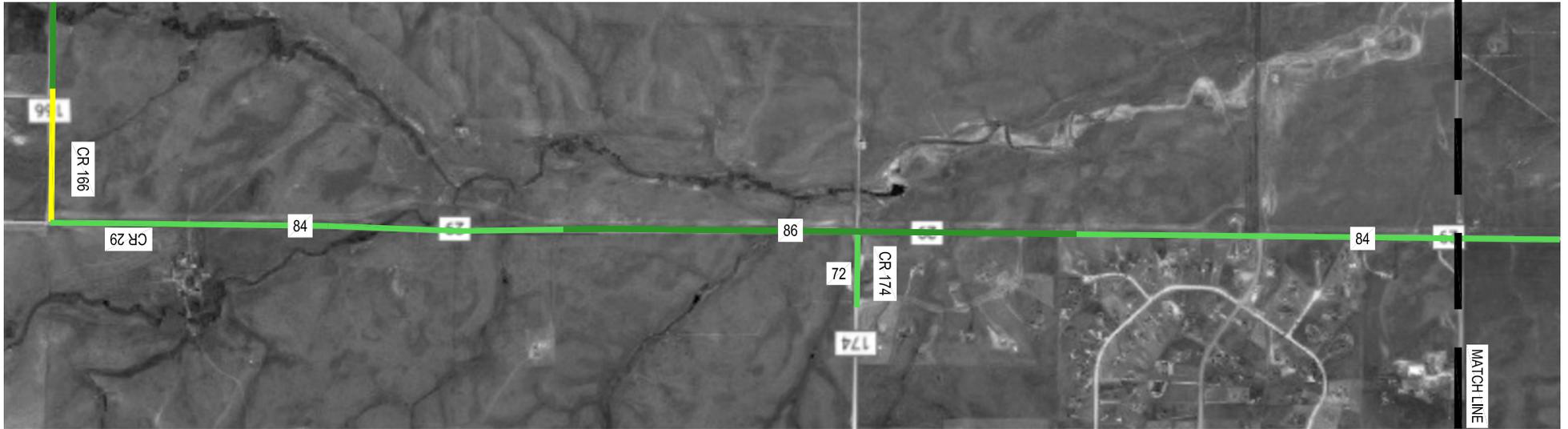
| STREET NAME    | SECTION | FROM | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------|---------|------|--------|-------------|----------|----------|
| County Road 29 | 30      | M2   | M3     | 5,035.95    | 60.00    | 88.00    |
| County Road 29 | 40      | M3   | M4     | 6,714.61    | 60.00    | 87.00    |
| County Road 29 | 50      | M4   | M5     | 6,714.61    | 60.00    | 86.00    |
| County Road 29 | 60      | M5   | M6     | 6,714.61    | 60.00    | 84.00    |
| County Road 29 | 70      | M6   | M7     | 6,714.61    | 60.00    | 86.00    |
| County Road 29 | 80      | M7   | CR 166 | 6,714.61    | 60.00    | 84.00    |
| OVERALL        |         |      |        | 38,609.     | 60.00    | 86.00    |

**2017 ROADWAY CONDITION SUMMARY**

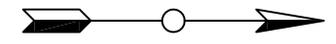


**2010 ROADWAY CONDITION SUMMARY**





**COUNTY ROAD 29 & 174 - 2017 PCI**  
 SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 29

INSPECTION DATE: 7/12/2017

| STREET NAME    | SECTION | FROM | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------|---------|------|--------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 29 | 30      | M2   | M3     | 5,035.95    | 60.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| County Road 29 | 40      | M3   | M4     | 6,714.61    | 60.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| County Road 29 | 50      | M4   | M5     | 6,714.61    | 60.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| County Road 29 | 60      | M5   | M6     | 6,714.61    | 60.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| County Road 29 | 70      | M6   | M7     | 6,714.61    | 60.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| County Road 29 | 80      | M7   | CR 166 | 6,714.61    | 60.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| OVERALL        |         |      |        |             | 60.00    | 86.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 29**

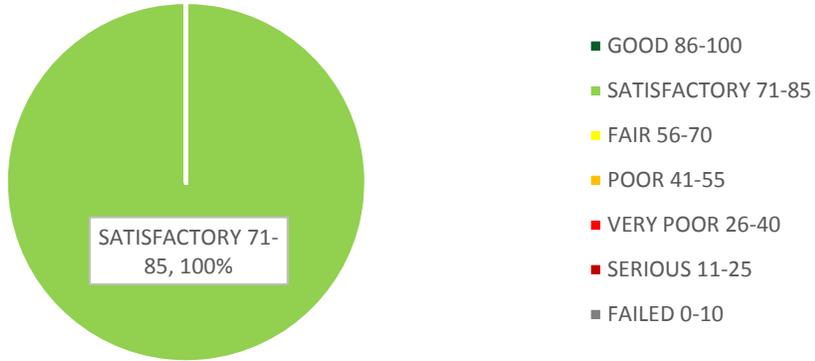


**ROADWAY ASPHALT CONDITION SUMMARY**

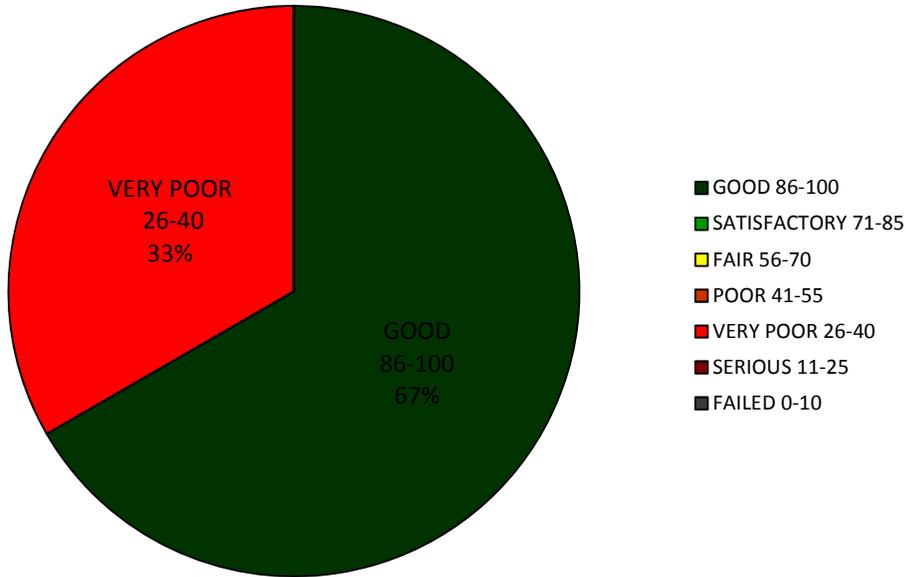
COUNTY ROAD: 33  
 INSPECTION DATE: 7/14/2017

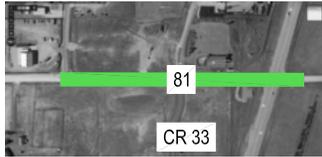
| STREET NAME    | SECTION | FROM    | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------|---------|---------|---------|-------------|----------|----------|
| County Road 33 | 10      | End (N) | End (S) | 1,280.      | 71.00    | 81.00    |
| OVERALL        |         |         |         | 1,280.      | 71.00    | 81.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**

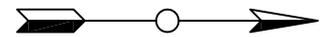




COUNTY ROAD 33 - 2017 PCI  
SCALE: N.T.S.



COUNTY ROAD 45 - 2017 PCI  
SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 33

INSPECTION DATE: 7/14/2017

| STREET NAME    | SECTION | FROM    | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------|---------|---------|---------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 33 | 10      | End (N) | End (S) | 1,280.      | 71.00    | 81.00    | TBD             | ----  | ----       | 76.00          |
| OVERALL        |         |         |         |             | 71.00    | 81.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 33**

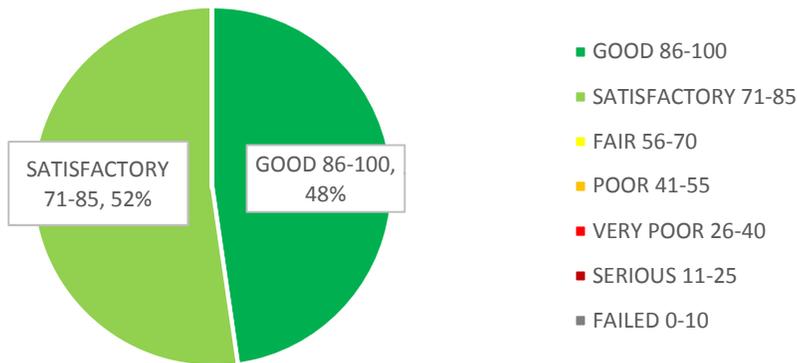


**ROADWAY ASPHALT CONDITION SUMMARY**

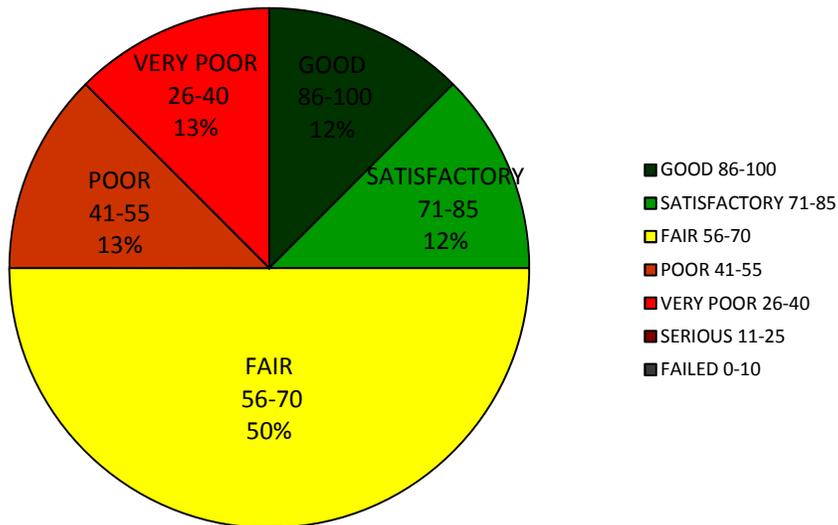
COUNTY ROAD: 45  
 INSPECTION DATE: 7/14/2017

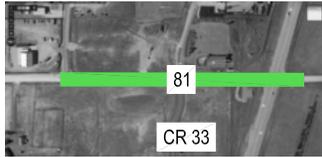
| STREET NAME    | SECTION | FROM  | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------|---------|-------|--------|-------------|----------|----------|
| County Road 45 | 01      | CR 86 | M1     | 5,280.      | 55.00    | 74.00    |
| County Road 45 | 02      | M1    | M2     | 5,280.      | 74.00    | 80.00    |
| County Road 45 | 03      | M2    | M3     | 5,280.      | 57.00    | 87.00    |
| County Road 45 | 04      | M3    | CR 118 | 4,360.      | 63.00    | 91.00    |
| OVERALL        |         |       |        | 20,200.     | 63.00    | 83.00    |

**2017 ROADWAY CONDITION SUMMARY**



**CR 45 - ROADWAY CONDITIONS SUMMARY**

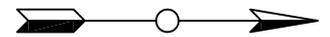




COUNTY ROAD 33 - 2017 PCI  
SCALE: N.T.S.



COUNTY ROAD 45 - 2017 PCI  
SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 45

INSPECTION DATE: 7/14/2017

| STREET NAME    | SECTION | FROM  | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------|---------|-------|--------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 45 | 01      | CR 86 | M1     | 5,280.      | 55.00    | 74.00    | TBD             | ---   | ---        | 69.00          |
| County Road 45 | 02      | M1    | M2     | 5,280.      | 74.00    | 80.00    | TBD             | ---   | ---        | 75.00          |
| County Road 45 | 03      | M2    | M3     | 5,280.      | 57.00    | 87.00    | TBD             | ---   | ---        | 82.00          |
| County Road 45 | 04      | M3    | CR 118 | 4,360.      | 63.00    | 91.00    | TBD             | ---   | ---        | 86.00          |
| OVERALL        |         |       |        |             | 63.00    | 83.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 45**

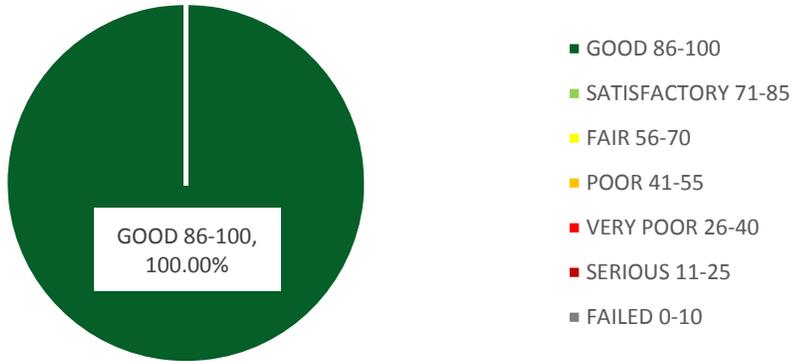


**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 106  
 INSPECTION DATE: 7/14/2017

| STREET NAME     | SECTION | FROM  | TO        | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|-------|-----------|-------------|----------|----------|
| County Road 106 | 10      | CR 21 | M1        | 5,280.      | n/a      | 86.00    |
| County Road 106 | 20      | M1    | ELBERT RD | 5,289.1     | n/a      | 88.00    |
| OVERALL         |         |       |           | 10,569.1    | n/a      | 87.00    |

**2017 ROADWAY CONDITION SUMMARY**





COUNTY ROAD 124 - 2017 PCI  
SCALE: N.T.S.



COUNTY ROAD 106 - 2017 PCI  
SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 106

INSPECTION DATE: 7/14/2017

| STREET NAME     | SECTION | FROM  | TO        | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|-------|-----------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 106 | 10      | CR 21 | M1        | 5,280.      | n/a      | 86.00    | TBD             | ---   | ---        | 81.00          |
| County Road 106 | 20      | M1    | ELBERT RD | 5,289.1     | n/a      | 88.00    | TBD             | ---   | ---        | 83.00          |
| OVERALL         |         |       |           |             | n/a      | 87.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 106**

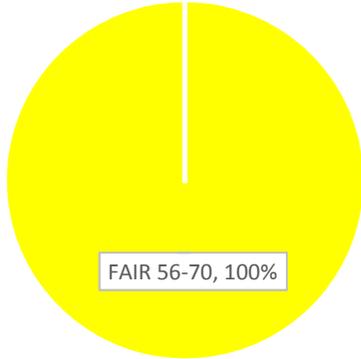


**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 124  
 INSPECTION DATE: 7/14/2017

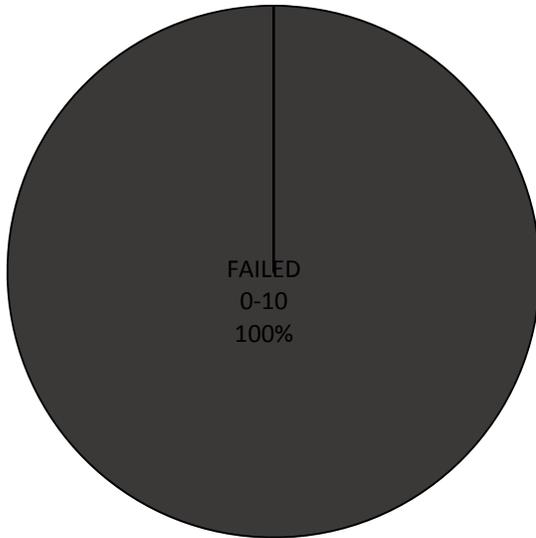
| STREET NAME     | SECTION | FROM     | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|----------|-----|-------------|----------|----------|
| County Road 124 | 10      | CR 17-21 | End | 4,140.      | .00      | 58.00    |
| OVERALL         |         |          |     | 4,140.      | 0.00     | 58.00    |

**2017 ROADWAY CONDITION SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10

**2010 ROADWAY CONDITIONS SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10



COUNTY ROAD 124 - 2017 PCI  
SCALE: N.T.S.



COUNTY ROAD 106 - 2017 PCI  
SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 124

INSPECTION DATE: 7/14/2017

| STREET NAME     | SECTION | FROM     | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|-----------------|---------|----------|-----|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| County Road 124 | 10      | CR 17-21 | End | 4,140.      | .00      | 58.00    | 2018            | CR, ED, CS | \$ 32,976.48        | 80             |
| <b>OVERALL</b>  |         |          |     | 4,140.      | 0.00     | 58.00    |                 |            | <b>\$ 32,976.48</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 124**



**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 125  
 INSPECTION DATE: 8/14/2017

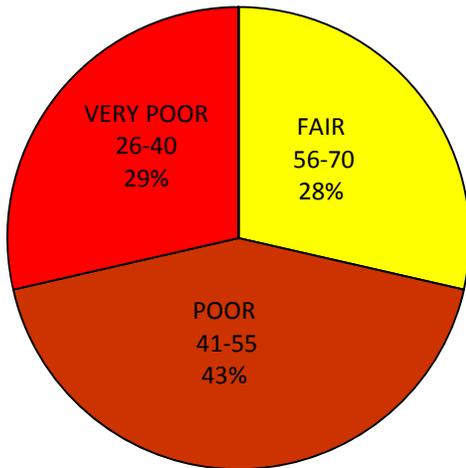
| STREET NAME     | SECTION | FROM | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|------|-------------|-------------|----------|----------|
| County Road 125 | 10      | M1   | Antelope St | 5,280.      | 49.00    | 74.00    |
| OVERALL         |         |      |             | 5,280.      | 49.00    | 74.00    |

**2017 ROADWAY CONDITION SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10

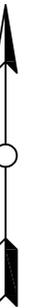
**CR 125 - ROADWAY CONDITIONS SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10



COUNTY ROAD 125 - 2017 PCI  
SCALE: N.T.S.



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 125

INSPECTION DATE: 8/14/2017

| STREET NAME     | SECTION         | FROM | TO | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|-----------------|------|----|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 125 | County Road 125 | 10   | M1 | Antelope St | 5,280.   | 74.00    | TBD             | ----  | ----       | 69.00          |
| <b>OVERALL</b>  |                 |      |    |             | 5,280.00 | 74.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

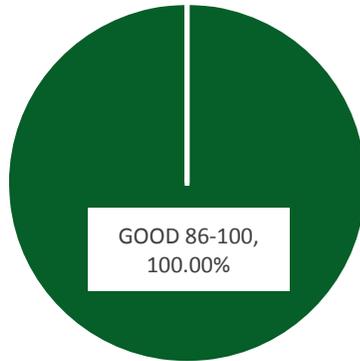
**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 132-Elbert Street

INSPECTION DATE: 7/13/2017

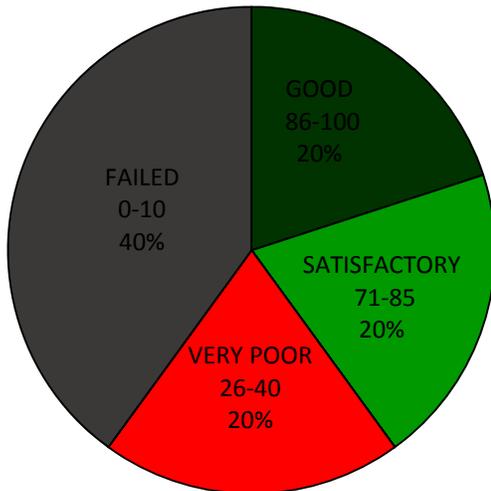
| STREET NAME                 | SECTION | FROM   | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------------------|---------|--------|---------|-------------|----------|----------|
| County Road 132 - Elbert St | 10      | CR 136 | M1      | 5,280.      | 63.00    | 93.00    |
| County Road 132 - Elbert St | 20      | M1     | CR 9/15 | 3,295.      | .00      | 93.00    |
| OVERALL                     |         |        |         | 8,575.      | 38.00    | 93.00    |

**2017 ROADWAY CONDITION SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10

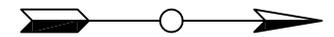
**2010 ROADWAY CONDITIONS SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10



ELBERT STREET, COUNTY ROAD 132 & 9-15 - 2017 PCI  
SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 132-Elbert Street  
 INSPECTION DATE: 7/13/2017

| STREET NAME                 | SECTION | FROM   | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | REHAB COST |
|-----------------------------|---------|--------|---------|-------------|----------|----------|-----------------|-------|------------|------------|
| County Road 132 - Elbert St | 10      | CR 136 | M1      | 5,280.      | 63.00    | 93.00    | TBD             | ----  | ----       | 88.00      |
| County Road 132 - Elbert St | 20      | M1     | CR 9/15 | 3,295.      | .00      | 93.00    | TBD             | ----  | ----       | 88.00      |
| OVERALL                     |         |        |         |             | 38.00    | 93.00    |                 |       |            |            |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**ELBERT STREET / COUNTY ROAD 132 / COUNTY ROAD 9-15**



**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 142  
 INSPECTION DATE: 7/13/2017

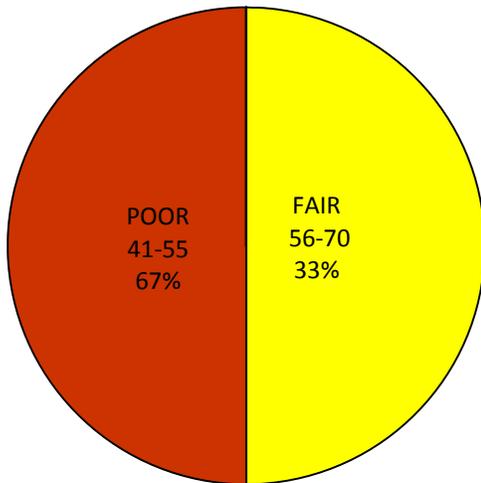
| STREET NAME     | SECTION | FROM        | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|-------------|-------|-------------|----------|----------|
| County Road 142 | 10      | Cimarron Tr | CR 13 | 3,050.      | 53.00    | 75.00    |
| OVERALL         |         |             |       | 3,050.      | 53.00    | 75.00    |

**2017 ROADWAY CONDITION SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10

**2010 ROADWAY CONDITIONS SUMMARY**

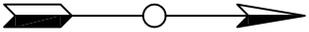


- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10



COUNTY ROAD 13 & 142 - 2017 PCI

SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 142

INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM        | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|-----------------|---------|-------------|-------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| County Road 142 | 10      | Cimarron Tr | CR 13 | 3,050.      | 53.00    | 75.00    | 2021            | CR, ED, CS | \$ 27,100.27        | 83.00          |
| <b>OVERALL</b>  |         |             |       | 3,050.      | 53.00    | 75.00    |                 |            | <b>\$ 27,100.27</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 142**

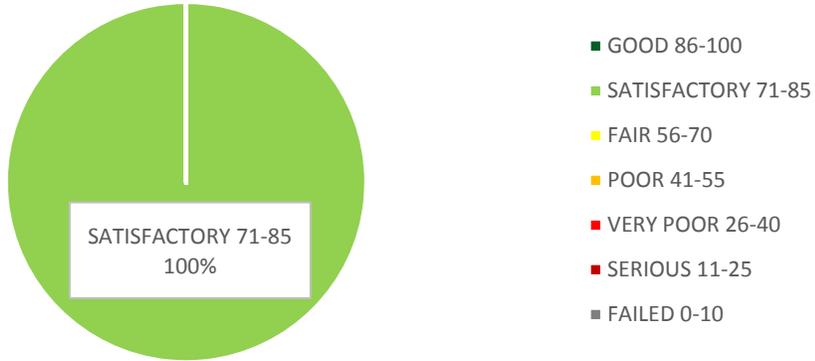


**ROADWAY ASPHALT CONDITION SUMMARY**

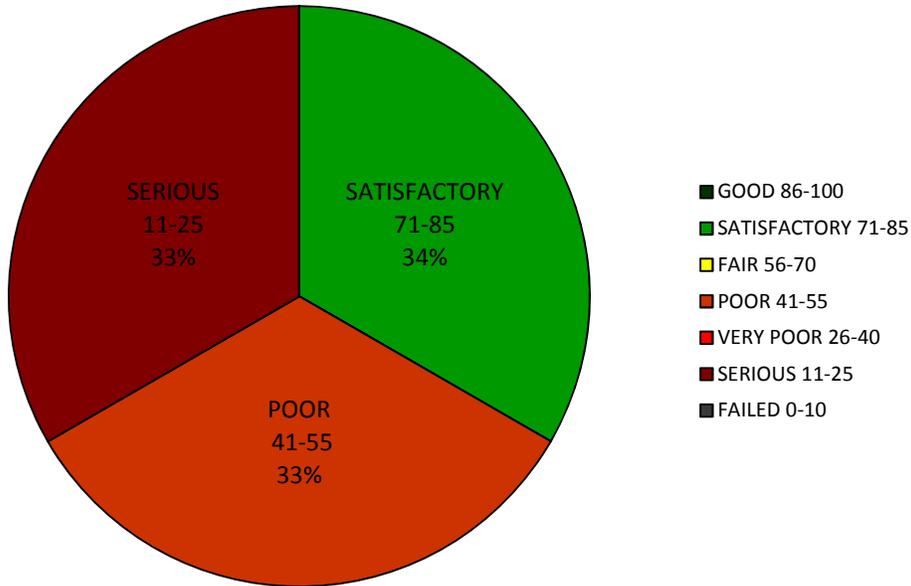
COUNTY ROAD: 146  
 INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM       | TO   | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|------------|------|-------------|----------|----------|
| County Road 146 | 10      | Delbert Rd | CR 5 | 5,100.      | 49.00    | 73.00    |
| OVERALL         |         |            |      | 5,100.      | 49.00    | 73.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**





COUNTY ROAD 150, 5 (SOUTH) & 146 - 2017 PCI  
 SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 146

INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM       | TO   | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|-----------------|---------|------------|------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| County Road 146 | 10      | Delbert Rd | CR 5 | 5,100.      | 49.00    | 73.00    | 2021            | CR, ED, CS | \$ 45,315.20        | 83             |
| <b>OVERALL</b>  |         |            |      | 5,100.      | 49.00    | 73.00    |                 |            | <b>\$ 45,315.20</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

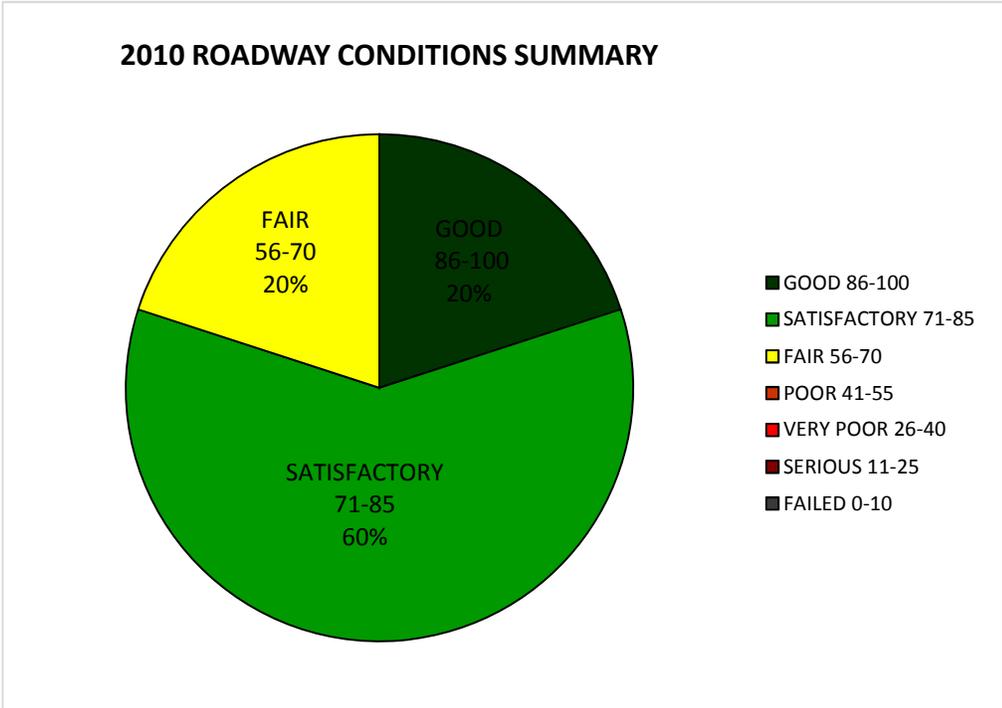
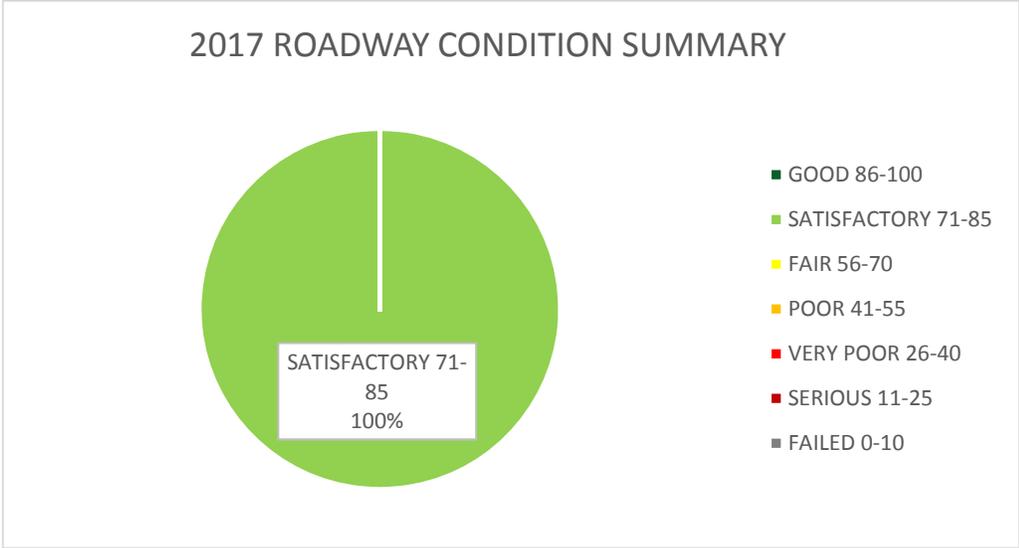
**COUNTY ROAD 146**



**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 150  
 INSPECTION DATE: 7/13/2017

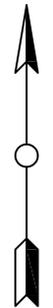
| STREET NAME     | SECTION | FROM | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|------|-------|-------------|----------|----------|
| County Road 150 | 10      | CR 5 | M1    | 5,280.      | 77.00    | 82.00    |
| County Road 150 | 20      | M1   | CR 13 | 4,878.      | 84.00    | 74.00    |
| OVERALL         |         |      |       | 10,158.     | 81.00    | 78.00    |





COUNTY ROAD 150, 5 (SOUTH) & 146 - 2017 PCI  
 SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 150

INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM | TO    | LENGTH (FT)    | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|-----------------|---------|------|-------|----------------|--------------|--------------|-----------------|------------|---------------------|----------------|
| County Road 150 | 10      | CR 5 | M1    | 5,280.         | 77.00        | 82.00        | 2021            | CR, ED     | \$ 2,365.44         | 80.00          |
| County Road 150 | 20      | M1   | CR 13 | 4,878.         | 84.00        | 74.00        | 2021            | CR, ED, CS | \$ 43,342.66        | 83.00          |
| <b>OVERALL</b>  |         |      |       | <b>10,158.</b> | <b>81.00</b> | <b>78.00</b> |                 |            | <b>\$ 45,708.10</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 150**

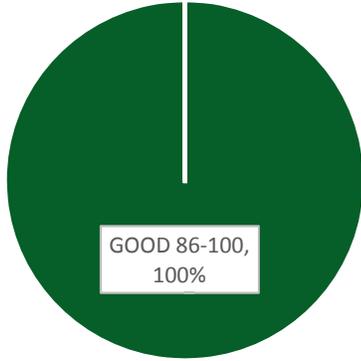


**ROADWAY ASPHALT CONDITION SUMMARY**

COUNTY ROAD: 154  
 INSPECTION DATE: 7/13/2017

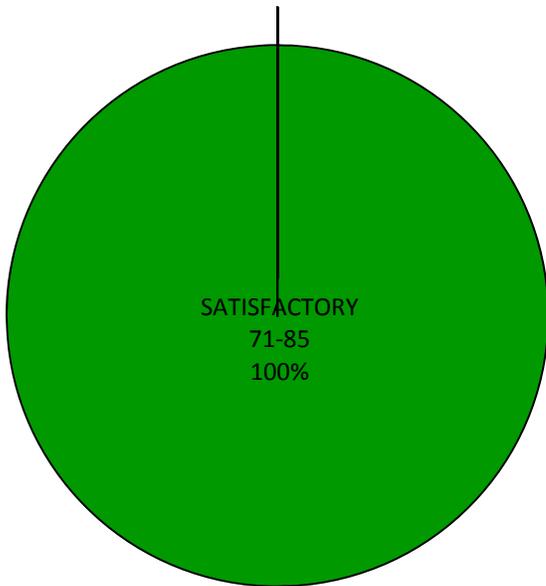
| STREET NAME     | SECTION | FROM  | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|-------|-----|-------------|----------|----------|
| County Road 154 | 10      | CR 21 | End | 4,860.      | 81.00    | 90.00    |
| <b>OVERALL</b>  |         |       |     | 4,860.      | 81.00    | 90.00    |

**2017 ROADWAY CONDITION SUMMARY**

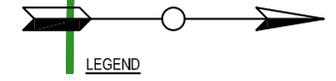


- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10

**2010 ROADWAY CONDITIONS SUMMARY**



- GOOD 86-100
- SATISFACTORY 71-85
- FAIR 56-70
- POOR 41-55
- VERY POOR 26-40
- SERIOUS 11-25
- FAILED 0-10



- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

COUNTY ROAD 21 & 154 - 2017 PCI  
SCALE: N.T.S.

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 154

INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM  | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|-------|-----|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 154 | 10      | CR 21 | End | 4,860.      | 81.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| OVERALL         |         |       |     |             | 81.00    | 90.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 154**

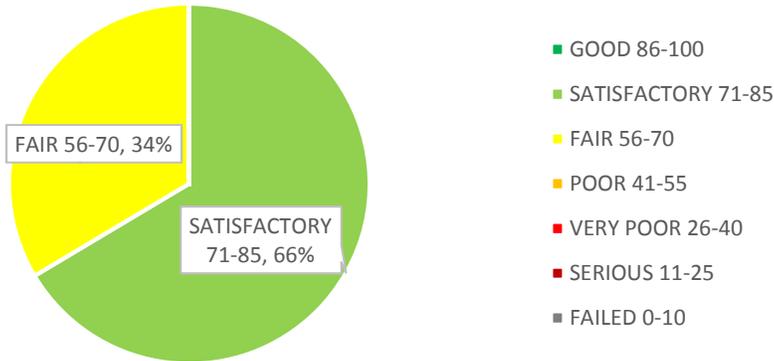


**ROADWAY ASPHALT CONDITION SUMMARY**

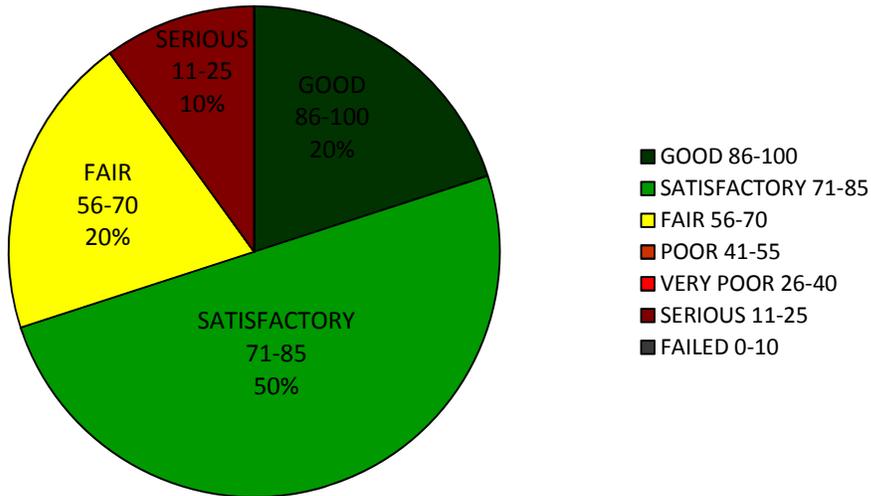
COUNTY ROAD: 158  
 INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM       | TO    | LENGTH (FT)    | 2010 PCI     | 2017 PCI     |
|-----------------|---------|------------|-------|----------------|--------------|--------------|
| County Road 158 | 10      | Delbert Rd | M1    | 5,280.         | 81.00        | 74.00        |
| County Road 158 | 20      | M1         | M2    | 5,280.         | 59.00        | 68.00        |
| County Road 158 | 30      | M2         | CR 13 | 5,180.         | 70.00        | 72.00        |
| <b>OVERALL</b>  |         |            |       | <b>15,740.</b> | <b>70.00</b> | <b>83.00</b> |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**





**COUNTY ROAD 158 & 5 (NORTH) - 2017 PCI**  
 SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 158

INSPECTION DATE: 7/13/2017

| STREET NAME     | SECTION | FROM       | TO    | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|------------|-------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 158 | 10      | Delbert Rd | M1    | 5,280.      | 81.00    | 74.00    | 2017            | ----  | ----       | 89.00          |
| County Road 158 | 20      | M1         | M2    | 5,280.      | 59.00    | 68.00    | 2017            | ----  | ----       | 89.00          |
| County Road 158 | 30      | M2         | CR 13 | 5,180.      | 70.00    | 72.00    | 2017            | ----  | ----       | 89.00          |
| OVERALL         |         |            |       |             | 70.00    | 71.33    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

\* AT THE TIME OF THIS REPORT, THIS ROAD WAS WAS PROPOSED TO BE RECONSTRUCTED IN 2017

**COUNTY ROAD 158**

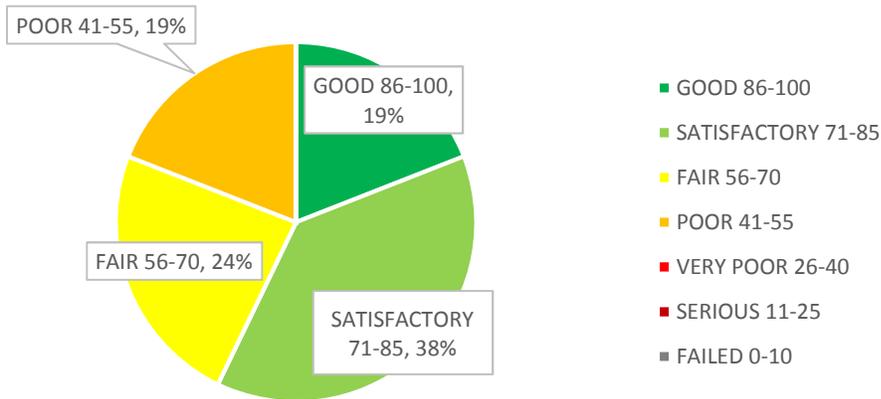


**ROADWAY ASPHALT CONDITION SUMMARY**

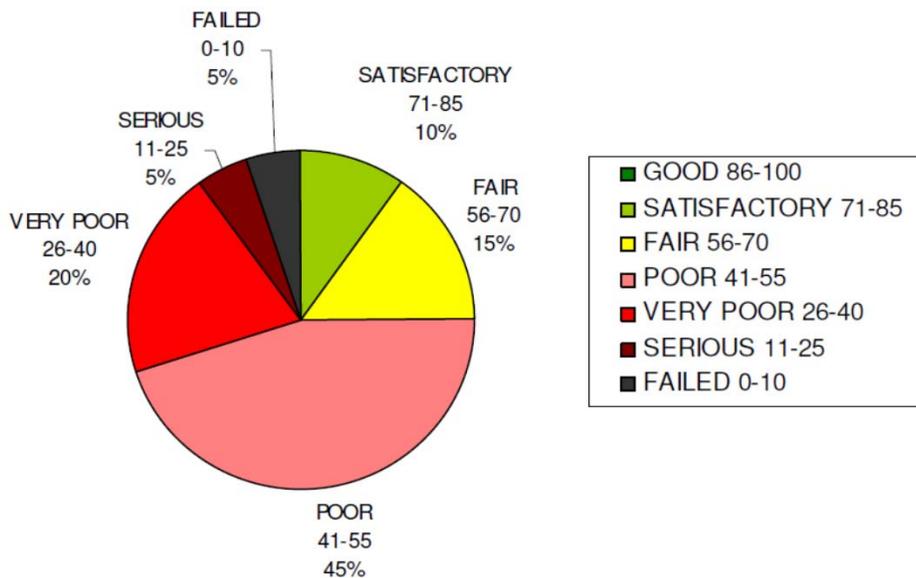
COUNTY ROAD: 166  
 INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM | TO | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|------|----|-------------|----------|----------|
| County Road 166 | 10      | CR 1 | M1 | 6,959.94    | 47.00    | 51.00    |
| County Road 166 | 20      | M1   | M2 | 6,959.94    | 40.00    | 70.00    |
| County Road 166 | 30      | M2   | M3 | 6,959.94    | 45.00    | 75.00    |
| County Road 166 | 40      | M3   | M4 | 6,959.94    | 57.00    | 85.00    |
| County Road 166 | 50      | M4   | M5 | 6,959.94    | 41.00    | 88.00    |
| County Road 166 | 60      | M5   | M6 | 1,740.02    | 50.60    | 62.00    |
| OVERALL         |         |      |    | 36,539.72   | 47.00    | 73.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





**COUNTY ROAD 166 - 2017 PCI**  
SCALE: N.T.S.

- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0
- 74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 166

INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM | TO | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|------|----|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 166 | 10      | CR 1 | M1 | 6,959.94    | 47.00    | 51.00    | TBD             | ----  | ----       | 46.00          |
| County Road 166 | 20      | M1   | M2 | 6,959.94    | 40.00    | 70.00    | TBD             | ----  | ----       | 65.00          |
| County Road 166 | 30      | M2   | M3 | 6,959.94    | 45.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| County Road 166 | 40      | M3   | M4 | 6,959.94    | 57.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| County Road 166 | 50      | M4   | M5 | 6,959.94    | 41.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| County Road 166 | 60      | M5   | M6 | 1,740.02    | 50.60    | 62.00    | TBD             | ----  | ----       | 57.00          |
| OVERALL         |         |      |    |             | 47.00    | 73.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 166**

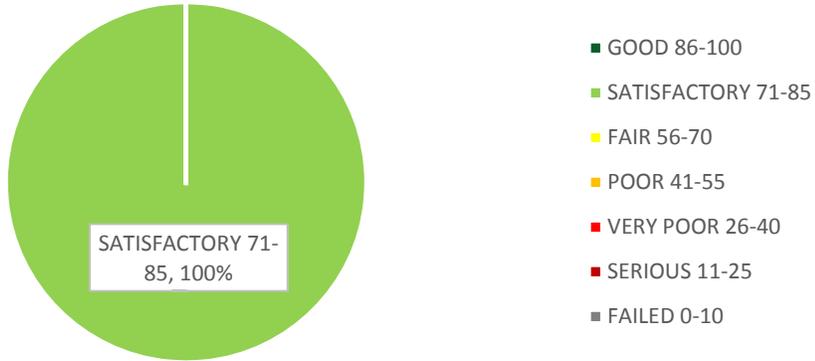


**ROADWAY ASPHALT CONDITION SUMMARY**

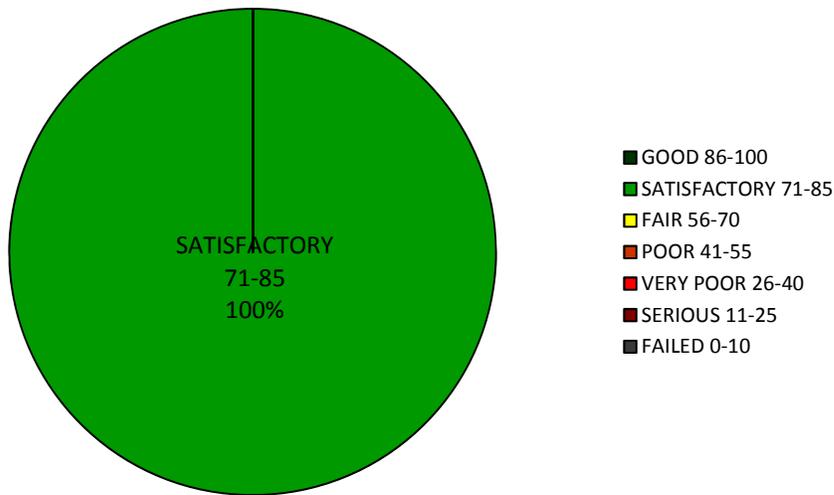
COUNTY ROAD: 174  
 INSPECTION DATE: 7/12/2017

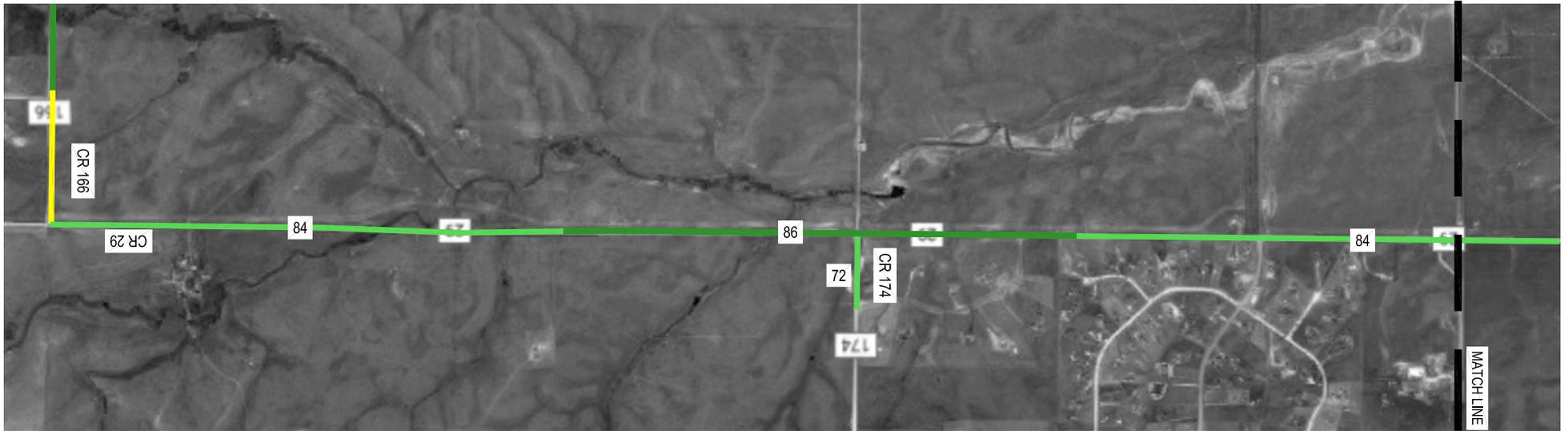
| STREET NAME     | SECTION | FROM   | TO         | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|--------|------------|-------------|----------|----------|
| County Road 174 | 10      | CR 129 | Taos Trail | 940.        | 74.00    | 72.00    |
| OVERALL         |         |        |            | 940.        | 74.00    | 72.00    |

**2017 ROADWAY CONDITION SUMMARY**

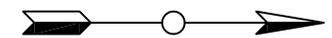


**2010 ROADWAY CONDITIONS SUMMARY**





**COUNTY ROAD 29 & 174 - 2017 PCI**  
 SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 174

INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM   | TO         | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST         | 2023 PROJ. PCI |
|-----------------|---------|--------|------------|-------------|----------|----------|-----------------|------------|--------------------|----------------|
| County Road 174 | 10      | CR 129 | Taos Trail | 940.        | 74.00    | 72.00    | 2021            | CR, ED, CS | \$ 8,352.21        | 83             |
| <b>OVERALL</b>  |         |        |            | 940.        | 74.00    | 72.00    |                 |            | <b>\$ 8,352.21</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 174**

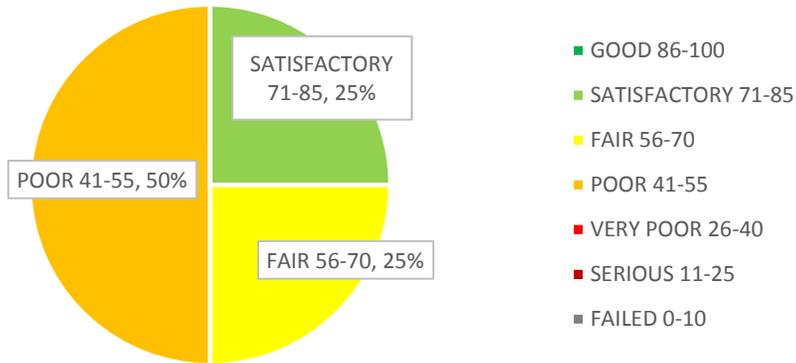


**ROADWAY ASPHALT CONDITION SUMMARY**

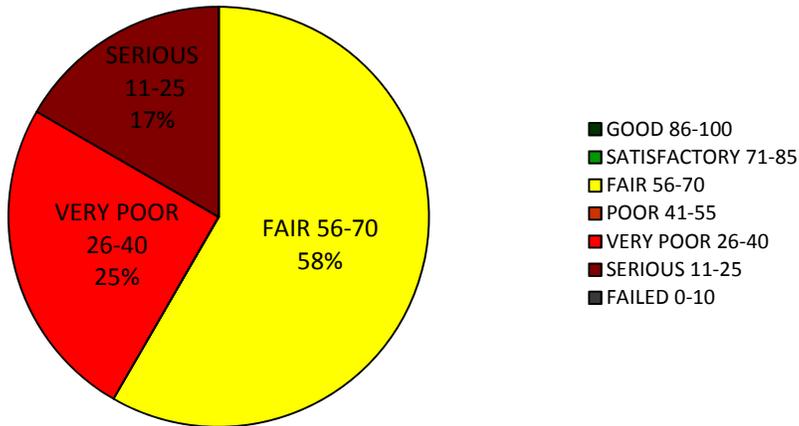
COUNTY ROAD: 186  
 INSPECTION DATE: 7/12/2017

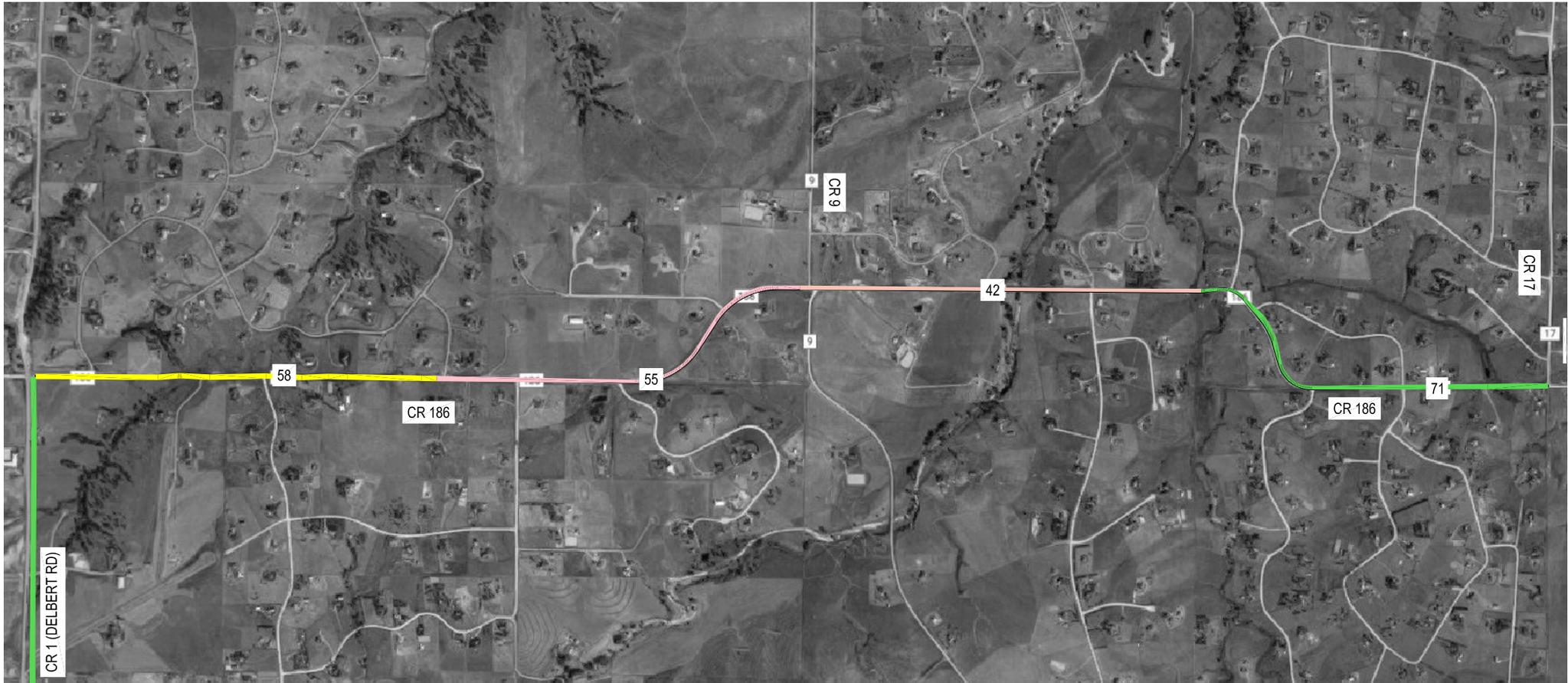
| STREET NAME     | SECTION | FROM       | TO | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|------------|----|-------------|----------|----------|
| County Road 186 | 10      | Delbert Rd | M1 | 5,485.74    | 62.00    | 58.00    |
| County Road 186 | 20      | M1         | M2 | 5,485.74    | 42.00    | 55.00    |
| County Road 186 | 30      | M2         | M3 | 5,485.74    | 67.00    | 42.00    |
| County Road 186 | 40      | M3         | M4 | 5,485.74    | 23.00    | 71.00    |
| OVERALL         |         |            |    | 21,942.96   | 49.00    | 57.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**



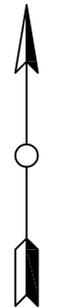


COUNTY ROAD 186 - 2017 PCI  
SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

74 SECTION PCI SCORE



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 186

INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM       | TO | LENGTH (FT)      | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB      | REHAB COST           | 2023 PROJ. PCI |
|-----------------|---------|------------|----|------------------|--------------|--------------|-----------------|------------|----------------------|----------------|
| County Road 186 | 40      | M3         | M4 | 5,485.74         | 23.00        | 71.00        | 2018            | CR, ED, CS | \$ 44,825.81         | 80             |
| County Road 186 | 10      | Delbert Rd | M1 | 5,485.74         | 62.00        | 58.00        | 2018            | CR, ED, CS | \$ 47,085.93         | 80             |
| County Road 186 | 20      | M1         | M2 | 5,485.74         | 42.00        | 55.00        | 2018            | CR, ED, CS | \$ 47,085.93         | 80             |
| County Road 186 | 30      | M2         | M3 | 5,485.74         | 67.00        | 42.00        | 2018            | CR, ED, CS | \$ 47,085.93         | 80             |
| <b>OVERALL</b>  |         |            |    | <b>21,942.96</b> | <b>49.00</b> | <b>57.00</b> |                 |            | <b>\$ 186,083.62</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 186**

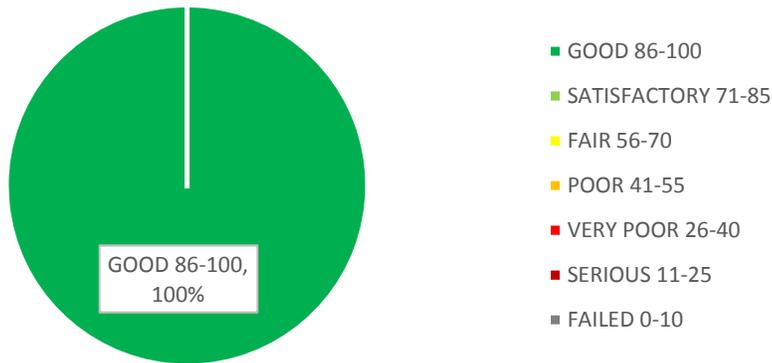


**ROADWAY ASPHALT CONDITION SUMMARY**

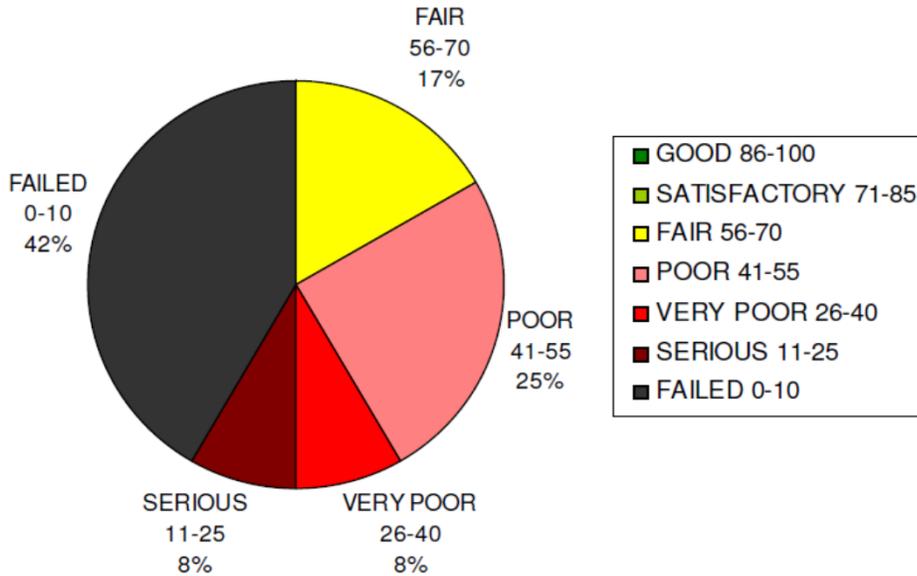
COUNTY ROAD: 194  
 INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM  | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|-------|---------|-------------|----------|----------|
| County Road 194 | 10      | CR 17 | M1      | 5,280.      | 16.00    | 87.00    |
| County Road 194 | 20      | M1    | M2      | 5,280.      | 18.00    | 88.00    |
| County Road 194 | 30      | M2    | M3      | 5,280.      | 37.00    | 90.00    |
| County Road 194 | 40      | M3    | M4      | 5,280.      | 28.00    | 89.00    |
| County Road 194 | 50      | M4    | PATRICK | 966.1       | 28.00    | 88.00    |
| OVERALL         |         |       |         | 22,086.1    | 28.00    | 89.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





COUNTY ROAD 194 - 2017 PCI  
SCALE: N.T.S.



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: 194

INSPECTION DATE: 7/12/2017

| STREET NAME     | SECTION | FROM  | TO      | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|-------|---------|-------------|----------|----------|-----------------|-------|------------|----------------|
| County Road 194 | 10      | CR 17 | M1      | 5,280.      | 16.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| County Road 194 | 20      | M1    | M2      | 5,280.      | 18.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| County Road 194 | 30      | M2    | M3      | 5,280.      | 37.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| County Road 194 | 40      | M3    | M4      | 5,280.      | 28.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| County Road 194 | 50      | M4    | PATRICK | 966.1       | 28.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| OVERALL         |         |       |         |             | 28.00    | 89.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COUNTY ROAD 194**

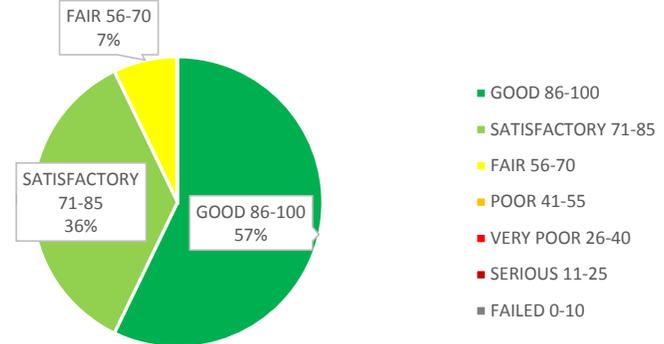


**ROADWAY ASPHALT CONDITION SUMMARY**

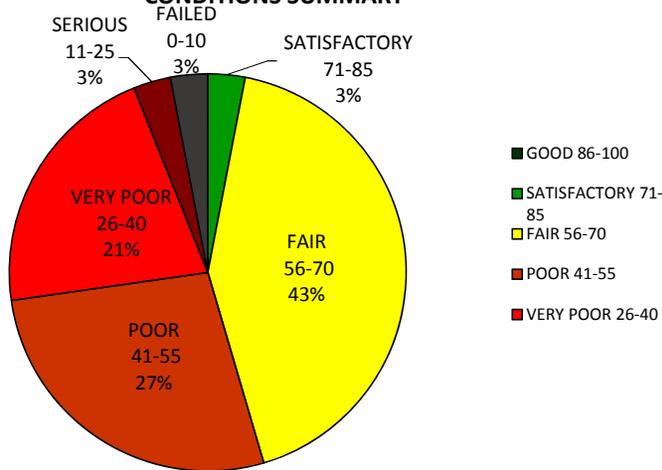
COUNTY ROAD: Elbert Road  
 INSPECTION DATE: 7/17/2017

| STREET NAME    | SECTION | FROM   | TO  | LENGTH (FT)      | 2010 PCI | 2017 PCI     |
|----------------|---------|--------|-----|------------------|----------|--------------|
| ELBERT RD      | 10      | HWY 86 | M1  | 6,061.72         | 50.00    | 86.00        |
| ELBERT RD      | 20      | M1     | M2  | 6,061.72         | 50.00    | 86.00        |
| ELBERT RD      | 30      | M2     | M3  | 6,061.72         | 50.00    | 88.00        |
| ELBERT RD      | 40      | M3     | M4  | 6,061.72         | 50.00    | 88.00        |
| ELBERT RD      | 50      | M4     | M5  | 6,061.72         | 50.00    | 87.00        |
| ELBERT RD      | 60      | M5     | M6  | 6,061.72         | 50.00    | 74.00        |
| ELBERT RD      | 70      | M6     | M7  | 6,061.72         | 50.00    | 87.00        |
| ELBERT RD      | 80      | M7     | M8  | 6,061.72         | 50.00    | 88.00        |
| ELBERT RD      | 90      | M8     | M9  | 6,061.72         | 50.00    | 87.00        |
| ELBERT RD      | 100     | M9     | M10 | 6,061.72         | 50.00    | 79.00        |
| ELBERT RD      | 110     | M10    | M11 | 6,061.72         | 50.00    | 78.00        |
| ELBERT RD      | 120     | M11    | M12 | 6,061.72         | 78.00    | 79.00        |
| ELBERT RD      | 130     | M12    | M13 | 6,061.72         | 78.00    | 78.00        |
| ELBERT RD      | 140     | M13    | M14 | 6,061.72         | 78.00    | 64.00        |
| <b>OVERALL</b> |         |        |     | <b>84,864.08</b> |          | <b>82.00</b> |

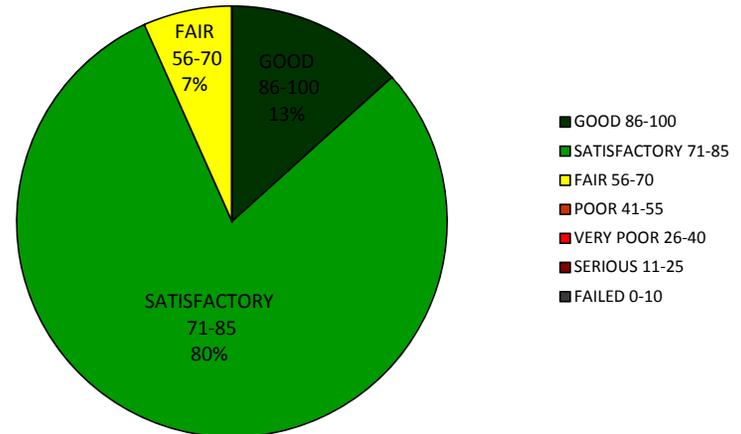
**2017 ROADWAY CONDITION SUMMARY**

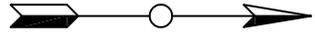
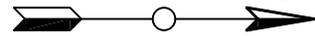


**2010 ELBERT ROAD, SECTION 1 - ROADWAY CONDITIONS SUMMARY**



**2010 ELBERT ROAD, SECTION 2 - ROADWAY CONDITIONS SUMMARY**

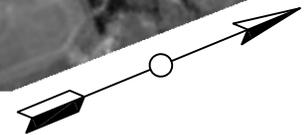
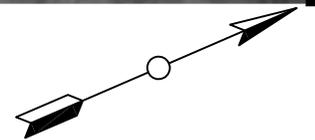




ELBERT ROAD (SOUTH) - 2017 PCI  
SCALE: N.T.S.

LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ELBERT ROAD (NORTH) - 2017 PCI**  
SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: Elbert Road  
 INSPECTION DATE: 7/17/2017

| STREET NAME | SECTION | FROM   | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-------------|---------|--------|-----|-------------|----------|----------|-----------------|-------|------------|----------------|
| ELBERT RD   | 10      | HWY 86 | M1  | 6,061.72    | 50.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| ELBERT RD   | 20      | M1     | M2  | 6,061.72    | 50.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| ELBERT RD   | 30      | M2     | M3  | 6,061.72    | 50.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| ELBERT RD   | 40      | M3     | M4  | 6,061.72    | 50.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| ELBERT RD   | 50      | M4     | M5  | 6,061.72    | 50.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| ELBERT RD   | 60      | M5     | M6  | 6,061.72    | 50.00    | 74.00    | TBD             | ----  | ----       | 69.00          |
| ELBERT RD   | 70      | M6     | M7  | 6,061.72    | 50.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| ELBERT RD   | 80      | M7     | M8  | 6,061.72    | 50.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| ELBERT RD   | 90      | M8     | M9  | 6,061.72    | 50.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| ELBERT RD   | 100     | M9     | M10 | 6,061.72    | 50.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| ELBERT RD   | 110     | M10    | M11 | 6,061.72    | 50.00    | 78.00    | TBD             | ----  | ----       | 73.00          |
| ELBERT RD   | 120     | M11    | M12 | 6,061.72    | 78.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| ELBERT RD   | 130     | M12    | M13 | 6,061.72    | 78.00    | 78.00    | TBD             | ----  | ----       | 73.00          |
| ELBERT RD   | 140     | M13    | M14 | 6,061.72    | 78.00    | 64.00    | TBD             | ----  | ----       | 59.00          |
| OVERALL     |         |        |     |             |          | 82.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**ELBERT ROAD**

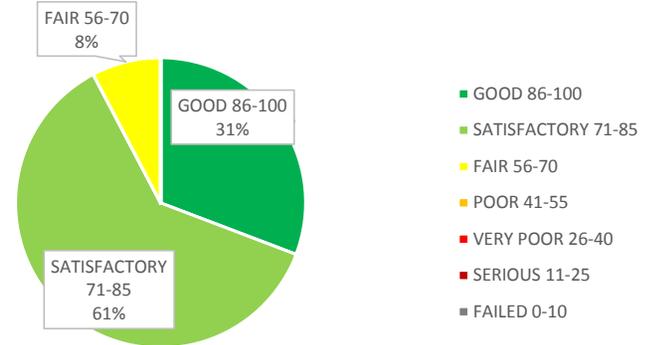


**ROADWAY ASPHALT CONDITION SUMMARY**

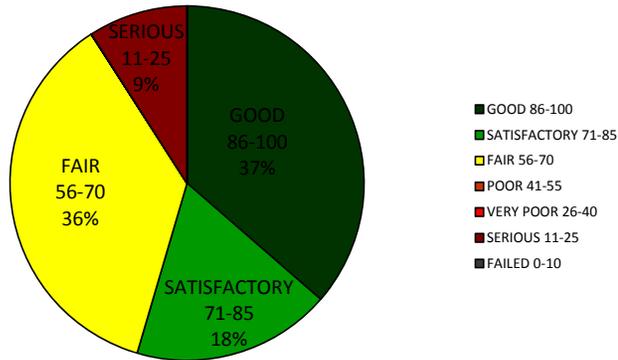
COUNTY ROAD: Kiowa-Bennett  
 INSPECTION DATE: 7/17/2017

| STREET NAME     | SECTION | FROM   | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------|---------|--------|-----|-------------|----------|----------|
| KIOWA-BENNET RD | 10      | CR 194 | M1  | 6,543.38    | 74.00    | 85.00    |
| KIOWA-BENNET RD | 20      | M1     | M2  | 6,543.38    | 74.00    | 86.00    |
| KIOWA-BENNET RD | 30      | M2     | M3  | 6,543.38    | 74.00    | 84.00    |
| KIOWA-BENNET RD | 40      | M3     | M4  | 6,543.38    | 83.00    | 88.00    |
| KIOWA-BENNET RD | 50      | M4     | M5  | 6,543.38    | 83.00    | 89.00    |
| KIOWA-BENNET RD | 60      | M5     | M6  | 6,543.38    | 83.00    | 88.00    |
| KIOWA-BENNET RD | 70      | M6     | M7  | 6,543.38    | 83.00    | 82.00    |
| KIOWA-BENNET RD | 80      | M7     | M8  | 6,543.38    | 83.00    | 79.00    |
| KIOWA-BENNET RD | 90      | M8     | M9  | 6,543.38    | 83.00    | 69.00    |
| KIOWA-BENNET RD | 100     | M9     | M10 | 6,543.38    | 83.00    | 71.00    |
| KIOWA-BENNET RD | 110     | M10    | M11 | 6,543.38    | 83.00    | 75.00    |
| KIOWA-BENNET RD | 120     | M11    | M12 | 6,543.38    | 83.00    | 76.00    |
| KIOWA-BENNET RD | 130     | M12    | M13 | 6,543.38    | 83.00    | 75.00    |
| OVERALL         |         |        |     | 85,063.94   |          | 81.00    |

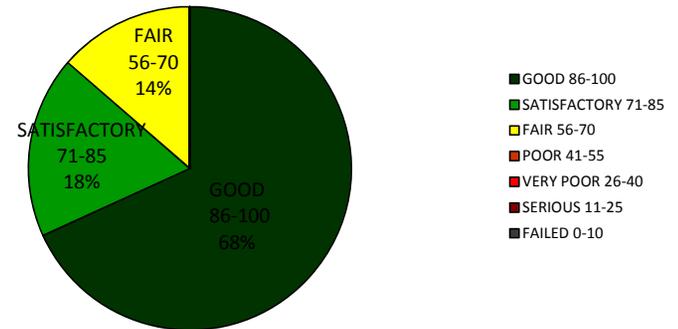
**2017 ROADWAY CONDITION SUMMARY**

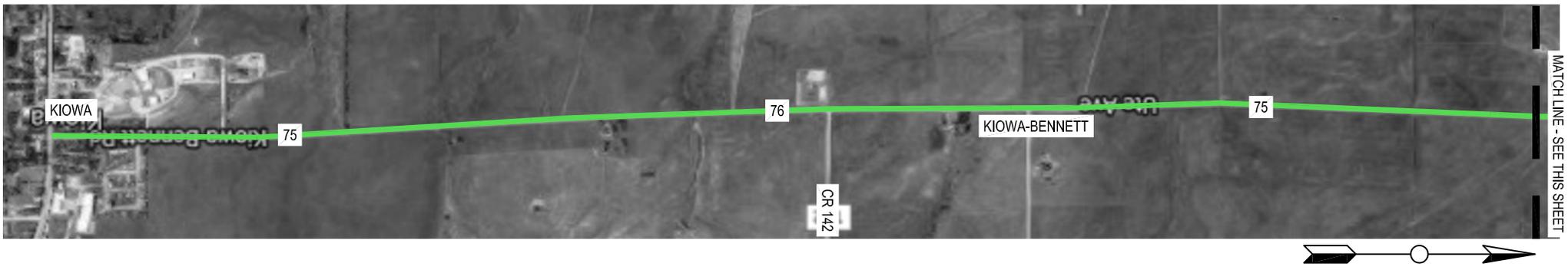


**2010 KIOWA BENNETT ROAD, SECTION 1 - ROADWAY CONDITIONS SUMMARY**



**2010 KIOWA BENNETT ROAD, SECTION 2 - ROADWAY CONDITIONS SUMMARY**

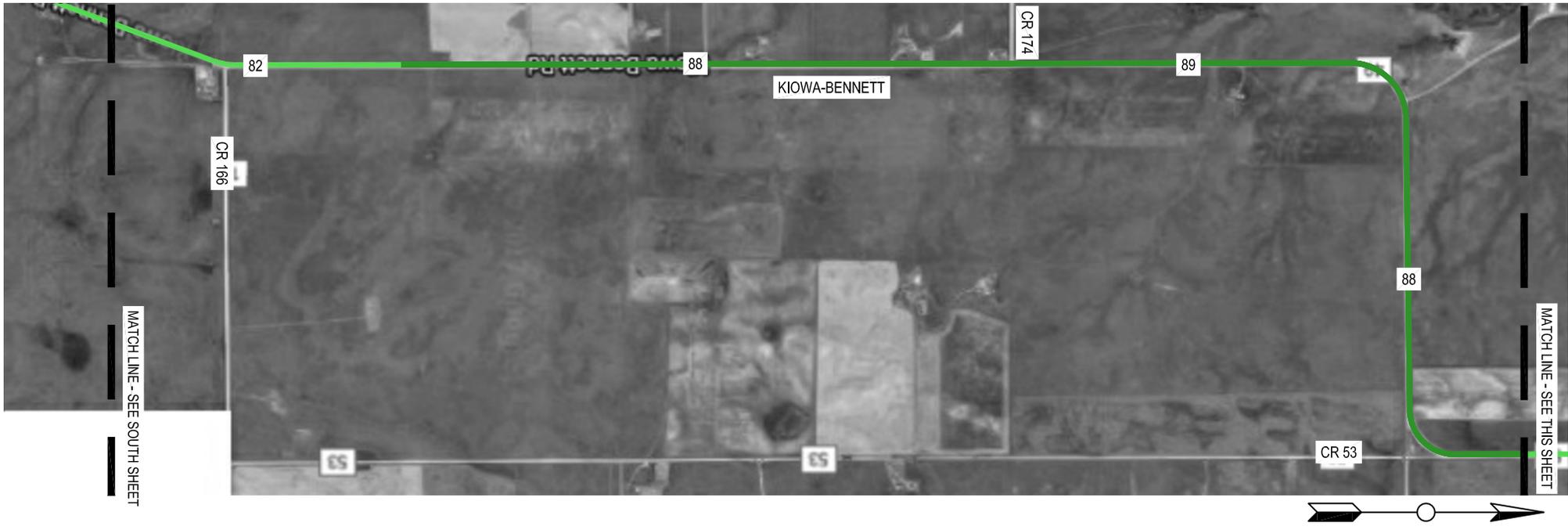




**KIOWA-BENNETT ROAD (SOUTH) - 2017 PCI**  
SCALE: N.T.S.



- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0



**KIOWA-BENNETT ROAD (NORTH) - 2017 PCI**  
SCALE: N.T.S.



**ROADWAY REHABILITATION COST ANALYSIS**

COUNTY ROAD: Kiowa-Bennett

INSPECTION DATE: 7/17/2017

| STREET NAME     | SECTION | FROM   | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------|---------|--------|-----|-------------|----------|----------|-----------------|-------|------------|----------------|
| KIOWA-BENNET RD | 10      | CR 194 | M1  | 6,543.38    | 74.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| KIOWA-BENNET RD | 20      | M1     | M2  | 6,543.38    | 74.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| KIOWA-BENNET RD | 30      | M2     | M3  | 6,543.38    | 74.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| KIOWA-BENNET RD | 40      | M3     | M4  | 6,543.38    | 83.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| KIOWA-BENNET RD | 50      | M4     | M5  | 6,543.38    | 83.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| KIOWA-BENNET RD | 60      | M5     | M6  | 6,543.38    | 83.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| KIOWA-BENNET RD | 70      | M6     | M7  | 6,543.38    | 83.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| KIOWA-BENNET RD | 80      | M7     | M8  | 6,543.38    | 83.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| KIOWA-BENNET RD | 90      | M8     | M9  | 6,543.38    | 83.00    | 69.00    | TBD             | ----  | ----       | 64.00          |
| KIOWA-BENNET RD | 100     | M9     | M10 | 6,543.38    | 83.00    | 71.00    | TBD             | ----  | ----       | 66.00          |
| KIOWA-BENNET RD | 110     | M10    | M11 | 6,543.38    | 83.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| KIOWA-BENNET RD | 120     | M11    | M12 | 6,543.38    | 83.00    | 76.00    | TBD             | ----  | ----       | 71.00          |
| KIOWA-BENNET RD | 130     | M12    | M13 | 6,543.38    | 83.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| OVERALL         |         |        |     |             |          | 81.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**KIOWA-BENNETT ROAD**

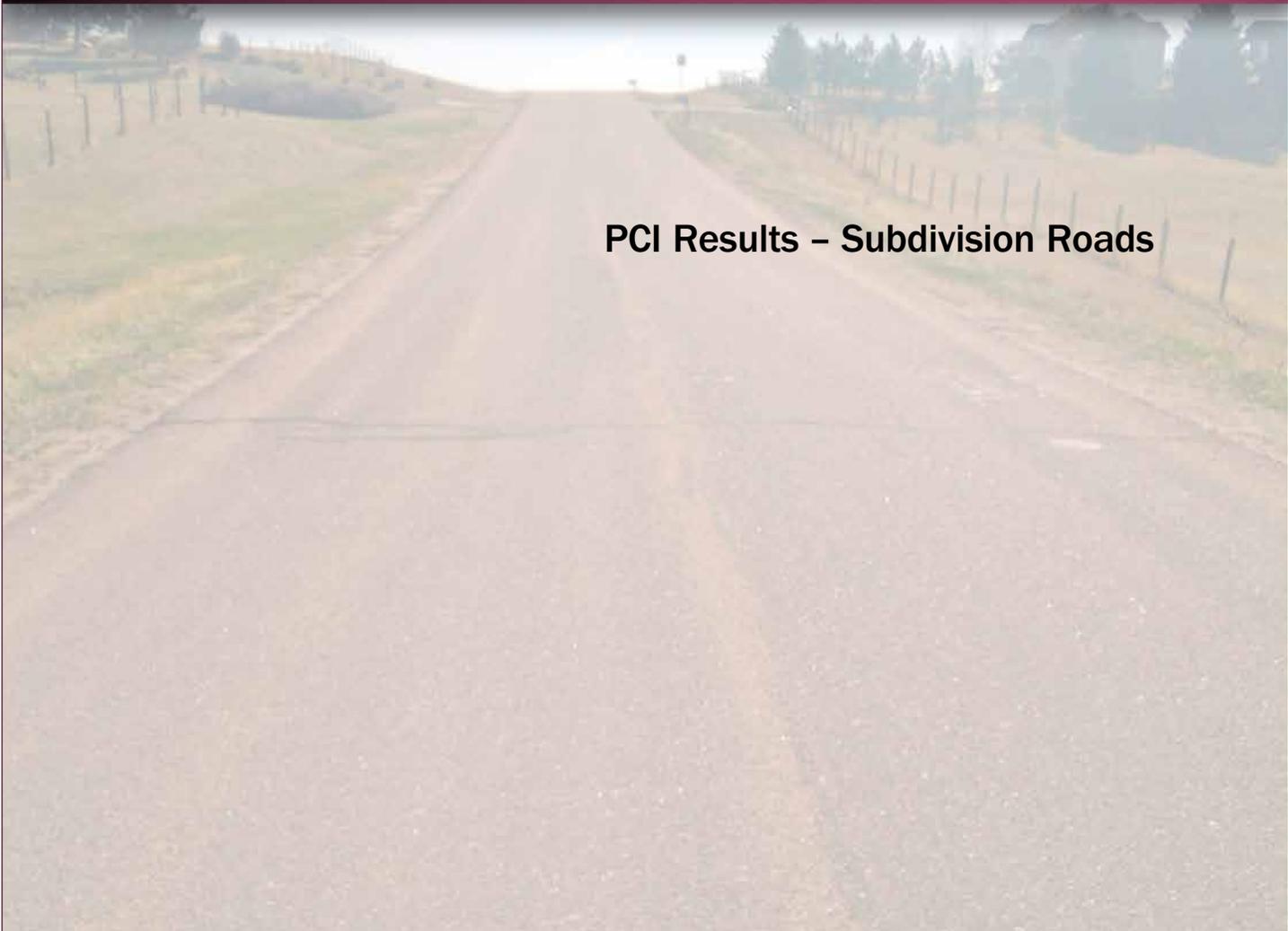


**ENERTIA**

CONSULTING  
GROUP



*Appendix D*



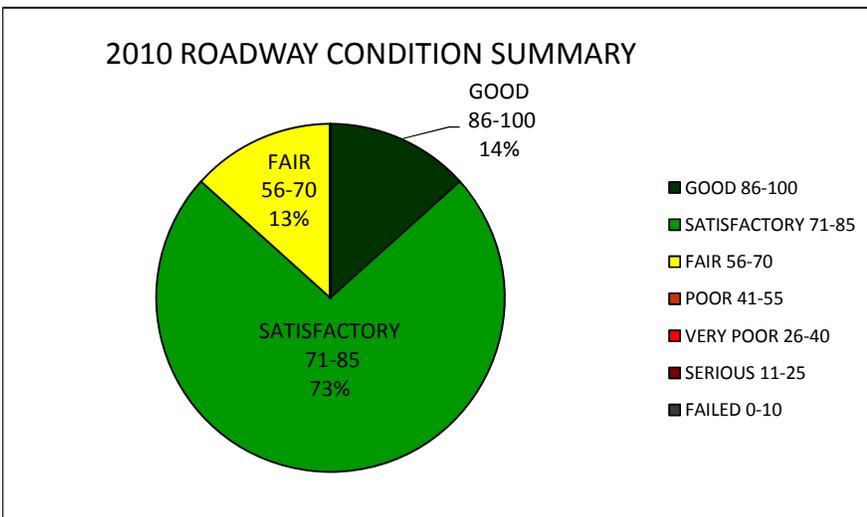
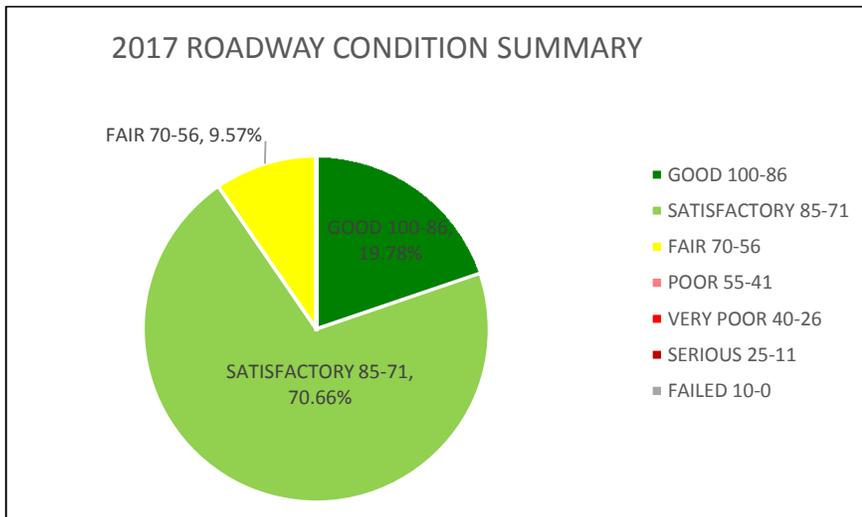
**PCI Results – Subdivision Roads**

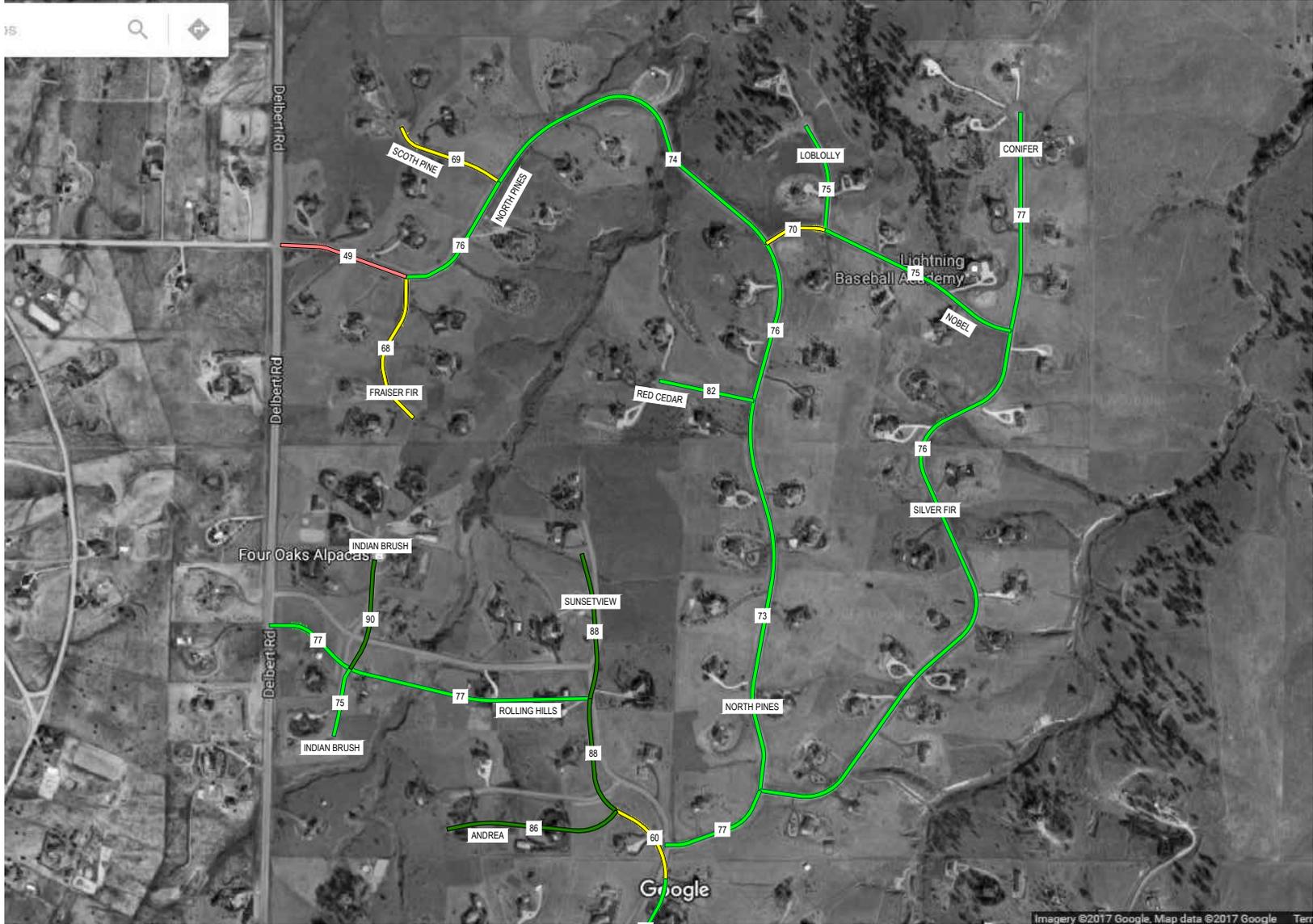
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: AMANDA PINES

INSPECTION DATE: 4/10/2017

| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|
| Amanda Pines Drive  | 10      | CR 186           | Sugar Pine Cir   | 1,980.      | 76.00    | 85.00    |
| Amanda Pines Drive  | 20      | Sugar Pine Cir   | Sunsetview Way   | 1,400.      | 76.00    | 80.00    |
| Amanda Pines Drive  | 30      | Sunsetview Way   | Black Spruce Ln  | 680.        | 76.00    | 81.00    |
| Amanda Pines Drive  | 40      | Black Spruce Ln  | Needle Leaf Ln   | 1,850.      | 76.00    | 79.00    |
| Amanda Pines Drive  | 50      | Needle Leaf Ln   | Bristle Cone Ct  | 1,520.      | 76.00    | 80.00    |
| Amanda Pines Drive  | 60      | Bristle Cone Ct  | End              | 1,430.      | 76.00    | 66.00    |
| Andrea Circle       | 10      | Sunsetview Way   | End              | 1,150.      | 83.00    | 86.00    |
| Black Spruce Lane   | 10      | End (S)          | Amanda Pines Dr  | 700.        | 75.00    | 83.00    |
| Black Spruce Lane   | 20      | Amanda Pines Dr  | End (N)          | 1,120.      | 75.00    | 80.00    |
| Bristle Cone Court  | 10      | Amanda Pines Dr  | CR 186           | 1,305.      | 78.00    | 79.00    |
| Indian Brush Court  | 10      | End (S)          | Rolling Hills Pl | 450.        | 80.00    | 75.00    |
| Indian Brush Court  | 20      | Rolling Hills Pl | End (N)          | 735.        | 80.00    | 90.00    |
| Needle Leaf Lane    | 10      | Amanda Pines Dr  | End              | 760.        | 69.00    | 75.00    |
| Rolling Hills Place | 10      | Sunsetview Pl    | Indian Brush Ct  | 1,580.      | 87.00    | 77.00    |
| Rolling Hills Place | 20      | Indian Brush Ct  | Delbert Rd       | 630.        | 87.00    | 77.00    |
| Sugar Pine Circle   | 10      | Amanda Pines Dr  | End              | 540.        | 88.00    | 87.00    |
| Sunsetview Way      | 10      | Amanda Pines Dr  | North Pines      | 870.        | 86.00    | 77.00    |
| Sunsetview Way      | 20      | North Pines      | Andrea Cir       | 580.        | 86.00    | 60.00    |
| Sunsetview Way      | 30      | Andrea Cir       | Rolling Hills Pl | 780.        | 86.00    | 88.00    |
| Sunsetview Way      | 40      | Rolling Hills Pl | End              | 950.        | 86.00    | 88.00    |
| OVERALL             |         |                  |                  |             | 78.00    | 79.65    |



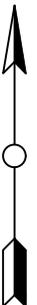


**AMANDA PINES SUBDIVISION - 2017 PCI**

SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: AMANDA PINES

INSPECTION DATE: 4/10/2017

| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| Amanda Pines Drive  | 10      | CR 186           | Sugar Pine Cir   | 1,980.      | 76.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Amanda Pines Drive  | 20      | Sugar Pine Cir   | Sunsetview Way   | 1,400.      | 76.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Amanda Pines Drive  | 30      | Sunsetview Way   | Black Spruce Ln  | 680.        | 76.00    | 81.00    | TBD             | ----  | ----       | 76.00          |
| Amanda Pines Drive  | 40      | Black Spruce Ln  | Needle Leaf Ln   | 1,850.      | 76.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| Amanda Pines Drive  | 50      | Needle Leaf Ln   | Bristle Cone Ct  | 1,520.      | 76.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Amanda Pines Drive  | 60      | Bristle Cone Ct  | End              | 1,430.      | 76.00    | 66.00    | TBD             | ----  | ----       | 61.00          |
| Andrea Circle       | 10      | Sunsetview Way   | End              | 1,150.      | 83.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| Black Spruce Lane   | 10      | End (S)          | Amanda Pines Dr  | 700.        | 75.00    | 83.00    | TBD             | ----  | ----       | 78.00          |
| Black Spruce Lane   | 20      | Amanda Pines Dr  | End (N)          | 1,120.      | 75.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Bristle Cone Court  | 10      | Amanda Pines Dr  | CR 186           | 1,305.      | 78.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| Indian Brush Court  | 10      | End (S)          | Rolling Hills Pl | 450.        | 80.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| Indian Brush Court  | 20      | Rolling Hills Pl | End (N)          | 735.        | 80.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| Needle Leaf Lane    | 10      | Amanda Pines Dr  | End              | 760.        | 69.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| Rolling Hills Place | 10      | Sunsetview Pl    | Indian Brush Ct  | 1,580.      | 87.00    | 77.00    | TBD             | ----  | ----       | 72.00          |
| Rolling Hills Place | 20      | Indian Brush Ct  | Delbert Rd       | 630.        | 87.00    | 77.00    | TBD             | ----  | ----       | 72.00          |
| Sugar Pine Circle   | 10      | Amanda Pines Dr  | End              | 540.        | 88.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| Sunsetview Way      | 10      | Amanda Pines Dr  | North Pines      | 870.        | 86.00    | 77.00    | TBD             | ----  | ----       | 72.00          |
| Sunsetview Way      | 20      | North Pines      | Andrea Cir       | 580.        | 86.00    | 60.00    | TBD             | ----  | ----       | 55.00          |
| Sunsetview Way      | 30      | Andrea Cir       | Rolling Hills Pl | 780.        | 86.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| Sunsetview Way      | 40      | Rolling Hills Pl | End              | 950.        | 86.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| OVERALL             |         |                  |                  | 21,010.     | 78.00    | 79.65    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

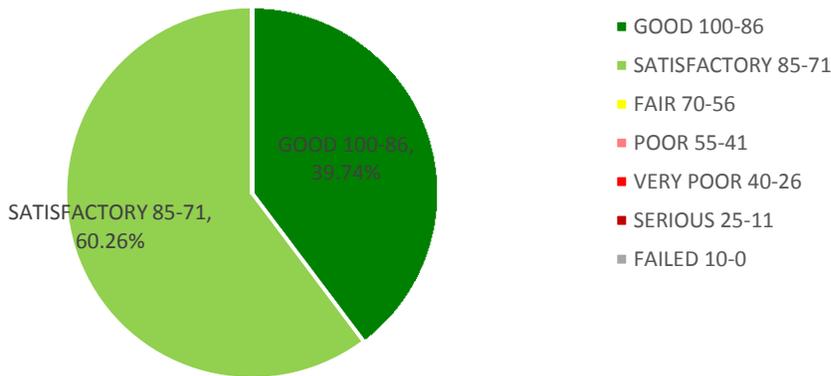
### ROADWAY ASPHALT CONDITION SUMMARY

SUBDIVISION: BRITANIE RIDGE

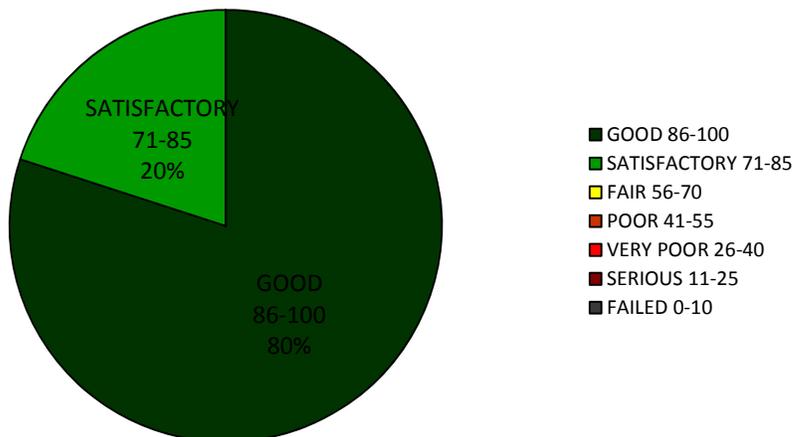
INSPECTION DATE: 4/7/2017

| STREET NAME        | SECTION | FROM            | TO              | LENGTH (FT) | 2010 PCI | 2017 PCI |
|--------------------|---------|-----------------|-----------------|-------------|----------|----------|
| Black Forest Drive | 30      | Bobcat Cr       | Johnson St      | 2,040.      | 95.00    | 72.00    |
| Black Forest Drive | 40      | Johnson St      | End             | 780.        | 95.00    | 78.00    |
| Black Forest Drive | 10      | Wild Horse Tr   | Tarie Tr        | 1,445.      | 95.00    | 87.00    |
| Black Forest Drive | 20      | Tarie Tr        | Bobcat Cr       | 1,270.      | 95.00    | 80.00    |
| Bobcat Circle      | 10      | Black Forest Dr | End             | 975.        | 84.00    | 72.00    |
| Coyote Circle      | 10      | Tarie Tr        | End             | 1,200.      | 94.00    | 79.00    |
| Johnson Street     | 10      | Black Forest Dr | CR 154          | 570.        | 92.00    | 93.00    |
| Melanie Circle     | 10      | Wild Horse Tr   | End             | 1,300.      | 84.00    | 78.00    |
| N Big Buck Circle  | 10      | Wild Horse Tr   | End             | 1,000.      | 100.00   | 80.00    |
| S Big Buck Circle  | 10      | Wild Horse Tr   | End             | 495.        | 86.00    | 91.00    |
| Tarie Trail        | 10      | Wild Horse Cr   | Coyote Cr       | 1,440.      | 94.00    | 82.00    |
| Tarie Trail        | 20      | Coyote Cr       | Black Forest Dr | 1,360.      | 94.00    | 83.00    |
| Wild Horse Trail   | 10      | CR 154          | Melanie Cr      | 655.        | 87.00    | 88.00    |
| Wild Horse Trail   | 20      | Melanie Cr      | Black Forest Dr | 400.        | 87.00    | 88.00    |
| Wild Horse Trail   | 30      | Black Forest Dr | Tarie Tr        | 1,300.      | 87.00    | 90.00    |
| Wild Horse Trail   | 40      | Tarie Trail     | Big Buck Cir    | 2,230.      | 87.00    | 88.00    |
| Wild Horse Trail   | 50      | Big Buck Cir    | End             | 400.        | 87.00    | 88.00    |
| OVERALL            |         |                 |                 |             | 91.00    | 83.35    |

### 2017 ROADWAY CONDITION SUMMARY



### 2010 ROADWAY CONDITIONS SUMMARY



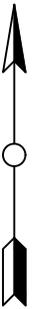


**BRITANIE RIDGE SUBDIVISION - 2017 PCI**

SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: BRITANIE RIDGE

INSPECTION DATE: 4/7/2017

| STREET NAME        | SECTION | FROM            | TO              | LENGTH (FT)    | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|--------------------|---------|-----------------|-----------------|----------------|--------------|--------------|-----------------|-------|------------|----------------|
| Black Forest Drive | 30      | Bobcat Cr       | Johnson St      | 2,040.         | 95.00        | 72.00        | TBD             | ----  | ----       | 67.00          |
| Black Forest Drive | 40      | Johnson St      | End             | 780.           | 95.00        | 78.00        | TBD             | ----  | ----       | 73.00          |
| Black Forest Drive | 10      | Wild Horse Tr   | Tarie Tr        | 1,445.         | 95.00        | 87.00        | TBD             | ----  | ----       | 82.00          |
| Black Forest Drive | 20      | Tarie Tr        | Bobcat Cr       | 1,270.         | 95.00        | 80.00        | TBD             | ----  | ----       | 75.00          |
| Bobcat Circle      | 10      | Black Forest Dr | End             | 975.           | 84.00        | 72.00        | TBD             | ----  | ----       | 67.00          |
| Coyote Circle      | 10      | Tarie Tr        | End             | 1,200.         | 94.00        | 79.00        | TBD             | ----  | ----       | 74.00          |
| Johnson Street     | 10      | Black Forest Dr | CR 154          | 570.           | 92.00        | 93.00        | TBD             | ----  | ----       | 88.00          |
| Melanie Circle     | 10      | Wild Horse Tr   | End             | 1,300.         | 84.00        | 78.00        | TBD             | ----  | ----       | 73.00          |
| N Big Buck Circle  | 10      | Wild Horse Tr   | End             | 1,000.         | 100.00       | 80.00        | TBD             | ----  | ----       | 75.00          |
| S Big Buck Circle  | 10      | Wild Horse Tr   | End             | 495.           | 86.00        | 91.00        | TBD             | ----  | ----       | 86.00          |
| Tarie Trail        | 10      | Wild Horse Cr   | Coyote Cr       | 1,440.         | 94.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| Tarie Trail        | 20      | Coyote Cr       | Black Forest Dr | 1,360.         | 94.00        | 83.00        | TBD             | ----  | ----       | 78.00          |
| Wild Horse Trail   | 10      | CR 154          | Melanie Cr      | 655.           | 87.00        | 88.00        | TBD             | ----  | ----       | 83.00          |
| Wild Horse Trail   | 20      | Melanie Cr      | Black Forest Dr | 400.           | 87.00        | 88.00        | TBD             | ----  | ----       | 83.00          |
| Wild Horse Trail   | 30      | Black Forest Dr | Tarie Tr        | 1,300.         | 87.00        | 90.00        | TBD             | ----  | ----       | 85.00          |
| Wild Horse Trail   | 40      | Tarie Trail     | Big Buck Cir    | 2,230.         | 87.00        | 88.00        | TBD             | ----  | ----       | 83.00          |
| Wild Horse Trail   | 50      | Big Buck Cir    | End             | 400.           | 87.00        | 88.00        | TBD             | ----  | ----       | 83.00          |
| <b>OVERALL</b>     |         |                 |                 | <b>18,860.</b> | <b>91.00</b> | <b>83.35</b> |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

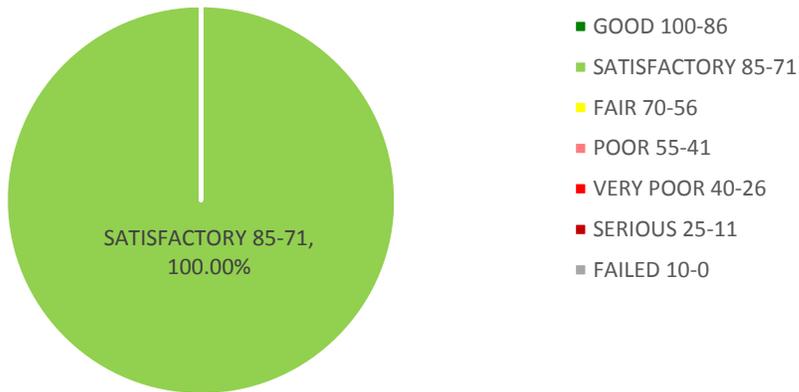
# ROADWAY ASPHALT CONDITION SUMMARY

SUBDIVISION: COYOTE HILLS

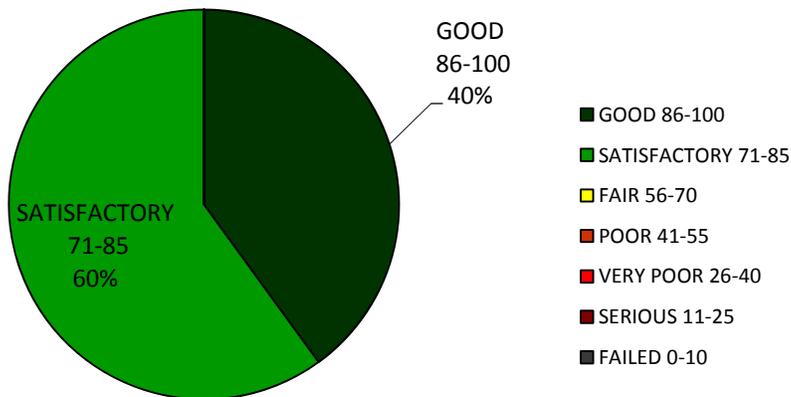
INSPECTION DATE: 4/14/2017

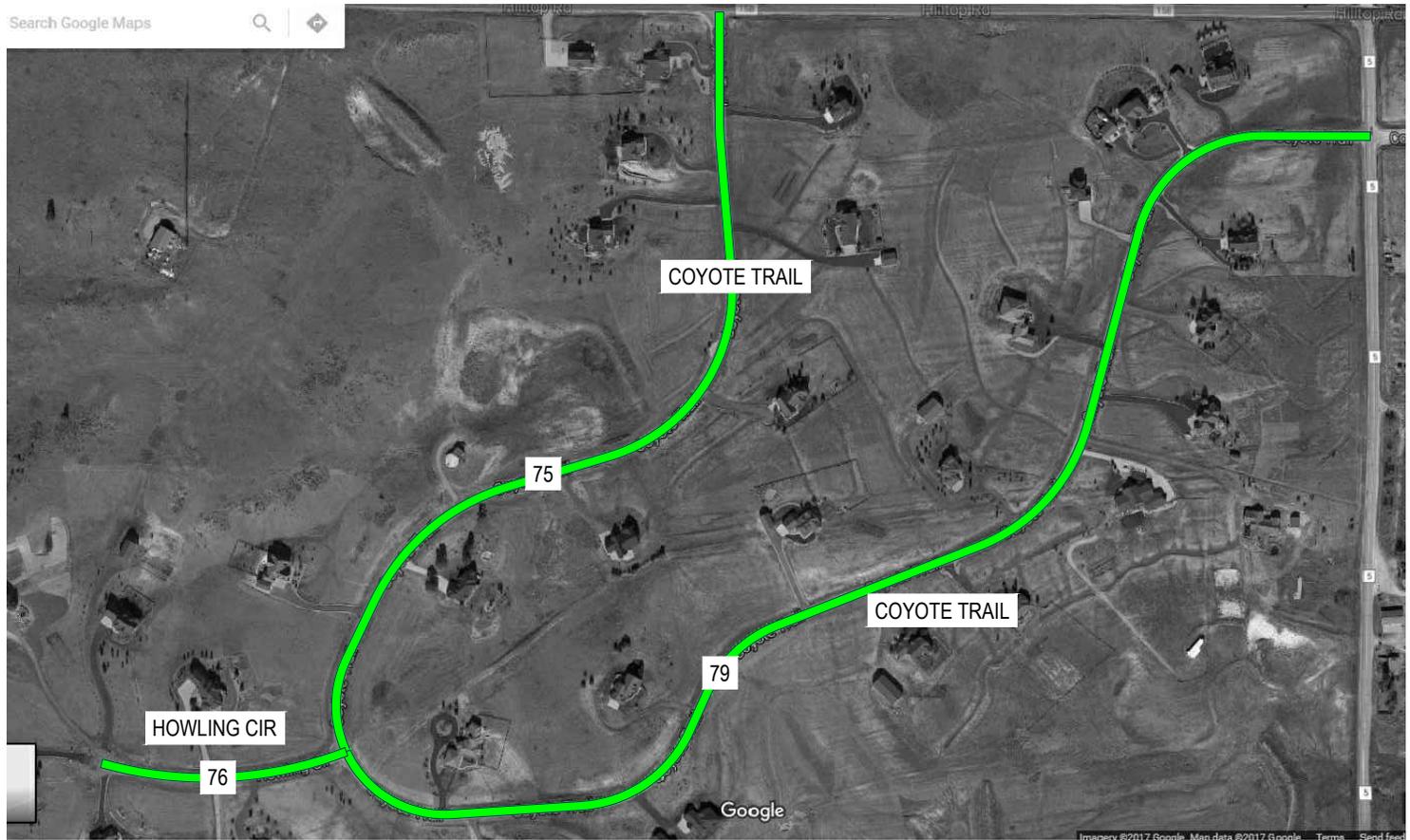
| STREET NAME    | SECTION | FROM        | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------|---------|-------------|-------------|-------------|----------|----------|
| Coyote Trail   | 10      | Hilltop Rd  | Howling Cir | 2,610.      | 82.00    | 75.00    |
| Coyote Trail   | 20      | Howling Cir | CR 5        | 3,865.      | 82.00    | 79.00    |
| Howling Circle | 10      | End         | Coyote Tr   | 690.        | 84.00    | 76.00    |
| OVERALL        |         |             |             |             | 82.00    | 76.67    |

## 2017 ROADWAY CONDITION SUMMARY



## 2010 ROADWAY CONDITION SUMMARY





**COYOTE HILLS SUBDIVISION - 2017 PCI**  
 SCALE: N.T.S.

**LEGEND**

|  |                     |
|--|---------------------|
|  | GOOD: 100-86        |
|  | SATISFACTORY: 85-71 |
|  | FAIR: 70-56         |
|  | POOR: 55-41         |
|  | VERY POOR: 40-26    |
|  | SERIOUS: 25-11      |
|  | FAILED: 10-0        |



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: COYOTE HILLS

INSPECTION DATE: 4/14/2017

| STREET NAME    | SECTION | FROM        | TO          | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB    | REHAB COST          | 2023 PROJ. PCI |
|----------------|---------|-------------|-------------|-------------|----------|----------|-----------------|----------|---------------------|----------------|
| Coyote Trail   | 20      | Howling Cir | CR 5        | 3,865.      | 82.00    | 79.00    | 2021            | CR,ED,SS | \$ 27,415.73        | 83.00          |
| Howling Circle | 10      | End         | Coyote Tr   | 690.        | 84.00    | 76.00    | 2021            | CR,ED,SS | \$ 4,894.40         | 83.00          |
| Coyote Trail   | 10      | Hilltop Rd  | Howling Cir | 2,610.      | 82.00    | 75.00    | 2021            | CR,ED,SS | \$ 18,513.60        | 83.00          |
| <b>OVERALL</b> |         |             |             | 7,165.      | 82.00    | 76.67    |                 |          | <b>\$ 50,823.73</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**COYOTE HILLS**

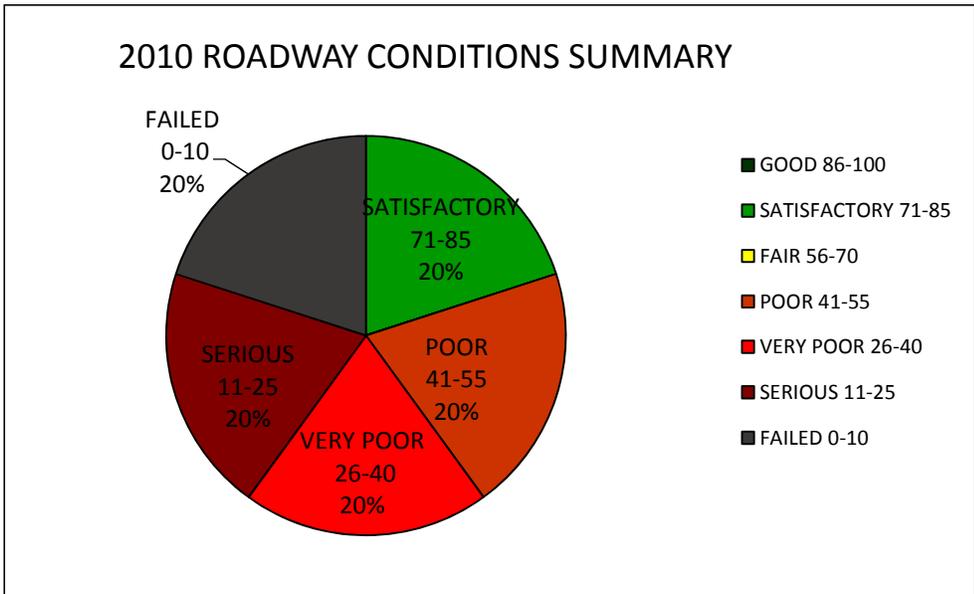
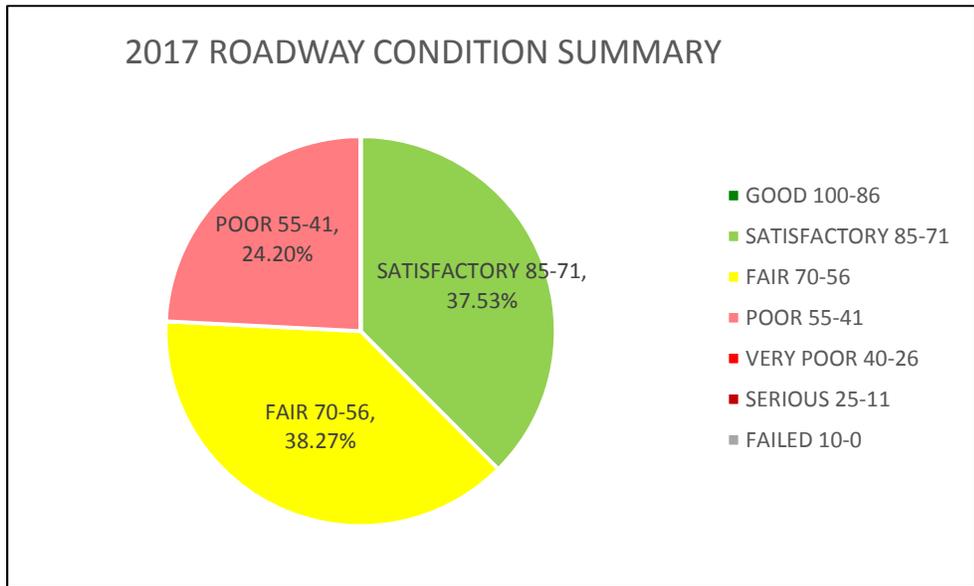


**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: CIMARRON

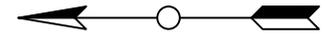
INSPECTION DATE: 4/13/2017

| STREET NAME    | SECTION | FROM            | TO              | LENGTH (FT) | 2010 PCI     | 2017 PCI     |
|----------------|---------|-----------------|-----------------|-------------|--------------|--------------|
| Cimarron Trail | 10      | CR 142          | Morgan Trail    | 1,290.      | 36.00        | 53.00        |
| Cimarron Trail | 20      | Morgan Trail    | Appaloosa Trail | 1,225.      | 36.00        | 66.00        |
| Cimarron Trail | 30      | Appaloosa Trail | Shetland Trail  | 550.        | 36.00        | 76.00        |
| Cimarron Trail | 40      | Shetland Trail  | Arabian Trail   | 570.        | 36.00        | 63.00        |
| Cimarron Trail | 50      | Arabian Trail   | Palomino Trail  | 1,060.      | 36.00        | 82.00        |
| Cimarron Trail | 60      | Palomino Trail  | Morgan Trail    | 825.        | 36.00        | 50.00        |
| Cimarron Trail | 70      | Morgan Trail    | Pinto Trail     | 1,670.      | 36.00        | 73.00        |
| Cimarron Trail | 80      | Pinto Trail     | CR 86           | 1,550.      | 36.00        | 69.00        |
| <b>OVERALL</b> |         |                 |                 |             | <b>36.00</b> | <b>66.50</b> |





**CIMARRON SUBDIVISION - 2017 PCI**  
SCALE: N.T.S.



**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: CIMARRON

INSPECTION DATE: 4/13/2017

| STREET NAME    | SECTION | FROM            | TO              | LENGTH (FT)   | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|----------------|---------|-----------------|-----------------|---------------|--------------|--------------|-----------------|------------|---------------------|----------------|
| Cimarron Trail | 50      | Arabian Trail   | Palomino Trail  | 1,060.        | 36.00        | 82.00        | 2020            | CR, ED     | \$ 462.16           | 77.00          |
| Cimarron Trail | 30      | Appaloosa Trail | Shetland Trail  | 550.          | 36.00        | 76.00        | 2020            | CR, ED, SS | \$ 3,796.83         | 82.00          |
| Cimarron Trail | 70      | Morgan Trail    | Pinto Trail     | 1,670.        | 36.00        | 73.00        | 2020            | CR, ED, SS | \$ 11,528.57        | 82.00          |
| Cimarron Trail | 80      | Pinto Trail     | CR 86           | 1,550.        | 36.00        | 69.00        | 2020            | CR, ED, SS | \$ 10,700.17        | 82.00          |
| Cimarron Trail | 20      | Morgan Trail    | Appaloosa Trail | 1,225.        | 36.00        | 66.00        | 2020            | CR, ED, SS | \$ 8,456.58         | 82.00          |
| Cimarron Trail | 40      | Shetland Trail  | Arabian Trail   | 570.          | 36.00        | 63.00        | 2020            | CR, ED, SS | \$ 3,934.90         | 82.00          |
| Cimarron Trail | 10      | CR 142          | Morgan Trail    | 1,290.        | 36.00        | 53.00        | 2020            | CR, ED, SS | \$ 9,467.74         | 82.00          |
| Cimarron Trail | 60      | Palomino Trail  | Morgan Trail    | 825.          | 36.00        | 50.00        | 2020            | CR, ED, SS | \$ 6,054.95         | 82.00          |
| <b>OVERALL</b> |         |                 |                 | <b>8,740.</b> | <b>36.00</b> | <b>66.50</b> |                 |            | <b>\$ 54,401.90</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**CIMARRON**



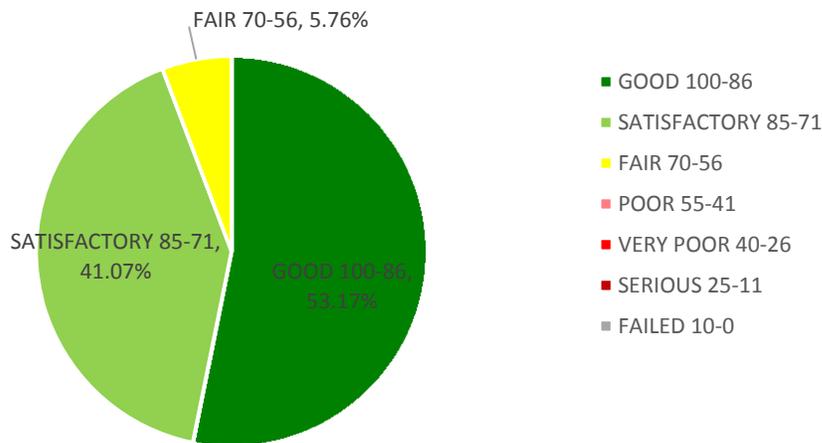
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: DEER CREEK ESTATES

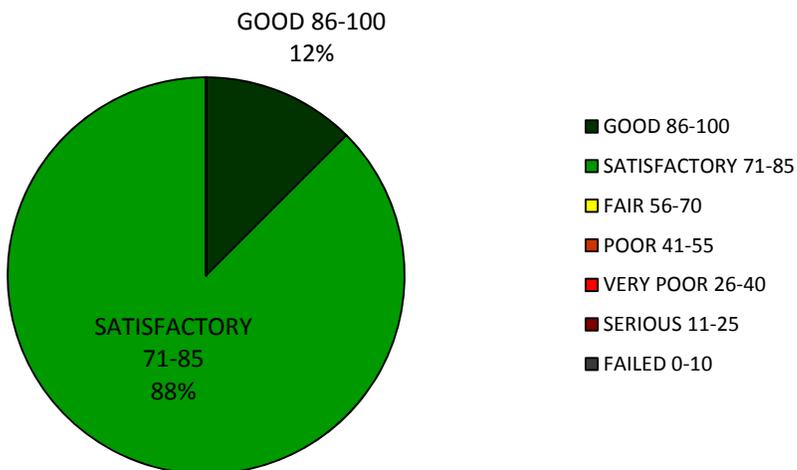
INSPECTION DATE: 4/12/2017

| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|
| Deer Creek Ranch Lo | 10      | CR 13 (N)        | Zane Grey Loop   | 1,045.      | 78.00    | 82.00    |
| Deer Creek Ranch Lo | 20      | Zane Grey Loop   | Zane Grey Loop   | 1,000.      | 78.00    | 91.00    |
| Deer Creek Ranch Lo | 30      | Zane Grey Loop   | CR 13 (S)        | 1,270.      | 78.00    | 86.00    |
| John Wayne Circle   | 10      | Zane Grey Loop   | End              | 930.        | 73.00    | 84.00    |
| Tom Mix Circle      | 10      | Zane Grey Loop   | End              | 665.        | 96.00    | 88.00    |
| Zane Grey Loop      | 10      | Deer Creek Ranch | Tom Mix Cir      | 2,975.      | 82.00    | 86.00    |
| Zane Grey Loop      | 20      | Tom Mix Cir      | John Wayne Cir   | 640.        | 82.00    | 60.00    |
| Zane Grey Loop      | 30      | John Wayne Cir   | Deer Creek Ranch | 2,590.      | 82.00    | 84.00    |
| OVERALL             |         |                  |                  |             | 81.00    | 82.63    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**

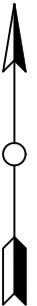




**DEER CREEK ESTATES SUBDIVISION - 2017 PCI**  
 SCALE: N.T.S.

**LEGEND**

|  |                     |
|--|---------------------|
|  | GOOD: 100-86        |
|  | SATISFACTORY: 85-71 |
|  | FAIR: 70-56         |
|  | POOR: 55-41         |
|  | VERY POOR: 40-26    |
|  | SERIOUS: 25-11      |
|  | FAILED: 10-0        |



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: DEER CREEK ESTATES

INSPECTION DATE: 4/12/2017

| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| Deer Creek Ranch Lo | 10      | CR 13 (N)        | Zane Grey Loop   | 1,045.      | 78.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| Deer Creek Ranch Lo | 20      | Zane Grey Loop   | Zane Grey Loop   | 1,000.      | 78.00    | 91.00    | TBD             | ----  | ----       | 86.00          |
| Deer Creek Ranch Lo | 30      | Zane Grey Loop   | CR 13 (S)        | 1,270.      | 78.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| John Wayne Circle   | 10      | Zane Grey Loop   | End              | 930.        | 73.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| Tom Mix Circle      | 10      | Zane Grey Loop   | End              | 665.        | 96.00    | 88.00    | TBD             | ----  | ----       | 83.00          |
| Zane Grey Loop      | 10      | Deer Creek Ranch | Tom Mix Cir      | 2,975.      | 82.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| Zane Grey Loop      | 20      | Tom Mix Cir      | John Wayne Cir   | 640.        | 82.00    | 60.00    | TBD             | ----  | ----       | 55.00          |
| Zane Grey Loop      | 30      | John Wayne Cir   | Deer Creek Ranch | 2,590.      | 82.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| OVERALL             |         |                  |                  | 11,115.     | 81.00    | 82.63    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

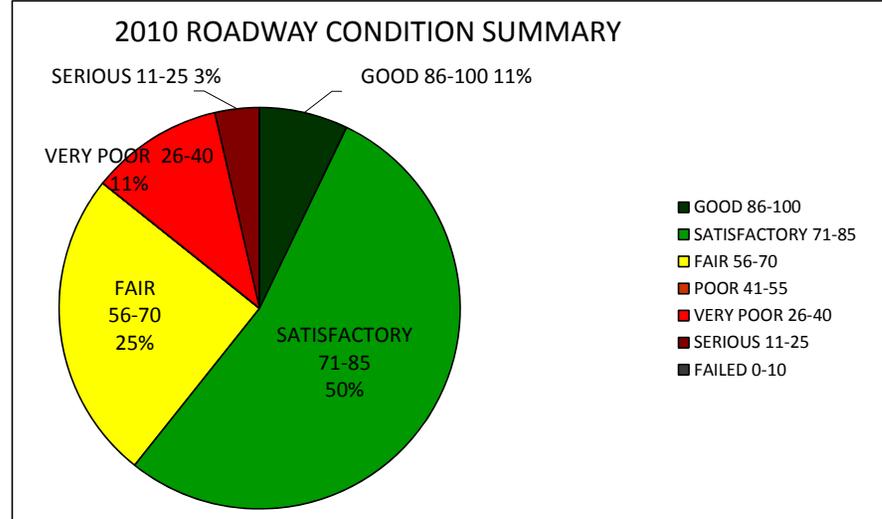
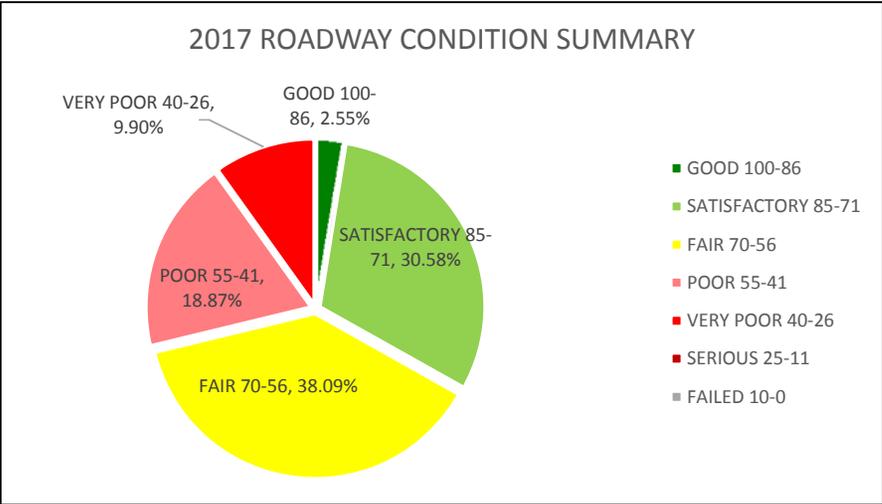
**DEER CREEK ESTATES**

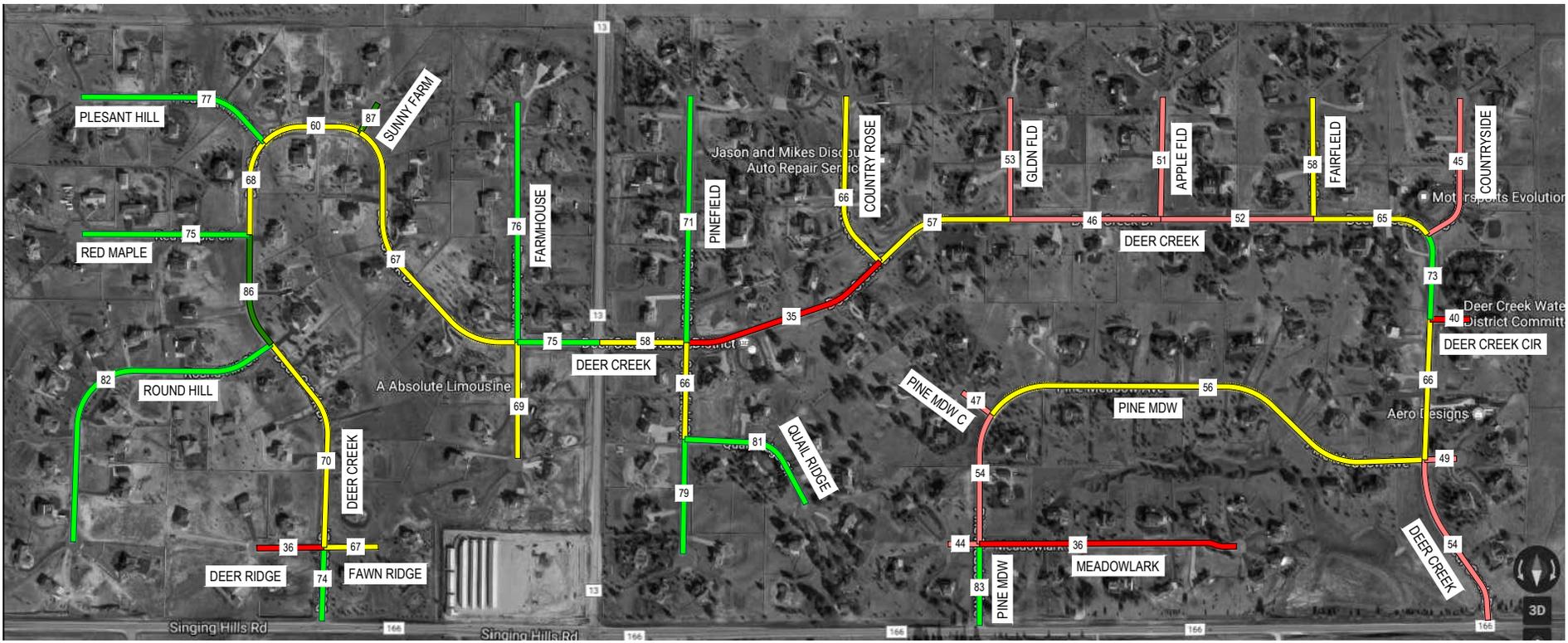


**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: DEER CREEK FARM  
 INSPECTION DATE: 4/11/2017

| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI     | 2017 PCI     |
|----------------------|---------|-------------------|-------------------|-------------|--------------|--------------|
| Apple Field Circle   | 10      | S Pinefield Dr    | End               | 540.        | 86.00        | 51.00        |
| Country Rose Circle  | 10      | S Pinefield Dr    | End               | 790.        | 71.00        | 66.00        |
| Countryside Circle   | 10      | S Pinefield Dr    | End               | 670.        | 29.00        | 45.00        |
| Deer Creek Drive     | 10      | Singing Hills Rd  | Deer Ridge Cir    | 325.        | 72.00        | 74.00        |
| Deer Creek Drive     | 100     | Country Rose Cir  | Golden Field Cir  | 640.        | 72.00        | 57.00        |
| Deer Creek Drive     | 110     | Golden Field Cir  | Apple Field Cir   | 665.        | 72.00        | 46.00        |
| Deer Creek Drive     | 120     | Apple Field Cir   | OVERALL+B6:B46    | 675.        | 72.00        | 52.00        |
| Deer Creek Drive     | 130     | Fairfield Cir     | Countryside Cir   | 525.        | 72.00        | 65.00        |
| Deer Creek Drive     | 140     | Countryside Cir   | Deer Creek Cir    | 380.        | 72.00        | 73.00        |
| Deer Creek Drive     | 150     | Deer Creek Cir    | Pine Meadow Ave   | 620.        | 72.00        | 66.00        |
| Deer Creek Drive     | 160     | Pine Meadow Ave   | Singing Hills Rd  | 780.        | 72.00        | 54.00        |
| Deer Creek Drive     | 20      | Deer Ridge Cir    | Round Hill Cir    | 980.        | 72.00        | 70.00        |
| Deer Creek Drive     | 30      | Round Hill Cir    | Red Maple Cir     | 510.        | 72.00        | 86.00        |
| Deer Creek Drive     | 40      | Red Maple Cir     | Pleasant Hill Cir | 425.        | 72.00        | 68.00        |
| Deer Creek Drive     | 50      | Pleasant Hill Cir | Sunny Farm Cir    | 445.        | 72.00        | 60.00        |
| Deer Creek Drive     | 60      | Sunny Farm Cir    | Farmhouse Cir     | 1,295.      | 72.00        | 67.00        |
| Deer Creek Drive     | 70      | Farmhouse Cir     | CR 13             | 365.        | 72.00        | 75.00        |
| Deer Creek Drive     | 80      | CR 13             | N Pinefield Cir   | 380.        | 72.00        | 58.00        |
| Deer Creek Drive     | 90      | N Pinefield Cir   | Country Rose Cir  | 950.        | 72.00        | 35.00        |
| Deer Ridge Circle    | 10      | Deer Creek Dr     | End               | 300.        | 40.00        | 36.00        |
| Deer Creek Circle    | 10      | S Pinefield Dr    | End               | 175.        | 40.00        | 40.00        |
| Fairfield Circle     | 10      | S Pinefield Dr    | End               | 535.        | 73.00        | 58.00        |
| Farmhouse Circle     | 10      | End (S)           | Deer Creek Dr     | 500.        | 75.00        | 69.00        |
| Farmhouse Circle     | 20      | Deer Creek Dr.    | End (N)           | 1,059.      | 75.00        | 76.00        |
| Fawn Ridge Circle    | 10      | Deer Creek Dr     | End               | 240.        | 72.00        | 67.00        |
| Golden Field Circle  | 10      | S Pinefield Dr    | End               | 535.        | 72.00        | 53.00        |
| Meadowlark Court     | 10      | End (W)           | Pine Meadow Ave   | 140.        | 51.00        | 44.00        |
| Meadowlark Court     | 20      | Pine Meadow Ave   | End (E)           | 1,140.      | 51.00        | 36.00        |
| Pine Meadow Avenue   | 10      | End               | Deer Creek Dr     | 140.        | 50.00        | 49.00        |
| Pine Meadow Avenue   | 20      | Deer Creek Dr     | Pine Meadow Cir   | 2,065.      | 50.00        | 56.00        |
| Pine Meadow Avenue   | 30      | Pine Meadow Cir   | Meadowlark Ct     | 580.        | 50.00        | 54.00        |
| Pine Meadow Avenue   | 40      | Meadowlark Ct     | End               | 360.        | 50.00        | 83.00        |
| Pine Meadow Circle   | 10      | Pine Meadow Cir   | End               | 165.        | 50.00        | 47.00        |
| S Pinefield Circle   | 10      | End               | Quail Ridge Cir   | 505.        | 75.00        | 79.00        |
| S Pinefield Circle   | 20      | Quail Ridge Cir   | Deer Creek Dr     | 430.        | 75.00        | 66.00        |
| S Pinefield Circle   | 30      | Deer Creek Dr     | End               | 1,090.      | 75.00        | 71.00        |
| Pleasant Hill Circle | 10      | Deer Creek Dr     | End               | 880.        | 79.00        | 77.00        |
| Quail Ridge Circle   | 10      | S Pinefield Dr    | End               | 680.        | 76.00        | 81.00        |
| Red Maple Circle     | 10      | Deer Creek Dr     | End               | 740.        | 74.00        | 75.00        |
| Round Hill Circle    | 10      | Deer Creek Dr     | End               | 1,540.      | 84.00        | 82.00        |
| Sunny Farm Circle    | 10      | Deer Creek Dr     | End               | 150.        | 79.00        | 87.00        |
| <b>OVERALL</b>       |         |                   |                   |             | <b>68.00</b> | <b>62.29</b> |



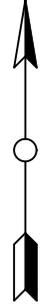


**DEER CREEK FARM SUBDIVISION - 2017 PCI**

SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: DEER CREEK FARM

INSPECTION DATE: 4/11/2017

| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|----------------------|---------|-------------------|-------------------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| Sunny Farm Circle    | 10      | Deer Creek Dr     | End               | 150.        | 79.00    | 87.00    | 2019            | CR, ED     | \$63.60             | 82.00          |
| Deer Creek Drive     | 30      | Round Hill Cir    | Red Maple Cir     | 510.        | 72.00    | 86.00    | 2019            | CR, ED     | \$216.24            | 81.00          |
| Pine Meadow Avenue   | 40      | Meadowlark Ct     | End               | 360.        | 50.00    | 83.00    | 2019            | CR, ED     | \$152.64            | 78.00          |
| Round Hill Circle    | 10      | Deer Creek Dr     | End               | 1,540.      | 84.00    | 82.00    | 2019            | CR, ED     | \$652.96            | 77.00          |
| Quail Ridge Circle   | 10      | S Pinefield Dr    | End               | 680.        | 76.00    | 81.00    | 2019            | CR, ED     | \$288.32            | 76.00          |
| S Pinefield Circle   | 10      | End               | Quail Ridge Cir   | 505.        | 75.00    | 79.00    | 2019            | CR, ED, SS | \$3,390.23          | 81.00          |
| Pleasant Hill Circle | 10      | Deer Creek Dr     | End               | 880.        | 79.00    | 77.00    | 2019            | CR, ED, SS | \$5,740.53          | 81.00          |
| Farmhouse Circle     | 20      | Deer Creek Dr.    | End (N)           | 1,059.      | 75.00    | 76.00    | 2019            | CR, ED, SS | \$6,908.21          | 81.00          |
| Deer Creek Drive     | 70      | Farmhouse Cir     | CR 13             | 365.        | 72.00    | 75.00    | 2019            | CR, ED, SS | \$2,381.02          | 81.00          |
| Red Maple Circle     | 10      | Deer Creek Dr     | End               | 740.        | 74.00    | 75.00    | 2019            | CR, ED, SS | \$4,827.27          | 81.00          |
| Deer Creek Drive     | 10      | Singing Hills Rd  | Deer Ridge Cir    | 325.        | 72.00    | 74.00    | 2019            | CR, ED, SS | \$2,120.08          | 81.00          |
| Deer Creek Drive     | 140     | Countryside Cir   | Deer Creek Cir    | 380.        | 72.00    | 73.00    | 2019            | CR, ED, SS | \$2,478.87          | 81.00          |
| S Pinefield Circle   | 30      | Deer Creek Dr     | End               | 1,090.      | 75.00    | 71.00    | 2019            | CR, ED, SS | \$7,110.43          | 81.00          |
| Deer Creek Drive     | 20      | Deer Ridge Cir    | Round Hill Cir    | 980.        | 72.00    | 70.00    | 2019            | CR, ED, SS | \$6,392.87          | 81.00          |
| Farmhouse Circle     | 10      | End (S)           | Deer Creek Dr     | 500.        | 75.00    | 69.00    | 2019            | CR, ED, SS | \$3,261.67          | 81.00          |
| Deer Creek Drive     | 40      | Red Maple Cir     | Pleasant Hill Cir | 425.        | 72.00    | 68.00    | 2019            | CR, ED, SS | \$2,772.42          | 81.00          |
| Deer Creek Drive     | 60      | Sunny Farm Cir    | Farmhouse Cir     | 1,295.      | 72.00    | 67.00    | 2019            | CR, ED, SS | \$8,447.72          | 81.00          |
| Fawn Ridge Circle    | 10      | Deer Creek Dr     | End               | 240.        | 72.00    | 67.00    | 2019            | CR, ED, SS | \$1,565.60          | 81.00          |
| Country Rose Circle  | 10      | S Pinefield Dr    | End               | 790.        | 71.00    | 66.00    | 2019            | CR, ED, SS | \$5,153.43          | 81.00          |
| Deer Creek Drive     | 150     | Deer Creek Cir    | Pine Meadow Ave   | 620.        | 72.00    | 66.00    | 2019            | CR, ED, SS | \$4,044.47          | 81.00          |
| S Pinefield Circle   | 20      | Quail Ridge Cir   | Deer Creek Dr     | 430.        | 75.00    | 66.00    | 2019            | CR, ED, SS | \$2,805.03          | 81.00          |
| Deer Creek Drive     | 130     | Fairfield Cir     | Countryside Cir   | 525.        | 72.00    | 65.00    | 2019            | CR, ED, SS | \$3,424.75          | 81.00          |
| Deer Creek Drive     | 50      | Pleasant Hill Cir | Sunny Farm Cir    | 445.        | 72.00    | 60.00    | 2019            | CR, ED, SS | \$3,176.11          | 81.00          |
| Deer Creek Drive     | 80      | CR 13             | N Pinefield Cir   | 380.        | 72.00    | 58.00    | 2019            | CR, ED, SS | \$2,712.19          | 81.00          |
| Fairfield Circle     | 10      | S Pinefield Dr    | End               | 535.        | 73.00    | 58.00    | 2019            | CR, ED, SS | \$3,818.47          | 81.00          |
| Deer Creek Drive     | 100     | Country Rose Cir  | Golden Field Cir  | 640.        | 72.00    | 57.00    | 2019            | CR, ED, SS | \$4,567.89          | 81.00          |
| Pine Meadow Avenue   | 20      | Deer Creek Dr     | Pine Meadow Cir   | 2,065.      | 50.00    | 56.00    | 2019            | CR, ED, SS | \$14,738.59         | 81.00          |
| Deer Creek Drive     | 160     | Pine Meadow Ave   | Singing Hills Rd  | 780.        | 72.00    | 54.00    | 2019            | CR, ED, SS | \$5,567.12          | 81.00          |
| Pine Meadow Avenue   | 30      | Pine Meadow Cir   | Meadowlark Ct     | 580.        | 50.00    | 54.00    | 2019            | CR, ED, SS | \$4,139.65          | 81.00          |
| Golden Field Circle  | 10      | S Pinefield Dr    | End               | 535.        | 72.00    | 53.00    | 2019            | CR, ED, SS | \$3,818.47          | 81.00          |
| Deer Creek Drive     | 120     | Apple Field Cir   | OVERALL+B6:B46    | 675.        | 72.00    | 52.00    | 2019            | CR, ED, SS | \$4,817.70          | 81.00          |
| Apple Field Circle   | 10      | S Pinefield Dr    | End               | 540.        | 86.00    | 51.00    | 2019            | CR, ED, SS | \$3,854.16          | 81.00          |
| Pine Meadow Avenue   | 10      | End               | Deer Creek Dr     | 140.        | 50.00    | 49.00    | 2019            | CR, ED, SS | \$999.23            | 81.00          |
| Pine Meadow Circle   | 10      | Pine Meadow Cir   | End               | 165.        | 50.00    | 47.00    | 2019            | CR, ED, SS | \$1,177.66          | 81.00          |
| Deer Creek Drive     | 110     | Golden Field Cir  | Apple Field Cir   | 665.        | 72.00    | 46.00    | 2019            | CR, ED, SS | \$4,746.33          | 81.00          |
| Countryside Circle   | 10      | S Pinefield Dr    | End               | 670.        | 29.00    | 45.00    | 2019            | CR, ED, SS | \$4,782.01          | 81.00          |
| Meadowlark Court     | 10      | End (W)           | Pine Meadow Ave   | 140.        | 51.00    | 44.00    | 2019            | CR, ED, SS | \$999.23            | 81.00          |
| Deer Creek Circle    | 10      | S Pinefield Dr    | End               | 175.        | 40.00    | 40.00    | 2019            | OV         | \$5,132.17          | 86.00          |
| Deer Ridge Circle    | 10      | Deer Creek Dr     | End               | 300.        | 40.00    | 36.00    | 2019            | OV         | \$8,798.00          | 86.00          |
| Meadowlark Court     | 20      | Pine Meadow Ave   | End (E)           | 1,140.      | 51.00    | 36.00    | 2019            | OV         | \$33,432.40         | 86.00          |
| Deer Creek Drive     | 90      | N Pinefield Cir   | Country Rose Cir  | 950.        | 72.00    | 35.00    | 2019            | OV         | \$27,860.33         | 86.00          |
| <b>OVERALL</b>       |         |                   |                   | 25,909.     | 68.00    | 62.29    |                 |            | <b>\$213,336.07</b> | 90.00          |

| Rehab Key | Description                |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**DEER CREEK FARM**



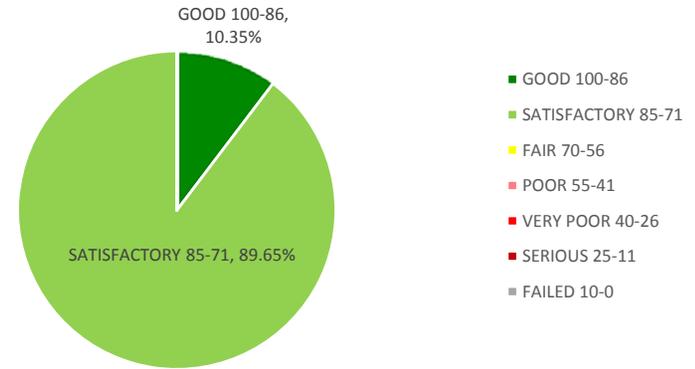
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: ELKHORN RANCH

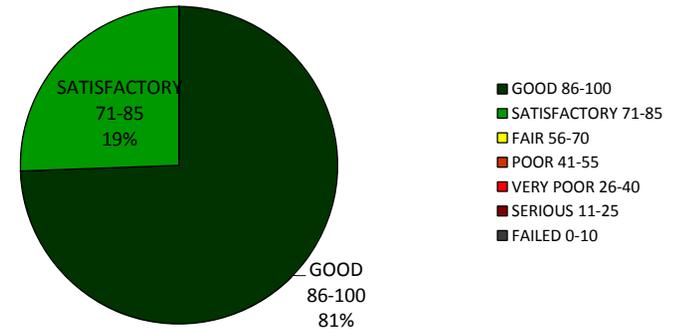
INSPECTION DATE: 4/5/2017

| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------------|---------|-------------------|-------------------|-------------|----------|----------|
| Antelope Ridge Trail | 10      | Elkhorn Ranch St  | Northout St       | 500.        | 90.00    | 82.00    |
| Antelope Ridge Trail | 100     | Paintbrush Ln     | Coal Creek St     | 2,855.      | 90.00    | 80.00    |
| Antelope Ridge Trail | 20      | Northout St       | Elkhorn Ranch St  | 5,225.      | 90.00    | 82.00    |
| Antelope Ridge Trail | 30      | Elkhorn Ranch St  | Sagebrush St      | 1,835.      | 90.00    | 75.00    |
| Antelope Ridge Trail | 40      | Sagebrush St      | Elkhorn Ranch St  | 2,285.      | 90.00    | 90.00    |
| Antelope Ridge Trail | 50      | Elkhorn Ranch St  | Coal Creek St     | 1,160.      | 90.00    | 87.00    |
| Antelope Ridge Trail | 60      | Coal Creek St     | Paintbrush Ln     | 1,385.      | 90.00    | 80.00    |
| Antelope Ridge Trail | 70      | Paintbrush Ln     | Eastout Ave       | 8,055.      | 90.00    | 85.00    |
| Antelope Ridge Trail | 80      | Eastout Ave       | Sagebrush Ave     | 1,260.      | 90.00    | 85.00    |
| Antelope Ridge Trail | 90      | Sagebrush Ave     | Paintbrush Ln     | 1,530.      | 90.00    | 85.00    |
| Coal Creek Street    | 10      | CR 194            | Antelope Ridge Tr | 1,925.      | 95.00    | 83.00    |
| Coal Creek Street    | 20      | Antelope Ridge Tr | Antelope Ridge Tr | 705.        | 95.00    | 86.00    |
| Eastout Ave          | 10      | Antelope Ridge Tr | Sagebrush Ave     | 2,560.      | 93.00    | 92.00    |
| Eastout Ave          | 20      | Sagebrush Ave     | CR 17             | 665.        | 93.00    | 83.00    |
| Elkhorn Ranch Street | 50      | Elkhorn St        | Sagebrush St      | 1,245.      | 87.00    | 76.00    |
| Elkhorn Ranch Street | 60      | Sagebrush St      | Antelope Ridge Tr | 3,070.      | 87.00    | 78.00    |
| Elkhorn Ranch Street | 10      | End               | Antelope Ridge Tr | 975.        | 87.00    | 76.00    |
| Elkhorn Ranch Street | 20      | Antelope Ridge Tr | Sagebrush St      | 825.        | 87.00    | 82.00    |
| Elkhorn Ranch Street | 30      | Sagebrush St      | Antelope Ridge Tr | 2,050.      | 87.00    | 85.00    |
| Elkhorn Ranch Street | 40      | Antelope Ridge Tr | Elkhorn St        | 3,950.      | 87.00    | 78.00    |
| Elkhorn Street       | 10      | Elkhorn Ranch St  | Sagebrush St      | 2,715.      | 81.00    | 79.00    |
| Elkhorn Street       | 20      | Sagebrush St      | Westout Ave       | 1,710.      | 81.00    | 83.00    |
| Elkhorn Street       | 30      | Westout Ave       | CR 186            | 1,000.      | 81.00    | 75.00    |
| Northout Street      | 10      | CR 194            | Antelope Ridge Tr | 675.        | 86.00    | 85.00    |
| Paintbrush Lane      | 10      | End               | Antelope Ridge Tr | 810.        | 91.00    | 80.00    |
| Paintbrush Lane      | 20      | Antelope Ridge Tr | Antelope Ridge Tr | 2,930.      | 91.00    | 85.00    |
| Sagebrush Avenue     | 10      | Antelope Ridge Tr | Eastout Ave       | 1,980.      | 91.00    | 85.00    |
| Sagebrush Street     | 10      | Elkhorn Ranch St  | Antelope Ridge Tr | 2,460.      | 88.00    | 82.00    |
| Sagebrush Street     | 20      | Antelope Ridge Tr | Elkhorn Ranch St  | 1,750.      | 88.00    | 78.00    |
| Sagebrush Street     | 30      | Elkhorn Ranch St  | Elkhorn St        | 2,240.      | 88.00    | 84.00    |
| Westout Avenue       | 10      | Elkhorn St        | CR 9              | 2,520.      | 80.00    | 73.00    |
| OVERALL              |         |                   |                   |             | 88.00    | 81.90    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: ELKHORN RANCH  
 INSPECTION DATE: 4/5/2017

| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------------|---------|-------------------|-------------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| Antelope Ridge Trail | 10      | Elkhorn Ranch St  | Northout St       | 500.        | 90.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| Antelope Ridge Trail | 100     | Paintbrush Ln     | Coal Creek St     | 2,855.      | 90.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Antelope Ridge Trail | 20      | Northout St       | Elkhorn Ranch St  | 5,225.      | 90.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| Antelope Ridge Trail | 30      | Elkhorn Ranch St  | Sagebrush St      | 1,835.      | 90.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| Antelope Ridge Trail | 40      | Sagebrush St      | Elkhorn Ranch St  | 2,285.      | 90.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| Antelope Ridge Trail | 50      | Elkhorn Ranch St  | Coal Creek St     | 1,160.      | 90.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| Antelope Ridge Trail | 60      | Coal Creek St     | Paintbrush Ln     | 1,385.      | 90.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Antelope Ridge Trail | 70      | Paintbrush Ln     | Eastout Ave       | 8,055.      | 90.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Antelope Ridge Trail | 80      | Eastout Ave       | Sagebrush Ave     | 1,260.      | 90.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Antelope Ridge Trail | 90      | Sagebrush Ave     | Paintbrush Ln     | 1,530.      | 90.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Coal Creek Street    | 10      | CR 194            | Antelope Ridge Tr | 1,925.      | 95.00    | 83.00    | TBD             | ----  | ----       | 78.00          |
| Coal Creek Street    | 20      | Antelope Ridge Tr | Antelope Ridge Tr | 705.        | 95.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| Eastout Ave          | 10      | Antelope Ridge Tr | Sagebrush Ave     | 2,560.      | 93.00    | 92.00    | TBD             | ----  | ----       | 87.00          |
| Eastout Ave          | 20      | Sagebrush Ave     | CR 17             | 665.        | 93.00    | 83.00    | TBD             | ----  | ----       | 78.00          |
| Elkhorn Ranch Street | 50      | Elkhorn St        | Sagebrush St      | 1,245.      | 87.00    | 76.00    | TBD             | ----  | ----       | 71.00          |
| Elkhorn Ranch Street | 60      | Sagebrush St      | Antelope Ridge Tr | 3,070.      | 87.00    | 78.00    | TBD             | ----  | ----       | 73.00          |
| Elkhorn Ranch Street | 10      | End               | Antelope Ridge Tr | 975.        | 87.00    | 76.00    | TBD             | ----  | ----       | 71.00          |
| Elkhorn Ranch Street | 20      | Antelope Ridge Tr | Sagebrush St      | 825.        | 87.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| Elkhorn Ranch Street | 30      | Sagebrush St      | Antelope Ridge Tr | 2,050.      | 87.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Elkhorn Ranch Street | 40      | Antelope Ridge Tr | Elkhorn St        | 3,950.      | 87.00    | 78.00    | TBD             | ----  | ----       | 73.00          |
| Elkhorn Street       | 10      | Elkhorn Ranch St  | Sagebrush St      | 2,715.      | 81.00    | 79.00    | TBD             | ----  | ----       | 74.00          |
| Elkhorn Street       | 20      | Sagebrush St      | Westout Ave       | 1,710.      | 81.00    | 83.00    | TBD             | ----  | ----       | 78.00          |
| Elkhorn Street       | 30      | Westout Ave       | CR 186            | 1,000.      | 81.00    | 75.00    | TBD             | ----  | ----       | 70.00          |
| Northout Sreet       | 10      | CR 194            | Antelope Ridge Tr | 675.        | 86.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Paintbrush Lane      | 10      | End               | Antelope Ridge Tr | 810.        | 91.00    | 80.00    | TBD             | ----  | ----       | 75.00          |
| Paintbrush Lane      | 20      | Antelope Ridge Tr | Antelope Ridge Tr | 2,930.      | 91.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Sagebrush Avenue     | 10      | Antelope Ridge Tr | Eastout Ave       | 1,980.      | 91.00    | 85.00    | TBD             | ----  | ----       | 80.00          |
| Sagebrush Street     | 10      | Elkhorn Ranch St  | Antelope Ridge Tr | 2,460.      | 88.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| Sagebrush Street     | 20      | Antelope Ridge Tr | Elkhorn Ranch St  | 1,750.      | 88.00    | 78.00    | TBD             | ----  | ----       | 73.00          |
| Sagebrush Street     | 30      | Elkhorn Ranch St  | Elkhorn St        | 2,240.      | 88.00    | 84.00    | TBD             | ----  | ----       | 79.00          |
| Westout Avenue       | 10      | Elkhorn St        | CR 9              | 2,520.      | 80.00    | 73.00    | TBD             | ----  | ----       | 68.00          |
| OVERALL              |         |                   |                   | 64,850.     | 88.00    | 81.90    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

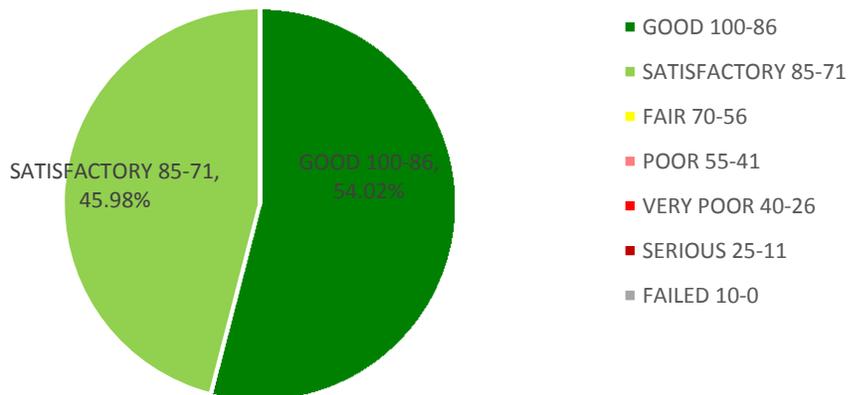
### ROADWAY ASPHALT CONDITION SUMMARY

SUBDIVISION: FOXWOOD RANCHES

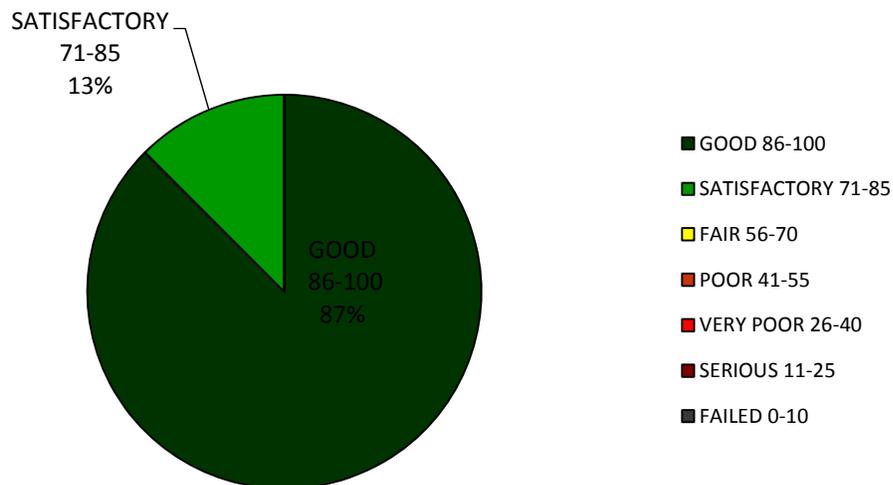
INSPECTION DATE: 4/12/2017

| STREET NAME   | SECTION | FROM       | TO        | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------|---------|------------|-----------|-------------|----------|----------|
| Becky Circle  | 10      | Patrick Tr | End       | 2,915.      | 97.00    | 74.00    |
| Patrick Trail | 10      | CO194 (W)  | Becky Cir | 6,890.      | 94.00    | 89.00    |
| Patrick Trail | 20      | Becky Cir  | CO194 (E) | 2,950.      | 94.00    | 83.00    |
| OVERALL       |         |            |           |             | 95.00    | 85.67    |

### 2017 ROADWAY CONDITION SUMMARY



### 2010 ROADWAY CONDITIONS SUMMARY





**FOXWOOD RANCHES SUBDIVISION - 2017 PCI**  
 SCALE: N.T.S.

**LEGEND**

|  |                     |
|--|---------------------|
|  | GOOD: 100-86        |
|  | SATISFACTORY: 85-71 |
|  | FAIR: 70-56         |
|  | POOR: 55-41         |
|  | VERY POOR: 40-26    |
|  | SERIOUS: 25-11      |
|  | FAILED: 10-0        |

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: FOXWOOD RANCHES

INSPECTION DATE: 4/12/2017

| STREET NAME    | SECTION | FROM       | TO        | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------|---------|------------|-----------|-------------|----------|----------|-----------------|-------|------------|----------------|
| Becky Circle   | 10      | Patrick Tr | End       | 2,915.      | 97.00    | 74.00    | TBD             | ----  | ----       | 69.00          |
| Patrick Trail  | 10      | CO194 (W)  | Becky Cir | 6,890.      | 94.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| Patrick Trail  | 20      | Becky Cir  | CO194 (E) | 2,950.      | 94.00    | 83.00    | TBD             | ----  | ----       | 78.00          |
| <b>OVERALL</b> |         |            |           | 12,755.     | 95.00    | 85.67    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**FOXWOOD**

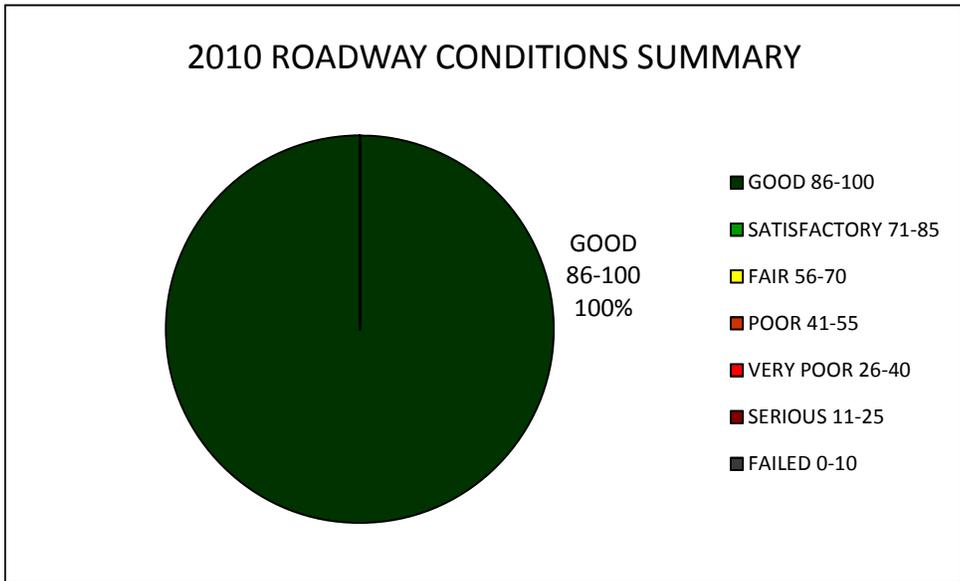
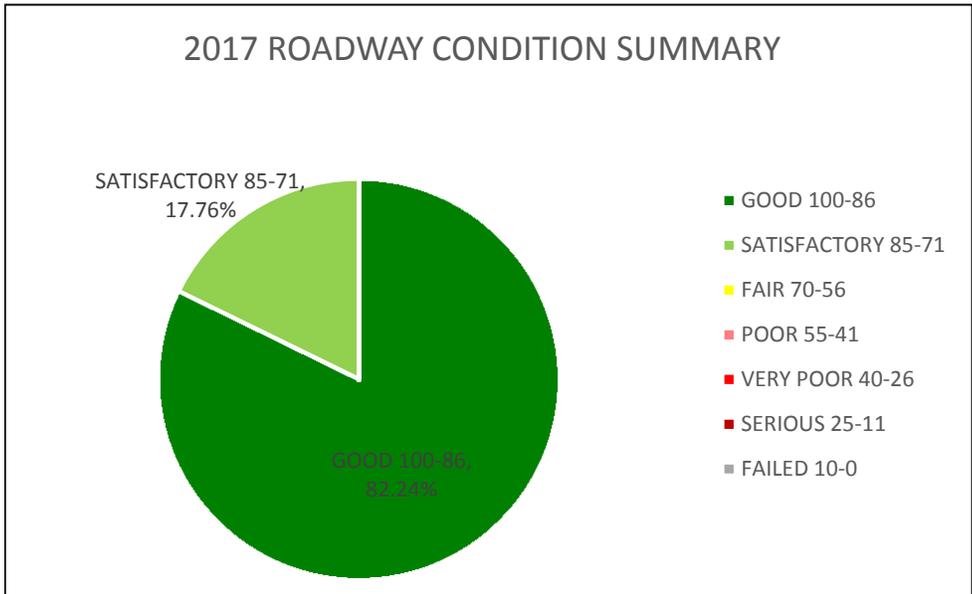


**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: MEADOW STATION

INSPECTION DATE: 4/11/2017

| STREET NAME           | SECTION | FROM               | TO                 | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-----------------------|---------|--------------------|--------------------|-------------|----------|----------|
| Buckskin Court        | 10      | Buckskin Rd        | End                | 875.        | 96.00    | 72.00    |
| Buckskin Road         | 10      | Delbert Rd         | Buckskin Ct        | 985.        | 97.00    | 82.00    |
| Buckskin Road         | 20      | Buckskin Ct        | Delbert Rd         | 1,650.      | 97.00    | 92.00    |
| Carlson Road          | 10      | Meadow Station Cir | End                | 790.        | 100.00   | 84.00    |
| London Drive          | 10      | Delbert Rd         | Meadow Station Cir | 4,415.      | 91.00    | 89.00    |
| London Drive          | 20      | Meadow Station Cir | End                | 2,295.      | 91.00    | 87.00    |
| Meadow Station Circle | 10      | Meadow Station Rd  | Carlson Rd         | 2,745.      | 93.00    | 90.00    |
| Meadow Station Circle | 20      | Carlson Rd         | Meadow Station Rd  | 4,120.      | 93.00    | 89.00    |
| Meadow Station Circle | 30      | Meadow Station Rd  | London Dr          | 1,450.      | 93.00    | 80.00    |
| Meadow Station Road   | 10      | Delbert Rd         | Meadow Sation Cir  | 3,765.      | 92.00    | 86.00    |
| OVERALL               |         |                    |                    |             | 93.00    | 85.10    |





**MEADOW STATION SUBDIVISION - 2017 PCI**

SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

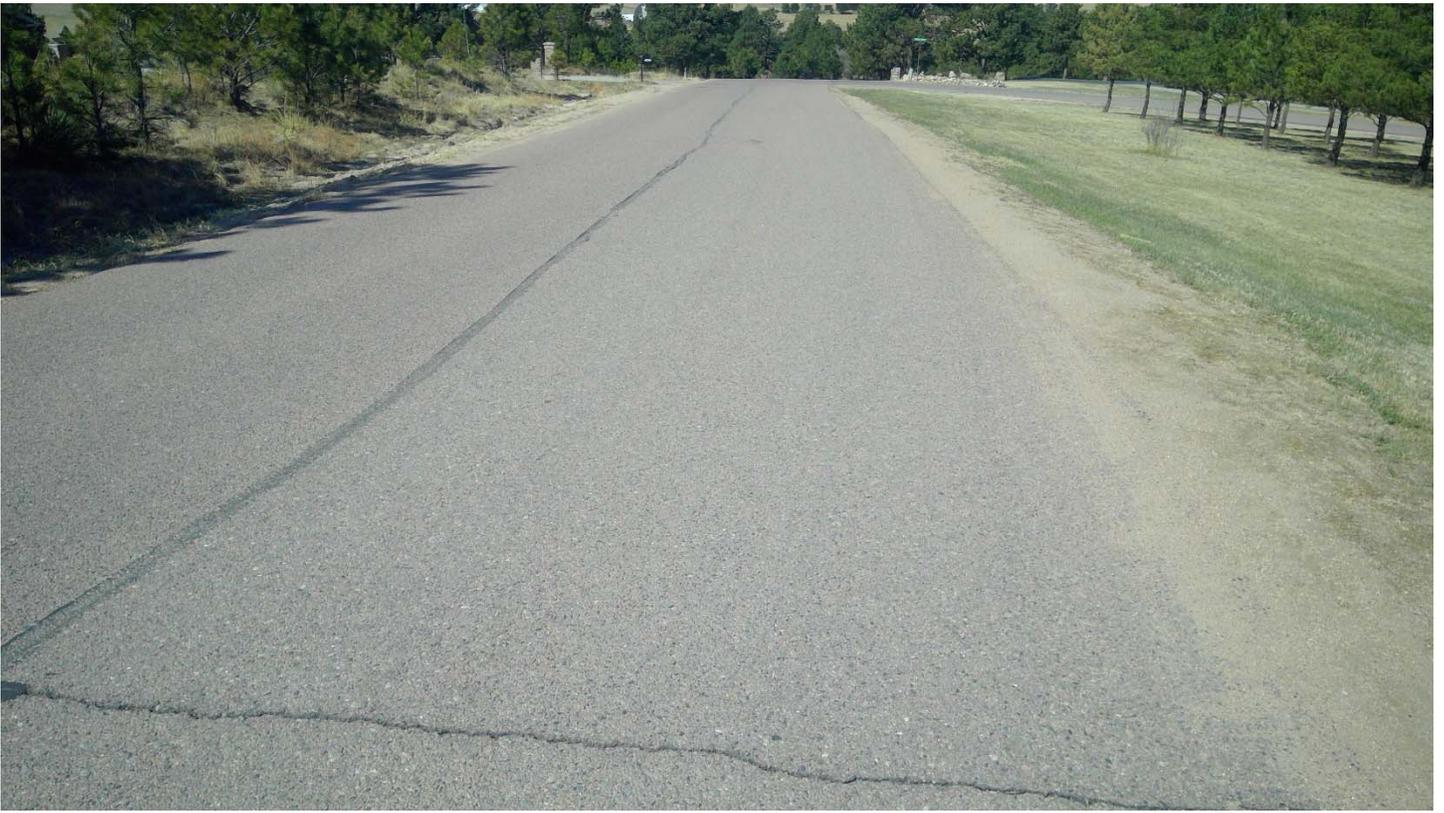
SUBDIVISION: MEADOW STATION

INSPECTION DATE: 4/11/2017

| STREET NAME           | SECTION | FROM               | TO                 | LENGTH (FT)    | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-----------------------|---------|--------------------|--------------------|----------------|--------------|--------------|-----------------|-------|------------|----------------|
| Buckskin Court        | 10      | Buckskin Rd        | End                | 875.           | 96.00        | 72.00        | TBD             | ----  | ----       | 67.00          |
| Buckskin Road         | 10      | Delbert Rd         | Buckskin Ct        | 985.           | 97.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| Buckskin Road         | 20      | Buckskin Ct        | Delbert Rd         | 1,650.         | 97.00        | 92.00        | TBD             | ----  | ----       | 87.00          |
| Carlson Road          | 10      | Meadow Station Cir | End                | 790.           | 100.00       | 84.00        | TBD             | ----  | ----       | 79.00          |
| London Drive          | 10      | Delbert Rd         | Meadow Station Cir | 4,415.         | 91.00        | 89.00        | TBD             | ----  | ----       | 84.00          |
| London Drive          | 20      | Meadow Station Cir | End                | 2,295.         | 91.00        | 87.00        | TBD             | ----  | ----       | 82.00          |
| Meadow Station Circle | 10      | Meadow Station Rd  | Carlson Rd         | 2,745.         | 93.00        | 90.00        | TBD             | ----  | ----       | 85.00          |
| Meadow Station Circle | 20      | Carlson Rd         | Meadow Station Rd  | 4,120.         | 93.00        | 89.00        | TBD             | ----  | ----       | 84.00          |
| Meadow Station Circle | 30      | Meadow Station Rd  | London Dr          | 1,450.         | 93.00        | 80.00        | TBD             | ----  | ----       | 75.00          |
| Meadow Station Road   | 10      | Delbert Rd         | Meadow Sation Cir  | 3,765.         | 92.00        | 86.00        | TBD             | ----  | ----       | 81.00          |
| <b>OVERALL</b>        |         |                    |                    | <b>23,090.</b> | <b>93.00</b> | <b>85.10</b> |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**MEADOW STATION**

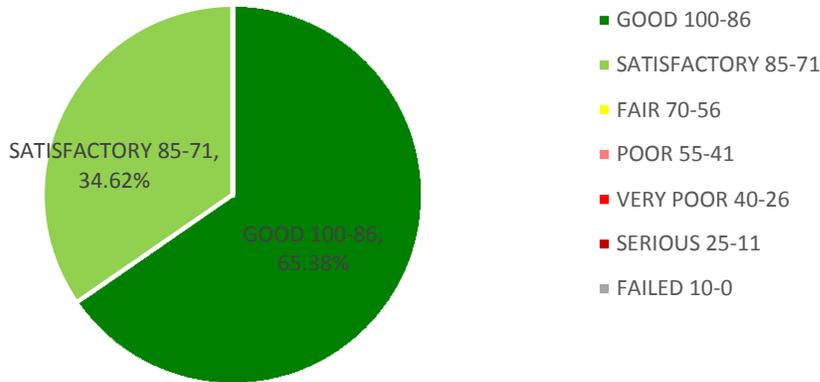


**ROADWAY ASPHALT CONDITION SUMMARY**

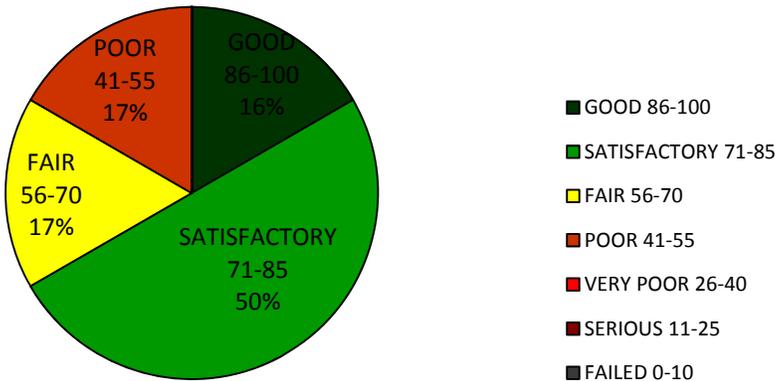
SUBDIVISION: OVERLAND  
 INSPECTION DATE: 4/13/2017

| STREET NAME          | SECTION | FROM                | TO                  | LENGTH (FT) | 2010 PCI     | 2017 PCI     |
|----------------------|---------|---------------------|---------------------|-------------|--------------|--------------|
| Columbine Ridge Road | 10      | Columbine Trail     | Columbine Trail E   | 625.        | 75.00        | 86.00        |
| Columbine Trail      | 10      | CO 86               | Columbine Trail W   | 450.        | 75.00        | 90.00        |
| Columbine Trail      | 20      | Columbine Trail E   | Columbine Ridge Rd  | 1,050.      | 75.00        | 90.00        |
| Columbine Trail      | 30      | Columbine Trail E   | End (N)             | 280.        | 75.00        | 89.00        |
| Columbine Trail East | 10      | Columbine Trail W   | Columbine Trail     | 320.        | 71.00        | 73.00        |
| Columbine Trail East | 20      | Columbine Trail     | Columbine Ridge Rd  | 1,690.      | 71.00        | 87.00        |
| Columbine Trail East | 30      | Columbine Ridge Rd  | Columbine Trail     | 1,335.      | 71.00        | 87.00        |
| Columbine Trail West | 10      | Columbine Trail (S) | Columbine Trail (N) | 2,555.      | 71.00        | 82.00        |
| <b>OVERALL</b>       |         |                     |                     |             | <b>73.00</b> | <b>88.88</b> |

**2017 ROADWAY CONDITION SUMMARY**

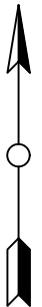


**2010 ROADWAY CONDITIONS SUMMARY**





OVERLAND SUBDIVISION - 2017 PCI  
SCALE: N.T.S.



**ROADWAY REHABILITATION COST ANALYSIS**

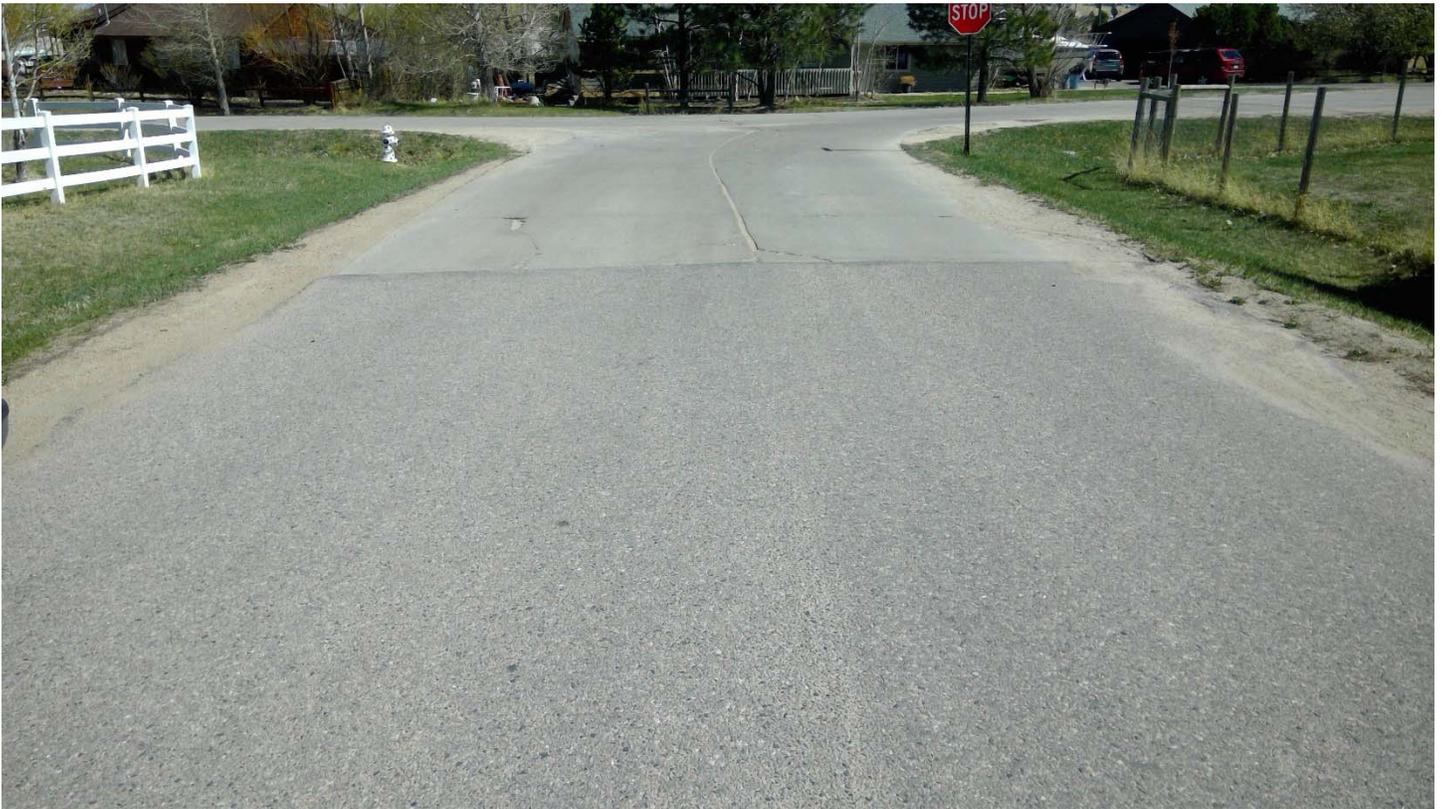
SUBDIVISION: OVERLAND

INSPECTION DATE: 4/13/2017

| STREET NAME          | SECTION | FROM                | TO                  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|----------------------|---------|---------------------|---------------------|-------------|----------|----------|-----------------|-------|------------|----------------|
| Columbine Ridge Road | 10      | Columbine Trail     | Columbine Trail E   | 625.        | 75.00    | 86.00    | TBD             | ----  | ----       | 81.00          |
| Columbine Trail      | 10      | CO 86               | Columbine Trail W   | 450.        | 75.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| Columbine Trail      | 20      | Columbine Trail E   | Columbine Ridge Rd  | 1,050.      | 75.00    | 90.00    | TBD             | ----  | ----       | 85.00          |
| Columbine Trail      | 30      | Columbine Trail E   | End (N)             | 280.        | 75.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| Columbine Trail East | 10      | Columbine Trail W   | Columbine Trail     | 320.        | 71.00    | 73.00    | TBD             | ----  | ----       | 68.00          |
| Columbine Trail East | 20      | Columbine Trail     | Columbine Ridge Rd  | 1,690.      | 71.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| Columbine Trail East | 30      | Columbine Ridge Rd  | Columbine Trail     | 1,335.      | 71.00    | 87.00    | TBD             | ----  | ----       | 82.00          |
| Columbine Trail West | 10      | Columbine Trail (S) | Columbine Trail (N) | 2,555.      | 71.00    | 82.00    | TBD             | ----  | ----       | 77.00          |
| OVERALL              |         |                     |                     | 8,305.      | 73.00    | 88.88    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**OVERLAND**



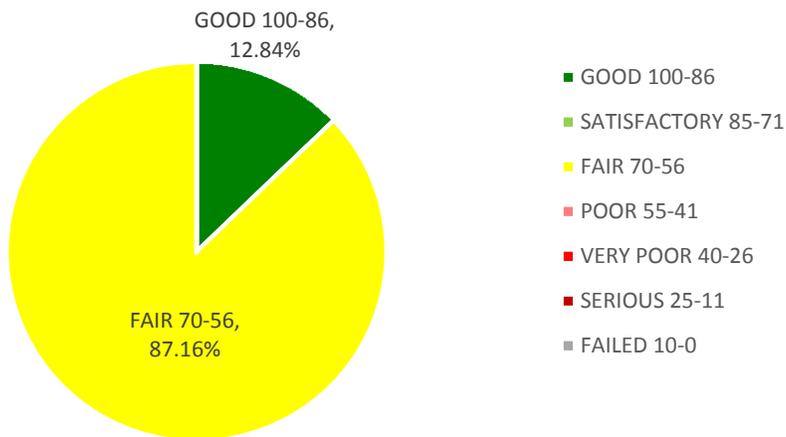
### ROADWAY ASPHALT CONDITION SUMMARY

SUBDIVISION: OUTBACK

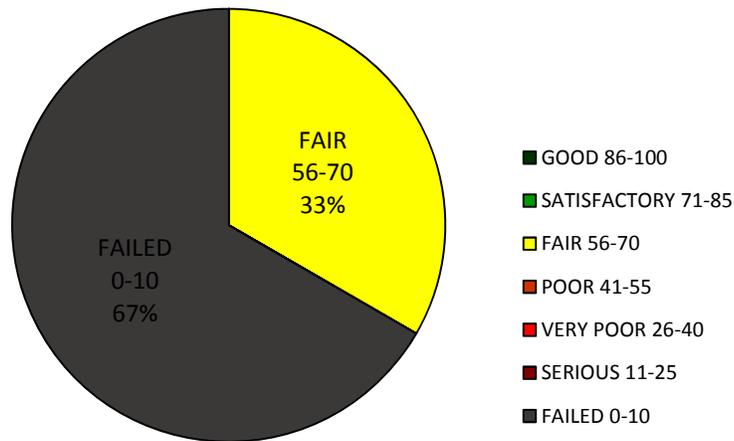
INSPECTION DATE: 4/12/2017

| STREET NAME | SECTION | FROM           | TO             | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-------------|---------|----------------|----------------|-------------|----------|----------|
| Sunset Ave  | 10      | CO 29          | Antler Cir     | 680.        | 19.00    | 70.00    |
| Sunset Ave  | 20      | Antler Cir     | Buckhorn Cir   | 1,700.      | 19.00    | 67.00    |
| Sunset Ave  | 30      | Buckhorn Cir   | Cactus Cir     | 405.        | 19.00    | 67.00    |
| Sunset Ave  | 40      | Cactus Cir     | Deerfield Cir  | 675.        | 19.00    | 66.00    |
| Sunset Ave  | 50      | Deerfield Cir  | Eagle Nest Cir | 1,120.      | 19.00    | 68.00    |
| Sunset Ave  | 60      | Eagle Nest Cir | End            | 675.        | 19.00    | 88.00    |
| OVERALL     |         |                |                |             | 19.00    | 71.00    |

### 2017 ROADWAY CONDITION SUMMARY



### 2010 ROADWAY CONDITIONS SUMMARY





**OUTBACK SUBDIVISION - 2017 PCI**  
 SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: OUTBACK

INSPECTION DATE: 4/12/2017

| STREET NAME    | SECTION | FROM           | TO             | LENGTH (FT)   | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|----------------|---------|----------------|----------------|---------------|--------------|--------------|-----------------|------------|---------------------|----------------|
| Sunset Ave     | 60      | Eagle Nest Cir | End            | 675.          | 19.00        | 88.00        | 2020            | CR, ED     | \$ 302.40           | 83.00          |
| Sunset Ave     | 10      | CO 29          | Antler Cir     | 680.          | 19.00        | 70.00        | 2020            | CR, ED, SS | \$ 4,823.47         | 82.00          |
| Sunset Ave     | 50      | Deerfield Cir  | Eagle Nest Cir | 1,120.        | 19.00        | 68.00        | 2020            | CR, ED, SS | \$ 7,944.53         | 82.00          |
| Sunset Ave     | 20      | Antler Cir     | Buckhorn Cir   | 1,700.        | 19.00        | 67.00        | 2020            | CR, ED, SS | \$ 12,058.67        | 82.00          |
| Sunset Ave     | 30      | Buckhorn Cir   | Cactus Cir     | 405.          | 19.00        | 67.00        | 2020            | CR, ED, SS | \$ 2,872.80         | 82.00          |
| Sunset Ave     | 40      | Cactus Cir     | Deerfield Cir  | 675.          | 19.00        | 66.00        | 2020            | CR, ED, SS | \$ 4,788.00         | 82.00          |
| <b>OVERALL</b> |         |                |                | <b>5,255.</b> | <b>19.00</b> | <b>71.00</b> |                 |            | <b>\$ 32,789.87</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**OUTBACK**



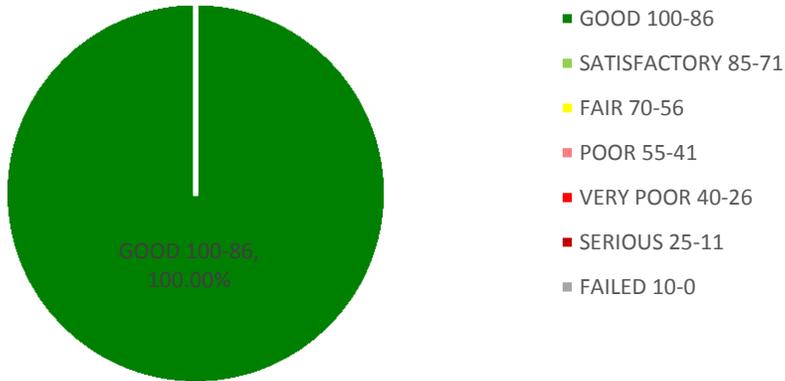
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: SOUTHERN HILLS

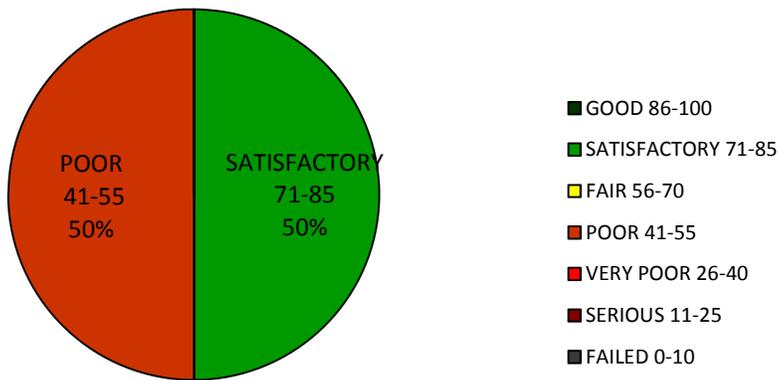
INSPECTION DATE: 4/14/2017

| STREET NAME       | SECTION | FROM   | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-------------------|---------|--------|-----|-------------|----------|----------|
| Pine Ridge Street | 10      | CO 132 | End | 1,325.      | 68.00    | 89.00    |
| OVERALL           |         |        |     |             | 68.00    | 89.00    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITIONS SUMMARY**

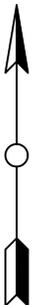




SOUTHERN HILLS SUBDIVISION - 2017 PCI  
 SCALE: N.T.S.

LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: SOUTHERN HILLS

INSPECTION DATE: 4/14/2017

| STREET NAME       | SECTION | FROM   | TO  | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|-------------------|---------|--------|-----|-------------|----------|----------|-----------------|-------|------------|----------------|
| Pine Ridge Street | 10      | CO 132 | End | 1,325.      | 68.00    | 89.00    | TBD             | ----  | ----       | 84.00          |
| OVERALL           |         |        |     | 1,325.      | 68.00    | 89.00    |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

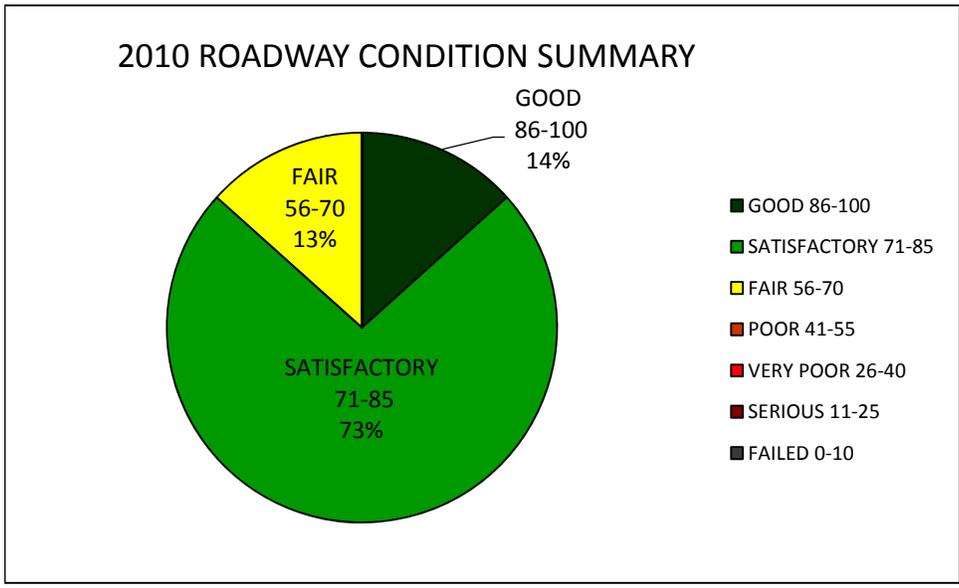
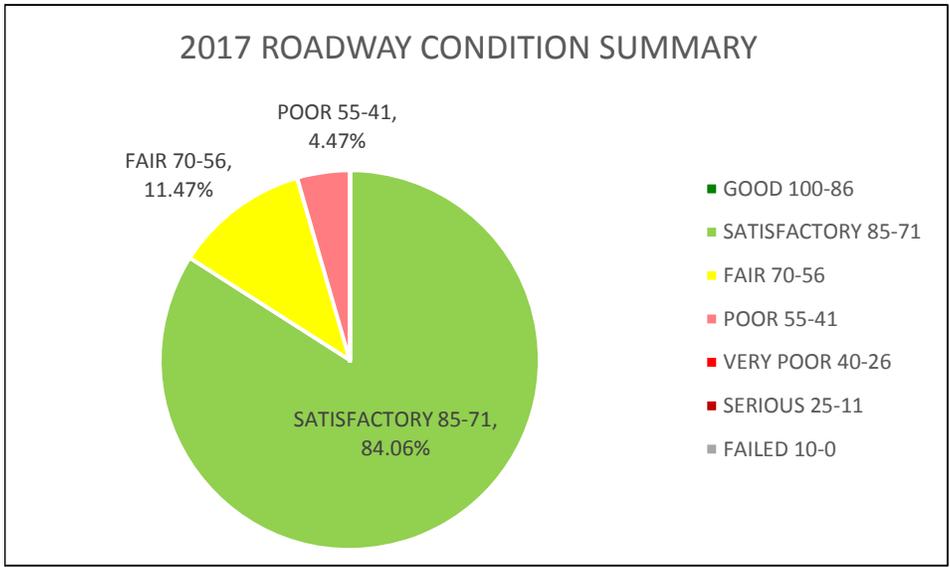
## SOUTHERN HILLS



**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: SKY RIM  
 INSPECTION DATE: 4/11/2017

| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------------|---------|-------------------|-------------------|-------------|----------|----------|
| Conifer Street       | 10      | Nobel Dr          | End               | 1,420.      | 86.00    | 77.00    |
| Fraiser Fir Circle   | 10      | N Pines Tr        | End               | 1,020.      | 73.00    | 68.00    |
| Loblolly Pine Circle | 10      | Nobel Dr          | End               | 710.        | 79.00    | 75.00    |
| Noble Drive          | 10      | N Pines Tr        | Loblolly Pine Cir | 410.        | 73.00    | 70.00    |
| Noble Drive          | 20      | Loblolly Pine Cir | End               | 1,380.      | 73.00    | 75.00    |
| North Pines Trail    | 10      | Delbert Rd        | Fraiser Fir       | 850.        | 79.00    | 49.00    |
| North Pines Trail    | 20      | Fraiser Fir       | Scotch Pine Cir   | 920.        | 79.00    | 76.00    |
| North Pines Trail    | 30      | Scotch Pine Cir   | Nobel Dr          | 2,400.      | 79.00    | 74.00    |
| North Pines Trail    | 40      | Nobel Dr          | Red Cedar Cir     | 1,060.      | 79.00    | 76.00    |
| North Pines Trail    | 50      | Red Cedar Cir     | Silver Fir St     | 2,565.      | 79.00    | 73.00    |
| North Pines Trail    | 60      | Silver Fir St     | Sunsetview Way    | 765.        | 79.00    | 77.00    |
| Red Cedar Circle     | 10      | N Pines Tr        | End               | 625.        | 76.00    | 82.00    |
| Scotch Pine Circle   | 10      | N Pines Tr        | End               | 750.        | 79.00    | 69.00    |
| Silver Fir Street    | 10      | Nobel Dr          | N Pines Tr        | 4,130.      | 66.00    | 76.00    |
| OVERALL              |         |                   |                   |             | 78.00    | 76.90    |





**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: SKY RIM

INSPECTION DATE: 4/11/2017

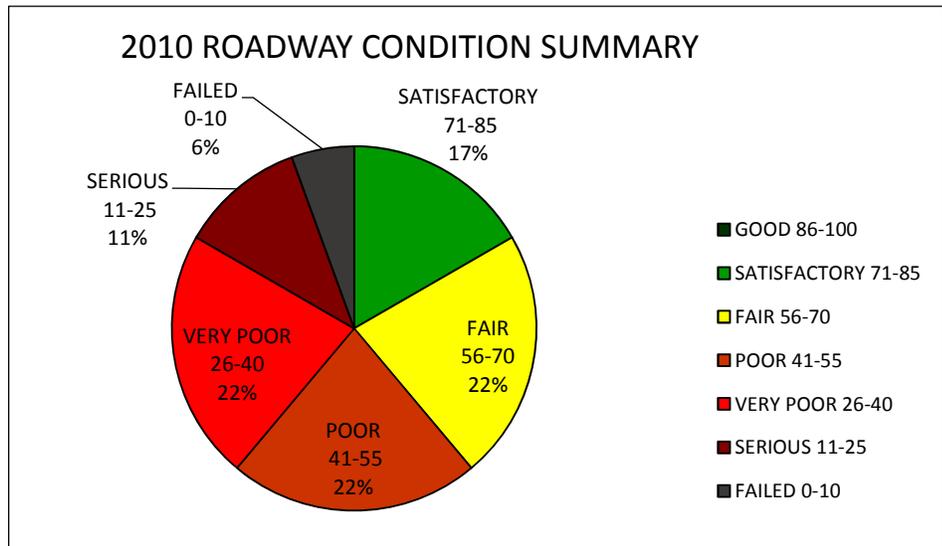
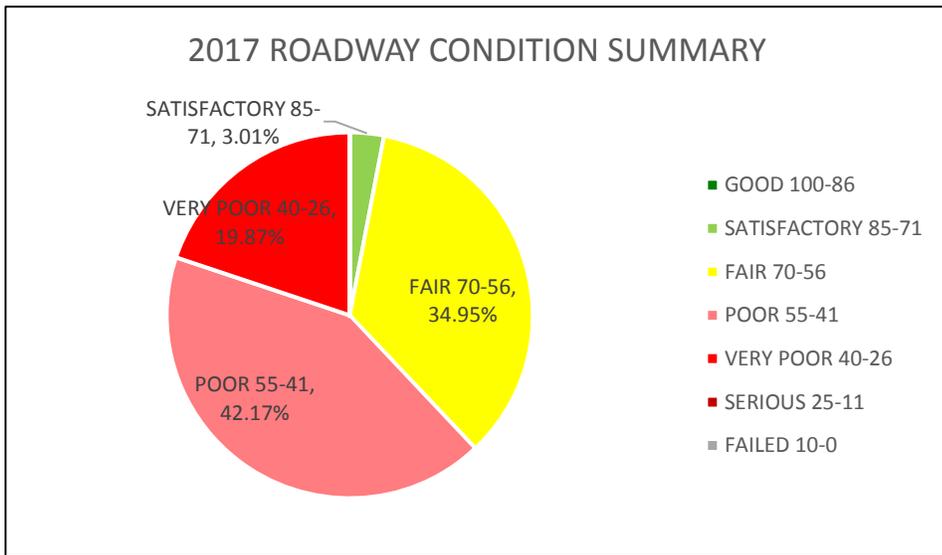
| STREET NAME          | SECTION | FROM              | TO                | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|----------------------|---------|-------------------|-------------------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| Red Cedar Circle     | 10      | N Pines Tr        | End               | 625.        | 76.00    | 82.00    | 2022            | CR,ED      | \$ 287.50           | 77.00          |
| Conifer Street       | 10      | Nobel Dr          | End               | 1,420.      | 86.00    | 77.00    | 2022            | CR, ED, SS | \$ 10,342.33        | 84.00          |
| North Pines Trail    | 60      | Silver Fir St     | Sunsetview Way    | 765.        | 79.00    | 77.00    | 2022            | CR, ED, SS | \$ 3,460.35         | 84.00          |
| North Pines Trail    | 20      | Fraiser Fir       | Scotch Pine Cir   | 920.        | 79.00    | 76.00    | 2022            | CR, ED, SS | \$ 28,848.13        | 84.00          |
| North Pines Trail    | 40      | Nobel Dr          | Red Cedar Cir     | 1,060.      | 79.00    | 76.00    | 2022            | CR, ED, SS | \$ 731.40           | 84.00          |
| Silver Fir Street    | 10      | Nobel Dr          | N Pines Tr        | 4,130.      | 66.00    | 76.00    | 2022            | CR, ED, SS | \$ 2,849.70         | 84.00          |
| Loblolly Pine Circle | 10      | Nobel Dr          | End               | 710.        | 79.00    | 75.00    | 2022            | CR, ED, SS | \$ 489.90           | 84.00          |
| Noble Drive          | 20      | Loblolly Pine Cir | End               | 1,380.      | 73.00    | 75.00    | 2022            | CR, ED, SS | \$ 952.20           | 84.00          |
| North Pines Trail    | 30      | Scotch Pine Cir   | Nobel Dr          | 2,400.      | 79.00    | 74.00    | 2022            | CR, ED, SS | \$ 1,656.00         | 84.00          |
| North Pines Trail    | 50      | Red Cedar Cir     | Silver Fir St     | 2,565.      | 79.00    | 73.00    | 2022            | CR, ED, SS | \$ 1,769.85         | 84.00          |
| Noble Drive          | 10      | N Pines Tr        | Loblolly Pine Cir | 410.        | 73.00    | 70.00    | 2022            | CR, ED, SS | \$ 282.90           | 84.00          |
| Scotch Pine Circle   | 10      | N Pines Tr        | End               | 750.        | 79.00    | 69.00    | 2022            | CR, ED, SS | \$ 517.50           | 84.00          |
| Fraiser Fir Circle   | 10      | N Pines Tr        | End               | 1,020.      | 73.00    | 68.00    | 2022            | CR, ED, SS | \$ 703.80           | 84.00          |
| North Pines Trail    | 10      | Delbert Rd        | Fraiser Fir       | 850.        | 79.00    | 49.00    | 2022            | CR, ED, SS | \$ 977.50           | 84.00          |
| <b>OVERALL</b>       |         |                   |                   | 19,005.     | 78.00    | 76.90    |                 |            | <b>\$ 53,869.07</b> |                |

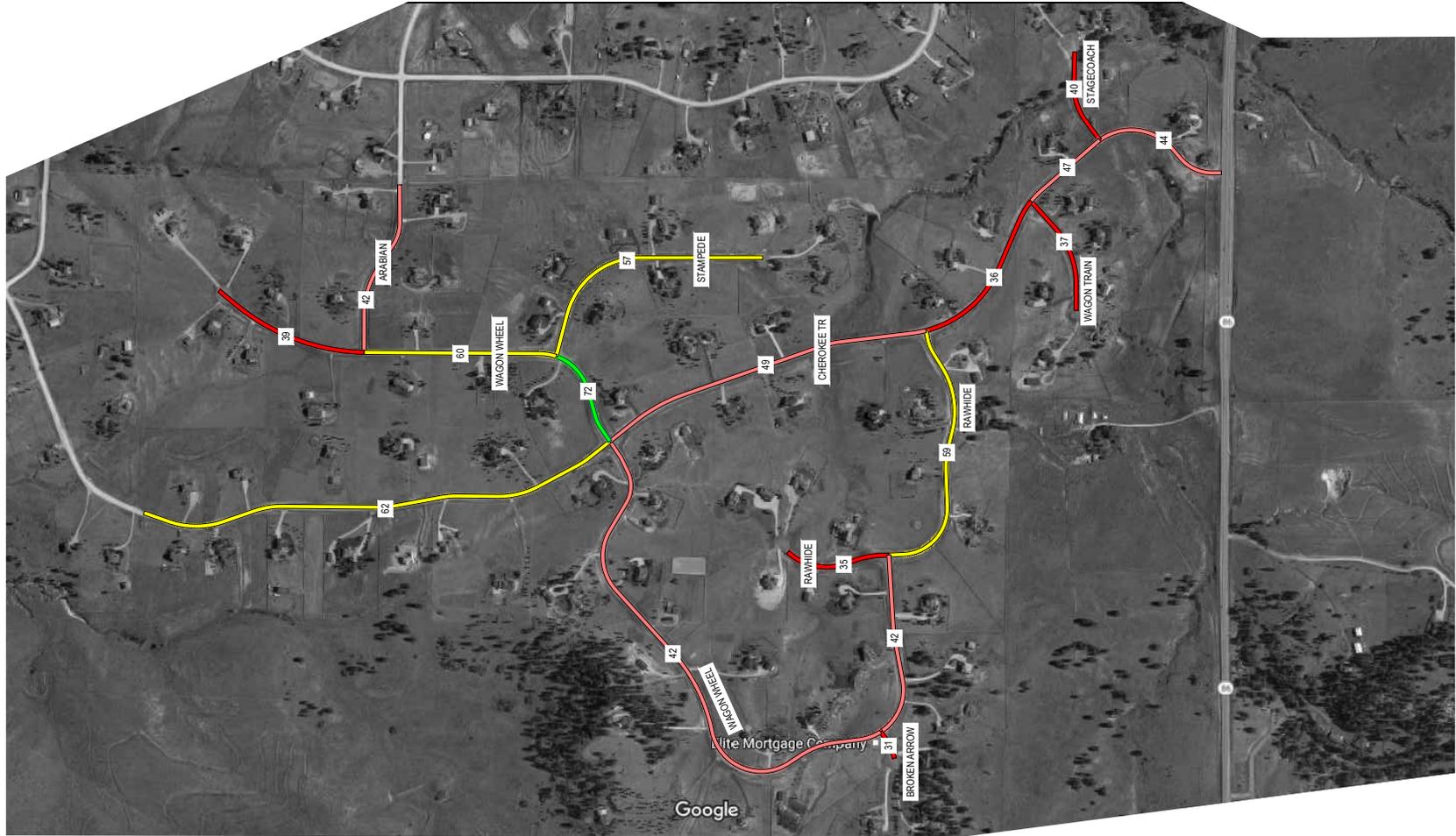
| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: STAGE RUN  
 INSPECTION DATE: 4/14/2017

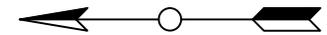
| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|
| Arabian Trail       | 10      | Wagon Wheel Tr   | End              | 1,050.      | 50.00    | 42.00    |
| Broken Arrow Circle | 10      | Wagon Wheel Tr   | End              | 180.        | 22.00    | 31.00    |
| Cherokee Trail      | 10      | End              | Wagon Wheel Tr   | 2,910.      | 30.00    | 62.00    |
| Cherokee Trail      | 20      | Wagon Wheel Tr   | Rawhide Cir      | 2,030.      | 30.00    | 49.00    |
| Cherokee Trail      | 30      | Rawhide Cir      | Wagon Train Cir  | 1,040.      | 30.00    | 36.00    |
| Cherokee Trail      | 40      | Wagon Train Cir  | Stagecoach Cir   | 550.        | 30.00    | 47.00    |
| Cherokee Trail      | 50      | Stagecoach Cir   | CR 86            | 825.        | 30.00    | 44.00    |
| Rawhide Circle      | 10      | End              | Wagon Wheel Tr   | 635.        | 53.00    | 35.00    |
| Rawhide Circle      | 20      | Wagon Wheel Tr   | Cherokee Trail   | 1,610.      | 53.00    | 59.00    |
| Stagecoach Circle   | 10      | Cherokee Trail   | End              | 570.        | 49.00    | 40.00    |
| Stampede Circle     | 10      | Wagon Wheel Tr   | End              | 1,585.      | 75.00    | 57.00    |
| Wagon Train Circle  | 10      | Cherokee Trail   | End              | 740.        | 70.00    | 37.00    |
| Wagon Wheel Trail   | 10      | End              | Arabian Trail    | 960.        | 64.00    | 39.00    |
| Wagon Wheel Trail   | 20      | Arabian Trail    | Stampede Cir     | 1,150.      | 64.00    | 60.00    |
| Wagon Wheel Trail   | 30      | Stampede Cir     | Cherokee Trail   | 625.        | 64.00    | 72.00    |
| Wagon Wheel Trail   | 40      | Cherokee Trail   | Broken Arrow Cir | 3,190.      | 64.00    | 42.00    |
| Wagon Wheel Trail   | 50      | Broken Arrow Cir | Rawhide Cir      | 1,110.      | 64.00    | 42.00    |
| OVERALL             |         |                  |                  |             | 48.00    | 46.71    |





STAGE RUN SUBDIVISION - 2017 PCI

SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: STAGE RUN

INSPECTION DATE: 4/14/2017

| STREET NAME         | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST           | 2023 PROJ. PCI |
|---------------------|---------|------------------|------------------|-------------|----------|----------|-----------------|------------|----------------------|----------------|
| Wagon Wheel Trail   | 30      | Stampede Cir     | Cherokee Trail   | 625.        | 64.00    | 72.00    | 2018            | CR, ED, SS | \$ 4,077.08          | 80.00          |
| Cherokee Trail      | 10      | End              | Wagon Wheel Tr   | 2,910.      | 30.00    | 62.00    | 2018            | CR, ED, SS | \$ 18,982.90         | 80.00          |
| Wagon Wheel Trail   | 20      | Arabian Trail    | Stampede Cir     | 1,150.      | 64.00    | 60.00    | 2018            | CR, ED, SS | \$ 7,975.63          | 80.00          |
| Rawhide Circle      | 20      | Wagon Wheel Tr   | Cherokee Trail   | 1,610.      | 53.00    | 59.00    | 2018            | CR, ED, SS | \$ 11,165.89         | 80.00          |
| Stampede Circle     | 10      | Wagon Wheel Tr   | End              | 1,585.      | 75.00    | 57.00    | 2018            | CR, ED, SS | \$ 10,992.50         | 80.00          |
| Cherokee Trail      | 20      | Wagon Wheel Tr   | Rawhide Cir      | 2,030.      | 30.00    | 49.00    | 2018            | CR, ED, SS | \$ 14,078.73         | 80.00          |
| Cherokee Trail      | 40      | Wagon Train Cir  | Stagecoach Cir   | 550.        | 30.00    | 47.00    | 2018            | CR, ED, SS | \$ 3,814.43          | 80.00          |
| Cherokee Trail      | 50      | Stagecoach Cir   | CR 86            | 825.        | 30.00    | 44.00    | 2018            | CR, ED, SS | \$ 5,721.65          | 80.00          |
| Arabian Trail       | 10      | Wagon Wheel Tr   | End              | 1,050.      | 50.00    | 42.00    | 2018            | CR, ED, SS | \$ 7,282.10          | 80.00          |
| Wagon Wheel Trail   | 40      | Cherokee Trail   | Broken Arrow Cir | 3,190.      | 64.00    | 42.00    | 2018            | CR, ED, SS | \$ 22,123.71         | 80.00          |
| Wagon Wheel Trail   | 50      | Broken Arrow Cir | Rawhide Cir      | 1,110.      | 64.00    | 42.00    | 2018            | CR, ED, SS | \$ 7,698.22          | 80.00          |
| Stagecoach Circle   | 10      | Cherokee Trail   | End              | 570.        | 49.00    | 40.00    | 2018            | CR, ED, OV | \$ 16,243.10         | 85.00          |
| Wagon Wheel Trail   | 10      | End              | Arabian Trail    | 960.        | 64.00    | 39.00    | 2018            | CR, ED, OV | \$ 27,356.80         | 85.00          |
| Wagon Train Circle  | 10      | Cherokee Trail   | End              | 740.        | 70.00    | 37.00    | 2018            | CR, ED, OV | \$ 21,087.53         | 85.00          |
| Cherokee Trail      | 30      | Rawhide Cir      | Wagon Train Cir  | 1,040.      | 30.00    | 36.00    | 2018            | CR, ED, OV | \$ 29,636.53         | 85.00          |
| Rawhide Circle      | 10      | End              | Wagon Wheel Tr   | 635.        | 53.00    | 35.00    | 2018            | CR, ED, OV | \$ 18,095.38         | 85.00          |
| Broken Arrow Circle | 10      | Wagon Wheel Tr   | End              | 180.        | 22.00    | 31.00    | 2018            | CR, ED, OV | \$ 5,129.40          | 85.00          |
| <b>OVERALL</b>      |         |                  |                  | 20,760.     | 48.00    | 46.71    |                 |            | <b>\$ 231,461.60</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**STAGE RUN**



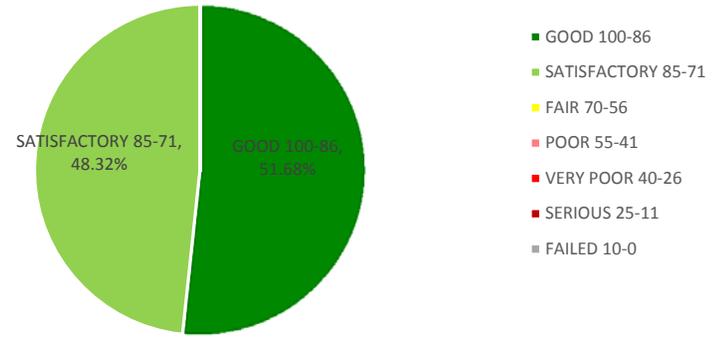
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: SPRING VALLEY RANCH

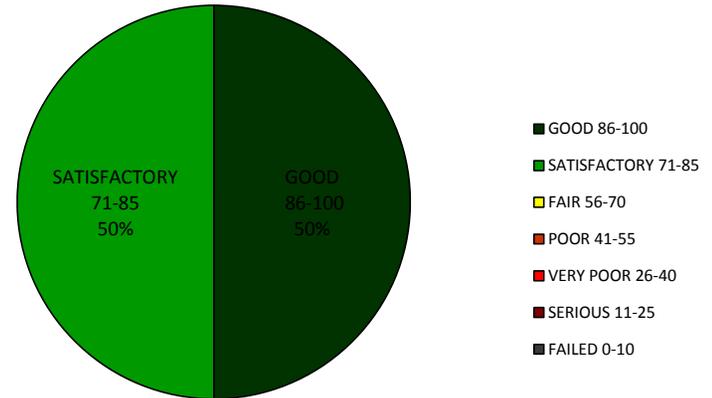
INSPECTION DATE: 4/12/2017

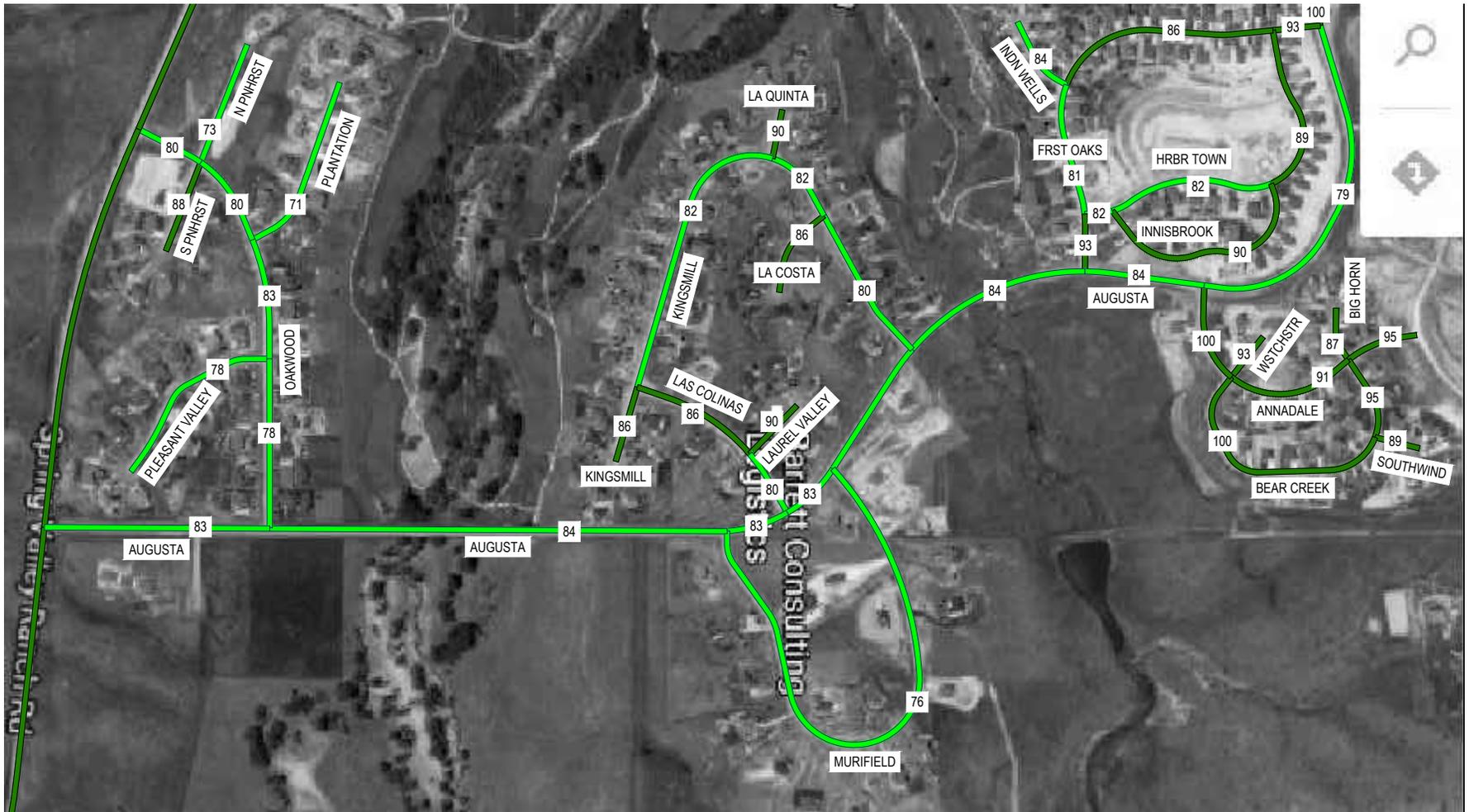
| STREET NAME            | SECTION | FROM                | TO                  | LENGTH (FT) | 2010 PCI | 2017 PCI |
|------------------------|---------|---------------------|---------------------|-------------|----------|----------|
| Annadale Trail         | 10      | S Augusta Ave       | Westchester Dr      | 445.        | 100.00   | n/a      |
| Annadale Trail         | 20      | Westchester Dr      | Big Horn Cir        | 580.        | 100.00   | 91.00    |
| Annadale Trail         | 30      | Big Horn Cir        | End                 | 325.        | 100.00   | 95.00    |
| Bear Creek Loop        | 10      | Annadale Tr (S)     | Southwind Cir       | 1,130.      | 92.00    | n/a      |
| Bear Creek Loop        | 20      | Southwind Cir       | Annadale Tr (N)     | 380.        | 92.00    | 95.00    |
| Big Horn Circle        | 10      | Annadale Trail      | End                 | 245.        | n/a      | 87.00    |
| E Kingsmill Circle     | 10      | End                 | Las Colinas Dr      | 340.        | 89.00    | 86.00    |
| E Kingsmill Circle     | 20      | Las Colinas Dr      | La Quinta Cir       | 1,310.      | 89.00    | 82.00    |
| E Kingsmill Circle     | 30      | La Quinta Cir       | La Costa Cir        | 350.        | 89.00    | 82.00    |
| E Kingsmill Circle     | 40      | La Costa Cir        | E Kingsmill Cir     | 715.        | 89.00    | 80.00    |
| E Muirfield Loop       | 10      | S Augusta Ave (S)   | S Augusta Ave (N)   | 2,670.      | 85.00    | 76.00    |
| Forest Oaks Drive      | 10      | S Augusta Ave       | Harbor Town Dr      | 255.        | 91.00    | 93.00    |
| Forest Oaks Drive      | 20      | Harbor Town Dr      | Indian Wells Cir    | 590.        | 91.00    | 81.00    |
| Forest Oaks Drive      | 30      | Indian Wells Cir    | Harbor Town Dr      | 1,020.      | 91.00    | 86.00    |
| Forest Oaks Drive      | 40      | Harbor Town Dr      | S Augusta Ave       | 210.        | 91.00    | 93.00    |
| Harbor Town Drive      | 10      | Forest Oaks Dr (S)  | Innisbrook Loop     | 125.        | 94.00    | 82.00    |
| Harbor Town Drive      | 20      | Innisbrook Loop     | Innisbrook Loop     | 740.        | 94.00    | 82.00    |
| Harbor Town Drive      | 30      | Innisbrook Loop     | Forest Oaks Dr (N)  | 765.        | 94.00    | 89.00    |
| Indian Wells Circle    | 10      | Forest Oaks Dr      | End                 | 365.        | n/a      | 84.00    |
| Innisbrook Loop        | 10      | Harbor Town Dr      | Harbor Town Dr      | 1,040.      | n/a      | 90.00    |
| La Costa Circle        | 10      | E Kingsmill Cir     | End                 | 415.        | 91.00    | 86.00    |
| La Quinta Circle       | 10      | E Kingsmill Cir     | End                 | 220.        | 93.00    | 90.00    |
| Las Colinas Drive      | 10      | S Augusta Ave       | Laurel Valley Cir   | 310.        | 90.00    | 80.00    |
| Las Colinas Drive      | 20      | Laurel Valley Cir   | Las Colinas Dr      | 590.        | 90.00    | 86.00    |
| Laurel Valley Circle   | 10      | Las Colinas Dr      | End                 | 300.        | 94.00    | 90.00    |
| N Pinehurst Circle     | 10      | End                 | Oakwood St          | 560.        | 94.00    | 73.00    |
| Oakwood Street         | 40      | Pleasant Valley Cir | S Augusta Ave       | 750.        | 83.00    | 78.00    |
| Oakwood Street         | 10      | Spring Valley Ranch | N Pinehurst Cir     | 315.        | 83.00    | 80.00    |
| Oakwood Street         | 20      | N Pinehurst Cir     | Plantation Cir      | 420.        | 83.00    | 80.00    |
| Oakwood Street         | 30      | Plantation Cir      | Pleasant Valley Cir | 540.        | 83.00    | 83.00    |
| Plantation Circle      | 10      | Oakwood St          | End                 | 830.        | 97.00    | 71.00    |
| Pleasant Valley Circle | 10      | Oakwood St          | End                 | 855.        | 77.00    | 78.00    |
| S Augusta Avenue       | 50      | E Muirfield Loop    | E Kingsmill Cir     | 635.        | 78.00    | 82.00    |
| S Augusta Avenue       | 60      | E Kingsmill Cir     | Forest Oaks Dr      | 870.        | 78.00    | 84.00    |
| S Augusta Avenue       | 70      | Forest Oaks Dr      | Annadale Tr         | 535.        | 78.00    | 84.00    |
| S Augusta Avenue       | 80      | Annadale Tr         | Forest Oaks Dr      | 1,600.      | 78.00    | 79.00    |
| S Augusta Avenue       | 90      | Forest Oaks Dr      | End                 | 130.        | 78.00    | n/a      |
| S Augusta Avenue       | 10      | Spring Valley Ranch | Oakwood St          | 1,000.      | 78.00    | 83.00    |
| S Augusta Avenue       | 20      | Oakwood St          | E Muirfield Loop    | 2,030.      | 78.00    | 84.00    |
| S Augusta Avenue       | 30      | E Muirfield Loop    | Las Colinas Dr      | 280.        | 78.00    | 83.00    |
| S Augusta Avenue       | 40      | Las Colinas Dr      | E Muirfield Loop    | 280.        | 78.00    | 83.00    |
| S Pinehurst Circle     | 10      | Oakwood St          | End                 | 420.        | 81.00    | 88.00    |
| Southwind Circle       | 10      | Bear Creek Loop     | End                 | 205.        | n/a      | 89.00    |
| Spring Valley Ranch F  | 10      | End                 | Oakwood St          | 3,195.      | 82.00    | n/a      |
| Spring Valley Ranch F  | 20      | Oakwood St          | S Augusta Ave       | 1,825.      | 82.00    | n/a      |
| Spring Valley Ranch F  | 30      | S Augusta Ave       | CO 166              | 5,710.      | 82.00    | n/a      |
| Westchester Drive      | 10      | Annadale Tr         | End                 | 225.        | 100.00   | 93.00    |
| OVERALL                |         |                     |                     |             | 86.00    | 86.77    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





**SPRING VALLEY RANCH SUBDIVISION - 2017 PCI**

SCALE: N.T.S.

**LEGEND**

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0



**ROADWAY REHABILITATION COST ANALYSIS**

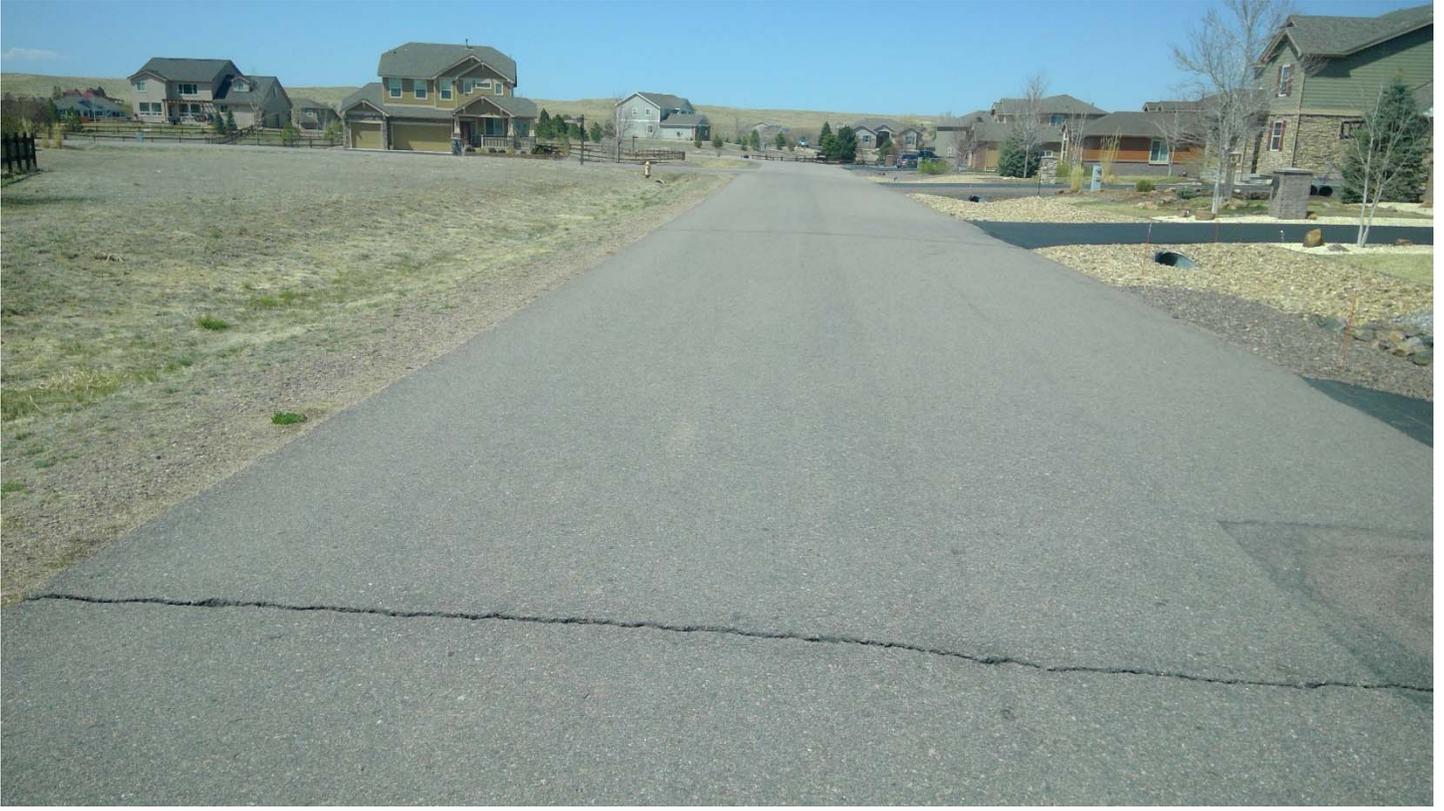
SUBDIVISION: SPRING VALLEY RANCH

INSPECTION DATE: 4/12/2017

| STREET NAME            | SECTION | FROM                | TO                  | LENGTH (FT)    | 2010 PCI     | 2017 PCI     | EST. REHAB DATE | REHAB | REHAB COST | 2023 PROJ. PCI |
|------------------------|---------|---------------------|---------------------|----------------|--------------|--------------|-----------------|-------|------------|----------------|
| Annadale Trail         | 10      | S Augusta Ave       | Westchester Dr      | 445.           | 100.00       | n/a          | TBD             | ----  | ----       |                |
| Annadale Trail         | 20      | Westchester Dr      | Big Horn Cir        | 580.           | 100.00       | 91.00        | TBD             | ----  | ----       | 86.00          |
| Annadale Trail         | 30      | Big Horn Cir        | End                 | 325.           | 100.00       | 95.00        | TBD             | ----  | ----       | 90.00          |
| Bear Creek Loop        | 10      | Annadale Tr (S)     | Southwind Cir       | 1,130.         | 92.00        | n/a          | TBD             | ----  | ----       |                |
| Bear Creek Loop        | 20      | Southwind Cir       | Annadale Tr (N)     | 380.           | 92.00        | 95.00        | TBD             | ----  | ----       | 90.00          |
| Big Horn Circle        | 10      | Annadale Trail      | End                 | 245.           | n/a          | 87.00        | TBD             | ----  | ----       | 82.00          |
| E Kingsmill Circle     | 10      | End                 | Las Colinas Dr      | 340.           | 89.00        | 86.00        | TBD             | ----  | ----       | 81.00          |
| E Kingsmill Circle     | 20      | Las Colinas Dr      | La Quinta Cir       | 1,310.         | 89.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| E Kingsmill Circle     | 30      | La Quinta Cir       | La Costa Cir        | 350.           | 89.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| E Kingsmill Circle     | 40      | La Costa Cir        | E Kingsmill Cir     | 715.           | 89.00        | 80.00        | TBD             | ----  | ----       | 75.00          |
| E Muirfield Loop       | 10      | S Augusta Ave (S)   | S Augusta Ave (N)   | 2,670.         | 85.00        | 76.00        | TBD             | ----  | ----       | 71.00          |
| Forest Oaks Drive      | 10      | S Augusta Ave       | Harbor Town Dr      | 255.           | 91.00        | 93.00        | TBD             | ----  | ----       | 88.00          |
| Forest Oaks Drive      | 20      | Harbor Town Dr      | Indian Wells Cir    | 590.           | 91.00        | 81.00        | TBD             | ----  | ----       | 76.00          |
| Forest Oaks Drive      | 30      | Indian Wells Cir    | Harbor Town Dr      | 1,020.         | 91.00        | 86.00        | TBD             | ----  | ----       | 81.00          |
| Forest Oaks Drive      | 40      | Harbor Town Dr      | S Augusta Ave       | 210.           | 91.00        | 93.00        | TBD             | ----  | ----       | 88.00          |
| Harbor Town Drive      | 10      | Forest Oaks Dr (S)  | Innisbrook Loop     | 125.           | 94.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| Harbor Town Drive      | 20      | Innisbrook Loop     | Innisbrook Loop     | 740.           | 94.00        | 82.00        | TBD             | ----  | ----       | 77.00          |
| Harbor Town Drive      | 30      | Innisbrook Loop     | Forest Oaks Dr (N)  | 765.           | 94.00        | 89.00        | TBD             | ----  | ----       | 84             |
| Indian Wells Circle    | 10      | Forest Oaks Dr      | End                 | 365.           | n/a          | 84.00        | TBD             | ----  | ----       | 79             |
| Innisbrook Loop        | 10      | Harbor Town Dr      | Harbor Town Dr      | 1,040.         | n/a          | 90.00        | TBD             | ----  | ----       | 85             |
| La Costa Circle        | 10      | E Kingsmill Cir     | End                 | 415.           | 91.00        | 86.00        | TBD             | ----  | ----       | 81             |
| La Quinta Circle       | 10      | E Kingsmill Cir     | End                 | 220.           | 93.00        | 90.00        | TBD             | ----  | ----       | 85             |
| Las Colinas Drive      | 10      | S Augusta Ave       | Laurel Valley Cir   | 310.           | 90.00        | 80.00        | TBD             | ----  | ----       | 75             |
| Las Colinas Drive      | 20      | Laurel Valley Cir   | Las Colinas Dr      | 590.           | 90.00        | 86.00        | TBD             | ----  | ----       | 81             |
| Laurel Valley Circle   | 10      | Las Colinas Dr      | End                 | 300.           | 94.00        | 90.00        | TBD             | ----  | ----       | 85             |
| N Pinehurst Circle     | 10      | End                 | Oakwood St          | 560.           | 94.00        | 73.00        | TBD             | ----  | ----       | 68             |
| Oakwood Street         | 40      | Pleasant Valley Cir | S Augusta Ave       | 750.           | 83.00        | 78.00        | TBD             | ----  | ----       | 73             |
| Oakwood Street         | 10      | Spring Valley Ranch | N Pinehurst Cir     | 315.           | 83.00        | 80.00        | TBD             | ----  | ----       | 75             |
| Oakwood Street         | 20      | N Pinehurst Cir     | Plantation Cir      | 420.           | 83.00        | 80.00        | TBD             | ----  | ----       | 75             |
| Oakwood Street         | 30      | Plantation Cir      | Pleasant Valley Cir | 540.           | 83.00        | 83.00        | TBD             | ----  | ----       | 78             |
| Plantation Circle      | 10      | Oakwood St          | End                 | 830.           | 97.00        | 71.00        | TBD             | ----  | ----       | 66             |
| Pleasant Valley Circle | 10      | Oakwood St          | End                 | 855.           | 77.00        | 78.00        | TBD             | ----  | ----       | 73             |
| S Augusta Avenue       | 50      | E Muirfield Loop    | E Kingsmill Cir     | 635.           | 78.00        | 82.00        | TBD             | ----  | ----       | 77             |
| S Augusta Avenue       | 60      | E Kingsmill Cir     | Forest Oaks Dr      | 870.           | 78.00        | 84.00        | TBD             | ----  | ----       | 79             |
| S Augusta Avenue       | 70      | Forest Oaks Dr      | Annadale Tr         | 535.           | 78.00        | 84.00        | TBD             | ----  | ----       | 79             |
| S Augusta Avenue       | 80      | Annadale Tr         | Forest Oaks Dr      | 1,600.         | 78.00        | 79.00        | TBD             | ----  | ----       | 74             |
| S Augusta Avenue       | 90      | Forest Oaks Dr      | End                 | 130.           | 78.00        | n/a          | TBD             | ----  | ----       |                |
| S Augusta Avenue       | 10      | Spring Valley Ranch | Oakwood St          | 1,000.         | 78.00        | 83.00        | TBD             | ----  | ----       | 78             |
| S Augusta Avenue       | 20      | Oakwood St          | E Muirfield Loop    | 2,030.         | 78.00        | 84.00        | TBD             | ----  | ----       | 79             |
| S Augusta Avenue       | 30      | E Muirfield Loop    | Las Colinas Dr      | 280.           | 78.00        | 83.00        | TBD             | ----  | ----       | 78             |
| S Augusta Avenue       | 40      | Las Colinas Dr      | E Muirfield Loop    | 280.           | 78.00        | 83.00        | TBD             | ----  | ----       | 78             |
| S Pinehurst Circle     | 10      | Oakwood St          | End                 | 420.           | 81.00        | 88.00        | TBD             | ----  | ----       | 83             |
| Southwind Circle       | 10      | Bear Creek Loop     | End                 | 205.           | n/a          | 89.00        | TBD             | ----  | ----       | 84             |
| Spring Valley Ranch F  | 10      | End                 | Oakwood St          | 3,195.         | 82.00        | n/a          | TBD             | ----  | ----       |                |
| Spring Valley Ranch F  | 20      | Oakwood St          | S Augusta Ave       | 1,825.         | 82.00        | n/a          | TBD             | ----  | ----       |                |
| Spring Valley Ranch F  | 30      | S Augusta Ave       | CO 166              | 5,710.         | 82.00        | n/a          | TBD             | ----  | ----       |                |
| Westchester Drive      | 10      | Annadale Tr         | End                 | 225.           | 100.00       | 93.00        | TBD             | ----  | ----       | 88             |
| <b>OVERALL</b>         |         |                     |                     | <b>38,645.</b> | <b>86.00</b> | <b>86.77</b> |                 |       |            |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | fill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**SPRING VALLEY**



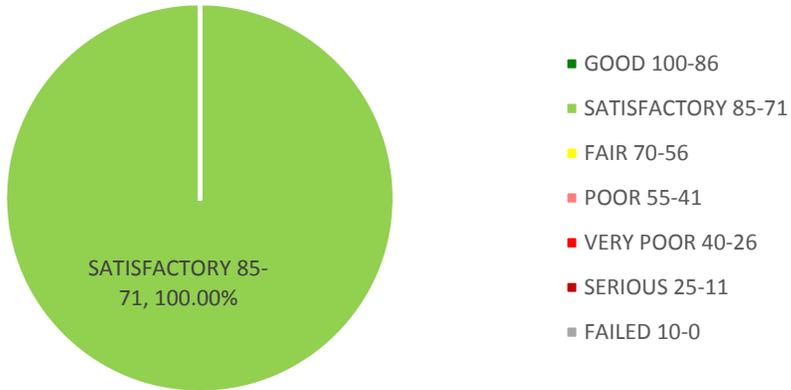
**ROADWAY ASPHALT CONDITION SUMMARY**

SUBDIVISION: TNM RANCHES

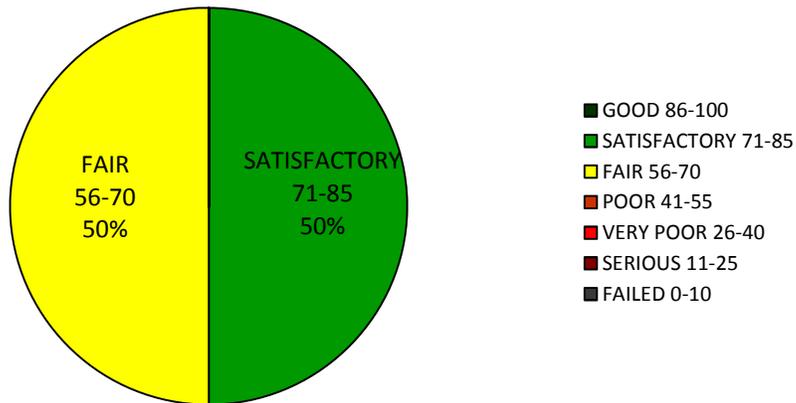
INSPECTION DATE: 4/12/2017

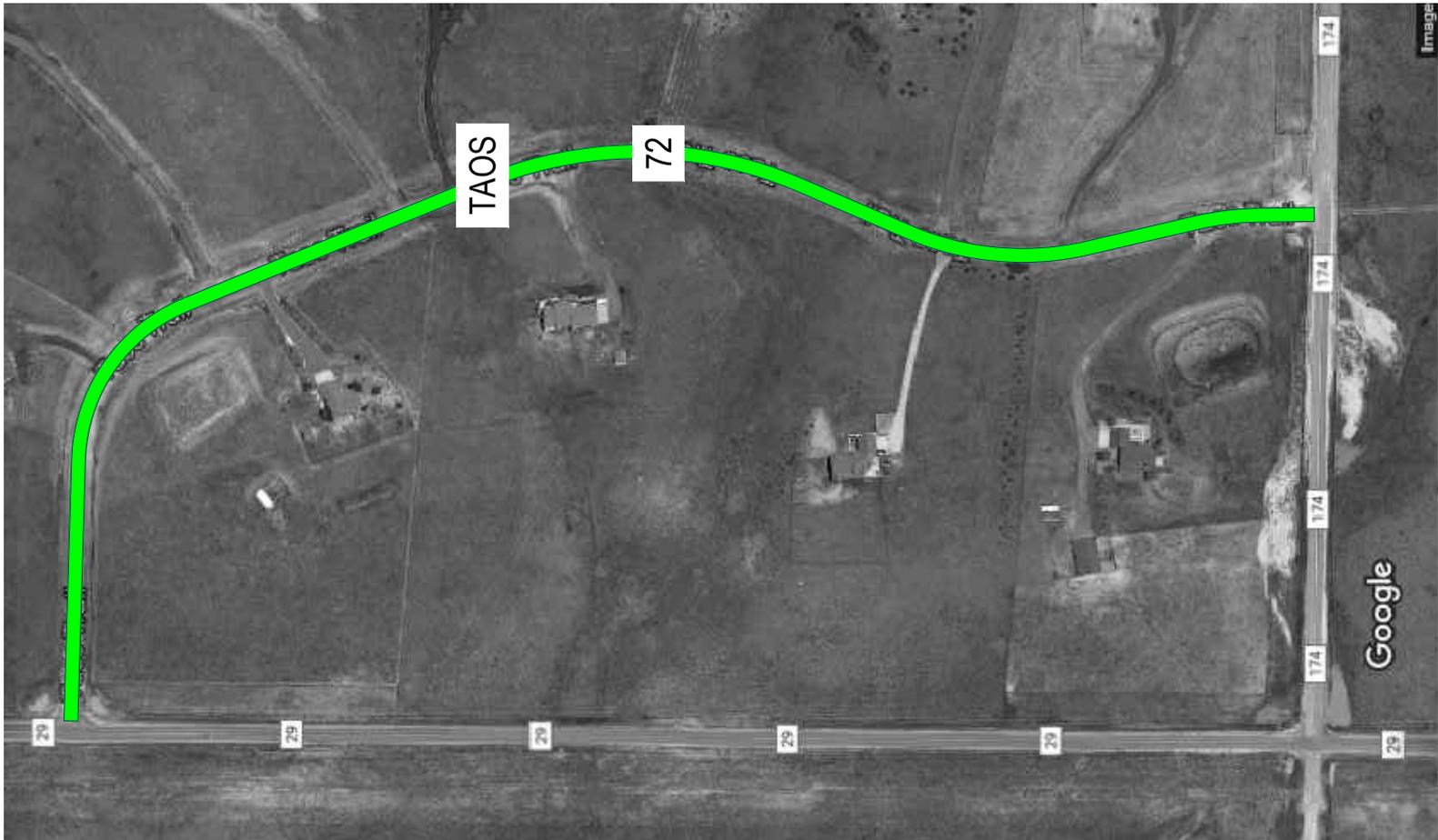
| STREET NAME | SECTION | FROM  | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI |
|-------------|---------|-------|--------|-------------|----------|----------|
| Taos Trail  | 10      | CO 29 | CO 174 | 2,830.      | 74.00    | 72.00    |
| OVERALL     |         |       |        |             | 74.00    | 72.00    |

**2017 ROADWAY CONDITION SUMMARY**



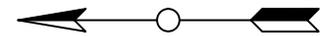
**2010 ROADWAY CONDITION SUMMARY**





TNM RANCHES SUBDIVISION - 2017 PCI

SCALE: N.T.S.



LEGEND

- GOOD: 100-86
- SATISFACTORY: 85-71
- FAIR: 70-56
- POOR: 55-41
- VERY POOR: 40-26
- SERIOUS: 25-11
- FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: TNM RANCHES

INSPECTION DATE: 4/12/2017

| STREET NAME    | SECTION | FROM  | TO     | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB      | REHAB COST          | 2023 PROJ. PCI |
|----------------|---------|-------|--------|-------------|----------|----------|-----------------|------------|---------------------|----------------|
| Taos Trail     | 10      | CO 29 | CO 174 | 2,830.      | 74.00    | 72.00    | 2021            | CR, ED, SS | \$ 19,440.21        | 83.00          |
| <b>OVERALL</b> |         |       |        | 2,830.      | 74.00    | 72.00    |                 |            | <b>\$ 19,440.21</b> |                |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**TNM RANCHES**

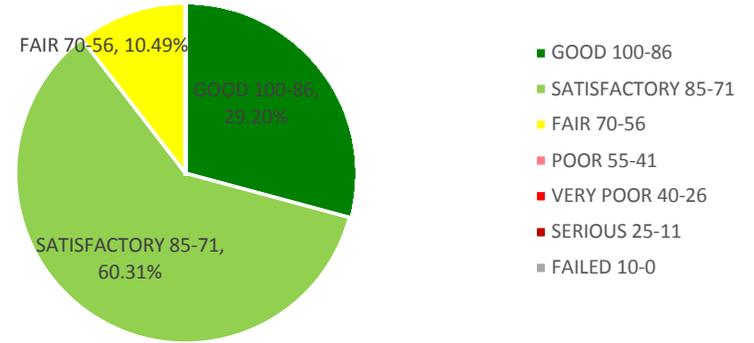


**ROADWAY ASPHALT CONDITION SUMMARY**

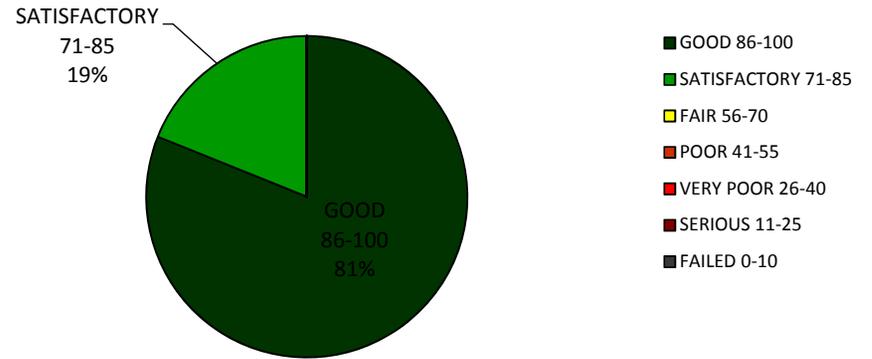
SUBDIVISION: WILD POINTE  
 INSPECTION DATE: 4/13/2017

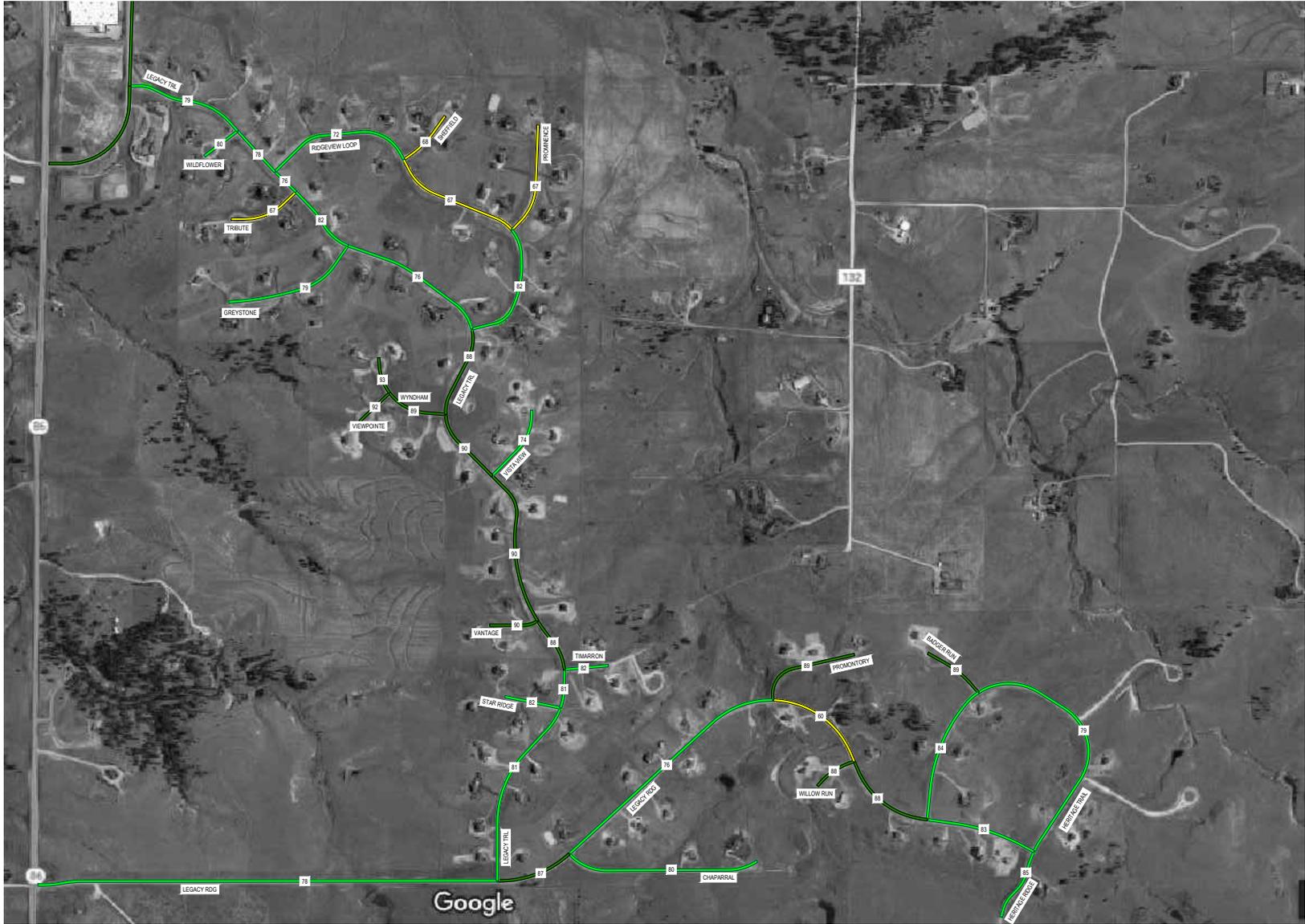
| STREET NAME          | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI |
|----------------------|---------|------------------|------------------|-------------|----------|----------|
| Badger Ridge Circle  | 10      | Heritage Trail   | End              | 630.        | 87.00    | 89.00    |
| Chaparral Circle     | 10      | Legacy Ridge St  | End              | 1,900.      | 92.00    | 80.00    |
| Greystone Circle     | 10      | Legacy Trail     | End              | 1,360.      | 85.00    | 79.00    |
| Heritage Ridge Trail | 10      | Legacy Ridge St  | End              | 725.        | n/a      | 85.00    |
| Heritage Trail       | 10      | Legacy Ridge St  | Badger Ridge Cir | 1,380.      | 93.00    | 84.00    |
| Heritage Trail       | 20      | Badger Ridge Cir | End              | 2,550.      | 93.00    | 79.00    |
| Legacy Circle        | 10      | CO 86(N)         | Legacy Trail     | 2,595.      | 86.00    | n/a      |
| Legacy Circle        | 20      | Legacy Trail     | CO 86(S)         | 1,285.      | 86.00    | n/a      |
| Legacy Ridge Street  | 30      | Chaparral Cir    | Promontory Cir   | 2,545.      | 90.00    | 76.00    |
| Legacy Ridge Street  | 40      | Promontory Cir   | Willow Run Cir   | 1,065.      | 90.00    | 60.00    |
| Legacy Ridge Street  | 50      | Willow Run Cir   | Heritage Tr      | 970.        | 90.00    | 88.00    |
| Legacy Ridge Street  | 60      | Heritage Tr      | Heritage Tr      | 1,100.      | 90.00    | 83.00    |
| Legacy Ridge Street  | 10      | CO 86            | Legacy Trail     | 4,495.      | 90.00    | 78.00    |
| Legacy Ridge Street  | 20      | Legacy Trail     | Chaparral Cir    | 770.        | 90.00    | 87.00    |
| Legacy Trail         | 10      | Legacy Cir       | Wildflower Cir   | 1,180.      | 92.00    | 79.00    |
| Legacy Trail         | 100     | Timarron Cir     | Star Ridge Cir   | 380.        | 92.00    | 81.00    |
| Legacy Trail         | 110     | Star Ridge Cir   | Legacy Ridge St  | 1,885.      | 92.00    | 81.00    |
| Legacy Trail         | 20      | Wildflower Cir   | Ridgeview Loop   | 540.        | 92.00    | 78.00    |
| Legacy Trail         | 30      | Ridgeview Loop   | Tribute Cir      | 285.        | 92.00    | 76.00    |
| Legacy Trail         | 40      | Tribute Cir      | Greystone Cir    | 740.        | 92.00    | 82.00    |
| Legacy Trail         | 50      | Greystone Cir    | Ridgeview Loop   | 1,505.      | 92.00    | 76.00    |
| Legacy Trail         | 60      | Ridgeview Loop   | Wyndham Cir      | 895.        | 92.00    | 88.00    |
| Legacy Trail         | 70      | Wyndham Cir      | Vista View Cir   | 770.        | 92.00    | 90.00    |
| Legacy Trail         | 80      | Vista View Cir   | Vantage Cir      | 1,545.      | 92.00    | 90.00    |
| Legacy Trail         | 90      | Vantage Cir      | Timarron Cir     | 550.        | 92.00    | 88.00    |
| Prominence Circle    | 10      | Ridgeview Loop   | End              | 1,105.      | 78.00    | 67.00    |
| Promontory Circle    | 10      | Legacy Ridge St  | End              | 1,020.      | 94.00    | 89.00    |
| Ridgeview Loop       | 10      | Legacy Trail     | Sheffield Cir    | 1,510.      | 81.00    | 72.00    |
| Ridgeview Loop       | 20      | Sheffield Cir    | Prominence Cir   | 1,305.      | 81.00    | 67.00    |
| Ridgeview Loop       | 30      | Prominence Cir   | Legacy Trail     | 1,265.      | 81.00    | 82.00    |
| Sheffield Circle     | 10      | Ridgeview Loop   | End              | 590.        | 94.00    | 68.00    |
| Star Ridge Circle    | 10      | Legacy Trail     | End              | 555.        | 86.00    | 82.00    |
| Timarron Circle      | 10      | Legacy Trail     | End              | 435.        | 100.00   | 82.00    |
| Tribute Circle       | 10      | Legacy Trail     | End              | 720.        | 85.00    | 67.00    |
| Vantage Circle       | 10      | Legacy Trail     | End              | 480.        | 100.00   | 90.00    |
| Viewpointe Circle    | 10      | Wyndham Cir      | End              | 400.        | 100.00   | 92.00    |
| Vista View Circle    | 10      | Legacy Trail     | End              | 780.        | 97.00    | 74.00    |
| Wildflower Circle    | 10      | Legacy Trail     | End              | 405.        | 99.00    | 80.00    |
| Willow Run Circle    | 10      | Legacy Ridge St  | End              | 440.        | n/a      | 88.00    |
| Wyndham Circle       | 10      | Legacy Trail     | Viewpointe Cir   | 610.        | 100.00   | 89.00    |
| Wyndham Circle       | 20      | Viewpointe Cir   | End              | 365.        | 100.00   | 93.00    |
| OVERALL              |         |                  |                  |             | 91.00    | 81.93    |

**2017 ROADWAY CONDITION SUMMARY**



**2010 ROADWAY CONDITION SUMMARY**





**WILD POINTE SUBDIVISION - 2017 PCI**  
 SCALE: N.T.S.



- LEGEND**
- GOOD: 100-86
  - SATISFACTORY: 85-71
  - FAIR: 70-56
  - POOR: 55-41
  - VERY POOR: 40-26
  - SERIOUS: 25-11
  - FAILED: 10-0

**ROADWAY REHABILITATION COST ANALYSIS**

SUBDIVISION: WILD POINTE

INSPECTION DATE: 4/13/2017

| STREET NAME          | SECTION | FROM             | TO               | LENGTH (FT) | 2010 PCI | 2017 PCI | EST. REHAB DATE | REHAB | REHAB COST | REHAB COST |
|----------------------|---------|------------------|------------------|-------------|----------|----------|-----------------|-------|------------|------------|
| Badger Ridge Circle  | 10      | Heritage Trail   | End              | 630.        | 87.00    | 89.00    | TBD             | ----  | ----       | 84.00      |
| Chaparral Circle     | 10      | Legacy Ridge St  | End              | 1,900.      | 92.00    | 80.00    | TBD             | ----  | ----       | 75.00      |
| Greystone Circle     | 10      | Legacy Trail     | End              | 1,360.      | 85.00    | 79.00    | TBD             | ----  | ----       | 74.00      |
| Heritage Ridge Trail | 10      | Legacy Ridge St  | End              | 725.        | n/a      | 85.00    | TBD             | ----  | ----       | 80.00      |
| Heritage Trail       | 10      | Legacy Ridge St  | Badger Ridge Cir | 1,380.      | 93.00    | 84.00    | TBD             | ----  | ----       | 79.00      |
| Heritage Trail       | 20      | Badger Ridge Cir | End              | 2,550.      | 93.00    | 79.00    | TBD             | ----  | ----       | 74.00      |
| Legacy Circle        | 10      | CO 86(N)         | Legacy Trail     | 2,595.      | 86.00    | n/a      | TBD             | ----  | ----       |            |
| Legacy Circle        | 20      | Legacy Trail     | CO 86(S)         | 1,285.      | 86.00    | n/a      | TBD             | ----  | ----       |            |
| Legacy Ridge Street  | 30      | Chaparral Cir    | Promontory Cir   | 2,545.      | 90.00    | 76.00    | TBD             | ----  | ----       | 71.00      |
| Legacy Ridge Street  | 40      | Promontory Cir   | Willow Run Cir   | 1,065.      | 90.00    | 60.00    | TBD             | ----  | ----       | 55.00      |
| Legacy Ridge Street  | 50      | Willow Run Cir   | Heritage Tr      | 970.        | 90.00    | 88.00    | TBD             | ----  | ----       | 83.00      |
| Legacy Ridge Street  | 60      | Heritage Tr      | Heritage Tr      | 1,100.      | 90.00    | 83.00    | TBD             | ----  | ----       | 78.00      |
| Legacy Ridge Street  | 10      | CO 86            | Legacy Trail     | 4,495.      | 90.00    | 78.00    | TBD             | ----  | ----       | 73.00      |
| Legacy Ridge Street  | 20      | Legacy Trail     | Chaparral Cir    | 770.        | 90.00    | 87.00    | TBD             | ----  | ----       | 82.00      |
| Legacy Trail         | 10      | Legacy Cir       | Wildflower Cir   | 1,180.      | 92.00    | 79.00    | TBD             | ----  | ----       | 74.00      |
| Legacy Trail         | 100     | Timarron Cir     | Star Ridge Cir   | 380.        | 92.00    | 81.00    | TBD             | ----  | ----       | 76.00      |
| Legacy Trail         | 110     | Star Ridge Cir   | Legacy Ridge St  | 1,885.      | 92.00    | 81.00    | TBD             | ----  | ----       | 76.00      |
| Legacy Trail         | 20      | Wildflower Cir   | Ridgeview Loop   | 540.        | 92.00    | 78.00    | TBD             | ----  | ----       | 73.00      |
| Legacy Trail         | 30      | Ridgeview Loop   | Tribute Cir      | 285.        | 92.00    | 76.00    | TBD             | ----  | ----       | 71.00      |
| Legacy Trail         | 40      | Tribute Cir      | Greystone Cir    | 740.        | 92.00    | 82.00    | TBD             | ----  | ----       | 77.00      |
| Legacy Trail         | 50      | Greystone Cir    | Ridgeview Loop   | 1,505.      | 92.00    | 76.00    | TBD             | ----  | ----       | 71.00      |
| Legacy Trail         | 60      | Ridgeview Loop   | Wyndham Cir      | 895.        | 92.00    | 88.00    | TBD             | ----  | ----       | 83.00      |
| Legacy Trail         | 70      | Wyndham Cir      | Vista View Cir   | 770.        | 92.00    | 90.00    | TBD             | ----  | ----       | 85.00      |
| Legacy Trail         | 80      | Vista View Cir   | Vantage Cir      | 1,545.      | 92.00    | 90.00    | TBD             | ----  | ----       | 85.00      |
| Legacy Trail         | 90      | Vantage Cir      | Timarron Cir     | 550.        | 92.00    | 88.00    | TBD             | ----  | ----       | 83.00      |
| Prominence Circle    | 10      | Ridgeview Loop   | End              | 1,105.      | 78.00    | 67.00    | TBD             | ----  | ----       | 62.00      |
| Promontory Circle    | 10      | Legacy Ridge St  | End              | 1,020.      | 94.00    | 89.00    | TBD             | ----  | ----       | 84.00      |
| Ridgeview Loop       | 10      | Legacy Trail     | Sheffield Cir    | 1,510.      | 81.00    | 72.00    | TBD             | ----  | ----       | 67.00      |
| Ridgeview Loop       | 20      | Sheffield Cir    | Prominence Cir   | 1,305.      | 81.00    | 67.00    | TBD             | ----  | ----       | 62.00      |
| Ridgeview Loop       | 30      | Prominence Cir   | Legacy Trail     | 1,265.      | 81.00    | 82.00    | TBD             | ----  | ----       | 77.00      |
| Sheffield Circle     | 10      | Ridgeview Loop   | End              | 590.        | 94.00    | 68.00    | TBD             | ----  | ----       | 63.00      |
| Star Ridge Circle    | 10      | Legacy Trail     | End              | 555.        | 86.00    | 82.00    | TBD             | ----  | ----       | 77.00      |
| Timarron Circle      | 10      | Legacy Trail     | End              | 435.        | 100.00   | 82.00    | TBD             | ----  | ----       | 77.00      |
| Tribute Circle       | 10      | Legacy Trail     | End              | 720.        | 85.00    | 67.00    | TBD             | ----  | ----       | 62.00      |
| Vantage Circle       | 10      | Legacy Trail     | End              | 480.        | 100.00   | 90.00    | TBD             | ----  | ----       | 85.00      |
| Viewpointe Circle    | 10      | Wyndham Cir      | End              | 400.        | 100.00   | 92.00    | TBD             | ----  | ----       | 87.00      |
| Vista View Circle    | 10      | Legacy Trail     | End              | 780.        | 97.00    | 74.00    | TBD             | ----  | ----       | 69.00      |
| Wildflower Circle    | 10      | Legacy Trail     | End              | 405.        | 99.00    | 80.00    | TBD             | ----  | ----       | 75.00      |
| Willow Run Circle    | 10      | Legacy Ridge St  | End              | 440.        | n/a      | 88.00    | TBD             | ----  | ----       | 83.00      |
| Wyndham Circle       | 10      | Legacy Trail     | Viewpointe Cir   | 610.        | 100.00   | 89.00    | TBD             | ----  | ----       | 84.00      |
| Wyndham Circle       | 20      | Viewpointe Cir   | End              | 365.        | 100.00   | 93.00    | TBD             | ----  | ----       | 88.00      |
| OVERALL              |         |                  |                  | 45,630.     | 91.00    | 81.93    |                 |       |            |            |

| Rehab Key |                            |
|-----------|----------------------------|
| Code      | Description                |
| CR        | Crack seal                 |
| ED        | Edge Repair                |
| RJ        | Rejuvenator                |
| SS        | Slurry Seal                |
| CS        | Chip Seal                  |
| OV        | Overlay (2"-4" depth)      |
| MO        | Mill & Overlay (>4" depth) |
| RS        | Reconstruction             |

**WILD POINTE**

