

# CITY OF MIDDLETON, IDAHO

## **PAVEMENT MANAGEMENT PLAN**

December 2013





212096-001/13-387



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#### 1.0 Introduction

### 1.1 Purpose of Report and Study Objectives

One of Middleton's most valuable assets is its approximately 36 miles of street network. The maintenance of this street network facilitates the livability and economy of Middleton An efficient way of maintaining an agency's pavement assets is through a Pavement Management Plan (PMP). A typical pavement management plan entails:

- A physical inventory and condition survey of the street network
- A needs assessment process
- Analyses of root causes of pavement deterioration
- Analysis of current street maintenance programs
- Recommended maintenance and preservation treatments
- Treatment costs and budget proposals

The specific objectives of the City of Middleton PMP were:

- Identify the current condition of the City's roadways in terms of quantity, condition, and importance
- Assess the current and future pavement improvement needs
- Evaluate the current pavement maintenance program and identify specific improvements that could be made
- Develop a prioritized, 5-year pavement preservation and reconstruction plan that identifies roads to be improved, a recommended timing, and approximate cost estimate based on traffic volumes and safety considerations.

### 1.2 Advisory Committee

An advisory committee was formed with City of Middleton and Keller Associates personnel to guide and direct project efforts. The advisory committee included engineers Justin Walker and Stephen Lewis from Keller Associates. The City of Middleton was represented by Mayor Darin Taylor and City Engineer Amy Woodruff. The committee met four times during the study process.



### 2.0 Study Kick-Off and Compilation of Existing Data

#### 2.1 GIS Data

GIS data was obtained from Inside Idaho (http://cloud.insideidaho.org/) and a county-wide GIS database. This data was compiled and processed to develop an electronic street map in the form of a shape file. Recently constructed roadways within the city, not available in the database, were added to the existing data after being mapped using aerial photographs and ESRI ArcMap GIS software. The pavement inventory and condition assessment was based on this map.

### 2.2 Roadway Jurisdiction

It was necessary to designate City jurisdiction once the GIS map was created. Keller Associates personnel developed the map illustrated in Figure 1 to show jurisdiction in the Middleton area based on information provided by the City. Nearly all roads within the city limits are maintained by Middleton. However, there are a few roads near the edges of city limits for which the City has an intergovernmental agreement with Canyon Highway District No. 4 (CHD4) for maintenance. There are a few privately-maintained streets. At the time of this report, portions of the roads within the Crossings, Pines, Powder River, and West Highlands subdivisions had not been dedicated to the City. It is anticipated that these roads will be dedicated to the City in the future so they have been included in this PMP.

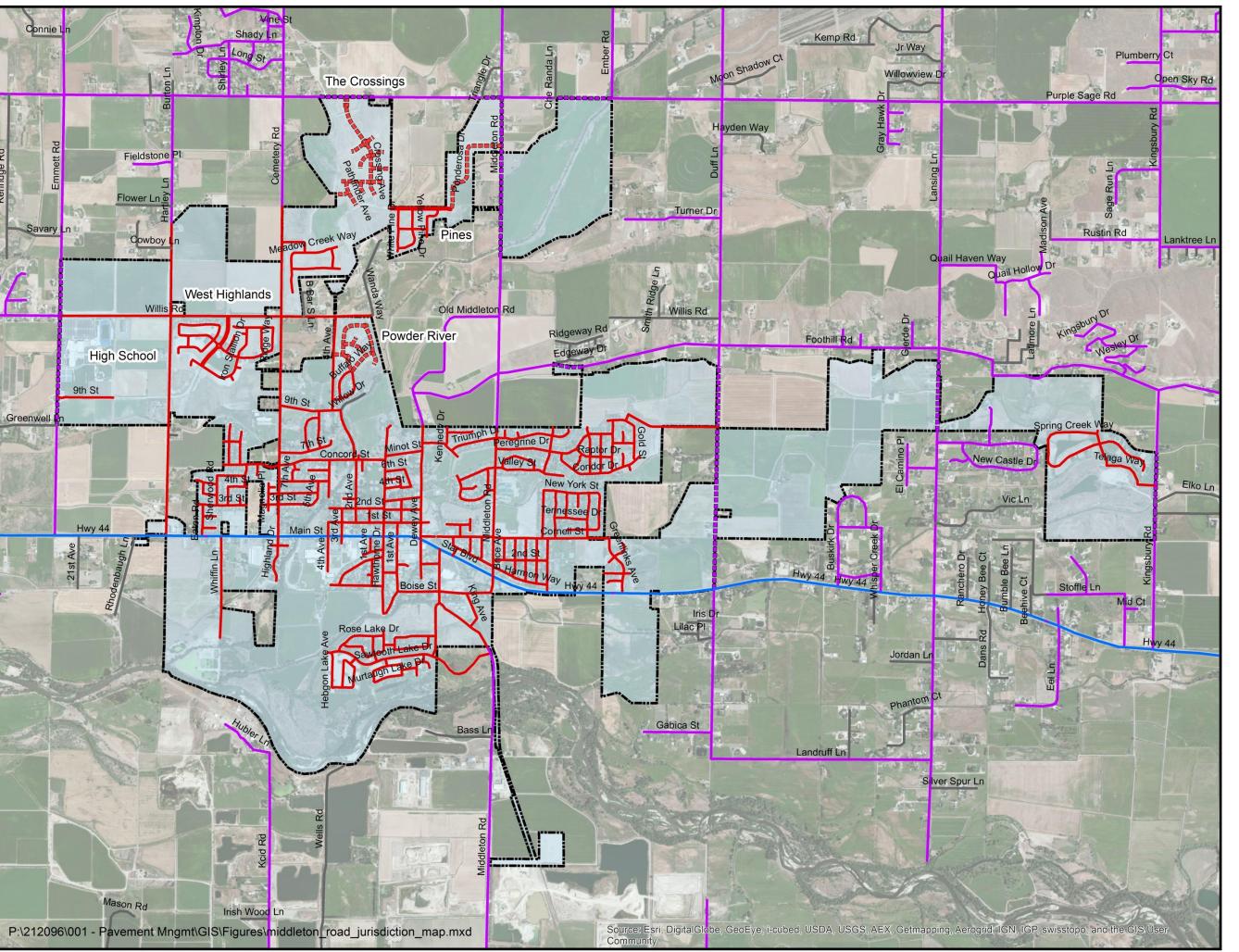
State Highway 44 runs parallel to Harmon Way where it is known as Star Boulevard then becomes West Main St west of Middleton Road. SH-44 is maintained by the Idaho Transportation Department (ITD). All other roads surrounding Middleton are maintained by CHD4 or private parties.

#### 2.3 Traffic Data

Keller Associates assembled traffic counts available from ITD, City of Middleton, CHD4 and the Community Planning Association of Southwest Idaho (COMPASS). Figure 2 illustrates the Average Annual Daily Traffic for the Middleton area.

#### 2.4 Functional Classification

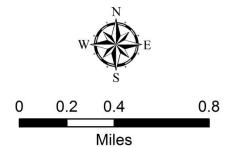
Functional Classification was assigned based on COMPASS and ITD designations. City and Keller Associates personnel reviewed the functional classification and made recommendations for future classification. It is recommended that the City of Middleton update their road functional classifications following COMPASS, ITD, and Federal Highway Administration (FHWA) protocol. The COMPASS 2015, City-proposed 2015, COMPASS 2035, and City-proposed 2035 Functional Classification maps are illustrated in Figures 3 through 6.

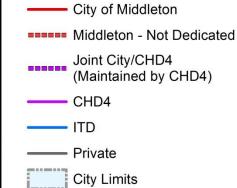




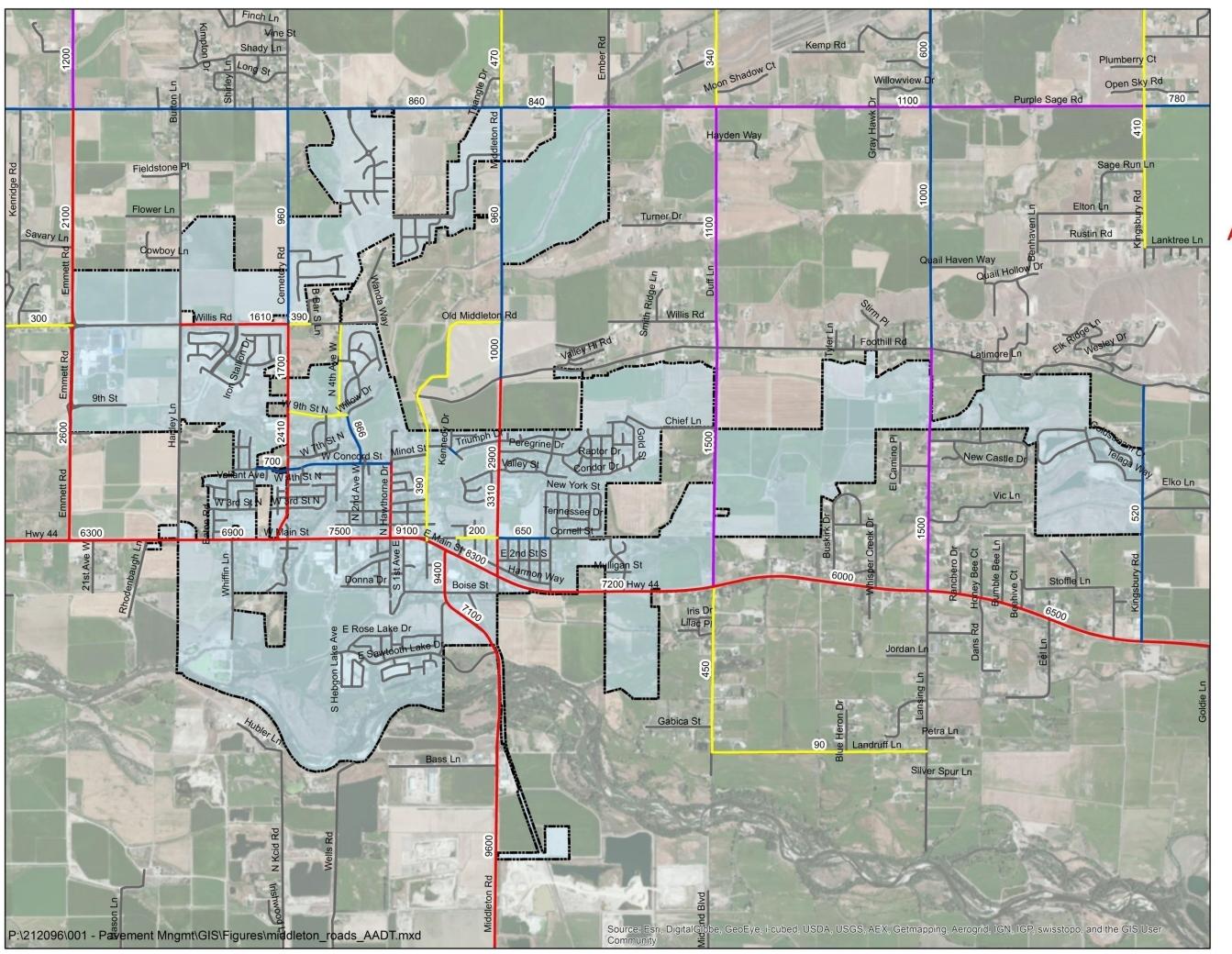
## Figure 1

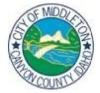
Road Jurisdiction Map June 1, 2013







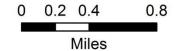




## Figure 2

Average Annual Daily Traffic (AADT)
2012 Data





— No Count Data

1 - 500

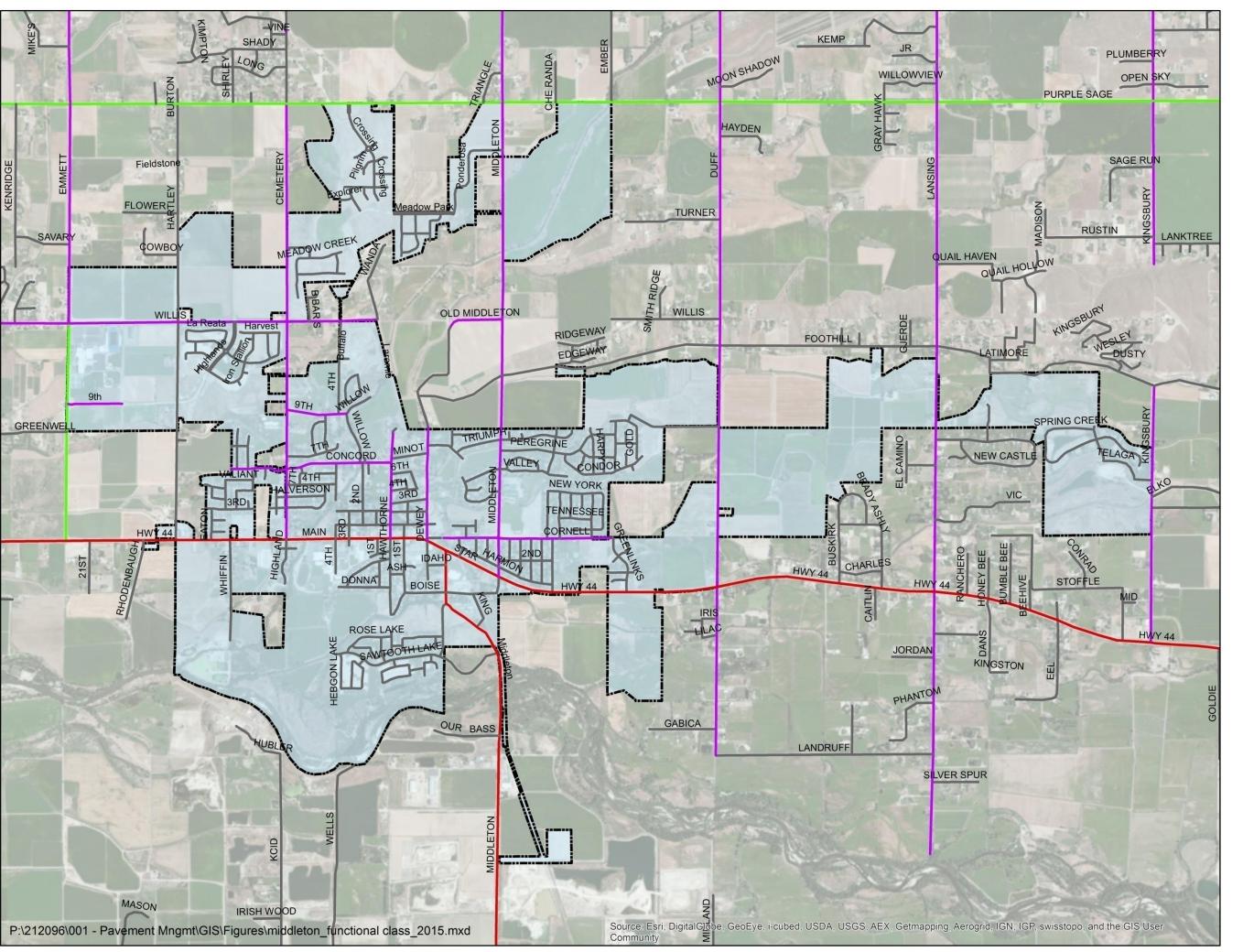
<del>-----</del> 501 - 1000

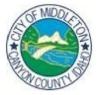
**---** 1001 - 1500

— Over 1500





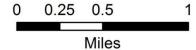




## Figure 3

2015 COMPASS Functional Classification





— Principal Arterial

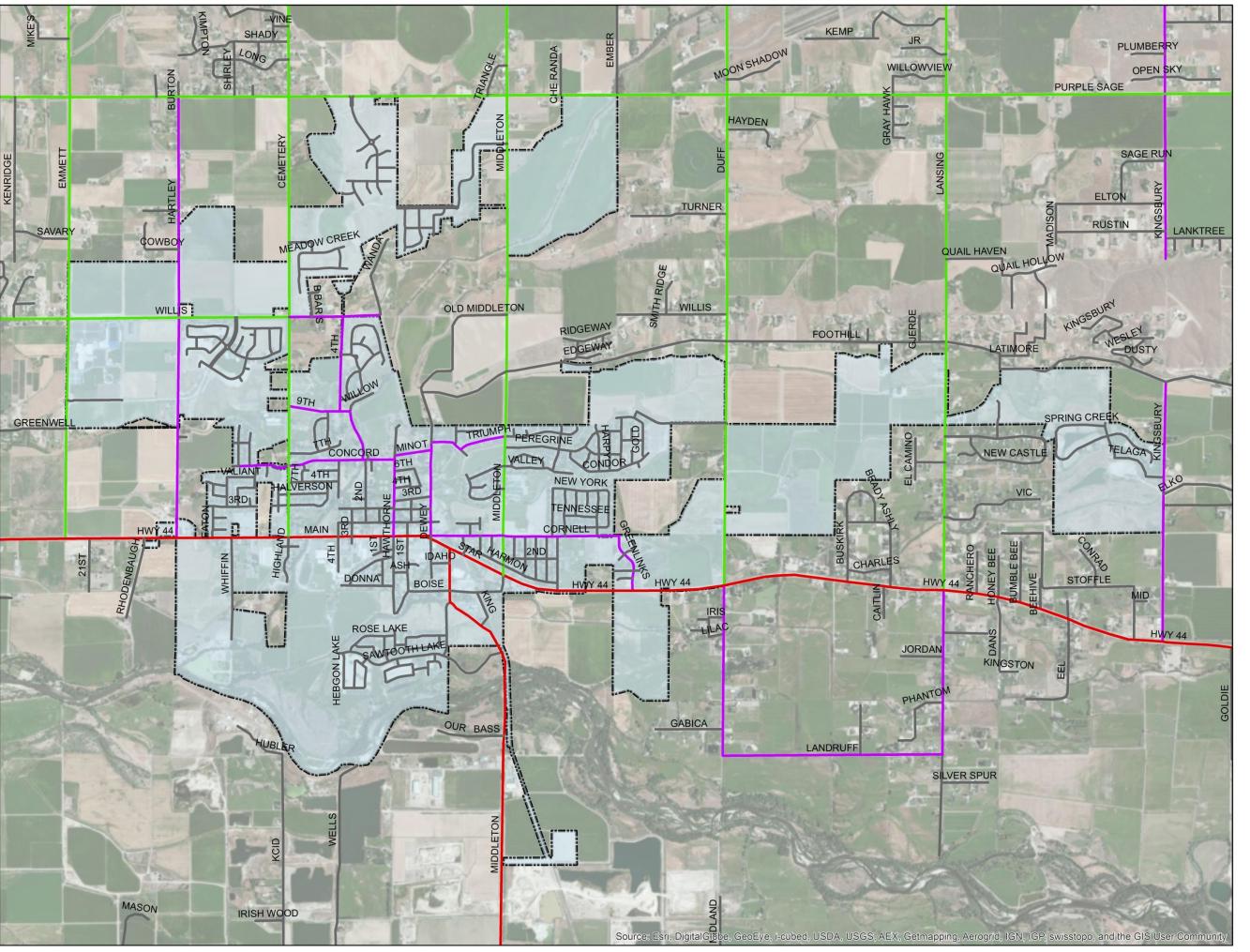
Minor Arterial

Major Collector

Local Road

City Limits



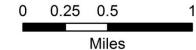




## Figure 4

2015 City-Proposed Functional Classification





Principal Arterial

Minor Arterial

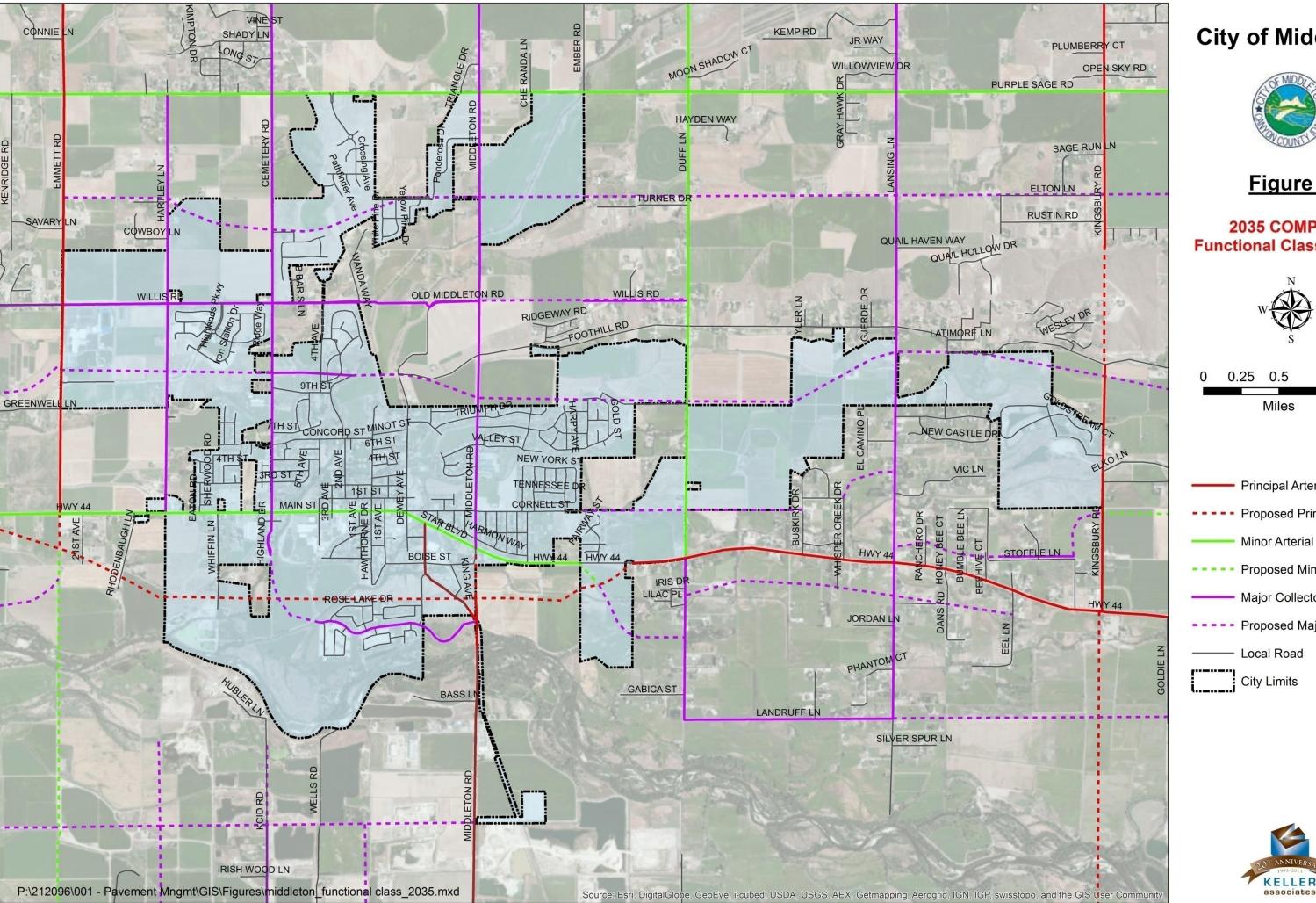
Major Collector

Minor Collector

Local Road

Middleton City Limits



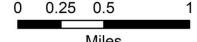




## Figure 5

### 2035 COMPASS **Functional Classification**





Principal Arterial

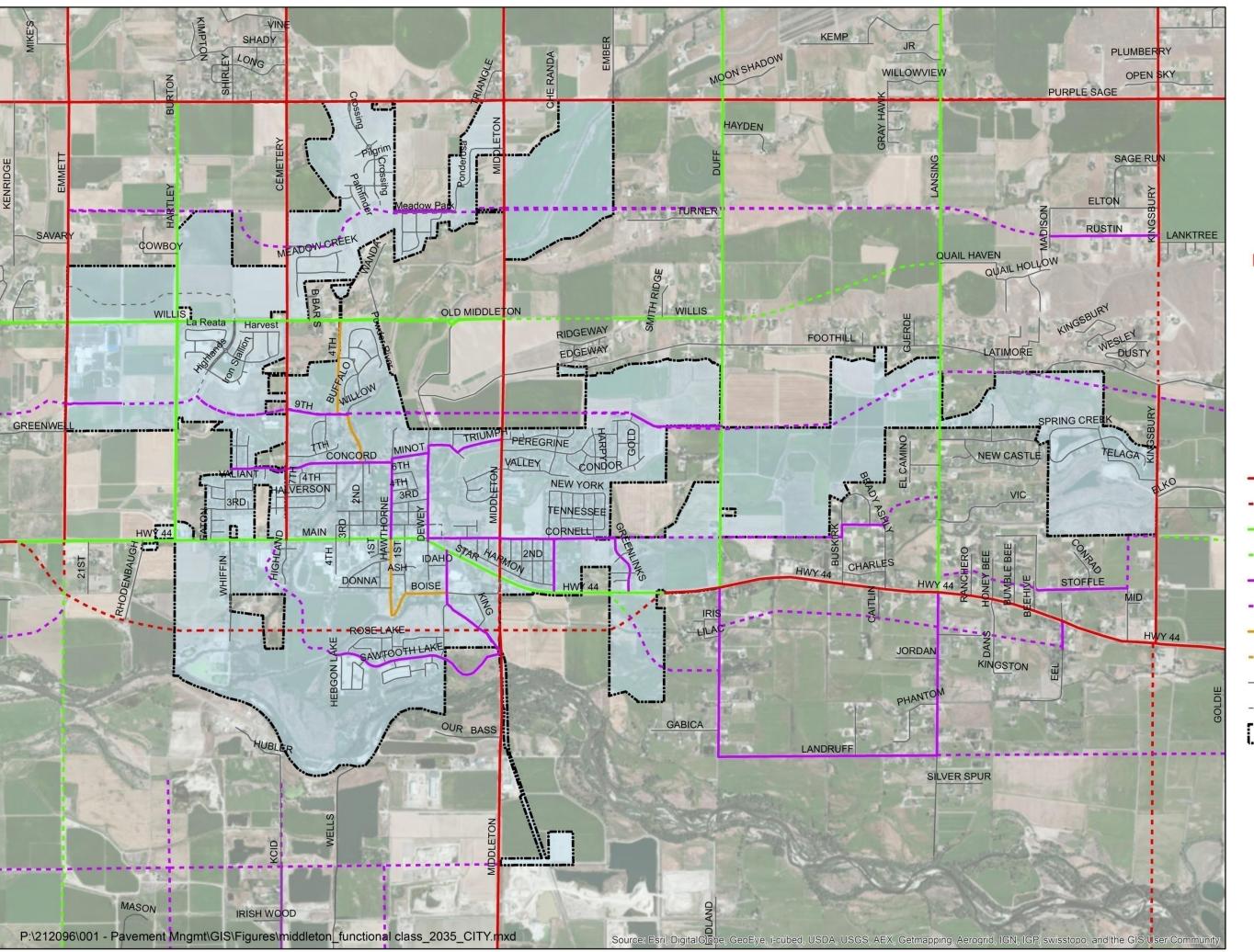
- Proposed Principal Arterial

Proposed Minor Arterial

Major Collector

- - Proposed Major Collector



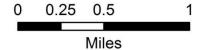




## Figure 6

## 2035 City-Proposed Functional Classification





- Principal Arterial
- Proposed Principal Arterial
- Minor Arterial
- Proposed Minor Arterial
- Major Collector
- - Proposed Major Collector
  - Minor Collector
- --- Proposed Minor Collector
  - Local Road
- --- Proposed Local Road
- City Limits





## 3.0 Physical Inventory and Condition Assessment

### 3.1 Physical Inventory

Street segment widths were gathered in the field using a measurement wheel or tape measure. Lengths were obtained from the GIS data. These measurements were used to calculate surface areas. Information in the database for the segments includes:

- Road name
- To and from locations or intersections
- Surface type (asphalt or unpaved)
- Functional classification (Principal and Minor Arterial, Major and Minor Collector, Local Road)
- Dimensions (length, width, area (square yards), percent of network area represented by segment)
- Speed limit and number of lanes
- Roadway distress information
- Remaining Service Life (RSL)
- Recommended maintenance

The inventory excludes pavement structure details such as date of initial construction, layer thickness, design specifications for each segment, and other pertinent data. This information can be obtained from historical records, City employees, sampling and testing of the pavement structures. Results from the inventory can be found online in the City of Middleton's iWorQ pavements module.

The inventory found that Middleton has approximately 35.7 miles of roads within its network. Approximately 34.9 miles are paved and 0.8 miles are gravel.

#### 3.2 Condition Assessment

A road condition survey was conducted in May of 2013. This windshield survey consisted of a pickup truck at a low speed (20 mph or less) and performing a visual inspection rating of each road segment. Inspectors also took width measurements of each segment during the condition survey. The relatively small size and number of road segments in Middleton allowed for the individual inspection of each road segment, rather than a systematic sampling of segments throughout the city.

Keller Associates personnel identified pavement distress types and rated the severity and extent of the distress. Distress types observed in Middleton were rated using the Strategic Highway Research Program (SHRP) Distress Manual. Specifically these seven distresses included the following, which are discussed in more detail in Chapter 3.2.1:



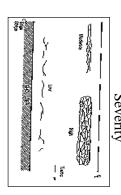
- Fatigue (alligator) Cracking
- Transverse Cracking
- Longitudinal Cracking
- Block Cracking
- Potholes, Patching and Utility Cuts
- Edge Cracking
- Rutting

The rating system uses a matrix format that scores the severity of the distress against the extent of the distress. Extent is determined by the amount of road surface area which is affected by the pavement distress. Low extent means the distress appears in less than 10% of the segment. Medium extent means the distress appears in 10-30% of the segment. High extent means the distress is present in 30% or more of the segment. Severity refers to how far the cracking has progressed, and is often a function of the crack width. For example, a low severity crack is less than ¼ in. wide, a medium severity crack is between ¼ and ¾ in. wide, and a high severity crack is over ¾ in. wide. Figure 7 on the following page shows the distress types and their corresponding rating matrices.



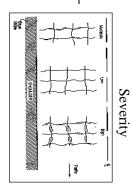
### Figure 7: Asphalt Distress Rating Sheet

#### **FATIGUE CRACKING**



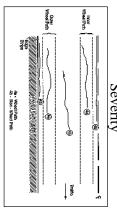
		Extent Low	Medium	High
	0 None	or 1' off C&G	2 Crack WP or 1'-2' off C&G Length	Surface Area
2	Low Cracks < 1/4"	1	2	3
	Medium Cracks 1/4"to 3/4"	4	5	6
	High Cracks > 3/4"	7	8	9

#### **BLOCK CRACKING**



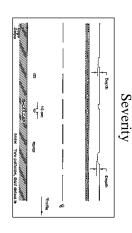
-		Low	Extent Low Medium High					
	O one	> 15'x15' Squares	15'-10'x Squares	< 10'x10' Squares				
Low Cracks < 1/4"		1	2	3				
Cra	dium acks so 3/4"	4	5	6				
Cra	<b>igh</b> cks > /4"	7	8	9				

#### LONGITUDINAL CRACKING



		Low	Extent Medium	High
	0 None	1 Crack Full Length	2 Cracks Full Length	> 2 Cracks Full Length
2	Low Cracks < 1/4"	1	2	3
Severity	Medium Cracks 1/4"to 3/4"	4	5	6
<	High Cracks > 3/4"	7	8	9

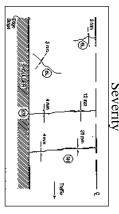
#### **POTHOLES & UTILITY CUTS**



		Extent	TT* 1
0 None			High >30% of Length
Low Cracks < 1/4"	1	2	3
l <b>edium</b> Cracks 4"to 3/4"	4	5	6
High Cracks > 3/4"	7	8	9
	None  Low Cracks < 1/4"  Ledium Cracks 4"to 3/4"  High Cracks >	0 0-10% of Length  Low Pracks   1 1   1   1   1   1   1   1   1   1	Low   Medium

Note: to rate potholes use the same form with the following changes to the severity: **Low** is <1" deep, **Med** is 1"-2" deep and **High** is >2"

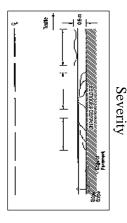
#### TRANSVERSE CRACKING



			Extent		
		Low	Medium	High	
	0 None	> 100' between Cracks	100'-20' between Cracks	< 20' between Cracks	
	Low Cracks < 1/4"	1	2	3	
	Medium Cracks 1/4"to 3/4"	4	5	6	
N	High Cracks > 3/4"	7	8	9	
	,				

Dra	inage	/ Rough	ness
Excellent	Good	Fair	Poor

#### **EDGE CRACKING**



	Low	Extent Medium	
0 None	0-10% of Length	10-30% of Length	> 30% of Length
Low 0-6" from Curb	1	2	3
Medium 6-18" from Curb	4	5	6
High 18" from Curb	7	8	9

Rutting								
Excellent	Low	Med	High					
0	<3/8"	1/2"-3/4"	>3/4"					



#### 3.2.1 Types of Pavement Distresses

Below is a discussion of the major types of pavement distresses, including typical causes and repair options. More in-depth information can be found in the SHRP Pavement Distress Identification Manual.

#### Fatigue Cracking

Fatigue cracking occurs in areas that are subjected to repeated traffic loadings such as in the wheel path. Such wear usually results in a series of interconnected cracks that in later





stages will resemble a chicken wire or alligator pattern. Some common causes of fatigue cracking are loss of base support due to poor drainage, increased heavy traffic loading, inadequate structural design, or

poor compaction during construction. Due to the failure of the underlying base layer, repair by crack sealing or seal coating is generally ineffective. Fatigue cracking can be repaired by excavating localized areas and replacing the base and sub-base. Large areas of distress require reconstruction of the entire road segment. Improvements to drainage should also be considered during repair.

#### Longitudinal Cracking

Longitudinal cracks are parallel to the pavement centerline. Centerline or lane cracks are caused by inadequate bonding during construction. They usually start as hairline cracks and widen and erode with age. Longitudinal cracks in the wheel path indicate they may actually be fatigue cracks (see above). If caught early when the severity is low, crack sealing is an excellent repair option.



However, if not addressed early they will continue to ravel, widen, develop into multiple cracks, and allow moisture to penetrate and weaken the base and sub-base.

#### Transverse Cracking

Transverse cracks are perpendicular to the pavement centerline. They are often regularly spaced and generally caused by movement due to temperature changes and hardening of the asphalt with aging. They usually begin as hairline cracks that are widely spaced (over 50' apart). Similar to longitudinal cracks, they will continue to ravel and widen with age and should be treated early by crack sealing.







#### **Block Cracking**

Block cracks are interconnected cracks that divide the pavement up into rectangular pieces. Larger blocks are generally classified as longitudinal and transverse cracking. Closer spacing indicates more advanced aging caused by shrinking and hardening of the asphalt over time. Possible causes are usually due to the inability of the asphalt binder to expand and contract. Low

severity cracks can be repaired by a crack seal. High severity cracks require a mill and overlay for repair.

#### Potholes and Utility Cuts

Potholes are small bowl shaped depressions in the pavement surface that penetrate all the way through to the base course. Most usually occur on roads with thin asphalt surfaces and seldom occur on roads with 4" of asphalt or greater. Generally, potholes are the end result of fatigue cracking often combined with poor drainage. As fatigue cracking becomes severe, small chunks of pavement begin to break away creating the pothole. Utility trenches that exhibit signs of settlement are also a pavement distress. Poor compaction of the trench backfill is usually the underlying cause. Potholes and utility trenches can be repaired by patching, however when the distress becomes extensive, reconstruction is usually the recommended treatment.





#### **Edge Cracking**

Edge cracking is the formation of crescent-shaped cracks near the edge of the road. It is caused by lack of support of the road edge, and is sometimes due to poorly drained or weak shoulders. If left untreated, additional cracks will form until it resembles alligator cracking. The appropriate treatment for edge cracking depends on its severity and extent. If caught in the early stages, crack sealing can be very effective. Once the



damage has progressed, an overlay or reconstruction becomes necessary.



#### **Rutting**

Rutting is a surface depression in the wheel path. There are two basic types of rutting; pavement rutting and subgrade rutting. Pavement rutting is usually the result of insufficient compaction during construction. If not compacted enough initially, the pavement will



continue to densify under traffic loads. Subgrade rutting occurs when the subgrade fails due to settlement or lateral movement. In this case, the pavement settles into the subgrade ruts causing the surface depression in the wheel path. The method of repair depends on the type of rutting. Severe pavement rutting should be repaired by a mill and overlay. Subgrade rutting can only be repaired by replacing the entire pavement and failed base.



### 4.0 Pavement Needs Assessment

## 4.1 Existing Pavement Conditions and Analysis of Current Maintenance Program

The distress ratings collected during the condition assessment were uploaded into the iWorQ software system, which is a roadway asset management software being sponsored by the State of Idaho through the Local Highway Technical Advisory Council (LHTAC). iWorQ determines a Remaining Service Life (RSL) of each road segment based on the distress ratings. RSL ranges from 20 to 0 years and is a measure of the remaining useful life of a road segment. Asphalt pavements are generally designed in accordance with the AASHTO Guide for Design of Pavement Structures which recommends designing for a 20-year life in new pavements. It is common practice to perform preventative maintenance treatments and asphalt overlays during a pavement's life of service to extend the useful life beyond the original 20 years. The critical challenge is the timing of maintenance and overlay to achieve the highest level of service and longest useful life at the lowest cost. Chart 1 below demonstrates the time relationship between pavement condition and cost of repair:

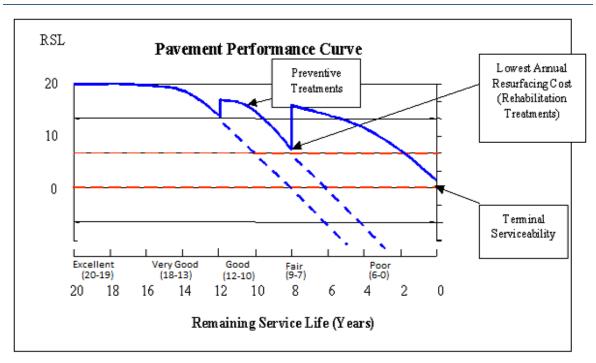


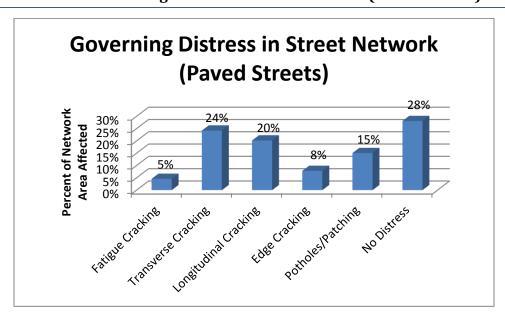
Chart 1: Pavement Condition vs. Cost of Repair

Most asphalt concrete pavements will deteriorate to a "Good" condition category after about 8 years (RSL = 12). This corresponds to a drop in the service life of the pavement of 33% and is the optimal time to apply preventative maintenance. After 12 years (RSL=8), most asphalt pavements will deteriorate to a "Fair" condition rating. This



corresponds to a 60% drop in pavement life and is the optimal time to consider rehabilitation treatment. If no rehabilitation is undertaken at this point, the street will likely deteriorate to the "Poor" category within another three years (RSL=5). Cost comparisons show that reconstruction strategies cost three to five times more than rehabilitation strategies. The cost of preventative maintenance is about one-third the cost of rehabilitation strategies, or one-sixth the cost of reconstruction.

RSL is calculated based on the governing distress. Governing distress is the distress type that has the highest rating (in regards to extent and severity) and results in the lowest RSL of the various distresses present in a street segment. For example, say a hypothetical street segment has a fatigue crack rating of 9 and a longitudinal crack rating of 9. A fatigue crack rating of 9 indicates a RSL of 0 years and a longitudinal crack rating of 9 indicates a RSL of 6 years. The governing distress of the hypothetical street segment is fatigue cracking, since that distress results in the lowest RSL. Chart 2 below illustrates the governing distress affecting Middleton's pavement network.



**Chart 2: Governing Distress in Street Network (Paved Streets)** 

For reference, 10% of the City of Middleton's street network represents approximately 3.5 miles in length. It is apparent from the figure that there are various governing distresses affecting the network, some more common than others. Transverse and longitudinal cracking are the most common governing distress types in the City of Middleton's street network.

As stated above, governing distress is used to determine the RSL value for a street segment. This allows the average RSL of the street network to be calculated. Chart 3 shows the current RSL distribution for Middleton's street network in terms of percent of surface area of the network.



2013 Remaining Service Life Distribution for Paved Street Network 37% 40% 35% 31% Percent of Network 30% Surface Area 25% 20% 12% 15% 9% 8% 10% 2% 0% 0% 5% 0% 0 1-3 4-6 7-9 10-12 13-15 16-18 19-21

Chart 3: 2013 RSL Distribution for Paved Street Network

The average RSL for the City of Middleton's street network is approximately 13 years. It is generally accepted that a good road network has the following characteristics:

**RSL Categories** 

- Average RSL of road network is 10 years or greater
- Less than 3% of the system falls into the terminal serviceability level (RSL=0)
- A bell-shaped distribution with the mean falling at about 12 years RSL

The following table displays the same information along with corresponding subjective ratings of poor, fair, good, very good, and excellent.

Rating	POOR			FAIR	GOOD	VERY	GOOD	EXCELLENT	
Years	0	1-3	4-6	7-9	10-12	13-15	16-18	19-20	
% of Network	0%	2%	9%	8%	37%	12%	0%	31%	
Total %	<b>Total %</b> 11%			8%	37%	12 %		31%	

**Table 1: Subjective Condition Rating of Street Network** 

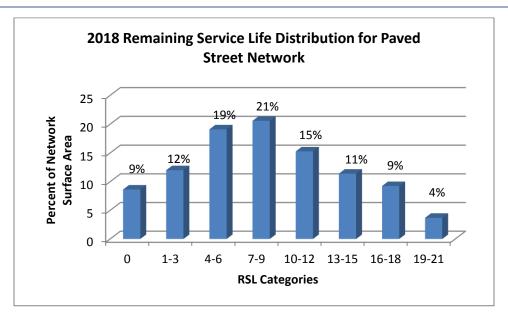
Eleven percent of the paved street network in Middleton is considered to be in poor condition. Eight percent is rated to be in fair condition while 81 percent of the network is rated to be in good, very good, or excellent condition.

The City of Middleton's paved street network overall is in "very good" condition. None of the network is at a terminal serviceability level as shown in Table 1. If no preservation or rehabilitation were to occur, however, nine percent of the system is projected to deteriorate to a terminal level within five years and thirty-four percent in ten years (Charts 4 & 5). This could place a major financial burden on the City. The time to implement a



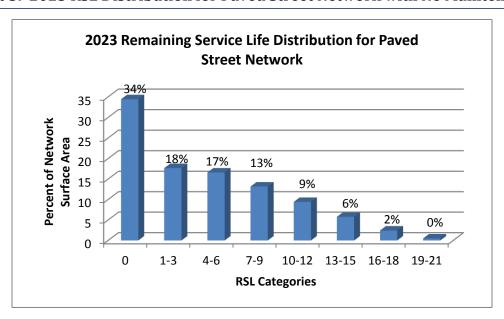
systematic pavement management plan is now. Balancing a set of preservation strategies (routine and preventative maintenance, rehabilitation, and reconstruction) can prevent or reduce the backlog of street maintenance needs and the overall decline of the network service life.

Chart 4: 2018 RSL Distribution for Paved Street Network with No Maintenance



With no maintenance the system average Remaining Service Life in 2018 will be 8 years.

Chart 5: 2023 RSL Distribution for Paved Street Network with No Maintenance



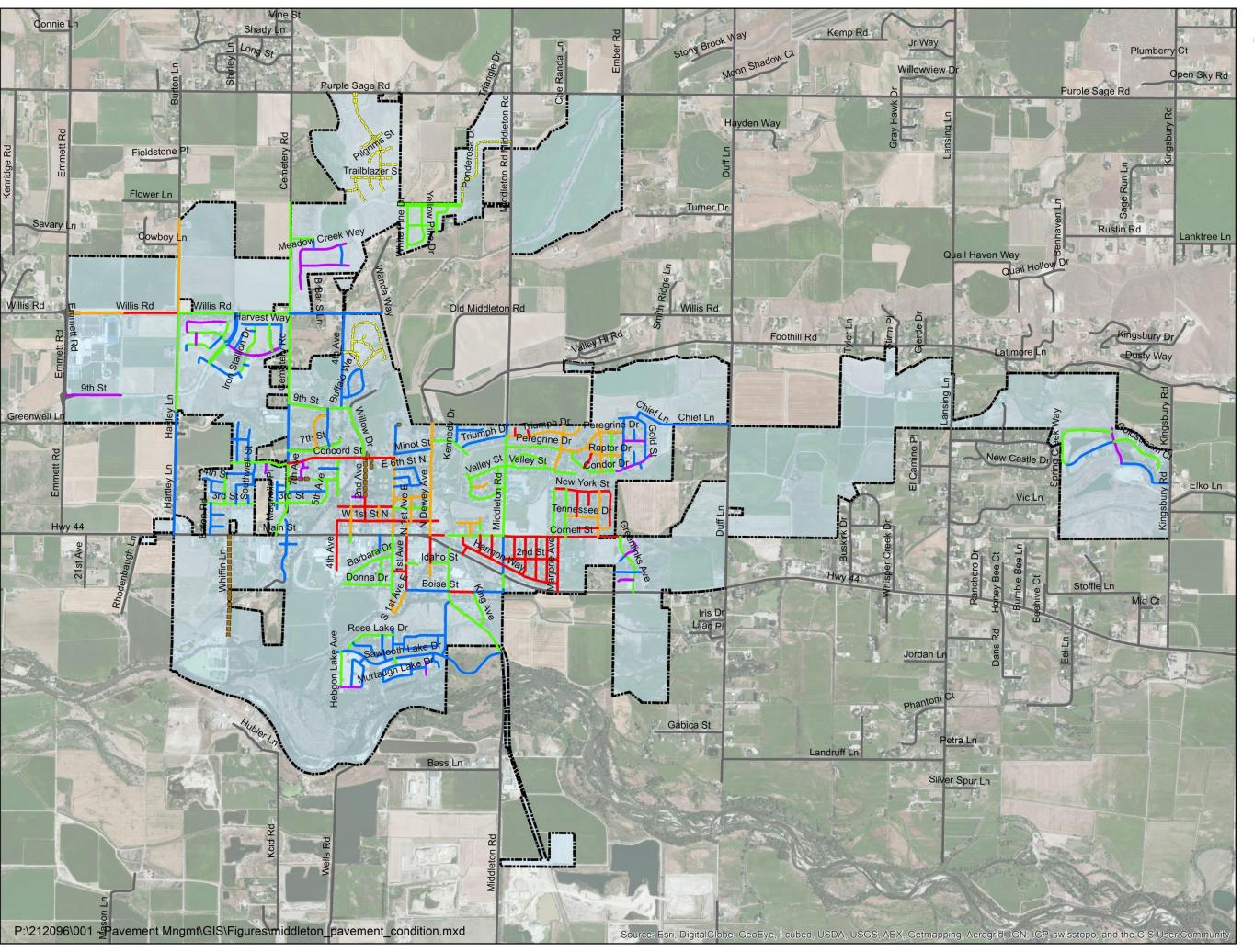


With no maintenance, the system average Remaining Service Life in 2023 will be 5 years. The deterioration of the network through the year 2032 is shown in Table 2 if no pavement maintenance is performed. Figure 8 illustrates the current condition of Middleton's road network.

**Table 2: Deterioration of Paved Street Network with No Maintenance** 

#### (Percent of System in Each RSL Category)

				RSI	L Category	7			
Year	0	1-3	4-6	7-9	10-12	13-15	16-18	19-21	Avg. RSL
2013	0	1.8	8.9	8.2	37.3	11.9	0	30.7	13.2
2014	0.6	3.5	6.9	17.9	32.1	10.9	9.4	18.7	12.2
2015	1.8	4.7	10.6	22.6	25.0	10.4	12.5	12.5	11.3
2016	3.3	6.6	14.6	23.4	20.2	11.1	12.5	8.3	10.3
2017	5.6	9.3	17.5	22.3	17.1	11.6	11.1	5.6	9.4
2018	8.6	12.0	19.1	20.6	15.3	11.4	9.3	3.7	8.4
2019	12.6	14.4	19.6	18.8	14.0	10.7	7.4	2.5	7.6
2020	17.4	16.1	19.3	17.2	12.9	9.6	5.8	1.6	6.7
2021	22.8	17.2	18.6	15.8	11.8	8.3	4.4	1.1	6.0
2022	28.5	17.7	17.7	14.4	10.6	7.0	3.3	0.7	5.3
2023	34.4	17.7	16.6	13.2	9.4	5.8	2.4	0.5	4.6
2024	40.3	17.3	15.5	11.9	8.2	4.7	1.8	0.3	4.0
2025	46.1	16.7	14.3	10.7	7.0	3.7	1.3	0.2	3.5
2026	51.7	15.9	13.1	9.5	5.9	2.9	0.9	0.1	3.0
2027	57.0	15.0	11.9	8.3	4.9	2.3	0.7	0.1	2.5
2028	61.9	13.9	10.7	7.2	4.0	1.7	0.5	0.1	2.2
2029	66.6	12.8	9.5	6.1	3.3	1.3	0.3	0	1.8
2030	70.9	11.7	8.4	5.2	2.6	1.0	0.2	0	1.5
2031	74.8	10.6	7.3	4.3	2.1	0.7	0.2	0	1.3
2032	78.3	9.5	6.3	3.6	1.6	0.6	0.1	0	1.1





## Figure 8

Remaining Service Life (RSL) 2013





Excellent (19-20)

Very Good (13-18)

Good (10-12)

—— Fair (7-9)

Poor (0-6)

Unpaved

----- Undedicated

Not Inventoried







# 4.2 Development of Preservation Strategies and Recommended Treatments

Pavement preservation treatments and strategies to correct root causes of distress were identified after determining the governing distress for each street segment. In many cases there are multiple treatments that can be used to remedy the governing and other distresses present in a pavement segment. To illustrate this, a distress deterioration table for longitudinal cracking is shown in Table 3. The table shows the severity and extent ratings for longitudinal cracks, the resulting RSL from each, and the recommended treatment and strategy.

**Severity & Rating RSL Strategy Treatment Extent** None 20 No Maintenance No Maintenance 1 Low, Low 14 Routine Crack Seal 2 Low, Med 12 Routine Crack Seal 3 Low, High 10 Preventative Single Chip Seal 4 Med, Low 12 Routine Crack Seal 5 Med, Med 10 Rehabilitation Thin Hot Mix Overlay (<2 in) 6 Med, High 8 Rehabilitation Thin Hot Mix Overlay (<2 in) 7 High, Low 10 Preventative Digout and Hot Patch 8 8 High, Med Reconstruction Rotomill & Thick Overlay (3 in.) 9 6 Rotomill & Thick Overlay (3 in.) High, High Reconstruction

**Table 3: Longitudinal Cracking** 

Distress deterioration tables similar to this are used by the iWorQ software program. The RSL and governing distress determines a treatment based on distress ratings. A maintenance performance chart of common treatments is provided in Appendix 1. The chart lists treatments by their maintenance types (preventative, routine, rehabilitation, reconstruction) along with a description and lists an associated unit cost (per square yard). Additionally, the achieved gain in RSL from each treatment is given according to the current RSL of the pavement segment being treated.

The City of Middleton carried out the following projects in July 2013 after the condition survey was conducted:

- Overlaid Willis Rd from B/S Lane to N 4<sup>th</sup> Ave. W
- Paved N Hawthorne Dr. north of Minot St. (previously unpaved)
- Paved Middleton Mobile Estates subdivision off of N Hawthorne Dr. (previously unpaved)



These projects were taken into account in developing the Pavement Management Plan (PMP). Figures in this report were updated to reflect them as well. It is recommended that the condition of the newly-paved streets be inventoried in 2014.

The City identified the following streets and years in which they are to be treated as priority:

- Reconstruct streets in the Canyon Villa Subdivision (2015)
- Concord Street (2015)
- Reconstruct South 3<sup>rd</sup> Avenue (2015)
- Reconstruct all of 4<sup>th</sup> Avenue (2015)
- South Dewey Avenue (2016)
- Willis Road west of Hartley Rd (2016)
- Middleton Place Subdivision (2017)
- 2<sup>nd</sup> Street North (2017)
- 1<sup>st</sup> Avenue South (2018)
- Park Place Subdivision (2018)
- North Middleton Road realignment (2018)

These projects have been incorporated in to the PMP in the years the City has requested. See Chapter 5.2 for more information.



### 5.0 Development of 5-Year Pavement Management Plan

The iWorQ software takes the percentage of the street network in each RSL year (0–20) and subtracts one year of RSL each year. For example, if Middleton has 20% of its network with RSL of 3 and 8% at RSL 2 in 2014, iWorQ projects that 20% of the network will be at RSL 2 and 8% will be at RSL 1 one year later in 2015. iWorQ projects deterioration in terms of percent area of roadway in each RSL category, not by street segment. It is important to note that this prediction of deterioration does not necessarily represent how the network will perform in reality. Many factors contribute to pavement distress and it must be reemphasized the importance of conducting pavement condition surveys every two to three years. iWorQ should not be used exclusively when selecting a treatment for pavements. iWorQ recommends treatments based on current rating data and conditions may change through the year the Pavement Management Plan is implemented. It is meant to be a tool the City of Middleton can use to improve decision-making.

A two-step pavement management plan is recommended. The first step calls for \$160,000 in funding being allocated to crack and chip seals in 2014. The second step requires \$650,000 in annual funding from 2015 through 2018. The recommended management plan should maintain a street network average RSL of 12 to 13 with no more than 3% of the network at a terminal service level. This will result in an overall good level of service for the City of Middleton street network.

Chapters 5.1 and 5.2 discuss the Management Plan for years 2014 and 2015 through 2018 respectively. Maintenance recommendations for specific street segments and years to be carried out are included in Appendix 2.



### **5.1** Step 1 - Year 2014

Step 1 applies to year 2014. It is assumed that the system average RSL will deteriorate by one year to 12 in 2014. Chart 6 shows the RSL distribution for 2014.

2014 Remaining Service Life Distribution for Paved **Street Network** 35% 31% 27% 30% Percent of Network **Surface Area** 25% 19% 20% 12% 15% 9% 10% 2% 0% 5% 0% 0% 1-3 4-6 7-9 10-12 13-15 16-18 19-21 **RSL Categories** 

Chart 6: 2014 RSL Distribution for Paved Street Network

The City of Middleton 2013-14 budget includes \$50,000 and \$110,000 for crack seal and chip seal, respectively. It is estimated that this budget of \$160,000 for maintenance should treat approximately 24% of the street network.



### 5.2 Step 2 - Years 2015 through 2018

The average RSL is projected to be 12.5 after treatments are performed in 2014. The resulting RSL distribution for 2015 is shown in Chart 7.

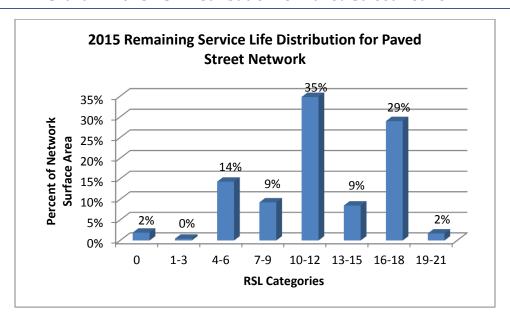


Chart 7: 2015 RSL Distribution for Paved Street Network

The City plans to reconstruct the roads in the Canyon Villa Subdivision. Currently there is no base under the roads. The poor condition of the pavement was substantiated during the pavement condition survey; most of the roads in the subdivision are in need of rehabilitation or reconstruction maintenance indicating a poor structure. The PMP reflects this project occurring in 2015. Additionally, reconstruction of S 3<sup>rd</sup> and 4<sup>th</sup> Avenues is allocated for 2015.

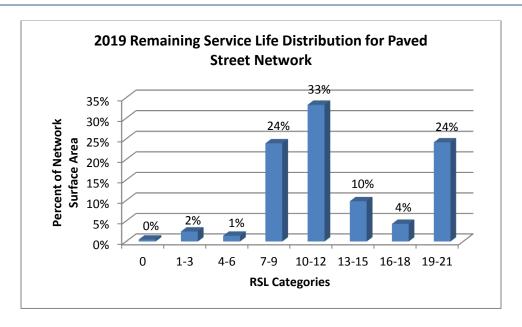
Maintenance needs for S. Dewey Avenue and the portion of Willis Road west of Hartley Road have been allocated for 2016 in the PMP. The recommended treatments for streets in the Middleton Place Subdivision as well as those of 2<sup>nd</sup> Street North have been allocated for 2017. Maintenance allocations in 2018 include those of streets in the Park Place Subdivision as well as costs for N. Middleton Road realignment. Streets within the City but not yet dedicated are assumed to be dedicated in the near future and their maintenance needs are incorporated into the year 2018.

A \$650,000 yearly budget was assumed for 2015 through 2018. The yearly maintenance allocations for these years are combinations of routine maintenance, reconstruction of pavements in poor condition, as well as new construction and projects mentioned previously and prioritized accordingly. These allocations are intended to reduce the percentage of the network that is in poor condition, improve fair streets, and preserve streets in good condition, thus slowing deterioration to a terminal service level. Amounts of funding for specific treatments (crack and chip seal, overlay, reconstruction, etc.) vary each year.

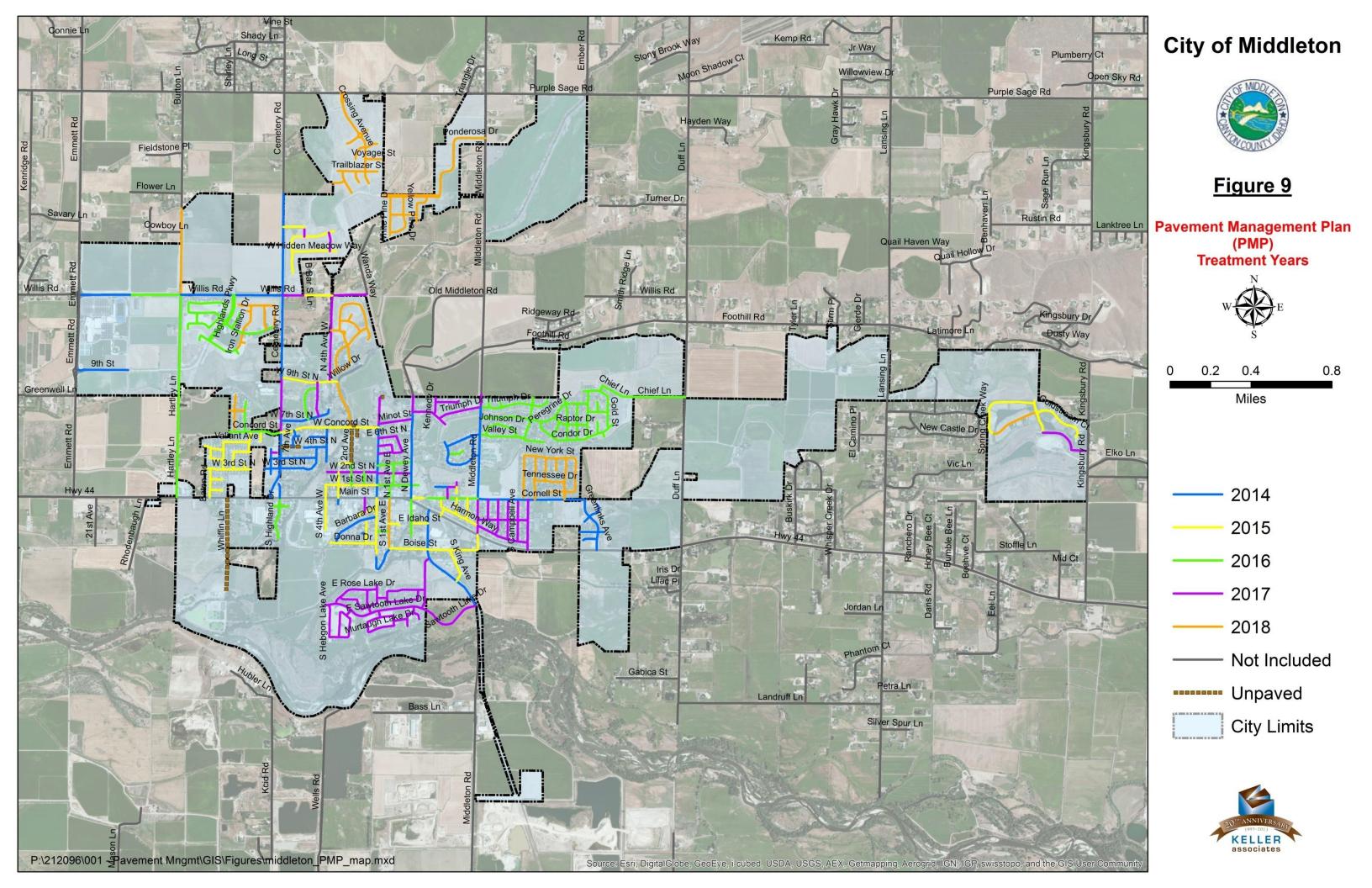


The network average RSL is predicted to be 12.5 years in 2019 after Step 2 maintenance has been performed. The resulting RSL distribution for 2019 is illustrated in Chart 8.

Chart 8: 2019 RSL Distribution for Paved Street Network



For specific street segments recommended for the various treatments outlined above, see the PMP Allocations Table in Appendix 2. Middleton's street network color-coded by year to be treated in the PMP is shown in Figure 9. Minor re-evaluation of the City's Pavement Management Plan is recommended annually with a more comprehensive re-evaluation in 2018.





#### 6.0 Recommendations

This Pavement Management Plan represents an effort by the City of Middleton in facilitating an efficient street network. Following this plan will maintain a good level of service (RSL between 12 and 13) for the next 5 years with less than 2% of the system at a terminal level. Combinations of routine maintenance, preventative maintenance, rehabilitation, and reconstruction allow for an acceptable network average level of service that promotes the growth and economy of the City of Middleton.

### 6.1 Implementation

Specific street segment recommendations for various treatments are provided in the PMP Treatment Allocations in Appendix 2. The same list sorted by RSL (smallest to largest) can be found in Appendix 3. This plan develops the most cost-effective recommended treatments to achieve the targeted RSL of 12 years based on the assumed budget provided by the City of Middleton. It is recommended that the City coordinate this plan with other capital improvements. For example, if the City plans on reconstructing a sewer main which would require the demolition of road's pavement and base section, it would be an ideal time to reconstruct that road segment even if that is not the PMP recommended treatment.

#### 6.2 Feedback

The importance of input and feedback regarding the pavement management plan cannot be over emphasized. The PMP is systematic in nature and allows for fine-tuning based on feedback and input from those involved. Timely and accurate feedback on all decisions and actions regarding maintenance, rehabilitation and reconstruction is required. Feedback and input would include but is not limited to the following:

- Type of work performed
- Unit cost of work performed
- Amount and quality of work performed
- Date of completed work
- Additional pavement structures added to the network

Additionally, it is recommended the City conduct a pavement condition survey every two to three years. This feedback and information enables a pavement management team to fine-tune the pavement management plan, providing better information to decision-makers.

A key piece of a PMP is the ability to keep up-to-date and accurate records about the condition of the street network. The iWorQ pavement module provided in this PMP makes this process relatively easy for users. It is imperative that the records in iWorQ be kept up to date as treatments are administered, streets are re-inventoried, the network is expanded, and as conditions change. Monitoring and analyzing the effectiveness of a Pavement Management Plan allows for improved planning and decision making in the future.



## 7.0 Summary and Conclusions

A recommended pavement preservation program is one that maintains an average remaining service life (RSL) of at least 10 years with the majority of the network above 7-9 years RSL. It is recommended that no more than 3% of the network be at the terminal serviceability level. Using the Pavement Management Plan presented in this report, the estimated average RSL of the City of Middleton should be 12 years by the end of 2018. The terminal serviceability level will be less than 1%. The overall RSL distribution of the network in terms of RSL categories will be greatly improved. This stabilization allows for cost-effective strategies and treatments to be used to maintain the street network.

A two-step funding level for preserving the paved street network at a high level of service is recommended. The combined recommended annual budget for pavement management for step one (2014) is \$160,000 and for step two (2015-2018) is \$650,000. Recommendations and/or budgets to expand the network or increase the network capacity or safety are not included in this plan unless otherwise specified. Future funding needs will likely increase due to inflation, increased pavement surface areas, increased traffic volumes, and increased materials costs. Additional funds for personnel, capital improvements, and capacity improvements are not included in this PMP.

City personnel should be trained in the use of the iWorQ software module so that it may be used and maintained properly and regularly. This training should also include data collection and analysis. Condition surveys every two to three years and updates to records as work is accomplished is critical in maintaining the pavement management plan.

# **APPENDICES**

<u>Appendix 1</u> Maintenance Performance Chart

Appendix 2
PMP Treatment Allocations
by Year and Segment

Appendix 3
PMP Treatment Allocations
by RSL and Year

### Maintenance Performance Chart

Treatment Type	Maint. Category	Cost	0	1-3	4-6	7-9	10-12	13-15	16-18	19-21
Crack Seal	Routine	\$0.35	0	0	0	0	1	2	3	2
Cold Patch	Routine	\$0.30	0	0	0	0	0	0	0	0
Digout and Hot Patch	Routine	\$0.45	0	0	0	0	0	0	0	0
High Perf. Cold Patch	Routine	\$0.60	0	0	0	0	0	0	0	0
Fog Coat	Routine	\$0.45	0	0	0	1	1	2	2	2
High Mineral Asphalt Emulsion	Preventative	\$1.20	0	0	0	1	2	3	5	5
Sand Seal	Preventative	\$0.65	0	0	0	1	2	2	2	2
Scrub Seal	Preventative	\$1.00	0	1	3	5	5	5	5	5
Single Chip Seal	Preventative	\$1.60	0	1	3	5	5	5	5	5
Slurry Seal	Preventative	\$1.75	0	1	3	5	5	5	5	5
Microsurfacing	Preventative	\$2.40	0	2	3	5	7	7	7	7.
Plant Mix Seal	Rehabilitation	\$5.60	0	3	4	5	7	7	7	7
Cold In-place Recycling (2 in with chip seal)	Rehabilitation	\$5.00	0	3	4	5	6	7	7	7
Thin Hot Mix Overlay (<2 in)	Rehabilitation	\$7.25	0	4	6	7	7	7	7	7
HMA (leveling) & Overlay (<2 in.)	Rehabilitation	\$8.00	0	4	6	8	8	8	8	8
Hot Surface Recycling	Rehabilitation	\$5.00	0	3	5	7	8	8	8	8
Rotomill & Overlay (<2 in)	Rehabilitation	\$8.40	0	4	7	8	8	8	8	8
Cold In-place Recycling (2/2 in.)	Reconstruction	\$10.30	15	15	15	15	15	15	15	15
Thick Overlay (3 in.)	Reconstruction	\$11.00	12	12	12	12	12	12	12	12
Rotomill & Thick Overlay (3 in.)	Reconstruction	\$12.00	12	12	12	12	12	12	12	12
Base Repair\Pavement Replacement	Reconstruction	\$12.00	16	16	16	16	16	16	16	16
Cold Recycling & Overlay (3/3 in.)	Reconstruction	\$11.15	14	14	14	14	14	14	14	14
Full Depth Reclamation & Overlay (3/3 in.)	Reconstruction	\$15.00	20	20	20	20	20	20	20	20
Base/Pavement Replacement (3/3/6 in.)	Reconstruction	\$19.00	20	20	20	20	20	20	20	20

<sup>\*</sup>Fit the current RSL into a category along the top row and then move downward to the applied treatment to find the additional RSL that will be achieved from the selected treatment.

(2/2 in.) Means 2" overlay with 2" recycle

(3/3/6) Means 3" HMA over 3" Road Base over 6" Base

ID	Road Name	From Address	To Address	Length (ft)	Width (ft)	Area (yd^2)	RSL	Recommended Treatment	Budgeted Treatment	Cost	Budgeted Year
18 60	Middleton Rd Middleton Rd	Triumph Dr STAR BLVD	Valley St E SAWTOOTH LAKE DR	712 3,028	52 47	4,115 15,815	10	Chip Seal Patching	Chip Seal	\$6,584.33 \$25,304.69	2014
97 183	N Hawthorne Dr  Cornell St  Cemetery Rd	Main St MIDDLETON RD WILLIS RD	Minot St  GREENLINKS AVE  W 9TH ST N	1,936 2,789 2,141	36 37 34	7,744 11,466 8,090	8 8 12	Thin Overlay Thin Overlay No Maintenance	Chip Seal Chip Seal Chip Seal	\$12,389.82 \$18,346.22 \$12,943.76	2014 2014 2014
205	Cemetery Rd Willis Rd	NORTH CITY LIMIT EMMETT RD	WILLIS RD LDS Church	2,645 1,329	30 40	8,818 5,907	10	Chip Seal Chip Seal	Chip Seal Chip Seal	\$14,108.54 \$9,451.53	2014
320 2	Middleton Rd N Magnolia Pl	Valley St N DEAD END	Comell St S DEAD END	1,670 653	52 36	9,650 2,612	10 20	Chip Seal No Maintenance	Chip Seal Crack Seal	\$15,440.72 \$914.30	2014 2014
3 5 24	W 3rd St N W Halverson St S 3rd Ave W	W DEAD END CITY LIMIT  N MAGNOLIA PL  MAIN ST	N 5TH AVE W N 5TH AVE W S DEAD END	1,283 1,186 166	36 36	5,134 4,746 665	12 20 12	Crack Seal  No Maintenance  Crack Seal	Crack Seal Crack Seal Crack Seal	\$1,796.81 \$1,661.06 \$232.68	2014 2014 2014
82 93	Mountain Loop St Valley St	NW DEAD END MOUNTAIN LOOP ST	VALLEY ST MIDDLETON RD	1,860	37 37	7,645 3,804	12	Patching Patching	Crack Seal Crack Seal	\$2,675.74 \$1,331.40	2014
100 105	N 4th Ave W N 5th Ave W	W CONCORD ST W 4TH ST N	S DEAD END W 3RD ST N	888 557	36 36	3,552 2,228	14 12	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,243.20 \$779.80	2014 2014
106 110	Cemetery Rd  Carol Pl  W 7th St N	W CONCORD ST W DEAD END CEMETARY RD	W MAIN ST S 1ST AVE W N DEAD END	1,770 99 1,350	42 36 36	8,260 396 5,399	12 12 12	Crack Seal Patching Patching	Crack Seal Crack Seal Crack Seal	\$2,891.01 \$138.46 \$1,889.80	2014 2014 2014
123	W 5th St N Ridge St	W DEAD END MOUNTAIN LOOP ST	N 4TH AVE W MIDDLETON RD	454 165	36 37	1,816	20	No Maintenance Crack Seal	Crack Seal  Crack Seal  Crack Seal	\$635.72 \$238.04	2014
145 154	W 4th St N Barbara Dr	W DEAD END DONNA DR	N 4TH AVE W HAWTHORNE DR	593 1,335	36 36	2,374 5,339	14 10	Crack Seal Patching	Crack Seal Crack Seal	\$830.88 \$1,868.54	2014 2014
179 180	Greenlinks Ave Fairway St	E MAIN ST SW DEAD END	HWY 44  GREENLINKS AVE	1,448	37 37	5,951 768	12 20	Crack Seal No Maintenance	Crack Seal Crack Seal	\$2,082.97 \$268.71	2014
181 182 190	Augusta St Fairway St N Dewey Ave	W DEAD END GREENLINKS AVE Triumph Dr	GREENLINKS AVE  N DEAD END  E Main St	369 491 2,243	37 37 36	1,515 2,019 8,972	14 14 10	Crack Seal  Crack Seal  Patching	Crack Seal Crack Seal Crack Seal	\$530.29 \$706.55 \$3,140.12	2014 2014 2014
212 213	Mulligan St Mulligan St	W DEAD END GREENLINKS AVE	GREENLINKS AVE E DEAD END	478 137	37 37	1,966 561	20 20	No Maintenance No Maintenance	Crack Seal Crack Seal	\$688.14 \$196.42	2014 2014
221 247	Willis Rd Johnson Pl	HARTLEY LN N 7TH AVE W	CEMETARY RD E DEAD END	2,656 118	45 36	13,282 473	10	Patching Crack Seal	Crack Seal	\$4,648.75 \$165.53	2014 2014
249 260 272	N 7th Ave W S 1st Ave E Creekside Ct	W CONCORD ST  BOISE ST  BRIDGEWATER WAY	W 4TH ST N S HAWTHORNE DR W DEAD END	594 321	36 36 37	1,769 2,378 1,320	14 8 10	Crack Seal Patching Patching	Crack Seal Crack Seal Crack Seal	\$618.98 \$832.14 \$461.96	2014 2014 2014
276 277	S Hawthorne Dr N Highland Ct	S 1ST AVE E  N DEAD END	DEAD END MAIN ST	370 374	36 32	1,481	8	Patching No Maintenance	Crack Seal Crack Seal	\$518.40 \$465.49	2014
310 77	9th St S 4th Ave W	Emmett Rd MAIN ST	Dead End S DEAD END PARKING LOT	1,311 843	28 36	4,080 3,373	14 6	Crack Seal Thick Overlay	Crack Seal Base/Pavement Replacement	\$1,428.04 \$64,083.43	2014 2015
91 101 107	Harmon Way Skyline Dr S Skyline Dr	SKYLINE DR N MAIN ST STAR BLVD	MIDDLETON RD HARMON WAY HARMON WAY	1,079 210 211	38 37 38	4,558 863 891	2 2	Thick Overlay  Cold Recycling & Overlay  Cold Recycling & Overlay	Base/Pavement Replacement Base/Pavement Replacement Base/Pavement Replacement	\$86,594.52 \$16,401.79 \$16,934.22	2015 2015 2015
115	N 4th Ave W S Villa Dr	W 1ST ST N MAIN ST	S DEAD END PAST MAIN ST HARMON WAY	335 555	36 37	1,340	4	Mill & Thick Overlay  Thick Overlay	Base/Pavement Replacement Base/Pavement Replacement	\$25,469.42 \$43,358.66	2015 2015 2015
160 170	N 3rd Ave W S Canyon Dr	2ND ST MAIN ST	SOUTH OF MAIN ST DEAD END HARMON WAY	669 416	36 37	2,676 1,709	_	Thin Overlay Thin Overlay	Base/Pavement Replacement Base/Pavement Replacement	\$50,836.08 \$32,463.63	2015 2015
42 50	Ascent Ct Southwell St	S 1ST AVE E CONCORD ST	E DEAD END W 4TH ST	275 541	36 36	1,098 2,165	12 20	No Maintenance	Chip Seal Chip Seal	\$1,757.05 \$3,463.28	2015 2015
51 52 64	Southwell Ct W 4th St N W 4th St N	N DEAD END ARCHER RD W 4TH ST N	W 3RD ST N E DEAD END CITY LIMIT SHERWOOD RD	189 449 513	36 36	757 1,796 2,053	20 20 20	No Maintenance No Maintenance No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,210.72 \$2,873.65 \$3,284.73	2015 2015 2015
65 84	Eaton Rd Forester Rd	W 3RD ST N W 4TH ST N	W MAIN ST LOCKSLEY ST	763 268	35 36	2,967 1,074	20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$4,747.49 \$1,717.79	2015 2015 2015
85 99	Locksley St W 9th St N	FORESTER RD CEMETARY RD	SHERWOOD RD WILLOW DR	337 1,464	36 24	1,350 3,903	20 12	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,159.37 \$6,244.55	2015 2015
146	S 1st Ave W Manchester Ct	BARBARA DR EASTON RD	DONNA DR E DEAD END	633 311	36 36	2,531 1,243	_	No Maintenance No Maintenance	Chip Seal Chip Seal	\$4,049.27 \$1,988.40	2015
157 159 184	Abbey Ct Valiant Ave Donna Dr	EATON RD SHERWOOD RD W DEAD END	E DEAD END SOUTHWELL ST HAWTHORNE DR	309 668 1,198	36 36	1,235 2,674 4,792	20 20 12	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,975.51 \$4,278.21 \$7,667.66	2015 2015 2015
241 250	S King Ave Archer Rd	BOISE ST W 4TH ST N	MIDDLETON RD W 3RD ST N	891 450	38 36	3,761 1,800	10	Chip Seal  No Maintenance	Chip Seal Chip Seal	\$6,017.31 \$2,880.58	2015 2015
263 273	E Idaho St Cobblestone Ct	S DEWEY AVE BRIDGEWATER WAY	S MIDDLETON RD COBBLESTONE CT	438 160	37 37	1,801 660	10 12	Chip Seal No Maintenance	Chip Seal Chip Seal	\$2,882.20 \$1,055.43	2015 2015
275 27 34	S Hawthorne Dr Fountain Springs Dr Goldstream Ct	E MAIN ST  N DEAD END  FOUNTAIN SPRINGS DR	S DEAD END TELAGA WAY S DEAD END	1,449 883 1,451	36 33 33	5,796 3,239 5,321	10 14 14	No Maintenance  Crack Seal  Crack Seal	Chip Seal Crack Seal Crack Seal	\$9,274.11 \$1,133.61 \$1,862.45	2015 2015 2015
47	W 3rd St N Spring Creek Way	W DEAD END COPPER CREEK WAY	E DEAD END PAST SOUTHWELL CT FOUNTAIN SPRINGS DR	1,192	36 33	4,767 7,048	14	Crack Seal Crack Seal	Crack Seal  Crack Seal	\$1,668.55 \$2,466.72	2015 2015 2015
56 69	W Arbor Dr Garden Ct	W DEAD END CONCORD ST	HAWTHORNE DR S DEAD END	508 271	36 36	2,032 1,085	14 14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$711.21 \$379.70	2015 2015
90	Sherwood Rd Halverson Pl	VALIANT AVE W DEAD END	W 3RD ST N N 2ND AVE W	716 301	36 36	2,864 1,202	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,002.53 \$420.85	2015 2015
201 202 204	W Hidden Meadow Way W Meadow Creek Way N Windsor Park Ave	N WINDSOR PARK AVE N WINDSOR PARK AVE SOUTH OF W MEADOW CREEK WAY	EAST DEAD END  EAST DEAD END  SOUTH DEAD END	1,160 1,174 859	32 32 32	4,126 4,176 3,055	14 14 14	Crack Seal Crack Seal Crack Seal	Crack Seal Crack Seal Crack Seal	\$1,444.02 \$1,461.56 \$1,069.15	2015 2015 2015
206	W Meadow Park Blvd Murphy Ave	CEMETARY RD STAR BLVD	N MEADOW WOOD AVE BOISE ST	607	18	1,213 836	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$424.56 \$292.62	2015 2015
210 133	Willis Rd W Concord St	B/S LANE (PRIVATE) CEMETARY RD	N 4TH AVE W N HAWTHORNE DR	760 2,571	26 33	2,196 9,428	4	Mill & Thick Overlay Thick Overlay	Mill & Thick Overlay Thick Overlay	\$26,354.37 \$103,712.80	2015 2015
141 158 242	W 1st St N Cornell St	N 4th Ave W DEWEY MIDDLETON RD	N Hawthorne Dr DEAD END	1,334 324 582	36 45	5,335 1,618 2,329	6	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$38,675.74 \$11,727.67 \$16,883.38	2015
257 268	Boise St  Boise St  Boise St	S 1ST AVE E S KING AVE	S KING AVE MIDDLETON RD MURPHY AVE	987 778	36 23 23	2,529 2,523 1,988	6 20 20	Thin Overlay  No Maintenance  No Maintenance	Thin Overlay Thin Overlay Thin Overlay	\$18,294.46 \$14,411.13	2015 2015 2015
127 149	S Highland Dr E 1st St N	MAIN ST N DEWEY AVE	S DEAD END E DEAD END	1,106 190	37 36	4,546 759	_	Base/Pavement Replacement Base/Pavement Replacement	Base/Pavement Replacement Base/Pavement Replacement	\$86,378.09 \$14,422.37	2016 2016
37	Hartley Ln Hartley Ln	WILLIS RD S CITY LIMIT	SOUTH CITY LIMIT  MAIN ST	2,332 2,958	32 32	8,291 10,517	12	No Maintenance No Maintenance	Chip Seal Chip Seal	\$13,266.19 \$16,827.51	2016 2016
39 45 55	Goshawk Ave Fairhaven Rd Meadow Ct	PEREGRINE DR CRUSADER DR MOUNTAIN LOOP ST	CONDOR DR CONCORD ST  NE DEAD END	947 555 404	37 36 37	3,893 2,220 1,662	12 20 10	No Maintenance  No Maintenance  Chip Seal	Chip Seal Chip Seal Chip Seal	\$6,228.46 \$3,551.75 \$2,659.83	2016 2016 2016
55 59 67	Fairhaven Pl Valley Ct	N DEAD END PROVIDENCE AVE	RE DEAD END  CRUSADER DR  E DEAD END	237 525	36 37	950 2,157		No Maintenance Chip Seal	Chip Seal Chip Seal	\$2,659.83 \$1,519.50 \$3,451.64	2016 2016 2016
73 109	Triumph Dr Concord St	MIDDLETON RD GARDEN CT	NE DEAD END CEMETARY RD	1,856 539	36 36	7,425 2,155	10	Chip Seal No Maintenance	Chip Seal Chip Seal	\$11,880.05 \$3,447.98	2016 2016
135 136 137	Cornell St  Concord St  Johnson Dr	W DEAD END W DEAD END CITY LIMIT W VALLEY ST NODE	MIDDLETON RD  GARDEN CT  E VALLEY ST NODE	1,313 828 1,115	37 36 37	5,399 3,313 4,582	12 12	No Maintenance  No Maintenance  Chip Seal	Chip Seal Chip Seal Chip Seal	\$8,639.05 \$5,301.53 \$7,331.12	2016 2016 2016
172 173	Miner Ave Raptor Dr	CONDOR DR PEREGRINE DR	S DEAD END GATEWAY AVE	1,115 124 916	32 37	4,582 441 3,765	20	No Maintenance Chip Seal	Chip Seal Chip Seal	\$7,331.12 \$705.01 \$6,023.78	2016 2016 2016
174 175	Stage Line PI Gateway Ave	N DEAD END GOLD ST	CONDOR DR CONDOR DR	311 1,226	32 32	1,104 4,358	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$1,766.69 \$6,972.36	2016 2016
176 178	Gold St  Nugget Ct  White Horse Ridge Dr	W DEAD END N DEAD END	CONDOR DR GOLD KING DR SADDLE MOUNTAIN WAY	1,506 267	32 32	5,354 949	20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$8,566.93 \$1,518.04	2016 2016
217 220 222	White Horse Ridge Dr Windmill Springs Ct Horseshoe Canyon Dr	NE DEAD END  N DEAD END  MUSTANG MESA AVE	SADDLE MOUNTAIN WAY STALLION SPRINGS WAY STALLION SPRINGS WAY	1,045 442 614	32 32 32	3,716 1,572 2,182	20 20 12	No Maintenance No Maintenance Patching	Chip Seal Chip Seal Chip Seal	\$5,945.01 \$2,514.65 \$3,490.98	2016 2016 2016
226 227	W Highlands Pkwy ROUNDABOUT W Highlands Pkwy	NE NODE WILLIS RD	SW NODE ROUNDABOUT	296 718	16 16	526 1,276	20 20	No Maintenance	Chip Seal Chip Seal	\$841.83 \$2,042.22	2016 2016
229	W Highlands Pkwy  Mustang Mesa Ave	ROUNDABOUT HORSESHOE CANYON DR	WILLIS RD S DEAD END	748 127	16 32	1,330 451	20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,127.25 \$721.08	2016 2016
234 253 255	Saddle Mountain Way Chief Ln Chief Ln	WHITE HORSE RIDGE RD  CITY LIMIT  FRONTIER AVE	SW DEAD END  DUFF LN  CITY LIMIT	123 1,341 892	32 37 37	436 5,515 3,667		No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$697.27 \$8,823.72 \$5,867.02	2016 2016 2016
261 316	Frontier Ave Spring Creek Dr	CHIEF LN IRON STALLION DR	GOLD ST Dead end	165 137	32 32	585 486	20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$936.11 \$778.10	2016 2016
317 10	Great Glen Harpy Ave	HORSESHOE CANYON DR N DEAD END	STALLION SPRINGS WAY  CONDOR DR	370 1,130	32 37	1,317 4,646	20 10	No Maintenance Patching	Chip Seal Crack Seal	\$2,106.97 \$1,626.03	2016 2016
103 171 177	Valley St Condor Dr Gold King Dr	MIDDLETON RD PAVEMENT CHANGE W GATEWAY AVE	PROVIDENCE AVE  NE DEAD END  GOLD ST	1,182 928	37 37	4,859 3,817	12	Crack Seal	Crack Seal Crack Seal	\$1,700.51 \$1,335.96	2016 2016
177 216 218	Gold King Dr Stallion Springs Way Stallion Springs Ave	GATEWAY AVE STALLION SPRINGS AVE LA REATA WAY	GOLD ST HIGHLANDS PKWY STALLION SPRINGS WAY	521 999 259	32 32 32	1,852 3,551 921	14 14 14	Crack Seal Crack Seal Crack Seal	Crack Seal Crack Seal Crack Seal	\$648.11 \$1,242.86 \$322.43	2016 2016 2016
219 223	La Reata Way Stallion Springs Way	STALLION SPRINGS AVE ROUNDABOUT W NODE	HORSESHOE CANYON DR IRON STALLION DR	959 492	32 32	3,408 1,750	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,192.91 \$612.42	2016 2016
224	W Highlands Pkwy Blue Sky Ave	WHITE HORSE RIDGE RD STALLION SPRINGS WAY	ROUNDABOUT HORSESHOE CANYON DR	587 272	16 32	1,044 968	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$365.49 \$338.93	2016 2016
230 232	W Highlands Pkwy Stallion Springs Way Horseshoe Canyon Dr	ROUNDABOUT IRON STALLION DR LA REATA WAY	WHITE HORSE RIDGE RD Ridge Way STALLION SPRINGS WAY	597 845 391	16 32 32	1,061 3,003 1,389	12 14 12	Crack Seal Crack Seal Crack Seal	Crack Seal Crack Seal Crack Seal	\$371.35 \$1,050.96 \$486.32	2016 2016 2016
233											

ID	Road Name	From Address	To Address	V 17	h (ft) Area (yd^2	_	Recommended Treatment	Budgeted Treatment	Cost	Budgeted Year
9 21	W Willow Cir Condor Dr Ash St	W DEAD END PEREGRINE DR HAWTHORNE DR	E DEAD END  PAVEMENT CHANGE E OF GOSHAWK AVE  S 1ST AVE E	1,342 333	35 1,57 37 5,51 36 1,33	9 10	Thick Overlay Thin Overlay Thin Overlay	Thick Overlay Thin Overlay Thin Overlay	\$17,347.17 \$40,010.25 \$9,665.09	2016 2016 2016
79	Prevail Pl Providence Ave	N DEAD END N DEAD END	TRIUMPH DR  VALLEY ST	138	37 56 37 4,61	5 8	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$4,099.68 \$33,484.61	2016 2016
111	N 1st Ave W Peregrine Dr	W 2ND ST N PROVIDENCE	W 1ST ST N GATEWAY AVE	341	36 1,36 37 7,02	3 8	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$9,879.90	2016 2016
121 139	Bluegrass Way E 1st St N	W 7TH ST N N HAWTHORNE DR	RED FERN DR N DEWEY AVE	1,047 896	36 4,18 36 3,58		Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$30,373.20 \$25,978.09	2016 2016
147 150	Conquest Ct N 1st Ave E	N DEAD END E 1ST ST N	TRIUMPH DR E MAIN ST	178 327	37 73 36 1,30	7 8	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$5,295.89 \$9,476.70	2016 2016
153 169	E 3rd St N Willis Rd	N HAWTHORNE DR LDS CHURCH	N DEWEY AVE HARTLEY LN	893 1,331	36 3,57 25 3,69	9 8	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$25,885.37 \$26,814.37	2016 2016
186	S Dewey Ave S Dewey Ave	E MAIN ST  IDAHO ST	STAR BLVD S DEAD END	73 318	36 29 19 67	2 8	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$2,112.04 \$4,870.14	2016
259 282 318	N 1st Ave E S Dewey Ave N 2nd Ave W	E 3RD ST N STAR BLVD HALVERSON	E 1ST ST N IDAHO W 1ST ST N	559 592 572	36 2,23 42 2,76 24 1,52	1 8	Thin Overlay Thin Overlay Thin Overlay	Thin Overlay Thin Overlay Thin Overlay	\$16,209.78 \$20,014.72 \$11,050.20	2016 2016 2016
40	S Campbell Ave W Aspen Ct	MAIN ST N MAGNOLIA PL	HARMON WAY E DEAD END	1,090	37 4,48 36 61	2 2	Base/Pavement Replacement No Maintenance	Base/Pavement Replacement Chip Seal	\$85,155.02 \$975.91	2017
6 7	Triumph Dr S Jarbidge Ave	N Dewey Ave N DEAD END	Dead End south east E WILLOW CREEK DR	582 487	36 2,32 36 1,94		No Maintenance No Maintenance	Chip Seal Chip Seal	\$3,721.98 \$3,117.73	2017 2017
11	E Sawtooth Lake Dr S Zehr Ave	W DEAD END SAWTOOTH LAKE DR	S CRANE CREEK WAY WALCOTT LAKE CT	2,657 174	36 10,62 36 69		No Maintenance No Maintenance	Chip Seal Chip Seal	\$17,003.45 \$1,113.15	2017 2017
13 15	E Walcott Lake Ct E Killarney Lake St	S ALTURAS LAKE PL S ASHAHKA AVE	SE DEAD END ALTURAS LAKE PL	416 361	36 1,66 36 1,44	2 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,660.79 \$2,307.39	2017 2017
16	E Murtaugh Lake Dr S Arrowrock Ave	Arrowrock Ave WALCOTT LAKE DR	S ASHAHKA AVE MURTAUGH LAKE DR	693 273	36 2,77 36 1,09	1 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$4,433.18 \$1,745.27	2017
22 23 26	E Willow Creek Dr S Arrowrock Ave E Rose Lake Dr	E ROSE LAKE DR E ROSE LAKE DR Fernan Lake St	S JARBRIDGE AVE E SAWTOOTH LAKE DR S CRANE CREEK WAY	1,186 626 1,154	36 4,74 36 2,50 36 4,61	5 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$7,591.45 \$4,007.82 \$7,385.67	2017 2017 2017
29	S Ashahka Ave E Walcott Lake Dr	E WALCOTT LAKE DR S ARROWROCK AVE	MURTAUGH LAKE DR S ASHAHKA AVE	256 694	36 4,61 36 1,02 36 2,77	5 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,639.84 \$4,439.53	2017 2017 2017
31	S Crane Creek Way N 4th Ave W	MIDDLETON RD WILLIS RD	E SAWTOOTH LAKE DR W 9TH ST N	1,377	36 5,50 27 6,76	7 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$8,811.58 \$10,818.18	2017
33 46	N Dewey Ave Middleton Rd	City Limit N WIDTH CHANGE N OF TRIUMPH	Triumph Dr TRIUMPH DR	423 316	36 1,69 26 91	4 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,709.75 \$1,462.32	2017
48 72	E Willowcreek Dr S Ahsahka Way	S AHSAHKA WAY E FERNAN LAKE ST	S WILLOWCREEK WAY E WILLOWCREEK DR	807 113	36 3,22 36 45	2 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$5,163.20 \$723.08	2017 2017
75 87	E Fernan Lake St Middleton Rd	S JARBRIDGE AVE MAIN ST	S AHSAHKA WAY STAR BLVD	265 948	36 1,05 30 3,16	1 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,695.12 \$5,057.15	2017
88 104 114	Cemetery Rd S Willowcreek Way Minot St	W 9TH ST N E ROSE LAKE DR HAWTHORNE DR	W CONCORD ST S WILLOWCREEK WAY DEWEY AVE	1,435 255 896	35 5,58 36 1,02 25 2,48	1 20	No Maintenance No Maintenance No Maintenance	Chip Seal Chip Seal	\$8,929.31 \$1,634.01 \$3,980.44	2017 2017 2017
114 132 168	Minot St  Red Fern Dr  S 1st Ave W	HAWTHORNE DR  W 9TH ST N  MAIN ST	DEWEY AVE W 7TH ST N W ARBOR DR	900 377	25 2,48 37 3,70 36 1,50	1 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$3,980.44 \$5,920.83 \$2,412.04	2017 2017 2017
196 197	S Redfish Ave S Benewah Lake Ave	E SAWTOOTH LAKE DR E HENRYS LAKE DR	E HENRYS LAKE DR E MRTAUGH LAKE ST	189	36 75 36 2,67	8 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,212.38 \$4,282.35	2017
198 200	E Henrys Lake Dr S Twin lakes Ave	S BENEWAH LAKE AVE E HENRYS LAKE DR	S TWIN LAKES AVE MURTAUGH LAKES ST	308 471	36 1,23 36 1,88	2 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$1,970.64 \$3,011.41	2017 2017
203	N Prairie Wind Ave Willis Rd	W MEADOW CREEK WAY N 4TH AVE W	W HIDDEN MEADOW WAY WANDA WAY	485 906	32 1,72 26 2,61	8 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,758.84 \$4,189.47	2017 2017
246 251	Telaga Way N Meadow Wood Ave	FOUNTAIN SPRINGS DR W MEADOW PARK BLVD	KINGSBURY RD W MEADOW CREEK WAY	1,439	33 5,27 33 67	8 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$8,443.81 \$1,084.60	2017
252 254 256	Triumph Dr  Kennedy Ct  Kennedy Dr	TRIUMPTH T INTX  KENNEDY DR  N DEAD END	MIDDLETON RD E DEAD END TRIUMPH DR	1,138 612 441	36 4,55 36 2,44 36 1,76	9 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$7,280.70 \$3,917.71 \$2,823.44	2017 2017 2017
269 281	E Sawtooth Lake Dr Willis Rd	Crane Creek Way CEMETARY RD	Middleton Rd  B/S LANE (PRIVATE)	1,739	36 6,95 42 2,51	5 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$11,128.69 \$4,022.76	2017
321 322	Triumph Dr Triumph Dr	Kennedy Dr Triumph Dr	Triumph Dr Dead End	203 188	36 81 36 75	1 12	No Maintenance No Maintenance	Chip Seal Chip Seal	\$1,298.19 \$1,205.17	2017 2017
8	E Rose Lake Dr S Alturas Lake Pl	E SAWTOOTH LAKE DR WALCOTT LAKE CT	S JARBRIDGE AVE S DEAD END	1,250 307	36 5,00 36 1,22	0 14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,750.12 \$429.11	2017 2017
19 68	S Jarbidge Ave N 2nd Ave E	SAWTOOTH LAKE DR E 6TH ST N	WALCOTT LAKE DR E 4TH ST N	179 434	36 71 21 1,01	3 20	Crack Seal No Maintenance	Crack Seal Crack Seal	\$250.73 \$354.39	2017 2017
98 195	E 6th St N S Hebgon Lake Ave	N HAWTHORNE DR E SAWTOOTH LAKE DR	N 2ND AVE E E MURTAUGH LAKE ST	476 831	22 1,16 36 3,32	6 12	No Maintenance Crack Seal	Crack Seal Crack Seal	\$407.10 \$1,163.95	2017
199 265 266	E Murtaugh Lake St N 1st Ave E E 5th St N	S HEBGON LAKE AVE E 5TH ST N N HAWTHORNE DR	S TWIN LAKES AVE E 4TH ST N N 1ST AVE E	521 196 351	36 2,08 33 71 33 1,28	9 20	Crack Seal  No Maintenance  No Maintenance	Crack Seal Crack Seal Crack Seal	\$729.87 \$251.82 \$450.46	2017 2017 2017
267 319	E 4th St N Hawthorne Dr	N HAWTHORNE DR  N HAWTHORNE DR  Minot St	N 2ND AVE E E 8th St	643	30 2,14 36 2,84	3 20	No Maintenance  No Maintenance  No Maintenance	Crack Seal  Crack Seal	\$749.88 \$994.56	2017
130	Harmon Way W 2nd St N	N MIDDLETON RD W DEAD END	MARJORIE AVE N HAWTHORNE DR	1,394	38 5,88 36 5,25	5 6	Mill & Thick Overlay Thick Overlay	Mill & Thick Overlay Thick Overlay	\$70,623.06 \$57,773.50	2017
89 129	E 2nd St S S Marjorie Ave	N MIDDLETON RD MAIN ST	DEAD END (PARK) STAR BLVD	1,308 1,311	37 5,37 37 5,39		Thick Overlay Thick Overlay	Thick Overlay Thick Overlay	\$59,132.09 \$59,307.42	2017 2017
86 116	S Duncan Ave S Brice Ave	MAIN ST MAIN ST	HARMON WAY E 2ND ST S	1,040 530	37 4,27 37 2,17	8 6	Thin Overlay Thin Overlay	Thin Overlay Thin Overlay	\$31,001.49 \$15,791.21	2017 2017
119	E 2nd St N S Borup Ave	N HAWTHORNE ST  MAIN ST	N DEWEY AVE HARMON WAY	886 930	36 3,54 37 3,82	5 8	No Maintenance Thin Overlay	Thin Overlay Thin Overlay	\$25,684.95 \$27,730.58	2017
271 163 185	Bridgewater Way Pacific Ave St Charles Ct	N DEAD END  NEW YORK ST  NEW YORK ST	E MAIN ST TENNESSEE DR S DEAD END	663 607 324	37 2,72 37 2,49 37 1,33	6 2	Thin Overlay  Base/Pavement Replacement  Base/Pavement Replacement	Thin Overlay  Base/Pavement Replacement  Base/Pavement Replacement	\$19,755.73 \$47,421.17 \$25,331.01	2017 2018 2018
17 25	N Buffalo Way Copper Creek Way	N POWDER RIVER DR SPRING CREEK WAY	N POWDER RIVER DR INTX FOUNTAIN SPRINGS DR	835 1,315	32 2,96 33 4,82	9 20	No Maintenance  No Maintenance	Chip Seal  Chip Seal	\$4,750.36 \$7,715.65	2018
28 44	N Powder River Dr Castle Rock Rd	N 4TH AVE W CRUSADER DR	N BUFFALO WAY CONCORD ST	1,063 558	30 3,54 36 2,23		No Maintenance No Maintenance	Chip Seal Chip Seal	\$5,668.42 \$3,569.15	2018 2018
74 76	Willow Dr Crusader Dr	W 9TH ST N W DEAD END CITY LIMIT	W CONCORD ST FAIRHAVEN RD	1,261 399	22 3,08 36 1,59		No Maintenance No Maintenance	Chip Seal Chip Seal	\$4,930.14 \$2,550.76	2018 2018
165	Castle Rock PI St James St	N DEAD END PARK PLACE WAY	CRUSADER DR ATLANTIC AVE	412 279	36 1,64 37 1,14	7 10	No Maintenance Patching	Chip Seal Chip Seal	\$2,635.47 \$1,835.65	2018
285 286 287	Crossing Avenue (west)  Crossing Avenue (east)  Crossing Avenue	PURPLE SAGE RD PURPLE SAGE RD South of Divider	END OF DIVIDED SEGMENT END OF DIVIDED SEGMENT ROUNDABOUT	265 261 933	18 52 18 52 36 3,73	2 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$846.48 \$834.46 \$5,973.77	2018 2018 2018
289 290	Homesteaders St Homesteaders St	Crossing Ave Roundabout Crossing Ave Roundabout	Dead end (east)  Dead end (west)	188 352	36 3,73 31 64 31 1,21	9 10	Patching  No Maintenance	Chip Seal Chip Seal	\$1,037.68 \$1,942.09	2018 2018 2018
291 292	Crossing Avenue Pilgrims St	S of Roundabout  Crossing Avenue	Dead End dead end (east)	1,260 334	36 5,04 31 1,15	0 12	No Maintenance Patching	Chip Seal Chip Seal	\$8,064.21 \$1,840.86	2018 2018
294 295	Voyager St Trailblazer St	Crossing Avenue Crossing Avenue	Dead end Dead End (east)	425 323	32 1,51 32 1,14	8 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$2,415.98 \$1,836.26	2018 2018
299 300	Unnamed Rd Ponderosa Dr	Trailblazer St MIDDLETON RD	Dead end MEADOW PARK BLVD	312 2,523	32 1,10 33 9,25	0 12	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,774.70 \$14,800.12	2018 2018
301 302	Meadow Park Blvd W Meadow Park Blvd E	DEAD END PONDEROSA DR	PONDEROSA DR  DEAD END  MEADOW PARK PLAYS	1,471	18 2,94 18 2,92	9 12	No Maintenance  No Maintenance	Chip Seal	\$4,707.84 \$4,686.76	2018
303 304 306	Yellow Pine Dr White Pine Dr Scotch Pine Dr	WHITE PINE DR  MEADOW PARK BLVD  MEADOW PARK BLVD	MEADOW PARK BLVD  DEAD END CUL DE SAC  DEAD END	1,227 1,017 858	32 4,36 32 3,61 32 3,05	4 12	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$6,981.15 \$5,783.19 \$4,882.74	2018 2018 2018
308 309	N Powder River Dr Powder River Dr	N 4TH AVE W SUBDIVISION ENTRANCE  4th	SE ROUNDABOUT THEN NE TO FINISH LOOP SUBDIVISION INTERIOR LOOP	4,279 220	32 3,05 30 14,26 34 83	3 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$4,882.74 \$22,820.35 \$1,331.92	2018 2018 2018
311	Harvest Way Iron Stallion Court	Ridge Way IRON STALLION DR	W Dead end dead end	955 103	32 3,39 32 36	4 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$5,430.18 \$585.74	2018 2018
314 315	Ridge Way Heritage Dr	Stallion Springs IRON STALLION DR	Harvest Way Dead end	552 112	32 1,96 32 39	1 20 9 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$3,138.18 \$638.26	2018 2018
225 288	Iron Stallion Dr Crossing Avenue Roundabout	Harvest Way Crossing Avenue	SADDLE MOUNTAIN WAY WHOLE ROUNDABOUT	1,271 325	32 4,51 22 79	5 14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,581.63 \$278.40	2018 2018
293 296	Pilgrims St Trailblazer St	Crossing Avenue Crossing Avenue	dead end (west)  Dead End (West)	724 631	31 1,57 32 2,57	5 14	Crack Seal	Crack Seal	\$550.76 \$901.29	2018
297 298 305	Pathfinder ave Explorer St Lodge Pole Dr	Trailblazer St  Pathfinder Ave  SCOTCH PINE DR	Dead End (South)  Dead end  WHITE PINE DR	631 313 686	32 2,24 30 1,04 32 2,43	5 14	Crack Seal Crack Seal Crack Seal	Crack Seal Crack Seal Crack Seal	\$784.91 \$365.70 \$853.42	2018 2018 2018
313	Prairie View Way  New York St	Harvest Way  N CAMPBELL AVE	STALLION SPRINGS WAY ATLANTIC AVE	633	32 2,43 32 2,25 37 5,51	1 14	Crack Seal  Crack Seal  Mill & Thick Overlay	Crack Seal  Crack Seal  Mill & Thick Overlay	\$787.86 \$66,145.08	2018 2018
35 36	Hartley Ln Hartley Ln	Cowboy Ln City Limits	Willis Rd Cowboy Ln	1,645	27 4,93 27 1,81	4 8	Thin Overlay  Thin Overlay	Thin Overlay  Thin Overlay	\$35,769.20 \$13,175.49	2018 2018
41 96	S 1st Ave E N Campbell Ave	MAIN ST NEW YORK ST	BOISE ST MAIN ST	1,329 1,156	36 5,31 37 4,75	8 8 1 12	Thin Overlay  No Maintenance	Thin Overlay Thin Overlay	\$38,552.96 \$34,444.61	2018 2018
112 113	Park Place Way Tennessee Dr	NEW YORK ST BOARDWALK WAY	E MAIN ST PARK PLACE WAY	1,094 793	37 4,49 37 3,25	8 8	No Maintenance Crack Seal	Thin Overlay Thin Overlay	\$32,618.81 \$23,621.36	2018 2018
134 162	Boardwalk Way Atlantic Ave	NEW YORK ST NEW YORK ST	MAIN ST ST JAMES ST	1,140 843	37 4,68 37 3,46	7 8	No Maintenance Thin Overlay	Thin Overlay Thin Overlay	\$33,987.53 \$25,138.68	2018
166	St James Ct	W DEAD END	PARK PLACE WAY	484	37 1,99	1 8	Thin Overlay	Thin Overlay	\$14,434.48	2018

The color	Budgeted Year	Cost	Budgeted Treatment	Recommended Treatment	RSL	Area (yd^2)	Width (ft)	Length (ft)	To Address	From Address	Road Name	ID
1.	1.22 2015	\$16,401.79 \$16,934.22									· · · · · · · · · · · · · · · · · · ·	
1.	2.37 2016	\$14,422.37	Base/Pavement Replacement	Base/Pavement Replacement	2	759	36	190	E DEAD END	N DEWEY AVE	E 1st St N	149
March   Marc	1.17 2018	\$47,421.17 \$25,331.01	Base/Pavement Replacement	Base/Pavement Replacement	2	2,496	37	607	TENNESSEE DR	NEW YORK ST	Pacific Ave	163
Proceedings		\$25,469.42 \$26,354.37										
March   Marc	1.52 2015	\$64,083.43 \$86,594.52	Base/Pavement Replacement	Thick Overlay	6	4,558	38	1079	MIDDLETON RD	SKYLINE DR N	Harmon Way	91
Dec   100	5.74 2015	\$38,675.74	Thin Overlay	Thin Overlay	6	5,335	36	1334	N Hawthorne Dr	N 4th Ave W	W 1st St N	141
Manual	7.67 2015	\$11,727.67	Thin Overlay	Thin Overlay	6	1,618	45	324	DEAD END	DEWEY	Cornell St	158
	3.38 2015	\$16,883.38 \$9,665.09	Thin Overlay	Thin Overlay	6	2,329	36	582	S KING AVE	MIDDLETON RD	Boise St	242
March		\$21,479.04 \$17,347.17										
Total	0.20 2016	\$25,978.09 \$11,050.20	Thin Overlay	Thin Overlay	6	1,524	24	572	W 1ST ST N	HALVERSON	N 2nd Ave W	318
The content	2.09 2017	\$59,132.09	Thick Overlay	Thick Overlay	6	5,376	37	1308	DEAD END (PARK)	N MIDDLETON RD	E 2nd St S	89
1	7.42 2017	\$59,307.42 \$70,623.06	Thick Overlay	Thick Overlay	6	5,392	37	1311	STAR BLVD	MAIN ST	S Marjorie Ave	129
		\$66,145.08 \$12,389.82	,									
December   Property   Property	2.14 2014	\$18,346.22 \$832.14	Crack Seal	Patching	8	2,378	36	594	S HAWTHORNE DR	BOISE ST	S 1st Ave E	260
1.	5.08 2015	\$50,836.08	Base/Pavement Replacement	Thin Overlay	8	2,676	36	669	SOUTH OF MAIN ST DEAD END	2ND ST	N 3rd Ave W	160
10	9.90 2016	\$9,879.90	Thin Overlay	Thin Overlay	8	1,363	36	341	W 1ST ST N	W 2ND ST N	N 1st Ave W	111
Table	5.70 2016	\$9,476.70 \$25,885.37	Thin Overlay	Thin Overlay		1,307	36	327	E MAIN ST	E 1ST ST N	N 1st Ave E	150
10   10   10   10   10   10   10   10	2.04 2016	\$26,814.37 \$2,112.04	Thin Overlay	Thin Overlay	8	291	36	73	STAR BLVD	E MAIN ST	S Dewey Ave	186
Texas   Control   Contro	9.78 2016	\$4,870.14 \$16,209.78 \$20.014.72	Thin Overlay	Thin Overlay	8	2,236	36	559	E 1ST ST N	E 3RD ST N	N 1st Ave E	259
The content of the	1.49 2017	\$20,014.72 \$31,001.49 \$27,730.58	Thin Overlay	Thin Overlay	8	4,276	37	1040	HARMON WAY	MAIN ST	S Duncan Ave	86
Descripton	5.73 2017	\$19,755.73 \$35,769.20	Thin Overlay	Thin Overlay	8	2,725	37	663	E MAIN ST	N DEAD END	Bridgewater Way	271
No.   Company   Company		\$13,175.49 \$38,552.96	,	,					-			41
Total	3.68 2018	\$23,621.36 \$25,138.68	Thin Overlay	Thin Overlay	8	3,467	37	843	ST JAMES ST	NEW YORK ST	Atlantic Ave	162
Company	4.33 2014	\$14,434.48 \$6,584.33 \$25,304.69	Chip Seal	Chip Seal	10	4,115	52	712	Valley St	Triumph Dr	Middleton Rd	18
Company   Control   Cont		\$1,331.40 \$1,868.54	Crack Seal	Patching						MOUNTAIN LOOP ST	·	
December   Principle   Princ		\$3,140.12 \$14,108.54		-					WILLIS RD			205
Marchest   Court   C	1.96 2014	\$4,648.75 \$461.96	Crack Seal	Patching	10	1,320	37	321	W DEAD END	BRIDGEWATER WAY	Creekside Ct	272
10   10   10   10   10   10   10   10	0.72 2014	\$15,440.72	Chip Seal	Chip Seal	10	9,650	52	1670	Cornell St	Valley St	Middleton Rd	320
Coulo	7.31 2015	\$6,017.31 \$2,882.20	Chip Seal	Chip Seal	10	3,761	38	891	MIDDLETON RD	BOISE ST	S King Ave	241
Memory C	0.25 2016	\$9,274.11 \$40,010.25	Thin Overlay			5,519		1342	PAVEMENT CHANGE E OF GOSHAWK AVE	PEREGRINE DR		9
Tourne   Middle   M	9.83 2016	\$1,626.03 \$2,659.83	Chip Seal	Chip Seal	10	1,662	37	404	NE DEAD END	MOUNTAIN LOOP ST	Meadow Ct	55
17   Respute for   PROPERTY   P	0.05 2016	\$11,880.05	Chip Seal	Chip Seal	10	7,425	36	1856	NE DEAD END	MIDDLETON RD	Triumph Dr	73
	5.84 2016	\$50,936.84 \$30,373.20	Thin Overlay	Thin Overlay	10	7,026	37	1709	GATEWAY AVE	PROVIDENCE	Peregrine Dr	118
Post Plance Way	3.78 2016	\$7,331.12 \$6,023.78	Chip Seal	Chip Seal	10	3,765	37	916	GATEWAY AVE	PEREGRINE DR	Raptor Dr	173
Temperature of   Compare Provention	3.81 2018	\$32,618.81	Thin Overlay	No Maintenance	10	4,499	37	1094	E MAIN ST	NEW YORK ST	Park Place Way	112
1	7.68 2018	\$1,835.65 \$1,037.68 \$1,840.86	Chip Seal	Patching	10	649	31	188	Dead end (east)	Crossing Ave Roundabout	Homesteaders St	289
May No	5.81 2014	\$1,796.81 \$232.68	Crack Seal	Crack Seal	12	5,134	36	1283	N 5TH AVE W	W DEAD END CITY LIMIT	W 3rd St N	3
Columb   WORKER PRO	9.80 2014	\$2,675.74 \$779.80	Crack Seal	Crack Seal	12	2,228	36	557	W 3RD ST N	W 4TH ST N	N 5th Ave W	105
MOUNTAIN LOOP 67	3.46 2014	\$138.46	Crack Seal	Patching	12	396	36	99	S 1ST AVE W	W DEAD END	Carol PI	110
Commenty RG	3.04 2014	\$238.04 \$2,082.97	Crack Seal	Crack Seal	12	680	37	165	MIDDLETON RD	MOUNTAIN LOOP ST	Ridge St	138
Diversity   Dive		\$12,943.76 \$1,757.05									·	
Part	7.66 2015	\$6,244.55 \$7,667.66	Chip Seal	No Maintenance	12	4,792	36	1198	HAWTHORNE DR	W DEAD END	Donna Dr	184
Valley 81	5.19 2016	\$1,055.43 \$13,266.19 \$6,228.46	Chip Seal	No Maintenance	12	8,291	32	2332	SOUTH CITY LIMIT	WILLIS RD	Hartley Ln	37
Persperse Dr.   MIDDLETON RD   PROVIDENCE AVE   1304   37   5.362   12   Patching   Patching   52.4128   136   Concert St.   No Maintenance   Chip Seal   58.8050   136   Concert St.   W DEAD END   MIDDLETON RD   1313   37   5.369   12   No Maintenance   Chip Seal   58.8015   136   Concert St.   No Maintenance   Chip Seal   58.015   Concert St.   No Maintenance   Chip Seal   Concert St.   Seal   Seal   Concert St.   Seal   Concert St.   Seal   Seal   Seal   Seal   Seal   Concert St.   Seal   Seal	0.51 2016	\$1,700.51 \$3,447.98	Crack Seal	Crack Seal	12	4,859	37	1182	PROVIDENCE AVE	MIDDLETON RD	Valley St	103
222   Homesthoc Carryon Dr	2.89 2016 9.05 2016	\$2,412.89 \$8,639.05	Patching Chip Seal	Patching No Maintenance	12 12	5,362 5,399	37 37	1304 1313	PROVIDENCE AVE MIDDLETON RD	MIDDLETON RD W DEAD END	Peregrine Dr Cornell St	117 135
233   Horseshoe Canryon Dr	0.98 2016	\$5,301.53 \$3,490.98	Chip Seal	Patching	12	2,182	32	614	STALLION SPRINGS WAY	MUSTANG MESA AVE	Horseshoe Canyon Dr	222
S	5.32 2016	\$371.35 \$486.32 \$3,721.98	Crack Seal	Crack Seal	12	1,389	32	391	STALLION SPRINGS WAY	LA REATA WAY	Horseshoe Canyon Dr	233
Triumph Dr	3.95 2017	\$3,721.98 \$1,163.95 \$1,298.19	Crack Seal	Crack Seal	12	3,326	36	831	E MURTAUGH LAKE ST	E SAWTOOTH LAKE DR	S Hebgon Lake Ave	195
Boardwalk Way   NEW YORK ST   MAIN ST   1140   37   4,688   12   No Maintenance   Thin Overlay   \$33,987.5	5.17 2017 0.14 2018	\$1,205.17 \$4,930.14	Chip Seal Chip Seal		12 12			188	Dead End	Triumph Dr W 9TH ST N	Triumph Dr	322 74
287   Crossing Avenue   South of Divider   ROUNDABOUT   933   36   3,734   12   No Maintenance   Chip Seal   \$5,973.7	7.53 2018	\$34,444.61 \$33,987.53	Thin Overlay	No Maintenance	12	4,688	37	1140	MAIN ST	NEW YORK ST	Boardwalk Way	134
Ponderosa Dr   MIDDLETON RD   MEADOW PARK BLVD   2523   33   9,250   12   No Maintenance   Chip Seal   \$14,800.1	3.77 2018	\$1,581.63 \$5,973.77 \$8.064.21	Chip Seal	No Maintenance	12	3,734	36	933	ROUNDABOUT	South of Divider	Crossing Avenue	287
Meadow Park Blvd E   PONDEROSA DR   DEAD END   1465   18   2,929   12   No Maintenance   Chip Seal   \$4,686.7	0.12 2018	\$14,800.12 \$4,707.84	Chip Seal	No Maintenance	12	9,250	33	2523	MEADOW PARK BLVD	MIDDLETON RD	Ponderosa Dr	300
Scotch Pine Dr   MEADOW PARK BLVD   DEAD END   858   32   3,052   12   No Maintenance   Chip Seal   \$4,882.7	5.76 2018 1.15 2018	\$4,686.76 \$6,981.15	Chip Seal Chip Seal	No Maintenance	12 12	2,929 4,363	18 32	1465 1227	DEAD END MEADOW PARK BLVD	PONDEROSA DR WHITE PINE DR	Meadow Park Blvd E Yellow Pine Dr	302 303
145         W 4th St N         W DEAD END         N 4TH AVE W         593         36         2,374         14         Crack Seal         Crack Seal         \$830.8           181         Augusta St         W DEAD END         GREENLINKS AVE         369         37         1,515         14         Crack Seal         Crack Seal         \$530.2           182         Fairway St         GREENLINKS AVE         N DEAD END         491         37         2,019         14         Crack Seal         Crack Seal         \$706.5           247         Johnson PI         N 7TH AVE W         E DEAD END         118         36         473         14         Crack Seal         Crack Seal         \$165.9           249         N 7Th Ave W         W CONCORD ST         W 4TH ST N         442         36         1,769         14         Crack Seal         Crack Seal         \$618.9           310         9th St         Emmet Rd         Dead End         1311         28         4,080         14         Crack Seal         Crack Seal         \$1,428.0           27         Fountain Springs Dr         N DEAD END         TELAGA WAY         883         33         3,239         14         Crack Seal         Crack Seal         \$1,133.6	2.74 2018	\$5,783.19 \$4,882.74	Chip Seal	No Maintenance	12	3,052	32	858	DEAD END	MEADOW PARK BLVD	Scotch Pine Dr	306
182         Fairway St         GREENLINKS AVE         N DEAD END         491         37         2,019         14         Crack Seal         Crack Seal         \$706.5           247         Johnson PI         N 7TH AVE W         E DEAD END         118         36         473         14         Crack Seal         Crack Seal         \$165.5           249         N 7th Ave W         W CONCORD ST         W 4TH ST N         442         36         1,769         14         Crack Seal         Crack Seal         \$618.9           310         9th St         Emmett Rd         Dead End         1311         28         4,080         14         Crack Seal         Crack Seal         \$1,428.0           27         Fountain Springs Dr         N DEAD END         TELAGA WAY         883         33         3,299         14         Crack Seal         Crack Seal         \$1,133.6           34         Goldstream Ct         FOUNTAIN SPRINGS DR         S DEAD END         1451         33         5,321         14         Crack Seal         Crack Seal         \$1,862.4	0.88 2014	\$1,243.20 \$830.88 \$530.29	Crack Seal	Crack Seal	14	2,374	36	593	N 4TH AVE W	W DEAD END	W 4th St N	145
249         N 7th Ave W         W CONCORD ST         W 4TH ST N         442         36         1,769         14         Crack Seal         Crack Seal         \$618.9           310         9th St         Emmett Rd         Dead End         1311         28         4,080         14         Crack Seal         Crack Seal         \$1,428.0           27         Fountain Springs Dr         N DEAD END         TELAGA WAY         883         33         3,239         14         Crack Seal         Crack Seal         \$1,133.6           34         Goldstream Ct         FOUNTAIN SPRINGS DR         S DEAD END         1451         33         5,321         14         Crack Seal         Crack Seal         \$1,862.4	6.55 2014	\$530.29 \$706.55 \$165.53	Crack Seal	Crack Seal	14	2,019	37	491	N DEAD END	GREENLINKS AVE	Fairway St	182
34 Goldstream Ct FOUNTAIN SPRINGS DR S DEAD END 1451 33 5,321 14 Crack Seal Crack Seal \$1,862.4	3.98 2014 3.04 2014	\$618.98 \$1,428.04	Crack Seal	Crack Seal Crack Seal	14	1,769 4,080	36 28	442 1311	W 4TH ST N Dead End	W CONCORD ST Emmett Rd	N 7th Ave W	249 310
4/ W 3rd St N W DEAD END E DEAD END PAST SOUTHWELL CT 1192 36 4,767 14 Crack Seal Crack Seal \$1,668.5	2.45 2015	\$1,133.61 \$1,862.45	Crack Seal	Crack Seal	14	5,321	33	1451	S DEAD END	FOUNTAIN SPRINGS DR	Goldstream Ct	34
	6.72 2015	\$1,668.55 \$2,466.72 \$711.21	Crack Seal	Crack Seal	14	7,048	33	1922	FOUNTAIN SPRINGS DR	COPPER CREEK WAY	Spring Creek Way	53

ID 69	Road Name Garden Ct	From Address CONCORD ST	To Address S DEAD END	Length (ft)	Width (ft)	Area (yd^2) 1,085	RSL 14	Recommended Treatment Crack Seal	Budgeted Treatment  Crack Seal	Cost \$379.70	Budgeted Year 2015
90	Sherwood Rd Halverson Pl	VALIANT AVE W DEAD END	W 3RD ST N N 2ND AVE W	716 301	36 36	2,864 1,202	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,002.53 \$420.85	2015
201 202	W Hidden Meadow Way W Meadow Creek Way	N WINDSOR PARK AVE N WINDSOR PARK AVE	EAST DEAD END EAST DEAD END	1160 1174	32 32	4,126 4,176	14 14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,444.02 \$1,461.56	2015 2015
204 206 214	N Windsor Park Ave W Meadow Park Blvd Murphy Ave	SOUTH OF W MEADOW CREEK WAY  CEMETARY RD  STAR BLVD	SOUTH DEAD END  N MEADOW WOOD AVE  BOISE ST	859 607 342	32 18 22	3,055 1,213 836	14 14	Crack Seal  Crack Seal  Crack Seal	Crack Seal  Crack Seal  Crack Seal	\$1,069.15 \$424.56 \$292.62	2015 2015 2015
171 177	Condor Dr Gold King Dr	PAVEMENT CHANGE W GATEWAY AVE GATEWAY AVE	NE DEAD END GOLD ST	928 521	37	3,817 1,852	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,335.96 \$648.11	2016 2016
216 218	Stallion Springs Way Stallion Springs Ave	STALLION SPRINGS AVE LA REATA WAY	HIGHLANDS PKWY STALLION SPRINGS WAY	999 259	32 32	3,551 921	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,242.86 \$322.43	2016 2016
219 223 224	La Reata Way Stallion Springs Way W Highlands Pkwy	STALLION SPRINGS AVE ROUNDABOUT W NODE WHITE HORSE RIDGE RD	HORSESHOE CANYON DR IRON STALLION DR ROUNDABOUT	959 492 587	32 32 16	3,408 1,750 1,044	14 14 14	Crack Seal Crack Seal Crack Seal	Crack Seal Crack Seal Crack Seal	\$1,192.91 \$612.42 \$365.49	2016 2016 2016
228	Blue Sky Ave Stallion Springs Way	STALLION SPRINGS WAY  IRON STALLION DR	HORSESHOE CANYON DR Ridge Way	272 845	32	968	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$338.93 \$1,050.96	2016
8 14	E Rose Lake Dr S Alturas Lake PI	E SAWTOOTH LAKE DR WALCOTT LAKE CT	S JARBRIDGE AVE S DEAD END	1250 307	36 36	5,000 1,226	14 14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$1,750.12 \$429.11	2017 2017
19 199 288	S Jarbidge Ave  E Murtaugh Lake St  Crossing Avenue Roundabout	SAWTOOTH LAKE DR S HEBGON LAKE AVE Crossing Avenue	WALCOTT LAKE DR S TWIN LAKES AVE WHOLE ROUNDABOUT	179 521 325	36 36 22	716 2,085 795	14 14	Crack Seal Crack Seal Crack Seal	Crack Seal  Crack Seal  Crack Seal	\$250.73 \$729.87 \$278.40	2017 2017 2018
293 296	Pilgrims St  Trailblazer St	Crossing Avenue  Crossing Avenue	dead end (west)  Dead End( West)	457 724	31 32	1,574 2,575	14	Crack Seal  Crack Seal	Crack Seal  Crack Seal	\$550.76 \$901.29	2018
297 298	Pathfinder ave Explorer St	Trailblazer St Pathfinder Ave	Dead End (South)  Dead end	631 313	32 30	2,243 1,045	14	Crack Seal Crack Seal	Crack Seal Crack Seal	\$784.91 \$365.70	2018 2018
305 313 2	Lodge Pole Dr Prairie View Way N Magnolia Pl	SCOTCH PINE DR Harvest Way N DEAD END	WHITE PINE DR STALLION SPRINGS WAY S DEAD END	686 633 653	32 32 36	2,438 2,251 2,612	14 14 20	Crack Seal  Crack Seal  No Maintenance	Crack Seal  Crack Seal  Crack Seal	\$853.42 \$787.86 \$914.30	2018 2018 2014
5 123	W Halverson St W 5th St N	N MAGNOLIA PL W DEAD END	N 5TH AVE W N 4TH AVE W	1186 454	36 36	4,746 1,816	20	No Maintenance  No Maintenance  No Maintenance	Crack Seal  Crack Seal	\$1,661.06 \$635.72	2014
180 212	Fairway St Mulligan St	SW DEAD END W DEAD END	GREENLINKS AVE GREENLINKS AVE	187 478	37 37	768 1,966	20 20	No Maintenance No Maintenance	Crack Seal Crack Seal	\$268.71 \$688.14	2014 2014
213 277 50	Mulligan St  N Highland Ct  Southwell St	GREENLINKS AVE  N DEAD END  CONCORD ST	E DEAD END  MAIN ST  W 4TH ST	137 374 541	37 32 36	561 1,330 2,165	20	No Maintenance  No Maintenance  No Maintenance	Crack Seal Crack Seal	\$196.42 \$465.49 \$3,463.28	2014 2014 2015
50 51 52	Southwell Ct W 4th St N	N DEAD END ARCHER RD	W 3RD ST N E DEAD END CITY LIMIT	189 449	36 36	757 1,796	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,210.72 \$2,873.65	2015 2015 2015
64 65	W 4th St N Eaton Rd	W 4TH ST N W 3RD ST N	SHERWOOD RD W MAIN ST	513 763	36 35	2,053 2,967	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$3,284.73 \$4,747.49	2015 2015
84 85 148	Forester Rd Locksley St Manchester Ct	W 4TH ST N FORESTER RD EASTON RD	LOCKSLEY ST  SHERWOOD RD  E DEAD END	268 337 311	36 36	1,074 1,350	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,717.79 \$2,159.37 \$1,988.40	2015 2015 2015
148 157 159	Manchester Ct Abbey Ct Valiant Ave	EASTON RD  EATON RD  SHERWOOD RD	E DEAD END E DEAD END SOUTHWELL ST	311 309 668	36 36	1,243 1,235 2,674	20 20 20	No Maintenance No Maintenance No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,988.40 \$1,975.51 \$4,278.21	2015 2015 2015
250 257	Archer Rd Boise St	W 4TH ST N S 1ST AVE E	W 3RD ST N MIDDLETON RD	450 987	36 23	1,800 2,523	20 20	No Maintenance No Maintenance	Chip Seal Thin Overlay	\$2,880.58 \$18,294.46	2015 2015
268 38 45	Boise St Hartley Ln Fairhaven Rd	S KING AVE S CITY LIMIT CRUSADER DR	MURPHY AVE  MAIN ST  CONCORD ST	778 2958 555	23 32 36	1,988 10,517 2,220	20 20 20	No Maintenance No Maintenance No Maintenance	Thin Overlay Chip Seal Chip Seal	\$14,411.13 \$16,827.51 \$3,551.75	2015 2016 2016
59 172	Fairhaven Rd Fairhaven Pl Miner Ave	N DEAD END CONDOR DR	CONCORD ST  CRUSADER DR  S DEAD END	237 124	36 36 32	950 441	20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$3,551.75 \$1,519.50 \$705.01	2016 2016 2016
174 175	Stage Line PI Gateway Ave	N DEAD END GOLD ST	CONDOR DR CONDOR DR	311 1226	32 32	1,104 4,358	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$1,766.69 \$6,972.36	2016 2016
176 178 217	Gold St  Nugget Ct  White Horse Ridge Dr	W DEAD END  N DEAD END  NE DEAD END	CONDOR DR  GOLD KING DR  SADDLE MOUNTAIN WAY	1506 267 1045	32 32 32	5,354 949 3,716	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$8,566.93 \$1,518.04 \$5,945.01	2016 2016 2016
220	Windmill Springs Ct Windmill Springs Ct W Highlands Pkwy ROUNDABOUT	N DEAD END  NE NODE	STALLION SPRINGS WAY SW NODE	442 296	32 16	1,572 526	20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$2,514.65 \$841.83	2016 2016 2016
227 229	W Highlands Pkwy W Highlands Pkwy	WILLIS RD ROUNDABOUT	ROUNDABOUT WILLIS RD	718 748	16 16	1,276 1,330	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,042.22 \$2,127.25	2016 2016
231 234 253	Mustang Mesa Ave Saddle Mountain Way Chief Ln	HORSESHOE CANYON DR WHITE HORSE RIDGE RD CITY LIMIT	S DEAD END SW DEAD END DUFF LN	127 123 1341	32 32 37	451 436	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$721.08 \$697.27 \$8,823.72	2016 2016 2016
255 255 261	Chief Ln  Chief Ln  Frontier Ave	FRONTIER AVE CHIEF LN	CITY LIMIT  GOLD ST	892 165	37 37 32	5,515 3,667 585	20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$5,867.02 \$936.11	2016 2016 2016
316 317	Spring Creek Dr Great Glen	IRON STALLION DR HORSESHOE CANYON DR	Dead end STALLION SPRINGS WAY	137 370	32 32	486 1,317	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$778.10 \$2,106.97	2016 2016
7	W Aspen Ct S Jarbidge Ave E Sawtooth Lake Dr	N MAGNOLIA PL  N DEAD END  W DEAD END	E DEAD END E WILLOW CREEK DR S CRANE CREEK WAY	152 487 2657	36 36 36	1,949 10,627	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$975.91 \$3,117.73 \$17,003.45	2017 2017 2017
12	S Zehr Ave E Walcott Lake Ct	SAWTOOTH LAKE DR S ALTURAS LAKE PL	WALCOTT LAKE CT SE DEAD END	174 416	36 36	696 1,663	20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,113.15 \$2,660.79	2017
15 16	E Killarney Lake St E Murtaugh Lake Dr	S ASHAHKA AVE Arrowrock Ave	ALTURAS LAKE PL S ASHAHKA AVE	361 693	36 36	1,442 2,771	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$2,307.39 \$4,433.18	2017 2017
20 22 23	S Arrowrock Ave E Willow Creek Dr S Arrowrock Ave	WALCOTT LAKE DR E ROSE LAKE DR E ROSE LAKE DR	MURTAUGH LAKE DR S JARBRIDGE AVE E SAWTOOTH LAKE DR	273 1186 626	36 36 36	1,091 4,745 2,505	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,745.27 \$7,591.45 \$4,007.82	2017 2017 2017
26 29	E Rose Lake Dr S Ashahka Ave	Feman Lake St E WALCOTT LAKE DR	S CRANE CREEK WAY  MURTAUGH LAKE DR	1154 256	36 36	4,616 1,025	20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$7,385.67 \$1,639.84	2017
30 31	E Walcott Lake Dr S Crane Creek Way	S ARROWROCK AVE MIDDLETON RD	S ASHAHKA AVE E SAWTOOTH LAKE DR	694 1377	36 36	2,775 5,507	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$4,439.53 \$8,811.58	2017 2017
32 33 46	N 4th Ave W N Dewey Ave Middleton Rd	WILLIS RD City Limit N WIDTH CHANGE N OF TRIUMPH	W 9TH ST N Triumph Dr TRIUMPH DR	2254 423 316	27 36 26	6,761 1,694 914	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$10,818.18 \$2,709.75 \$1,462.32	2017 2017 2017
48	E Willowcreek Dr N 2nd Ave E	S AHSAHKA WAY E 6TH ST N	S WILLOWCREEK WAY E 4TH ST N	807 434	36 21	3,227 1,013	20	No Maintenance No Maintenance	Chip Seal Crack Seal	\$5,163.20 \$354.39	2017
72 75	S Ahsahka Way E Fernan Lake St	E FERNAN LAKE ST S JARBRIDGE AVE	E WILLOWCREEK DR S AHSAHKA WAY	113 265	36 36	452 1,059	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$723.08 \$1,695.12	2017 2017
87 88 98	Middleton Rd Cemetery Rd E 6th St N	MAIN ST W 9TH ST N N HAWTHORNE DR	STAR BLVD W CONCORD ST N 2ND AVE E	948 1435 476	30 35 22	3,161 5,581 1,163	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Crack Seal	\$5,057.15 \$8,929.31 \$407.10	2017 2017 2017
104 114	S Willowcreek Way Minot St	E ROSE LAKE DR HAWTHORNE DR	S WILLOWCREEK WAY DEWEY AVE	255 896	36 25	1,021 2,488	20 20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$1,634.01 \$3,980.44	2017 2017
132 168 196	Red Fern Dr S 1st Ave W S Redfish Ave	W 9TH ST N MAIN ST E SAWTOOTH LAKE DR	W 7TH ST N W ARBOR DR E HENDYS LAKE DR	900 377 189	37 36 36	3,701 1,508 758	20 20 20	No Maintenance No Maintenance	Chip Seal	\$5,920.83 \$2,412.04 \$1,212.38	2017 2017 2017
196 197 198	S Redfish Ave S Benewah Lake Ave E Henrys Lake Dr	E SAWTOOTH LAKE DR E HENRYS LAKE DR S BENEWAH LAKE AVE	E HENRYS LAKE DR E MRTAUGH LAKE ST S TWIN LAKES AVE	189 669 308	36 36 36	758 2,676 1,232	20 20 20	No Maintenance No Maintenance No Maintenance	Chip Seal Chip Seal Chip Seal	\$1,212.38 \$4,282.35 \$1,970.64	2017 2017 2017
200 203	S Twin lakes Ave N Prairie Wind Ave	E HENRYS LAKE DR W MEADOW CREEK WAY	MURTAUGH LAKES ST W HIDDEN MEADOW WAY	471 485	36 32	1,882 1,724	20 20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$3,011.41 \$2,758.84	2017 2017
208 246 251	Willis Rd Telaga Way N Meadow Wood Ave	N 4TH AVE W FOUNTAIN SPRINGS DR W MEADOW PARK BLVD	WANDA WAY KINGSBURY RD W MEADOW CREEK WAY	906 1439 185	26 33 33	2,618 5,277 678	20 20 20	No Maintenance No Maintenance No Maintenance	Chip Seal Chip Seal Chip Seal	\$4,189.47 \$8,443.81 \$1,084.60	2017 2017 2017
251 252 254	Triumph Dr  Kennedy Ct	TRIUMPTH T INTX  KENNEDY DR	MIDDLETON RD E DEAD END	1138 612	36 36	4,550 2,449	20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal	\$7,280.70 \$3,917.71	2017
256 265	Kennedy Dr N 1st Ave E	N DEAD END E 5TH ST N	TRIUMPH DR E 4TH ST N	441 196	36 33	1,765 719	20	No Maintenance  No Maintenance	Chip Seal Crack Seal	\$2,823.44 \$251.82	2017
266 267 269	E 5th St N E 4th St N E Sawtooth Lake Dr	N HAWTHORNE DR N HAWTHORNE DR Crane Creek Way	N 1ST AVE E N 2ND AVE E Middleton Rd	351 643 1739	33 30 36	1,287 2,143 6,955	20 20 20	No Maintenance  No Maintenance  No Maintenance	Crack Seal Crack Seal Chip Seal	\$450.46 \$749.88 \$11,128.69	2017 2017 2017
281 319	Willis Rd Hawthorne Dr	CEMETARY RD Minot St	B/S LANE (PRIVATE) E 8th St	539 710	42 36	2,514 2,842	20 20	No Maintenance  No Maintenance	Chip Seal Crack Seal	\$4,022.76 \$994.56	2017 2017
17 25	N Buffalo Way  Copper Creek Way  N Powder Piver Dr	N POWDER RIVER DR SPRING CREEK WAY	N POWDER RIVER DR INTX FOUNTAIN SPRINGS DR	835 1315	32 33	2,969 4,822	20 20 20	No Maintenance No Maintenance No Maintenance	Chip Seal	\$4,750.36 \$7,715.65 \$5,668.42	2018 2018 2018
28 44 76	N Powder River Dr  Castle Rock Rd  Crusader Dr	N 4TH AVE W CRUSADER DR W DEAD END CITY LIMIT	N BUFFALO WAY  CONCORD ST  FAIRHAVEN RD	1063 558 399	30 36 36	3,543 2,231 1,594	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$5,668.42 \$3,569.15 \$2,550.76	2018 2018 2018
81 285	Castle Rock PI Crossing Avenue (west)	N DEAD END PURPLE SAGE RD	CRUSADER DR END OF DIVIDED SEGMENT	412 265	36 18	1,647 529	20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$2,635.47 \$846.48	2018 2018
286 290	Crossing Avenue (east)  Homesteaders St	PURPLE SAGE RD  Crossing Ave Roundabout	END OF DIVIDED SEGMENT  Dead end (west)	261 352	18 31	522 1,214	20	No Maintenance  No Maintenance	Chip Seal	\$834.46 \$1,942.09	2018 2018
294 295 299	Voyager St Trailblazer St Unnamed Rd	Crossing Avenue Crossing Avenue Trailblazer St	Dead end Dead End (east) Dead end	425 323 312	32 32 32	1,510 1,148 1,109	20 20 20	No Maintenance  No Maintenance  No Maintenance	Chip Seal Chip Seal Chip Seal	\$2,415.98 \$1,836.26 \$1,774.70	2018 2018 2018
308 309	N Powder River Dr Powder River Dr	N 4TH AVE W SUBDIVISION ENTRANCE 4th	SE ROUNDABOUT THEN NE TO FINISH LOOP SUBDIVISION INTERIOR LOOP	4279 220	30 34	14,263 832	20	No Maintenance  No Maintenance	Chip Seal Chip Seal	\$22,820.35 \$1,331.92	2018 2018
311 312	Harvest Way Iron Stallion Court	Ridge Way  IRON STALLION DR	W Dead end dead end	955 103	32 32	3,394 366	20	No Maintenance No Maintenance	Chip Seal	\$5,430.18 \$585.74	2018
314 315	Ridge Way Heritage Dr	Stallion Springs IRON STALLION DR	Harvest Way  Dead end	552 112	32 32	1,961 399	20	No Maintenance No Maintenance	Chip Seal Chip Seal	\$3,138.18 \$638.26	2018 2018