PROJECT REPORT

Pavement Management System Implementation

Prepared For:
City of Newberg
414 E. First Street
Newberg, OR 97132

July 8, 2014

Prepared By:

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Project No. *13075*

PROJECT INFORMATION AND ACKNOWLEDGEMENTS

Project Title	**Pavement Management System Implementation** **Newberg, Oregon**
Client	City of Newberg Engineering Division 414 E. First Street Newberg, OR 97132
Project No.	13075
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EXECUTIVE SUMMARY

Pavement Services, Inc. (PSI) produced this Pavement Management Report to establish a pavement management system and a baseline condition of the City of Newberg, OR street network. This report provides surface condition descriptions, reviews current treatment programs and costs, projects future treatment needs based on several funding scenarios, and formulated multiyear maintenance and repair (M&R) project list. In addition to the listed pavement management activities, pavement coring was conducted to determine the in situ pavement structure layers, and traffic counts were performed to update Federal Functional Classification (FFC).

The street network is conservatively valued at $500 million (April 2013 Newberg Council Meeting). This asset is typically described in lane miles and/or centerline miles. Currently, Public Works manages 69.4 centerline miles within the City limits. This report includes a breakdown of the street transportation system in terms of pavement type, level of improvement, and functional classification. Comparative statistical data is based on area (square feet).

In order to establish the baseline pavement condition, PSI staff collected the street condition data by conducting a walking inspection based on the procedure outlined in ASTM International D6433-11: *Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys*. The Pavement Condition Index (PCI) rating was then generated using MicroPAVER pavement management software (PMS). The PCI is a numerical indicator that rates the condition of the pavement. The scale ranges from zero to 100, where zero is the worst possible condition and 100 is the best possible condition. The MicroPAVER analysis helps establish efficient treatment requirements and identify financial implications of various budget strategies. This PMS also provides street inventory and condition trends using the street condition information and street maintenance and rehabilitation (M&R) history.

The overall area weighted average condition of the Newberg street system is rated as 73 or "Good". The PCI scale used was Good, Fair, and Poor; where Good is from 100 to 71, Fair is from 70 to 56, and Poor is 55 to 0. The pavement condition distribution in Newberg is 66% Good, 12% Fair, and 22% Poor. Figure 1 presents a map with the baseline street condition resulting from the 2014 PCI survey.

Depending on design life and preventive maintenance, the typical pavement condition trend is to deteriorate slightly right after construction and then the deterioration levels off. The leveling off period is where the deterioration condition slows relative to time. The location of slower deterioration is the time where the majority of the desired condition, use, and life of the pavement occurs. At the end of the leveling off period, there is a transition point referred to as the critical PCI. After the critical PCI is reached, the pavement condition deteriorates more quickly into a poor condition state. An example of typical pavement deterioration is presented in Figure 2.

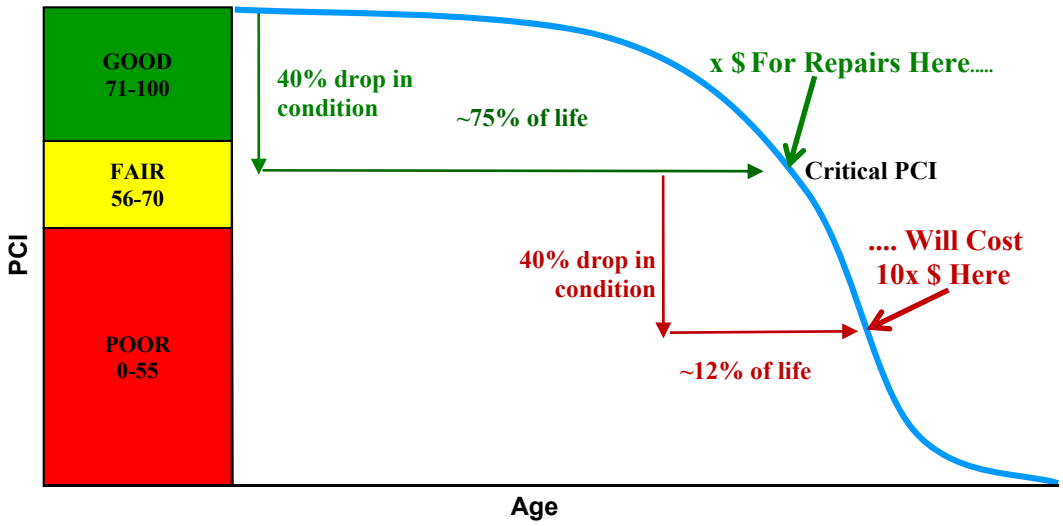


Figure 2 – Typical Pavement Deterioration Curve

Ideally, if preventive maintenance is performed before the critical PCI is reached the life and use of the pavement can be extended in the leveling off period. Also, any major restoration work, such as an overlay, that is done before a pavement deteriorates below the critical PCI usually costs substantially lower due to the better condition of the pavement.

For some time, street repair funding levels for the City have not kept pace with rehabilitation needs. To help address this need, the City is interested in establishing supplementary funding. Supplementary funding could be generated from the implementation of a gas tax, street utility fee, user mileage fee, a bond, or other means. The revenue from supplementary funding will assist in reducing the backlog of street repair projects. Specifically, based on the 2014 pavement condition ratings, the City has a backlog of $14.3 million. By maintaining the current M&R budget of $150,000, the backlog is projected to continue to grow unless funding levels are increased.

PSI analyzed four different budget scenarios based on either a specific budget requirement or a pavement condition constraint. Based on our analysis, we offer the following conclusions:

Scenario 1. An annual expenditure of $2.8M over the next seven years would eliminate the M&R backlog for the entire street system.

Scenario 2. At the current funding level of $150,000 annually, the M&R backlog will grow to $21.0M by the year 2022.

Scenario 3. Supplementary funding of $336,000 per year increases the annual budget to $486,000. At an annual investment level of $486,000, the M&R backlog will grow to $17.9M by 2022.

Scenario 4. In order to stabilize the condition of the street system at the current PCI of 73, an annual budget of $1.87M is required during the period of 2014-2022. At

this level of investment, the M&R backlog shrinks to $9.8 million by 2022.

Figure 3 shows the effect of the four budget scenarios on the resulting condition of the Newberg street system.

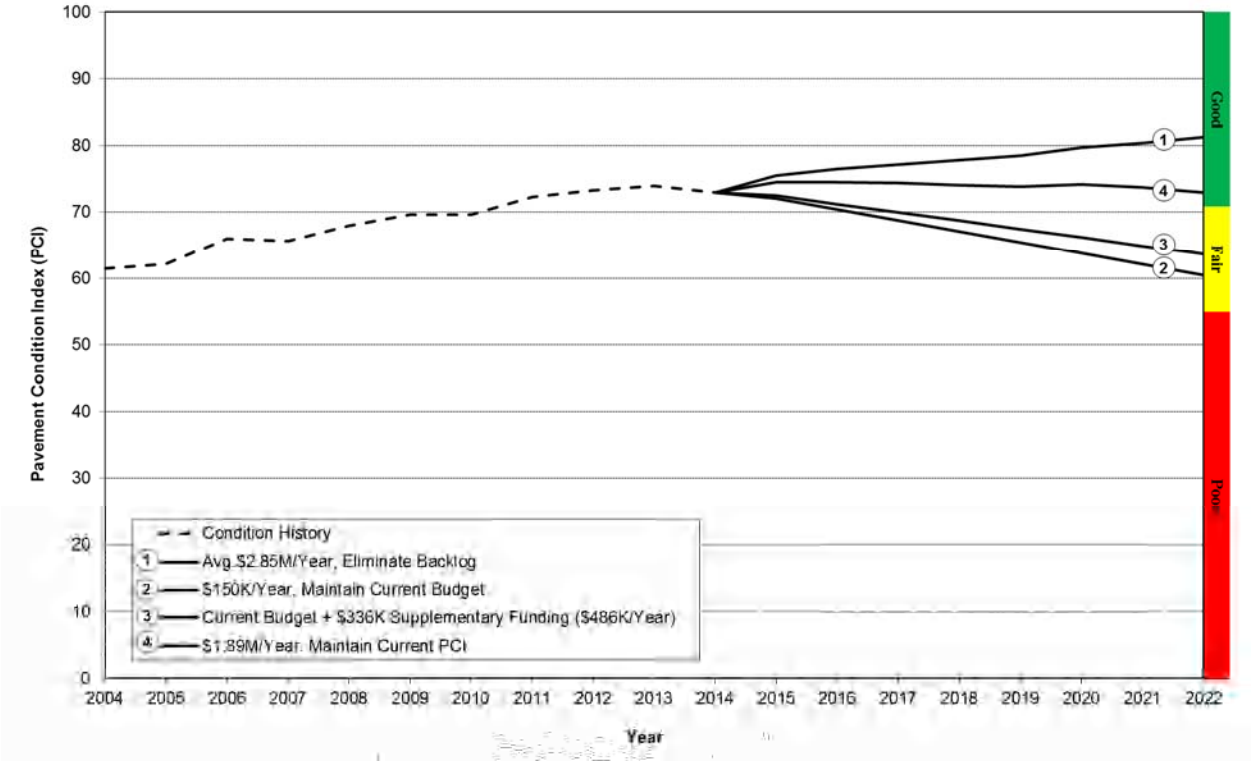
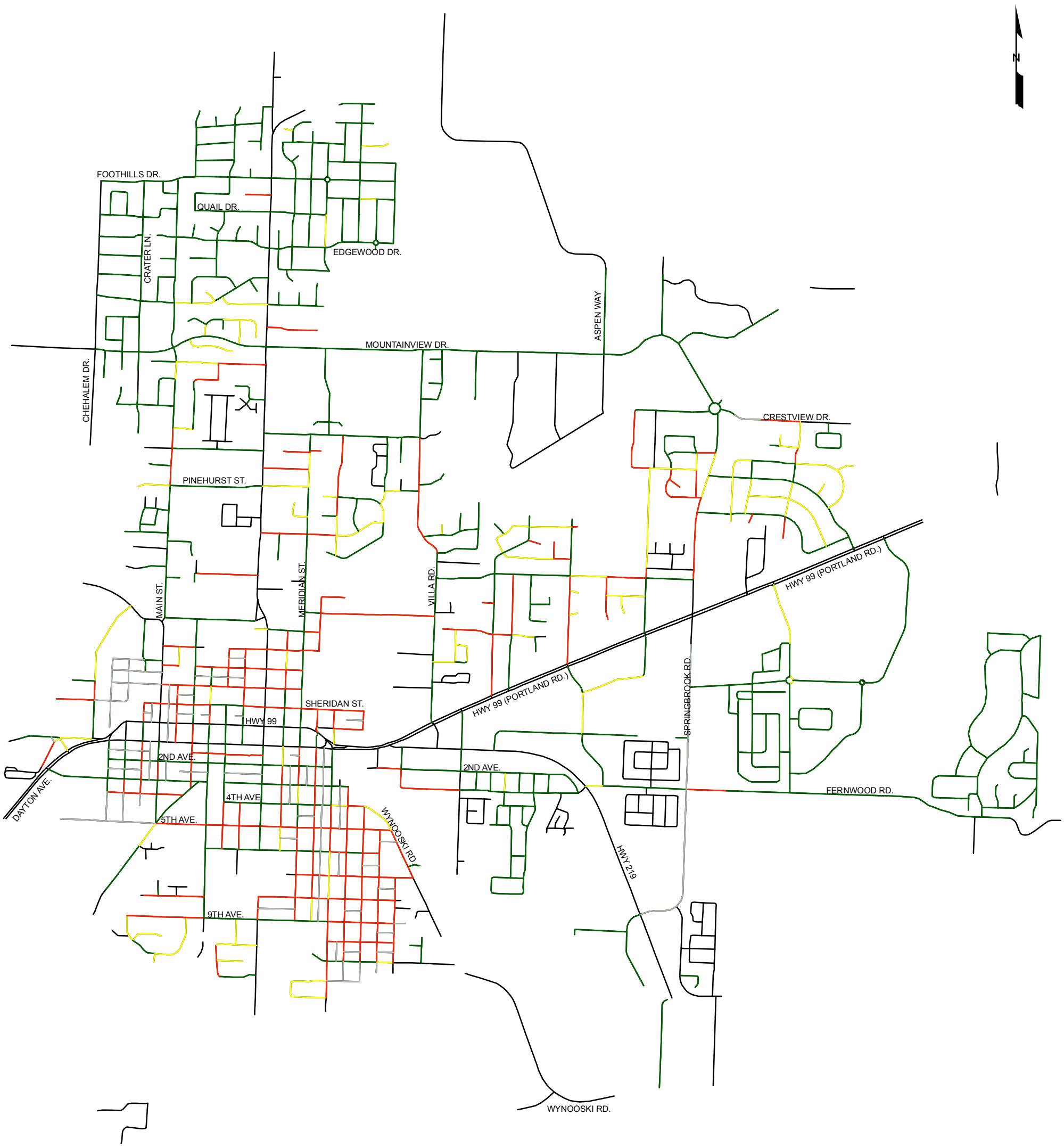


Figure 3 – Various Budget Effects on PCI



Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 1,600 feet

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

2014 PAVEMENT CONDITION INDEX SURVEY RESULTS
Newberg, Oregon

FIGURE
1

INTRODUCTION

City of Newberg Public Works Department maintains and operates approximately 70 centerline miles of local, collector, and arterial streets. Approximately 65 centerline miles of the existing street system is constructed of asphalt concrete (AC), with the remainder being gravel roads and portland cement concrete (PCC). The City has a desire to establish the current condition of the pavement surface and establish a maintenance and rehabilitation (M&R) plan for the next seven years.

In the past, the City has conducted pavement condition surveys using the Oregon Department of Transportation (ODOT) Good-Fair-Poor (GFP) pavement rating system. The ODOT GFP system was previously a system that used a 1-5 scale, with 5 being very good and 1 being very poor. The ODOT system was modified in 2010 to include an updated 0-100 rating scale and new descriptions of pavement distresses. The system is essentially subjective in that it allows the rater to apply considerable judgment in rating the pavement surface condition as he or she drives the pavement at speeds up to the posted speed limit. We are not aware of a pavement management system (PMS) that uses the ODOT distress survey method. This means that in order to use the GFP method, Newberg would likely have to develop an ad-hoc system for analysis and evaluation of the distress data for M&R prioritization.

In 2013, the City adopted the ASTM International Test Method D-6433 as the standard method for conducting pavement surveys. ASTM D 6433 is the Pavement Condition Index (PCI) system for local roads and streets which uses a zero to 100 rating scale. Surveys are conducted visually by foot, which provides the best vantage point for observing the actual condition of the pavement surface. By standing or walking the pavement surface, the pavement rater has the opportunity to closely observe pavement distresses such as cracks, weathering, raveling, and rutting, allowing for a better assessment of the amount of distress in a specific survey location.

In 2013, the City also adopted the MicroPAVER software as its pavement management system (PMS). MicroPAVER was selected as the pavement management system because it is based upon the ASTM D-6433 methodology and it uses a proactive management approach as opposed to a reactive management approach. A proactive approach uses a long-term, life-cycle perspective and takes advantage of sound, engineering-based procedures.

MicroPAVER is the pavement management system developed by the US Army Corps of Engineers. MicroPAVER aids pavement managers in deciding when and where to appropriate funds for pavement M&R.

The City of Newberg is considering various resources for supplementary funding in order to increase the current level of funding for street pavement M&R. The City is interested in using the PMS to understand the impact on the condition of the street system based on different funding levels, and to prioritize street M&R projects during the period of 2014-2022.

OBJECTIVES

This project for the City involves several objectives. The first was to implement a pavement management system. Second, we established the current condition of the street system. Third was to determine the immediate and future M&R needs. Additionally, the City wanted the Federal Functional Classification (FFC) of the streets to be reviewed and updated. The last objective was to supplement the inventory of information the City has on the in place pavement structure of the streets. In order to achieve these objectives, Pavement Services, Inc. performed the following tasks:

1. Conducted a visual condition survey of the street network using the ASTM D6433-11: *Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys* method.
2. Determined the consequences of the current budget and the impacts of supplementary funding on the pavement condition.
3. Prioritized M&R projects for the 2014-2022 timeframe so the City can manage expenditures and begin to implement a preservation management style.
4. Advanced pavement cores on City streets to determine the pavement layer thicknesses of the in situ structure.
5. Updated the current FFC of minor arterials, major collectors, and minor collectors by using a traffic count study.

In addition to the objective desired by the City, we developed a brief structural condition report for locations where coring activities took place.

PAVEMENT MANAGEMENT METHODOLOGY

MicroPAVER Database

PSI developed a MicroPAVER database by populating an inventory with accurate information regarding the street network such as the street geometry, surface type, location, and the historical construction and maintenance data.

Currently, the Newberg street network is defined and managed in a Geographical Information System (GIS). The City provided PSI with their GIS data and maintenance records from Cartegraph. Utilizing this data, we were able directly imported the City's pavement inventory into MicroPAVER using the "Create PAVER Inventory from Shape Data" tool.

Pavement Condition Index (PCI)

PSI conducted a PCI survey from December 16, 2013 through February 2, 2014. Due to the typically wet climate in Newberg during the winter months, we performed the survey only on days when the pavements were free of standing water.

Our survey crews used the MicroPAVER FieldInspector handheld tablet devices for data collection in the field. The FieldInspector allowed us to improve the accuracy of the data by

eliminating redundant data entry. It also streamlined the data handling process by allowing us to compute the pavement condition index as soon as the day following the inspection.

Pavement Condition Prediction Models

Prediction models are used to predict future pavement condition, which is an essential component of M&R planning. The models are developed using historical PCI inspection data from a specific location (e.g., airport, city, town, etc.). A model is developed for each group of pavement sections that share similar characteristics (e.g., surface type, functional use, rank, etc.). For example, a model may be developed for asphalt surfaced minor arterial street.

In order to develop an effective prediction model, we must establish the age of each pavement section with unknown last major construction dates. Having both the last major construction date (age) and the PCI from one or multiple inspections allows us to accurately model the condition deterioration of a pavement.

The age of a pavement section is based on the last major M&R activity (e.g., structural overlay, reconstruction, etc.). The date of the last major M&R activity is referred to as the last construction date (LCD).

Newberg had a large number of sections unknown LCD due to incomplete historical work records. For pavement sections where we didn't have LCD information we were able to use the LCD. For the LCD backcalculation we assumed a deterioration rate of 2.5 PCI points per year for the minor arterials, major collectors, and minor collectors roadway pavements and 1.5 points per year for the residential pavements.

The backcalculation starts from the first inspection following the uncertain LCD, as shown in Figure 4. In this example, a pavement with a PCI of 90 in 2012 would have a backcalculated LCD of 2007, assuming a condition deterioration rate of 2.0 PCI points/year.

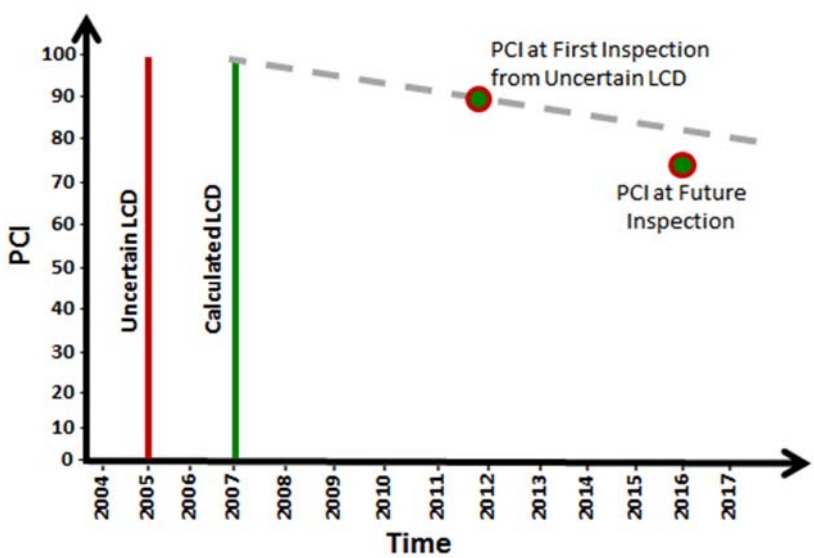


Figure 4. LCD Backcalculation Process.

To predict future condition, we used the same assumed deterioration rates of 2.5 points per year for arterials and collectors, and 1.5 points per year for residential streets. We used a straight line deterioration model because the 2013 condition rating was the first PCI inspection for the Newberg street system. Once a few PCI inspections have been conducted, the MicroPAVER prediction modeling can use the actual deterioration patterns of pavements to determine the future condition. Models using the actual deterioration patterns of the pavements are developed when each pavement sections has multiple PCI and work history data points.

For Newberg, the pavements with known LCD were used to develop deterioration rates. Deterioration rates can change over time due to changes in traffic or infrastructure development and therefore, deterioration rates and prediction models should be updated on a regular basis.

Development of M&R Plans

The MicroPAVER M&R work planning module identifies when and where M&R is required and how much it will cost. M&R plans can be developed either by assuming an annual budget or by identifying the desired pavement condition. Based on either a known annual budget or a desired overall condition level, MicroPAVER will produce a prioritized M&R plan.

PSI developed M&R plans are determined for nine budget years, where the first plan year begins in April 2014 and the last plan year begins in April 2022. The following four budget scenarios were considered:

Scenario 1. Eliminate Backlog: This scenario eliminates all unfunded major M&R requirements by the year 2022. More specifically, it eliminates the M&R backlog and ensures that all pavement sections have PCI values greater than the critical PCI. The critical PCI is described in Appendix I.

Scenario 2. Maintain Current Budget: This scenario assumes that the current annual budget of $150,000 is maintained annually.

Scenario 3. Current annual budget ($150,000) + $336,000 annually: This scenario represents the addition of supplementary funding from sources such as a gas tax, street utility fee, or a user mileage fee. We ran the analysis with a total annual budget of $486,000.

Scenario 4. Funding to Stabilize Street System at the Current PCI: This scenario maintains the average PCI of the street system at 73 through the year 2022.

MicroPAVER determines the timing to perform M&R based on predicted future pavement conditions. The anticipated cost of performing M&R is based on cost tables that relate M&R cost to PCI. The cost tables used in this analysis can be seen in Appendix E. The budget scenarios include only pavements inspection data collected during the 2014 survey. We set the critical PCI to 60 for all M&R plans. Appendix C includes detailed results for the M&R planning analysis.

M&R Recommended Projects

Project development and prioritization was based upon the current and future predicted pavement condition. The pavement sections selected for projects were first generated by optimizing the budget and performing preservation based analysis within the MicroPAVER software. We then grouped the sections into projects based upon the year the work is to be performed. Each pavement section was assigned M&R activities based upon the PCI and the distresses observed during the 2014 survey. For example, a pavement with any severity level of alligator cracking or rutting triggers a requirement for full depth patching. For pavement with only low or medium weathering, low severity patching, or low severity longitudinal/transverse cracking a surface treatment is assigned. Mill and overlay is triggered for pavements with medium and high severity cracking, patching, block cracking, weathering, or raveling. Note that these recommendations are developed at the network level. Network level work looks at the entire system as a whole in order to evaluate the large scale need such as funding or backlog. Project level work includes performing in-depth evaluation. Project level work typically occurs before preparing plans and specifications for a specific M&R project. Additional structural and project level analysis is required to implement these project recommendations.

PCI SURVEY RESULTS

A total of 69.4 centerline miles of pavements were surveyed as part of this project. This accounts for approximately 93.5% of the total centerline miles of streets in Newberg. The remaining 6.5% of street that were not surveyed was due to construction and unsurfaced streets.

The average PCI of the Newberg street system was 73 on a scale of 0 to 100. Herein, the term average indicates area-weighted average unless otherwise specified. The standard rating scale defines seven PCI categories. This scale can be customized to have as many categories as desired in order to more easily view the distribution of PCI. For Newberg, we used a three-category scale as shown in Figure 5. Having three condition categories allows for quick observation of pavements that are in need of immediate repair (56 to 70), or which pavements have fallen into the poor category (0 to 55) and may require more costly repairs.

Figure 5. PCI Rating Scales

Table 1 presents the overall PCI for the sections that were classified as minor arterial, major collector, minor collector, and residential streets.

Table 1. Newberg Pavement Network Pavement Condition Index Results

Pavement Classification	Pavement Sections	Section Area (SqFt)	Section Area (%)	Weighted Average PCI	PCI Rating
Minor Arterial	22	394,522	4%	81	Good
Major Collector	156	2,427,297	22%	79	Good
Minor Collector	57	732,393	7%	88	Good
Residential	715	7,578,696	68%	71	Good
All Inspected	950	11,132,908	100%	73	Good

Figure 6 through Figure 9 provide a graphical representation of the PCI distribution for each of the pavement classifications listed in Table 1.

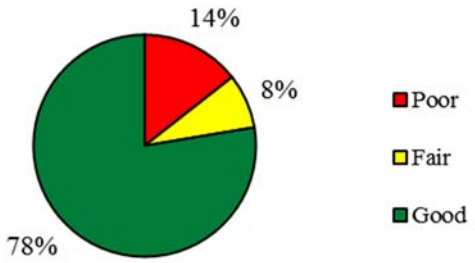


Figure 6. PCI Distribution for Minor Arterial Streets

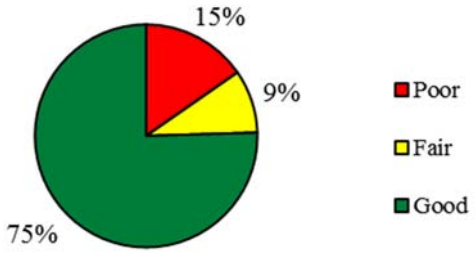


Figure 7. PCI Distribution for Major Collector Streets

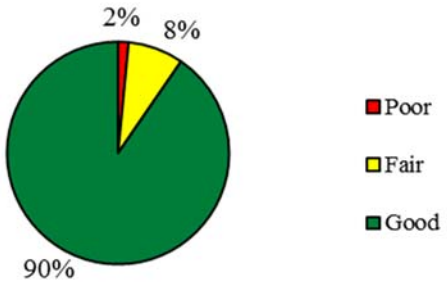


Figure 8. PCI Distribution for Minor Collector Streets

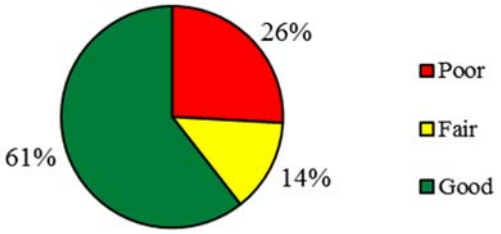


Figure 9. PCI Distribution for Residential Streets

Shown another way, Figure 10 presents the overall PCI distribution of the Newberg pavement network.

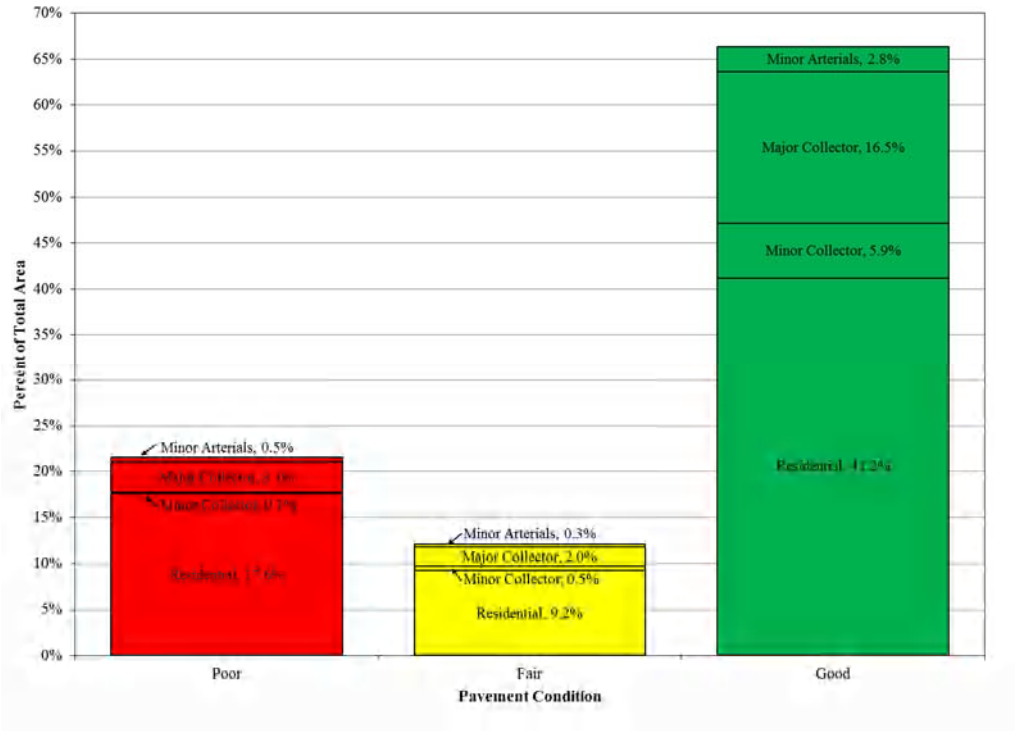


Figure 10. Overview of the Newberg Pavement Condition in 2014

For further detail, consult the following Appendices, which contain information on the condition of the Newberg street network:

- Appendix A contains tables showing summary inventory and condition data by section.
- Appendix B contains maps that show section identification and PCI ratings.

BUDGET SCENARIO ANALYSIS

PSI analyzed four budget scenarios for the period of 2014-2022 and the results are summarized below. Additional graphical information regarding the comparison of the budgets and the effects on the PCI are in Appendix C.

The M&R costs in the analysis are based on estimated unit prices from bid tabs that were provided by the City of Newberg. These costs are presented in constant 2014 dollars, i.e., they assume no inflation over the long term.

Scenario 1 – Eliminate M&R Backlog

M&R backlog is any major work type that is required for a pavement with a PCI below critical value. The backlog for Newberg as of 2014 is approximately $14.3M. The results of the analysis found that an annual budget of $2.85M dollars is needed to eliminate the backlog by the year 2022. Table 2 shows on an annual basis the resulting PCI values before and after the application of the funding, the total backlog, and the unfunded sustainment costs, which includes all stopgap, preventive, global, and major work above critical PCI.

Table 2–Scenario 1 Analysis Results

			Unfunded M&R Cost			
Year	PCI Before Repair	Funded M&R Cost[1]	Major Below Critical[2]	Sustainment[3]	Total[4]	PCI After Repair
2014	73	$2,852,572	$14,281,552	$1,071,631	$15,353,183	77
2015	76	$2,854,394	$13,432,635	$0	$13,432,635	78
2016	77	$2,853,496	$11,354,653	$0	$11,354,653	79
2017	77	$2,845,919	$9,279,007	$0	$9,279,007	80
2018	78	$2,852,116	$7,409,031	$0	$7,409,031	80
2019	79	$2,844,274	$6,611,394	$0	$6,611,394	82
2020	80	$2,852,898	$4,640,707	$0	$4,640,707	82
2021	80	$2,852,747	$2,535,105	$0	$2,535,105	83
2022	81	$2,660,486	$0	$0	$0	85
	Total Funded:	$25,468,902		Total Unfunded:	$0	

Notes: [1]Total Funding for the M&R budget scenarios. [2]Any major M&R under critical PCI (60). [3]Sustainment includes stopgap, preventive, global, and major above critical M&R unfunded values. [4]The sum of the major below critical and sustainment unfunded values.

The total cost over the next nine years, including the funded and unfunded M&R cost is $25.5M. The resulting annual M&R cost after eliminating backlog in 2022 would be

approximately $533,000 annually for the five years following and would result in a network PCI of 79 in year 2027.

Scenario 2 – Maintain Current Budget of $150,000 Annually

With continued funding at the current level, the average PCI is estimated to decline to 60 by 2022. It is projected that the cost of the M&R work backlog will increase to about $21.0M in 2022. By maintaining this low annual budget, it is estimated that by 2022 the total unfunded M&R costs will exceed $24M, which is amounts to the addition of $0.5M annually in backlog.

A summary of this budget is shown in Table 3. The total cost over the next nine years, including the funded and unfunded M&R cost is $25.8M if the current budget is maintained.

Table 3–Scenario 2 Analysis Results

			Unfunded M&R Cost			
Year	PCI Before Repair	Funded M&R Cost[1]	Major Below Critical[2]	Sustainment[3]	Total[4]	PCI After Repair
2014	73	$147,070	$14,281,552	$3,805,217	$18,086,769	74
2015	72	$146,569	$14,703,500	$3,937,831	$18,641,331	72
2016	70	$148,001	$15,335,214	$3,901,595	$19,236,809	71
2017	69	$146,763	$15,832,083	$3,956,873	$19,788,956	69
2018	67	$147,733	$16,501,258	$4,038,614	$20,539,873	67
2019	65	$149,628	$17,260,011	$3,993,041	$21,253,052	66
2020	64	$143,658	$18,486,971	$3,839,062	$22,326,033	64
2021	62	$144,994	$19,418,736	$3,716,061	$23,134,798	62
2022	60	$149,169	$20,954,237	$3,521,434	$24,475,671	61
	Total Funded:	$1,323,585		Total Unfunded:	$24,475,671	

Notes: [1]Total Funding for the M&R budget scenarios. [2]Any major M&R under critical PCI (60). [3]Sustainment includes stopgap, preventive, global, and major above critical M&R unfunded values. [4]The sum of the major below critical and sustainment unfunded values.

Scenario 3 – Current Budget of $150,000 + $336,000 in Supplementary Funding, Totaling $486,000 Annually

The City is exploring ways to obtain supplementary funding through several mechanisims, including a gas tax, street utility fee, or a bond. The additional funding would help the City address looming M&R requirements.

We surveyed cities in Oregon and found that many currently have a street utility fee in place. Table 4 summarizes the list of cities surveyed and their respective street utility fee.

Table 4 – Oregon City's Street Utility Fees

Oregon City	Street Maintenance Utility Fee
Albany	No
Ashland	$7.94
Bay City	$5.00
Canby	$5.00
Eagle Point	$5.00
Grants Pass	$3.00
Happy Valley	No
Hillsboro	$3.10
Lake Oswego	$4.00
McMinnville	No. TSDC (one-time fee)
Medford	$6.55
Milwaukie	$3.35
North Plains	$0.90
Oregon City	$11.56
Salem	No
Sherwood	$2.00
Silverton	$5.00
Springfield	No
Talent	$3.93
Tigard	$5.83
Tualatin	$4.00
West Linn	$5.89 ($10.31 in July 2014)
Wilsonville	$4.00
Average	$3.74

In the case that Newberg implemented a street utility fee, we ran the budgetary analysis using a $6 street utility fee, which would provide an additional $336,000 annually to the maintenance budget. The $336,000 was calculated using the data provided in the April 2013 "State of Our Street System" council presentation, which stated that for every dollar, the City would collect $80,000 annually, and 70% would go directly towards pavement M&R. At a total annual budget of $486,000, the PCI would decrease from 73 to 64 by the year 2022. The total cost over the next nine years, including the funded and unfunded M&R cost is $24.8M. With supplementary funding, the City could reduce the backlog by $3.1M when compared to the current projected budget of $150,000 annually. Table 5 summarizes the results of the analysis.

Table 5–Scenario 3 Analysis Results

			Unfunded M&R Cost			
Year	PCI Before Repair	Funded M&R Cost[1]	Major Below Critical[2]	Sustainment[3]	Total[4]	PCI After Repair
2014	73	$483,559	$14,281,552	$3,459,801	$17,741,353	74
2015	72	$482,541	$14,703,500	$3,214,899	$17,918,399	73
2016	71	$485,440	$15,335,214	$2,754,236	$18,089,449	72
2017	70	$484,911	$15,723,905	$2,465,834	$18,189,739	71
2018	69	$483,091	$16,154,925	$2,331,545	$18,486,469	69
2019	67	$483,043	$16,466,823	$2,258,568	$18,725,390	68
2020	66	$485,615	$16,954,043	$2,345,913	$19,299,956	67
2021	65	$482,403	$17,118,499	$2,481,379	$19,599,878	65
2022	64	$481,640	$17,862,410	$2,566,139	$20,428,549	64
	Total Funded:	$4,352,243		Total Unfunded:	$20,428,549	

Notes: [1]Total Funding for the M&R budget scenarios. [2]Any major M&R under critical PCI (60). [3]Sustainment includes stopgap, preventive, global, and major above critical M&R unfunded values. [4]The sum of the major below critical and sustainment unfunded values.

Scenario 4 – Funding to Stabilize Street System at Current Conditions

Funding at an average annual amount of $2.02M is estimated to be sufficient to stabilize the street system at its current average condition rating. This funding level would result in a decrease in the current backlog over the analysis period.

A summary of this budget is in shown in Table 6. The total cost over the next nine years, including the funded and unfunded M&R cost is $27.9M if the goal is to maintain a PCI of 73.

Table 6–Scenario 4 Analysis Results

			Unfunded M&R Cost			
Year	PCI Before Repair	Funded M&R Cost[1]	Major Below Critical[2]	Sustainment[3]	Total[4]	PCI After Repair
2014	73	$2,018,478	$14,281,552	$1,924,774	$16,206,326	76
2015	75	$2,017,153	$14,675,113	$528,321	$15,203,433	76
2016	75	$2,017,812	$14,113,487	$0	$14,113,487	76
2017	74	$2,009,570	$13,034,905	$0	$13,034,905	76
2018	74	$2,017,194	$12,123,711	$0	$12,123,711	76
2019	74	$2,019,923	$12,316,577	$0	$12,316,577	76
2020	74	$2,020,050	$11,416,073	$0	$11,416,073	76
2021	74	$2,016,738	$10,548,001	$0	$10,548,001	75
2022	73	$2,018,658	$9,779,761	$0	$9,779,761	74
	Total Funded:	$18,155,577		Total Unfunded:	$9,779,761	

Notes: [1]Total Funding for the M&R budget scenarios. [2]Any major M&R under critical PCI (60). [3]Sustainment includes stopgap, preventive, global, and major above critical M&R unfunded values. [4]The sum of the major below critical and sustainment unfunded values. [5]The sum of the total funded and the total unfunded in the last year.

PRIORITIZED M&R PLAN

Projects were developed based for three different budget scenarios:

Scenario 2 – Maintain current budget of $150,000 annually
Scenario 3 – Current budget + $336,000 in supplementary funding, totaling $486,000 annually
Scenario 4 – Budget required to maintain existing condition of 73

Detailed project information is provided for budget scenario 2. Each section or grouping of sections has information pertaining to the recommended work, PCI before and after the work, an approximate cost, and the types of distresses that were observed in the section(s).

Additionally, a list of projects based on budget scenario 3 are in Table 7. Maps showing the project location and the year of construction are presented in Appendix D.

A summary table of recommended M&R work based on budget scenario 4 is in Appendix D.

Budget Scenario 1 - Maintain Current Budget of $150,000 Annually M&R Project Recommendations

Project Year: 2014

BranchID: MERIDIAN
Name: Meridian Street
SectionID: rd2610
From: Fulton Street
To: Jacqui Court
PCI Before Project: 63
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $28,600
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2014 Continued

BranchID: MERIDIAN
Name: Meridian Street
SectionID: rd1536, rd1620, rd449, rd5005
From: Crestview Drive
To: Pinehurst Drive
PCI Before Project: 65, 65, 70, 49
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $78,100
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2015

BranchID: ELLIOTT
Name: Elliot Road
SectionID: rd2485, rd4883
From: 2nd Street
To: Hayes Street
PCI Before Project: 68, 63
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $157,000
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2016

BranchID:	BRUTSCHER
Name:	Brutscher Street
SectionID:	rd4902, rd4927, rd4929
From:	Little Oak Street
To:	Roundabout
PCI Before Project:	71, 66, 65
PCI After Project:	100
Work Type:	Mill & Overlay. Full depth patching.
Approximate Cost:	$82,000
Visual Distresses:	Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2016 Continued

BranchID: HAYES
Name: Hayes Street
SectionID: rd4925, rd4920
From: Roundabout
To: Roundabout
PCI Before Project: 69, 64
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $9,100
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2017

BranchID:	BRUTSCHER
Name:	Brutscher Street
SectionID:	rd2608
From:	Portland Road
To:	Little Oak Street
PCI Before Project:	65
PCI After Project:	100
Work Type:	Mill & Overlay. Full depth patching.
Approximate Cost:	$119,000
Visual Distresses:	Alligator Cracking, Longitudinal/Transverse Cracking, Patching, Rutting, and Weathering

Project Year: 2018

BranchID: 2ND
Name: 2nd Street
SectionID: rd1578, rd1705
From: Washington Street
To: Howard Street
PCI Before Project: 72, 70
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $65,500
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Rutting, and Weathering

Project Year: 2018 Continued

BranchID: 2ND
Name: 2nd Street
SectionID: rd1648
From: HWY 219
To: Elliott Road
PCI Before Project: 60
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $21,000
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2018 Continued

BranchID: MAIN
Name: Main Street
SectionID: rd4871
From: 2nd Street
To: 1st Street
PCI Before Project: 61
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $31,100
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2019

BranchID:	MAIN
Name:	Main Street
SectionID:	rd2627, rd4686, rd5006, rd5007
From:	Clifford Court
To:	Emma Lane
PCI Before Project:	68, 69, 61, 62
PCI After Project:	100
Work Type:	Mill & Overlay. Full depth patching.
Approximate Cost:	$56,500
Visual Distresses:	Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2019 Continued

BranchID: MAIN
Name: Main Street
SectionID: rd5009
From: Creekside Lane
To: Pinehurst Drive
PCI Before Project: 58
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $42,100
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2019 Continued

BranchID:	MAIN
Name:	Main Street
SectionID:	rd2818
From:	Nugget Lane
To:	Melody Lane
PCI Before Project:	55
PCI After Project:	100
Work Type:	Mill & Overlay. Full depth patching.
Approximate Cost:	$24,500
Visual Distresses:	Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2020

BranchID: DAYTON
Name: Dayton Street
SectionID: rd2294, rd2317
From: 5th Street
To: Stevenson Road
PCI Before Project: 59, 49
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $124,500
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2021

BranchID: 9TH
Name: 9th Street
SectionID: rd1567, rd1570, rd2247
From: College Street
To: River Street
PCI Before Project: 69, 59, 62
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $99,200
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2021 Continued

BranchID: 11TH
Name: 11th Street
SectionID: rd1681
From: River Street
To: Chehalem Street
PCI Before Project: 55
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $25,000
Visual Distresses: Alligator Cracking, Edge Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2021 Continued

BranchID: 11TH
Name: 11th Street
SectionID: rd1895
From: Columbia Street
To: Pacific Street
PCI Before Project: 51
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $21,500
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2022

BranchID: ELLIOTT
Name: Elliott Road
SectionID: rd4767
From: Haworth Avenue
To: Willow Drive
PCI Before Project: 67
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $13,800
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2022 Continued

BranchID:	FOOTHILLS
Name:	Foothills Drive
SectionID:	rd1936
From:	College Street
To:	Burlington Drive
PCI Before Project:	
PCI After Project:	100
Work Type:	Mill & Overlay. Full depth patching.
Approximate Cost:	$36,800
Visual Distresses:	Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Project Year: 2022 Continued

BranchID: VILLA
Name: Villa Road
SectionID: rd2368
From: Sherman Street
To: Laurel Drive
PCI Before Project:
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $42,000
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, Patching, and Weathering

Project Year: 2022 Continued

BranchID: VILLA
Name: Villa Road
SectionID: rd4780
From: Orchard Drive
To: Carol Avenue
PCI Before Project:
PCI After Project: 100
Work Type: Mill & Overlay. Full depth patching.
Approximate Cost: $10,100
Visual Distresses: Alligator Cracking, Longitudinal/Transverse Cracking, and Weathering

Table 7- Budget Scenario 3 ($486,000 Annually) M&R Project Recommendations

Year	BranchID	SectionID	Work Type		PCI Before Work	PCI After Work	Cost
2014	11TH	rd1677	Mill & Overlay		74	100	27,152
2014	11TH	rd1679	Mill & Overlay		73	100	28,531
2014	11TH	rd1895	Mill & Overlay	Full Depth Patching	69	100	19,678
2014	BRUTSCHER	rd2608	Mill & Overlay	Full Depth Patching	69	100	99,038
2014	BRUTSCHER	rd4789	Mill & Overlay	Full Depth Patching	71	100	56,827
2014	BRUTSCHER	rd4902	Mill & Overlay	Full Depth Patching	75	100	45,826
2014	ELLIOTT	rd2485	Mill & Overlay	Full Depth Patching	70	100	69,896
2014	ELLIOTT	rd4883	Mill & Overlay	Full Depth Patching	65	100	59,742
2014	MAIN	rd2818	Mill & Overlay	Full Depth Patching	62	100	24,492
2014	MAIN	rd4871	Mill & Overlay	Full Depth Patching	70	100	22,986
2015	11TH	rd1681	Mill & Overlay	Full Depth Patching	70	100	19,088
2015	2ND	rd1578	Mill & Overlay	Full Depth Patching	79	100	17,539
2015	2ND	rd1648	Mill & Overlay	Full Depth Patching	67	100	19,199
2015	2ND	rd1705	Mill & Overlay	Full Depth Patching	77	100	17,392
2015	2ND	rd2474	Mill & Overlay	Full Depth Patching	74	100	39,310
2015	9TH	rd1567	Mill & Overlay	Full Depth Patching	84	100	11,248
2015	9TH	rd1570	Mill & Overlay	Full Depth Patching	74	100	15,316
2015	9TH	rd2247	Mill & Overlay	Full Depth Patching	77	100	29,583
2015	BLAINE	rd4671	Mill & Overlay	Full Depth Patching	64	100	32,507
2015	CRESTVIEW	rd447	Mill & Overlay	Full Depth Patching	71	100	54,070
2015	DAYTON	rd2294	Mill & Overlay	Full Depth Patching	71	100	58,905
2015	DAYTON	rd2317	Mill & Overlay	Full Depth Patching	61	100	40,435
2015	MAIN	rd2627	Mill & Overlay	Full Depth Patching	78	100	11,617
2015	MAIN	rd4686	Mill & Overlay	Full Depth Patching	79	100	8,064

Year	BranchID	SectionID	Work Type		PCI Before Work	PCI After Work	Cost
2015	MAIN	rd5006	Mill & Overlay	Full Depth Patching	71	100	9,253
2015	MAIN	rd5007	Mill & Overlay	Full Depth Patching	72	100	8,803
2015	MAIN	rd5009	Mill & Overlay	Full Depth Patching	68	100	29,753
2015	OAK	rd4699	Mill & Overlay	Full Depth Patching	64	100	34,822
2016	BRUTSCHER	rd4927	Mill & Overlay	Full Depth Patching	66	100	4,273
2016	BRUTSCHER	rd4929	Mill & Overlay	Full Depth Patching	65	100	4,027
2016	DARTMOUTH	rd2716	Mill & Overlay	Full Depth Patching	63	100	71,773
2016	EARLS	rd4879	Mill & Overlay	Full Depth Patching	66	100	10,741
2016	ELLIOTT	rd4767	Mill & Overlay	Full Depth Patching	82	100	7,179
2016	FERNWOOD	rd2419	Mill & Overlay	Full Depth Patching	79	100	38,693
2016	FOOTHILLS	rd1936	Mill & Overlay	Full Depth Patching	74	100	22,771
2016	HAWTHORNE	rd2644	Mill & Overlay	Full Depth Patching	62	100	36,810
2016	HAYES	rd4892	Mill & Overlay	Full Depth Patching	80	100	31,993
2016	HAYES	rd4920	Mill & Overlay	Full Depth Patching	64	100	4,473
2016	HAYES	rd4925	Mill & Overlay	Full Depth Patching	69	100	3,423
2016	VILLA	rd2368	Mill & Overlay	Full Depth Patching	77	100	22,971
2016	VILLA	rd2515	Mill & Overlay	Full Depth Patching	72	100	34,590
2016	VILLA	rd2587	Mill & Overlay	Full Depth Patching	71	100	40,799
2016	VILLA	rd4612	Mill & Overlay	Full Depth Patching	0	100	17,063
2016	VILLA	rd4780	Mill & Overlay	Full Depth Patching	71	100	6,871
2016	WILLOW	rd2631	Mill & Overlay	Full Depth Patching	61	100	82,658
2016	YALE	rd4760	Mill & Overlay	Full Depth Patching	62	100	18,000
2017	12TH	rd2217	Mill & Overlay	Full Depth Patching	62	100	51,669
2017	2ND	rd2461	Mill & Overlay	Full Depth Patching	67	100	75,054
2017	DORIS	rd1768	Mill & Overlay	Full Depth Patching	61	100	26,878
2017	DOUGLAS	rd1605	Mill & Overlay	Full Depth Patching	65	100	34,119

Year	BranchID	SectionID	Work Type		PCI Before Work	PCI After Work	Cost
2017	DOUGLAS	rd1630	Mill & Overlay	Full Depth Patching	62	100	26,486
2017	EDWARDS	rd1727	Mill & Overlay	Full Depth Patching	64	100	29,818
2017	EDWARDS	rd4868	Mill & Overlay	Full Depth Patching	67	100	20,801
2017	MELODY	rd2819	Mill & Overlay	Full Depth Patching	63	100	64,657
2017	MERIDIAN	rd1536	Mill & Overlay	Full Depth Patching	58	100	22,139
2017	MERIDIAN	rd1620	Mill & Overlay	Full Depth Patching	58	100	24,084
2017	MERIDIAN	rd1686	Mill & Overlay		66	100	34,309
2017	MERIDIAN	rd449	Mill & Overlay	Full Depth Patching	63	100	20,831
2017	MERIDIAN	rd5005	Mill & Overlay	Full Depth Patching	38	100	4,937
2017	WASHINGTON	rd4690	Mill & Overlay	Full Depth Patching	67	100	25,870
2018	1ST	rd4714	Mill & Overlay	Full Depth Patching	69	100	25,334
2018	3RD	rd1811	Mill & Overlay	Full Depth Patching	67	100	21,532
2018	3RD	rd1927	Mill & Overlay	Full Depth Patching	68	100	7,598
2018	ALEXANDRA	rd4494	Mill & Overlay	Full Depth Patching	73	100	11,135
2018	ANDREW	rd2222	Mill & Overlay	Full Depth Patching	73	100	36,913
2018	ARDUS	rd1911	Mill & Overlay	Full Depth Patching	69	100	20,148
2018	GRANT	rd4575	Mill & Overlay	Full Depth Patching	75	100	9,830
2018	HARVARD	rd4566	Mill & Overlay	Full Depth Patching	66	100	18,257
2018	HOWARD	rd1580	Mill & Overlay	Full Depth Patching	74	100	18,962
2018	HOWARD	rd1769	Mill & Overlay	Full Depth Patching	71	100	20,054
2018	HOWARD	rd1835	Mill & Overlay	Full Depth Patching	70	100	20,767
2018	HULET	rd2572	Mill & Overlay	Full Depth Patching	71	100	59,100
2018	JONES	rd4761	Mill & Overlay	Full Depth Patching	69	100	18,936
2018	MARGUERITE	rd2636	Mill & Overlay	Full Depth Patching	66	100	19,855
2018	MIDDLE BRK	rd1589	Mill & Overlay	Full Depth Patching	68	100	37,510
2018	OXFORD	rd2713	Mill & Overlay	Full Depth Patching	61	100	25,687

Year	BranchID	SectionID	Work Type		PCI Before Work	PCI After Work	Cost
2018	OXFORD	rd2714	Mill & Overlay	Full Depth Patching	63	100	33,830
2018	OXFORD	rd4592	Mill & Overlay	Full Depth Patching	66	100	21,619
2018	PIONEER	rd1963	Mill & Overlay	Full Depth Patching	73	100	16,309
2018	ZOE	rd2718	Mill & Overlay	Full Depth Patching	70	100	14,493
2019	SPRINGBRK	rd1533	Mill & Overlay		47	100	65,838
2019	SPRINGBRK	rd1624	Mill & Overlay		46	100	73,670
2019	SPRINGBRK	rd2669	Mill & Overlay	Full Depth Patching	40	100	245,616
2019	SPRINGBRK	rd4632	Mill & Overlay		36	100	55,784
2020	3RD	rd2410	Mill & Overlay	Full Depth Patching	75	100	9,740
2020	4TH	rd1833	Mill & Overlay	Full Depth Patching	78	100	18,806
2020	AQUARIUS	rd2668	Mill & Overlay	Full Depth Patching	77	100	24,172
2020	AQUARIUS	rd2670	Mill & Overlay	Full Depth Patching	75	100	28,812
2020	AQUARIUS	rd4535	Mill & Overlay	Full Depth Patching	70	100	14,284
2020	CHURCH	rd1760	Mill & Overlay	Full Depth Patching	73	100	20,405
2020	EVEREST	rd1682	Mill & Overlay	Full Depth Patching	75	100	32,107
2020	EVEREST	rd1697	Mill & Overlay	Full Depth Patching	70	100	23,489
2020	FOOTHILLS	rd1552	Mill & Overlay	Full Depth Patching	57	100	76,708
2020	HARRISON	rd2493	Mill & Overlay	Full Depth Patching	73	100	17,392
2020	MERIDIAN	rd2610	Mill & Overlay	Full Depth Patching	63	100	17,471
2020	MERIDIAN	rd4919	Mill & Overlay	Full Depth Patching	59	100	24,467
2020	MORRIS	rd4799	Mill & Overlay	Full Depth Patching	79	100	11,502
2020	PARK	rd4614	Mill & Overlay	Full Depth Patching	55	100	16,170
2020	WYNOOSKI	rd1786	Mill & Overlay	Full Depth Patching	45	100	103,060
2020	WYNOOSKI	rd1939	Mill & Overlay	Full Depth Patching	23	100	23,835
2021	ANN	rd4783	Mill & Overlay	Full Depth Patching	66	100	19,825
2021	DEBORAH	rd4855	Mill & Overlay	Full Depth Patching	36	100	30,024

Year	BranchID	SectionID	Work Type		PCI Before Work	PCI After Work	Cost
2021	HANCOCK	rd2440	Mill & Overlay	Full Depth Patching	73	100	57,339
2021	HAWORTH	rd4768	Mill & Overlay	Full Depth Patching	41	100	107,217
2021	HAYES	rd2525	Mill & Overlay	Full Depth Patching	38	100	176,880
2021	RIVER	rd1625	Mill & Overlay		46	100	35,153
2021	RIVER	rd1797	Mill & Overlay	Full Depth Patching	44	100	40,223
2022	FOOTHILLS	rd1989	Mill & Overlay		60	100	26,647
2022	FOOTHILLS	rd523	Mill & Overlay		60	100	33,637
2022	GARFIELD	rd2268	Mill & Overlay	Full Depth Patching	60	100	13,766
2022	HAWORTH	rd2622	Mill & Overlay	Full Depth Patching	60	100	112,834
2022	MNT VIEW	rd2678	Mill & Overlay		60	100	167,577
2022	MNT VIEW	rd2681	Mill & Overlay		60	100	102,180
2022	MNT VIEW	rd4589	Mill & Overlay	Full Depth Patching	57	100	10,921

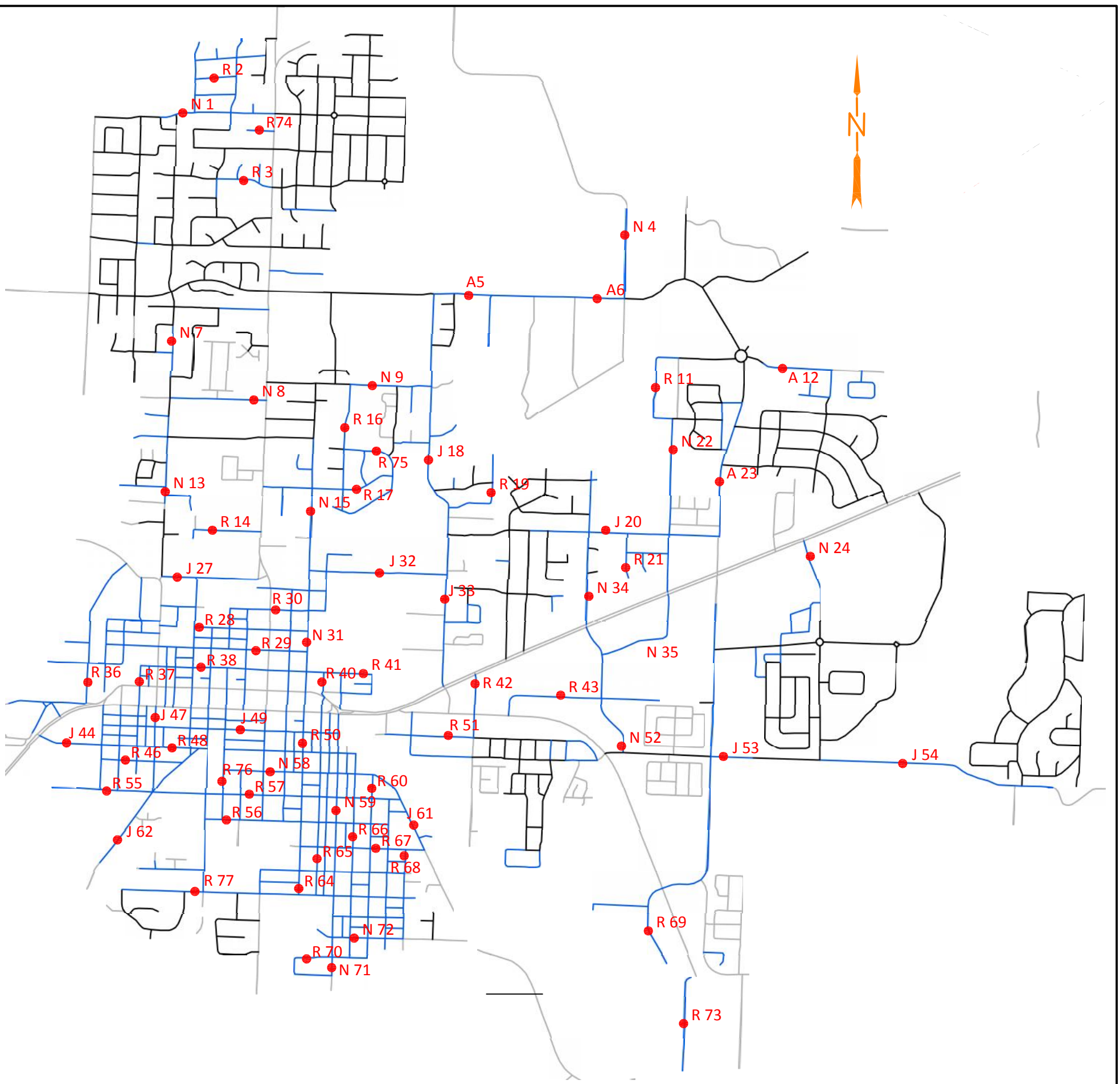
PAVEMENT CORING

Available construction records for the City street system are incomplete. As part of this project, PSI extracted 70 pavement cores on the City streets as shown in Figure 11. The objective of this activity was to supplement the current City records showing pavement type, thickness, and base composition.

The coring process consisted of:

1. Extracting the pavement core
2. Measuring the pavement thickness
3. Auguring to remove aggregate base (when present)
4. Measuring the aggregate base
5. Extracting a "grab" sample of the subgrade soil
6. Performing a field classification of the subgrade soil
7. At our laboratory, determined the water content of the subgrade soil

For each core, a core log was developed that identifies the location with GPS coordinates, pavement type and thickness, aggregate base type and thickness, and subgrade soil visual classification. Core logs and photographs of the core samples with a scale, showing the thickness of the core are presented in Appendix F. A summary of the core log data is shown in Table 8.



Legend

- Known Pavement Structure
- Unknown Pavement Structure
- Streets Not Managed by City of Newberg
- R 41 Core Location

Scale: 1-inch = 1,500 feet

PAVEMENT SERVICES, INC.

INNOVATIVE PAVEMENT SOLUTIONS

Date: 3/28/2014 Job No.: 13075

Pavement Core Locations

Newberg, Oregon

FIGURE 11

Table 8 - Summary of Core Results

Number	Core Label	MicroPAVER SectionID	Location	From	To	AC	AB	ASB	Over a Crack	Crack	Core Photo Name	Moisture Content (%)	Location Coordinates (NEMA String)
1	N-1	rd1847	E Foothills Drive	N Main St	Jones St	4.50	17.50	--	No	NA	N1.jpg	24 26	$GPGGA,163329.00,4519.47288673,N,12258.72080856,W,2,09,1.1,67.703,M,-19.860,M,4.2,0272*49
2	R-2	rd2841	Hilltop Dr	Jones St	Morris St	3.50	8.50	--	Yes	Full Depth	R2.jpg	27	$GPGGA,163627.00,4519.56504240,N,12258.60568777,W,2,08,1.1,77.725,M,-19.856,M,8.2,0272*44
3	R-3	rd4550	Edgewood Dr	Princeton Ct	Clearbrook Ct	2.25	8.75	--	Yes	Full Depth	R3.jpg	26	$GPGGA,181520.00,4519.31347996,N,12258.48326369,W,2,07,1.5,71.188,M,-19.859,M,10.8,0172*72
4	N-4	rd2752	N Aspen Way	City Limits	E Mountainview Dr	6.25	4.75	19.0+	No	NA	N4.jpg		$GPGGA,162256.00,4519.17914892,N,12257.17042452,W,2,10,1.0,81.673,M,-19.841,M,4.2,0172*46
5	A-5	rd4856	E Mountainview Dr	Thorne St	N Alice Way	6.75	8.75	--	Yes	Full Depth	A5.jpg	26	$GPGGA,162629.00,4519.05190010,N,12257.70921666,W,2,10,1.0,60.592,M,-19.851,M,5.4,0272*41
6	A-6	rd4516	E Mountainview Dr	N Herman St	N Aspen Way	7.25	5.75	--	No	NA	A6.jpg	24	$GPGGA,161754.00,4519.04966901,N,12257.26193977,W,2,11,0.8,75.619,M,-19.844,M,4.0,0172*43
7	N-7	rd2562	N Main St	Nugget Ln	Lynn Dr	4.50	7.50	--	Yes	Full Depth	N7.jpg	27	$GPGGA,164134.00,4518.91264682,N,12258.73318927,W,2,08,1.2,58.454,M,-19.870,M,6.8,0272*44
8	N-8	rd4852	E Columbia Dr	N Main St	N College St	2.50	10.50	--	No	N/A	N8.jpg	26	$GPGGA,164759.00,4518.77824532,N,12258.43771861,W,2,08,1.2,61.257,M,-19.868,M,6.6,0272*44
9	N-9	rd447	E Crestview Dr	Hoskins St	Aldersgate Ln	4.00	20.0+	--	Yes	Full Depth	N9.jpg	14	$GPGGA,172929.00,4518.81896143,N,12258.03642647,W,2,07,1.3,65.003,M,-19.861,M,4.8,0272*4B
11	R-11	rd464	N Emery Dr	E Crestview Dr	Douglas Ave	3.50	7.50	--	Yes	Full Depth	R11.jpg	32	$GPGGA,182918.00,4518.84142380,N,12257.04720216,W,2,07,1.5,72.516,M,-19.845,M,4.0,0272*4C
12	A-12	rd2669	E Crestview Dr	Springbrook Way	N Libra St	2.75	1.25	--	Yes	Full Depth	A12.jpg	23	$GPGGA,182332.00,4518.89539333,N,12256.54727080,W,2,08,1.4,71.858,M,-19.836,M,5.4,0172*45
13	N-13	rd5007	N Main St	Emma St	Markris Ln	3.50	--	8.50	Yes	Top Down to 1.5" Depth	N13.jpg	27	$GPGGA,170149.00,4518.54297857,N,12258.73892509,W,2,07,1.6,54.416,M,-19.877,M,9.2,0172*41
14	R-14	rd2624	Mission Dr	Mission Ct	N College St	2.50	9.00	--	Yes	Full Depth	R14.jpg	21	$GPGGA,181036.00,4518.45619409,N,12258.57607517,W,2,08,1.4,54.760,M,-19.876,M,36.4,0272*7F
15	N-15	rd2645	N Meridia.n St	Sierra Vista St		5.50	20.50	--	No	N/A	N15.jpg	28	$GPGGA,165437.00,4518.51035690,N,12258.23010400,W,2,07,1.4,60.652,M,-19.869,M,6.2,0172*4B
16	R-16	rd446	Hoskins St	N Pennington Dr	E Crestview Dr	3.25	7.75	--	Yes	Full Depth	R16.jpg	23	$GPGGA,164440.00,4518.71458335,N,12258.12096780,W,2,10,1.0,65.218,M,-19.864,M,3.8,0172*45
17	R-17	rd4502	Sierra Vista St	Hoskins St	Barclay Way	4.75	7.00	--	Yes	Full Depth	R17.jpg	23	$GPGGA,172520.00,4518.56561563,N,12258.08214686,W,2,08,1.2,61.503,M,-19.866,M,9.6,0272*4D
18	J-18	rd4768	Villa Rd	Carol Ann Dr	Park Ln	4.25	3.25	--	No	N/A	J18.jpg	29	$GPGGA,161304.00,4518.62293388,N,12257.82745842,W,2,09,1.2,53.947,M,-19.861,M,5.0,0272*4A
19	R-19	rd2654	N Carol Ave	Villa Rd	Carol Ann Dr	3.25	9.25	9.50	Yes	Cracked from 1.5" Depth to 3.25" Depth	R19.jpg	29	$GPGGA,173512.00,4518.55967196,N,12257.60911438,W,2,07,1.3,56.875,M,-19.859,M,5.2,0272*40
20	J-20	rd2585	Haworth Ave	Elliott Rd	Deborah Rd	4.50	31.50	--	No	N/A	J20.jpg	20	$GPGGA,155956.00,4518.47561240,N,12257.20732875,W,2,10,0.9,66.009,M,-19.854,M,4.2,0172*45
21	R-21	rd4660	Pecan Ct	Walnut Ave	End	3.00	8.50	--	No	N/A	R21.jpg	22	$GPGGA,183349.00,4518.39562578,N,12257.13454860,W,2,05,2.8,66.843,M,-19.854,M,6.2,0272*4B
22	N-22	rd2626	Deborah Rd	Douglas Ave	Haworth Ave	3.50	8.50	--	No	N/A	N22.jpg	34	$GPGGA,160713.00,4518.69216165,N,12256.99043179,W,2,11,0.8,69.314,M,-19.846,M,6.2,0172*45
23	A-23	rd4588	N Springbrook Rd	Haworth Ave	E Aquarius Blvd	5.75	--	--	No	N/A	A23.jpg	19	$GPGGA,160328.00,4518.61676870,N,12256.81178237,W,2,09,1.0,66.173,M,-19.845,M,3.8,0272*44
24	N-24	rd2608	Brutscher St	99-W	Little Oak St	5.50	4.00	26.50	No	N/A	N24.jpg	24	$GPGGA,160205.00,4518.31331849,N,12256.45430761,W,2,10,0.9,65.151,M,-19.845,M,13.2,0172*7F
27	J-27	rd2592	E Illinois St	N Main St	Washington St	6.00	13.50	--	No	N/A	J27.jpg	17	$GPGGA,165857.00,4518.34027303,N,12258.67103177,W,2,07,1.6,55.324,M,-19.879,M,6.4,0172*4F
28	R-28	rd4606	Franklin St	Washington St	S Blaine St	2.00	9.00	--	Yes	Full Depth	R28.jpg	29	$GPGGA,180508.00,4518.21681928,N,12258.60657887,W,2,08,1.1,57.821,M,-19.880,M,6.0,0272*4C
29	R-29	rd4683	Sherman St	S School St	College St	1.50	9.00	--	Yes	Full Depth	R29.jpg	24	$GPGGA,184439.00,4518.16620499,N,12258.39458974,W,2,07,1.3,57.953,M,-19.878,M,16.6,0172*75
30	R-30	rd4706	North	College St	Edwards St	2.00	7.50	--	Yes	Full Depth	R30.jpg	18	$GPGGA,192202.00,4518.26478417,N,12258.34721251,W,2,08,1.4,58.010,M,-19.875,M,4.2,0272*4A
31	N-31	rd4801	Meridia.n St	Franklin St	Sherman St	2.50	27.5+	--	No	N/A	N31.jpg		$GPGGA,180242.00,4518.18832090,N,12258.23150711,W,2,08,1.1,57.652,M,-19.875,M,4.6,0272*40
32	J-32	rd2587	Fulton St	Center St	Villa Rd	3.50	7.50	--	Yes	Full Depth	J32.jpg	28	$GPGGA,171100.00,4518.36245919,N,12257.92803903,W,2,07,1.3,51.552,M,-19.867,M,5.8,0172*45
33	J-33	rd2463	Villa Rd	Fulton St	North	3.00	8.50	--	Yes	Full Depth	J33.jpg	22	$GPGGA,170508.00,4518.30570511,N,12257.75868568,W,2,08,1.1,59.300,M,-19.865,M,5.4,0172*44
34	N-34	rd4883	S Eliott Rd	E Hancock St	E 2nd St	2.50	4.50	3.50	Yes	Full Depth	N34.jpg	23	$GPGGA,161009.00,4518.32426979,N,12257.26880053,W,2,09,1.3,66.112,M,-19.857,M,6.4,0172*43
35	N-35	rd2525	Hayes St	S Eliott Rd	Deborah Rd	3.50	9.00	--	Yes	Full Depth	N35.jpg	25	$GPGGA,173052.00,4518.20640467,N,12257.10616196,W,2,07,1.4,60.834,M,-19.857,M,4.4,0172*41
36	R-36	rd2503	Morton St	Sheridan St	E 1st St	3.75	9.25	--	No	N/A	R36.jpg	18	$GPGGA,211710.00,4518.08474281,N,12258.99365959,W,2,07,1.2,49.722,M,-19.889,M,5.0,0272*42
37	R-37	rd1608	Grant St	Sheridan St	E Hancock St	2.00	8.00	--	Yes	Full Depth	R37.jpg	27	$GPGGA,203853.00,4518.08567438,N,12258.80992320,W,2,06,1.3,52.185,M,-19.886,M,5.4,0172*49
38	R-38	rd1691	Sheridan St	S Blaine St	S Washington St	6.50	--	--	Yes	Top Down to 1" Depth	R38.jpg	24	$GPGGA,200220.00,4518.11832415,N,12258.59295992,W,2,06,2.0,57.212,M,-19.882,M,4.8,0172*44
40	R-40	rd1695	Center St	Sheridan St	99-W	6.00	--	--	No	NA	R40.jpg	30	$GPGGA,160206.00,4518.09755631,N,12258.17393635,W,2,09,1.0,55.357,M,-19.876,M,10.0,0172*71
41	R-41	rd2455	Sheridan St	S River St	Carlton Way	1.25	--	2.75	Yes	Full Depth	R41.jpg	23	$GPGGA,151802.00,4518.11671374,N,12258.03617947,W,2,08,1.2,53.590,M,-19.873,M,9.6,0172*42
42	R-42	rd1682	S Everest St	Hwy 99	E 1st St	4.25	2.25	--	Yes	Full Depth	R42.jpg	25	$GPGGA,193302.00,4518.09244533,N,12257.64575593,W,2,07,1.4,56.507,M,-19.867,M,14.4,0172*7C
43	R-43	rd2440	E Hancock St	E 1st St	S Eliott Rd	6.50	7.50	--	Yes	Top Down to 3.5"	R43.jpg	34	$GPGGA,164332.00,4518.07464459,N,12257.33254710,W,2,09,1.0,57.304,M,-19.863,M,18.6,0272*78
44	J-44	rd4871	E 3rd St	99-W	N Harrison St	6.50	12.50	--	No	NA	J44.jpg	22	$GPGGA,195659.00,4517.92128597,N,12259.04660183,W,2,08,1.2,48.210,M,-19.892,M,4.8,0172*41
46	R-46	rd1812	E 4th St	Lincoln St	Grant St	2.25	11.75	--	Yes	Full Depth	R46.jpg	26	$GPGGA,180043.00,4517.88569866,N,12258.84939344,W,2,09,1.1,49.541,M,-19.890,M,5.0,0172*49
47	J-47	rd2469	N Main St	E 1st St	E 2nd St	2.50	--	--	Yes	Top Down to 2.5" Depth	J47.jpg	23	$GPGGA,183534.00,4517.98747280,N,12258.74769355,W,2,09,1.1,53.267,M,-19.887,M,6.2,0172*49

Table 8 - Summary of Core Results

Number	Core Label	MicroPAVER SectionID	Location	From	To	AC	AB	ASB	Over a Crack	Crack	Core Photo Name	Moisture Content (%)	Location Coordinates (NEMA String)
48	R-48	rd2427	E 3rd St	N Main St	Washington St	2.50	8.50	--	Yes	Full Depth	R48.jpg	26	$GPGGA,180306.00,4517.91884114,N,12258.69326980,W,2,09,1.1,51.493,M,-19.887,M,85.0,0172*7D
49	J-49	rd4853	E 2nd St	S Howard St	College St	3.00	1.00	6.50	No	N/A	J49.jpg	21	$GPGGA,190047.00,4517.96987821,N,12258.45712106,W,2,08,1.4,51.991,M,-19.882,M,16.2,0172*7D
50	R-50	rd1771	S Meridia.n St	E 2nd St	E 3rd St	5.00	--	--	No	N/A	R50.jpg	29	$GPGGA,175332.00,4517.93931731,N,12258.23368407,W,2,09,1.1,52.845,M,-19.879,M,4.2,0272*47
51	R-51	rd2461	E 2nd St	S Church St	S Everest St	4.00	4.00	3.00	Yes	Full Depth	R51.jpg	23 28	$GPGGA,181236.00,4517.96471698,N,12257.73097355,W,2,07,1.3,52.204,M,-19.871,M,7.6,0172*41
52	N-52	rd5003	S Eliott St	E Hancock St	E 2nd St	5.25	10.25	--	No	N/A	N52.jpg	22	$GPGGA,193927.00,4517.96044889,N,12257.12585219,W,2,06,2.3,57.484,M,-19.862,M,10.6,0172*70
53	J-53	rd2411	E Fernwood Rd	S Springbrook St	Brutscher St	6.50	--	3.00	Yes	Full Depth	J53.jpg	24	$GPGGA,205312.00,4517.93932250,N,12256.76953388,W,2,08,1.0,54.455,M,-19.856,M,5.2,0172*48
54	J-54	rd1940	E Fernwood Rd	Brutscher St	N Fetig Ln	4.50	21.50	--	No	N/A	J54.jpg	28	$GPGGA,220921.00,4517.93781679,N,12256.20800322,W,2,08,1.3,54.878,M,-19.848,M,6.4,0172*42
56	R-56	rd1729	E 6th St	S Howard St	S School St	3.50	8.00	--	Yes	Full Depth	R56.jpg	24	$GPGGA,183106.00,4517.75138850,N,12258.49038557,W,2,06,2.4,49.013,M,-19.887,M,5.8,0172*45
57	R-57	rd1833	E 5th St	S School St	S College St	3.00	8.00	--	Yes	Full Depth	R57.jpg	29	$GPGGA,172518.00,4517.81088657,N,12258.42068781,W,2,07,1.6,54.029,M,-19.885,M,11.8,0172*7D
58	N-58	rd1824	E 4th St	S College St	S Edwards St	6.50	5.00	--	Yes	Full Depth	N58.jpg	25	$GPGGA,175643.00,4517.87035856,N,12258.34283256,W,2,09,1.1,52.780,M,-19.882,M,29.6,0172*78
59	N-59	rd1721	S River St	E 5th St	E 6th St	7.25	--	--	No	N/A	N59.jpg	36	$GPGGA,172820.00,4517.77866982,N,12258.11204692,W,2,06,1.9,50.912,M,-19.880,M,5.4,0172*47
60	R-60	rd1783	S Willamette St	S Wynooski St	E 5th St	1.25	6.25	--	Yes	Full Depth	R60.jpg	25	$GPGGA,220201.00,4517.84938498,N,12257.98993115,W,2,09,0.9,51.185,M,-19.877,M,3.8,0272*41
61	J-61	rd1666	S Wynooski St	E 5th St	E 7th St	2.50	2.50	6.00	No	N/A	J61.jpg	22	$GPGGA,173204.00,4517.74834494,N,12257.85016206,W,2,07,1.3,50.753,M,-19.877,M,8.6,0172*49
62	J-62	rd1921	Dayton Ave	E 5th St	City Limits	4.25	9.75	18.00	No	N/A	J62.jpg		$GPGGA,205611.00,4517.65145477,N,12258.91077553,W,2,05,1.5,46.118,M,-19.895,M,4.8,0172*47
64	R-64	rd1571	S Meridia.n St	E 8th St	E 9th St	1.75	12.25	--	Yes	Full Depth	R64.jpg	34	$GPGGA,174938.00,4517.58714612,N,12258.23296075,W,2,08,1.2,49.609,M,-19.886,M,4.8,0172*4E
65	R-65	rd1799	S Center St	E 7th St	E 8th St	2.50	10.00	--	Yes	Full Depth	R65.jpg	34	$GPGGA,174652.00,4517.65534769,N,12258.17599342,W,2,09,1.1,48.607,M,-19.883,M,3.8,0172*49
66	R-66	rd1736	S Chehalem St	E 6th St	E 7th St	2.50	11.00	--	Yes	Full Depth	R66.jpg	25	$GPGGA,174341.00,4517.70996530,N,12258.05160687,W,2,08,1.2,51.609,M,-19.881,M,12.6,0172*75
67	R-67	rd1574	E 7th St	S Willamette St	S Columbia St	2.25	11.75	--	Yes	Full Depth	R67.jpg	33	$GPGGA,174134.00,4517.68706542,N,12257.97479413,W,2,09,1.1,50.534,M,-19.880,M,9.2,0172*49
68	R-68	rd1741	S Pacific St	E 7th St	E 8th St	1.50	13.50	--	Yes	Full Depth	R68.jpg	24	$GPGGA,173836.00,4517.66576889,N,12257.87006433,W,2,09,1.1,49.968,M,-19.878,M,5.2,0172*4D
69	R-69	rd2245	Industrial Pkwy	E 9th St	South End	4.00	11.00	--	No	NA	R69.jpg	26	$GPGGA,203411.00,4517.50252083,N,12257.01284473,W,2,08,1.0,49.895,M,-19.868,M,34.2,0272*77
70	R-70	rd2217	E 12th St	S River St	Meridia.n St	3.75	8.75	--	Yes	Full Depth	R70.jpg	39	$GPGGA,171847.00,4517.41224444,N,12258.19071978,W,2,08,1.1,50.689,M,-19.888,M,4.8,0172*46
71	N-71	rd1584	S River St	E 12th St	E 13th St	9.50	--	--	Yes	Full Depth	N71.jpg	31	$GPGGA,172146.00,4517.38995832,N,12258.10887746,W,2,08,1.1,51.645,M,-19.887,M,9.8,0172*47
72	N-72	rd1679	E 11th St	S Chehalem St	S Willamette St	5.25	9.75	--	No	N/A	N72.jpg	35	$GPGGA,172410.00,4517.46625397,N,12258.03072905,W,2,08,1.1,50.403,M,-19.885,M,3.8,0172*48
73	R-73	rd2204	S Sandoz Rd	North End	S Wynooski St	6.50	5.00	--	No	N/A	R73.jpg	20	$GPGGA,211608.00,4517.27599623,N,12256.88414319,W,2,09,0.9,52.445,M,-19.870,M,50.4,0172*7A
74	R-74	rd509	Sunset Ct	Hwy 219	West End	2.50	5.50	--	Yes	Full Depth	R74.jpg	21	$GPGGA,160652.00,4519.43386907,N,12258.42864638,W,2,09,1.0,72.527,M,-19.856,M,6.8,0272*4F
75	R-75	rd4633	N Pennington Dr	Barclay Way	Aldersgate Ln	4.50	10.00	--	Yes	Full Depth	R75.jpg	26	$GPGGA,164800.00,4518.66161358,N,12258.02150624,W,2,10,1.0,61.718,M,-19.863,M,4.0,0272*40
76	R-76	rd1791	S Howard St	E 4th St	E 5th St	3.00	6.00	--	Yes	Full Depth	R76.jpg	44	$GPGGA,174609.00,4517.85367510,N,12258.50828925,W,2,07,1.3,53.675,M,-19.885,M,11.2,0272*75
77	R-77	rd1710	E 9th St	Charles St	S Blaine St	2.50	9.50	--	Yes	Full Depth	R77.jpg	23 32	$GPGGA,183726.00,4517.56986929,N,12258.60519468,W,2,08,1.4,48.755,M,-19.892,M,7.2,0172*47

Abbreviations: AC = Asphalt Concrete; AB = Aggregate Base; WC = Water Content; NA = Not Applicable; NM = Not Measured - surface core through bound layer(s) only

TRAFFIC COUNTS AND FEDERAL FUNCTIONAL CLASSIFICATION UPDATE

As part of our pavement evaluation, the City requested that we review the Federal Functional Classifications (FFC) of the City street system in order to update the current classification of arterials and collectors. This section summarizes our review and analysis of the City's FFC system. Based on information from the GIS database, the current street functional classification system is divided into five classes; 1) principal arterial, 2) minor arterial, 3) major collector, 4) minor collector and 5) residential or local street. Currently all the principal arterials are streets and highways under ODOT jurisdiction, effectively leaving the City with four classification categories.

Evaluation Approach

According to the AASHTO Green Book – A policy on Geometric Design of Highways and Streets (Green Book), functional classification is the grouping of streets by the character of service they provide. The Green Book recommends classifying streets based primarily on mobility and access where highly mobile streets (i.e., arterials) have limited access and higher operating speeds while accessible streets (i.e., residential/local streets) provide a high degree of access but have lower operating speeds and higher trip travel times. Conversely, collector streets offer balanced service for both mobility and access.

Instead of trying to make a distinction on which streets offer higher mobility or access, our review of the street classification system was based primarily on traffic volume and loading. This was done since traffic volume and loading offer quantifiable measures of which streets are currently being used the most for the transport of people and goods. Certainly, for new streets, geometric considerations relating to mobility and access and the type of function a street serves are of high importance and should be evaluated by a qualified traffic engineer. Our review was within the framework of the current FFC system and therefore, the information was used for comparison purposes in order to refine the current system.

Field Investigation

The traffic volume and loading estimates were derived from tube counts conducted at 58 locations throughout the City in February and early March by Quality Counts of Tigard, Oregon. The tube count locations are shown on Figure 12, which also shows the current FFC designations. At each location, 24-hour classified counts were conducted between Tuesday and Thursday and the data were separated by direction. The volumes were classified in accordance with the Federal Highway Administration (FHWA) axle classification system. The count locations were limited to minor arterials and major and minor collectors since these represent the critical streets within the city street system. We also conducted tube counts on two streets that are currently classified as residential to evaluate if they are appropriately classified.

Based on the traffic data, the truck volumes in the various axle categories were converted into

equivalent 18-kip single axle load (ESAL) repetitions using the ODOT yearly ESAL conversion factors for one-way traffic. An ESAL is a concept developed from the American Association of State Highway Officials (AASHO) road test (later changed to AASHTO) to establish a pavement damage relationship for comparing the effects of axles carrying different loads. An estimate of ESAL loading is an input parameter for the AASHTO pavement design procedure (as used by ODOT) for both rehabilitation analysis and design for new construction.

Traffic growth was estimated using an annual compound growth rate of 1%. The 20-year traffic loading estimates (a typical design period for pavement design) are summarized in Appendix G.

Analysis Results

We considered both the ESAL loading and the overall traffic volume in our analysis of the functional classification. Since auto and light truck traffic (i.e., pickups) have very minimal effect on ESAL loading and can be ignored from a pavement structural design standpoint, the ESAL loading is related to the truck traffic use of a street. Typically, average daily traffic (ADT) is primarily comprised of auto and light truck traffic (except perhaps for streets in industrial areas) and provides a measure of the overall use of a street.

For each count location, we evaluated the maximum 20-year ESAL loading and ADT between the two directions. A plot of the results, based on the current functional classification, is shown on Figure 13. The maximum value between the two directions was used since this represents the controlling value for each street. As seen in Figure 13, there is a high degree of correlation between the ESAL loading and ADT and the calculated coefficient of correlation between the two traffic use components is 0.99 (1.00 represents perfect correlation). Hence, based on the traffic count results, streets with high ESAL loading also have high ADT and vice versa. Since the analysis shows that the comparison in functional classification between streets can be made between either traffic loading (ESALs) or ADT, we selected traffic loading as the basis of our comparative analysis.

A plot of the traffic loading (ESALs) based on the current functional classification is shown in Figure 14 which also shows count locations where a change to the current functional classification is recommended. The basis of our recommended changes are discussed below.
Since some overlap in either traffic loading or ADT between the functional classification categories is reasonable, Figure 14 shows that in general the current functional classification system correlates very well with measured traffic volume and loading. Hence streets with high traffic volume and loading generally correspond to minor arterials and streets with lower traffic volume and loading generally correspond to minor collectors (except for a couple of locations residential streets were excluded from the analysis). Therefore, only minor refinement of the FFC is needed.

As shown in Figure 14, segments of Villa Rd and Haworth Avenue have higher traffic loading than segments of S Springbrook Blvd and Mountain View Dr even though the latter are classified as minor arterials. If an arbitrary demarcation of 125,000 ESALs is used to

delineate between minor arterials and major collectors, this would result in changes in functional classification from major collector to minor arterial to three street segments; 1) Villa Road – Haworth St to Hwy 99, 2) Haworth St – Villa Rd to N Springbrook Rd and River St – Wynooski Rd to Hwy 99. If these changes are made all streets with traffic loadings above 125,000 ESALs would be classified as minor arterials. The changes seem reasonable for Villa Rd and Haworth St given the heavy use of these streets and their geographic location as primary north/south and east/west routes in north Newberg and for River St since it is a primary connection for south Newberg to Hwy 99.

There are three streets that are currently classified as minor collectors but the traffic loading data indicates that they are within the mid to upper band of streets that are classified as major collectors. Therefore, we recommend that the designation of the following three streets be evaluated by the City and potentially be upgraded to major collectors: 1) Meridian Street – Hwy 99 to Vermillion St, 2) Hayes St – Elliott Rd to Hwy 99 and 3) 9th St – River St to Blaine St. In addition, the loading on 5th St, currently classified as a residential street between Blaine St and Dayton Ave, indicates that this street should be considered a major collector. It should be noted that the functional classification on all of the streets south of Hwy 99 may be affected due to future construction of the Newberg-Dundee Bypass.

There are two streets that are currently major collectors but their loading is at the lower band of minor collectors and we recommend that their classification be changed from major collector to minor collector. The two streets are: 1) Foothills Dr – Hwy 219 to east end and 2) Crestview Dr – Roundabout to Libra St. Although the loading on Main St between Foothills Dr and Mountainview Dr is very low (perhaps warranting a change to minor collector), we recommend that this street be retained as a major collector due to its location and geometric design.

There are two streets that are currently designated as residential streets where the traffic loading, in our opinion, warrants that they be re-classified as minor collectors. They are: 1) The Greens Ave – Argyle Ct to Masters Dr (serving a small neighborhood in east Newberg) and 2) 6th St – River St to Blaine St.

Finally, Aspen Way between Mountainview Dr and the north city limits has very low loading and ADT and we recommend that its classification be changed from minor collector to residential/local street.

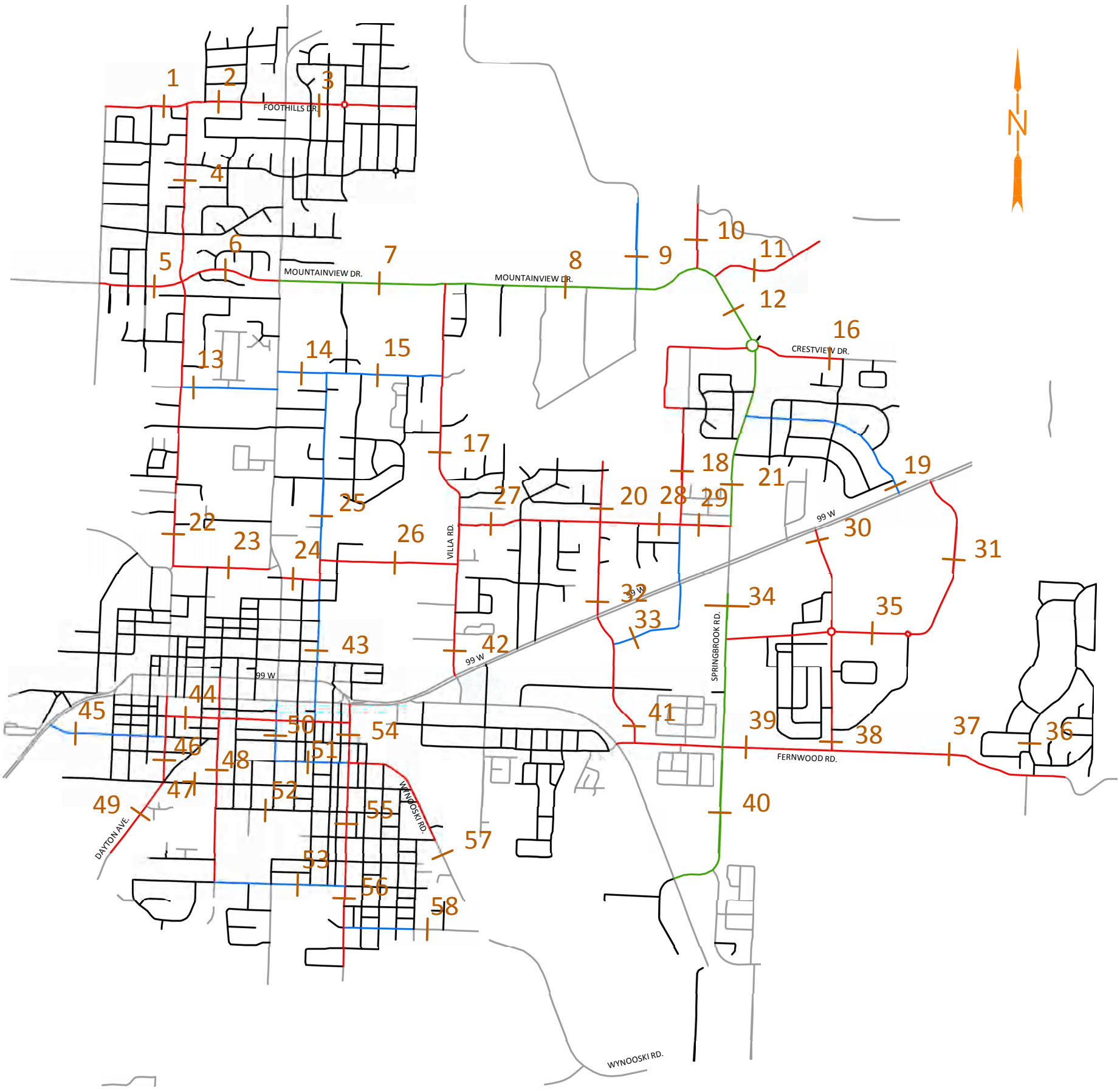
A summary of the recommended changes discussed above are shown in Table 9 and a map of the proposed recommended changes are shown on Figure 15.

Table 9 – Proposed Recommended FFC Changes

Count Location	Street	From	To	Current FFC	Recommended FFC
27,28,29	Haworth St	Villa	Springbrook	Major Coll.	Minor Artl.
42	Villa Rd	Haworth	Hwy 99	Major Coll.	Minor Artl.
54	River St	Wynooski	Hwy 99	Major Coll.	Minor Artl.
33	Hayes St	Elliott	Hwy 99	Minor Coll.	Major Coll.
43	Meridian St	Vermillion	Hwy 99	Minor Coll.	Major Coll.
53	9th St	River	Blaine	Minor Coll.	Major Coll.
47	5th St	Blaine	Dayton	Residential	Major Coll.
3	Foothills Dr	Hwy 219	East End	Major Coll.	Minor Coll.
16	Crestview Dr	Roundabout	Libra	Major Coll.	Minor Coll.
36	The Greens Ave	Argyle	Masters	Residential	Minor Coll.
52	6th St	River St	Blain St	Residential	Minor Coll.
9	Aspen Way	Mountainview	North City Limits	Minor Coll.	Local

Before the recommendations listed in Table 9 are adopted by the City, we recommend that each street be evaluated to determine how the classification change may affect the community. The main intention of theses traffic counts in relation to the implementation of the pavement management system, are to assist with the proper selection of maintenance and rehabilitation techniques. For example, now knowing that Haworth Street has similar volume of traffic as compared to a minor arterial, certain treatment types such as slurry seals may not be the best preservation option as compared to a thin inlay.

Additional data from the field counts and analysis are in Appendix G.



LEGEND

- Major Collector
- Minor Arterial
- Minor Collector
- Residential
- Not Surveyed
- 1 TRAFFIC COUNT LOCATION

Base Map: City of Newberg GIS map of functional classification

Scale: 1-inch = 1,600 feet

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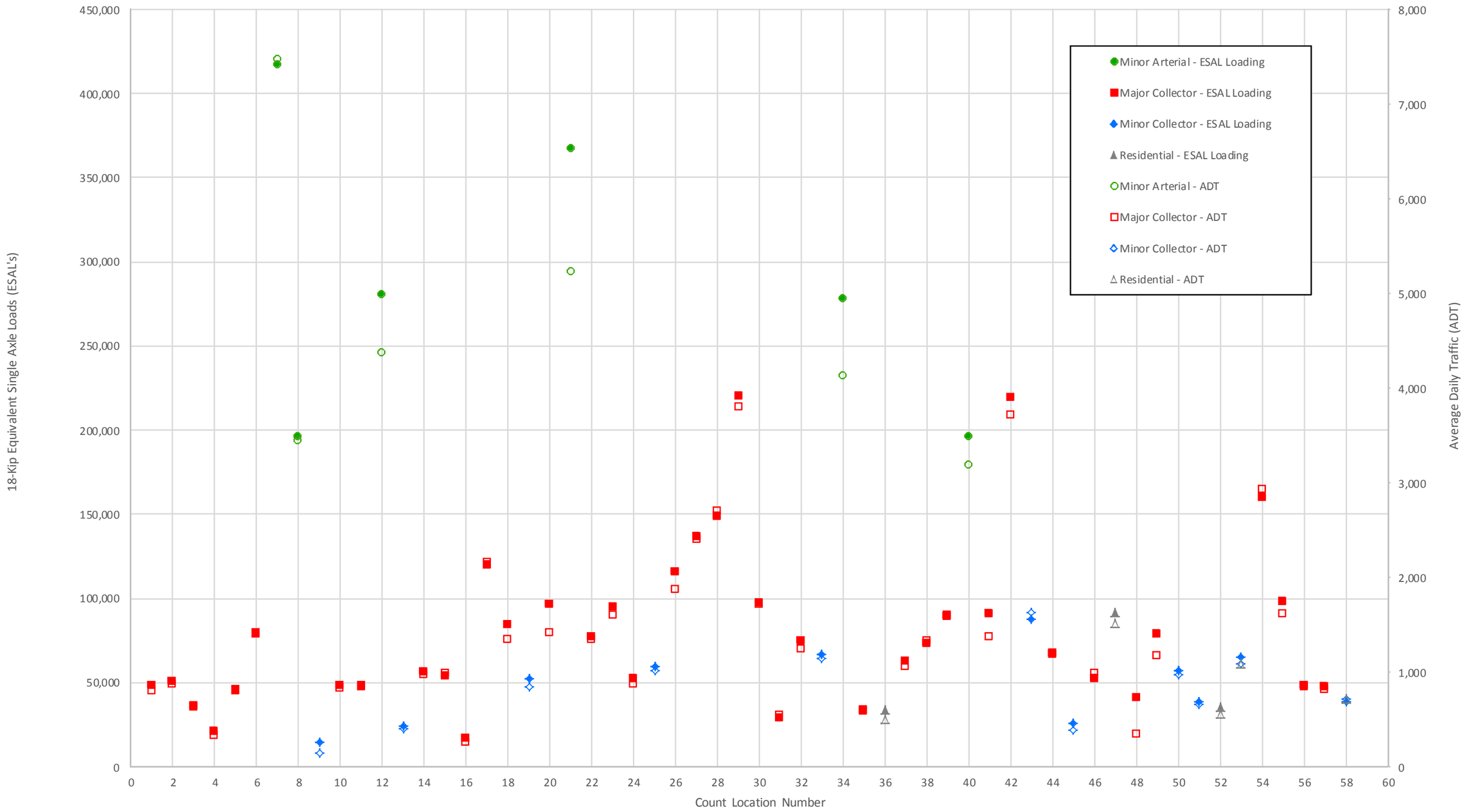
TRAFFIC COUNT LOCATIONS
Newberg, Oregon

FIGURE
12

Figure 13 - Plot of Traffic Loading and ADT by Count Location - City of Newberg



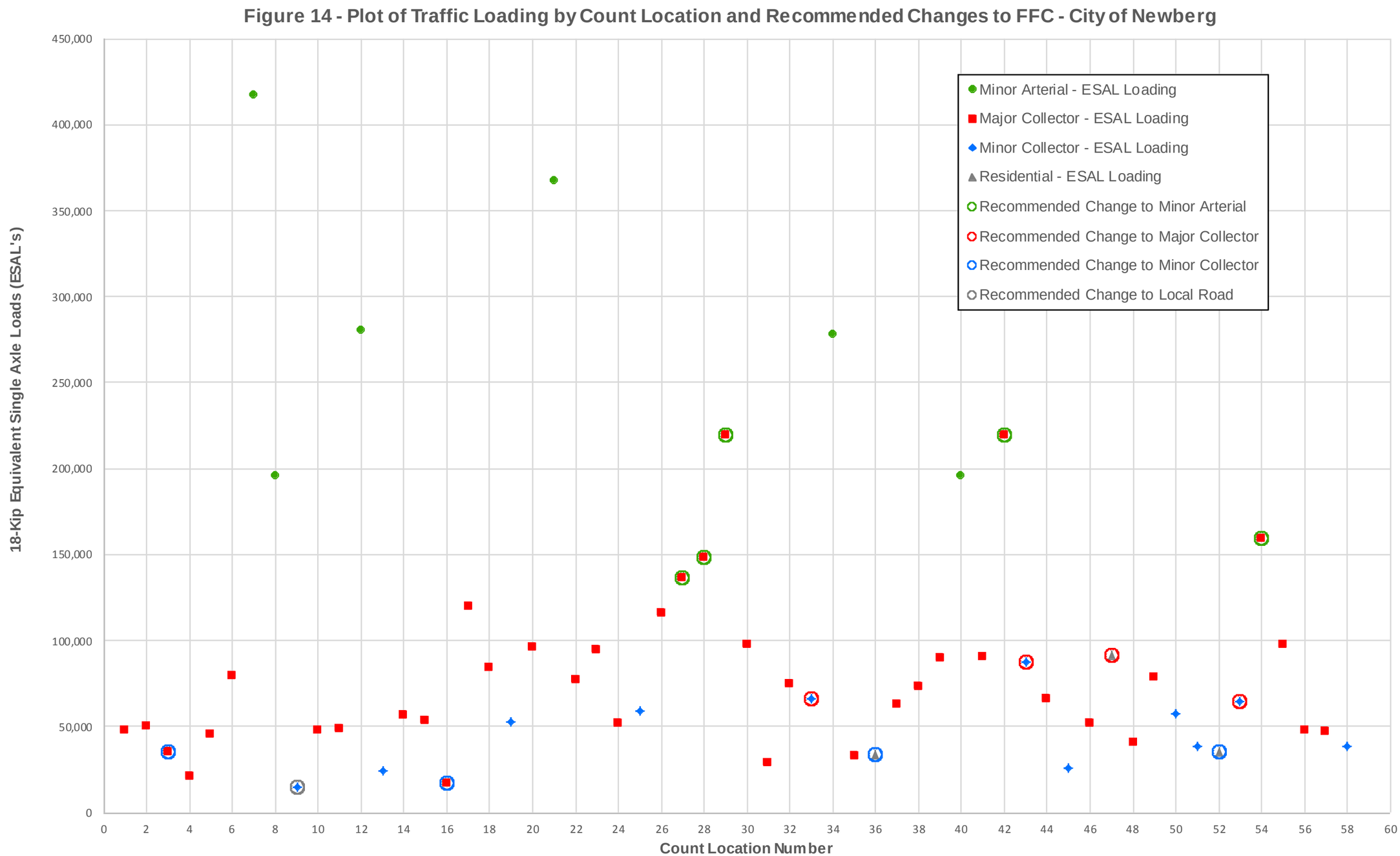
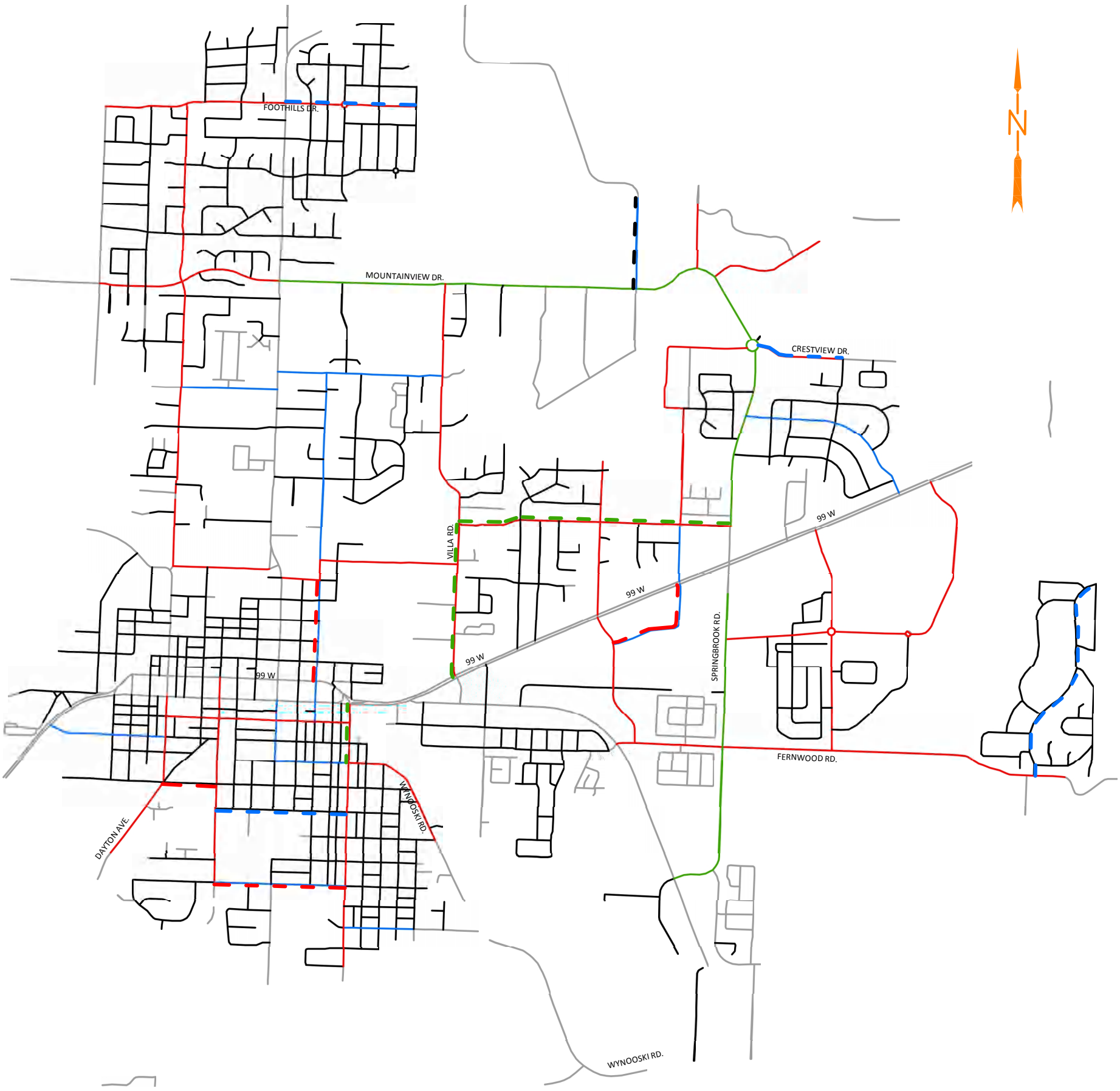


Figure 14 - Plot of Traffic Loading by Count Location and Recommended Changes to FFC - City of Newberg
18-Kip Equivalent Single Axle Loads (ESAL's)
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60
Count Location Number
Minor Arterial - ESAL Loading
Major Collector - ESAL Loading
Minor Collector - ESAL Loading
Residential - ESAL Loading
Recommended Change to Minor Arterial
Recommended Change to Major Collector
Recommended Change to Minor Collector
Recommended Change to Local Road



LEGEND

Current FFC	Recommended Change to FFC
Major Collector	Major Collector
Minor Arterial	Minor Arterial
Minor Collector	Minor Collector
Residential	Local
Not Surveyed	

Scale: 1-inch = 1,600 feet

Base Map: City of Newberg GIS map of functional classification

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 3/27/2014 Job No.: 13075

Map of Proposed Changes to Current Functional Classifications
Newberg, Oregon

FIGURE 15

PAVEMENT STRUCTURAL CONDITION

Many agencies place large amounts of seal coats and thin overlays every year in order to improve the surface condition of pavements. However, while these measures may improve the pavement surface for a short time, they are often unsuccessful on a long term basis because the structural condition of the pavement is not addressed. In these cases, the surface condition declines rapidly after the treatment because of structural deterioration of pavement layers and/or deformation of the pavement and subgrade. To make effective decisions about the type of treatment needed, the structural condition of a pavement should be evaluated. The structural condition of a pavement can be assessed through several different measurements, but the most comprehensive approach is to use Falling Weight Deflectometer (FWD) data. The FWD is a non-destructive tests that measures deflections by applying known impulse loads on the pavement to be examined. The load and the manner in which it is applied to the pavement simulates a 9,000 lb. axle load (a standard truck axle load) traveling over the pavement at approximately 30 miles per hour.

As part of our work scope we conducted a number of pavement core explorations throughout the city. At each of the core locations we elected to do FWD testing in order to characterize the structural capacity of the pavement at these locations. This work was not included in our works scope, but was done as a matter of interest and to demonstrate to the City the type of structural pavement information that is available through FWD testing and analysis.

Evaluation Approach

Although there are a number of methods to estimate the structural condition of an existing pavement, we elected to characterize the structural condition using the following:

1) Backcalculated pavement and subgrade moduli, and
2) Pavement Effective Structural Number (SN_{eff}).

The SN_{eff} is a concept developed during the AASHO Road Test. Following the completion of the Test, the AASHO Design Committee developed the AASHO Interim Guide for the Design of Rigid and Flexible Pavements (the precursor to the current AASHTO Guide) where the Structural Number is used as a design parameter and an indicator of the pavement strength.

Since the SN_{eff} estimates are sensitive to the pavement deterioration variables, the SN_{eff} values can be used as a good indicator of the existing (or effective) structural condition of a pavement. With the existing and required SN values of a pavement, the Structural Condition Index (SCI) can be established for the pavement. The Structural Condition Index (SCI) can be expressed as the ratio of the existing SN and the required SN, or:

$$SCI = SN_{eff}/SN_{req}$$

where,

SCI = Structural Condition Index.

SNeff = existing Structural Number.
SNreq = required Structural Number.

Because of the simplicity of the SCI, the interpretation of its meaning is straightforward. An SCI value equal or greater than one indicates that the pavement is in a sound structural condition for the estimated future traffic loading. However, an SCI less than one means that the pavement is no longer structurally adequate; as a result, rehabilitation work that will increase the structural capacity of the pavement should be considered. In addition, the SCI is essentially a structural condition factor and along with a traffic loading estimate can be used to easily calculate the structural remaining life of the pavement.

Field Investigation and Analysis

FWD Testing

Non-destructive deflection testing was conducted at each of the core locations between 3/12/14 and 3/20/14. The tests were conducted using our KUAB 150 Falling Weight Deflectometer (FWD) device in accordance with ASTM D 4694.

The FWD testing consisted of four impact loads that were applied to the pavement at each test point. The initial impact load was used to seat the test equipment. Following this load, test measurements were made at impact loads of nominally 6,000, 9,000 and 12,000 lbs, respectively. The loads were applied to the pavement surface using a 12-inch diameter segmented plate designed to apply a uniform surface pressure distribution despite irregularities in the pavement surface. Pavement deflection was measured by seismometers (absolute deflection sensors) positioned at 0, 8, 12, 18, 24, 36, 48 and 60 inches from the center of the load plate. The temperatures of the air and pavement surface (the latter measured by infrared thermometer) were also measured at each test point.

The FWD load-deflection data normalized to a 9-kip load basis are tabulated in Table 1 in Appendix H. The temperature at mid-depth in the AC layer was calculated for each FWD test result using the BELLS3 (AASHTO T-317) procedure. The 9-kip deflections at sensor D0 (below the load plate) were adjusted using the calculated BELLS3 mid-depth temperatures to correspond to normalized AC mid-depth temperatures of 68°F using asphalt temperature adjustment factors (ATAF), as calculated by the LTPP procedure. Pavement deflections are shown in mil units (1 mil = 0.001 inch).

Backcalculation Analysis

The FWD deflection test data were analyzed to "backcalculate" the in situ resilient modulus (Mr) of the subgrade soil and pavement layers and the effective structural number (SNeff) of the existing pavement structure (for the SCI analysis). Backcalculation analysis of pavement surface deflections consists of a computerized procedure for determining the elastic moduli in an elastic layered structural model of the pavement system. The backcalculation analysis was accomplished using our PAVBACK computer program following the guidelines of ASTM D 5858.

The AASHTO effective structural number, SNeff, is computed using Equation PP.17 from the 1986 AASHTO Guide for Design of Pavement Structures - Volume 2 after adjusting the moduli of asphaltic layers to 68°F temperature and 10 Hz loading rate conditions. The results of the backcalculation analysis for each test location are presented in Table 2 in Appendix H.

Structural Condition Analysis

We calculated the effective structural number (SNeff) and the required structural number (SNreq) for the pavement above both the subgrade and aggregate base. The analysis was done using the estimated traffic loading from the traffic count data corresponding to the functional classification for the street where the core was taken. Since we did not do traffic counts on residential streets, we used an estimated loading of 10,000 Equivalent Single Axle Loads (ESALs) for our analysis of these streets (which corresponds to the low end of the range in ESALs for residential streets given in Table 3.1 of the Asphalt Pavement Associations Pavement Design Guide). The traffic loading and reliability levels used in the analysis are summarized in Table 10.

Table 10 – AASHTO Design Input Parameters

Street Classification	Traffic Loading, ESAL's	Reliability
Arterials	150,000	90
Major Collectors	75,000	85
Minor Collectors	40,000	75
Residential	10,000	65

We calculated the SCI for the pavement above the subgrade and the base and used the lower of the two values to calculate a condition factor and the remaining structural pavement life (based on the above traffic loading values). The condition factor for the critical SCI (i.e., the minimum SCI for analysis above the base or subgrade) was calculated using the relationship given in Appendix M of the AASHTO Guide:

$$\text{Condition Factor} = \text{SCI}^{(1/.165)}$$

The above condition factor was used to calculate the remaining pavement structural life using the procedures shown in Part 5.3.3 of the AASHTO Guide. The analysis was done using a reliability level of 50% and a terminal serviceability level of 1.5 to calculate the original structural capacity, as recommended in the Guide. The results of the structural analysis are shown in Table 3 in Appendix H.

Discussion

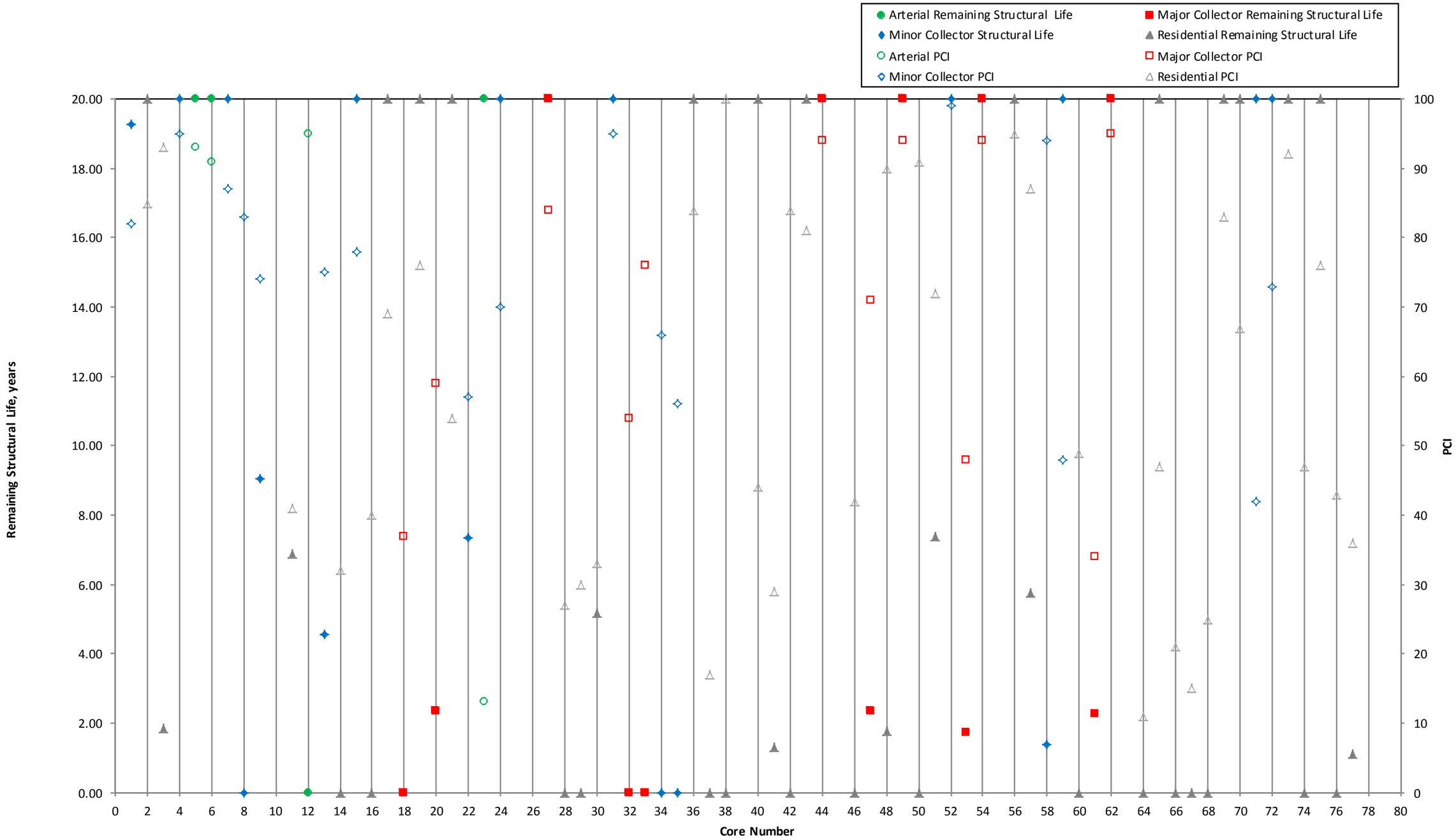
We plotted the remaining structural life and the calculated pavement condition index for each street where a core was conducted and the results are shown in Figure 16. At most of the core locations there is relatively good correlation between the remaining structural life and the visual condition. In these cases, a high remaining structural life corresponds to a high pavement condition index and vice versa. However, there are some locations where there is a

significant difference between the calculated remaining structural life and the PCI. For these cases the difference may be due to the fact that the structural conditions at the core location are not representative of the structural conditions of the overall street. This difference would be minimized if a network level structural evaluation were conducted since typically a few FWD tests would be done on each street thus giving a more reliable data set than can be achieved by just one test.

However, some of the cases where there is a high PCI but a much lower remaining structural life are due to the fact that the streets have recently been slurry sealed, resulting in a high PCI at the time of the survey. This is true for Cores R-3 (Edgewood – Princeton Ct to Clearbrook Ct), N-8 (Columbia Dr – Main St to College St) and N-58 (4th St – College St to Edwards St). If the structural analysis at the core locations on these streets is representative of the overall street, then it would indicate that structural strengthening (rather than a surface treatment) may be a more appropriate rehabilitation strategy.

Another factor that may explain large differences between the remaining structural life and the PCI is the fact that structural deterioration cannot always be observed based on a visual survey. The coat hanger analogy is a simple example. Say you take a coat hanger and bend it back and forth and it takes 20 times until it breaks. If you then take another hanger and bend it 15 times you know that even though it has not broken, it likely will break in 4 or 5 more bends. Certainly you wouldn't expect that you could bend it 20 additional times, even though visually it appears the same as a coat hanger than has never been bent. The same is true with pavements (which fail in fatigue much like a coat hanger). Hence, even though a pavement may not exhibit much if any structural distress, much of its fatigue life may have already been used up. The structural evaluation is used to estimate the remaining life.

Figure 16 - Remaining Structural Life and PCI at Core Locations



SUMMARY

The overall pavement condition of the streets in Newberg is GOOD. This average rating does not represent the areas in the city where there is advanced deterioration which may require complete reconstruction. With the decreasing annual budget for pavement maintenance, it will become significantly more difficult to rehabilitate pavements in poor condition. Currently, at a yearly budget of $150,000, the City will only able to perform a minimum amount of maintenance. Now is the time to look into additional funding to supplement the current budget.

PSI conducted the budget analysis based on a preservation philosophy as opposed to a worst-first methodology. The worst-first strategy is a suboptimal method because M&R work is only applied after the pavement has structural damage. Once a pavement has significant structural damage, the only repair option is reconstruction. Preservation, on the other hand utilizes optimum timing to perform preventive treatments such as crack sealing, surface seals, and hot-mix asphalt thin overlays.

Four budget scenarios were evaluated for the time period of 2014-2022. A summary of the four budgetary scenarios is shown in Table 11.

Table 11 – City of Newberg Budget Scenarios

	Budget Scenario	PCI at Beginning of Analysis	Funded M&R Cost Over Analysis Period[1]	Unfunded M&R Cost at End of Analysis[2]	Total Cost[3]	PCI at End of Analysis
1	Avg.$2.85M/Year, Eliminate Backlog	73	$25,468,902	$0	$25,468,902	81
2	$150,000/Year, Maintain Current Budget	73	$1,323,585	$24,475,671	$25,799,256	61
3	Current Budget + $336,000 Supplementary Funding ($486,000/Year)	73	$4,352,243	$20,428,549	$24,780,791	64
4	$1.89M/Year, Maintain Current PCI	73	$18,155,577	$9,779,761	$27,935,338	74

Notes: [1]Total Funding for the M&R budget scenarios. [2]Total unfunded stopgap, preventive, global, and major M&R values. [3]The sum of the total funded and total last year unfunded cost.

We recommend that the City of Newberg increase annual pavement maintenance funding. At the current funding level, the average condition of the street system will fall from 73 to a 61 by 2022 based on our analysis. By increasing funding to approximately $486,000 annually, the average PCI will only fall to a 64 in the year 2022, which keeps the average condition of the entire system above the critical PCI. As pavements that are in good condition continue to deteriorate, they will become increasingly more expensive to maintain. If preservation activities can be funded now, the cost of maintaining the pavements over their lifetime will be minimized.

Additionally, we recommend that the City perform routine pavement condition surveys every three years. Regular PCI surveys provide up-to-date information to the City staff and allow the most cost-effective use of maintenance and rehabilitation dollars.

Our analysis of the traffic counts performed during the project found that 14 of 58 locations had increased traffic volumes when compared to streets with similar classifications. We recommend that the City review the federal functional classification for the streets shown in Table 9 and recommend that the increased traffic volume be taken into account when performing pavement maintenance and rehabilitation.

APPENDIX A - INVENTORY AND CONDITION DATA

Table 1 - Section Condtion Report

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
10TH (E 10TH ST)	rd1662	T	AC	8,293	5/22/1973	1/20/2014	41	39	Poor
10TH (E 10TH ST)	rd1663	T	AC	8,260	1/21/1968	1/20/2014	46	31	Poor
10TH (E 10TH ST)	rd1714	T	AC	10,369	1/20/1994	1/20/2014	20	70	Fair
10TH (E 10TH ST)	rd1715	T	AC	9,731	9/21/1986	1/20/2014	28	59	Fair
10TH (E 10TH ST)	rd1752	T	AC	8,557	5/22/1959	1/20/2014	55	18	Poor
10TH (E 10TH ST)	rd1802	T	AC	8,260	5/22/1967	1/20/2014	47	30	Poor
11TH (E 11TH CT)	rd1677	S	AC	8,211	8/28/2003	1/20/2014	11	74	Good
11TH (E 11TH CT)	rd1679	S	AC	8,392	4/4/2003	1/20/2014	11	73	Good
11TH (E 11TH CT)	rd1681	S	AC	8,474	4/4/2003	1/20/2014	11	73	Good
11TH (E 11TH CT)	rd1895	S	AC	8,202	8/27/2001	1/20/2014	13	69	Fair
11TH (E 11TH CT)	rd1899	T	AC	7,089	9/20/2000	1/20/2014	14	80	Good
12TH (E 12TH ST)	rd1886	T	GR	6,658	Unknown	N/A	N/A	N/A	N/A
12TH (E 12TH ST)	rd1887	T	GR	6,609	Unknown	N/A	N/A	N/A	N/A
12TH (E 12TH ST)	rd2217	T	AC	17,273	1/21/1992	1/20/2014	22	67	Fair
13TH (E 13TH ST)	rd2207	T	AC	17,245	1/20/1994	1/20/2014	20	70	Fair
1ST (W 1ST ST)	rd2502	T	AC	12,316	9/13/1984	1/13/2014	30	56	Poor
1ST (W 1ST ST)	rd4713	T	AC	2,682	5/15/2001	1/13/2014	13	81	Good
1ST (W 1ST ST)	rd4714	T	AC	10,630	5/15/1997	1/13/2014	17	75	Good
2ND (E 2ND ST)	rd1578	S	AAC	10,642	11/2/2006	1/13/2014	8	82	Good
2ND (E 2ND ST)	rd1627	S	AC	10,622	3/28/2011	1/13/2014	3	93	Good
2ND (E 2ND ST)	rd1638	S	AC	10,241	1/14/2012	1/13/2014	2	95	Good
2ND (E 2ND ST)	rd1648	S	AC	8,315	8/15/2010	1/13/2014	4	70	Fair
2ND (E 2ND ST)	rd1671	T	AC	8,292	9/14/2010	1/13/2014	4	95	Good
2ND (E 2ND ST)	rd1696	T	AC	11,824	1/14/1960	1/13/2014	54	19	Poor
2ND (E 2ND ST)	rd1705	S	AC	9,483	1/13/2006	1/13/2014	8	80	Good
2ND (E 2ND ST)	rd1708	S	AC	10,499	8/21/2011	1/13/2014	3	94	Good
2ND (E 2ND ST)	rd1758	T	AC	8,333	1/13/2010	1/13/2014	4	94	Good
2ND (E 2ND ST)	rd1759	S	AC	12,423	6/9/2010	1/13/2014	4	91	Good
2ND (E 2ND ST)	rd1966	T	AC	7,160	6/1/1994	1/13/2014	20	93	Good
2ND (E 2ND ST)	rd1967	T	AC	6,874	6/1/1993	1/13/2014	21	95	Good
2ND (E 2ND ST)	rd2421	S	AC	40,249	8/15/2010	1/13/2014	4	94	Good
2ND (E 2ND ST)	rd2434	T	AC	18,830	6/1/1994	1/13/2014	20	94	Good
2ND (E 2ND ST)	rd2436	T	AC	6,762	6/1/1993	1/9/2014	21	93	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
2ND (E 2ND ST)	rd2438	T	AC	7,083	6/1/1993	1/13/2014	21	92	Good
2ND (E 2ND ST)	rd2439	T	AC	6,669	6/1/1993	1/13/2014	21	94	Good
2ND (E 2ND ST)	rd2460	T	AC	8,111	6/1/1993	1/13/2014	21	87	Good
2ND (E 2ND ST)	rd2461	T	AC	29,734	5/15/1995	1/13/2014	19	72	Good
2ND (E 2ND ST)	rd2469	S	AC	23,787	8/21/2011	1/13/2014	3	94	Good
2ND (E 2ND ST)	rd2474	S	AAC	20,852	11/1/2004	1/13/2014	10	77	Good
2ND (E 2ND ST)	rd2475	T	AC	8,234	9/14/2010	1/13/2014	4	95	Good
2ND (E 2ND ST)	rd4679	T	AC	6,996	9/13/1992	1/13/2014	22	68	Fair
3RD (E 3RD ST)	rd1515	T	AC	7,114	6/1/1994	1/13/2014	20	88	Good
3RD (E 3RD ST)	rd1561	T	AC	6,305	1/14/2008	1/13/2014	6	91	Good
3RD (E 3RD ST)	rd1701	T	AC	6,281	5/15/2009	1/13/2014	5	93	Good
3RD (E 3RD ST)	rd1704	T	AC	7,410	1/13/2006	1/13/2014	8	88	Good
3RD (E 3RD ST)	rd1762	S	AC	8,324	8/21/2011	1/13/2014	3	94	Good
3RD (E 3RD ST)	rd1763	S	AC	8,325	8/21/2011	1/13/2014	3	94	Good
3RD (E 3RD ST)	rd1767	S	AC	8,269	1/14/2012	1/13/2014	2	95	Good
3RD (E 3RD ST)	rd1770	T	AC	6,912	6/1/1993	1/13/2014	21	87	Good
3RD (E 3RD ST)	rd1772	T	AC	4,209	9/13/2008	1/13/2014	6	92	Good
3RD (E 3RD ST)	rd1773	T	AC	6,343	9/13/2008	1/13/2014	6	92	Good
3RD (E 3RD ST)	rd1811	T	AC	8,375	6/1/1994	1/13/2014	20	73	Good
3RD (E 3RD ST)	rd1927	T	AC	3,252	9/13/1996	1/13/2014	18	74	Good
3RD (E 3RD ST)	rd1932	T	AC	3,020	9/14/2006	1/13/2014	8	89	Good
3RD (E 3RD ST)	rd2410	T	AC	6,305	6/1/1994	1/13/2014	20	84	Good
3RD (E 3RD ST)	rd2412	T	AC	6,889	6/1/1993	1/13/2014	21	88	Good
3RD (E 3RD ST)	rd2414	T	AC	7,139	6/1/1993	1/13/2014	21	88	Good
3RD (E 3RD ST)	rd2416	T	AC	7,044	6/1/1993	1/13/2014	21	92	Good
3RD (E 3RD ST)	rd2417	T	AC	7,850	6/1/1993	1/13/2014	21	91	Good
3RD (E 3RD ST)	rd2422	T	AC	29,672	1/13/1982	1/13/2014	32	52	Poor
3RD (E 3RD ST)	rd2425	T	AC	14,291	9/14/2010	1/13/2014	4	95	Good
3RD (E 3RD ST)	rd2427	T	AC	12,757	5/15/2007	1/13/2014	7	90	Good
3RD (E 3RD ST)	rd2463	S	AC	21,113	8/21/2011	1/13/2014	3	94	Good
3RD (E 3RD ST)	rd4857	S	AC	9,244	1/14/2008	1/13/2014	6	85	Good
4TH (E 4TH ST)	rd1518	T	AC	8,302	9/13/1972	1/13/2014	42	38	Poor
4TH (E 4TH ST)	rd1812	T	AC	8,285	5/15/1975	1/13/2014	39	42	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
4TH (E 4TH ST)	rd1814	T	AC	8,333	1/14/1960	1/13/2014	54	19	Poor
4TH (E 4TH ST)	rd1824	S	AC	12,228	8/21/2011	1/13/2014	3	94	Good
4TH (E 4TH ST)	rd1825	S	AC	10,303	6/8/1996	1/13/2014	18	56	Poor
4TH (E 4TH ST)	rd1827	S	AC	10,108	1/13/1994	1/13/2014	20	50	Poor
4TH (E 4TH ST)	rd1829	S	AC	10,519	1/14/2012	1/13/2014	2	95	Good
4TH (E 4TH ST)	rd1831	S	AC	10,704	3/28/2011	1/13/2014	3	93	Good
4TH (E 4TH ST)	rd1832	S	AC	10,426	3/28/2011	1/13/2014	3	93	Good
4TH (E 4TH ST)	rd1833	T	AC	13,382	5/15/2005	1/13/2014	9	87	Good
4TH (E 4TH ST)	rd1834	T	AC	10,511	5/15/2007	1/13/2014	7	90	Good
4TH (E 4TH ST)	rd2409	T	AC	11,593	5/15/1963	1/13/2014	51	24	Poor
5TH (E 5TH ST)	rd1664	T	AC	8,261	1/20/1974	1/20/2014	40	40	Poor
5TH (E 5TH ST)	rd1665	T	AC	7,191	1/20/1974	1/20/2014	40	40	Poor
5TH (E 5TH ST)	rd1777	T	GR	3,889	Unknown	N/A	N/A	N/A	N/A
5TH (E 5TH ST)	rd1779	T	AC	7,213	1/20/1974	1/20/2014	40	40	Poor
5TH (E 5TH ST)	rd1780	T	AC	7,351	1/21/1968	1/20/2014	46	31	Poor
5TH (E 5TH ST)	rd1784	T	AC	7,393	5/22/1967	1/20/2014	47	30	Poor
5TH (E 5TH ST)	rd1785	T	AC	7,126	5/22/1977	1/20/2014	37	45	Poor
5TH (E 5TH ST)	rd1787	T	AC	5,058	1/20/1970	1/20/2014	44	34	Poor
5TH (E 5TH ST)	rd1789	T	AC	9,731	5/22/1973	1/20/2014	41	39	Poor
5TH (E 5TH ST)	rd1790	T	AC	7,385	5/22/1983	1/20/2014	31	54	Poor
5TH (E 5TH ST)	rd1792	T	AC	7,642	1/20/1970	1/20/2014	44	34	Poor
5TH (E 5TH ST)	rd1794	T	AC	7,783	5/22/1973	1/20/2014	41	39	Poor
5TH (E 5TH ST)	rd2318	T	AC	22,134	5/22/1981	1/20/2014	33	51	Poor
5TH (E 5TH ST)	rd2319	T	GR	14,079	Unknown	N/A	N/A	N/A	N/A
5TH (E 5TH ST)	rd2390	T	GR	12,700	Unknown	N/A	N/A	N/A	N/A
6TH (E 6TH ST)	rd1722	T	AC	7,032	5/22/2009	1/20/2014	5	93	Good
6TH (E 6TH ST)	rd1723	T	AC	7,436	1/20/2010	1/20/2014	4	94	Good
6TH (E 6TH ST)	rd1726	T	AC	11,730	1/20/2010	1/20/2014	4	94	Good
6TH (E 6TH ST)	rd1729	T	AC	11,962	9/21/2010	1/20/2014	4	95	Good
6TH (E 6TH ST)	rd1731	T	AC	7,961	5/22/1975	1/20/2014	39	42	Poor
6TH (E 6TH ST)	rd1732	T	AC	8,375	5/22/2007	1/20/2014	7	90	Good
6TH (E 6TH ST)	rd1734	T	AC	15,057	9/21/2010	1/20/2014	4	95	Good
6TH (E 6TH ST)	rd1735	T	AC	14,500	1/20/2010	1/20/2014	4	94	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
6TH (E 6TH ST)	rd1837	T	AC	8,317	9/21/1958	1/20/2014	56	17	Poor
6TH (E 6TH ST)	rd2289	T	AC	7,486	5/22/2009	1/20/2014	5	93	Good
7TH (E 7TH ST)	rd1574	T	AC	8,416	5/22/1957	1/20/2014	57	15	Poor
7TH (E 7TH ST)	rd1687	T	AC	8,185	5/22/1965	1/20/2014	49	27	Poor
7TH (E 7TH ST)	rd1737	T	AC	8,070	5/22/1957	1/20/2014	57	15	Poor
7TH (E 7TH ST)	rd1738	T	AC	8,366	9/20/1956	1/20/2014	58	14	Poor
7TH (E 7TH ST)	rd1816	T	AC	8,973	9/20/1964	1/20/2014	50	26	Poor
7TH (E 7TH ST)	rd1818	T	AC	8,350	9/20/1956	1/20/2014	58	14	Poor
7TH (E 7TH ST)	rd1819	T	AC	8,115	9/20/1968	1/20/2014	46	32	Poor
8TH (E 8TH ST)	rd1661	T	AC	9,231	1/20/1974	1/20/2014	40	40	Poor
8TH (E 8TH ST)	rd1743	T	AC	8,416	5/22/1973	1/20/2014	41	39	Poor
8TH (E 8TH ST)	rd1745	T	AC	8,017	9/21/1958	1/20/2014	56	17	Poor
8TH (E 8TH ST)	rd1746	T	AC	8,309	9/21/1958	1/20/2014	56	17	Poor
8TH (E 8TH ST)	rd1796	T	AC	8,136	5/22/1957	1/20/2014	57	15	Poor
8TH (E 8TH ST)	rd1798	T	AC	8,416	1/20/1958	1/20/2014	56	16	Poor
8TH (E 8TH ST)	rd1800	T	AC	8,293	9/21/1958	1/20/2014	56	17	Poor
8TH (E 8TH ST)	rd2260	T	AC	17,979	5/22/1953	1/20/2014	61	9	Poor
8TH (E 8TH ST)	rd2264	T	AC	12,405	9/21/1978	1/20/2014	36	47	Poor
8TH (E 8TH ST)	rd4945	T	AC	12,774	1/20/1970	1/20/2014	44	34	Poor
9TH (E 9TH ST)	rd1563	T	GR	5,332	Unknown	N/A	N/A	N/A	N/A
9TH (E 9TH ST)	rd1567	S	AAC	8,457	8/15/2008	1/20/2014	6	87	Good
9TH (E 9TH ST)	rd1568	T	AC	8,334	5/22/1957	1/20/2014	57	15	Poor
9TH (E 9TH ST)	rd1570	S	AAC	8,144	8/15/2008	1/20/2014	6	77	Good
9TH (E 9TH ST)	rd1710	T	AC	9,003	6/1/1977	1/20/2014	37	36	Poor
9TH (E 9TH ST)	rd1712	T	AC	37,263	6/15/1993	1/13/2014	21	80	Good
9TH (E 9TH ST)	rd1804	T	AC	8,384	5/22/1955	1/20/2014	59	12	Poor
9TH (E 9TH ST)	rd1805	S	AC	10,674	8/15/2010	1/20/2014	4	95	Good
9TH (E 9TH ST)	rd1806	T	AC	8,277	5/22/1955	1/20/2014	59	12	Poor
9TH (E 9TH ST)	rd1810	T	AC	8,326	9/21/1950	1/20/2014	64	5	Poor
9TH (E 9TH ST)	rd2247	S	AAC	18,471	8/15/2008	1/20/2014	6	80	Good
9TH (E 9TH ST)	rd2249	S	AC	16,512	8/15/2010	1/20/2014	4	95	Good
9TH (E 9TH ST)	rd2251	T	AC	29,338	9/21/1978	1/20/2014	36	47	Poor
ACORN (ACORN ST)	rd1934	T	AC	17,905	6/1/2003	1/9/2014	11	96	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
ALDER (ALDER LN)	rd4784	T	AC	6,320	6/1/1970	1/4/2014	44	40	Poor
ALDERCREST (ALDERCREST DR)	rd410	T	AC	23,245	6/1/1968	12/26/2013	45	31	Poor
ALDERSGATE (ALDERSGATE DR)	rd1588	T	AC	3,422	6/1/1981	12/26/2013	32	83	Good
ALDERSGATE (ALDERSGATE DR)	rd1606	T	AC	6,083	6/1/1981	12/26/2013	32	78	Good
ALDERSGATE (ALDERSGATE DR)	rd1942	T	AC	6,185	6/1/1996	12/16/2013	17	90	Good
ALDERSGATE (ALDERSGATE DR)	rd1943	T	AC	6,036	6/1/1996	12/16/2013	17	91	Good
ALDERSGATE (ALDERSGATE DR)	rd423	T	AC	14,565	6/1/1981	12/26/2013	32	83	Good
ALDERSGATE (ALDERSGATE DR)	rd4615	T	AC	2,672	6/1/1981	12/26/2013	32	79	Good
ALDERSGATE (ALDERSGATE DR)	rd4629	T	AC	6,875	12/27/1991	12/26/2013	22	67	Fair
ALDERSGATE (ALDERSGATE DR)	rd503	T	AC	14,705	6/1/2001	12/16/2013	12	93	Good
ALEXANDRA (ALEXANDRA DR)	rd2854	T	AC	10,605	6/1/2001	12/16/2013	12	87	Good
ALEXANDRA (ALEXANDRA DR)	rd4494	T	AC	5,512	6/1/2000	12/16/2013	13	79	Good
ALEXANDRA (ALEXANDRA DR)	rd4734	T	AC	5,408	6/1/2001	12/16/2013	12	93	Good
ALEXANDRA (ALEXANDRA DR)	rd4745	T	AC	7,331	6/1/2000	12/16/2013	13	95	Good
ALEXANDRA (ALEXANDRA DR)	rd4746	T	AC	4,416	6/1/2000	12/16/2013	13	95	Good
ALICE (ALICE WAY)	rd2830	T	GR	13,653	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4947	T	GR	2,599	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4948	T	GR	2,988	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4949	T	GR	2,578	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4950	T	GR	3,606	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4951	T	GR	3,012	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4952	T	GR	3,004	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4953	T	GR	2,620	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4954	T	GR	2,607	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4955	T	GR	3,687	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4956	T	GR	2,593	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4957	T	GR	1,253	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4958	T	GR	2,609	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4959	T	GR	2,604	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4960	T	GR	2,593	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4961	T	AC	2,623	9/22/1978	1/21/2014	36	47	Poor
ALLEY (ALLEY S RIVER ST)	rd4962	T	GR	2,577	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4963	T	GR	2,608	Unknown	N/A	N/A	N/A	N/A

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
ALLEY (ALLEY S RIVER ST)	rd4964	T	GR	2,606	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4965	T	GR	3,016	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4966	T	GR	3,115	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4967	T	GR	2,630	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4968	T	GR	1,279	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4969	T	GR	1,787	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4970	T	GR	3,683	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4971	T	GR	2,616	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4972	T	AC	5,939	1/21/1950	1/21/2014	64	4	Poor
ALLEY (ALLEY S RIVER ST)	rd4973	T	GR	2,626	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4974	T	GR	3,603	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4975	T	GR	2,991	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4976	T	GR	3,595	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4977	T	GR	2,611	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4978	T	GR	1,782	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4979	T	GR	2,599	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4980	T	GR	2,611	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4981	T	GR	3,708	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4982	T	GR	2,998	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4983	T	GR	1,707	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4984	T	GR	1,237	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4985	T	GR	2,991	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4986	T	GR	3,586	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4987	T	GR	5,830	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4988	T	AC	2,627	5/23/1977	1/21/2014	37	45	Poor
ALLEY (ALLEY S RIVER ST)	rd4989	T	GR	2,900	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4990	T	GR	2,970	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4991	T	GR	3,002	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4992	T	GR	2,598	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4993	T	GR	2,598	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4994	T	GR	1,515	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4995	T	GR	1,513	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4996	T	GR	1,341	Unknown	N/A	N/A	N/A	N/A

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
ALLEY (ALLEY S RIVER ST)	rd4997	T	GR	2,988	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4998	T	GR	2,711	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd4999	T	GR	2,997	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd5000	T	GR	1,304	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd5001	T	GR	3,099	Unknown	N/A	N/A	N/A	N/A
ALLEY (ALLEY S RIVER ST)	rd5002	T	GR	5,935	Unknown	N/A	N/A	N/A	N/A
ANDREW (ANDREW ST)	rd2222	T	AC	18,392	1/21/2000	1/20/2014	14	79	Good
ANN (ANN CT)	rd4783	T	AC	9,013	9/4/1998	1/3/2014	16	77	Good
ANTONIA (ANTONIA WAY)	rd516	T	AC	18,767	6/1/2004	12/18/2013	9	95	Good
AQUARIUS (AQUARIUS BLVD)	rd2667	T	AC	33,741	1/5/2008	1/4/2014	6	91	Good
AQUARIUS (AQUARIUS BLVD)	rd2668	T	AC	16,092	9/4/2004	1/4/2014	10	86	Good
AQUARIUS (AQUARIUS BLVD)	rd2670	T	AC	17,068	5/6/2003	1/4/2014	11	84	Good
AQUARIUS (AQUARIUS BLVD)	rd4521	T	AC	12,491	5/15/2003	1/13/2014	11	84	Good
AQUARIUS (AQUARIUS BLVD)	rd4535	T	AC	7,094	1/5/2000	1/4/2014	14	79	Good
AQUARIUS (AQUARIUS BLVD)	rd4631	T	AC	3,937	5/6/2009	1/4/2014	5	93	Good
ARABIAN (ARABIAN CT)	rd4617	T	AC	7,016	4/27/1993	12/26/2013	20	69	Fair
ARDUS (ARDUS DR)	rd1911	T	AC	8,448	6/1/1993	1/9/2014	21	75	Good
ARGYLE (ARGYLE CT)	rd1102	T	AC	5,825	6/1/2005	1/13/2014	9	93	Good
ARGYLE (ARGYLE CT)	rd1103	T	AC	5,378	6/1/2005	1/13/2014	9	93	Good
ARLINGTON (ARLINGTON DR)	rd1951	T	AC	7,015	6/1/1997	12/26/2013	16	95	Good
ARTHUR (ARTHUR LN)	rd2751	T	AC	6,693	6/1/1992	12/17/2013	21	82	Good
ASHLEY (ASHLEY CT)	rd1980	T	AC	11,065	6/1/1994	12/26/2013	19	95	Good
ASPEN (NE ASPEN WAY)	rd2752	S	AC	42,836	1/5/2012	1/4/2014	2	95	Good
BANNER (BANNER LN)	rd2690	T	AC	7,923	6/1/2005	12/18/2013	8	94	Good
BARCLAY (BARCLAY WAY)	rd2387	T	AC	16,583	4/27/2001	12/26/2013	12	81	Good
BINA (BINA DR)	rd1912	T	AC	8,480	6/1/1994	1/9/2014	20	93	Good
BIRCH (BIRCH LN)	rd2660	T	AC	7,054	9/5/1994	1/4/2014	20	71	Fair
BLAINE (N BLAINE ST)	rd1538	T	AC	10,987	9/14/1982	1/13/2014	32	53	Poor
BLAINE (N BLAINE ST)	rd1572	S	AC	11,193	8/15/2012	1/20/2014	2	95	Good
BLAINE (N BLAINE ST)	rd1577	S	AC	10,382	8/15/2012	1/13/2014	2	95	Good
BLAINE (N BLAINE ST)	rd1642	S	AAC	11,013	8/15/2011	1/13/2014	3	95	Good
BLAINE (N BLAINE ST)	rd1659	S	AC	25,834	8/15/2012	1/20/2014	2	95	Good
BLAINE (N BLAINE ST)	rd1672	S	AC	10,719	8/15/2012	1/13/2014	2	95	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
BLAINE (N BLAINE ST)	rd2314	S	AC	12,371	8/15/2013	1/20/2014	1	95	Good
BLAINE (N BLAINE ST)	rd2426	S	AC	22,908	8/15/2012	1/13/2014	2	91	Good
BLAINE (N BLAINE ST)	rd4671	T	AC	10,526	5/15/1991	1/13/2014	23	66	Fair
BLAINE (N BLAINE ST)	rd4692	T	AC	10,907	1/13/1998	1/13/2014	16	76	Good
BRAMBLE (BRAMBLE CT)	rd4573	T	AC	4,722	6/1/1992	12/26/2013	21	87	Good
BRIAR (BRIAR CT)	rd4529	T	AC	5,307	6/1/1992	12/26/2013	21	78	Good
BRUTSCHER (BRUTSCHER ST)	rd1654	S	AC	13,200	6/1/2005	1/9/2014	9	86	Good
BRUTSCHER (BRUTSCHER ST)	rd1655	S	AC	14,661	6/1/2005	1/9/2014	9	88	Good
BRUTSCHER (BRUTSCHER ST)	rd1948	S	AC	22,959	6/1/2005	1/9/2014	9	85	Good
BRUTSCHER (BRUTSCHER ST)	rd2608	S	AC	42,842	6/15/1991	1/9/2014	23	70	Fair
BRUTSCHER (BRUTSCHER ST)	rd4789	S	AC	24,170	6/1/2002	1/13/2014	12	72	Good
BRUTSCHER (BRUTSCHER ST)	rd4902	S	AC	23,144	6/1/1998	1/9/2014	16	76	Good
BRUTSCHER (BRUTSCHER ST)	rd4927	S	AC	1,926	6/1/2000	1/9/2014	14	71	Fair
BRUTSCHER (BRUTSCHER ST)	rd4929	S	AC	1,742	6/15/2009	1/9/2014	5	70	Fair
BUCKLEY (BUCKLEY LN)	rd4590	T	AC	12,565	8/19/1986	12/18/2013	27	59	Fair
BUR OAK (BUR OAK CT)	rd2513	T	AC	15,308	6/1/2004	1/9/2014	10	93	Good
BUR OAK (BUR OAK CT)	rd2514	T	AC	5,719	6/1/2004	1/9/2014	10	94	Good
BURL (BURL ST)	rd1545	T	AC	6,822	6/1/2003	1/9/2014	11	94	Good
BURL (BURL ST)	rd1913	T	AC	18,202	6/1/2003	1/9/2014	11	95	Good
BURL (BURL ST)	rd4813	T	AC	3,498	6/1/2003	1/9/2014	11	93	Good
BURL (BURL ST)	rd4814	T	AC	3,885	6/1/2003	1/9/2014	11	93	Good
BURL (BURL ST)	rd4887	T	AC	6,719	6/1/2003	1/9/2014	11	94	Good
BURLINGTON (BURLINGTON DR)	rd1969	T	AC	8,334	6/1/2000	12/16/2013	13	91	Good
BURLINGTON (BURLINGTON DR)	rd2769	T	AC	11,443	6/1/1996	12/18/2013	17	100	Good
BURLINGTON (BURLINGTON DR)	rd4739	T	AC	11,099	6/1/2000	12/16/2013	13	94	Good
BURLINGTON (BURLINGTON DR)	rd483	T	AC	15,211	6/1/1996	12/17/2013	17	90	Good
BURLINGTON (BURLINGTON DR)	rd521	T	AC	16,495	6/1/1996	12/17/2013	17	93	Good
CADDY (CADDY CT)	rd1918	T	AC	7,352	6/1/2005	1/9/2014	9	95	Good
CAMBRIDGE (CAMBRIDGE DR)	rd2743	T	AC	23,635	8/19/1998	12/18/2013	15	77	Good
CAMBRIDGE (CAMBRIDGE DR)	rd4565	T	AC	12,531	8/19/2002	12/18/2013	11	83	Good
CAMDEN (CAMDEN LN)	rd1959	T	AC	2,437	6/1/1997	12/31/2013	16	83	Good
CARLTON (CARLTON WAY)	rd1611	T	AC	8,053	1/13/1962	1/13/2014	52	22	Poor
CAROL (CAROL AVE)	rd2654	T	AC	30,186	1/3/1998	1/3/2014	16	76	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
CAROL (CAROL AVE)	rd4874	T	AC	13,174	1/4/1996	1/3/2014	18	73	Good
CAROL ANN (CAROL ANN DR)	rd4507	T	AC	7,389	9/3/2004	1/3/2014	10	86	Good
CAROL ANN (CAROL ANN DR)	rd4873	T	AC	6,433	5/5/1997	1/3/2014	17	75	Good
CAROL ANN (CAROL ANN DR)	rd4875	T	AC	9,447	9/4/1994	1/3/2014	20	71	Fair
CEDAR (CEDAR ST)	rd1529	T	AC	4,837	6/1/1978	1/4/2014	36	32	Poor
CEDAR (CEDAR ST)	rd1604	T	AC	7,241	1/5/2000	1/4/2014	14	79	Good
CEDAR (CEDAR ST)	rd401	T	AC	22,787	6/1/1978	1/4/2014	36	51	Poor
CEDAR (CEDAR ST)	rd448	T	AC	10,449	9/5/2002	1/4/2014	12	83	Good
CEDAR (CEDAR ST)	rd4757	T	AC	2,741	1/4/1974	1/4/2014	40	40	Poor
CENTER (N CENTER ST)	rd1565	T	AC	11,520	9/20/1988	1/20/2014	26	62	Fair
CENTER (N CENTER ST)	rd1695	T	AC	7,184	6/1/1983	1/13/2014	31	44	Poor
CENTER (N CENTER ST)	rd1698	T	AC	8,201	1/14/1968	1/13/2014	46	31	Poor
CENTER (N CENTER ST)	rd1706	T	AC	8,044	9/13/1976	1/13/2014	38	44	Poor
CENTER (N CENTER ST)	rd1720	T	AC	10,270	5/22/1967	1/20/2014	47	30	Poor
CENTER (N CENTER ST)	rd1781	T	AC	9,756	1/14/1972	1/13/2014	42	37	Poor
CENTER (N CENTER ST)	rd1799	T	AC	11,520	9/21/1978	1/20/2014	36	47	Poor
CENTER (N CENTER ST)	rd1815	T	AC	11,726	5/22/1969	1/20/2014	45	33	Poor
CENTER (N CENTER ST)	rd1830	T	AC	8,433	9/13/1968	1/13/2014	46	32	Poor
CENTER (N CENTER ST)	rd1953	T	AC	6,569	4/27/2007	12/26/2013	6	90	Good
CENTER (N CENTER ST)	rd1970	T	AC	7,352	6/1/1995	12/16/2013	18	78	Good
CENTER (N CENTER ST)	rd1971	T	AC	7,109	6/1/1995	12/17/2013	18	87	Good
CENTER (N CENTER ST)	rd1972	T	AC	8,400	6/1/1997	12/17/2013	16	83	Good
CENTER (N CENTER ST)	rd1997	T	AC	3,818	6/1/1983	1/13/2014	31	80	Good
CENTER (N CENTER ST)	rd2	T	AC	11,846	6/1/1996	12/17/2013	17	86	Good
CENTER (N CENTER ST)	rd2677	T	AAC	37,395	8/15/2007	12/26/2013	6	90	Good
CENTER (N CENTER ST)	rd2794	T	AC	14,723	6/1/1996	12/17/2013	17	68	Fair
CENTER (N CENTER ST)	rd4523	T	AC	9,498	1/5/1972	1/4/2014	42	37	Poor
CENTER (N CENTER ST)	rd4639	T	AC	9,393	1/14/1964	1/13/2014	50	25	Poor
CENTER (N CENTER ST)	rd4680	T	AC	8,242	9/5/1982	1/4/2014	32	53	Poor
CENTER (N CENTER ST)	rd4732	T	AC	8,357	6/1/2000	12/16/2013	13	87	Good
CHARLES (CHARLES CT)	rd1774	T	AC	2,387	9/21/1992	1/21/2014	22	68	Fair
CHARLES (CHARLES CT)	rd1775	T	AC	10,717	9/20/1992	1/20/2014	22	68	Fair
CHARLES (CHARLES CT)	rd1891	T	AC	13,573	9/21/1994	1/20/2014	20	71	Fair

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
CHARLES (CHARLES CT)	rd1892	T	AC	29,730	1/20/1994	1/20/2014	20	70	Fair
CHARLES (CHARLES CT)	rd1907	T	AC	16,173	1/20/1994	1/20/2014	20	70	Fair
CHEHALEM (CHEHALEM ST)	rd1673	T	AC	11,520	5/22/1961	1/20/2014	53	21	Poor
CHEHALEM (CHEHALEM ST)	rd1680	T	AC	9,800	5/22/1971	1/20/2014	43	36	Poor
CHEHALEM (CHEHALEM ST)	rd1730	T	AC	11,528	5/22/1963	1/20/2014	51	24	Poor
CHEHALEM (CHEHALEM ST)	rd1736	T	AC	11,840	5/22/1961	1/20/2014	53	21	Poor
CHEHALEM (CHEHALEM ST)	rd1747	T	AC	11,520	9/20/1956	1/20/2014	58	14	Poor
CHEHALEM (CHEHALEM ST)	rd1778	T	AC	11,633	5/15/1963	1/13/2014	51	24	Poor
CHEHALEM (CHEHALEM ST)	rd1803	T	AC	9,920	5/22/1953	1/20/2014	61	9	Poor
CHEHALEM (CHEHALEM ST)	rd1822	T	AC	5,090	5/15/1963	1/13/2014	51	24	Poor
CHEHALEM (CHEHALEM ST)	rd1841	T	GR	8,304	Unknown	N/A	N/A	N/A	N/A
CHERRY (CHERRY ST)	rd2603	T	AC	11,263	1/4/1982	1/4/2014	32	52	Poor
CHERRY (CHERRY ST)	rd4628	T	AC	5,700	5/5/1979	1/3/2014	35	48	Poor
CHURCH (CHURCH ST)	rd1760	T	AC	10,899	1/9/2002	1/9/2014	12	82	Good
CHURCH (CHURCH ST)	rd1765	T	AC	9,053	5/11/1975	1/9/2014	39	42	Poor
CLEARBROOK (CLEARBROOK CT)	rd4549	T	AC	8,467	6/1/1993	12/18/2013	20	91	Good
CLIFFORD (CLIFFORD CT)	rd4492	T	AC	6,905	6/1/2003	12/26/2013	10	95	Good
CLUBHOUSE (CLUBHOUSE LN)	rd2407	T	AC	17,390	6/1/2007	1/9/2014	7	92	Good
COFFEY (COFFEY LN)	rd1602	T	AC	21,790	9/4/1992	1/4/2014	22	68	Fair
COFFEY (COFFEY LN)	rd1623	T	AC	22,754	1/5/1992	1/4/2014	22	67	Fair
COFFEY (COFFEY LN)	rd404	T	AC	18,400	9/4/1984	1/4/2014	30	56	Poor
COFFEY (COFFEY LN)	rd416	T	AC	21,544	9/5/1998	1/4/2014	16	77	Good
COFFEY (COFFEY LN)	rd419	T	AC	16,556	9/4/1988	1/4/2014	26	62	Fair
COFFEY (COFFEY LN)	rd4545	T	AC	4,120	1/4/1986	1/4/2014	28	58	Fair
COLLEGE (S COLLEGE ST)	rd1562	T	AC	11,350	6/1/1962	1/20/2014	52	11	Poor
COLLEGE (S COLLEGE ST)	rd1700	S	AC	12,192	11/1/2013	1/13/2014	1	95	Good
COLLEGE (S COLLEGE ST)	rd1707	S	AC	12,489	11/1/2013	1/13/2014	1	95	Good
COLLEGE (S COLLEGE ST)	rd1733	T	AC	7,757	9/21/2010	1/20/2014	4	95	Good
COLLEGE (S COLLEGE ST)	rd1788	T	AC	7,886	1/13/2010	1/13/2014	4	94	Good
COLLEGE (S COLLEGE ST)	rd1820	S	AAC	11,784	8/15/2010	1/13/2014	4	95	Good
COLUMBIA (E COLUMBIA DR)	rd1569	T	AC	11,737	1/20/1962	1/20/2014	52	22	Poor
COLUMBIA (E COLUMBIA DR)	rd1647	T	AC	9,707	9/20/1960	1/20/2014	54	20	Poor
COLUMBIA (E COLUMBIA DR)	rd1688	T	AC	11,517	5/22/1957	1/20/2014	57	15	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
COLUMBIA (E COLUMBIA DR)	rd1719	T	AC	11,667	9/21/1974	1/20/2014	40	41	Poor
COLUMBIA (E COLUMBIA DR)	rd1742	T	AC	10,895	5/22/1965	1/20/2014	49	27	Poor
COLUMBIA (E COLUMBIA DR)	rd1896	T	AC	9,859	1/21/1968	1/20/2014	46	31	Poor
COLUMBIA (E COLUMBIA DR)	rd1903	T	GR	2,997	Unknown	N/A	N/A	N/A	N/A
COLUMBIA (E COLUMBIA DR)	rd430	S	AC	22,487	3/25/2010	12/26/2013	3	88	Good
COLUMBIA (E COLUMBIA DR)	rd4852	S	AC	14,718	8/25/2010	12/26/2013	3	83	Good
CONNER (CONNER DR)	rd1982	T	AC	6,817	6/1/2007	1/9/2014	7	95	Good
CORINNE (CORINNE DR)	rd1522	T	AC	10,545	6/1/2007	1/9/2014	7	95	Good
CORINNE (CORINNE DR)	rd1848	T	AC	10,285	6/1/2007	1/9/2014	7	95	Good
CORINNE (CORINNE DR)	rd1968	T	AC	8,966	6/1/1994	1/9/2014	20	93	Good
CORINNE (CORINNE DR)	rd1983	T	AC	6,455	6/1/2007	1/9/2014	7	95	Good
CORINNE (CORINNE DR)	rd2273	T	AC	22,038	6/1/2008	1/9/2014	6	95	Good
CORINNE (CORINNE DR)	rd2309	T	AC	13,886	6/1/2007	1/9/2014	7	92	Good
CRATER (CRATER LN)	rd2691	T	AC	15,497	6/1/2005	12/18/2013	8	94	Good
CRATER (CRATER LN)	rd2759	T	AC	8,896	6/1/2005	12/18/2013	8	93	Good
CRATER (CRATER LN)	rd2829	T	AC	8,486	8/27/2010	12/26/2013	3	95	Good
CRATER (CRATER LN)	rd473	T	AC	13,125	6/1/2008	12/26/2013	5	100	Good
CRATER (CRATER LN)	rd4795	T	AC	8,171	6/1/2005	12/18/2013	8	88	Good
CRATER (CRATER LN)	rd4891	T	AC	5,548	6/1/2007	12/26/2013	6	90	Good
CRATER (CRATER LN)	rd4910	T	AC	7,228	6/1/2005	12/18/2013	8	88	Good
CRATER (CRATER LN)	rd4916	T	AC	12,223	6/1/2005	12/18/2013	8	84	Good
CRATER (CRATER LN)	rd4917	T	AC	4,582	6/1/2005	12/18/2013	8	100	Good
CRATER (CRATER LN)	rd4933	T	AC	7,271	6/1/2005	12/19/2013	8	90	Good
CRATER (CRATER LN)	rd517	T	AC	11,438	6/1/2005	12/18/2013	8	88	Good
CREEKSIDE (CREEKSIDE LN)	rd2673	T	AC	5,228	6/1/1997	12/26/2013	16	90	Good
CREEKSIDE (CREEKSIDE LN)	rd4520	T	AC	8,252	6/1/2001	12/31/2013	12	92	Good
CREEKSIDE (CREEKSIDE LN)	rd4537	T	AC	5,207	6/1/1997	12/26/2013	16	82	Good
CREEKSIDE (CREEKSIDE LN)	rd4538	T	AC	871	6/1/1997	12/31/2013	16	93	Good
CREEKSIDE (CREEKSIDE LN)	rd4898	T	AC	2,927	6/1/2001	12/26/2013	12	93	Good
CRESTVIEW (CRESTVIEW DR)	rd1524	S	AAC	10,673	8/15/2008	12/26/2013	5	93	Good
CRESTVIEW (CRESTVIEW DR)	rd1525	S	AAC	8,415	8/15/2008	12/26/2013	5	87	Good
CRESTVIEW (CRESTVIEW DR)	rd1587	S	AC	9,030	3/10/2011	12/26/2013	2	93	Good
CRESTVIEW (CRESTVIEW DR)	rd1592	S	AC	7,572	12/28/2011	12/27/2013	2	95	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
CRESTVIEW (CRESTVIEW DR)	rd1847	S	AC	18,031	6/1/2007	1/4/2014	7	95	Good
CRESTVIEW (CRESTVIEW DR)	rd1867	P	AC	2,698	6/1/2007	1/4/2014	7	93	Good
CRESTVIEW (CRESTVIEW DR)	rd249	S	AC	18,598	6/1/2007	1/4/2014	7	94	Good
CRESTVIEW (CRESTVIEW DR)	rd447	S	AC	24,866	8/4/2003	12/27/2013	10	74	Good
CRESTVIEW (CRESTVIEW DR)	rd450	S	AC	23,387	8/4/2011	12/27/2013	2	94	Good
CRESTVIEW (CRESTVIEW DR)	rd459	T	AC	9,988	6/1/1998	12/27/2013	15	67	Fair
CRESTVIEW (CRESTVIEW DR)	rd465	S	AC	10,367	6/1/2007	1/4/2014	7	95	Good
CRESTVIEW (CRESTVIEW DR)	rd5015	S	AC	15,525	3/19/1987	1/4/2014	27	33	Poor
CRESTVIEW (CRESTVIEW DR)	rd5016	S	GR	12,587	Unknown	N/A	N/A	N/A	N/A
DAHLIA (DAHLIA ST)	rd4497	T	AC	7,553	6/1/2008	12/16/2013	5	95	Good
DAHLIA (DAHLIA ST)	rd4498	T	AC	8,708	6/1/2008	12/16/2013	5	95	Good
DAHLIA (DAHLIA ST)	rd4499	T	AC	3,827	6/1/2008	12/16/2013	5	95	Good
DARTMOUTH (DARTMOUTH ST)	rd2709	T	AC	10,379	4/19/2001	12/18/2013	12	81	Good
DARTMOUTH (DARTMOUTH ST)	rd2716	T	AC	24,268	4/19/1991	12/18/2013	22	66	Fair
DARTMOUTH (DARTMOUTH ST)	rd4568	T	AC	8,379	4/19/2001	12/18/2013	12	81	Good
DARTMOUTH (DARTMOUTH ST)	rd4570	T	AC	5,449	8/19/2002	12/18/2013	11	83	Good
DARTMOUTH (DARTMOUTH ST)	rd4571	T	AC	3,913	12/19/1995	12/18/2013	18	73	Good
DAYTON (DAYTON AVE)	rd1666	T	AAC	19,903	8/15/2008	1/13/2014	6	95	Good
DAYTON (DAYTON AVE)	rd1928	T	AAC	5,320	8/15/2011	1/13/2014	3	95	Good
DAYTON (DAYTON AVE)	rd1929	T	AAC	4,955	8/15/2011	1/13/2014	3	95	Good
DAYTON (DAYTON AVE)	rd2294	S	AC	27,276	8/28/2003	1/20/2014	11	74	Good
DAYTON (DAYTON AVE)	rd2317	S	AC	14,093	8/28/1999	1/20/2014	15	64	Fair
DEBORAH (DEBORAH RD)	rd2626	S	AC	53,026	10/23/1996	1/4/2014	18	57	Fair
DEBORAH (DEBORAH RD)	rd4587	S	AC	19,295	1/3/2014	1/4/2014	0	100	Good
DEBORAH (DEBORAH RD)	rd4601	S	AC	21,498	3/25/2013	1/4/2014	1	94	Good
DEBORAH (DEBORAH RD)	rd4620	S	AC	9,756	1/3/2014	1/4/2014	0	100	Good
DEBORAH (DEBORAH RD)	rd4855	S	AC	5,546	8/12/1995	1/4/2014	19	54	Poor
DOGWOOD (DOGWOOD AVE)	rd1547	T	AC	14,030	1/4/1998	1/4/2014	16	76	Good
DOLASH (DOLASH CT)	rd4543	T	AC	7,076	6/1/1982	1/4/2014	32	77	Good
DONALD (DONALD LN)	rd4530	T	AC	8,215	12/19/1991	12/18/2013	22	67	Fair
DONALD (DONALD LN)	rd4562	T	AC	9,656	4/19/1995	12/18/2013	18	72	Good
DONALD (DONALD LN)	rd4579	T	AC	15,364	4/19/1989	12/18/2013	24	63	Fair
DONALD (DONALD LN)	rd4580	T	AC	6,069	8/18/1992	12/18/2013	21	68	Fair

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
DONNA (DONNA DR)	rd1846	T	AC	9,096	6/1/2007	1/9/2014	7	95	Good
DONNA (DONNA DR)	rd1862	T	AC	10,290	6/1/2007	1/9/2014	7	95	Good
DONNA (DONNA DR)	rd2312	T	AC	14,675	6/1/2007	1/9/2014	7	95	Good
DORIS (DORIS DR)	rd1768	T	AC	8,698	6/1/1993	1/9/2014	21	66	Fair
DORIS (DORIS DR)	rd1973	T	AC	6,412	6/1/2007	1/9/2014	7	95	Good
DOUGLAS (DOUGLAS AVE)	rd1605	T	AC	12,563	1/4/1994	1/4/2014	20	70	Fair
DOUGLAS (DOUGLAS AVE)	rd1629	T	AC	2,101	6/15/1991	1/6/2014	23	62	Fair
DOUGLAS (DOUGLAS AVE)	rd1630	T	AC	8,835	1/5/1992	1/4/2014	22	67	Fair
DOUGLAS (DOUGLAS AVE)	rd411	S	AC	9,393	6/1/1991	1/4/2014	23	51	Poor
EAGLE (EAGLE ST)	rd2570	T	AC	29,336	6/1/2005	1/9/2014	9	95	Good
EARLS (EARLS CT)	rd4879	T	AC	4,015	6/1/2001	12/16/2013	12	69	Fair
EDGEWOOD (EDGEWOOD DR)	rd2781	T	AC	12,769	6/1/1995	12/18/2013	18	90	Good
EDGEWOOD (EDGEWOOD DR)	rd2782	T	AC	7,521	6/1/1995	12/18/2013	18	95	Good
EDGEWOOD (EDGEWOOD DR)	rd2783	T	AC	9,585	6/1/1997	12/18/2013	16	97	Good
EDGEWOOD (EDGEWOOD DR)	rd2784	T	AC	20,909	6/1/2004	12/18/2013	9	100	Good
EDGEWOOD (EDGEWOOD DR)	rd4511	T	AC	6,513	6/1/1995	12/18/2013	18	82	Good
EDGEWOOD (EDGEWOOD DR)	rd4515	T	AC	9,154	6/1/1993	12/18/2013	20	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4550	T	AC	9,876	6/1/1993	12/18/2013	20	93	Good
EDGEWOOD (EDGEWOOD DR)	rd4551	T	AC	7,709	6/1/1996	12/17/2013	17	85	Good
EDGEWOOD (EDGEWOOD DR)	rd4552	T	AC	8,123	6/1/1996	12/17/2013	17	82	Good
EDGEWOOD (EDGEWOOD DR)	rd4785	T	AC	4,270	6/1/1996	12/17/2013	17	80	Good
EDGEWOOD (EDGEWOOD DR)	rd4786	T	AC	6,433	6/1/1996	12/17/2013	17	77	Good
EDGEWOOD (EDGEWOOD DR)	rd4807	T	AC	8,282	6/1/2005	12/16/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4808	T	AC	7,721	6/1/2005	12/16/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4809	T	AC	7,121	6/1/2005	12/16/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4810	T	AC	6,823	6/1/2005	12/16/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4816	T	AC	938	6/1/2005	12/18/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4818	T	AC	891	6/1/2005	12/18/2013	8	95	Good
EDGEWOOD (EDGEWOOD DR)	rd4872	T	AC	6,561	6/1/1993	12/18/2013	20	94	Good
EDWARDS (S EDWARDS ST)	rd1534	T	AAC	10,681	8/15/2007	1/13/2014	7	95	Good
EDWARDS (S EDWARDS ST)	rd1694	T	AC	7,194	8/15/2012	1/13/2014	2	97	Good
EDWARDS (S EDWARDS ST)	rd1703	T	AC	7,272	5/15/1961	1/13/2014	53	21	Poor
EDWARDS (S EDWARDS ST)	rd1709	T	AC	10,336	9/13/1984	1/13/2014	30	56	Poor

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
EDWARDS (S EDWARDS ST)	rd1727	T	AC	10,637	5/22/1993	1/20/2014	21	69	Fair
EDWARDS (S EDWARDS ST)	rd1795	T	AC	10,615	9/13/1980	1/13/2014	34	50	Poor
EDWARDS (S EDWARDS ST)	rd1823	T	AC	8,596	5/15/1979	1/13/2014	35	48	Poor
EDWARDS (S EDWARDS ST)	rd4663	T	AC	8,291	5/15/1967	1/13/2014	47	30	Poor
EDWARDS (S EDWARDS ST)	rd4705	T	AC	9,999	9/14/1974	1/13/2014	40	41	Poor
EDWARDS (S EDWARDS ST)	rd4717	T	AC	8,208	5/15/1989	1/13/2014	25	63	Fair
EDWARDS (S EDWARDS ST)	rd4868	T	AC	8,241	5/15/1995	1/13/2014	19	72	Good
ELDERBERRY (ELDERBERRY CT)	rd2659	T	AC	4,909	6/1/1986	1/3/2014	28	69	Fair
ELLIOTT (N ELLIOTT RD)	rd2485	S	AC	31,511	6/1/1980	1/9/2014	34	71	Fair
ELLIOTT (N ELLIOTT RD)	rd2588	S	AC	23,047	3/19/1995	1/4/2014	19	53	Poor
ELLIOTT (N ELLIOTT RD)	rd2605	S	AC	11,178	1/4/1986	1/4/2014	28	30	Poor
ELLIOTT (N ELLIOTT RD)	rd4645	S	AAC	2,975	8/15/2005	1/4/2014	9	95	Good
ELLIOTT (N ELLIOTT RD)	rd4652	S	AC	6,936	10/24/1986	1/4/2014	28	32	Poor
ELLIOTT (N ELLIOTT RD)	rd4767	S	AAC	5,398	8/15/2005	1/4/2014	9	87	Good
ELLIOTT (N ELLIOTT RD)	rd4771	S	AAC	10,658	8/15/2005	1/4/2014	9	94	Good
ELLIOTT (N ELLIOTT RD)	rd4861	S	AC	16,015	6/15/1980	1/4/2014	34	96	Good
ELLIOTT (N ELLIOTT RD)	rd4883	S	AC	22,205	6/15/1980	1/4/2014	34	66	Fair
ELLIOTT (N ELLIOTT RD)	rd5003	S	AC	10,929	6/1/1980	1/4/2014	34	99	Good
ELM (ELM LN)	rd4555	T	AC	8,288	5/6/1981	1/4/2014	33	51	Poor
ELVA (ELVA DR)	rd1699	T	AC	8,321	6/1/1993	1/9/2014	21	94	Good
EMERY (EMERY DR)	rd464	S	AC	30,570	6/1/1991	1/4/2014	23	41	Poor
EMMA (EMMA LN)	rd2651	T	AC	20,057	6/1/2007	12/31/2013	6	95	Good
EVEREST (N EVEREST RD)	rd1682	T	AAC	19,020	8/15/2006	1/4/2014	8	84	Good
EVEREST (N EVEREST RD)	rd1697	T	AAC	11,665	8/15/2006	1/4/2014	8	79	Good
EVERGREEN (EVERGREEN DR)	rd4769	T	AC	10,056	1/4/2004	1/3/2014	10	85	Good
FAIRWAY (FAIRWAY ST)	rd1526	T	AC	7,404	6/1/2005	1/9/2014	9	90	Good
FAIRWAY (FAIRWAY ST)	rd1527	T	AC	14,398	6/1/2005	1/9/2014	9	90	Good
FAIRWAY (FAIRWAY ST)	rd1843	T	AC	7,587	6/1/2005	1/9/2014	9	88	Good
FAIRWAY (FAIRWAY ST)	rd1845	T	AC	4,253	6/1/2005	1/9/2014	9	93	Good
FAIRWAY (FAIRWAY ST)	rd1920	T	AC	7,320	6/1/2005	1/9/2014	9	95	Good
FAIRWAY (FAIRWAY ST)	rd2450	T	AC	25,489	6/1/2005	1/9/2014	9	95	Good
FERNWOOD (FERNWOOD RD)	rd1987	S	AAC	12,823	3/25/2013	1/9/2014	1	94	Good
FERNWOOD (FERNWOOD RD)	rd2411	S	AAC	89,004	3/25/2013	1/9/2014	1	94	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
FERNWOOD (FERNWOOD RD)	rd2419	S	AAC	26,414	3/25/2013	1/9/2014	1	84	Good
FERNWOOD (FERNWOOD RD)	rd4853	S	AC	16,989	3/23/1993	1/9/2014	21	48	Poor
FILBERT (FILBERT CT)	rd4658	T	AC	9,061	9/4/1984	1/4/2014	30	56	Poor
FIRCREST (FIRCREST DR)	rd1557	T	AC	7,551	6/1/1968	1/3/2014	46	34	Poor
FIRCREST (FIRCREST DR)	rd427	T	AC	13,042	5/5/1975	1/3/2014	39	42	Poor
FOOTHILLS (E FOOTHILLS DR)	rd1510	S	AC	1,276	6/1/1995	12/18/2013	18	83	Good
FOOTHILLS (E FOOTHILLS DR)	rd1511	S	AC	1,084	6/1/1995	12/18/2013	18	83	Good
FOOTHILLS (E FOOTHILLS DR)	rd1512	S	AC	1,221	6/1/1995	12/18/2013	18	84	Good
FOOTHILLS (E FOOTHILLS DR)	rd1513	S	AC	1,274	6/1/1995	12/18/2013	18	83	Good
FOOTHILLS (E FOOTHILLS DR)	rd1550	S	AC	8,482	6/1/1997	12/17/2013	16	81	Good
FOOTHILLS (E FOOTHILLS DR)	rd1552	S	AC	21,833	6/1/1995	12/17/2013	18	72	Good
FOOTHILLS (E FOOTHILLS DR)	rd1616	S	AC	9,348	6/1/1995	12/17/2013	18	82	Good
FOOTHILLS (E FOOTHILLS DR)	rd1751	S	AC	7,160	6/1/1995	12/17/2013	18	81	Good
FOOTHILLS (E FOOTHILLS DR)	rd1921	S	AC	8,118	10/6/2006	12/17/2013	7	82	Good
FOOTHILLS (E FOOTHILLS DR)	rd1935	S	AC	10,946	5/13/2006	12/17/2013	7	81	Good
FOOTHILLS (E FOOTHILLS DR)	rd1936	S	AC	12,304	6/1/1996	12/17/2013	17	80	Good
FOOTHILLS (E FOOTHILLS DR)	rd1989	S	AC	8,267	6/1/1995	12/17/2013	18	80	Good
FOOTHILLS (E FOOTHILLS DR)	rd518	S	AC	18,888	6/1/1995	12/17/2013	18	84	Good
FOOTHILLS (E FOOTHILLS DR)	rd519	S	AC	16,012	6/1/1995	12/17/2013	18	83	Good
FOOTHILLS (E FOOTHILLS DR)	rd523	S	AC	10,436	12/17/2005	12/17/2013	8	80	Good
FOOTHILLS (E FOOTHILLS DR)	rd524	S	AC	17,462	8/25/2010	12/17/2013	3	83	Good
FRANKLIN (W FRANKLIN ST)	rd4576	T	GR	5,308	Unknown	N/A	N/A	N/A	N/A
FRANKLIN (W FRANKLIN ST)	rd4578	T	GR	5,650	Unknown	N/A	N/A	N/A	N/A
FRANKLIN (W FRANKLIN ST)	rd4605	T	AC	8,093	1/13/1982	1/13/2014	32	52	Poor
FRANKLIN (W FRANKLIN ST)	rd4606	T	AC	7,406	5/15/1965	1/13/2014	49	27	Poor
FRANKLIN (W FRANKLIN ST)	rd4676	T	AC	7,773	1/13/1966	1/13/2014	48	28	Poor
FRANKLIN (W FRANKLIN ST)	rd4678	T	AC	9,988	5/15/1969	1/13/2014	45	33	Poor
FRANKLIN (W FRANKLIN ST)	rd4716	T	AC	7,067	9/13/1964	1/13/2014	50	26	Poor
FRANKLIN (W FRANKLIN ST)	rd4718	T	AC	8,883	9/14/1966	1/13/2014	48	29	Poor
FRANKLIN (W FRANKLIN ST)	rd4782	T	AC	7,742	5/15/1975	1/13/2014	39	42	Poor
FRANKLIN (W FRANKLIN ST)	rd4860	T	GR	5,697	Unknown	N/A	N/A	N/A	N/A
FRONTIER (FRONTIER LN)	rd1902	T	AC	4,759	1/21/1992	1/20/2014	22	67	Fair
FULTON (FULTON ST)	rd2592	S	AC	57,134	8/12/1995	1/4/2014	19	54	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
FULTON (FULTON ST)	rd4681	S	AC	7,850	1/5/2008	1/4/2014	6	85	Good
GARFIELD (N GARFIELD ST)	rd1640	T	AC	10,528	9/13/1960	1/13/2014	54	20	Poor
GARFIELD (N GARFIELD ST)	rd1644	T	AC	7,166	9/14/1978	1/13/2014	36	47	Poor
GARFIELD (N GARFIELD ST)	rd2268	T	AC	4,267	5/22/1995	1/20/2014	19	72	Good
GARFIELD (N GARFIELD ST)	rd4604	T	AC	9,754	9/13/1984	1/13/2014	30	56	Poor
GARFIELD (N GARFIELD ST)	rd4774	T	AC	8,882	5/15/1965	1/13/2014	49	27	Poor
GEMINI (GEMINI ST)	rd1946	T	AC	8,630	9/6/1984	1/6/2014	30	56	Poor
GEMINI (GEMINI ST)	rd1956	T	AC	8,716	9/7/1994	1/6/2014	20	71	Fair
GEMINI (GEMINI ST)	rd4546	T	AC	5,109	1/7/1984	1/6/2014	30	55	Poor
GEMINI (GEMINI ST)	rd4630	T	AC	8,957	9/9/1988	1/9/2014	26	62	Fair
GRAND OAK (GRAND OAK DR)	rd2430	T	AC	18,450	6/1/2003	1/9/2014	11	94	Good
GRANT (N GRANT ST)	rd1608	T	AC	9,064	9/14/1958	1/13/2014	56	17	Poor
GRANT (N GRANT ST)	rd1650	T	GR	7,245	Unknown	N/A	N/A	N/A	N/A
GRANT (N GRANT ST)	rd1685	T	AC	9,791	9/14/2010	1/13/2014	4	95	Good
GRANT (N GRANT ST)	rd1718	T	AC	6,816	9/14/1958	1/13/2014	56	17	Poor
GRANT (N GRANT ST)	rd1761	T	AC	9,189	9/14/1962	1/13/2014	52	23	Poor
GRANT (N GRANT ST)	rd2487	T	AC	9,499	1/14/1964	1/13/2014	50	25	Poor
GRANT (N GRANT ST)	rd4575	T	AC	5,390	5/15/2001	1/13/2014	13	81	Good
GRANT (N GRANT ST)	rd4899	T	AC	18,863	9/14/2006	1/13/2014	8	89	Good
GREENLINK (GREENLINK WAY)	rd2484	T	AC	16,657	6/1/2005	1/9/2014	9	94	Good
GRN VALLEY (GREEN VALLEY DR)	rd2702	T	AC	21,313	4/19/1975	12/18/2013	38	42	Poor
HANCOCK (E HANCOCK ST)	rd2440	T	AC	29,150	5/6/2001	1/4/2014	13	81	Good
HANCOCK (E HANCOCK ST)	rd2445	T	AC	40,925	9/4/2000	1/4/2014	14	80	Good
HANCOCK (E HANCOCK ST)	rd2446	T	AC	10,839	5/15/1977	1/13/2014	37	45	Poor
HANCOCK (E HANCOCK ST)	rd4798	T	AC	3,961	9/9/2008	1/9/2014	6	92	Good
HARRISON (N HARRISON ST)	rd1683	T	GR	14,713	Unknown	N/A	N/A	N/A	N/A
HARRISON (N HARRISON ST)	rd1716	T	AAC	6,615	8/15/2012	1/13/2014	2	100	Good
HARRISON (N HARRISON ST)	rd1764	T	AAC	9,532	8/15/2012	1/13/2014	2	100	Good
HARRISON (N HARRISON ST)	rd2493	T	AAC	9,299	8/15/2011	1/13/2014	3	82	Good
HARRISON (N HARRISON ST)	rd2504	T	GR	8,107	Unknown	N/A	N/A	N/A	N/A
HARRISON (N HARRISON ST)	rd4712	T	GR	5,709	Unknown	N/A	N/A	N/A	N/A
HARRISON (N HARRISON ST)	rd4858	T	GR	3,411	Unknown	N/A	N/A	N/A	N/A
HARRISON (N HARRISON ST)	rd4863	T	GR	4,280	Unknown	N/A	N/A	N/A	N/A

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
HARVARD (HARVARD CT)	rd4566	T	AC	6,824	4/19/1995	12/18/2013	18	72	Good
HAWORTH (HAWORTH AVE)	rd2614	S	AAC	28,253	8/15/2010	1/4/2014	4	95	Good
HAWORTH (HAWORTH AVE)	rd2618	S	AC	23,454	1/4/1990	1/4/2014	24	40	Poor
HAWORTH (HAWORTH AVE)	rd2620	S	AC	22,550	8/11/2009	1/4/2014	5	89	Good
HAWORTH (HAWORTH AVE)	rd2622	S	AC	35,118	1/3/2006	1/3/2014	8	80	Good
HAWORTH (HAWORTH AVE)	rd4583	S	AC	10,896	3/19/2007	1/4/2014	7	83	Good
HAWORTH (HAWORTH AVE)	rd4584	S	AC	11,204	10/24/2006	1/4/2014	8	82	Good
HAWORTH (HAWORTH AVE)	rd4768	S	AC	21,674	8/11/1997	1/4/2014	17	59	Fair
HAWTHORNE (HAWTHORNE LOOP)	rd2644	T	AC	12,089	9/5/1990	1/4/2014	24	65	Fair
HAWTHORNE (HAWTHORNE LOOP)	rd2656	T	AC	21,410	5/6/1993	1/4/2014	21	69	Fair
HAWTHORNE (HAWTHORNE LOOP)	rd2658	T	AC	14,352	1/4/1986	1/4/2014	28	58	Fair
HAWTHORNE (HAWTHORNE LOOP)	rd4644	T	AC	2,690	5/6/1969	1/4/2014	45	33	Poor
HAYES (HAYES ST)	rd2522	S	AC	43,890	6/1/2008	1/9/2014	6	85	Good
HAYES (HAYES ST)	rd2525	S	AC	33,839	6/15/1980	1/4/2014	34	56	Poor
HAYES (HAYES ST)	rd4790	S	AC	15,422	6/1/2004	1/9/2014	10	91	Good
HAYES (HAYES ST)	rd4796	S	AC	25,974	6/1/2004	1/9/2014	10	92	Good
HAYES (HAYES ST)	rd4892	S	AC	23,321	6/1/2004	1/9/2014	10	85	Good
HAYES (HAYES ST)	rd4920	S	AC	1,859	6/1/2000	1/9/2014	14	69	Fair
HAYES (HAYES ST)	rd4925	S	AC	1,765	6/1/2000	1/9/2014	14	74	Good
HAYES (HAYES ST)	rd4926	S	AC	1,357	1/10/2012	1/9/2014	2	95	Good
HAZELNUT (HAZELNUT DR)	rd1950	T	AC	4,920	6/1/2004	12/18/2013	9	95	Good
HAZELNUT (HAZELNUT DR)	rd4793	T	AC	7,906	6/1/2004	12/18/2013	9	95	Good
HAZELNUT (HAZELNUT DR)	rd4794	T	AC	7,796	6/1/2004	12/18/2013	9	95	Good
HAZELNUT (HAZELNUT DR)	rd494	T	AC	19,336	6/1/2004	12/18/2013	9	93	Good
HEATER (HEATER ST)	rd1556	T	AC	4,809	1/5/2000	1/4/2014	14	79	Good
HEATER (HEATER ST)	rd1560	T	AC	9,502	1/10/1988	1/9/2014	26	61	Fair
HEMLOCK (HEMLOCK LN)	rd4643	T	AC	13,511	5/5/1985	1/3/2014	29	57	Fair
HENRY (E HENRY RD)	rd2750	T	AC	16,659	6/1/1992	12/17/2013	21	82	Good
HENRY (E HENRY RD)	rd4740	T	AC	3,504	6/1/1992	12/17/2013	21	77	Good
HENRY (E HENRY RD)	rd4741	T	AC	3,512	6/1/1992	12/17/2013	21	79	Good
HERITAGE (HERITAGE WAY)	rd2553	T	AC	7,931	6/1/2007	12/30/2013	6	95	Good
HERITAGE (HERITAGE WAY)	rd2704	T	AC	11,092	6/1/2005	12/18/2013	8	95	Good
HERITAGE (HERITAGE WAY)	rd2831	T	AC	8,272	6/1/2005	12/30/2013	8	95	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
HERITAGE (HERITAGE WAY)	rd4944	T	AC	5,141	6/1/2005	12/18/2013	8	95	Good
HESS CREEK (HESS CREEK CT)	rd1590	T	AC	14,255	1/2/2014	1/3/2014	0	100	Good
HIGH TEE (HIGH TEE CT)	rd1528	T	AC	14,177	6/1/2005	1/9/2014	9	88	Good
HILLSDALE (HILLSDALE DR)	rd1944	T	AC	7,785	6/1/1997	12/16/2013	16	89	Good
HILLSDALE (HILLSDALE DR)	rd1945	T	AC	7,531	6/1/1997	12/16/2013	16	82	Good
HILLSDALE (HILLSDALE DR)	rd528	T	AC	16,193	6/1/1996	12/16/2013	17	86	Good
HILLSDALE (HILLSDALE DR)	rd531	T	AC	19,346	4/17/2005	12/16/2013	8	87	Good
HILLTOP (HILLTOP DR)	rd2841	T	AC	19,208	12/17/2003	12/16/2013	10	85	Good
HILLTOP (HILLTOP DR)	rd4495	T	AC	5,197	6/1/2000	12/16/2013	13	89	Good
HILLTOP (HILLTOP DR)	rd4730	T	AC	7,693	6/1/2000	12/16/2013	13	93	Good
HILLTOP (HILLTOP DR)	rd4731	T	AC	7,801	6/1/2000	12/16/2013	13	95	Good
HILLTOP (HILLTOP DR)	rd4876	T	AC	8,487	6/1/2000	12/16/2013	13	94	Good
HOLIDAY (HOLIDAY LN)	rd2746	T	AC	21,416	6/1/2001	12/18/2013	12	94	Good
HOLLY (HOLLY DR)	rd4542	T	AC	7,572	5/5/1987	1/3/2014	27	60	Fair
HOLLY (HOLLY DR)	rd4709	T	AC	7,544	5/5/1991	1/3/2014	23	66	Fair
HOLVECK (HOLVECK CT)	rd1110	T	AC	4,164	8/16/2008	12/16/2013	5	92	Good
HOMEWOOD (HOMEWOOD CT)	rd4756	T	AC	6,968	6/1/1993	12/18/2013	20	85	Good
HOOK (HOOK DR)	rd4727	T	AC	7,951	6/1/2005	1/9/2014	9	94	Good
HOSKINS (HOSKINS ST)	rd2642	T	AC	9,741	5/4/1989	1/2/2014	25	63	Fair
HOSKINS (HOSKINS ST)	rd446	T	AC	30,907	6/1/1978	1/2/2014	36	40	Poor
HOSKINS (HOSKINS ST)	rd4501	T	AC	9,228	1/2/1986	1/2/2014	28	58	Fair
HOSKINS (HOSKINS ST)	rd4540	T	AC	9,625	6/1/1976	1/2/2014	38	42	Poor
HOWARD (S HOWARD ST)	rd1548	T	AC	7,350	9/13/1996	1/13/2014	18	74	Good
HOWARD (S HOWARD ST)	rd1580	T	AC	9,892	9/13/2000	1/13/2014	14	80	Good
HOWARD (S HOWARD ST)	rd1643	T	AC	11,025	5/15/2009	1/13/2014	5	93	Good
HOWARD (S HOWARD ST)	rd1753	T	AC	10,249	9/20/1976	1/20/2014	38	44	Poor
HOWARD (S HOWARD ST)	rd1769	T	AC	9,133	9/14/1998	1/13/2014	16	77	Good
HOWARD (S HOWARD ST)	rd1791	T	AC	9,974	1/14/1976	1/13/2014	38	43	Poor
HOWARD (S HOWARD ST)	rd1835	T	AC	9,072	1/13/1998	1/13/2014	16	76	Good
HOWARD (S HOWARD ST)	rd4557	T	AC	8,862	1/13/1978	1/13/2014	36	46	Poor
HOWARD (S HOWARD ST)	rd4776	T	AC	10,883	9/13/1964	1/13/2014	50	26	Poor
HULET (HULET AVE)	rd2572	T	AC	26,869	9/5/1998	1/4/2014	16	77	Good
HULET (HULET AVE)	rd2621	T	AC	30,439	6/1/1970	1/4/2014	44	33	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
ILLINOIS (E ILLINOIS ST)	rd2584	S	AC	37,532	1/14/2008	1/13/2014	6	85	Good
ILLINOIS (E ILLINOIS ST)	rd2585	S	AC	19,861	8/21/2007	1/13/2014	7	84	Good
INDUSTRIAL (INDUSTRIAL PKWY)	rd1520	T	AC	16,104	6/1/2008	1/9/2014	6	95	Good
INDUSTRIAL (INDUSTRIAL PKWY)	rd2245	T	AC	29,691	6/15/1993	1/9/2014	21	83	Good
IRONWOOD (IRONWOOD DR)	rd1842	T	AC	9,695	6/1/2005	1/9/2014	9	94	Good
IRONWOOD (IRONWOOD DR)	rd2443	T	AC	46,100	6/1/2005	1/9/2014	9	94	Good
IRONWOOD (IRONWOOD DR)	rd4728	T	AC	14,549	6/1/2005	1/9/2014	9	95	Good
IVY (IVY DR)	rd4736	T	AC	9,954	6/1/2000	12/16/2013	13	93	Good
IVY (IVY DR)	rd4747	T	AC	8,302	6/1/1997	12/16/2013	16	89	Good
IVY (IVY DR)	rd505	T	AC	20,518	6/1/2001	12/16/2013	12	91	Good
JAMES (JAMES ST)	rd1901	T	AC	7,832	6/1/1978	1/20/2014	36	45	Poor
JAMES (JAMES ST)	rd1904	T	AC	8,350	6/1/1978	1/20/2014	36	45	Poor
JEFFERY (JEFFERY CT)	rd4569	T	AC	6,301	8/18/2004	12/18/2013	9	86	Good
JODI (JODI CT)	rd2601	T	AC	13,177	5/6/1999	1/4/2014	15	78	Good
JONES (JONES ST)	rd1551	T	AC	8,086	8/16/2000	12/16/2013	13	80	Good
JONES (JONES ST)	rd2851	T	AC	8,693	6/1/1996	12/16/2013	17	86	Good
JONES (JONES ST)	rd4528	T	AC	8,623	6/1/1996	12/16/2013	17	73	Good
JONES (JONES ST)	rd4761	T	AC	7,911	4/17/1997	12/16/2013	16	75	Good
JUNIPER (JUNIPER DR)	rd4496	T	AC	2,112	6/1/2005	12/16/2013	8	95	Good
JUNIPER (JUNIPER DR)	rd4815	T	AC	964	6/1/2005	12/16/2013	8	95	Good
JUNIPER (JUNIPER DR)	rd4817	T	AC	866	6/1/2005	12/16/2013	8	95	Good
JUNIPER (JUNIPER DR)	rd504	T	AC	19,442	6/1/2005	12/16/2013	8	91	Good
KEMPERCRST (KEMPER CREST DR)	rd2749	T	AC	20,243	6/1/2005	12/18/2013	8	94	Good
KENNEDY (KENNEDY DR)	rd1615	T	AC	6,053	6/1/2008	1/9/2014	6	94	Good
KENNEDY (KENNEDY DR)	rd2274	T	AC	15,732	6/1/2008	1/9/2014	6	98	Good
KNOLL (KNOLL DR)	rd1	T	AC	20,409	6/1/1998	12/16/2013	15	93	Good
KNOLL (KNOLL DR)	rd1596	T	AC	8,663	6/1/1995	12/16/2013	18	90	Good
KNOLL (KNOLL DR)	rd1917	T	AC	8,313	6/1/1995	12/16/2013	18	82	Good
KNOLL (KNOLL DR)	rd4719	T	AC	7,832	6/1/1995	12/16/2013	18	83	Good
KNOLL (KNOLL DR)	rd4720	T	AC	10,632	6/1/1995	12/16/2013	18	93	Good
KNOLL (KNOLL DR)	rd4733	T	AC	8,903	6/1/2001	12/16/2013	12	93	Good
LAIR (LAIR LN)	rd1974	T	AC	9,056	6/1/2007	1/9/2014	7	95	Good
LAUREL (LAUREL DR)	rd4558	T	AC	5,157	1/4/1996	1/3/2014	18	73	Good

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
LAUREL (LAUREL DR)	rd4559	T	AC	9,624	1/3/1994	1/3/2014	20	70	Fair
LAUREN (LAUREN CT)	rd4554	T	AC	10,739	6/1/2000	12/31/2013	13	95	Good
LEGACY (LEGACY DR)	rd2674	T	AC	12,992	6/1/2007	12/30/2013	6	94	Good
LEO (LEO LN)	rd1600	T	AC	8,775	1/10/1992	1/9/2014	22	67	Fair
LEVI (LEVI WAY)	rd4519	T	AC	6,977	6/1/2001	12/31/2013	12	95	Good
LEWIS (LEWIS CT)	rd4797	T	AC	11,632	6/1/2000	12/31/2013	13	88	Good
LIBRA (LIBRA ST)	rd1591	T	AC	8,690	5/11/1987	1/9/2014	27	60	Fair
LIBRA (LIBRA ST)	rd1610	T	AC	9,168	5/11/1997	1/9/2014	17	75	Good
LIBRA (LIBRA ST)	rd1618	T	AC	8,165	6/1/1977	1/9/2014	37	44	Poor
LIBRA (LIBRA ST)	rd234	T	AC	13,203	9/10/1986	1/9/2014	28	59	Fair
LIBRA (LIBRA ST)	rd4544	T	AC	8,966	5/11/1991	1/9/2014	23	66	Fair
LIBRA (LIBRA ST)	rd4655	T	AC	10,947	1/10/1984	1/9/2014	30	55	Poor
LILLY (LILLY CT)	rd1941	T	AC	5,454	6/1/2001	1/20/2014	13	95	Good
LINCOLN (N LINCOLN ST)	rd1652	T	AAC	9,509	8/15/2012	1/13/2014	2	100	Good
LINCOLN (N LINCOLN ST)	rd1717	T	AC	6,872	9/13/1972	1/13/2014	42	38	Poor
LINCOLN (N LINCOLN ST)	rd1776	T	GR	14,782	Unknown	N/A	N/A	N/A	N/A
LINCOLN (N LINCOLN ST)	rd2491	T	AAC	9,580	8/15/2012	1/13/2014	2	100	Good
LINCOLN (N LINCOLN ST)	rd4685	T	GR	6,416	Unknown	N/A	N/A	N/A	N/A
LINCOLN (N LINCOLN ST)	rd4859	T	GR	3,339	Unknown	N/A	N/A	N/A	N/A
LINCOLN (N LINCOLN ST)	rd4864	T	GR	5,918	Unknown	N/A	N/A	N/A	N/A
LINDA (LINDA WAY)	rd4708	T	AC	7,168	1/3/1994	1/3/2014	20	70	Fair
LINDQUIST (LINDQUIST CT)	rd1619	T	AC	5,128	6/1/1978	1/4/2014	36	52	Poor
LINK (LINK CT)	rd1844	T	AC	11,326	6/1/2005	1/9/2014	9	93	Good
LITTLE OAK (LITTLE OAK ST)	rd2367	T	AC	10,696	6/1/2005	1/9/2014	9	95	Good
LITTLE OAK (LITTLE OAK ST)	rd2376	T	AC	5,981	6/1/2005	1/9/2014	9	94	Good
LONGEST (LONGEST DR)	rd2575	T	AC	20,782	6/1/2005	1/9/2014	9	95	Good
LYNN (LYNN DR)	rd1908	T	AC	9,826	6/1/2007	12/30/2013	6	92	Good
LYNN (LYNN DR)	rd1977	T	AC	10,237	6/1/1994	12/30/2013	19	83	Good
LYNN (LYNN DR)	rd1978	T	AC	8,046	6/1/1994	12/30/2013	19	90	Good
MADISON (MADISON DR)	rd2801	T	AC	11,333	6/1/2001	12/16/2013	12	95	Good
MADISON (MADISON DR)	rd4735	T	AC	5,471	6/1/2001	12/16/2013	12	94	Good
MADRONA (MADRONA DR)	rd2386	T	AC	31,545	1/9/1986	1/9/2014	28	58	Fair
MADRONA (MADRONA DR)	rd2535	T	AC	20,259	9/9/1984	1/9/2014	30	56	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
MAIN (N MAIN ST)	rd1546	S	AC	10,874	3/25/2013	12/30/2013	0	95	Good
MAIN (N MAIN ST)	rd1667	S	AC	16,748	8/15/2012	1/13/2014	2	100	Good
MAIN (N MAIN ST)	rd1766	S	AC	10,540	3/28/1995	1/13/2014	19	53	Poor
MAIN (N MAIN ST)	rd1813	S	AC	7,718	8/15/2013	1/13/2014	1	100	Good
MAIN (N MAIN ST)	rd1922	S	AC	9,038	6/1/2000	12/18/2013	13	92	Good
MAIN (N MAIN ST)	rd1923	S	AC	8,608	6/1/2000	12/18/2013	13	92	Good
MAIN (N MAIN ST)	rd1947	S	AC	16,067	3/25/2013	12/18/2013	0	90	Good
MAIN (N MAIN ST)	rd2562	S	AC	13,593	10/18/2008	12/30/2013	5	87	Good
MAIN (N MAIN ST)	rd2615	S	AC	20,829	8/7/2009	12/31/2013	4	89	Good
MAIN (N MAIN ST)	rd2627	S	AC	6,641	5/27/2006	12/31/2013	7	81	Good
MAIN (N MAIN ST)	rd2679	S	AC	6,682	6/1/1997	12/30/2013	16	90	Good
MAIN (N MAIN ST)	rd2712	S	AAC	25,890	8/15/2004	12/18/2013	9	92	Good
MAIN (N MAIN ST)	rd2757	S	AC	10,792	6/1/1997	12/18/2013	16	94	Good
MAIN (N MAIN ST)	rd2818	S	AC	8,229	3/14/1999	12/30/2013	14	63	Fair
MAIN (N MAIN ST)	rd4593	S	AC	14,525	6/1/1997	12/18/2013	16	92	Good
MAIN (N MAIN ST)	rd4686	S	AC	4,868	8/25/2010	12/31/2013	3	82	Good
MAIN (N MAIN ST)	rd4871	S	AC	10,376	6/9/2002	1/13/2014	12	71	Fair
MAIN (N MAIN ST)	rd4931	S	AC	12,510	6/1/1997	12/18/2013	16	95	Good
MAIN (N MAIN ST)	rd5006	S	AC	4,261	8/8/2003	12/31/2013	10	74	Good
MAIN (N MAIN ST)	rd5007	S	AC	4,235	1/1/2004	12/31/2013	9	75	Good
MAIN (N MAIN ST)	rd5008	S	AC	12,010	1/1/2008	12/31/2013	5	85	Good
MAIN (N MAIN ST)	rd5009	S	AC	13,380	5/27/2002	12/31/2013	11	71	Fair
MAIN (N MAIN ST)	rd5010	S	AC	10,384	8/8/1995	12/31/2013	18	54	Poor
MAIN (N MAIN ST)	rd5011	S	AC	8,838	10/19/1992	12/31/2013	21	47	Poor
MAIN (N MAIN ST)	rd5012	S	AC	10,190	12/31/1995	12/30/2013	18	55	Poor
MAPLE (MAPLE DR)	rd4512	T	AC	4,768	1/3/1994	1/3/2014	20	70	Fair
MARGUERITE (MARGUERITE WAY)	rd2636	T	AC	7,437	5/2/1995	12/31/2013	18	72	Good
MARIE (MARIE AVE)	rd2599	T	AC	15,878	6/1/1982	1/4/2014	32	72	Good
MARIE (MARIE AVE)	rd2619	T	AC	14,806	9/4/1996	1/4/2014	18	74	Good
MARKRIS (MARKRIS WAY)	rd4759	T	AC	11,081	5/2/1995	12/31/2013	18	72	Good
MARY LOU (MARY LOU LN)	rd1109	T	AC	11,023	6/1/2003	1/3/2014	11	95	Good
MASTERS (MASTERS DR)	rd1993	T	AC	10,364	6/1/2005	1/9/2014	9	95	Good
MASTERS (MASTERS DR)	rd2432	T	AC	18,892	6/1/2005	1/9/2014	9	95	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
MCKERN (MCKERN PL)	rd2219	T	AC	13,073	9/10/2010	1/9/2014	4	95	Good
MEADOW (MEADOW LN)	rd4608	T	AC	6,441	5/11/1985	1/9/2014	29	57	Fair
MELODY (MELODY LN)	rd2816	T	AC	25,364	8/30/1968	12/30/2013	45	32	Poor
MELODY (MELODY LN)	rd2819	T	AC	22,251	8/30/1992	12/30/2013	21	68	Fair
MELODY (MELODY LN)	rd2820	T	AC	11,335	6/1/1993	12/30/2013	20	90	Good
MEREDITH (MEREDITH DR)	rd1771	T	AC	8,632	6/1/1993	1/9/2014	21	91	Good
MERIDIAN (N MERIDIAN ST)	rd1536	S	AC	8,226	5/29/2000	1/3/2014	14	66	Fair
MERIDIAN (N MERIDIAN ST)	rd1571	T	AC	11,503	9/21/1954	1/20/2014	60	11	Poor
MERIDIAN (N MERIDIAN ST)	rd1583	T	AC	7,500	9/20/1992	1/20/2014	22	68	Fair
MERIDIAN (N MERIDIAN ST)	rd1620	S	AC	8,948	5/29/2000	1/3/2014	14	66	Fair
MERIDIAN (N MERIDIAN ST)	rd1626	S	AC	10,196	6/9/1990	1/13/2014	24	41	Poor
MERIDIAN (N MERIDIAN ST)	rd1658	T	AC	11,520	1/20/1954	1/20/2014	60	10	Poor
MERIDIAN (N MERIDIAN ST)	rd1674	S	AC	10,881	3/27/2009	1/13/2014	5	88	Good
MERIDIAN (N MERIDIAN ST)	rd1686	S	AC	10,363	8/21/2003	1/13/2014	11	74	Good
MERIDIAN (N MERIDIAN ST)	rd1702	T	AC	7,333	5/15/1973	1/13/2014	41	39	Poor
MERIDIAN (N MERIDIAN ST)	rd1724	T	AC	10,229	9/21/1970	1/20/2014	44	35	Poor
MERIDIAN (N MERIDIAN ST)	rd1739	T	AC	10,341	9/21/1954	1/20/2014	60	11	Poor
MERIDIAN (N MERIDIAN ST)	rd1793	T	AAC	10,564	8/15/2010	1/13/2014	4	95	Good
MERIDIAN (N MERIDIAN ST)	rd1828	T	AC	8,649	5/15/1987	1/13/2014	27	60	Fair
MERIDIAN (N MERIDIAN ST)	rd2542	S	AC	15,050	8/15/2012	1/3/2014	2	100	Good
MERIDIAN (N MERIDIAN ST)	rd2610	S	AC	9,748	3/27/2005	1/13/2014	9	78	Good
MERIDIAN (N MERIDIAN ST)	rd2645	S	AC	23,250	3/17/2005	1/3/2014	9	78	Good
MERIDIAN (N MERIDIAN ST)	rd2795	T	AC	15,051	6/1/1996	12/17/2013	17	90	Good
MERIDIAN (N MERIDIAN ST)	rd2840	T	AC	17,196	6/1/1996	12/16/2013	17	86	Good
MERIDIAN (N MERIDIAN ST)	rd449	S	AC	8,500	5/30/2002	1/3/2014	12	71	Fair
MERIDIAN (N MERIDIAN ST)	rd4567	T	AC	11,019	4/19/2007	12/18/2013	6	90	Good
MERIDIAN (N MERIDIAN ST)	rd4634	S	AC	8,529	8/15/2012	1/3/2014	2	100	Good
MERIDIAN (N MERIDIAN ST)	rd4641	S	AAC	10,620	8/15/2008	1/13/2014	6	95	Good
MERIDIAN (N MERIDIAN ST)	rd4702	S	AAC	10,854	8/15/2008	1/13/2014	6	93	Good
MERIDIAN (N MERIDIAN ST)	rd4715	S	AC	10,216	1/14/2012	1/13/2014	2	95	Good
MERIDIAN (N MERIDIAN ST)	rd4801	S	AAC	10,630	8/15/2008	1/13/2014	6	95	Good
MERIDIAN (N MERIDIAN ST)	rd4867	S	AAC	10,153	8/15/2008	1/13/2014	6	95	Good
MERIDIAN (N MERIDIAN ST)	rd4877	T	AC	5,358	6/1/2000	12/16/2013	13	94	Good

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
MERIDIAN (N MERIDIAN ST)	rd4919	S	AC	7,401	8/29/2003	1/21/2014	11	74	Good
MERIDIAN (N MERIDIAN ST)	rd5005	S	AC	940	5/29/1992	1/3/2014	22	46	Poor
MERIDIAN (N MERIDIAN ST)	rd520	T	AC	16,660	6/1/1997	12/17/2013	16	85	Good
MICHELLE (MICHELLE CT)	rd1900	T	AC	12,961	5/22/1987	1/20/2014	27	60	Fair
MIDDLE BRK (MIDDLEBROOK DR)	rd1532	T	AC	9,757	6/1/1976	1/4/2014	38	22	Poor
MIDDLE BRK (MIDDLEBROOK DR)	rd1589	T	AC	15,120	9/4/1996	1/4/2014	18	74	Good
MILL (MILL PL)	rd1893	T	AC	8,176	6/1/1994	1/20/2014	20	86	Good
MILL (MILL PL)	rd1905	T	AC	3,643	6/1/1994	1/20/2014	20	81	Good
MILL (MILL PL)	rd1906	T	AC	5,532	6/1/1994	1/20/2014	20	80	Good
MISSION (MISSION DR)	rd2624	T	AC	30,626	6/1/1968	12/31/2013	45	32	Poor
MISSION (MISSION DR)	rd4647	T	AC	2,061	6/1/1992	12/31/2013	21	84	Good
MISTLETOE (MISTLETOE DR)	rd1632	T	AC	6,311	6/1/2003	1/9/2014	11	94	Good
MISTLETOE (MISTLETOE DR)	rd1916	T	AC	6,379	6/1/2003	1/9/2014	11	94	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd2678	P	AC	51,990	6/1/2002	12/18/2013	11	80	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd2681	P	AC	31,756	6/1/2002	12/26/2013	11	80	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd2689	T	AC	22,395	8/18/1992	12/18/2013	21	68	Fair
MNT VIEW (W MOUNTAINVIEW DR)	rd2827	P	AAC	9,395	3/25/2013	1/4/2014	1	94	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4505	P	AC	13,349	8/15/2012	1/4/2014	2	89	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4506	P	AC	13,849	8/15/2010	1/4/2014	4	92	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4581	S	AAC	23,583	8/15/2010	12/18/2013	3	95	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4582	S	AAC	10,406	8/15/2010	12/18/2013	3	95	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4588	P	AC	12,345	8/15/2010	1/4/2014	4	93	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4589	P	AC	6,556	8/15/2010	12/31/2013	3	77	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4591	S	AAC	17,942	8/15/2010	12/18/2013	3	94	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4744	S	AAC	11,169	8/15/2010	12/18/2013	3	95	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4856	P	AC	13,590	6/1/2007	1/4/2014	7	91	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4888	S	AC	17,994	6/1/2005	12/18/2013	8	94	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4894	S	AC	8,183	6/1/2005	12/18/2013	8	95	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4895	S	AC	8,547	6/1/2005	12/19/2013	8	94	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4896	S	AC	5,298	6/1/2005	12/18/2013	8	95	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4906	P	AC	43,911	6/1/2007	1/4/2014	7	92	Good
MNT VIEW (W MOUNTAINVIEW DR)	rd4907	P	AC	14,192	6/1/2007	1/4/2014	7	88	Good
MORRIS (MORRIS ST)	rd1553	T	AC	8,630	12/27/2003	12/26/2013	10	85	Good

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
MORRIS (MORRIS ST)	rd4561	T	AC	8,733	8/17/2002	12/16/2013	11	83	Good
MORRIS (MORRIS ST)	rd4721	T	AC	9,157	6/1/1997	12/16/2013	16	84	Good
MORRIS (MORRIS ST)	rd4799	T	AC	8,648	12/16/2005	12/16/2013	8	88	Good
MORRIS (MORRIS ST)	rd4800	T	AC	8,855	4/17/2003	12/16/2013	10	84	Good
MORTON (MORTON ST)	rd2503	T	AC	19,729	5/15/2003	1/13/2014	11	84	Good
MORTON (MORTON ST)	rd2598	T	AC	37,014	1/13/1986	1/13/2014	28	58	Fair
MORTON (MORTON ST)	rd4711	T	AC	9,580	1/13/1974	1/13/2014	40	40	Poor
MYRTLEWOOD (W MYRTLEWOOD DR)	rd2758	T	AC	12,861	6/1/1995	12/19/2013	18	90	Good
MYRTLEWOOD (W MYRTLEWOOD DR)	rd2763	T	AC	20,405	6/1/2004	12/19/2013	9	95	Good
MYRTLEWOOD (W MYRTLEWOOD DR)	rd4932	T	AC	7,488	6/1/1997	12/19/2013	16	94	Good
NATALIE (NATALIE DR)	rd2853	T	AC	14,099	6/1/2008	12/16/2013	5	85	Good
NATALIE (NATALIE DR)	rd4527	T	AC	10,554	6/1/1996	12/16/2013	17	95	Good
NATALIE (NATALIE DR)	rd4722	T	AC	8,873	6/1/1996	12/16/2013	17	93	Good
NORTH (W NORTH ST)	rd4598	T	AC	8,021	1/14/1968	1/13/2014	46	31	Poor
NORTH (W NORTH ST)	rd4600	T	AC	4,698	6/1/2003	1/13/2014	11	85	Good
NORTH (W NORTH ST)	rd4610	T	GR	3,989	Unknown	N/A	N/A	N/A	N/A
NORTH (W NORTH ST)	rd4611	T	GR	4,478	Unknown	N/A	N/A	N/A	N/A
NORTH (W NORTH ST)	rd4638	T	AC	8,408	1/14/1972	1/13/2014	42	37	Poor
NORTH (W NORTH ST)	rd4640	T	AC	7,979	1/13/1966	1/13/2014	48	28	Poor
NORTH (W NORTH ST)	rd4642	T	AC	9,481	5/15/1963	1/13/2014	51	24	Poor
NORTH (W NORTH ST)	rd4703	T	AC	6,974	5/15/1967	1/13/2014	47	30	Poor
NORTH (W NORTH ST)	rd4706	T	AC	8,791	5/15/1969	1/13/2014	45	33	Poor
NORTH (W NORTH ST)	rd4707	T	AC	7,101	1/13/1966	1/13/2014	48	28	Poor
NORWOOD (NORWOOD CT)	rd4659	T	AC	4,796	9/4/1984	1/4/2014	30	56	Poor
NUGGET (NUGGET LN)	rd2809	T	AC	13,533	6/1/1994	12/30/2013	19	82	Good
OAK (OAK DR)	rd2581	T	AC	18,915	6/1/1970	1/3/2014	44	39	Poor
OAK (OAK DR)	rd4688	T	AC	6,472	6/1/1970	1/3/2014	44	42	Poor
OAK (OAK DR)	rd4697	T	AC	9,411	6/1/1970	1/4/2014	44	32	Poor
OAK (OAK DR)	rd4699	T	AC	11,801	5/6/1991	1/4/2014	23	66	Fair
OAK GROVE (OAK GROVE ST)	rd2527	T	AC	9,585	6/1/2005	1/9/2014	9	90	Good
OAK GROVE (OAK GROVE ST)	rd2528	T	AC	7,850	6/1/2005	1/9/2014	9	95	Good
OAK HOLLOW (OAK HOLLOW DR)	rd2366	T	AC	17,334	6/1/2005	1/9/2014	9	95	Good
OAK KNOLL (OAK KNOLL CT)	rd2839	T	AC	13,235	6/1/1995	12/16/2013	18	70	Fair

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BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
OAK LEAF (OAK LEAF ST)	rd2518	T	AC	17,529	6/1/2004	1/9/2014	10	94	Good
OAK MDWS (OAK MEADOWS LOOP)	rd1949	T	AC	5,482	6/1/2004	1/9/2014	10	94	Good
OAK MDWS (OAK MEADOWS LOOP)	rd2457	T	AC	47,120	6/1/2004	1/9/2014	10	95	Good
OLD HWY99W (OLD HWY 99W)	rd1645	T	PCC	7,807	5/15/1977	1/13/2014	37	45	Poor
OLD HWY99W (OLD HWY 99W)	rd4664	T	AC	2,787	1/13/1990	1/13/2014	24	64	Fair
OLD HWY99W (OLD HWY 99W)	rd4665	T	GR	1,309	Unknown	N/A	N/A	N/A	N/A
OXFORD (OXFORD ST)	rd2713	T	AC	8,552	12/20/1991	12/19/2013	22	67	Fair
OXFORD (OXFORD ST)	rd2714	T	AC	12,028	4/27/1993	12/26/2013	20	69	Fair
OXFORD (OXFORD ST)	rd4572	T	AC	7,805	6/1/2001	12/19/2013	12	94	Good
OXFORD (OXFORD ST)	rd4592	T	AC	8,092	4/29/1995	12/28/2013	18	72	Good
OXFORD (OXFORD ST)	rd4594	T	AC	4,314	4/27/1997	12/26/2013	16	75	Good
OXFORD (OXFORD ST)	rd4607	T	AC	8,122	12/26/1997	12/26/2013	16	76	Good
OXFORD (OXFORD ST)	rd4726	T	AC	8,339	6/1/2001	12/19/2013	12	95	Good
OXFORD (OXFORD ST)	rd4742	T	AC	9,379	8/20/1998	12/19/2013	15	77	Good
OXFORD (OXFORD ST)	rd4936	T	AC	20,778	6/1/2005	12/19/2013	8	95	Good
PACIFIC (PACIFIC ST)	rd1564	T	AC	7,397	9/21/1954	1/20/2014	60	11	Poor
PACIFIC (PACIFIC ST)	rd1646	T	AC	9,707	5/22/1977	1/20/2014	37	45	Poor
PACIFIC (PACIFIC ST)	rd1676	T	AC	4,294	9/20/1952	1/20/2014	62	8	Poor
PACIFIC (PACIFIC ST)	rd1741	T	AC	11,294	1/21/1964	1/20/2014	50	25	Poor
PACIFIC (PACIFIC ST)	rd1894	T	AC	9,882	9/21/1978	1/20/2014	36	47	Poor
PALOMINO (PALOMINO CT)	rd4539	T	AC	7,192	1/2/1998	1/2/2014	16	76	Good
PARK (PARK CT)	rd4563	T	AC	9,888	12/27/1995	12/26/2013	18	73	Good
PARK (PARK CT)	rd4613	T	AC	5,697	6/1/1990	1/2/2014	24	86	Good
PARK (PARK CT)	rd4614	T	AC	5,151	6/1/1990	1/2/2014	24	64	Fair
PARKSIDE (PARKSIDE LN)	rd4667	T	AC	7,035	6/1/1997	12/31/2013	16	94	Good
PARTRIDGE (PARTRIDGE LN)	rd510	T	AC	8,079	12/27/1999	12/26/2013	14	79	Good
PEACOCK (PEACOCK CT)	rd4564	T	AC	5,117	8/27/1994	12/26/2013	19	71	Fair
PECAN (PECAN CT)	rd4623	T	AC	9,276	9/4/1976	1/4/2014	38	44	Poor
PECAN (PECAN CT)	rd4660	T	AC	12,050	5/6/1983	1/4/2014	31	54	Poor
PENNINGTON (N PENNINGTON DR)	rd2663	T	AC	31,966	9/3/1994	1/2/2014	20	71	Fair
PENNINGTON (N PENNINGTON DR)	rd4618	T	AC	9,111	5/4/1995	1/2/2014	19	72	Good
PENNINGTON (N PENNINGTON DR)	rd4626	T	AC	9,680	9/2/1992	1/2/2014	22	68	Fair
PENNINGTON (N PENNINGTON DR)	rd4633	T	AC	11,548	1/2/1998	1/2/2014	16	76	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
PENNINGTON (N PENNINGTON DR)	rd4723	T	AC	3,759	6/1/1996	1/2/2014	18	88	Good
PETUNIA (PETUNIA DR)	rd4812	T	AC	3,856	6/1/2008	12/16/2013	5	95	Good
PINEHURST (PINEHURST CT)	rd2546	T	AC	23,274	1/3/1990	1/3/2014	24	64	Fair
PINEHURST (PINEHURST CT)	rd2548	T	AAC	46,197	8/15/2012	12/31/2013	1	100	Good
PINEHURST (PINEHURST CT)	rd2549	T	AC	16,049	5/2/1989	12/31/2013	24	63	Fair
PIONEER (PIONEER LN)	rd1954	T	AC	7,141	5/2/2001	12/31/2013	12	81	Good
PIONEER (PIONEER LN)	rd1963	T	AC	8,096	1/1/2000	12/31/2013	13	79	Good
PRINCETON (PRINCETON ST)	rd1108	T	AC	10,925	8/27/2002	12/26/2013	11	83	Good
PRINCETON (PRINCETON ST)	rd4510	T	AC	4,265	6/1/1995	12/26/2013	18	88	Good
PRINCETON (PRINCETON ST)	rd4534	T	AC	4,301	6/1/1995	12/26/2013	18	86	Good
PRINCETON (PRINCETON ST)	rd4762	T	AC	9,440	6/1/1995	12/26/2013	18	90	Good
PRINCETON (PRINCETON ST)	rd4766	T	AC	9,356	8/26/2008	12/26/2013	5	92	Good
PROSPECT (PROSPECT DR)	rd2815	T	AC	21,791	6/1/1962	12/30/2013	51	28	Poor
PROVIDENCE (PROVIDENCE DR)	rd2641	S	AC	92,040	6/1/2005	1/9/2014	9	91	Good
PROVIDENCE (PROVIDENCE DR)	rd4923	S	AC	1,663	1/10/2012	1/9/2014	2	95	Good
PROVIDENCE (PROVIDENCE DR)	rd4928	S	AC	1,000	3/24/2011	1/9/2014	3	93	Good
QUAIL (QUAIL DR)	rd1106	T	AC	7,933	6/1/1996	12/17/2013	17	91	Good
QUAIL (QUAIL DR)	rd1107	T	AC	7,402	6/1/1996	12/17/2013	17	94	Good
QUAIL (QUAIL DR)	rd4509	T	AC	7,901	6/1/1996	12/17/2013	17	93	Good
QUAIL (QUAIL DR)	rd492	T	AC	23,342	12/26/2001	12/26/2013	12	82	Good
QUAIL (QUAIL DR)	rd493	T	AC	14,251	12/26/2001	12/26/2013	12	82	Good
RED OAK (RED OAK DR)	rd1516	T	AC	4,669	6/1/2003	1/9/2014	11	94	Good
RED OAK (RED OAK DR)	rd1544	T	AC	6,207	6/1/2003	1/9/2014	11	95	Good
RED OAK (RED OAK DR)	rd1976	T	AC	6,464	6/1/2003	1/9/2014	11	94	Good
REDWOOD (REDWOOD CT)	rd4619	T	AC	4,922	5/6/1991	1/4/2014	23	66	Fair
RENTFRO (RENTFRO WAY)	rd4648	T	AC	3,375	6/1/1992	12/31/2013	21	90	Good
RINKES (RINKES CT)	rd1555	T	AC	5,550	5/11/1991	1/9/2014	23	66	Fair
RIVER (S RIVER ST)	rd1566	S	AC	8,640	6/16/1994	1/20/2014	20	51	Poor
RIVER (S RIVER ST)	rd1584	S	AC	6,249	11/9/1990	1/20/2014	24	42	Poor
RIVER (S RIVER ST)	rd1625	S	AC	8,768	8/28/1999	1/20/2014	15	64	Fair
RIVER (S RIVER ST)	rd1628	S	AC	8,602	3/27/1993	1/13/2014	21	48	Poor
RIVER (S RIVER ST)	rd1675	T	AC	7,176	9/14/1978	1/13/2014	36	47	Poor
RIVER (S RIVER ST)	rd1721	S	AC	8,917	4/3/1993	1/20/2014	21	48	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
RIVER (S RIVER ST)	rd1797	S	AC	8,640	11/9/1998	1/20/2014	16	62	Fair
RIVER (S RIVER ST)	rd1826	S	AAC	12,467	8/15/2010	1/13/2014	4	95	Good
RIVER (S RIVER ST)	rd1838	S	AC	7,534	4/3/1993	1/20/2014	21	48	Poor
RIVER (S RIVER ST)	rd1840	S	AC	7,641	1/21/1992	1/20/2014	22	45	Poor
RIVER (S RIVER ST)	rd1898	S	AC	6,666	6/15/1992	1/20/2014	22	46	Poor
RIVER (S RIVER ST)	rd1933	S	AAC	11,944	8/15/2010	1/21/2014	4	95	Good
RIVER (S RIVER ST)	rd1964	S	AAC	13,545	8/15/2010	1/21/2014	4	94	Good
RIVER (S RIVER ST)	rd2008	T	AC	10,210	1/13/1986	1/13/2014	28	58	Fair
ROGERSMITH (ROGER SMITH DRIVE)	rd2699	T	AC	18,813	6/1/2005	12/19/2013	8	95	Good
ROGERSMITH (ROGER SMITH DRIVE)	rd4911	T	AC	7,632	6/1/2005	12/19/2013	8	95	Good
ROGERSMITH (ROGER SMITH DRIVE)	rd4938	T	AC	7,829	6/1/2005	12/26/2013	8	95	Good
ROYAL OAK (ROYAL OAK ST)	rd1981	T	AC	12,256	6/1/2003	1/9/2014	11	95	Good
ROYAL OAK (ROYAL OAK ST)	rd2453	T	AC	18,150	6/1/2003	1/9/2014	11	93	Good
ROYAL OAK (ROYAL OAK ST)	rd4791	T	AC	6,847	6/1/2003	1/9/2014	11	94	Good
SAM PARRET (SAM PARRETT DR)	rd1860	T	AC	2,615	6/1/2007	1/9/2014	7	93	Good
SAM PARRET (SAM PARRETT DR)	rd1984	T	AC	5,822	6/1/2007	1/9/2014	7	95	Good
SAM PARRET (SAM PARRETT DR)	rd1985	T	AC	5,924	6/1/2007	1/9/2014	7	95	Good
SAM PARRET (SAM PARRETT DR)	rd1986	T	AC	2,992	6/1/2007	1/9/2014	7	100	Good
SANDOZ (S SANDOZ RD)	rd2204	T	AC	49,436	9/9/2008	1/9/2014	6	92	Good
SCHOOL (N SCHOOL ST)	rd1541	T	AAC	11,052	8/15/2007	1/13/2014	7	95	Good
SCHOOL (N SCHOOL ST)	rd1582	T	AC	12,987	6/1/1981	1/20/2014	33	65	Fair
SCHOOL (N SCHOOL ST)	rd1612	T	AC	7,272	1/13/1998	1/13/2014	16	76	Good
SCHOOL (N SCHOOL ST)	rd1728	T	AC	10,711	9/20/1968	1/20/2014	46	32	Poor
SCHOOL (N SCHOOL ST)	rd1782	T	AC	10,106	5/15/1971	1/13/2014	43	36	Poor
SCHOOL (N SCHOOL ST)	rd4556	T	AC	8,750	9/14/1962	1/13/2014	52	23	Poor
SCHOOL (N SCHOOL ST)	rd4710	T	AC	9,177	1/13/1974	1/13/2014	40	40	Poor
SCHOOL (N SCHOOL ST)	rd4781	T	AC	8,980	9/13/1960	1/13/2014	54	20	Poor
SHELLY (SHELLY CT)	rd4526	T	AC	4,634	6/1/1996	12/16/2013	17	90	Good
SHERIDAN (E SHERIDAN ST)	rd1601	T	AC	6,262	9/14/1978	1/13/2014	36	47	Poor
SHERIDAN (E SHERIDAN ST)	rd1635	T	AC	5,479	6/1/1983	1/13/2014	31	35	Poor
SHERIDAN (E SHERIDAN ST)	rd1636	T	AC	5,912	6/1/1983	1/13/2014	31	42	Poor
SHERIDAN (E SHERIDAN ST)	rd1656	T	PCC	5,965	1/22/2014	1/22/2014	0	100	Good
SHERIDAN (E SHERIDAN ST)	rd1657	T	AC	6,397	1/14/1980	1/13/2014	34	49	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
SHERIDAN (E SHERIDAN ST)	rd1689	T	PCC	8,985	1/22/2014	1/22/2014	0	100	Good
SHERIDAN (E SHERIDAN ST)	rd1690	T	AC	6,200	5/15/1981	1/13/2014	33	51	Poor
SHERIDAN (E SHERIDAN ST)	rd1691	T	AC	7,795	1/13/1974	1/13/2014	40	40	Poor
SHERIDAN (E SHERIDAN ST)	rd1692	T	AC	7,521	9/13/1980	1/13/2014	34	50	Poor
SHERIDAN (E SHERIDAN ST)	rd2455	T	AC	12,810	9/14/1966	1/13/2014	48	29	Poor
SHERIDAN (E SHERIDAN ST)	rd2505	T	AC	18,792	1/14/1972	1/13/2014	42	37	Poor
SHERIDAN (E SHERIDAN ST)	rd4595	T	AC	8,897	1/13/1954	1/13/2014	60	10	Poor
SHERIDAN (E SHERIDAN ST)	rd4669	T	GR	6,090	Unknown	N/A	N/A	N/A	N/A
SHERIDAN (E SHERIDAN ST)	rd4670	T	GR	5,742	Unknown	N/A	N/A	N/A	N/A
SHERIDAN (E SHERIDAN ST)	rd4775	T	AC	6,120	5/15/1975	1/13/2014	39	42	Poor
SHERMAN (E SHERMAN ST)	rd4627	T	AC	7,588	5/15/1967	1/13/2014	47	30	Poor
SHERMAN (E SHERMAN ST)	rd4682	T	AC	7,881	9/13/1964	1/13/2014	50	26	Poor
SHERMAN (E SHERMAN ST)	rd4683	T	AC	9,873	5/15/1967	1/13/2014	47	30	Poor
SHERMAN (E SHERMAN ST)	rd4691	T	AC	7,850	5/15/1963	1/13/2014	51	24	Poor
SHERMAN (E SHERMAN ST)	rd4693	T	AC	7,958	5/15/1969	1/13/2014	45	33	Poor
SHERMAN (E SHERMAN ST)	rd4695	T	AC	8,890	9/13/1964	1/13/2014	50	26	Poor
SHERMAN (E SHERMAN ST)	rd4777	T	AC	7,626	9/14/1958	1/13/2014	56	17	Poor
SHERMAN (E SHERMAN ST)	rd4778	T	AC	7,141	9/13/1968	1/13/2014	46	32	Poor
SHERMAN (E SHERMAN ST)	rd4862	T	AC	9,635	6/1/1998	1/13/2014	16	94	Good
SHERMAN (E SHERMAN ST)	rd4865	T	GR	6,060	Unknown	N/A	N/A	N/A	N/A
SHERMAN (E SHERMAN ST)	rd4866	T	GR	14,055	Unknown	N/A	N/A	N/A	N/A
SHORT OAK (SHORT OAK DR)	rd2467	T	AC	12,331	6/1/2003	1/9/2014	11	95	Good
SIERRAVIST (SIERRA VISTA DR)	rd2646	T	AC	14,292	6/1/1976	1/2/2014	38	40	Poor
SIERRAVIST (SIERRA VISTA DR)	rd2650	T	AC	5,395	1/3/1966	1/3/2014	48	28	Poor
SIERRAVIST (SIERRA VISTA DR)	rd4502	T	AC	11,180	5/4/1993	1/2/2014	21	69	Fair
SIERRAVIST (SIERRA VISTA DR)	rd4503	T	AC	7,326	5/5/1971	1/3/2014	43	36	Poor
SIERRAVIST (SIERRA VISTA DR)	rd4518	T	AC	13,092	9/2/1992	1/2/2014	22	68	Fair
SITKA (SITKA AVE)	rd1668	T	AC	14,495	1/5/2000	1/4/2014	14	79	Good
SITKA (SITKA AVE)	rd2573	T	AC	30,732	6/1/1970	1/3/2014	44	33	Poor
SITKA (SITKA AVE)	rd2623	T	AC	14,877	9/3/2000	1/3/2014	14	80	Good
SITKA (SITKA AVE)	rd4560	T	AC	15,471	5/5/2003	1/3/2014	11	84	Good
SITKA (SITKA AVE)	rd4585	T	AC	12,557	5/6/2005	1/4/2014	9	87	Good
SITKA (SITKA AVE)	rd4884	T	AC	14,024	1/4/2006	1/4/2014	8	88	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
SITKA (SITKA AVE)	rd4885	T	AC	6,881	9/5/2006	1/4/2014	8	89	Good
SITKA (SITKA AVE)	rd4886	T	AC	5,309	5/6/2005	1/4/2014	9	87	Good
SOLSTICE (SOLSTICE LN)	rd513	T	AC	11,066	6/1/2004	12/18/2013	9	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1519	P	AC	2,005	6/1/2007	1/4/2014	7	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1521	P	AC	1,553	6/1/2007	1/4/2014	7	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1531	P	AC	1,583	6/1/2007	1/4/2014	7	94	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1533	P	AC	14,986	1/4/1998	1/4/2014	16	60	Fair
SPRINGBRK (N SPRINGBROOK RD)	rd1554	P	AC	1,516	6/1/2007	1/4/2014	7	93	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1559	T	AC	8,516	1/5/1988	1/4/2014	26	61	Fair
SPRINGBRK (N SPRINGBROOK RD)	rd1576	P	AC	41,017	6/1/2008	6/1/2008	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1585	T	AC	8,048	9/4/1996	1/4/2014	18	74	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1624	P	AC	16,418	8/11/1997	1/4/2014	17	59	Fair
SPRINGBRK (N SPRINGBROOK RD)	rd1850	P	AC	27,208	6/1/2008	6/1/2008	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd1995	P	AC	3,057	6/1/2007	1/4/2014	7	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd246	P	AC	28,571	6/1/2007	1/4/2014	7	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd2477	P	AC	17,661	1/1/1900	1/1/1900	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd2516	P	AC	11,250	1/1/1900	1/1/1900	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd2669	P	AC	46,525	3/19/1995	1/4/2014	19	53	Poor
SPRINGBRK (N SPRINGBROOK RD)	rd2706	S	AC	86,756	6/1/2007	1/4/2014	7	95	Good
SPRINGBRK (N SPRINGBROOK RD)	rd409	T	AC	13,715	6/1/1977	1/4/2014	37	17	Poor
SPRINGBRK (N SPRINGBROOK RD)	rd4632	P	AC	10,286	8/11/1993	1/4/2014	21	49	Poor
SPRINGBRK (N SPRINGBROOK RD)	rd4811	P	AC	54,392	6/1/2007	1/4/2014	7	92	Good
SPRINGBRK (N SPRINGBROOK RD)	rd4854	P	AC	6,168	1/1/1900	1/1/1900	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd4924	P	AC	30,783	1/1/1900	1/1/1900	0	100	Good
SPRINGBRK (N SPRINGBROOK RD)	rd5004	P	AC	6,547	1/1/1900	1/1/1900	0	100	Good
STEPHANIE (STEPHANIE CT)	rd4878	T	AC	4,618	6/1/2000	12/16/2013	13	92	Good
SUNSET (SUNSET DR)	rd1105	T	AC	7,623	6/1/1997	12/16/2013	16	94	Good
SUNSET (SUNSET DR)	rd1594	T	AC	8,156	6/1/1996	12/16/2013	17	72	Good
SUNSET (SUNSET DR)	rd1595	T	AC	8,410	6/1/1996	12/16/2013	17	69	Fair
SUNSET (SUNSET DR)	rd1597	T	AC	7,670	6/1/1997	12/16/2013	16	95	Good
SUNSET (SUNSET DR)	rd509	T	AC	13,451	8/27/1978	12/26/2013	35	47	Poor
SUNSET (SUNSET DR)	rd512	T	AC	17,367	4/27/2009	12/26/2013	4	93	Good
THE GREENS (THE GREENS AVE)	rd1991	T	AC	4,614	6/1/2005	1/9/2014	9	87	Good

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
THE GREENS (THE GREENS AVE)	rd1992	T	AC	6,667	6/1/2005	1/13/2014	9	94	Good
THE GREENS (THE GREENS AVE)	rd1994	T	AC	9,995	6/1/2005	1/9/2014	9	93	Good
THE GREENS (THE GREENS AVE)	rd2371	T	AC	19,897	6/1/2005	1/9/2014	9	95	Good
THE GREENS (THE GREENS AVE)	rd2431	T	AC	8,043	6/1/2005	1/9/2014	9	93	Good
THE GREENS (THE GREENS AVE)	rd2449	T	AC	26,432	6/1/2005	1/9/2014	9	94	Good
THE GREENS (THE GREENS AVE)	rd2512	T	AC	10,612	6/1/2005	1/13/2014	9	94	Good
THE GREENS (THE GREENS AVE)	rd4913	T	AC	6,834	6/1/2005	1/9/2014	9	94	Good
THE GREENS (THE GREENS AVE)	rd4914	T	AC	5,389	6/1/2005	1/9/2014	9	95	Good
THOMPSON (THOMPSON LN)	rd1975	T	AC	2,991	6/1/2007	1/9/2014	7	95	Good
THOMPSON (THOMPSON LN)	rd2313	T	AC	6,102	6/1/2007	1/9/2014	7	95	Good
THORNE (THORNE ST)	rd2554	T	AC	13,543	6/1/1992	12/31/2013	21	87	Good
THORNE (THORNE ST)	rd2822	T	AC	9,874	6/1/1992	12/31/2013	21	91	Good
THORNE (THORNE ST)	rd4609	T	AC	3,944	6/1/1992	12/31/2013	21	94	Good
TIN CUP (TIN CUP WAY)	rd4912	T	AC	10,575	6/1/2005	1/9/2014	9	94	Good
TUKWILA (TUKWILA DR)	rd4918	T	AC	5,459	6/1/2006	12/19/2013	7	95	Good
TUKWILA (TUKWILA DR)	rd511	T	AC	5,822	6/1/2000	12/19/2013	13	95	Good
TULIP (TULIP CT)	rd2842	T	AC	5,532	6/1/2008	12/16/2013	5	95	Good
VALERI (VALERI DR)	rd2557	T	AC	23,940	6/1/1991	12/30/2013	22	80	Good
VERMILLION (VERMILLION ST)	rd4522	S	AC	8,114	1/13/2010	1/13/2014	4	90	Good
VERMILLION (VERMILLION ST)	rd4524	T	AC	7,970	1/13/1966	1/13/2014	48	28	Poor
VERMILLION (VERMILLION ST)	rd4700	T	AC	4,539	5/23/1985	1/21/2014	29	57	Fair
VERMILLION (VERMILLION ST)	rd4701	S	AC	10,206	8/21/2011	1/13/2014	3	94	Good
VILLA (VILLA RD)	rd1586	S	AAC	27,031	8/15/2008	1/3/2014	6	95	Good
VILLA (VILLA RD)	rd2368	S	AC	13,884	8/15/2010	1/3/2014	4	82	Good
VILLA (VILLA RD)	rd2515	S	AC	18,294	8/15/2010	1/3/2014	4	77	Good
VILLA (VILLA RD)	rd2587	S	AC	20,566	8/15/2010	1/3/2014	4	76	Good
VILLA (VILLA RD)	rd2616	S	AC	18,511	8/15/2010	1/3/2014	4	95	Good
VILLA (VILLA RD)	rd2628	S	AC	5,968	8/15/2010	1/3/2014	4	94	Good
VILLA (VILLA RD)	rd445	S	AC	18,732	10/22/1984	1/3/2014	30	27	Poor
VILLA (VILLA RD)	rd4516	S	AC	19,032	10/22/1988	1/3/2014	26	37	Poor
VILLA (VILLA RD)	rd4541	S	AC	10,225	10/22/1988	1/3/2014	26	37	Poor
VILLA (VILLA RD)	rd4574	S	AAC	33,049	8/15/2008	12/31/2013	5	95	Good
VILLA (VILLA RD)	rd4612	S	AC	2,844	3/18/1975	1/3/2014	39	3	Poor

Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
VILLA (VILLA RD)	rd4673	S	AC	2,069	8/15/2010	1/3/2014	4	93	Good
VILLA (VILLA RD)	rd4758	S	AC	3,756	8/15/2010	1/3/2014	4	87	Good
VILLA (VILLA RD)	rd4780	S	AC	3,464	8/15/2010	1/3/2014	4	76	Good
VITTORIA (VITTORIA WAY)	rd1609	S	AAC	13,972	6/15/2013	1/9/2014	1	100	Good
VITTORIA (VITTORIA WAY)	rd1955	S	AAC	12,131	7/24/2013	1/9/2014	1	97	Good
VITTORIA (VITTORIA WAY)	rd1957	S	AAC	9,280	7/24/2013	1/9/2014	1	100	Good
VITTORIA (VITTORIA WAY)	rd402	S	AAC	20,805	7/23/2013	1/9/2014	1	98	Good
VITTORIA (VITTORIA WAY)	rd4616	S	AAC	8,805	7/23/2013	1/9/2014	1	100	Good
VITTORIA (VITTORIA WAY)	rd4653	S	AAC	18,053	7/23/2013	1/9/2014	1	100	Good
VITTORIA (VITTORIA WAY)	rd4668	S	AAC	6,172	7/23/2013	1/9/2014	1	95	Good
WALNUT (WALNUT AVE)	rd4621	T	AC	11,929	1/4/1986	1/4/2014	28	58	Fair
WALNUT (WALNUT AVE)	rd4622	T	AC	7,722	5/6/1985	1/4/2014	29	57	Fair
WASHINGTON (S WASHINGTON ST)	rd1537	T	AC	7,263	1/13/2006	1/13/2014	8	88	Good
WASHINGTON (S WASHINGTON ST)	rd1579	T	AC	10,196	5/15/1981	1/13/2014	33	51	Poor
WASHINGTON (S WASHINGTON ST)	rd1641	T	AC	10,047	1/14/1968	1/13/2014	46	31	Poor
WASHINGTON (S WASHINGTON ST)	rd1930	T	AC	7,493	5/15/1981	1/13/2014	33	51	Poor
WASHINGTON (S WASHINGTON ST)	rd1931	T	AC	3,042	5/15/1971	1/13/2014	43	36	Poor
WASHINGTON (S WASHINGTON ST)	rd4602	T	AC	9,649	1/13/1998	1/13/2014	16	76	Good
WASHINGTON (S WASHINGTON ST)	rd4637	T	AC	14,397	1/14/2000	1/13/2014	14	79	Good
WASHINGTON (S WASHINGTON ST)	rd4690	T	AC	10,249	5/15/1995	1/13/2014	19	72	Good
WASHINGTON (S WASHINGTON ST)	rd4773	T	AC	8,827	1/14/2008	1/13/2014	6	91	Good
WEDGEWOOD (WEDGEWOOD LOOP)	rd1919	T	AC	6,163	6/1/2005	1/9/2014	9	95	Good
WEDGEWOOD (WEDGEWOOD LOOP)	rd2470	T	AC	24,757	6/1/2005	1/9/2014	9	95	Good
WERTH (WERTH BLVD)	rd2519	T	AC	69,698	6/1/2011	1/9/2014	3	94	Good
WERTH (WERTH BLVD)	rd4922	S	AC	1,341	1/10/2012	1/9/2014	2	95	Good
WESTLAKE (WESTLAKE LOOP)	rd1530	T	AC	4,554	6/1/1995	1/4/2014	19	93	Good
WESTLAKE (WESTLAKE LOOP)	rd454	T	AC	36,936	6/1/1995	1/4/2014	19	89	Good
WHITE OAK (WHITE OAK ST)	rd1631	T	AC	17,681	6/1/2003	1/13/2014	11	95	Good
WHITE OAK (WHITE OAK ST)	rd1633	T	AC	6,971	6/1/2003	1/13/2014	11	94	Good
WHITE OAK (WHITE OAK ST)	rd1634	T	AC	6,278	6/1/2003	1/13/2014	11	95	Good
WHITNEY (WHITNEY DR)	rd2400	T	AC	11,142	6/1/2007	1/9/2014	7	95	Good
WILLAMETTE (WILLAMETTE ST)	rd1678	T	AC	9,882	9/21/1958	1/20/2014	56	17	Poor
WILLAMETTE (WILLAMETTE ST)	rd1725	T	AC	11,737	1/20/1962	1/20/2014	52	22	Poor

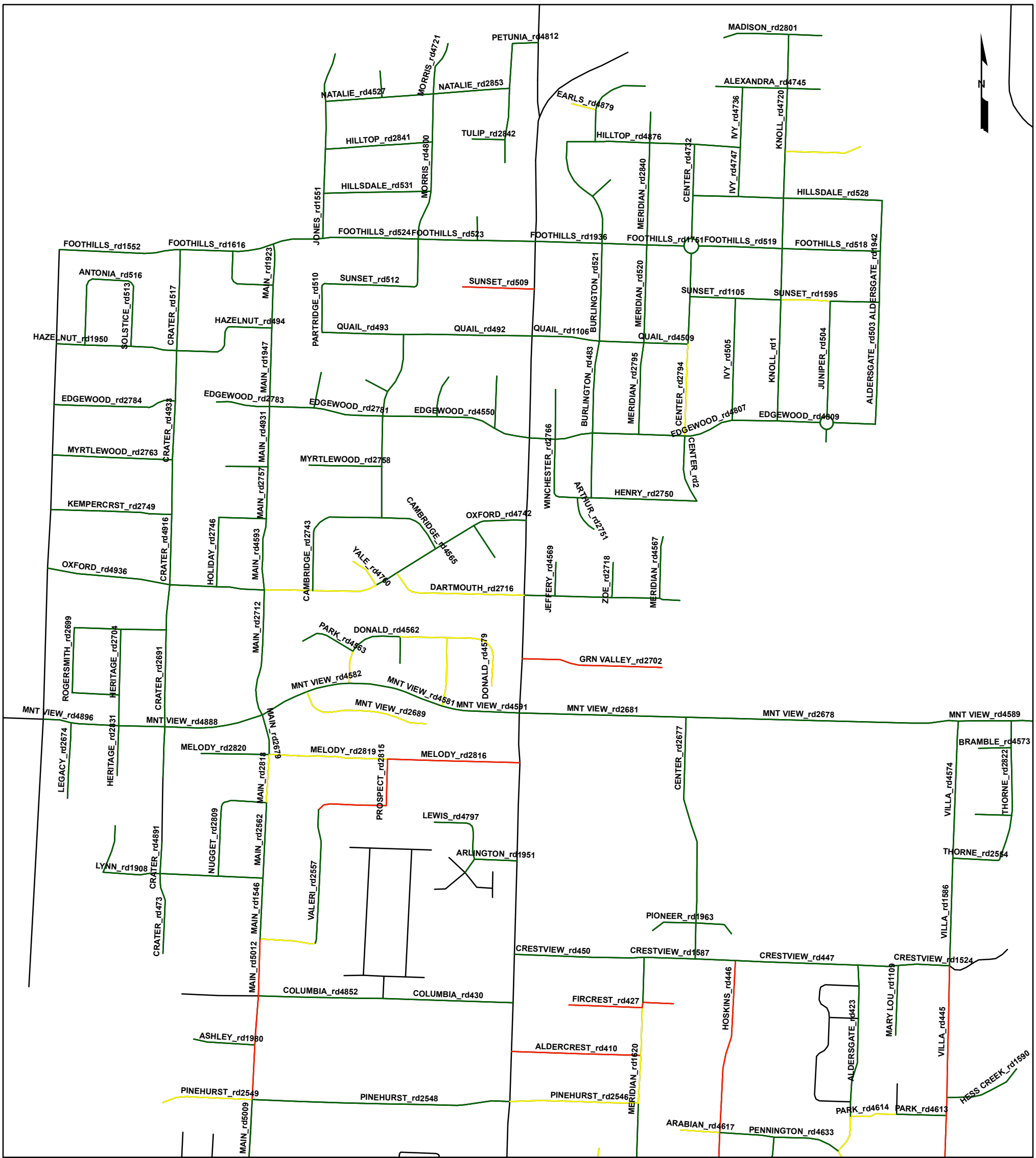
Table 1 - Section Condtion Report Cont.

BranchID	Section ID	Rank	Surface	Area (SqFt)	Last Construction Date	Last Inspection Date	Age At Inspection	PCI	Rating
WILLAMETTE (WILLAMETTE ST)	rd1744	T	AC	11,293	5/22/1953	1/20/2014	61	9	Poor
WILLAMETTE (WILLAMETTE ST)	rd1783	T	AC	10,180	1/14/1980	1/13/2014	34	49	Poor
WILLAMETTE (WILLAMETTE ST)	rd1801	T	AC	9,824	9/20/1964	1/20/2014	50	26	Poor
WILLAMETTE (WILLAMETTE ST)	rd1807	T	AC	8,640	9/21/1962	1/20/2014	52	23	Poor
WILLAMETTE (WILLAMETTE ST)	rd1817	T	AC	11,783	5/22/1955	1/20/2014	59	12	Poor
WILLAMETTE (WILLAMETTE ST)	rd1839	T	GR	6,721	Unknown	N/A	N/A	N/A	N/A
WILLOW (WILLOW DR)	rd2631	T	AC	26,333	1/4/1990	1/4/2014	24	64	Fair
WILLOW (WILLOW DR)	rd4772	T	AC	8,501	1/4/1982	1/4/2014	32	52	Poor
WILLOW OAK (WILLOW OAK DR)	rd4901	T	AC	6,432	6/1/2003	1/9/2014	11	94	Good
WINCHESTER (WINCHESTER DR)	rd2766	T	AC	9,894	6/1/1996	12/17/2013	17	88	Good
WINCHESTER (WINCHESTER DR)	rd4880	T	AC	8,236	6/1/1996	12/17/2013	17	84	Good
WOOD (WOOD CT)	rd1514	T	AC	6,640	6/1/2005	1/9/2014	9	91	Good
WYNOOSKI (WYNOOSKI ST)	rd1786	S	AC	21,262	1/13/1998	1/13/2014	16	60	Fair
WYNOOSKI (WYNOOSKI ST)	rd1939	S	AC	3,973	4/3/1989	1/20/2014	25	38	Poor
WYNOOSKI (WYNOOSKI ST)	rd1940	S	AC	13,594	8/28/1987	1/20/2014	27	34	Poor
YALE (YALE CT)	rd4760	T	AC	5,906	8/27/1990	12/26/2013	23	65	Fair
ZIMRI (NE ZIMRI DR)	rd2747	S	AC	30,189	6/1/2007	1/4/2014	7	95	Good
ZOE (ZOE CT)	rd2718	T	AC	6,303	12/18/1997	12/18/2013	16	76	Good

Table 2 – Summary of Section Condition Report

Age Category	Average Age at Inspection	Total Area (SqFt)	Number of Sections	Arithmetic Average PCI	PCI Standard Deviation	Area Weight Average PCI	Rating
0 - 02	0.48	1,227,11	139	99	3	98	Good
03 - 05	3.95	1,058,17	85	91	6	92	Good
06 - 10	7.94	2,716,45	202	91	5	91	Good
11 - 15	12.36	1,243,70	113	85	9	84	Good
16 - 20	17.8	1,838,20	167	79	11	77	Good
21 - 25	22.04	931,032	84	69	15	68	Fair
26 - 30	28.12	488,771	41	54	10	53	Poor
31 - 35	32.75	412,539	36	60	16	60	Fair
36 - 40	37.77	474,495	48	41	8	42	Poor
over 40	50.07	1,255,09	126	26	10	26	Poor
All	18	11,645,5	1041	74	25	73	Good

APPENDIX B - SECTION CONDITION MAP

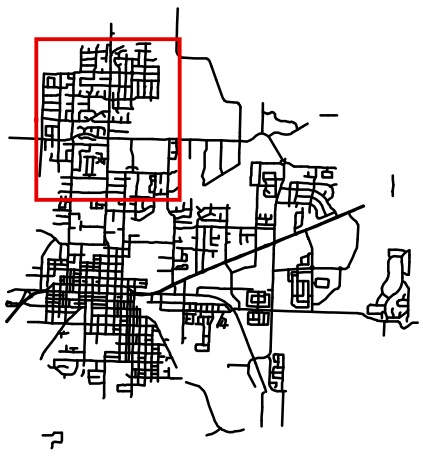


Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 550 feet

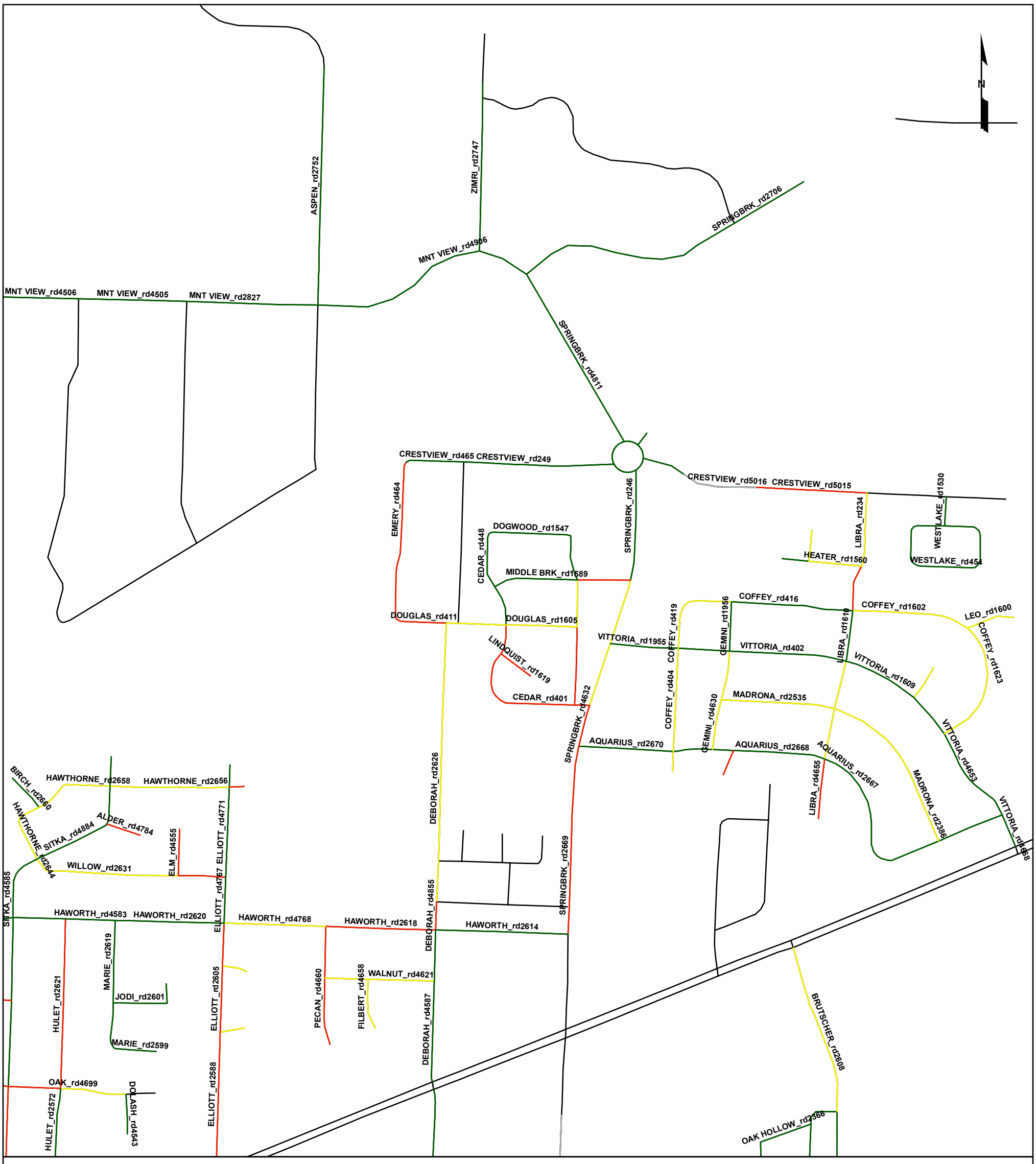


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
1



Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

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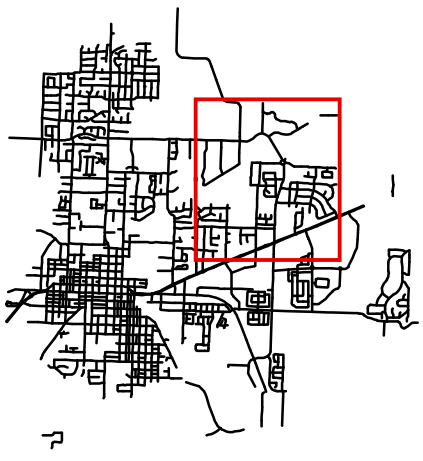
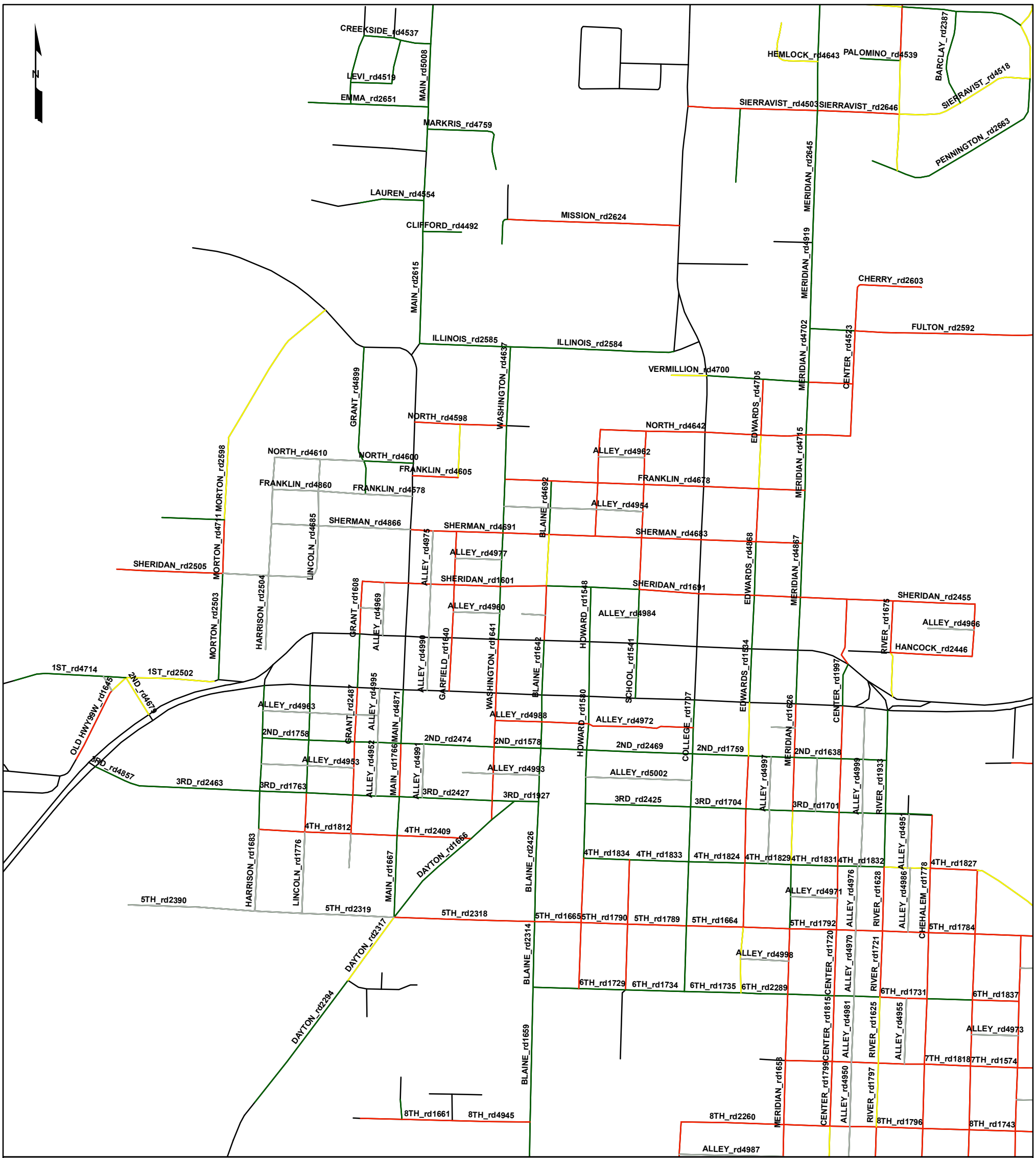


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
2



Legend

2014 Survey PCI Results

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- Poor (0 - 55)
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- Not Managed by Newberg

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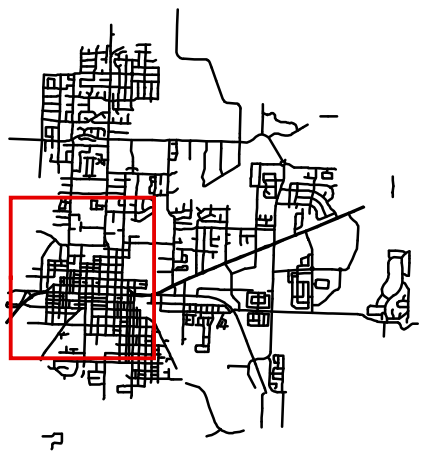


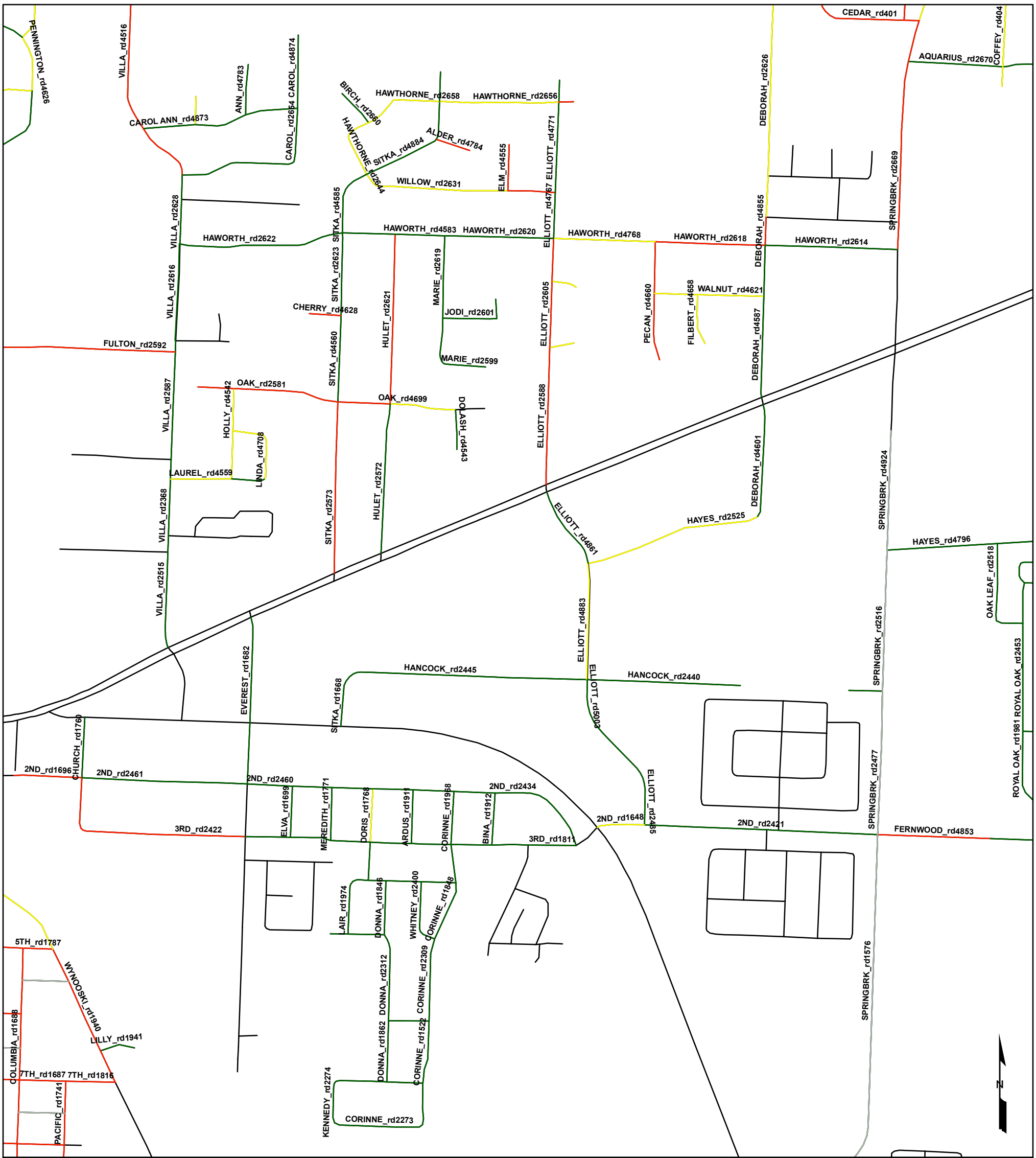
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014

Job No: 13075

STREET INVENTORY AND
2014 PCI RATING
Newberg, Oregon

FIGURE
3



Legend

2014 Survey PCI Results

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- Poor (0 - 55)
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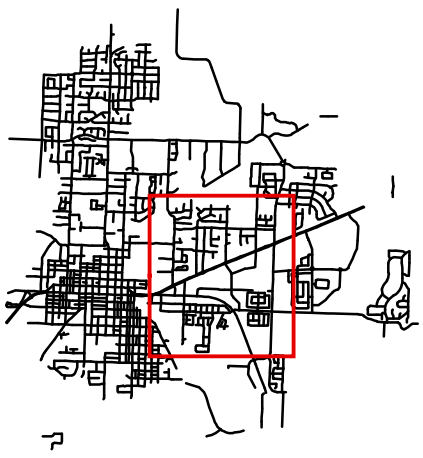
- Not Managed by Newberg

1 inch = 550 feet

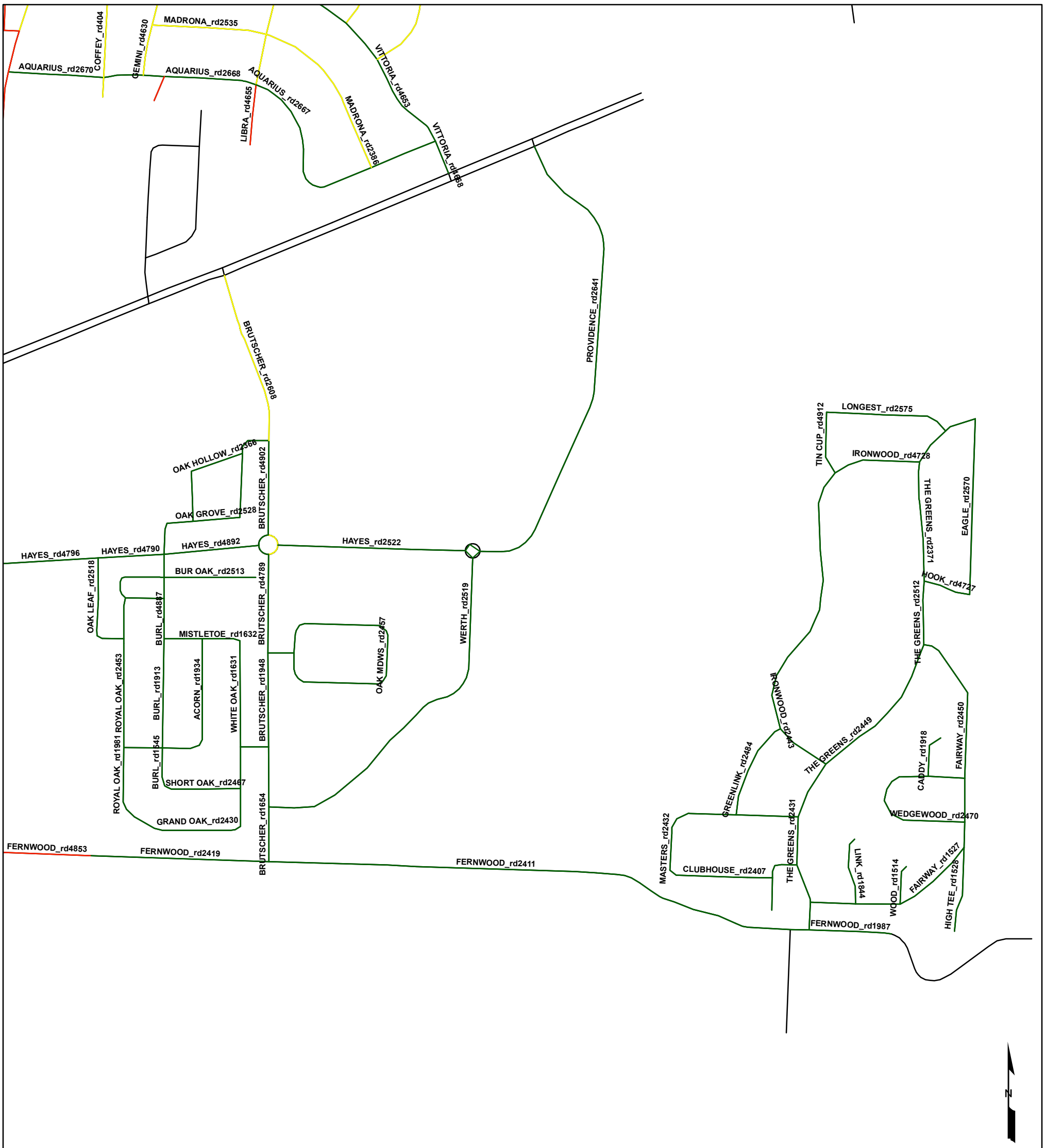


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
4

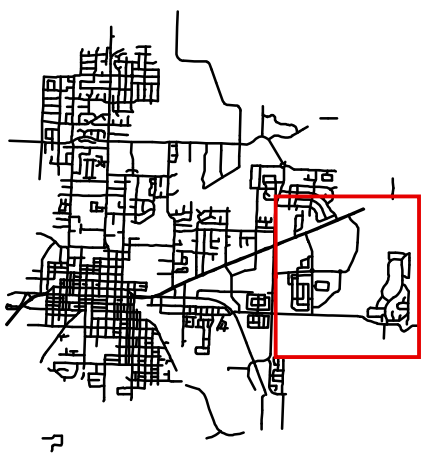


Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 550 feet

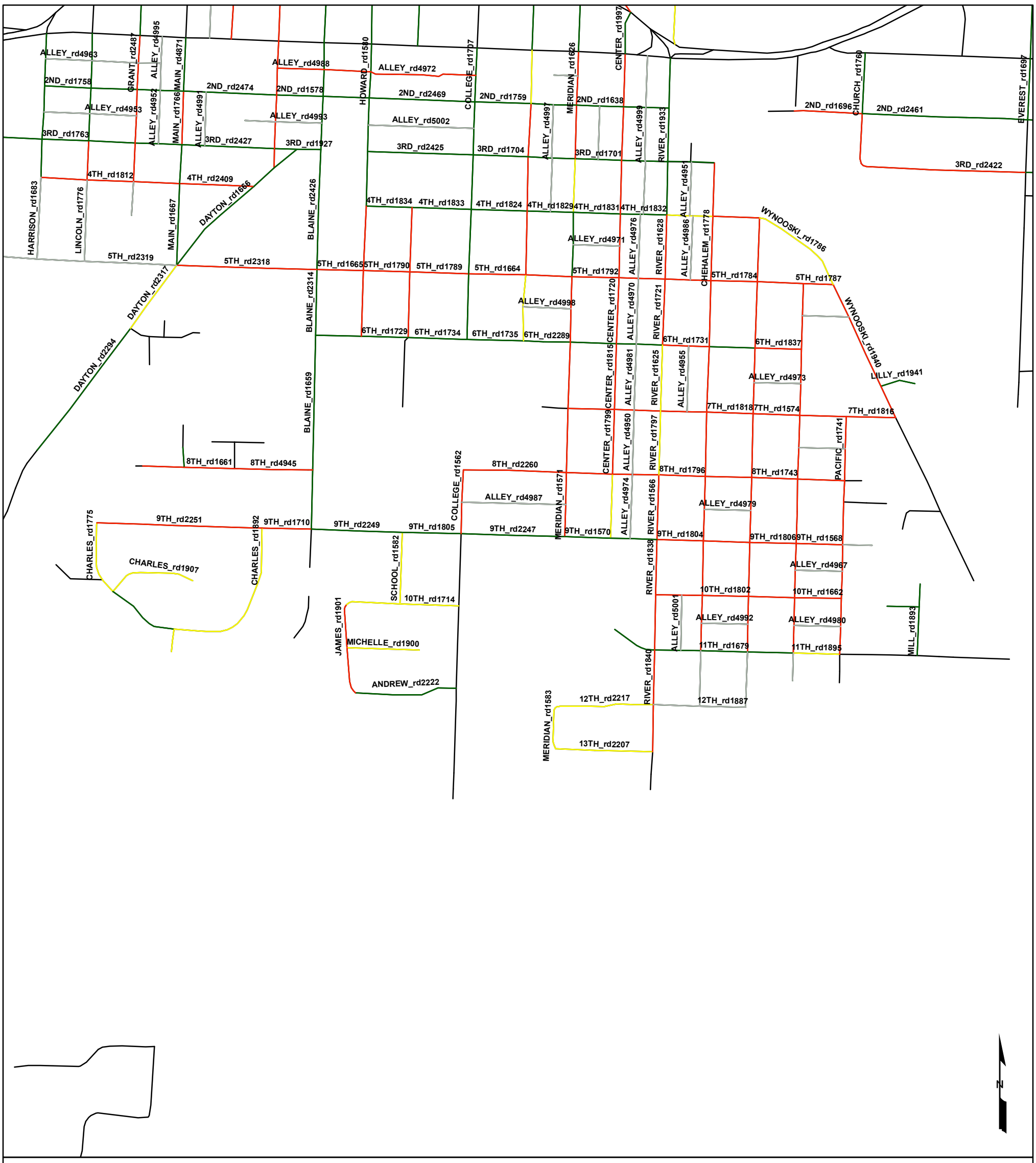


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
5

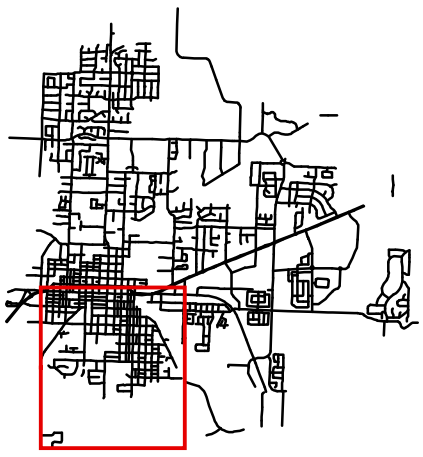


Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 550 feet

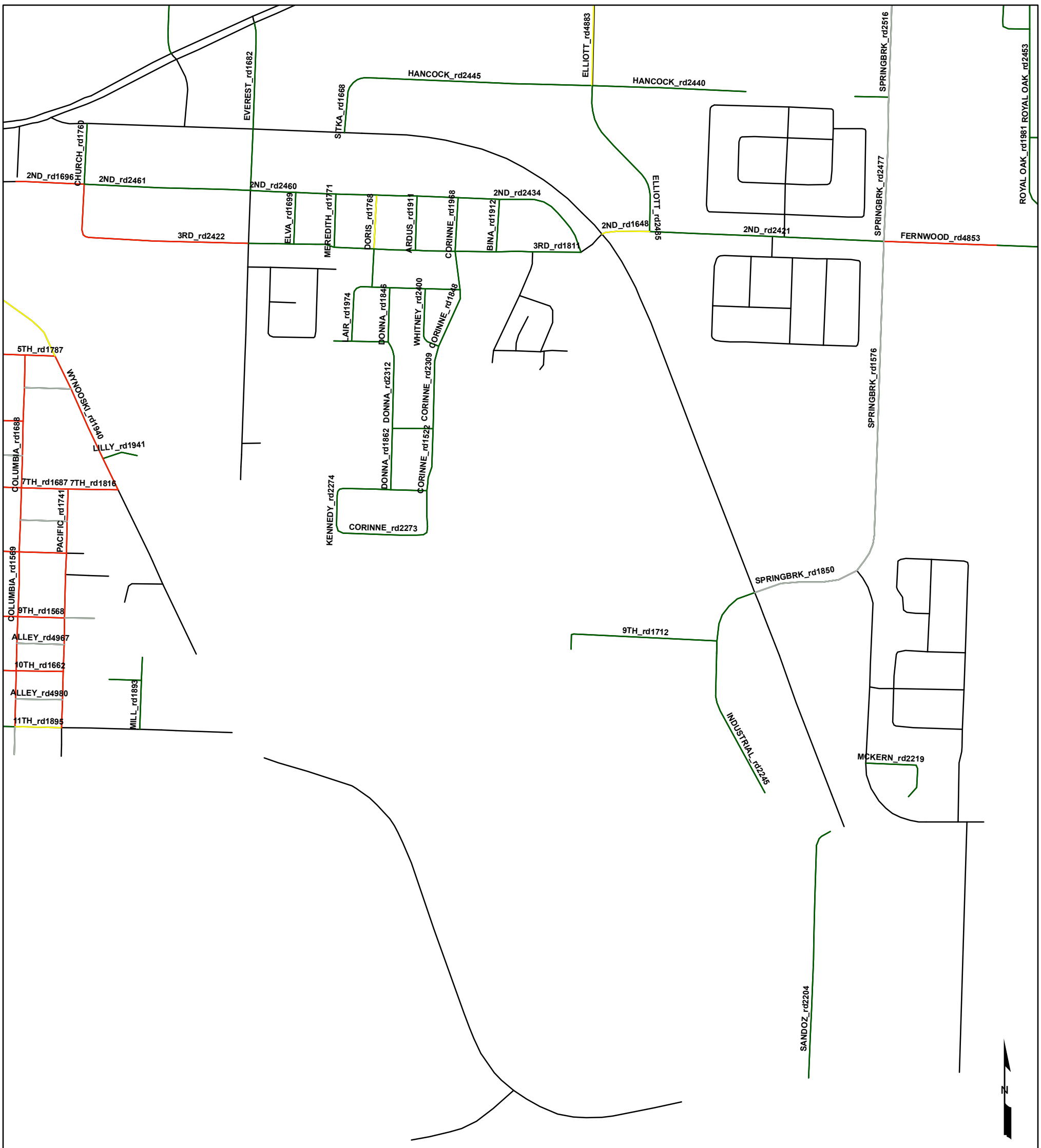


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
6

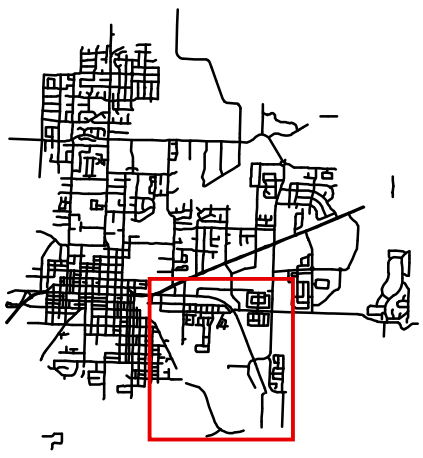


Legend

2014 Survey PCI Results

- Good (71 - 100)
- Fair (56 - 70)
- Poor (0 - 55)
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 550 feet



PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

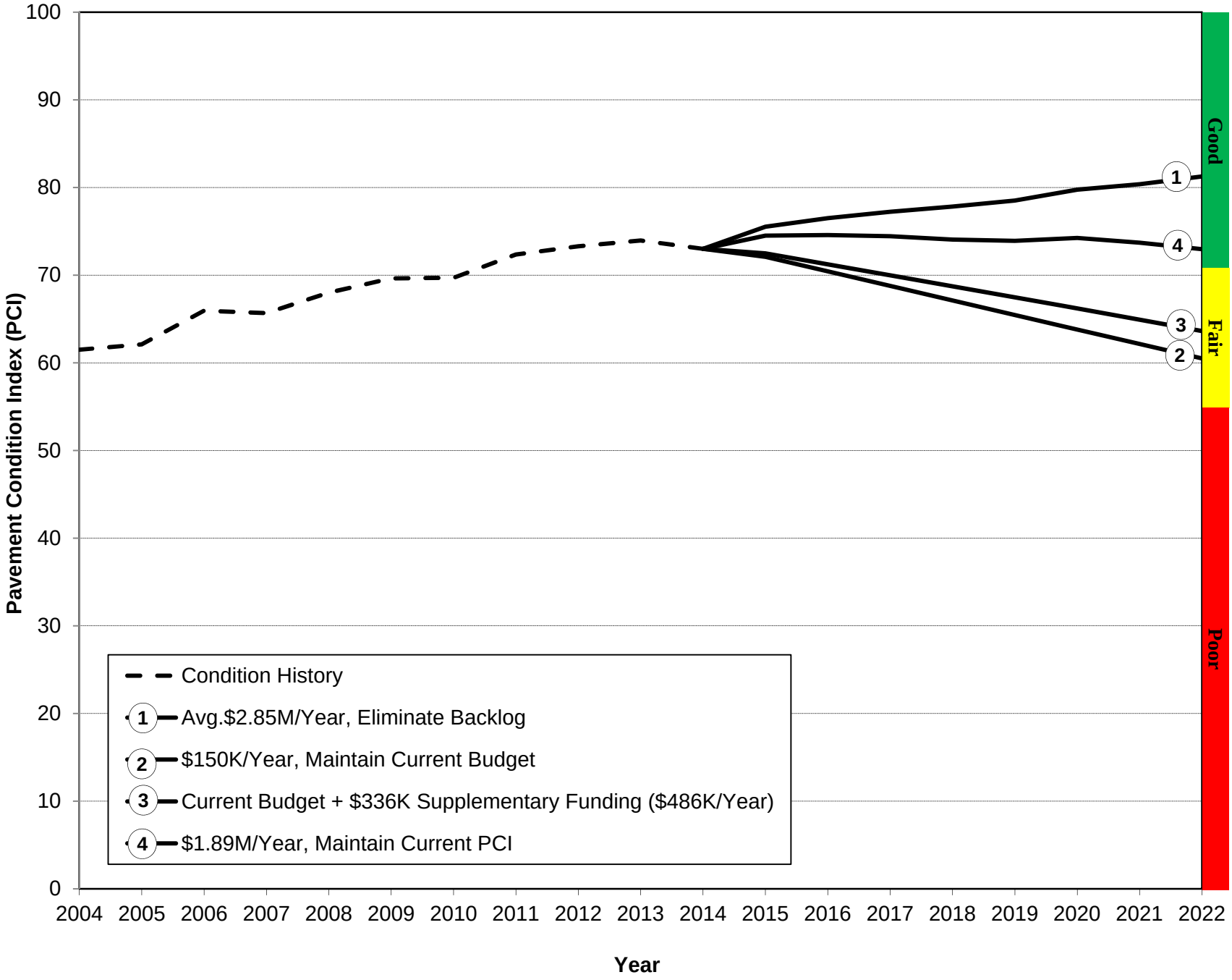
Date: 4/12/2014 Job No: 13075

STREET INVENTORY AND 2014 PCI RATING
Newberg, Oregon

FIGURE
7

APPENDIX C - MAINTENANCE AND REPAIR ANALYSIS

Figure 1 - Effect of M&R Budget Scenarios on PCI



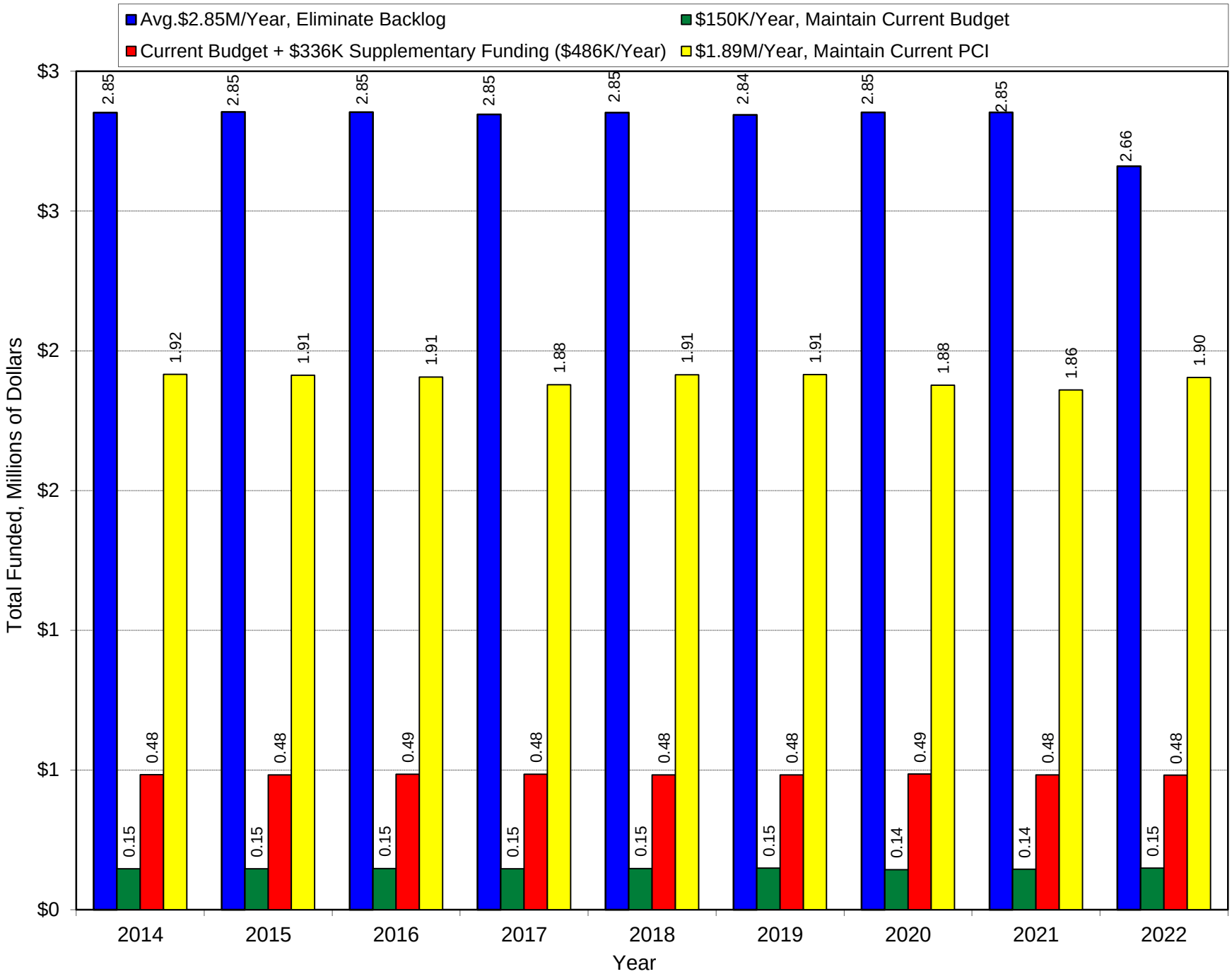


Figure 2 - Annual Funded Budget Amount for Each M&R Scenario

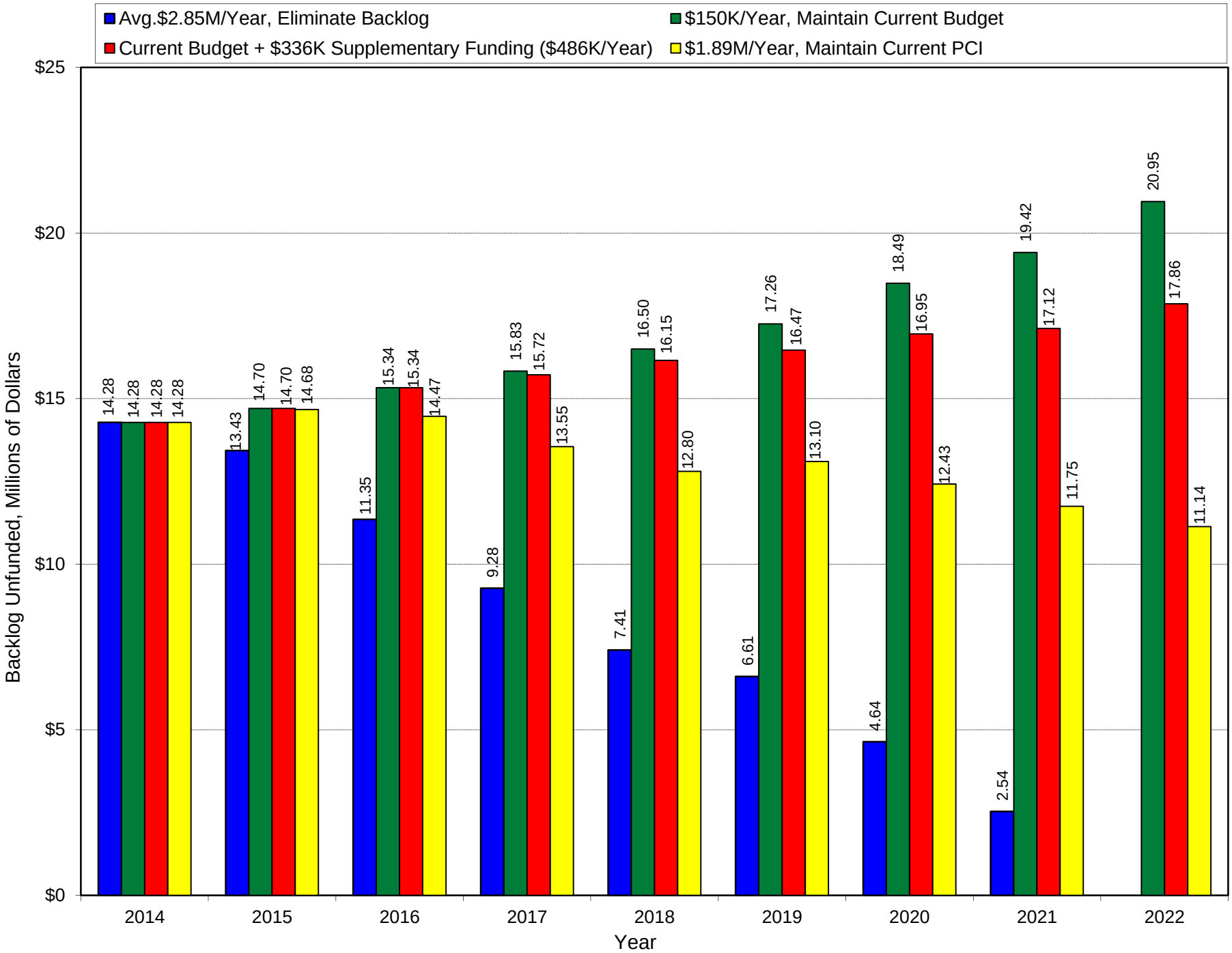


Figure 3 - Annual M&R Backlog for Each M&R Scenario

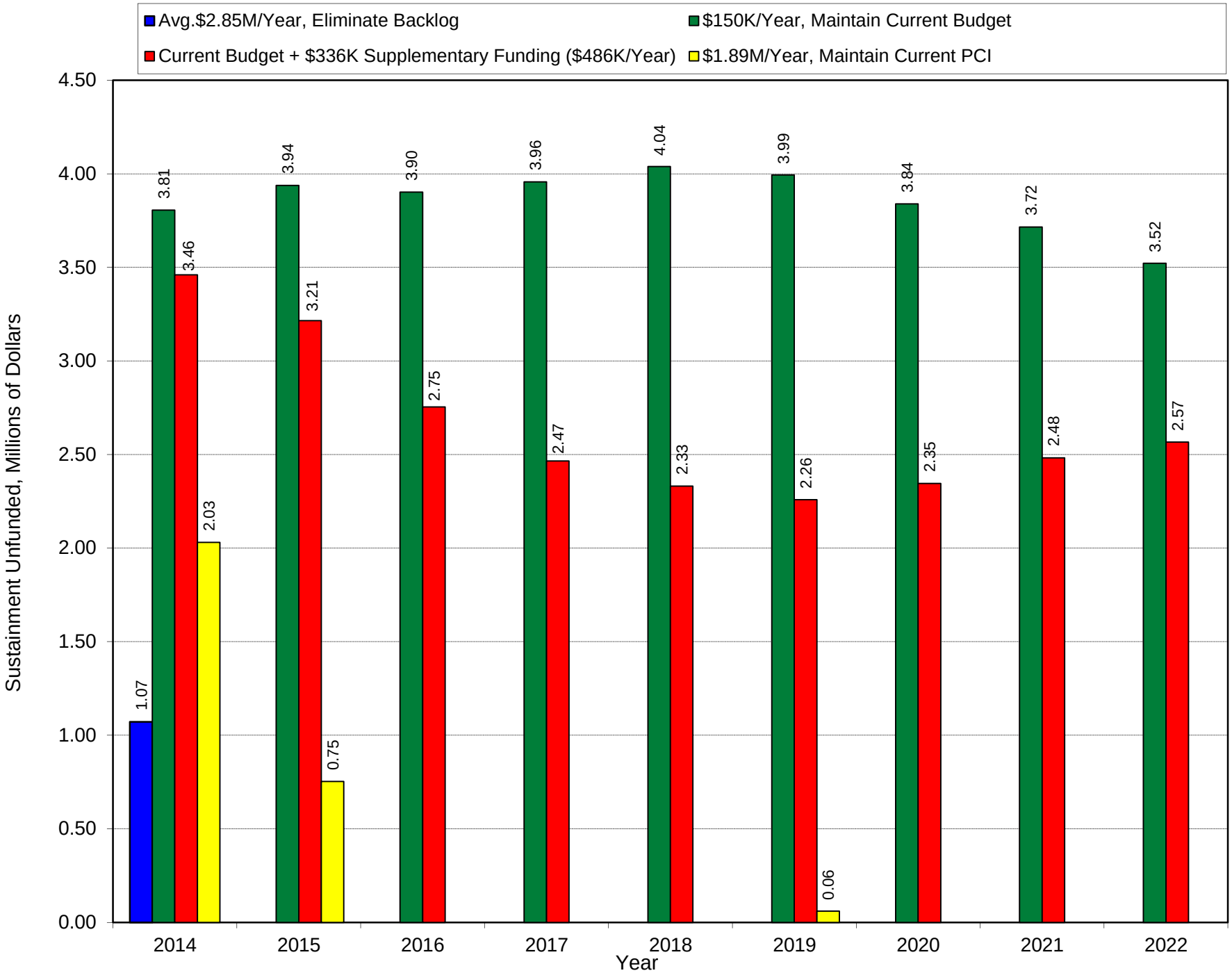


Figure 4 - Annual Unfunded M&R Sustainment for Each Budget Scenario

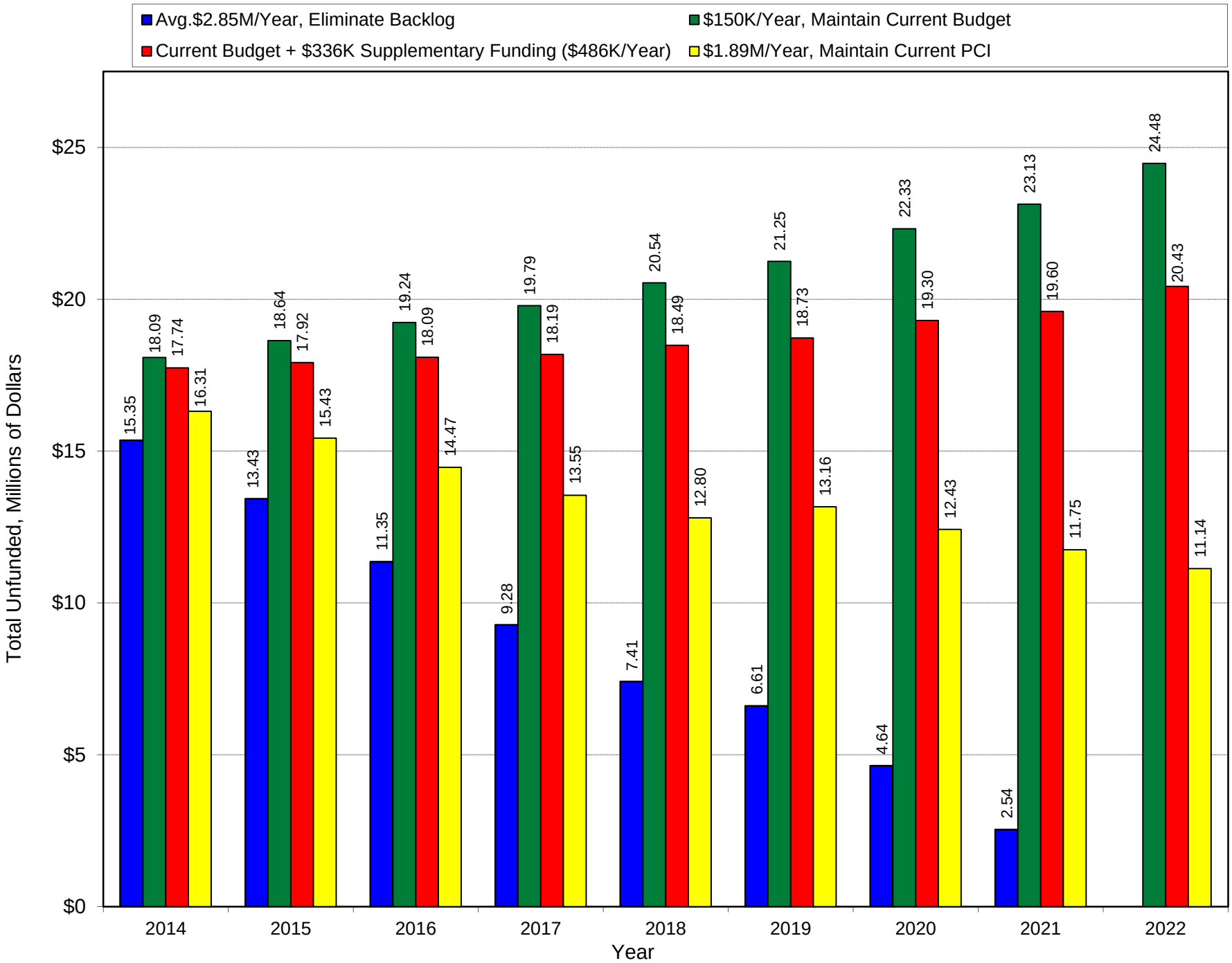


Figure 5 - Total Unfunded M&R for Each Budget Scenario

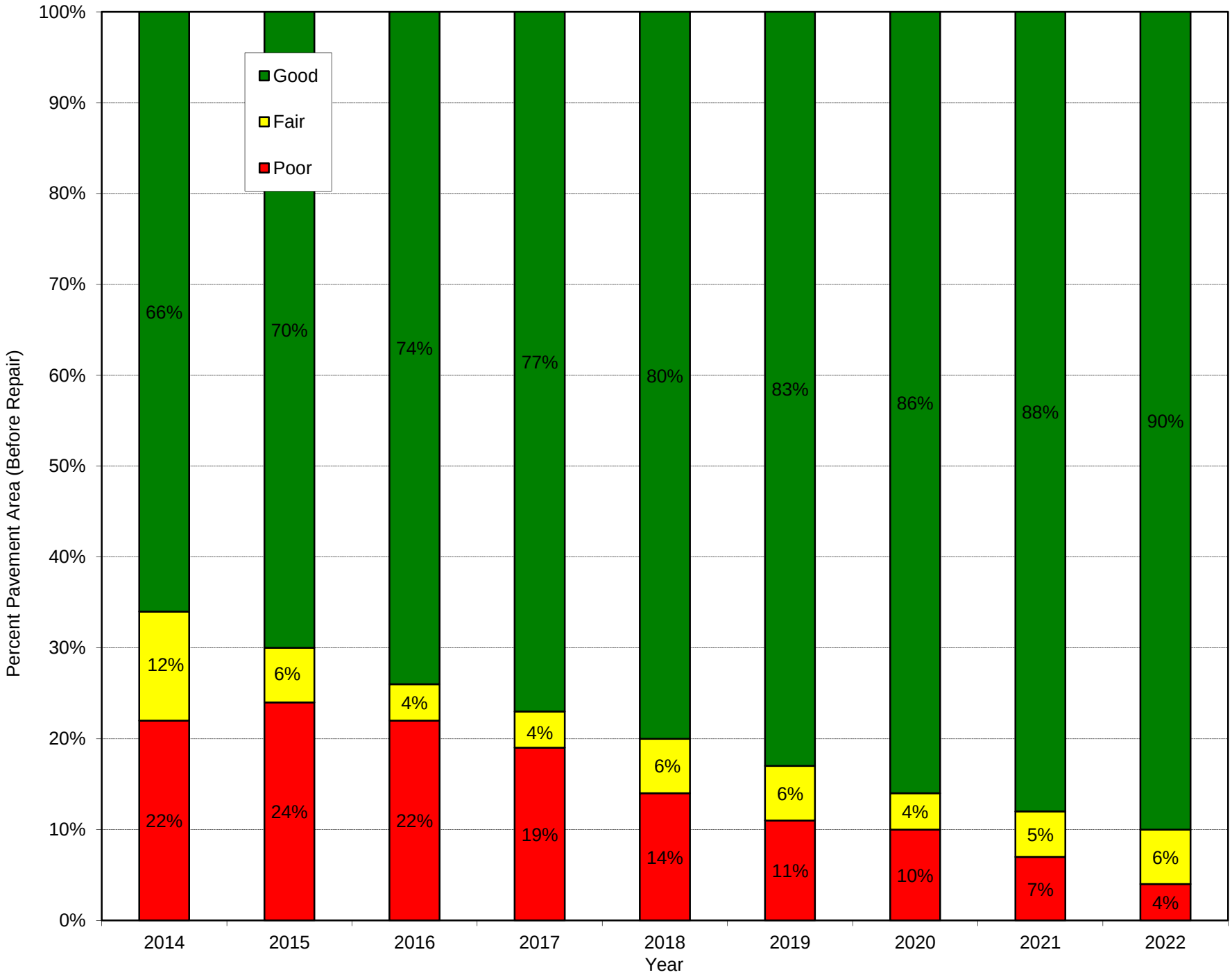


Figure 6 - Budget Scenario 1 - Eliminate Backlog Annual, PCI Rating Distribution

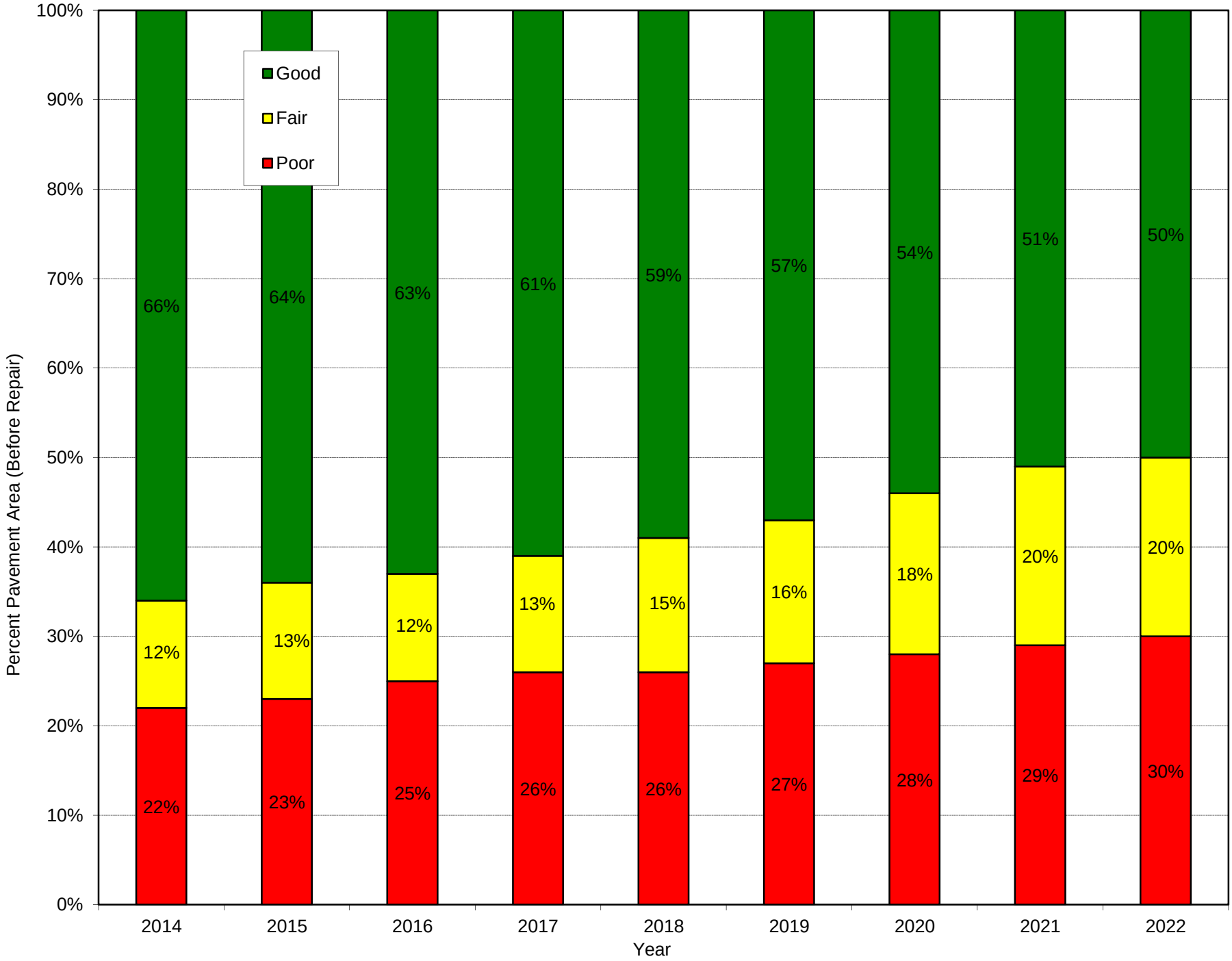


Figure 7 - Budget Scenario 2 - Maintain Current Budget, Annual PCI Rating Distribution

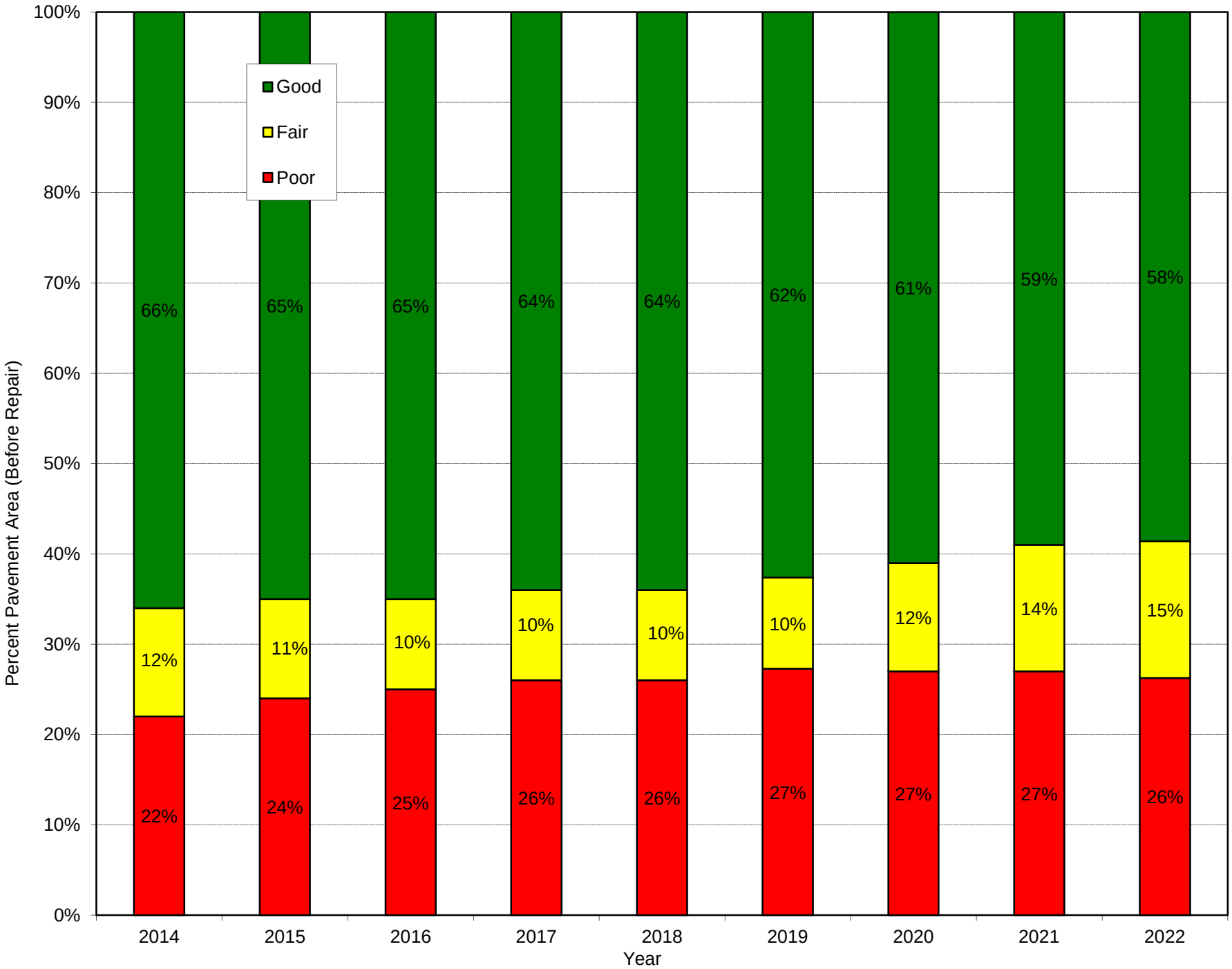


Figure 8 - Budget Scenario 3 - Current Budget + Supplementary Funding, Annual PCI Rating Distribution

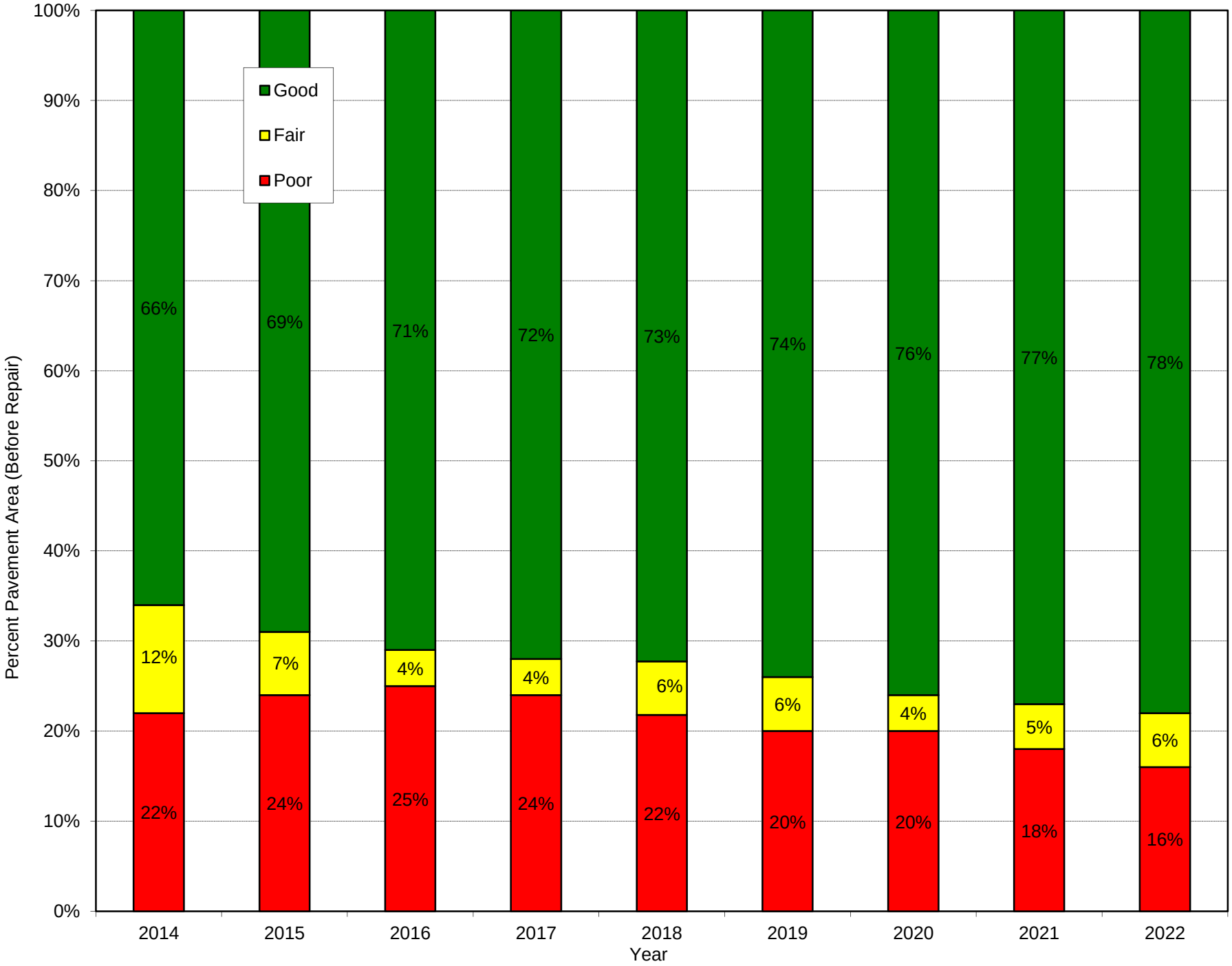
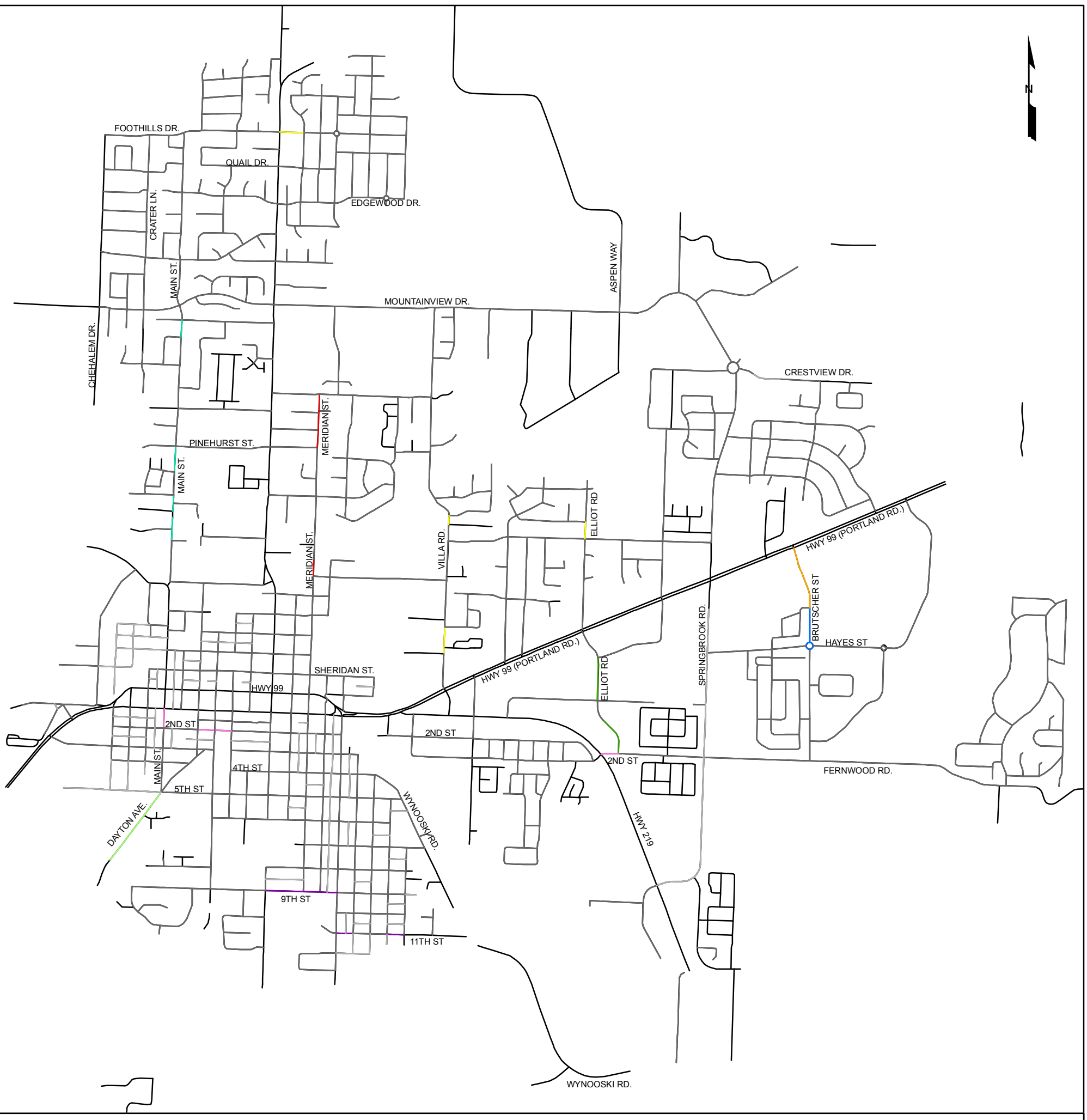


Figure 9 - Budget Scenario 4 - Maintain Current PCI, Annual PCI Rating Distribution

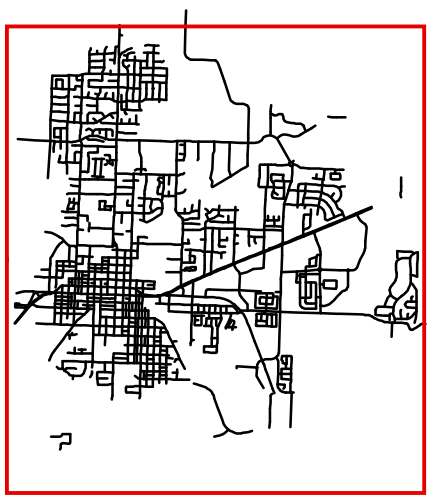
APPENDIX D - MAINTENANCE AND REPAIR RECOMMENDATIONS



Legend

- Nonproject Sections
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 1,600 feet

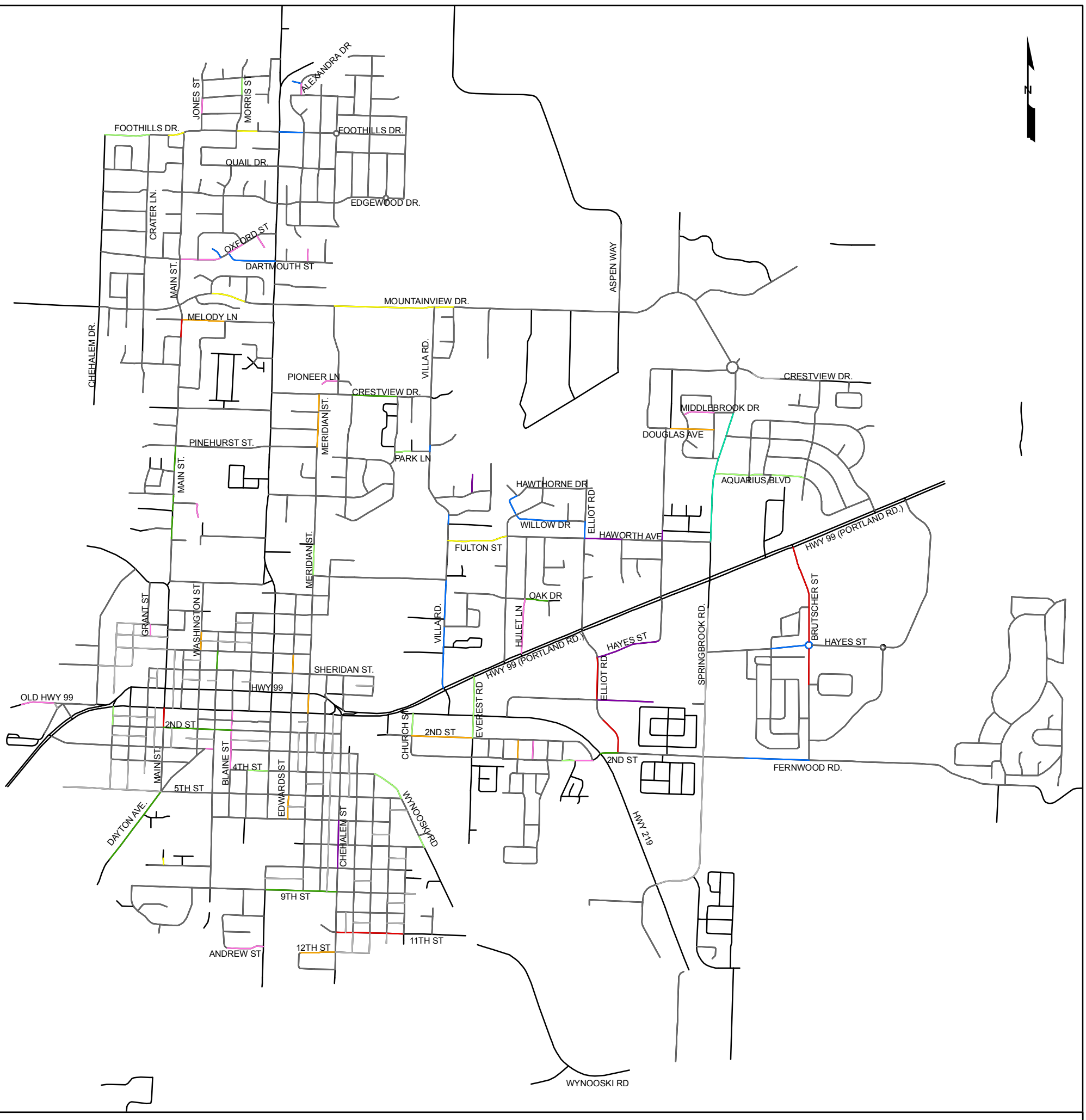


PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

M&R Formulated Projects Based on Current Budget
Newberg, Oregon

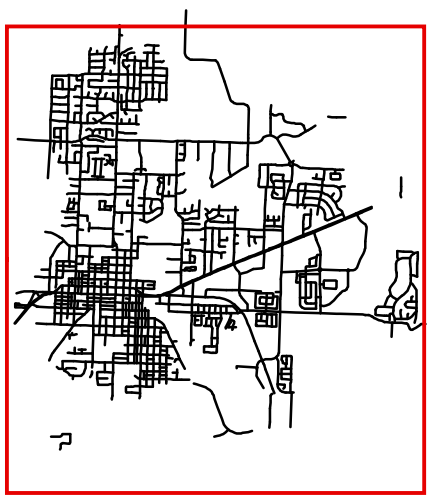
FIGURE
1



Legend

- Nonproject Sections
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- Inventoried/ Not Surveyed
- Not Managed by Newberg

1 inch = 1,600 feet



PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

Date: 4/12/2014 Job No: 13075

M&R Formulated Projects Based on Current Budget + Supplementary Funding
Newberg, Oregon

FIGURE
2

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
10TH rd1714	Surface Treatment					Surface Treatment			
10TH rd1715							Major M&R		
11TH rd1677	Surface Treatment					Surface Treatment			
11TH rd1679	Surface Treatment					Surface Treatment			
11TH rd1681		Major M&R							
11TH rd1895	Major M&R								
11TH rd1899	Surface Treatment					Surface Treatment			
12TH rd2217		Major M&R							
13TH rd2207	Surface Treatment					Surface Treatment			
1ST rd2502							Major M&R		
1ST rd4713	Surface Treatment					Surface Treatment			
1ST rd4714			Major M&R						
2ND rd1578		Major M&R							
2ND rd1627					Surface Treatment				
2ND rd1638					Surface Treatment				
2ND rd1648	Major M&R								
2ND rd1671		Surface Treatment					Surface Treatment		
2ND rd1705		Major M&R							
2ND rd1708					Surface Treatment				
2ND rd1758		Surface Treatment					Surface Treatment		
2ND rd1759					Surface Treatment				
2ND rd1966	Surface Treatment					Surface Treatment			
2ND rd1967	Surface Treatment					Surface Treatment			
2ND rd2421		Surface Treatment					Surface Treatment		
2ND rd2434	Surface Treatment					Surface Treatment			
2ND rd2436	Surface Treatment					Surface Treatment			
2ND rd2438	Surface Treatment					Surface Treatment			
2ND rd2439	Surface Treatment					Surface Treatment			
2ND rd2460	Surface Treatment					Surface Treatment			
2ND rd2461		Major M&R							
2ND rd2469					Surface Treatment				
2ND rd2474		Major M&R							
2ND rd4679	Surface Treatment					Surface Treatment			
3RD rd1515	Surface Treatment					Surface Treatment			
3RD rd1561					Surface Treatment				
3RD rd1701					Surface Treatment				
3RD rd1704					Surface Treatment				
3RD rd1762					Surface Treatment				
3RD rd1763					Surface Treatment				
3RD rd1770	Surface Treatment					Surface Treatment			
3RD rd1772					Surface Treatment				
3RD rd1773					Surface Treatment				
3RD rd1811			Major M&R						
3RD rd1927			Major M&R						
3RD rd1932					Surface Treatment				
3RD rd2410			Major M&R						
3RD rd2412	Surface Treatment					Surface Treatment			
3RD rd2414	Surface Treatment					Surface Treatment			
3RD rd2416	Surface Treatment					Surface Treatment			
3RD rd2417	Surface Treatment					Surface Treatment			
3RD rd2422								Major M&R	
3RD rd2427					Surface Treatment				

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
3RD rd2463					Surface Treatment				
3RD rd4857					Surface Treatment				
4TH rd1824					Surface Treatment				
4TH rd1825			Major M&R						
4TH rd1827				Major M&R					
4TH rd1829					Surface Treatment				
4TH rd1831					Surface Treatment				
4TH rd1832					Surface Treatment				
4TH rd1833			Major M&R						
4TH rd1834					Surface Treatment				
5TH rd1790								Major M&R	
5TH rd2318								Major M&R	
6TH rd1722					Surface Treatment				
6TH rd1723					Surface Treatment				
6TH rd1726					Surface Treatment				
6TH rd1732					Surface Treatment				
6TH rd1734					Surface Treatment				
6TH rd1735					Surface Treatment				
6TH rd2289					Surface Treatment				
8TH rd2264									Major M&R
9TH rd1567		Major M&R							
9TH rd1570		Major M&R							
9TH rd1712	Surface Treatment					Surface Treatment			
9TH rd2247		Major M&R							
9TH rd2251									Major M&R
ALDERSGATE rd1588	Surface Treatment					Surface Treatment			
ALDERSGATE rd1606	Surface Treatment					Surface Treatment			
ALDERSGATE rd1943	Surface Treatment					Surface Treatment			
ALDERSGATE rd423	Surface Treatment					Surface Treatment			
ALDERSGATE rd4615	Surface Treatment					Surface Treatment			
ALDERSGATE rd4629	Surface Treatment					Surface Treatment			
ALDERSGATE rd503	Surface Treatment					Surface Treatment			
ALEXANDRA rd2854	Surface Treatment					Surface Treatment			
ALEXANDRA rd4494			Major M&R						
ALEXANDRA rd4734	Surface Treatment					Surface Treatment			
ALLEY rd4961						Major M&R			
ALLEY rd4988									Major M&R
ANDREW rd2222			Major M&R						
ANN rd4783			Major M&R						
AQUARIUS rd2667					Surface Treatment				
AQUARIUS rd2668			Major M&R						
AQUARIUS rd2670			Major M&R						
AQUARIUS rd4521					Surface Treatment				
AQUARIUS rd4535			Major M&R						
AQUARIUS rd4631					Surface Treatment				
ARABIAN rd4617	Surface Treatment					Surface Treatment			
ARDUS rd1911			Major M&R						
ARGYLE rd1102	Surface Treatment					Surface Treatment			
ARGYLE rd1103	Surface Treatment					Surface Treatment			
ARLINGTON rd1951	Surface Treatment					Surface Treatment			
ARTHUR rd2751	Surface Treatment					Surface Treatment			
BANNER rd2690	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
BARCLAY rd2387	Surface Treatment					Surface Treatment			
BINA rd1912	Surface Treatment					Surface Treatment			
BIRCH rd2660	Surface Treatment					Surface Treatment			
BLAINE rd1538								Major M&R	
BLAINE rd4671		Major M&R							
BLAINE rd4692	Surface Treatment					Surface Treatment			
BRAMBLE rd4573	Surface Treatment					Surface Treatment			
BRIAR rd4529	Surface Treatment					Surface Treatment			
BRUTSCHER rd1654	Surface Treatment					Surface Treatment			
BRUTSCHER rd1655	Surface Treatment					Surface Treatment			
BRUTSCHER rd1948	Surface Treatment					Surface Treatment			
BRUTSCHER rd2608	Major M&R								
BRUTSCHER rd4789		Major M&R							
BRUTSCHER rd4902		Major M&R							
BRUTSCHER rd4927	Major M&R								
BRUTSCHER rd4929	Major M&R								
BUCKLEY rd4590					Major M&R				
BUR OAK rd2513	Surface Treatment					Surface Treatment			
BUR OAK rd2514	Surface Treatment					Surface Treatment			
BURL rd1545	Surface Treatment					Surface Treatment			
BURL rd4813	Surface Treatment					Surface Treatment			
BURL rd4814	Surface Treatment					Surface Treatment			
BURL rd4887	Surface Treatment					Surface Treatment			
BURLINGTON rd1969	Surface Treatment					Surface Treatment			
BURLINGTON rd4739	Surface Treatment					Surface Treatment			
BURLINGTON rd483	Surface Treatment					Surface Treatment			
BURLINGTON rd521	Surface Treatment					Surface Treatment			
CADDY rd1918	Surface Treatment					Surface Treatment			
CAMBRIDGE rd2743	Surface Treatment					Surface Treatment			
CAMBRIDGE rd4565	Surface Treatment					Surface Treatment			
CAMDEN rd1959	Surface Treatment					Surface Treatment			
CAROL ANN rd4507	Surface Treatment					Surface Treatment			
CAROL ANN rd4873	Surface Treatment					Surface Treatment			
CAROL ANN rd4875	Surface Treatment					Surface Treatment			
CAROL rd2654	Surface Treatment					Surface Treatment			
CAROL rd4874	Surface Treatment					Surface Treatment			
CEDAR rd1604	Surface Treatment					Surface Treatment			
CEDAR rd401								Major M&R	
CEDAR rd448	Surface Treatment					Surface Treatment			
CENTER rd1565		Major M&R							
CENTER rd1799									Major M&R
CENTER rd1953	Surface Treatment					Surface Treatment			
CENTER rd1970	Surface Treatment					Surface Treatment			
CENTER rd1971	Surface Treatment					Surface Treatment			
CENTER rd1972	Surface Treatment					Surface Treatment			
CENTER rd1997	Surface Treatment					Surface Treatment			
CENTER rd2	Surface Treatment					Surface Treatment			
CENTER rd2677	Surface Treatment					Surface Treatment			
CENTER rd2794	Surface Treatment					Surface Treatment			
CENTER rd4680								Major M&R	
CENTER rd4732	Surface Treatment					Surface Treatment			
CHARLES rd1774	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
CHARLES rd1775	Surface Treatment					Surface Treatment			
CHARLES rd1891	Surface Treatment					Surface Treatment			
CHARLES rd1892	Surface Treatment					Surface Treatment			
CHARLES rd1907	Surface Treatment					Surface Treatment			
CHERRY rd2603								Major M&R	
CHERRY rd4628									Major M&R
CHURCH rd1760			Major M&R						
CLEARBROOK rd4549	Surface Treatment					Surface Treatment			
CLUBHOUSE rd2407	Surface Treatment					Surface Treatment			
COFFEY rd1602	Surface Treatment					Surface Treatment			
COFFEY rd1623	Surface Treatment					Surface Treatment			
COFFEY rd404							Major M&R		
COFFEY rd416	Surface Treatment					Surface Treatment			
COFFEY rd419		Major M&R							
COFFEY rd4545				Major M&R					
COLLEGE rd1788		Surface Treatment					Surface Treatment		
COLUMBIA rd430		Surface Treatment					Surface Treatment		
COLUMBIA rd4852		Surface Treatment					Surface Treatment		
CORINNE rd1968	Surface Treatment					Surface Treatment			
CORINNE rd2309	Surface Treatment					Surface Treatment			
CRATER rd2759	Surface Treatment					Surface Treatment			
CRATER rd4795	Surface Treatment					Surface Treatment			
CRATER rd4891	Surface Treatment					Surface Treatment			
CRATER rd4910	Surface Treatment					Surface Treatment			
CRATER rd4916	Surface Treatment					Surface Treatment			
CRATER rd517	Surface Treatment					Surface Treatment			
CREEKSIDE rd2673	Surface Treatment					Surface Treatment			
CREEKSIDE rd4520	Surface Treatment					Surface Treatment			
CREEKSIDE rd4537	Surface Treatment					Surface Treatment			
CREEKSIDE rd4538	Surface Treatment					Surface Treatment			
CREEKSIDE rd4898	Surface Treatment					Surface Treatment			
CRESTVIEW rd1524	Surface Treatment					Surface Treatment			
CRESTVIEW rd1525	Surface Treatment					Surface Treatment			
CRESTVIEW rd1587					Surface Treatment				
CRESTVIEW rd1592					Surface Treatment				
CRESTVIEW rd1867	Surface Treatment					Surface Treatment			
CRESTVIEW rd249	Surface Treatment					Surface Treatment			
CRESTVIEW rd447		Major M&R							
CRESTVIEW rd450					Surface Treatment				
CRESTVIEW rd459	Surface Treatment					Surface Treatment			
CRESTVIEW rd5015					Major M&R				
DARTMOUTH rd2709	Surface Treatment					Surface Treatment			
DARTMOUTH rd2716		Major M&R							
DARTMOUTH rd4568	Surface Treatment					Surface Treatment			
DARTMOUTH rd4570	Surface Treatment					Surface Treatment			
DARTMOUTH rd4571	Surface Treatment					Surface Treatment			
DAYTON rd1666	Surface Treatment					Surface Treatment			
DAYTON rd2294		Major M&R							
DAYTON rd2317	Major M&R								
DEBORAH rd2626			Major M&R						
DEBORAH rd4587						Surface Treatment			
DEBORAH rd4601					Surface Treatment				

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
DEBORAH rd4620						Surface Treatment			
DEBORAH rd4855			Major M&R						
DOGWOOD rd1547	Surface Treatment					Surface Treatment			
DOLASH rd4543	Surface Treatment					Surface Treatment			
DONALD rd4530	Surface Treatment					Surface Treatment			
DONALD rd4562	Surface Treatment					Surface Treatment			
DONALD rd4579		Major M&R							
DONALD rd4580	Surface Treatment					Surface Treatment			
DORIS rd1768		Major M&R							
DOUGLAS rd1605		Major M&R							
DOUGLAS rd1629		Major M&R							
DOUGLAS rd1630		Major M&R							
DOUGLAS rd411				Major M&R					
EARLS rd4879		Major M&R							
EDGEWOOD rd2781	Surface Treatment					Surface Treatment			
EDGEWOOD rd2782	Surface Treatment					Surface Treatment			
EDGEWOOD rd2783					Surface Treatment				
EDGEWOOD rd4511	Surface Treatment					Surface Treatment			
EDGEWOOD rd4515	Surface Treatment					Surface Treatment			
EDGEWOOD rd4550	Surface Treatment					Surface Treatment			
EDGEWOOD rd4551	Surface Treatment					Surface Treatment			
EDGEWOOD rd4552	Surface Treatment					Surface Treatment			
EDGEWOOD rd4785	Surface Treatment					Surface Treatment			
EDGEWOOD rd4786	Surface Treatment					Surface Treatment			
EDGEWOOD rd4872	Surface Treatment					Surface Treatment			
EDWARDS rd1694				Surface Treatment					Surface Treatment
EDWARDS rd1709							Major M&R		
EDWARDS rd1727		Major M&R							
EDWARDS rd1795									Major M&R
EDWARDS rd1823									Major M&R
EDWARDS rd4717		Major M&R							
EDWARDS rd4868		Major M&R							
ELDERBERRY rd2659	Surface Treatment					Surface Treatment			
ELLIOTT rd2485	Major M&R								
ELLIOTT rd2588				Major M&R					
ELLIOTT rd2605					Major M&R				
ELLIOTT rd4652					Major M&R				
ELLIOTT rd4767		Major M&R							
ELLIOTT rd4771	Surface Treatment					Surface Treatment			
ELLIOTT rd4861					Surface Treatment				
ELLIOTT rd4883	Major M&R								
ELLIOTT rd5003					Surface Treatment				
ELM rd4555									Major M&R
ELVA rd1699	Surface Treatment					Surface Treatment			
EMERY rd464				Major M&R					
EVEREST rd1682			Major M&R						
EVEREST rd1697			Major M&R						
FAIRWAY rd1526	Surface Treatment					Surface Treatment			
FAIRWAY rd1527	Surface Treatment					Surface Treatment			
FAIRWAY rd1843	Surface Treatment					Surface Treatment			
FAIRWAY rd1845	Surface Treatment					Surface Treatment			
FAIRWAY rd2450	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
FERNWOOD rd1987					Surface Treatment				
FERNWOOD rd2411					Surface Treatment				
FERNWOOD rd2419		Major M&R							
FERNWOOD rd4853				Major M&R					
FILBERT rd4658								Major M&R	
FOOTHILLS rd1510	Surface Treatment					Surface Treatment			
FOOTHILLS rd1511	Surface Treatment					Surface Treatment			
FOOTHILLS rd1512	Surface Treatment					Surface Treatment			
FOOTHILLS rd1513	Surface Treatment					Surface Treatment			
FOOTHILLS rd1550	Surface Treatment					Surface Treatment			
FOOTHILLS rd1552	Surface Treatment					Surface Treatment			
FOOTHILLS rd1616	Surface Treatment					Surface Treatment			
FOOTHILLS rd1751	Surface Treatment					Surface Treatment			
FOOTHILLS rd1921	Surface Treatment					Surface Treatment			
FOOTHILLS rd1935	Surface Treatment					Surface Treatment			
FOOTHILLS rd1936		Major M&R							
FOOTHILLS rd1989	Surface Treatment					Surface Treatment			
FOOTHILLS rd518	Surface Treatment					Surface Treatment			
FOOTHILLS rd519	Surface Treatment					Surface Treatment			
FOOTHILLS rd523	Surface Treatment					Surface Treatment			
FOOTHILLS rd524		Surface Treatment					Surface Treatment		
FRANKLIN rd4605								Major M&R	
FRONTIER rd1902	Surface Treatment					Surface Treatment			
FULTON rd2592				Major M&R					
FULTON rd4681	Surface Treatment					Surface Treatment			
GARFIELD rd2268	Surface Treatment					Surface Treatment			
GARFIELD rd4604								Major M&R	
GEMINI rd1946							Major M&R		
GEMINI rd1956	Surface Treatment					Surface Treatment			
GEMINI rd4546								Major M&R	
GEMINI rd4630	Surface Treatment						Major M&R		
GRANT rd4575			Major M&R						
GRANT rd4899	Surface Treatment					Surface Treatment			
HANCOCK rd2440			Major M&R						
HANCOCK rd2445	Surface Treatment					Surface Treatment			
HANCOCK rd4798	Surface Treatment					Surface Treatment			
HARRISON rd2493			Major M&R						
HARVARD rd4566			Major M&R						
HAWORTH rd2618					Major M&R				
HAWORTH rd2620	Surface Treatment					Surface Treatment			
HAWORTH rd2622	Surface Treatment					Surface Treatment			
HAWORTH rd4583	Surface Treatment					Surface Treatment			
HAWORTH rd4584	Surface Treatment					Surface Treatment			
HAWORTH rd4768			Major M&R						
HAWTHORNE rd2644		Major M&R							
HAWTHORNE rd2656	Surface Treatment					Surface Treatment			
HAWTHORNE rd2658							Major M&R		
HAYES rd2522	Surface Treatment					Surface Treatment			
HAYES rd2525				Major M&R					
HAYES rd4790	Surface Treatment					Surface Treatment			
HAYES rd4796	Surface Treatment					Surface Treatment			
HAYES rd4892		Major M&R							

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
HAYES rd4920	Major M&R								
HAYES rd4925		Major M&R							
HAZELNUT rd494	Surface Treatment					Surface Treatment			
HEATER rd1556	Surface Treatment					Surface Treatment			
HEATER rd1560					Major M&R				
HEMLOCK rd4643							Major M&R		
HENRY rd2750	Surface Treatment					Surface Treatment			
HENRY rd4740	Surface Treatment					Surface Treatment			
HENRY rd4741	Surface Treatment					Surface Treatment			
HIGH TEE rd1528	Surface Treatment					Surface Treatment			
HILLSDALE rd1944	Surface Treatment					Surface Treatment			
HILLSDALE rd1945	Surface Treatment					Surface Treatment			
HILLSDALE rd528	Surface Treatment					Surface Treatment			
HILLSDALE rd531	Surface Treatment					Surface Treatment			
HILLTOP rd2841	Surface Treatment					Surface Treatment			
HILLTOP rd4495	Surface Treatment					Surface Treatment			
HILLTOP rd4730	Surface Treatment					Surface Treatment			
HILLTOP rd4876	Surface Treatment					Surface Treatment			
HOLIDAY rd2746	Surface Treatment					Surface Treatment			
HOLLY rd4542					Major M&R				
HOLLY rd4709	Surface Treatment					Surface Treatment			
HOLVECK rd1110	Surface Treatment					Surface Treatment			
HOMEWOOD rd4756	Surface Treatment					Surface Treatment			
HOOK rd4727	Surface Treatment					Surface Treatment			
HOSKINS rd2642	Surface Treatment						Major M&R		
HOSKINS rd4501							Major M&R		
HOWARD rd1548	Surface Treatment					Surface Treatment			
HOWARD rd1580			Major M&R						
HOWARD rd1643					Surface Treatment				
HOWARD rd1769			Major M&R						
HOWARD rd1835			Major M&R						
HULET rd2572			Major M&R						
ILLINOIS rd2584	Surface Treatment					Surface Treatment			
ILLINOIS rd2585	Surface Treatment					Surface Treatment			
INDUSTRIAL rd2245	Surface Treatment					Surface Treatment			
IRONWOOD rd1842	Surface Treatment					Surface Treatment			
IRONWOOD rd2443	Surface Treatment					Surface Treatment			
IVY rd4736	Surface Treatment					Surface Treatment			
IVY rd4747	Surface Treatment					Surface Treatment			
IVY rd505	Surface Treatment					Surface Treatment			
JEFFERY rd4569	Surface Treatment					Surface Treatment			
JODI rd2601	Surface Treatment					Surface Treatment			
JONES rd1551	Surface Treatment					Surface Treatment			
JONES rd2851	Surface Treatment					Surface Treatment			
JONES rd4528	Surface Treatment					Surface Treatment			
JONES rd4761			Major M&R						
JUNIPER rd504	Surface Treatment					Surface Treatment			
KEMPERCRST rd2749	Surface Treatment					Surface Treatment			
KENNEDY rd1615	Surface Treatment					Surface Treatment			
KENNEDY rd2274	Surface Treatment					Surface Treatment			
KNOLL rd1	Surface Treatment					Surface Treatment			
KNOLL rd1917	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
KNOLL rd4719	Surface Treatment					Surface Treatment			
KNOLL rd4720	Surface Treatment					Surface Treatment			
KNOLL rd4733	Surface Treatment					Surface Treatment			
LAUREL rd4558	Surface Treatment					Surface Treatment			
LAUREL rd4559	Surface Treatment					Surface Treatment			
LEGACY rd2674	Surface Treatment					Surface Treatment			
LEO rd1600	Surface Treatment					Surface Treatment			
LEVI rd4519	Surface Treatment					Surface Treatment			
LEWIS rd4797	Surface Treatment					Surface Treatment			
LIBRA rd1591					Major M&R				
LIBRA rd1610	Surface Treatment					Surface Treatment			
LIBRA rd234					Major M&R				
LIBRA rd4544	Surface Treatment					Surface Treatment			
LIBRA rd4655								Major M&R	
LINCOLN rd1652				Surface Treatment					Surface Treatment
LINDA rd4708	Surface Treatment					Surface Treatment			
LINDQUIST rd1619								Major M&R	
LINK rd1844	Surface Treatment					Surface Treatment			
LITTLE OAK rd2376	Surface Treatment					Surface Treatment			
LYNN rd1908	Surface Treatment					Surface Treatment			
LYNN rd1977	Surface Treatment					Surface Treatment			
LYNN rd1978	Surface Treatment					Surface Treatment			
MADRONA rd2386							Major M&R		
MADRONA rd2535							Major M&R		
MAIN rd1546					Surface Treatment				
MAIN rd1766				Major M&R					
MAIN rd1922	Surface Treatment					Surface Treatment			
MAIN rd1923	Surface Treatment					Surface Treatment			
MAIN rd1947					Surface Treatment				
MAIN rd2562	Surface Treatment					Surface Treatment			
MAIN rd2615	Surface Treatment					Surface Treatment			
MAIN rd2627		Major M&R							
MAIN rd2679	Surface Treatment					Surface Treatment			
MAIN rd2712	Surface Treatment					Surface Treatment			
MAIN rd2757	Surface Treatment					Surface Treatment			
MAIN rd2818	Major M&R								
MAIN rd4593	Surface Treatment					Surface Treatment			
MAIN rd4686		Major M&R							
MAIN rd4871	Major M&R								
MAIN rd5006	Major M&R								
MAIN rd5007		Major M&R							
MAIN rd5008	Surface Treatment					Surface Treatment			
MAIN rd5009	Major M&R								
MAIN rd5010				Major M&R					
MAIN rd5011				Major M&R					
MAIN rd5012			Major M&R						
MAPLE rd4512	Surface Treatment					Surface Treatment			
MARGUERITE rd2636			Major M&R						
MARIE rd2599	Surface Treatment					Surface Treatment			
MARIE rd2619	Surface Treatment					Surface Treatment			
MARKRIS rd4759	Surface Treatment					Surface Treatment			
MEADOW rd4608							Major M&R		

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
MELODY rd2819		Major M&R							
MELODY rd2820	Surface Treatment					Surface Treatment			
MEREDITH rd1771	Surface Treatment					Surface Treatment			
MERIDIAN rd1536	Major M&R								
MERIDIAN rd1583	Surface Treatment					Surface Treatment			
MERIDIAN rd1620	Major M&R								
MERIDIAN rd1626					Major M&R				
MERIDIAN rd1674	Surface Treatment					Surface Treatment			
MERIDIAN rd1686	Surface Treatment					Surface Treatment			
MERIDIAN rd1828					Major M&R				
MERIDIAN rd2610		Major M&R							
MERIDIAN rd2645	Surface Treatment					Surface Treatment			
MERIDIAN rd2795	Surface Treatment					Surface Treatment			
MERIDIAN rd2840	Surface Treatment					Surface Treatment			
MERIDIAN rd449		Major M&R							
MERIDIAN rd4567	Surface Treatment					Surface Treatment			
MERIDIAN rd4702	Surface Treatment					Surface Treatment			
MERIDIAN rd4877	Surface Treatment					Surface Treatment			
MERIDIAN rd4919	Surface Treatment					Surface Treatment			
MERIDIAN rd520	Surface Treatment					Surface Treatment			
MICHELLE rd1900					Major M&R				
MIDDLE BRK rd1589			Major M&R						
MILL rd1893	Surface Treatment					Surface Treatment			
MILL rd1905	Surface Treatment					Surface Treatment			
MILL rd1906	Surface Treatment					Surface Treatment			
MISSION rd4647	Surface Treatment					Surface Treatment			
MISTLETOE rd1632	Surface Treatment					Surface Treatment			
MISTLETOE rd1916	Surface Treatment					Surface Treatment			
MNT VIEW rd2678	Surface Treatment					Surface Treatment			
MNT VIEW rd2681	Surface Treatment					Surface Treatment			
MNT VIEW rd2689	Surface Treatment					Surface Treatment			
MNT VIEW rd2827					Surface Treatment				
MNT VIEW rd4506		Surface Treatment					Surface Treatment		
MNT VIEW rd4588		Surface Treatment					Surface Treatment		
MNT VIEW rd4589	Major M&R								
MNT VIEW rd4591		Surface Treatment					Surface Treatment		
MNT VIEW rd4856	Surface Treatment					Surface Treatment			
MNT VIEW rd4888	Surface Treatment					Surface Treatment			
MNT VIEW rd4895	Surface Treatment					Surface Treatment			
MNT VIEW rd4906	Surface Treatment					Surface Treatment			
MNT VIEW rd4907	Surface Treatment					Surface Treatment			
MORRIS rd1553	Surface Treatment					Surface Treatment			
MORRIS rd4561	Surface Treatment					Surface Treatment			
MORRIS rd4721	Surface Treatment					Surface Treatment			
MORRIS rd4799			Major M&R						
MORRIS rd4800	Surface Treatment					Surface Treatment			
MORTON rd2503	Surface Treatment					Surface Treatment			
MORTON rd2598							Major M&R		
MYRTLEWOOD rd2758	Surface Treatment					Surface Treatment			
MYRTLEWOOD rd4932	Surface Treatment					Surface Treatment			
N MERIDIAN rd5005			Major M&R						
NATALIE rd2853	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
NATALIE rd4527	Surface Treatment					Surface Treatment			
NATALIE rd4722	Surface Treatment					Surface Treatment			
NORTH rd4600	Surface Treatment					Surface Treatment			
NORWOOD rd4659								Major M&R	
NUGGET rd2809	Surface Treatment					Surface Treatment			
OAK GROVE rd2527	Surface Treatment					Surface Treatment			
OAK HOLLOW rd2366	Surface Treatment					Surface Treatment			
OAK KNOLL rd2839	Surface Treatment					Surface Treatment			
OAK LEAF rd2518	Surface Treatment					Surface Treatment			
OAK MDWS rd1949	Surface Treatment					Surface Treatment			
OAK rd4699		Major M&R							
OLD HWY99W rd4664	Surface Treatment					Surface Treatment			
OXFORD rd2713		Major M&R							
OXFORD rd2714		Major M&R							
OXFORD rd4572	Surface Treatment					Surface Treatment			
OXFORD rd4592		Major M&R							
OXFORD rd4594	Surface Treatment					Surface Treatment			
OXFORD rd4607	Surface Treatment					Surface Treatment			
OXFORD rd4742	Surface Treatment					Surface Treatment			
PACIFIC rd1894									Major M&R
PALOMINO rd4539	Surface Treatment					Surface Treatment			
PARK rd4563	Surface Treatment					Surface Treatment			
PARK rd4613	Surface Treatment					Surface Treatment			
PARK rd4614		Major M&R							
PARKSIDE rd4667	Thin Overlay								
PARTRIDGE rd510	Surface Treatment					Surface Treatment			
PEACOCK rd4564	Surface Treatment					Surface Treatment			
PECAN rd4660								Major M&R	
PENNINGTON rd2663	Surface Treatment					Surface Treatment			
PENNINGTON rd4618	Surface Treatment					Surface Treatment			
PENNINGTON rd4626	Surface Treatment					Surface Treatment			
PENNINGTON rd4633	Surface Treatment					Surface Treatment			
PINEHURST rd2546	Surface Treatment					Surface Treatment			
PINEHURST rd2549	Surface Treatment					Major M&R			
PIONEER rd1954	Surface Treatment					Surface Treatment			
PIONEER rd1963			Major M&R						
PRINCETON rd1108	Surface Treatment					Surface Treatment			
PRINCETON rd4510	Surface Treatment					Surface Treatment			
PRINCETON rd4534	Surface Treatment					Surface Treatment			
PRINCETON rd4762	Surface Treatment					Surface Treatment			
PRINCETON rd4766	Surface Treatment					Surface Treatment			
PROVIDENCE rd2641	Surface Treatment					Surface Treatment			
PROVIDENCE rd4928			Surface Treatment					Surface Treatment	
QUAIL rd1106	Surface Treatment					Surface Treatment			
QUAIL rd1107	Surface Treatment					Surface Treatment			
QUAIL rd4509	Surface Treatment					Surface Treatment			
QUAIL rd492	Surface Treatment					Surface Treatment			
QUAIL rd493	Surface Treatment					Surface Treatment			
RED OAK rd1516	Surface Treatment					Surface Treatment			
RED OAK rd1976	Surface Treatment					Surface Treatment			
REDWOOD rd4619	Surface Treatment					Surface Treatment			
RINKES rd1555	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
RIVER rd1566				Major M&R					
RIVER rd1584				Major M&R					
RIVER rd1625	Surface Treatment					Major M&R			
RIVER rd1628				Major M&R					
RIVER rd1721				Major M&R					
RIVER rd1797	Surface Treatment				Major M&R				
RIVER rd1838				Major M&R					
RIVER rd1840				Major M&R					
RIVER rd1898				Major M&R					
RIVER rd1964		Surface Treatment					Surface Treatment		
RIVER rd2008							Major M&R		
ROYAL OAK rd2453	Surface Treatment					Surface Treatment			
ROYAL OAK rd4791	Surface Treatment					Surface Treatment			
SAM PARRET rd1860	Surface Treatment					Surface Treatment			
SANDOZ rd2204	Surface Treatment					Surface Treatment			
SCHOOL rd1541	Surface Treatment					Surface Treatment			
SCHOOL rd1582	Surface Treatment					Surface Treatment			
SCHOOL rd1612	Surface Treatment					Surface Treatment			
SHELLY rd4526	Surface Treatment					Surface Treatment			
SHERIDAN rd1657									Major M&R
SHERIDAN rd1690									Major M&R
SHERIDAN rd1692									Major M&R
SIERRAVIST rd4502	Surface Treatment					Surface Treatment			
SIERRAVIST rd4518	Surface Treatment					Surface Treatment			
SITKA rd1668	Surface Treatment					Surface Treatment			
SITKA rd2623	Surface Treatment					Surface Treatment			
SITKA rd4560	Surface Treatment					Surface Treatment			
SITKA rd4585	Surface Treatment					Surface Treatment			
SITKA rd4884	Surface Treatment					Surface Treatment			
SITKA rd4885	Surface Treatment					Surface Treatment			
SITKA rd4886	Surface Treatment					Surface Treatment			
SPRINGBRK rd1531	Surface Treatment					Surface Treatment			
SPRINGBRK rd1533			Major M&R						
SPRINGBRK rd1554	Surface Treatment					Surface Treatment			
SPRINGBRK rd1559					Major M&R				
SPRINGBRK rd1585	Surface Treatment					Surface Treatment			
SPRINGBRK rd1624			Major M&R						
SPRINGBRK rd246	Surface Treatment					Surface Treatment			
SPRINGBRK rd2669			Major M&R						
SPRINGBRK rd2706	Surface Treatment					Surface Treatment			
SPRINGBRK rd4632			Major M&R						
SPRINGBRK rd4811	Surface Treatment					Surface Treatment			
STEPHANIE rd4878	Surface Treatment					Surface Treatment			
SUNSET rd1105	Surface Treatment					Surface Treatment			
SUNSET rd1594	Surface Treatment					Surface Treatment			
SUNSET rd1595	Surface Treatment					Surface Treatment			
SUNSET rd509									Major M&R
SUNSET rd512	Surface Treatment					Surface Treatment			
THE GREENS rd1991	Surface Treatment					Surface Treatment			
THE GREENS rd1992	Surface Treatment					Surface Treatment			
THE GREENS rd1994	Surface Treatment					Surface Treatment			
THE GREENS rd2371	Surface Treatment					Surface Treatment			

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
THE GREENS rd2431	Surface Treatment					Surface Treatment			
THE GREENS rd2449	Surface Treatment					Surface Treatment			
THE GREENS rd2512	Surface Treatment					Surface Treatment			
THE GREENS rd4913	Surface Treatment					Surface Treatment			
THE GREENS rd4914	Surface Treatment					Surface Treatment			
THORNE rd2554	Surface Treatment					Surface Treatment			
THORNE rd2822	Surface Treatment					Surface Treatment			
THORNE rd4609	Surface Treatment					Surface Treatment			
TIN CUP rd4912	Surface Treatment					Surface Treatment			
VALERI rd2557	Surface Treatment					Surface Treatment			
VERMILLION rd4522		Surface Treatment					Surface Treatment		
VERMILLION rd4700							Major M&R		
VERMILLION rd4701			Surface Treatment					Surface Treatment	
VILLA rd2368		Major M&R							
VILLA rd2515		Major M&R							
VILLA rd2587		Major M&R							
VILLA rd2616		Surface Treatment					Surface Treatment		
VILLA rd2628		Surface Treatment					Surface Treatment		
VILLA rd445					Major M&R				
VILLA rd4516					Major M&R				
VILLA rd4541					Major M&R				
VILLA rd4612			Major M&R						
VILLA rd4780		Major M&R							
VITTORIA rd1609					Surface Treatment				
VITTORIA rd1955					Surface Treatment				
VITTORIA rd1957					Surface Treatment				
VITTORIA rd402					Surface Treatment				
VITTORIA rd4616					Surface Treatment				
VITTORIA rd4653					Surface Treatment				
VITTORIA rd4668					Surface Treatment				
WALNUT rd4621							Major M&R		
WALNUT rd4622							Major M&R		
WASHINGTON rd1537	Surface Treatment					Surface Treatment			
WASHINGTON rd1579								Major M&R	
WASHINGTON rd1930									Major M&R
WASHINGTON rd4602	Surface Treatment					Surface Treatment			
WASHINGTON rd4637	Surface Treatment					Surface Treatment			
WASHINGTON rd4690		Major M&R							
WASHINGTON rd4773	Surface Treatment					Surface Treatment			
WEDGEWOOD rd1919	Surface Treatment					Surface Treatment			
WESTLAKE rd1530	Surface Treatment					Surface Treatment			
WESTLAKE rd454	Surface Treatment					Surface Treatment			
WHITE OAK rd1633	Surface Treatment					Surface Treatment			
WILLAMETTE rd1783									Major M&R
WILLOW rd2631		Major M&R							
WILLOW rd4772								Major M&R	
WINCHESTER rd2766	Surface Treatment					Surface Treatment			
WINCHESTER rd4880	Surface Treatment					Surface Treatment			
WOOD rd1514	Surface Treatment					Surface Treatment			
WYNOOSKI rd1786			Major M&R						
WYNOOSKI rd1939				Major M&R					
WYNOOSKI rd1940					Major M&R				

Table 1 - M&R Recommendations Based on Maintain Current PCI Budget Analysis

Branch/ Section	2014	2015	2016	2017	2018	2019	2020	2021	2022
YALE rd4760		Major M&R							
ZIMRI rd2747	Surface Treatment					Surface Treatment			
ZOE rd2718			Major M&R						

APPENDIX E - COST DATA

Table 1 – Estimated Unit Cost Data for Roadways

Types of M&R		Amount	Work Unit
Major M&R	Cold Mill and Overlay	$2.41	SqFt
	Cold Mill and Overlay - 2 Inches	$2.41	SqFt
	Cold Mill and Overlay - 4 Inches	$3.74	SqFt
	Complete Reconstruction - AC	$6.00	SqFt
	Complete Reconstruction - PCC	$12.00	SqFt
	Overlay - AC Structural (>2")	$2.00	SqFt
	Overlay - AC Thin (<2")	$1.33	SqFt
	Thin Pave (1")	$1.00	SqFt
	New Construction - AC	$6.00	SqFt
	New Construction - PCC	$12.00	SqFt
Localized Stopgap and Preventive M&R	Crack Sealing - AC	$0.50	Ft
	Grinding (Localized)	$5.00	Ft
	No Localized M & R	$0.00	SqFt
	Patching - AC Deep	$6.00	SqFt
	Patching - AC Leveling	$1.50	SqFt
	Patching - AC Shallow	$2.00	SqFt
	Shoulder leveling	$1.50	Ft
Global M&R	Overlay - AC Thin (Global)	$0.87	SqFt
	Surface Seal - Fog Seal	$0.15	SqFt
	Surface Treatment - Single Bitum. (Chip Seal)	$0.50	SqFt
	Surface Treatment - Slurry Seal	$0.25	SqFt

Table 2 – Localized Stopgap M&R Cost by Condition Data

	Non-Residential Streets	Residential Streets
PCI	AC Localized Stopgap M&R Cost	AC Localized Stopgap M&R Cost
0	$1.18	$1.98
10	$0.99	$1.08
20	$0.80	$0.20
30	$0.19	$0.06
40	$0.01	$0.01
50	$0.01	$0.01
60	$0.00	$0.00
70	$0.00	$0.00
80	$0.00	$0.00
90	$0.00	$0.00
100	$0.00	$0.00

Table 3 – Localized Preventive M&R Cost by Condition Data

PCI	Non-Residential Streets AC Localized Preventive M&R Cost	Residential Streets AC Localized Preventive M&R Cost
0	$3.15	$4.54
10	$2.79	$3.64
20	$2.42	$3.29
30	$1.55	$1.94
40	$0.68	$0.85
50	$0.37	$0.25
60	$0.09	$0.13
70	$0.06	$0.03
80	$0.01	$0.01
90	$0.00	$0.00
100	$0.00	$0.00

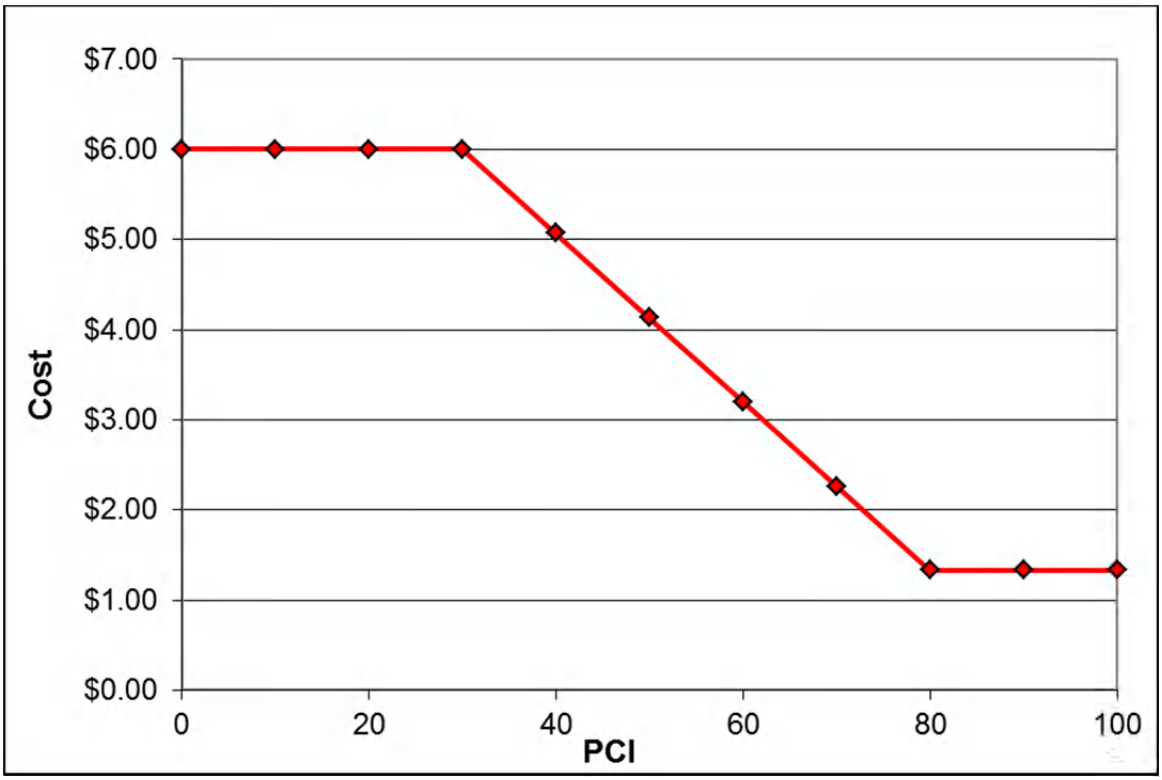


Figure 1 – Major M&R Cost by Condition Data

APPENDIX F - PAVEMENT CORE PHOTOS AND LOGS

Core A-5, Mountainview Dr, westbound lane.

Core A-12, Crestview Dr, westbound lane.

Core A-23, Springbrook St, northbound lane.

Core J-18, Villa Rd, northbound lane.

Core J-20, Haworth Ave, eastbound lane.

Core J-27, Illinois St, westbound lane.

Core J-32, Fulton St, westbound lane.

Core J-33, Villa Rd, southbound lane.

Core J-44, 3rd St, eastbound lane.

Core J-47, Main St, northbound lane.

Core J-49, 2nd St, westbound lane.

Core J-53, Fernwood Rd, westbound lane.

Core J-54, Fernwood Rd, westbound lane.

Core J-61, Wynooski St, southbound lane.

Core J-62, Dayton Ave, southbound lane.

Core N-1, Foothills Dr, eastbound lane.

Core N-4, Aspen Way, southbound lane.

Core N-7, Main St, southbound lane.

Core N-7, Main St, southbound lane.

Core N-9, Crestview Dr, eastbound lane.

Core N-13, Main St, northbound lane.

Core N-15, Meridian St, northbound lane.

Core N-22, Deborah St, southbound lane.

Core N-24, Brutscher St, northbound lane.

Core N-31, Meridian St, northbound lane.

Core N-34, Eliott Rd, southbound lane.

Core N-35, Hayes St, eastbound lane.

Core N-52, Eliott St, southbound lane.

Core N-58, 4th St, westbound lane.

Core N-59, River St, northbound lane.

Core N-71, River St, northbound lane.

Core N-72, 11th St, eastbound lane.

Core R-2, Hilltop Dr, westbound lane.

Core R-3, Edgewood Dr, eastbound lane.

Core R-11, Emery St, northbound lane.

Core R-14, Mission Dr, westbound lane.

Core R-16, Hoskins St, northbound lane.

Core R-17, Sierra Vista St, westbound lane.

Core R-19, Carol Ave, southbound lane.

Core R-21, Pecan Ct, southbound lane.

Core R-28, Franklin St, westbound lane.

Core R-29, Sherman St, westbound lane.

Core R-30, North St, westbound lane.

Core R-36, Morton St, southbound lane.

Core R-37, Grant St, southbound lane.

Core R-38, Sheridan St, westbound lane.

Core R-40, Center St, southbound lane.

Core R-41, Sheridan St, westbound lane.

Core R-42, Everest St, southbound lane.

Core R-43, Hancock St, westbound lane.

Core R-46, 4th St, westbound lane.

Core R-48, 3rd St, eastbound lane.

Core R-50, Meridian St, northbound lane.

Core R-51, 2nd St, eastbound lane.

Core R-56, 6th St, westbound lane.

Core R-57, 5th St, westbound lane.

Core R-60, Willamette St, northbound lane.

Core R-64, Meridian St, northbound lane.

Core R-65, Center St, southbound lane.

Core R-66, Chehalem St, northbound lane.

Core R-67, 7th St, eastbound lane.

Core R-68, Pacific St, northbound lane.

Core R-69, Industrial Pkwy, northbound lane.

Core R-70, 12th St, eastbound lane.

Core R-73, Sandoz Rd, southbound lane.

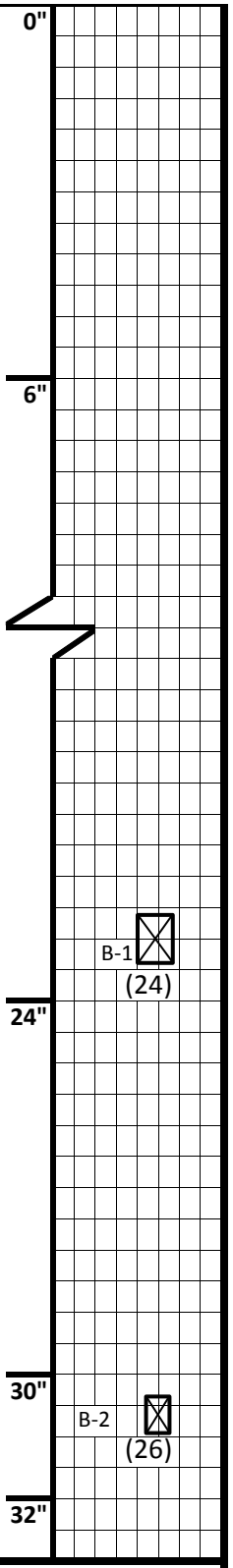
Core R-74, Sunset Ct, eastbound lane.

Core R-75, Pennington Dr, eastbound lane.

Core R-76, Howard St, northbound lane.

Core R-77, 9th St, westbound lane.

DEPTH IN INCHES		
4.5"	Asphalt Concrete (AC) Good condition.	4.5"
17.5"	Dense, brown, sandy, silty GRAVEL, moist. Gravel angular to 1 1/2" dia.	22"
2"	Stiff, brown, silty CLAY, moist.	24"
8"	Medium stiff, gray, SILT with some to trace clay, moist.	32"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

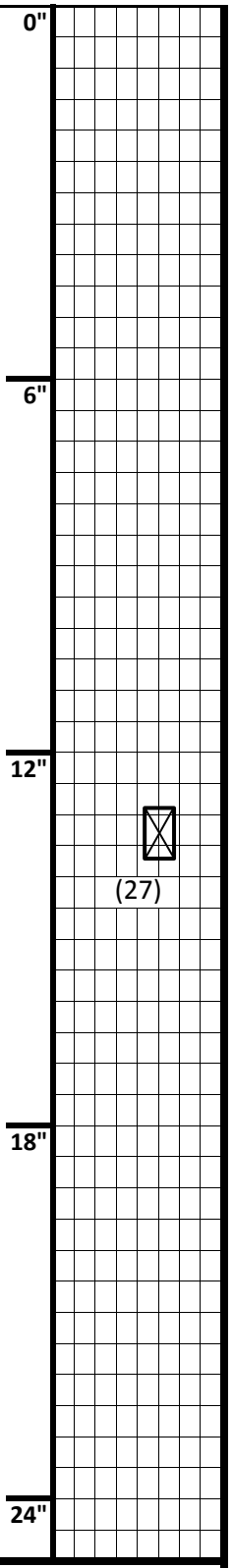
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-1
CORE DIA.: 8"

STREET NAME: E Foothills Drive
FROM: N Main St
TO: Jones St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/28/2014*

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) poor condition. One full-depth crack.	0" – 3.5"
8.5"	Dense, gray, sandy GRAVEL with some silt, moist. Gravel angular to 1" dia.	3.5" – 12"
4"	Stiff, brown silty CLAY/clayey SILT, moist. NFW	12" – 18"
		18" – 24"



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-2
CORE DIA.: 8"

STREET NAME: Hilltop Dr
FROM: Jones St
TO: Morris St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/20/2014

DEPTH IN INCHES

2.25"

Asphalt Concrete (AC)
Poor condition.
Full-depth cracks.

2.25"

8.75"

Dense, gray, sandy GRAVEL with some silt, moist. Gravel angular to 1" dia.

11"

5"

Stiff, brown clayey SILT, moist.

16"

NFW

0"

6"

12"

B- 1

(26)

18"

24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION

STRIPPING

B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-3
CORE DIA.: 8"

STREET NAME: Edgewood Dr
FROM: Princeton Ct
TO: Clearbrook Ct

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/20/2014*

DEPTH IN INCHES

2"	Asphalt Concrete (AC) Fair condition.	2"
4.25"	Asphalt Concrete (AC) Fair condition.	6.25"
4.75"	Gray GRAVEL, moist. Gravel angular to 1" dia.	11"
19"	Dense, brown, clayey GRAVEL, moist. Gravel angular to 3" dia. with occasional cobble of 6".	30"
	NFW no sample of subgrade	

0" 6" 12" 18" 30"

LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-4
CORE DIA.: 8"

STREET NAME: N Aspen Way
FROM: City limits
TO: Mountainview Dr.

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/27/2014*

DEPTH IN INCHES		
1.75"	Asphalt Concrete (AC) Poor condition. One full-depth crack	1.75"
5"	Asphalt Concrete (AC) Poor Condition. One full-depth diagonal crack	6.75"
2.25"	Sandy GRAVEL with some silt, moist. Gravel angular to 3/4" dia.	9"
6.5"	Dense, gray, sandy, silty GRAVEL, moist. Gravel subround and angular to 2".	15.5"
8.5"	Brown-gray CLAY, moist.	24"
	NFW	

0" 6" 12" 18" 24"

B-1 (26)

LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG A-5
CORE DIA.: 8"

STREET NAME: E Mountainview Dr
FROM: Thorne St
TO: N Alice Way

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/27/2014

DEPTH IN INCHES

7.25"

5.75"

11"

Asphalt Concrete (AC)
Fair condition.
Stripping in lower lifts.

7.25"

GRAVEL with sand, moist.
Gravel angular to 1 " dia.

13"

Brown SILT with some clay to clayey, moist.

24"

NFW

0"

6"

12"

18"

24"

B-1

(24)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

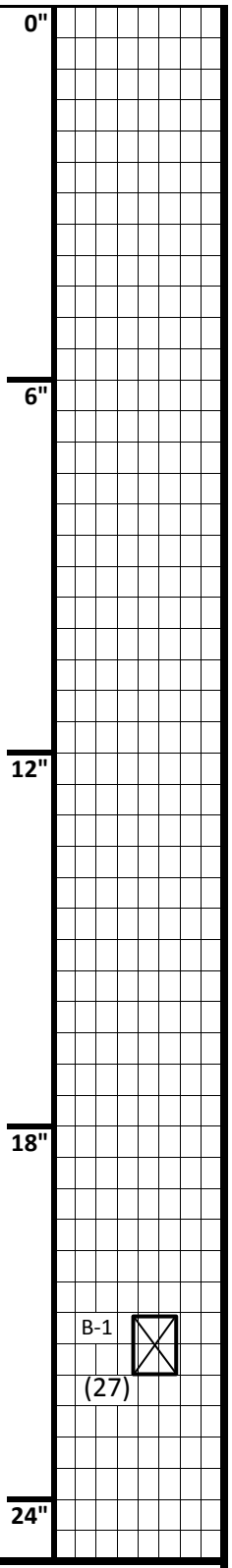
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG A-6
CORE DIA.: 8"

STREET NAME: E Mountainview Dr
FROM: N Herman St
TO: N Aspen Way

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/27/2014*

DEPTH IN INCHES		
4.5"	Asphalt Concrete (AC) Poor condition. One full-depth crack.	4.5"
7.5"	Dense, brown, silty, sandy GRAVEL, moist to wet. Gravel angular to 1 1/2" dia.	12"
12"	Stiff, gray CLAY, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

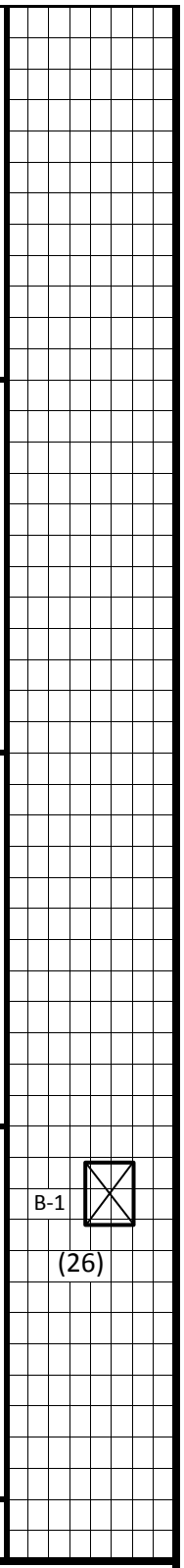
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-7
CORE DIA.: 8"

STREET NAME: N Main St
FROM: Nugget Ln
TO: Lynn Dr

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/28/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. One full-depth crack.	2.5"
10.5"	Dense, brown, silty, sandy GRAVEL, moist to wet. Gravel angular to 1 1/2" dia.	13"
11"	Stiff, brown, SILT with some to trace clay, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-8
CORE DIA.: 8"

STREET NAME: E Columbia Dr
FROM: N Main St
TO: N College St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/28/2014*

DEPTH IN INCHES		
4"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	4"
1"	Gravel angular to 1/2" dia. (Bedding gravel)	5"
19"	Dense, brown, silty, GRAVEL, moist. Gravel angular to 1 1/2" dia.	24"
	NFW	

0"
6"
12"
18"
24"

B-1 (14)

LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-9
CORE DIA.: 8"

STREET NAME: E Crestview Dr
FROM: Hoskins St
TO: Aldersgate Ln

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/28/2014

DEPTH IN INCHES

2.5"

Asphalt Concrete (AC)
Poor condition.
One full-depth crack

2.5"

8.5"

GRAVEL with sand, moist.
Gravel angular to 1" dia.

Perched water

11"

13"

Brown, stiff, CLAY, moist.

24"

NFW

0"

6"

12"

B-1

(32)

18"

24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

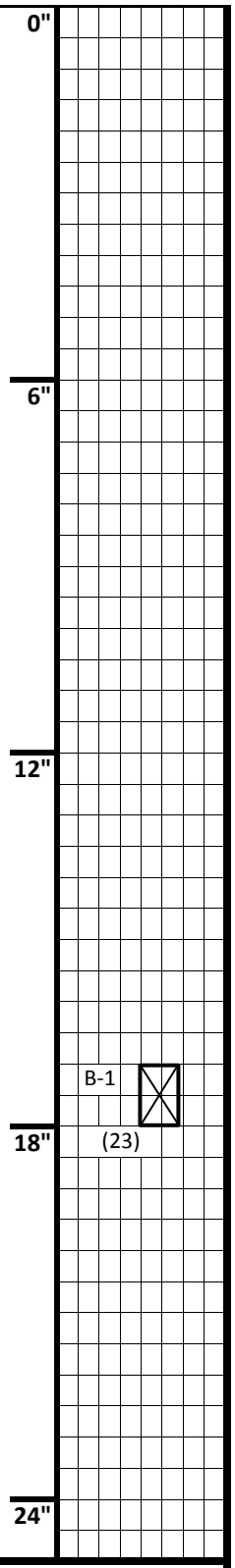
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-11
CORE DIA.: 8"

STREET NAME: N Emery Dr
FROM: E Crestview Dr
TO: Douglas Ave

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/27/2014*

DEPTH IN INCHES		
2.75"	Asphalt Concrete (AC) Fair to poor condition.	2.75"
1.25"	Silty GRAVEL, moist. Gravel subround to 1/2" dia.	4"
7"	Stiff, gray, SILT, moist.	11"
13"	Medium stiff, brown SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

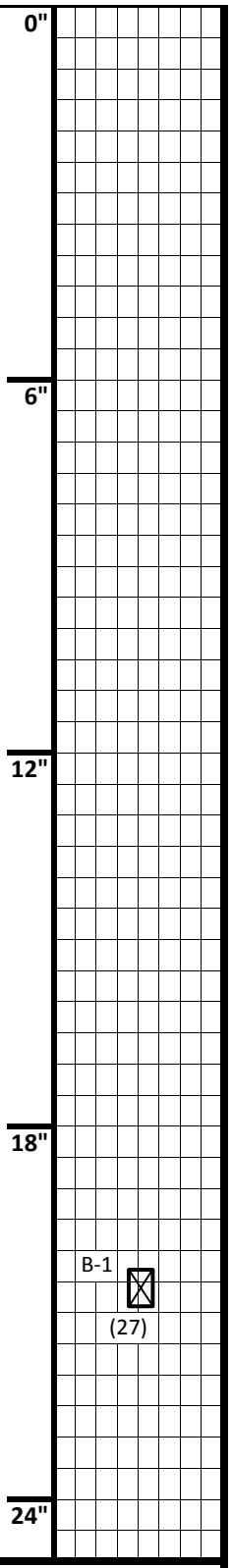
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG A-12
CORE DIA.: 8"

STREET NAME: E Crestview Dr
FROM: Springbrook Way
TO: N Libra St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/20/2014*

DEPTH IN INCHES		
1.5"	Asphalt Concrete (AC) Fair to poor condition. One full-depth crack.	1.5"
2"	Asphalt Concrete (AC) Good condition.	3.5"
8.5"	Medium dense, brown, gravely SILT, damp. Gravel angular to 2" dia.	12"
12"	Stiff, brown-gray mottle, SILT, damp.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

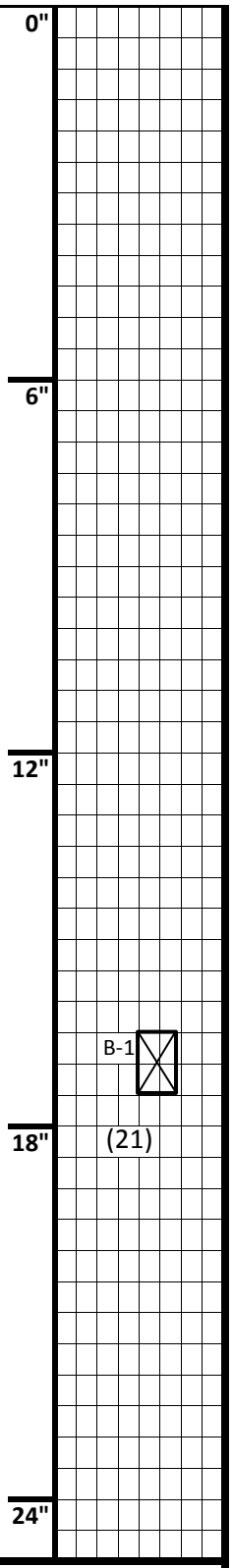
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-13
CORE DIA.: 8"

STREET NAME: N Main St
FROM: Emma St
TO: Markris Ln

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/28/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.5"
9"	Dense, gray, sandy GRAVEL with some silt, moist. Gravel angular to 1" dia.	11.5"
	Stiff, brown clayey SILT/silty CLAY, moist.	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

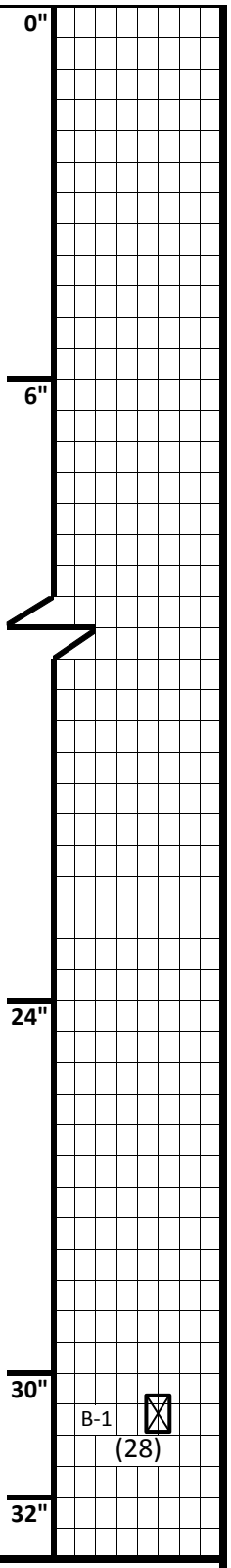
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-14
CORE DIA.: 8"

STREET NAME: Mission Dr
FROM: Mission Ct
TO: N College St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/20/2014

DEPTH IN INCHES		
5.5"	Asphalt Concrete (AC) Good condition.	5.5"
20.5"	Dense, brown, silty GRAVEL with some sand, moist. Gravel angular to 2" dia.	26"
6"	Stiff, brown, clayey SILT, moist.	32"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-15
CORE DIA.: 8"

STREET NAME: N Meridian St
FROM: Sierra Vista St
TO: Jacqui Ct

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/28/2014*

DEPTH IN INCHES

3.25"

Asphalt Concrete (AC)
Poor condition. Full-depth cracks.

3.25"

7.75"

Dense, brown, silty GRAVEL
with some sand, moist.
Gravel angular
to 1 1/2" dia.

11"

6"

Stiff, gray, SILT with trace clay,
oily odor.

17"

NFW

0"

6"

12"

B-1
(23)

18"

24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

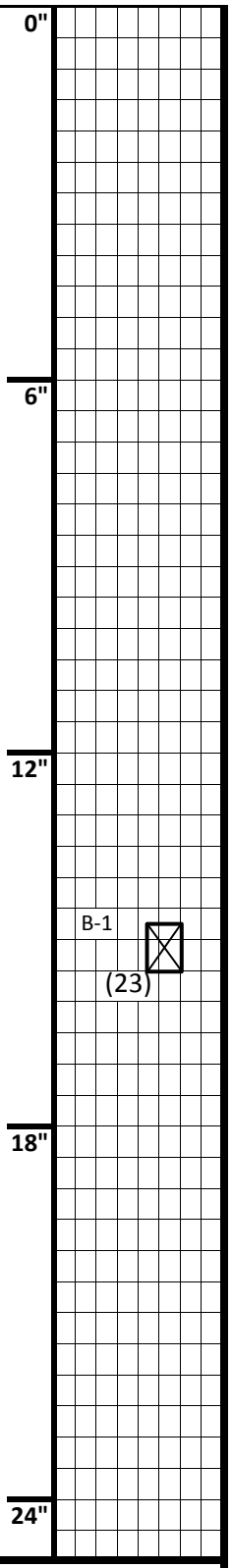
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-16
CORE DIA.: 8"

STREET NAME: Hoskins
FROM: N Pennington Dr
TO: E Crestview Dr

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/20/2014*

DEPTH IN INCHES		
4.75"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	4.75"
7"	Dense, gray, sandy GRAVEL with some silt, moist. Gravel angular to 2" dia.	11.75"
4.25"	Medium stiff to stiff, brown with gray mottle, clayey SILT, moist.	16"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

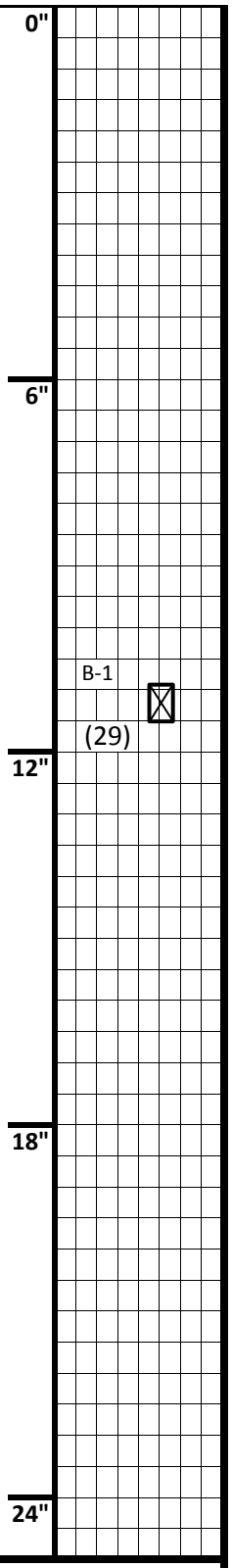
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-17
CORE DIA.: 8"

STREET NAME: Sierra Vista St
FROM: Hoskins St
TO: Barclay Way

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/20/2014*

DEPTH IN INCHES		
4.25"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	4.25"
3.25"	Gravelly SILT with some sand, moist. Gravel angular to 1 1/2" dia.	7.5"
10.5"	Brown, clayey SILT with some sand, moist.	18"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-18
CORE DIA.: 8"

STREET NAME: Villa Rd
FROM: Carol Ann Dr
TO: Park Ln

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/27/2014*

DEPTH IN INCHES

1.5"	Asphalt Concrete (AC) Good condition.	1.5"
1.75"	Asphalt Concrete (AC) Fair Condition.One full-depth crack.	3.25"
9.25"	GRAVEL, moist. Gravel angular to 3/4" dia.	12.5"
4.5"	Medium dense, brown, sandy GRAVEL with some silt, wet. Gravel angular to 2" dia.	17"
5"	Medium dense to loose, gray gravelly SILT/silty GRAVEL with some clay to clayey gravels, moist. Gravel subround to 1" dia.	22"
	Freewater at 14.5"	

0" 6" 12" 18" 24"

B-1 (29)

LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

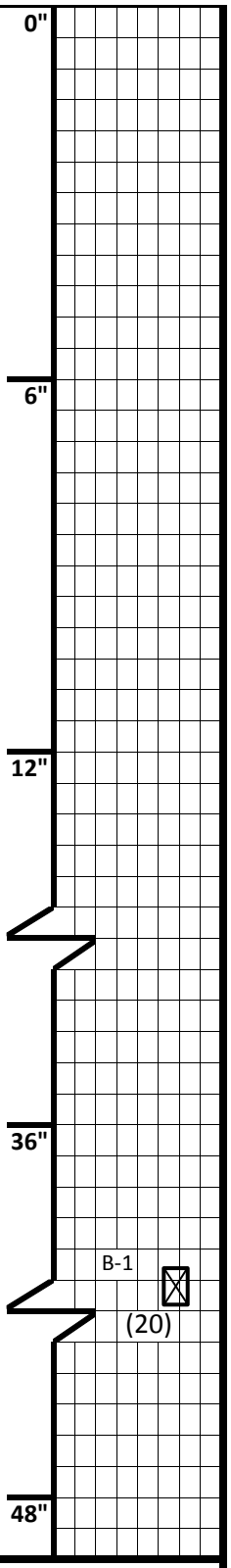
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-19
CORE DIA.: 8"

STREET NAME: N Carol Ave
FROM: Villa Rd
TO: Carol Ann Dr

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/20/2014

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) Good condition.	3.5"
32.5"	Dense, gray, silty, sandy, GRAVEL, moist. Gravel angular to 3/4" dia.	36"
12"	Medium stiff, gray clayey SILT/silty CLAY, moist.	48"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

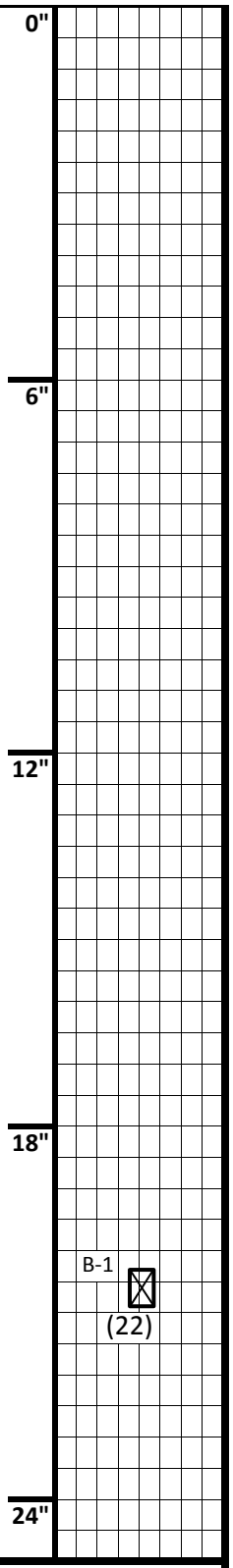
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-20
CORE DIA.: 8"

STREET NAME: Haworth Ave
FROM: Elliott Rd
TO: Deborah Rd

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/27/2014*

DEPTH IN INCHES		
3"	Asphalt Concrete (AC) Good condition.	3"
8.5"	Dense, gray, silty, sandy, GRAVEL, moist. Gravel angular to 3/4" dia.	11.5"
6.5"	Stiff to very stiff, brown, clayey SILT/ silty CLAY, moist.	18"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

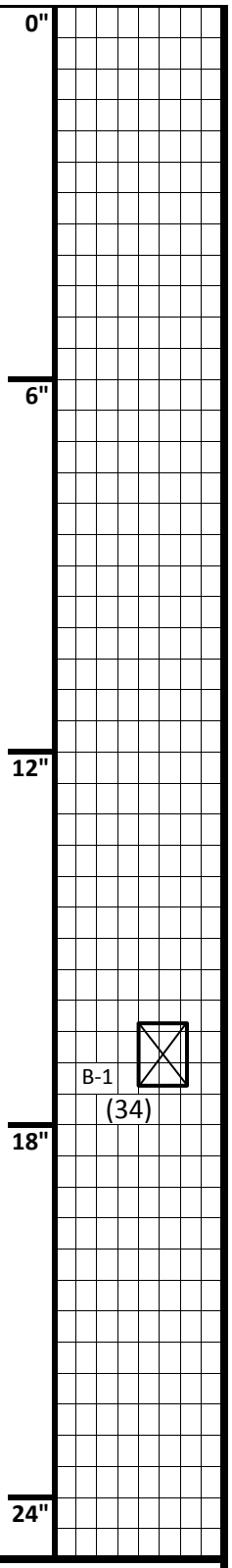
CORE LOG R-21
CORE DIA.: 8"

STREET NAME: Pecan Ct
FROM: Walnut Ave
TO: End

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/20/2014*

DEPTH IN INCHES

3.5"	Asphalt Concrete (AC) Good condition.	3.5"
8.5"	GRAVEL, sandy with some silt. Gravel angular to 1" dia. Perched water at 1'	12"
12"	Brown, stiff, CLAY, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

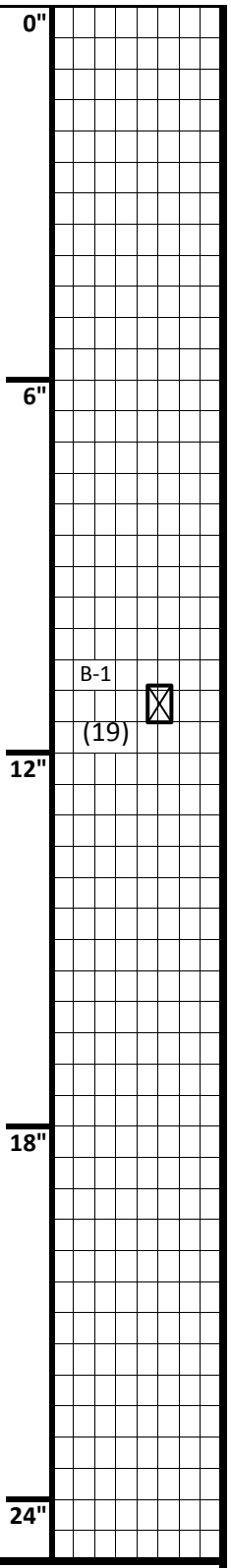
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-22
CORE DIA.: 8"

STREET NAME: Deborah Rd
FROM: Douglas Ave
TO: Haworth Ave

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 2/27/2014*

DEPTH IN INCHES		
5.75"	Asphalt Concrete (AC) Good condition.	5.75"
16.25"	Native soil: Medium density silty SAND with gravel, brown, damp.	22"



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

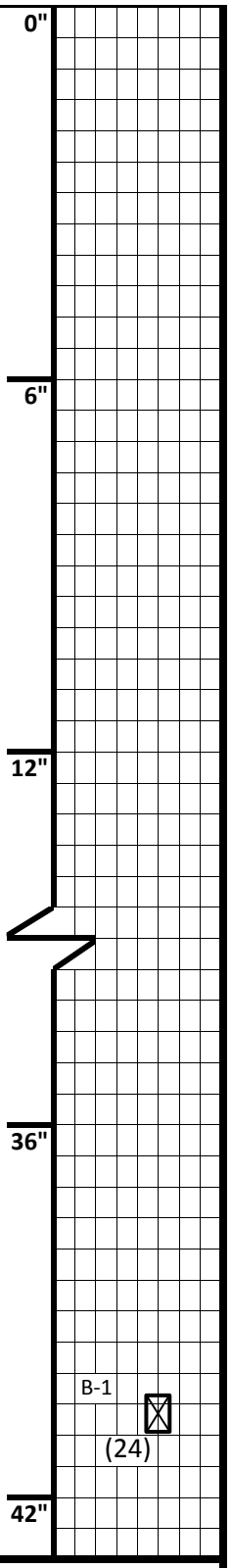
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG A-23
CORE DIA.: 8"

STREET NAME: N Sprinkbrook Rd
FROM: Haworth Ave
TO: E Aquarius Blvd

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/27/2014

DEPTH IN INCHES		
5.5"	Asphalt Concrete (AC) Good condition.	5.5"
4"	Dense, gray, sandy, silty GRAVEL, moist. Gravel angular to 3/4" dia.	9.5"
26.5"	Dense, brown silty, sandy GRAVEL with some sand, moist. Gravel angular to 1 1/2" dia.	36"
6"	Medium stiff, brown, SILT with some clay, moist.	42"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

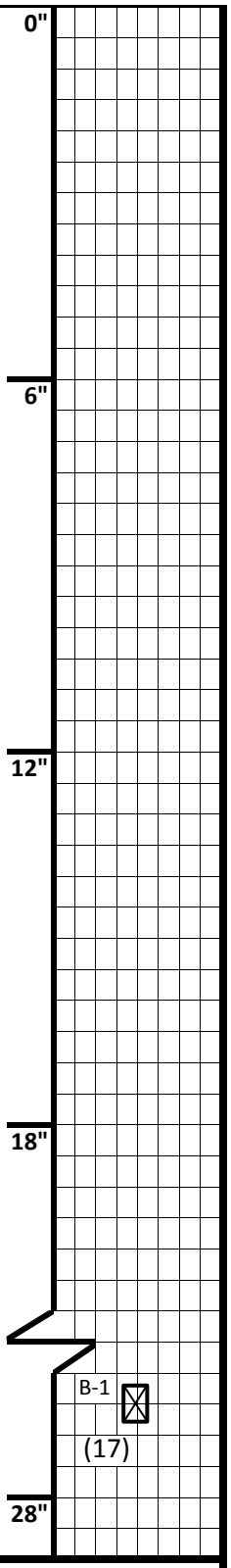
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-24
CORE DIA.: 8"

STREET NAME: Brutscher St
FROM: 99-W
TO: Little Oak St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/14/2014*

DEPTH IN INCHES		
6"	Asphalt Concrete (AC) Good condition.	6"
13.5"	Very dense, brown, silty, sandy GRAVEL, damp. Gravel angular to 1 1/2" dia.	19.5"
8.5"	Hard, brown, sandy, silty CLAY damp to moist occasional fine gravel subrounded.	28"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-27
CORE DIA.: 8"

STREET NAME: E Illinois St
FROM: N Main St
TO: Washington St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/6/2014*

DEPTH IN INCHES

2"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.
9"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.
11"	Medium stiff to stiff, brown SILT with some clay, moist.
	NFW

0"
2"
6"
11"
12"
18"
22"
24"

B-1
(29)

LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

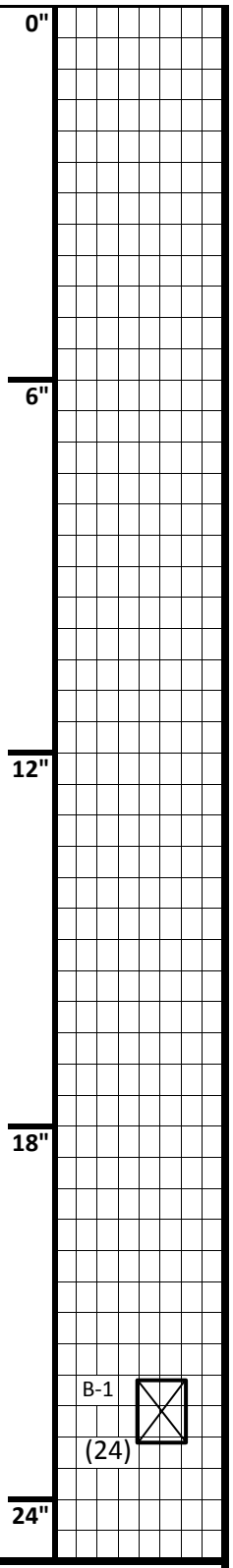
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-28
CORE DIA.: 8"

STREET NAME: Franklin St
FROM: Washington St
TO: S Blaine St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/12/2014*

DEPTH IN INCHES		
1.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	1.5"
9"	Dense, silty, sandy GRAVEL, moist. Gravel very angular to 3" dia.	10.5"
13.5"	Stiff to medium stiff, brown SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

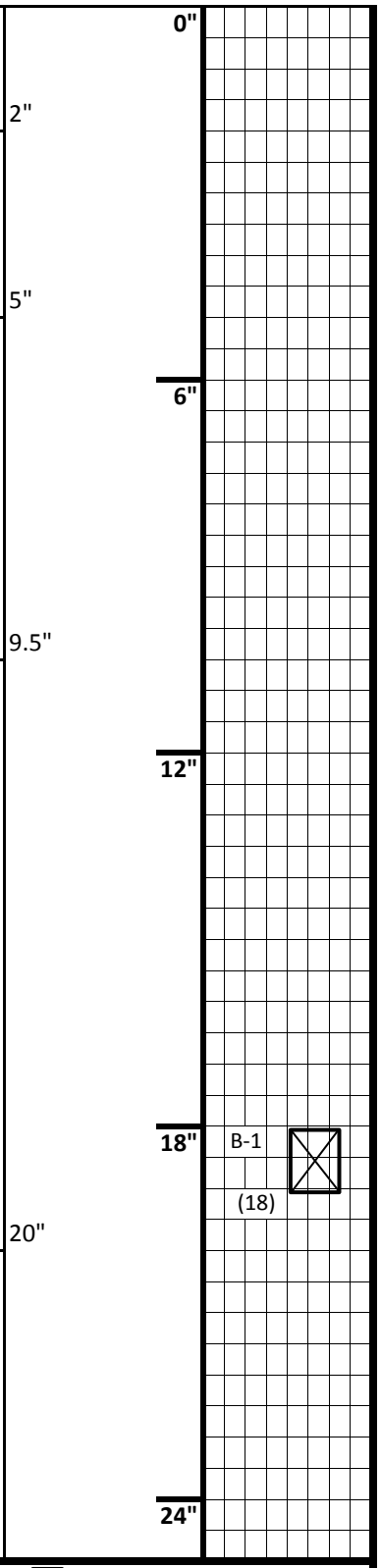
CORE LOG R-29
CORE DIA.: 8"

STREET NAME: Sherman St
FROM: S School St
TO: College St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/12/2014

DEPTH IN INCHES

2"	Asphalt Concrete (AC) Poor condition. One full-depth crack.
3"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 3/4" dia.
4.5"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.
10.5"	Stiff, brown SILT, moist.
	NFW



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

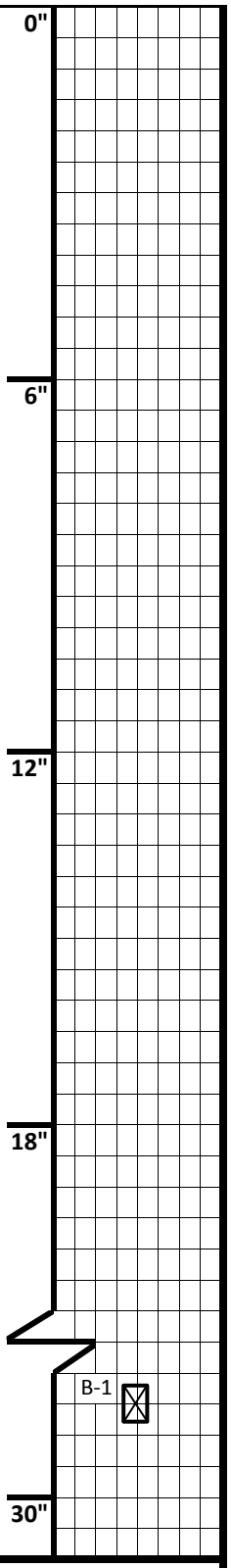
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-30
CORE DIA.: 8"

STREET NAME: North
FROM: College St
TO: Edwards St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/12/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Good condition.	2.5"
27.5"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 3/4" dia.	30"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

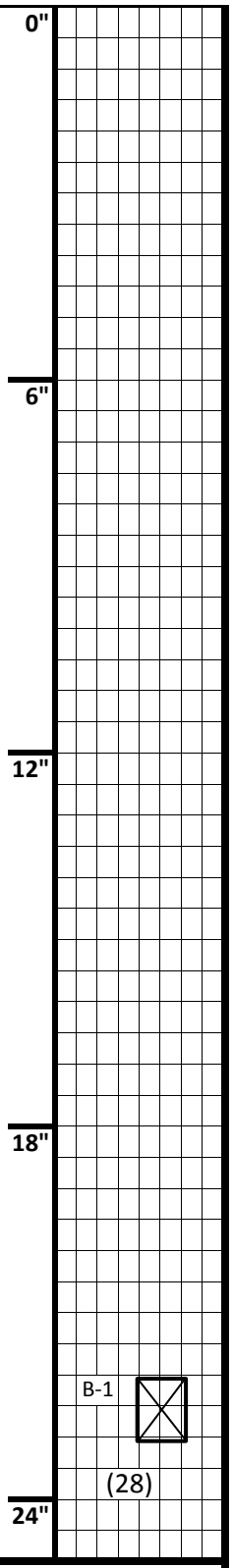
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-31
CORE DIA.: 8"

STREET NAME: Meridian St
FROM: Franklin St
TO: Sherman St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/13/2014*

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) poor condition. One full-depth crack.	3.5"
8"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1/2" dia.	11"
13"	Medium stiff, gray silty CLAY, moist.	24"
	Surface runoff from rains filled core hole.	
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-32
CORE DIA.: 8"

STREET NAME: Fulton St
FROM: Center St
TO: Villa Rd

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/6/2014*

DEPTH IN INCHES		
1.25"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	1.5"
1.75"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	3"
8.5"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1/2" dia.	8"
12.5"	Medium stiff, brown SILT, moist .	11.5"
	NFW	24"

0"
6"
12"
18"
24"

B-1
(22)

LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

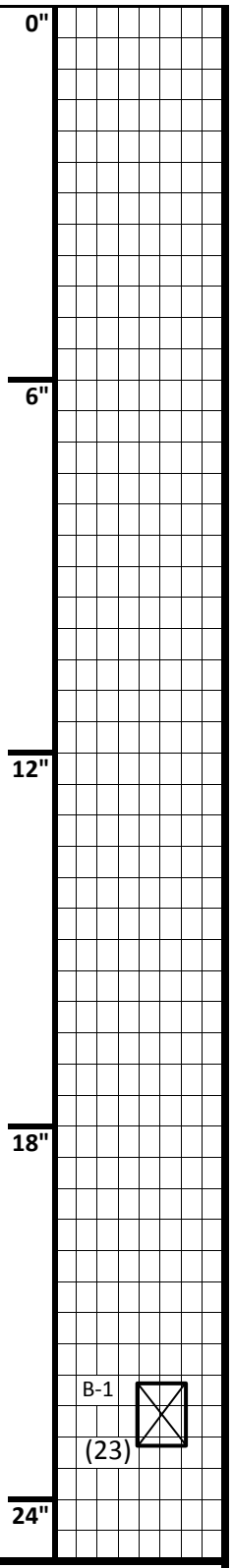
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-33
CORE DIA.: 8"

STREET NAME: Villa Rd
FROM: Fulton St
TO: North

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/13/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.5"
4.5"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1" dia.	7"
3.5"	Dense, brown, silty GRAVEL, moist. Gravel angular to 2" dia.	10.5"
13.5"	Stiff to medium stiff, brown SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

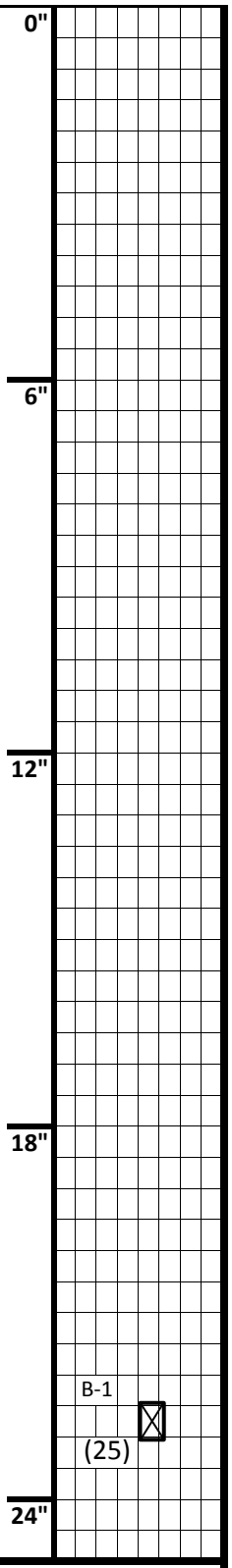
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-34
CORE DIA.: 8"

STREET NAME: Hayes St.
FROM: S. Elliott Rd.
TO: Deborah Rd.

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/13/2014

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) Fair condition. One full-depth crack.	3.5"
2"	Silty, sandy GRAVEL gray. Gravel angular to 1/2" dia.	5.5"
7"	Dense, brown, sandy, silty GRAVEL, moist. Gravel angular to 1.5" dia.	12.5"
11.5"	Stiff, brown SILT, moist.	24"
	NFW	



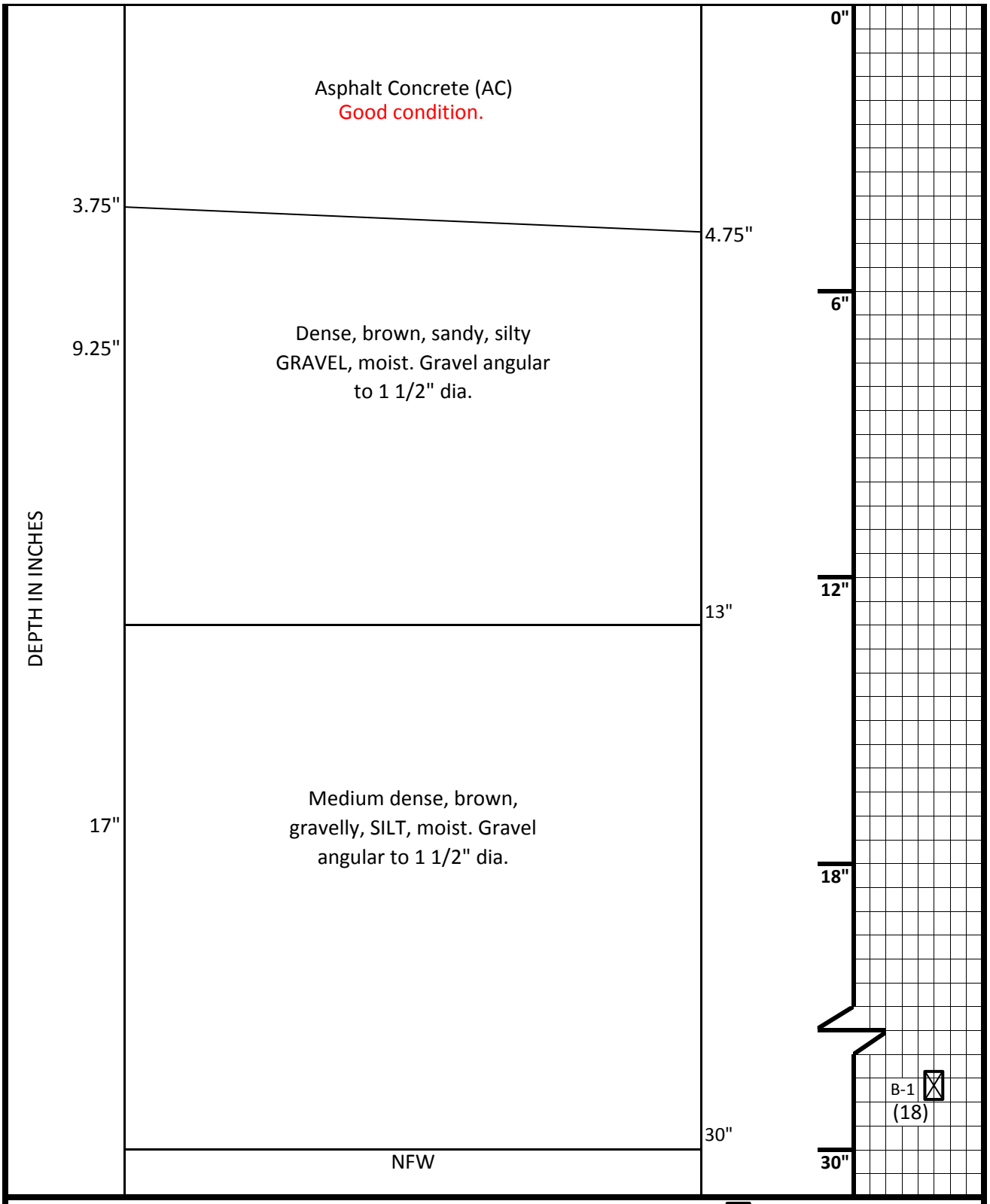
LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG
CORE DIA.: 8"

STREET NAME: S Eliott Rd
FROM: E Hancock St
TO: E 2nd St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/17/2014



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

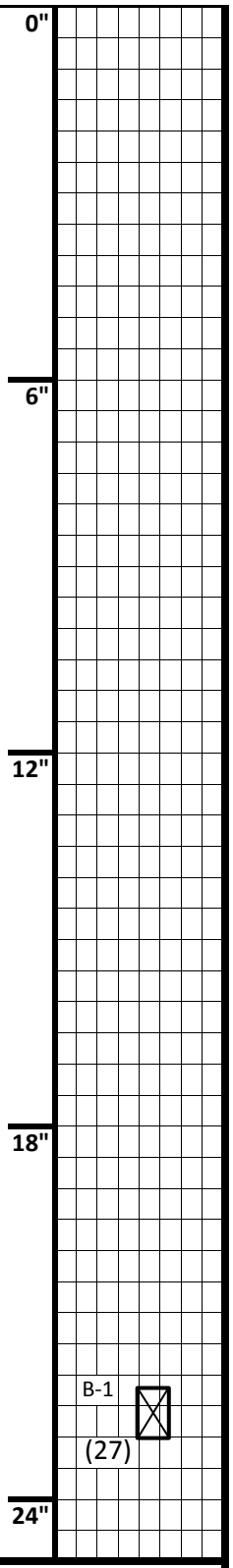
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-36
CORE DIA.: 8"

STREET NAME: Morton St
FROM: Sheridan St
TO: E 1st St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/12/2014*

DEPTH IN INCHES		
2"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2"
8"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	10"
14"	Stiff, brown SILT, moist.	24"
	NFW	



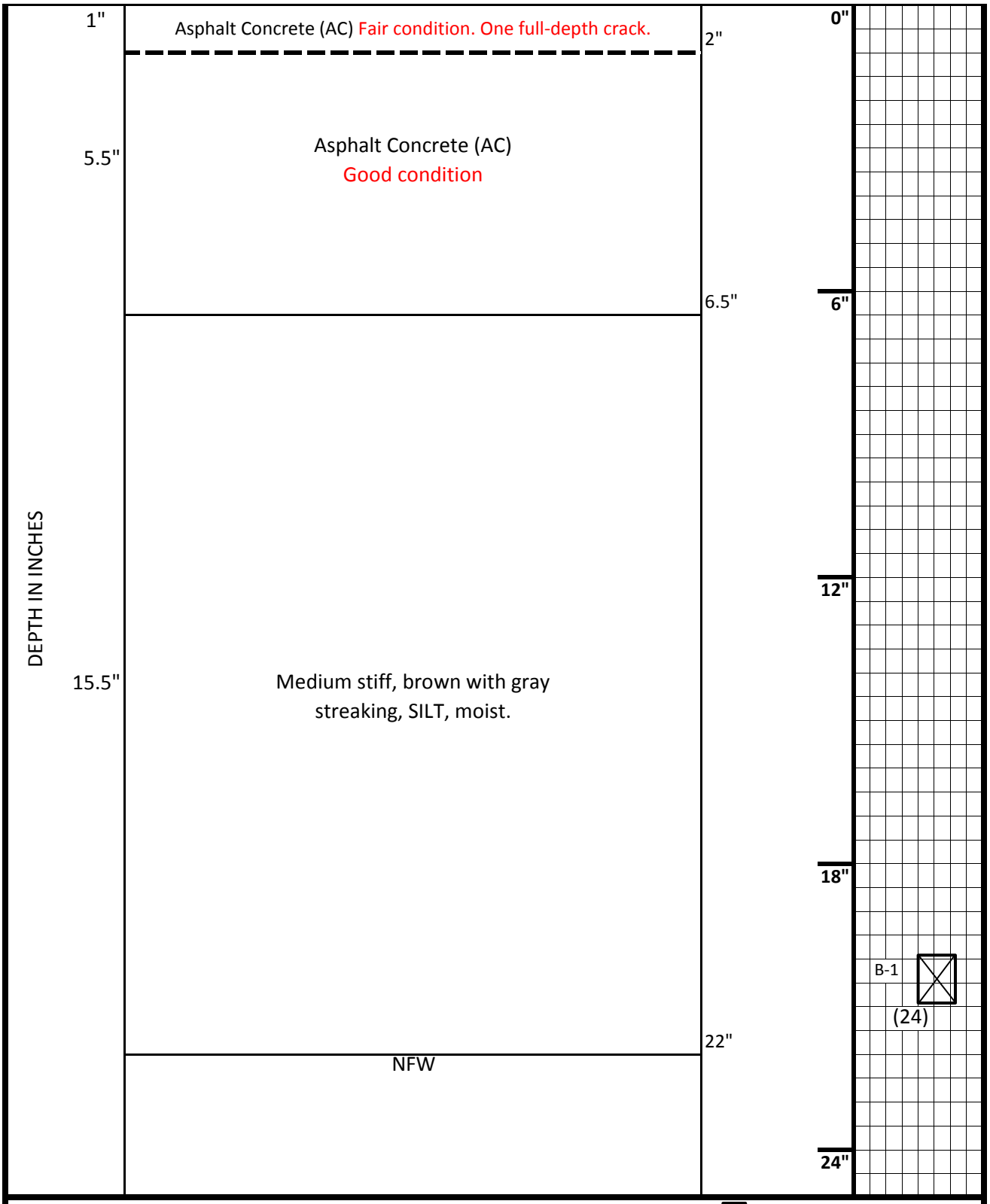
LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-37
CORE DIA.: 8"

STREET NAME: Grant St
FROM: Sheridan St
TO: E Hancock St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/12/2014*



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-38
CORE DIA.: 8"

STREET NAME: Sheridan St
FROM: S Blaine St
TO: S Washington St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/12/2014

DEPTH IN INCHES

1"

Asphalt Concrete (AC) Fair condition

5"

Asphalt Concrete (AC)
Good condition

12"

Medium stiff, brown, SILT,
with some to trace clay, moist.

NFW

1"

6"

18"

0"

6"

12"

B-1

(30)

18"

24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

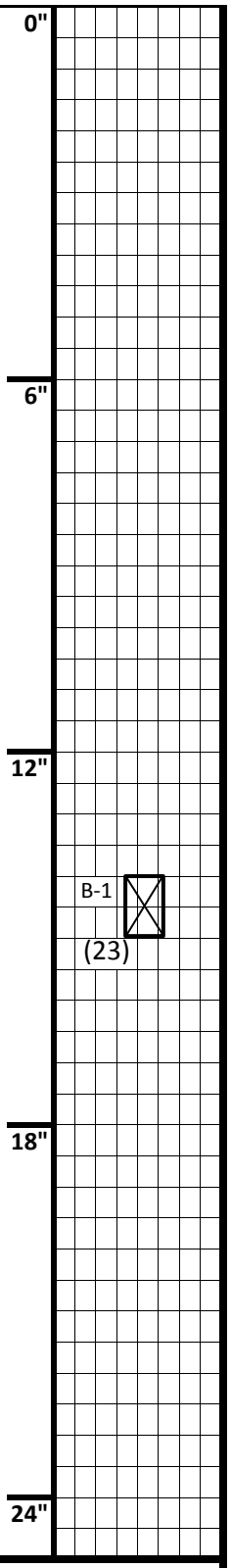
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-40
CORE DIA.: 8"

STREET NAME: Center St
FROM: Sheridan St
TO: 99-W

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/17/2014*

DEPTH IN INCHES		
1.25"	Asphalt Concrete (AC) Fair to poor condition.	1.25"
2.75"	Oil-gravelly SILT, moist. Gravel angular to 3/4" dia.	4"
14"	Medium stiff to stiff brown, SILT, moist.	18"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

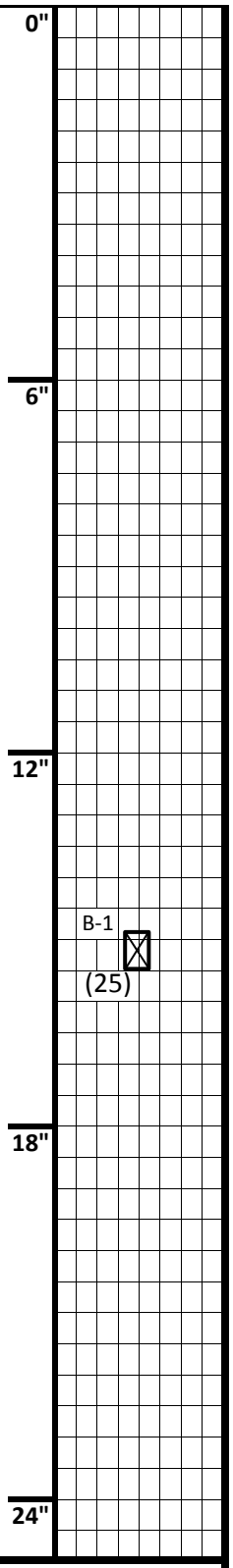
CORE LOG R-41
CORE DIA.: 8"

STREET NAME: Sheridan St
FROM: S River St
TO: Carlton Way

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/17/2014*

DEPTH IN INCHES

1.75"	Asphalt Concrete (AC) Fair condition.One full-depth crack	1.75"
2.75"	Asphalt Concrete (AC) Fair Condition.One full-depth crack	4.5"
2"	Gray, angular GRAVEL, to 1.5" dia. (Bedding gravel)	6.5"
13.5"	Stiff, gray, SILT with trace clay, oily odor.	20"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

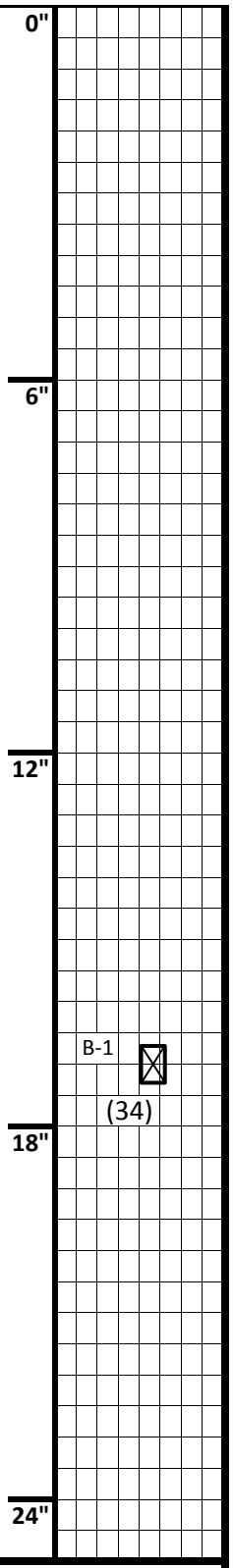
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-42
CORE DIA.: 8"

STREET NAME: S. Everest St.
FROM: Hwy 99
TO: E 1st St.

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/17/2014

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) Fair condition. One full-depth crack	3.5"
3"	Asphalt Concrete (AC) Good condition	6.5"
1.5"	Gray, angular GRAVEL, to 0.5" dia.	8"
6"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 2" dia.	14"
10"	Stiff, brown, SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

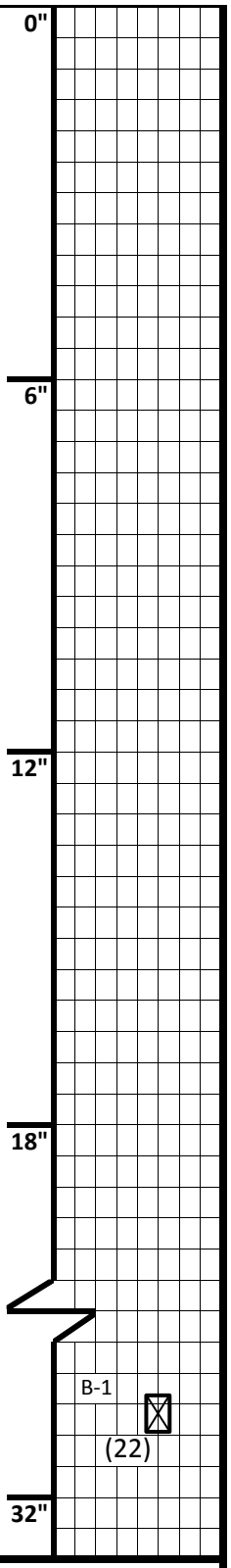
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-43
CORE DIA.: 8"

STREET NAME: E. Hancock St.
FROM: E 1st St
TO: S Eliott Rd

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/17/2014

DEPTH IN INCHES		
6.5"	Asphalt Concrete (AC) Good condition.	6.5"
12.5"	Dense, gray, sandy, silty GRAVEL, moist. Gravel angular to 1 1/2" dia.	19"
13"	Stiff, brown SILT, moist.	32"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-44
CORE DIA.: 8"

STREET NAME: E 3rd St
FROM: 99-W
TO: N Harrison St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/13/2014

DEPTH IN INCHES

2.25"

Asphalt Concrete (AC)
Poor condition.
Full-depth cracks.

2.25"

11.75"

Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.

14"

10"

Medium stiff, brown, SILT with some clay, moist.

24"

NFW

0"

6"

12"

18"

24"

B-1

(26)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-46
CORE DIA.: 8"

STREET NAME: E 4th St
FROM: Lincoln St
TO: Grant St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/7/2014*

DEPTH IN INCHES

2.5"

Asphalt Concrete (AC)
Poor condition.
One full-depth crack

5.5"

Asphalt Concrete (AC)
Fair condition
with large rounded aggregate
to 1.5" dia.
Couldn't core.

12"

Medium stiff, brown SILT,
moist.

NFW

0"
2.5"
6"
8"
12"
B-1
(23)
18"
20"
24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

B- BULK SAMPLE

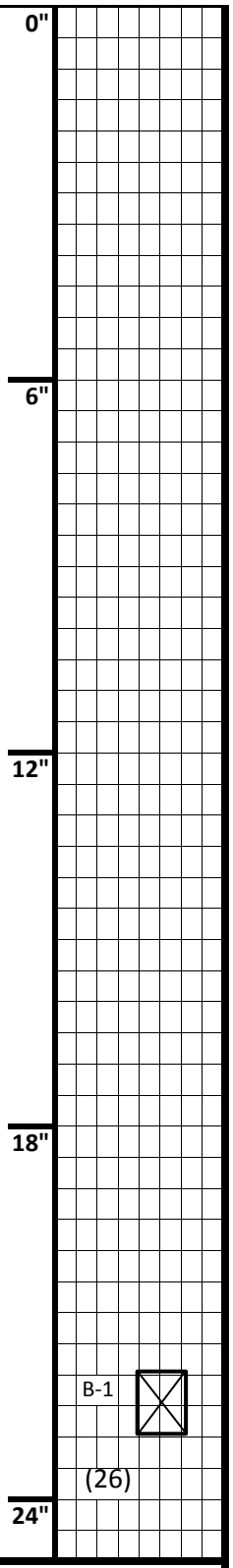
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-47
CORE DIA.: 8"

STREET NAME: N Main St
FROM: E 1st St
TO: E 2nd St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/14/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Fair to poor condition. Full-depth cracks.	2.5"
8.5"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1" dia.	11"
11"	Medium stiff, brown, SILT with trace clay, moist.	22"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

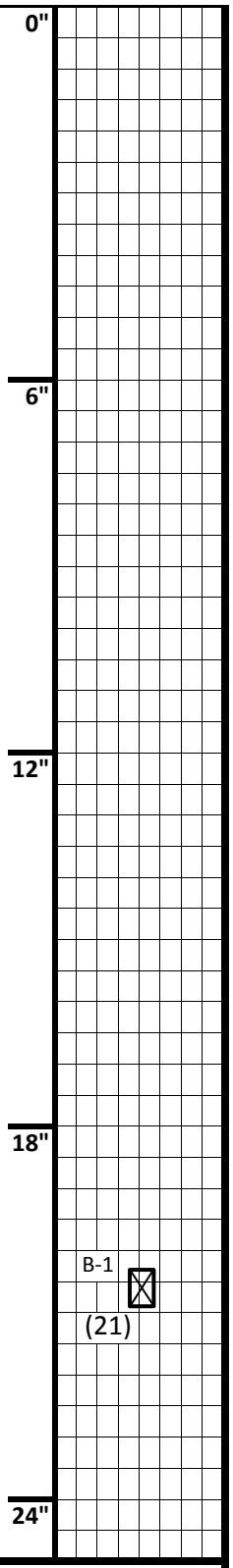
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-48
CORE DIA.: 8"

STREET NAME: E 3rd St
FROM: N Main St
TO: Washington St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/7/2014*

DEPTH IN INCHES		
3"	Asphalt Concrete (AC) Good condition.	3"
1"	1/2"-0 ang crushed rock	4"
6.5"	Old Asphalt Concrete (AC) with rounded gravel to 2" dia. (4"-10.5")	10.5"
11.5"	Medium stiff, blackish-gray, organic SILT, moist.	22"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-49
CORE DIA.: 8"

STREET NAME: 2nd St
FROM: S Howard St
TO: College St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/13/2014*

DEPTH IN INCHES

5"

Asphalt Concrete (AC)

Poor condition. Has rounded aggregate to 1 1/2" dia.

Broke apart during coring

5"

13"

Medium stiff, brown, clayey SILT/silty CLAY, moist.

18"

NFW

24"

0"

6"

12"

B-1

(29)

18"

24"

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

B- BULK SAMPLE

PAVEMENT SERVICES, INC.

INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-50

CORE DIA.: 8"

STREET NAME: S Merdian St

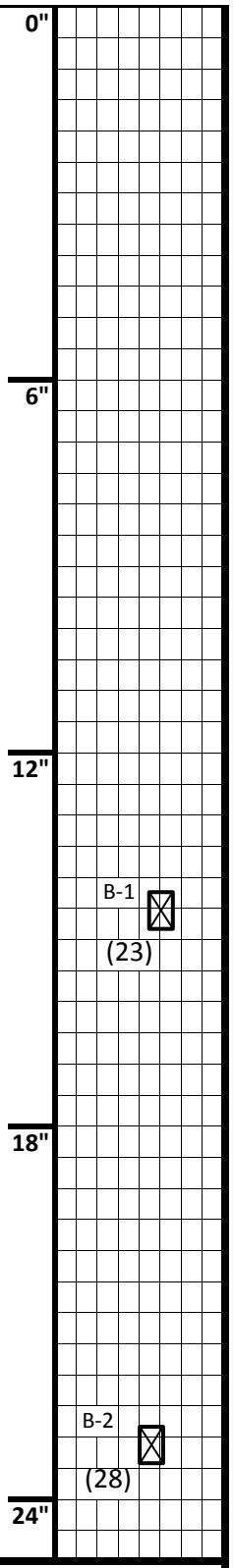
FROM: E 2nd St

TO: E 3rd St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/7/2014*

DEPTH IN INCHES

1.5"	Asphalt Concrete (AC) Fair condition. One full-depth crack.	1.5"
2.5"	Asphalt Concrete (AC) Poor condition. Multiple full-depth cracks (rubble).	4.0"
4"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1/2" dia.	8"
3" 5"	Stiff, gray, SILT, moist, oil-stained, hydrocarbon odor. From 8" to 11" contains 2" dia. rounded gravels.	11" 16"
8"	Changes to brown	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

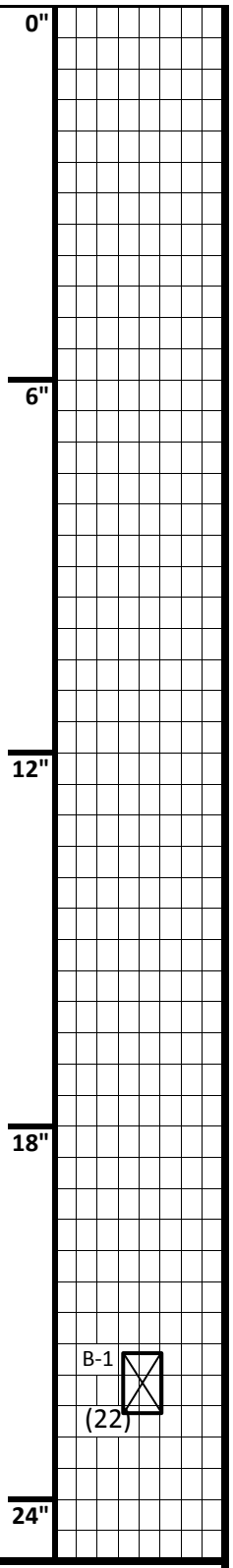
CORE LOG R-51
CORE DIA.: 8"

STREET NAME: 2nd St
FROM: S Church St
TO: S Everest St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/17/2014*

DEPTH IN INCHES

5.25"	Asphalt Concrete (AC) Good condition.	5.25"
3.75"	Sandy, silty GRAVEL. Gravel angular to 1/2" dia.	9"
6.5"	Dense, gray, sandy, silty GRAVEL, moist. Gravel angular to 1 1/2" dia.	15.5"
8.5"	Stiff, brown, with gray streaks, SILT, moist to damp.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

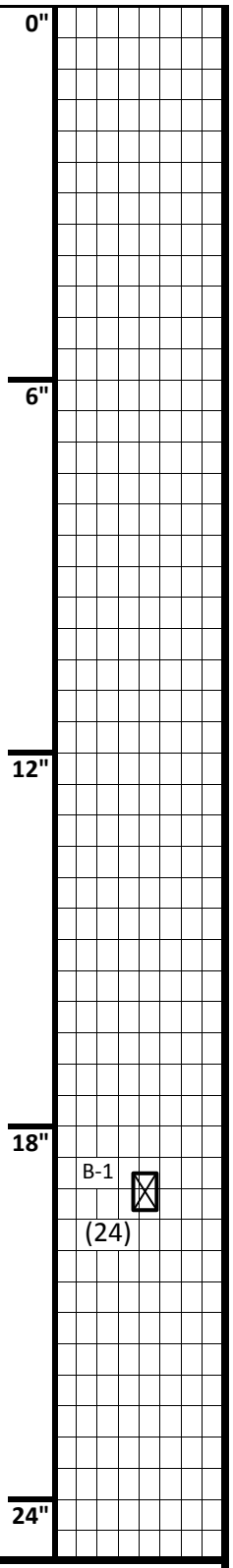
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-52
CORE DIA.: 8"

STREET NAME: S. Elliott St.
FROM: E Hancock St
TO: E 2nd St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/14/2014*

DEPTH IN INCHES		
1.25"	Asphalt Concrete (AC) Poor condition. One full-depth crack.	1.25"
3.25"	Asphalt Concrete (AC) Fair to poor condition. One full-depth crack.	4.5"
2"	Asphalt Concrete (AC) Poor condition.	6.5"
3"	Medium dense, brown, silty GRAVEL, moist. Gravel rounded to 2" dia.	9.5"
10.5"	Stiff, brown SILT, moist.	20"
	NFW	20"



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

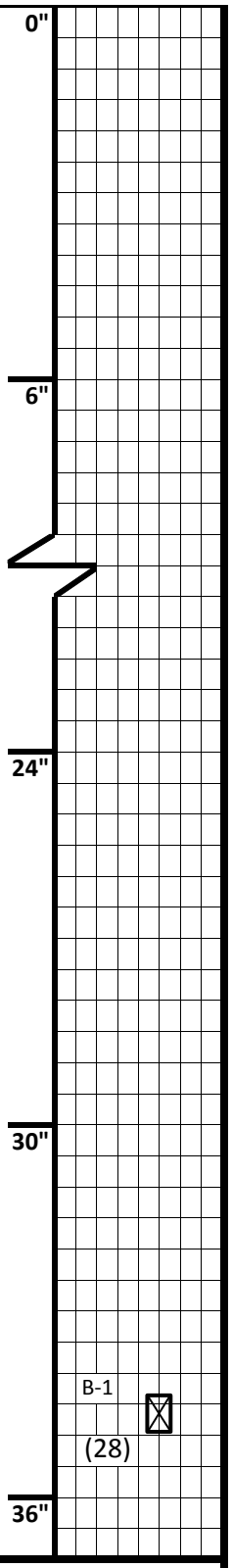
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-53
CORE DIA.: 8"

STREET NAME: E Fernwood Rd
FROM: S Springbrook St
TO: Brutscher St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/14/2014

DEPTH IN INCHES		
4.5"	Asphalt Concrete (AC) Good condition.	4.5"
21.5"	Dense, gray, sandy, silty GRAVEL, moist. Gravel angular to 2" dia .	26"
10"	Medium stiff, brown, SILT, moist.	36"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

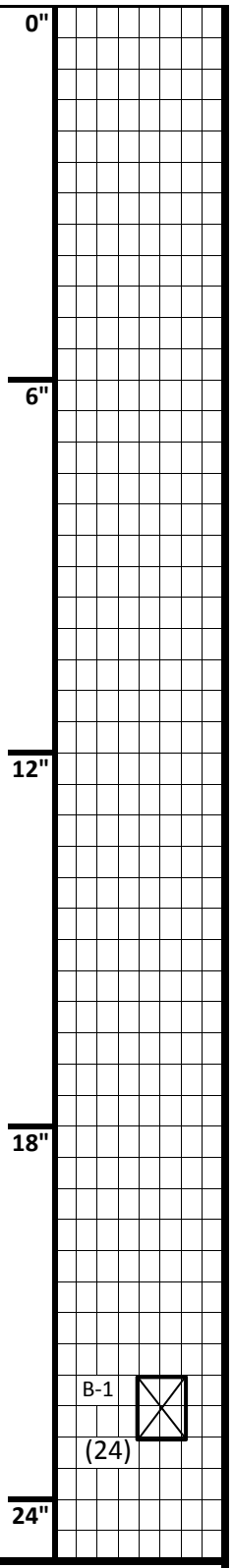
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-54
CORE DIA.: 8"

STREET NAME: E Fernwood Rd
FROM: Brutscher St
TO: N Fetig Ln

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/14/2014*

DEPTH IN INCHES		
3.5"	Asphalt Concrete (AC) Fair condition. One full-depth crack.	3.5"
8"	Dense, gray, silty, sandy GRAVEL, moist. Gravel very angular to 3" dia.	11.5"
12.5"	Stiff, brown, clayey SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

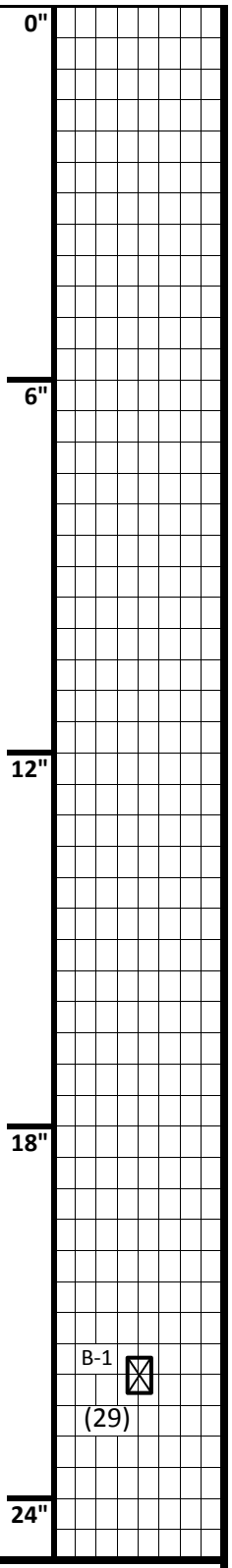
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-56
CORE DIA.: 8"

STREET NAME: E 6th St
FROM: S Howard St
TO: S School St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/6/2014

DEPTH IN INCHES		
0.75"	Asphalt Concrete (AC) Poor condition. One full-depth crack	0.75"
1.25"	Asphalt Concrete (AC) Poor condition. One full-depth crack.	2"
1"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	3"
8"	Dense, brown, silty, sandy GRAVEL, moist. Gravel very angular to 3" dia.	11"
13"	Medium stiff, brown SILT moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

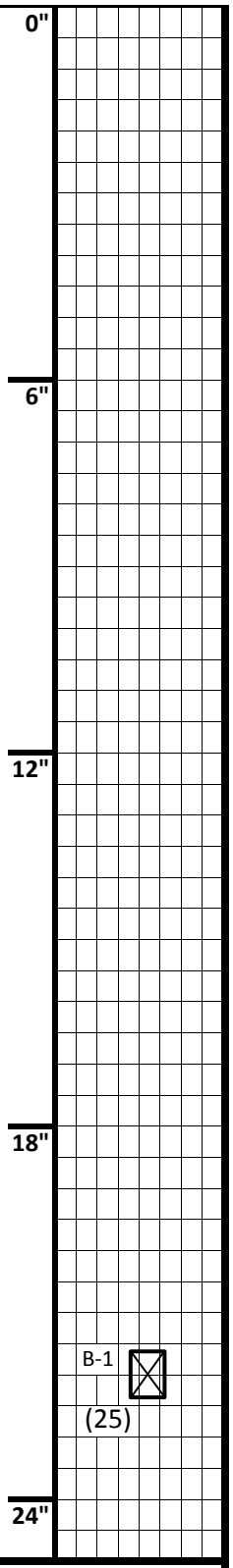
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-57
CORE DIA.: 8"

STREET NAME: E 5th St.
FROM: S School St
TO: S College St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/14/2014

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.5"
4"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	6.5"
5"	Dense, gray, silty, sandy, GRAVEL, moist. Gravel angular to 3" dia.	11.5"
12.5"	Medium stiff, brown SILT, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-58
CORE DIA.: 8"

STREET NAME: E 4th St
FROM: S College St
TO: S Edwards St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 2/28/2014

DEPTH IN INCHES

1.5"

Asphalt Concrete (AC)
Good condition.

1.5"

5.75"

Portland Cement Concrete (PCC)
Good condition.

7.25"

16.75"

Medium stiff, brown, clayey
SILT/silty CLAY, moist.

24"

NFW

0"

6"

12"

18"

24"

B-1
(36)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

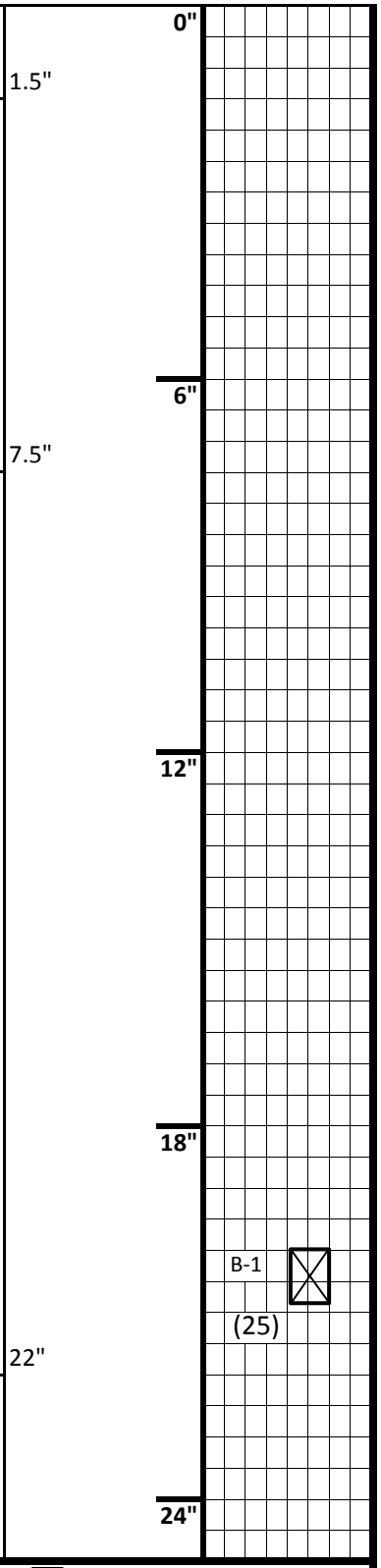
CORE LOG N-59
CORE DIA.: 4"

STREET NAME: S River Rd
FROM: E 5th St
TO: E 6th St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/6/2014*

DEPTH IN INCHES

1.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.
6"	Dense, brown,silty, sandy GRAVEL, moist. Gravel angular to 1" dia.
14.5"	Stiff, brown SILT, moist.
	NFW



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

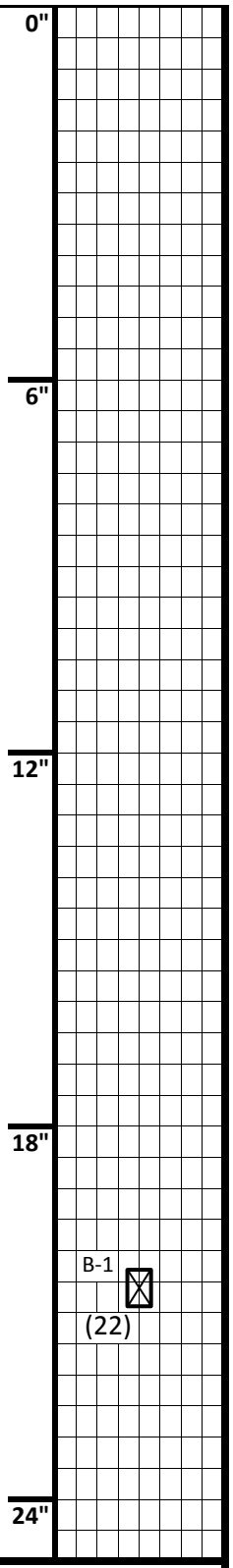
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-60
CORE DIA.: 8"

STREET NAME: S Willamette St
FROM: S Wynooski St
TO: E 5th St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/12/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Good condition.	2.5"
2.5"	Medium dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 3/4" dia.	5"
6"	Old Asphalt Concrete (AC) with rounded gravel to 1" dia.	11"
13"	Medium stiff, brown, SILT with some clay, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-61
CORE DIA.: 8"

STREET NAME: S Wynooski St
FROM: E 5th St
TO: E 7th St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/6/2014*

DEPTH IN INCHES

4.25"

Asphalt Concrete (AC)
Good condition.

4.25"

9.75"

Dense, brown, silty, sandy
GRAVEL, moist.
Gravel angular to 3/4" dia.

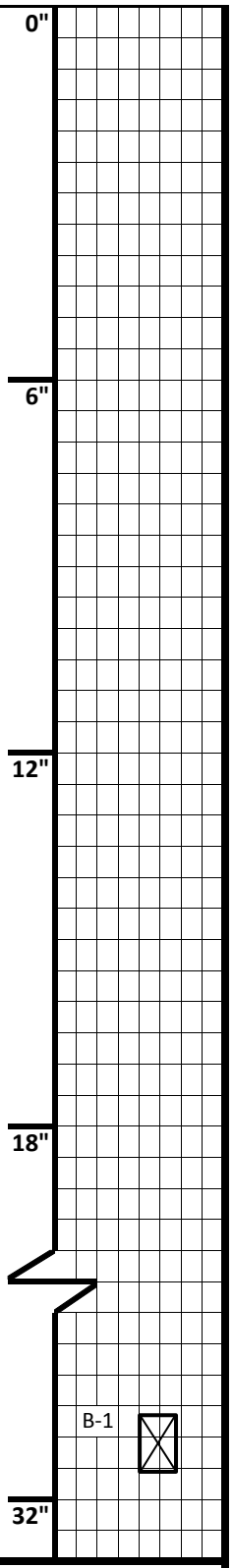
14"

18"

Dense, brown, silty, sandy
GRAVEL, moist. Gravel
rounded to angular to 2" dia.

32"

NFW



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

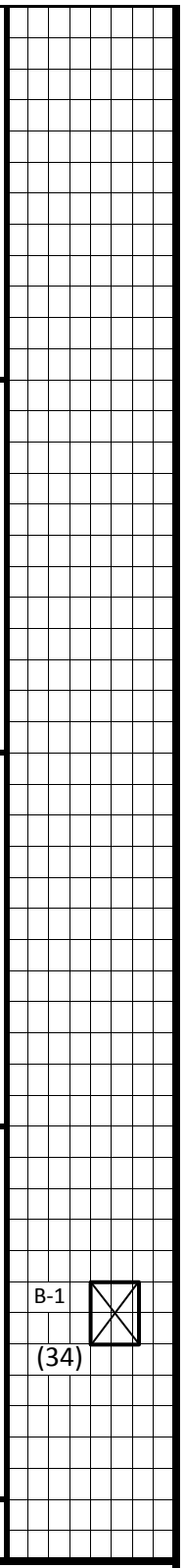
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG J-62
CORE DIA.: 8"

STREET NAME: Dayton Ave
FROM: E 5th St
TO: City Limits

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/13/2014*

DEPTH IN INCHES		
1.75"	Asphalt Concrete (AC) Fair condition. Full-depth cracks.	1.75"
6.25"	Dense, gray,silty, sandy GRAVEL, moist. Gravel angular to 1/2" dia.	8"
6"	Silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	14"
10"	Stiff, brown, clayey SILT/silty CLAY, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

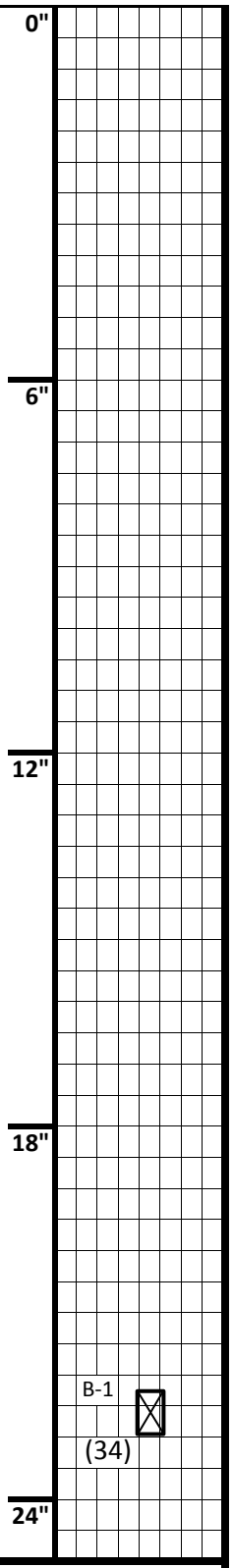
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-64
CORE DIA.: 8"

STREET NAME: S Meridian St
FROM: E 8th St
TO: E 9th St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *2/20/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.5"
10"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	12.5"
11.5"	Stiff, brown, silty CLAY, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-65
CORE DIA.: 8"

STREET NAME: S Center St
FROM: E 7th St
TO: E 8th St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/7/2014*

DEPTH IN INCHES

2.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.5"
11"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	13.5"
10.5"	Stiff, brown, clayey SILT, moist.	24"
	NFW	

0"
6"
12"
18"
24"

B-1
(25)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION
STRIPPING

B- BULK SAMPLE

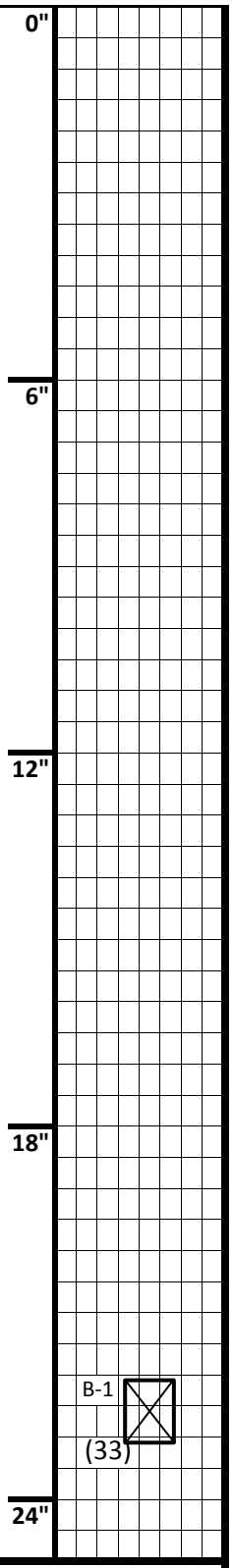
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-66
CORE DIA.: 8"

STREET NAME: S Chehalem St
FROM: E 6th St
TO: E 7th St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/7/2014*

DEPTH IN INCHES		
2 3/8"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	2.375"
11 5/8"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	14"
10"	Medium stiff, brown with gray streaks, SILT with some clay, moist.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-67
CORE DIA.: 8"

STREET NAME: E 7th St
FROM: S Willamette St
TO: S Columbia St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/7/2014*

DEPTH IN INCHES

1.5"	Asphalt Concrete (AC) Poor condition. Full-depth cracks.	1.5"
13.5"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.	
	[Water perched @ 15" on clay]	15"
9"	Stiff, gray, CLAY, moist.	
		24"
	NFW	

0"
6"
12"
18"
24"

B-1
(24)

LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

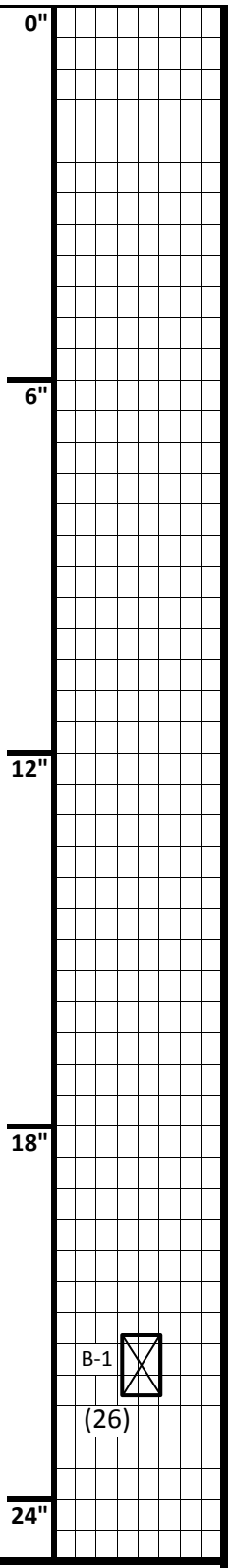
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-68
CORE DIA.: 8"

STREET NAME: S Pacific St
FROM: E 7th St
TO: E 8th St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/7/2014*

DEPTH IN INCHES		
4"	Asphalt Concrete (AC) Good condition.	4"
11"	Dense, gray silty, sandy GRAVEL, moist. Gravel angular to 1.5" dia.	15"
9"	Stiff, brown, SILT, with some clay to clayey, damp to moist. At 16" grades to brown.	24"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-69
CORE DIA.: 8"

STREET NAME: Industrial Pkwy.
FROM: E 9th St
TO: South end

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/17/2014

DEPTH IN INCHES

3.5"	Asphalt Concrete (AC) Fair condition. One full-depth crack.
9"	Dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.
11.5"	Stiff, gray, CLAY, moist, highly plastic.
	NFW

3.5"

12.5"

24"

0"

6"

12"

18"

24"

B-1

(39)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

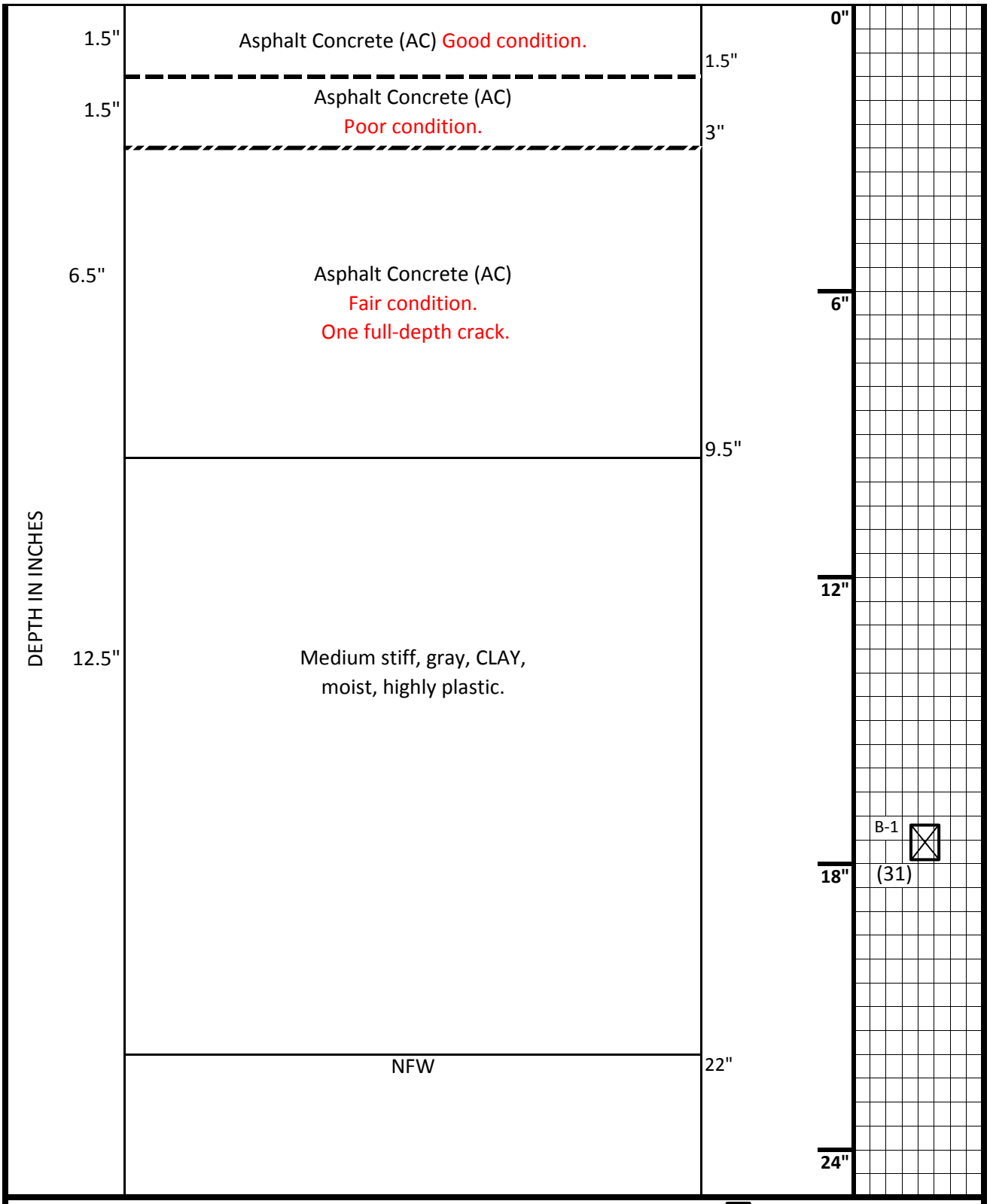
B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-70
CORE DIA.: 8"

STREET NAME: E 12th St
FROM: S River St
TO: Meridian St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/7/2014*



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-71
CORE DIA.: 4"

STREET NAME: S River St
FROM: E 12th St
TO: SE 13th St

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/6/2014*

DEPTH IN INCHES

5.25"

Asphalt Concrete (AC)
Good condition.

5.25"

9.75"

Dense, gray silty, sandy GRAVEL, moist. Gravel angular to 1.5" dia.

15"

9"

Medium stiff to stiff, brown, w/gray streaks, CLAY, moist.

24"

NFW

0"

6"

12"

18"

24"

B-1

(35)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

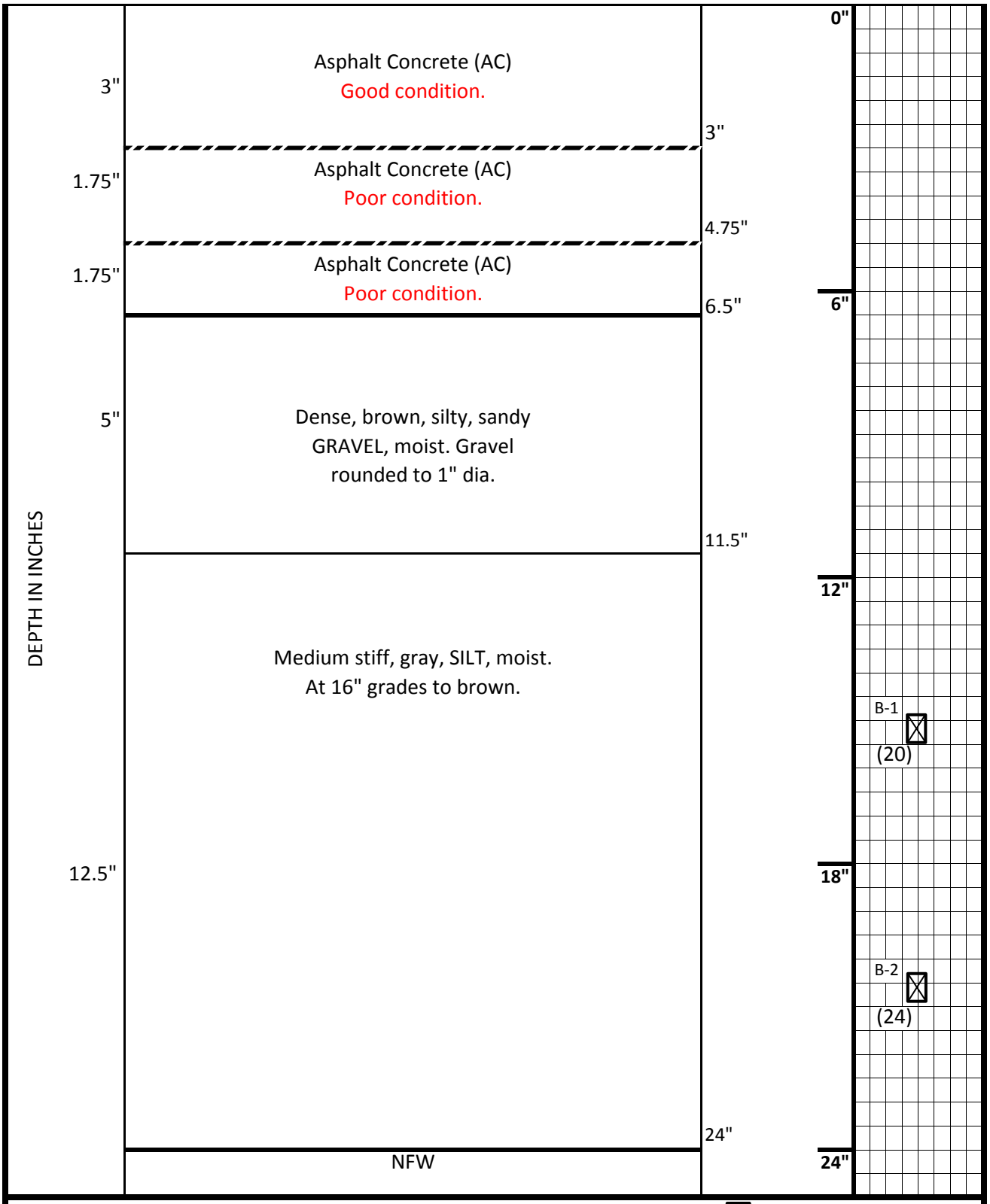
B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG N-72
CORE DIA.: 8"

STREET NAME: E 11th St
FROM: S Chehalem St
TO: S Willamette St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/6/2014*



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

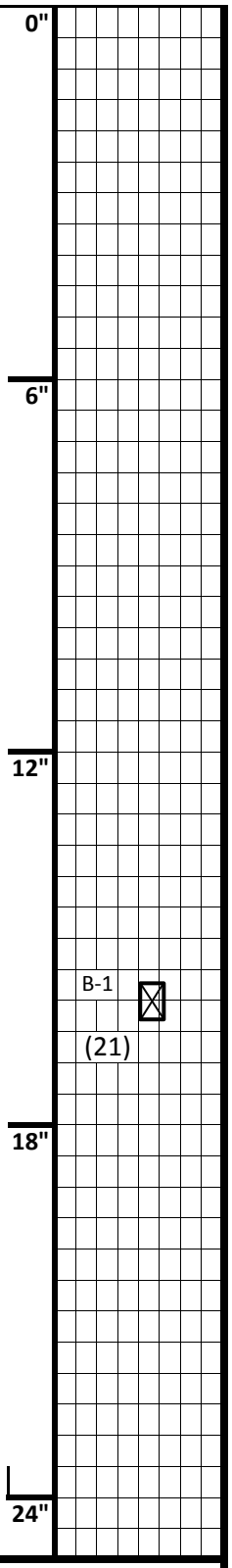
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-73
CORE DIA.: 4"

STREET NAME: S. Sandoz Rd.
FROM: North end
TO: S Wynooski St

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/17/2014*

DEPTH IN INCHES		
2.5"	Asphalt Concrete (AC) Poor condition. One full-depth crack	2.5"
5.5"	Medium dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1" dia. [From 6"-8" occasional gravel angular to 2" dia.]	8"
12"	Medium stiff, brown SILT, moist.	20"
	NFW	



LEGEND ( ) WATER CONTENT IN PERCENT DELAMINATION STRIPPING B- BULK SAMPLE

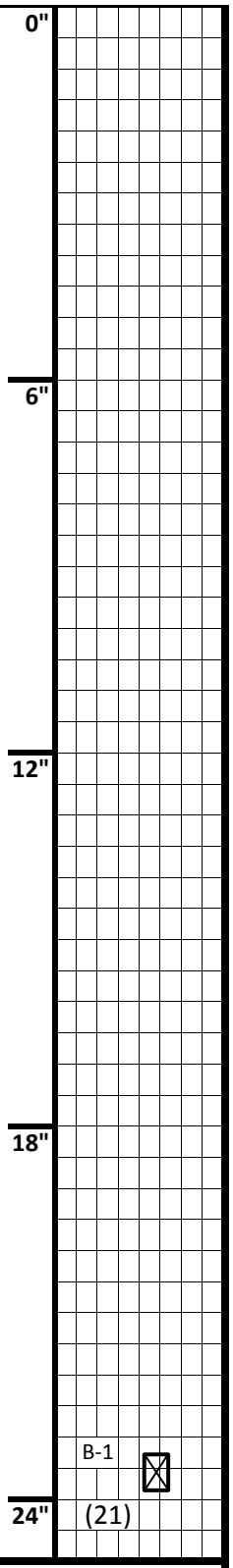
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-74
CORE DIA.: 8"

STREET NAME: Sunset Ct.
FROM: College St.
TO: End

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE:* 3/20/2014

DEPTH IN INCHES		
4.5"	Asphalt Concrete (AC) Fair to poor condition. One full-depth crack	4.5"
4.5"	Medium dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1" dia.	9"
5.5"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 2" dia.	14.5"
11.5"	Medium stiff, brown SILT, moist. NFW	26"



LEGEND ( ) WATER CONTENT IN PERCENT | DELAMINATION STRIPPING | B- BULK SAMPLE (26)

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-74
CORE DIA.: 8"

STREET NAME: Pennington
FROM: Barclay
TO: Aldersgate

JOB NUMBER: 13075 *LOCATION: NEWBERG, OR* *DATE: 3/20/2014*

DEPTH IN INCHES

1"

Asphalt Concrete (AC)
Poor condition. Full-depth cracks.

2"

Asphalt Concrete (AC)
Poor condition. Full-depth cracks.

6"

Dense, gray GRAVEL with some sand, some silt. Gravel angular to 3" dia.

Perched water at 9"

15"

Medium stiff, brown CLAY, moist.

NFW

1"

3"

9"

24"

0"

6"

12"

18"

24"

B-2

(44)

LEGEND ( ) WATER CONTENT IN PERCENT

DELAMINATION STRIPPING

B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

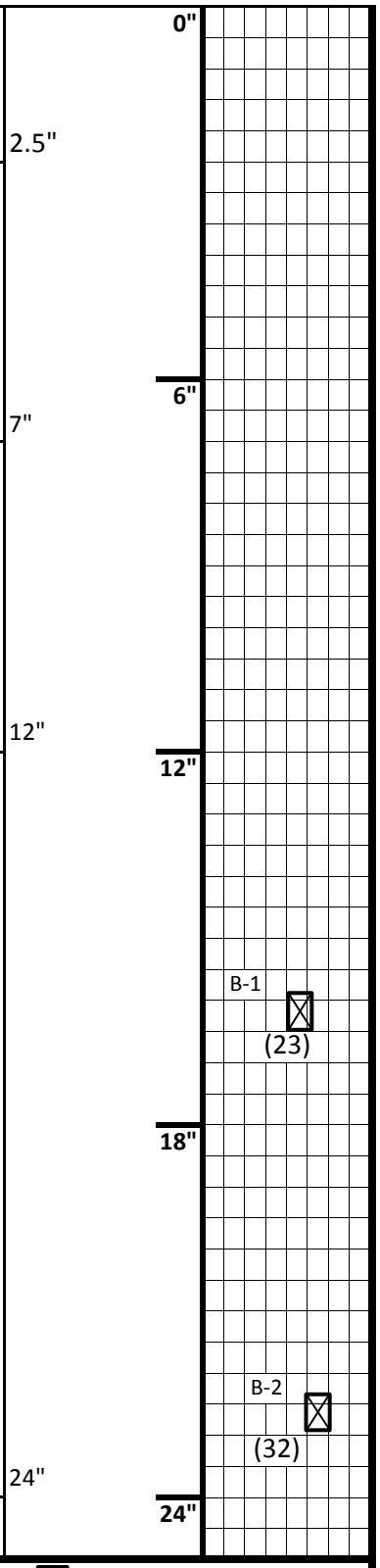
CORE LOG R-76
CORE DIA.: 8"

STREET NAME: Howard St
FROM: 4th Ave.
TO: 5th Ave.

JOB NUMBER: *13075* *LOCATION: NEWBERG, OR* *DATE:* *3/20/2014*

DEPTH IN INCHES

2.5"	Asphalt Concrete (AC) Poor condition. Two full-depth cracks
4.5"	Medium dense, gray, silty, sandy GRAVEL, moist. Gravel angular to 1/2" dia.
5"	Dense, brown, silty, sandy GRAVEL, moist. Gravel angular to 1 1/2" dia.
12"	Medium stiff, gray SILT, moist, oil-stained gray. At 16" becomes brown.
	NFW



LEGEND ( ) WATER CONTENT IN PERCENT — DELAMINATION STRIPPING — B- BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

CORE LOG R-77
CORE DIA.: 8"

STREET NAME: E 9th St
FROM: Charles St
TO: Blaine St.

13075 LOCATION: NEWBERG, OR DATE: 3/20/2014

APPENDIX G - TRAFFIC COUNT DATA

Table 1 - Summary of Traffic Loading Analysis - City of Newberg

					24-hr Volumes by Vehicle Classification																					
				Vehicle Class:	1	2	3	4	5	6	7	8	9	10	11	12	13									
				ODOT ESAL Conversion Factors (flexible pavement):	0	0	0	246	104	284	757	253	466	561	603	546	1037									
Location No.	**Street Name**	**Count Location**	**Dir**	**Traffic Growth, %**	**Motor-cycle**	**Car**	**Light Pickup**	**Buses**	**2 axle-6 tire**	**3 axle - single**	**4 axle - single**	**<5 axle - double**	**5 axle - double**	**>6 axle - double**	**<6 axle - multi**	**6 axle - multi**	**>6 axle- multi**	**Not Classified**	**Total 24 hr Volume**	**% Trucks**	**Annual ESALs**	**Design Period, yrs**	**Cumulative Growth Factor**	**Total Design Period Cumulative ESAL Repetitions**	**Comment**	**Current FFC from PAVER**
1	Foothills Dr	Between Crater and Tukwil	EB	1%	4	495	178	40	56	2	0	1	1	0	0	0	0	19	796	12.8%	2,195	20	22.02	48,323		Major Collector
1	Foothill Dr	Between Crater Ln & W Tukwil Dr	WB	1%	1	486	139	2	24	3	0	2	2	0	0	0	0	18	677	5.1%	1,757	20	22.02	38,692		Major Collector
2	Foothill Dr	Btwn Jones St & Morris St	EB	1%	7	581	182	30	47	2	0	0	0	0	0	0	0	21	870	9.3%	2,300	20	22.02	50,653		Major Collector
2	Foothill Dr	Btwn Jones St & Morris St	WB	1%	2	520	153	27	53	4	0	2	1	0	0	0	0	14	776	11.4%	2,069	20	22.02	45,549		Major Collector
3	Foothill Dr	btwn Meridian St & Burlington Dr	EB	1%	1	471	138	4	25	0	0	2	0	0	0	0	0	8	649	4.9%	1,597	20	22.02	35,169		Major Collector
3	Foothill Dr	btwn Meridian St & Burlington Dr	WB	1%	0	443	148	9	32	0	0	2	0	0	0	0	0	7	641	6.8%	1,615	20	22.02	35,556		Major Collector
4	Main St	Btwn Edgewood Dr & Myrtlewood Dr	NB	1%	7	214	73	4	15	0	0	0	0	0	0	0	0	20	333	6.3%	953	20	22.02	20,984		Major Collector
4	Main St	Btwn Edgewood Dr & Myrtlewood Dr	SB	1%	1	204	64	6	14	1	0	0	0	0	0	0	0	20	310	7.4%	909	20	22.02	20,015		Major Collector
5	Mountainview Dr	Btwn Crater Ln & Main St	EB	1%	3	510	157	2	31	1	0	1	0	0	0	0	1	15	721	5.2%	1,840	20	22.02	40,515		Major Collector
5	Mountainview Dr	Btwn Crater Ln & Main St	WB	1%	4	568	175	1	36	2	0	0	0	0	0	0	0	21	807	5.1%	2,079	20	22.02	45,786		Major Collector
6	Mountainview Dr	btwn Donald Ln & Buckley Ln	EB	1%	5	967	309	5	70	1	0	4	0	0	0	0	0	32	1,393	6.0%	3,607	20	22.02	79,418		Major Collector
6	Mountainview Dr	btwn Donald Ln & Buckley Ln	WB	1%	3	1007	316	3	85	2	0	0	0	0	0	0	0	10	1,426	6.4%	3,518	20	22.02	77,463		Major Collector
7	Mountainview Dr	Btwn Center St & Villa Rd	EB	1%	13	2765	686	24	163	3	0	7	0	0	0	0	0	102	3,763	5.5%	9,647	20	22.02	212,413		Minor Arterial
7	Mountainview Dr	Btwn Center St & Villa Rd	WB	1%	29	5611	1262	39	312	14	0	10	3	0	0	0	0	191	7,471	5.3%	18,930	20	22.02	416,829		Minor Arterial
8	Mountainview Dr	Btwn Herman St & Esther	EB	1%	23	2393	734	33	162	12	0	14	6	1	0	0	0	66	3,444	6.8%	8,887	20	22.02	195,692		Minor Arterial
8	Mountainview Dr	Btwn Herman St & Esther	WB	1%	17	2452	686	25	163	14	0	11	5	0	0	0	0	67	3,440	6.5%	8,808	20	22.02	193,939		Minor Arterial
9	Aspen Way	N of E Mountainview Dr	NB	1%	0	9	15	16	102	0	0	2	0	0	0	0	0	2	146	82.3%	674	20	22.02	14,836		Minor Collector
9	Aspen Way	N of E Mountainview Dr	SB	1%	0	39	55	9	54	0	0	1	0	0	0	0	0	0	158	40.5%	557	20	22.02	12,265		Minor Collector
10	Zimri Dr	N of Mountainview Dr	NB	1%	0	434	196	3	113	1	0	7	0	0	0	0	0	4	758	16.4%	2,137	20	22.02	47,046		Major Collector
10	Zimri Dr	N of Mountainview Dr	SB	1%	3	543	181	7	84	1	0	4	0	2	0	0	0	4	829	11.9%	2,180	20	22.02	47,993		Major Collector
11	Springbrook Rd	BTwn Allison Ln & Mountainview Dr	EB	1%	1	560	180	10	84	2	0	4	0	0	0	0	0	4	845	11.9%	2,207	20	22.02	48,587		Major Collector
11	Springbrook Rd	BTwn Allison Ln & Mountainview Dr	WB	1%	0	521	150	4	63	2	0	2	0	0	0	0	0	10	752	9.6%	1,955	20	22.02	43,047		Major Collector
12	Springbrook Rd	Btwn Mountain View Dr & Crestview Dr	NB	1%	7	2736	996	42	359	11	0	37	11	1	0	0	0	176	4,376	10.9%	12,731	20	22.02	280,333		Minor Arterial
12	Springbrook Rd	Btwn Mountain View Dr & Crestview Dr	SB	1%	15	3159	665	43	214	25	0	31	14	3	0	0	0	136	4,305	8.0%	11,538	20	22.02	254,064		Minor Arterial
13	Columbia Dr	Btwn Main St & Ridgeview Village	EB	1%	2	257	95	3	29	0	0	3	0	0	0	0	0	11	400	9.0%	1,096	20	22.02	24,142		Minor Collector
13	Columbia Dr	Btwn Main St & Ridgeview Village	WB	1%	1	204	66	5	22	0	0	0	0	0	0	0	0	12	310	9.1%	862	20	22.02	18,976		Minor Collector
14	Crestview Dr	Btwn Hwy 219 & Meridian St	EB	1%	2	325	342	6	63	0	0	4	1	0	0	0	0	9	752	10.0%	2,152	20	22.02	47,376		Major Collector
14	Crestview Dr	Btwn Hwy 219 & Meridian St	WB	1%	0	620	238	14	95	0	0	1	0	0	0	0	0	6	974	11.4%	2,555	20	22.02	56,267		Major Collector
15	Crestview Dr	Btwn Hoskins St & Aldersgate Ln	EB	1%	2	577	233	11	62	0	0	3	0	0	0	0	0	9	897	8.6%	2,327	20	22.02	51,229		Major Collector
15	Crestview Dr	Btwn Hoskins St & Aldersgate Ln	WB	1%	0	737	171	22	48	1	0	0	0	0	0	0	0	12	991	7.3%	2,446	20	22.02	53,854		Major Collector
16	Crestview Dr	Btwn Libra St & Roundabout	EB	1%	1	123	42	5	15	0	0	1	0	0	0	0	0	5	192	11.2%	528	20	22.02	11,626		Major Collector
16	Crestview Dr	Btwn Libra St & Roundabout	WB	1%	1	157	62	4	12	0	0	0	0	0	0	0	0	18	254	7.0%	764	20	22.02	16,827		Major Collector
17	Villa Rd	Btwn Carol Ann Dr & Park Ln	NB	1%	10	1567	407	23	99	8	0	4	2	0	0	0	0	39	2,159	6.5%	5,456	20	22.02	120,127		Major Collector
17	Villa Rd	Btwn Carol Ann Dr & Park Ln	SB	1%	14	1644	349	13	85	3	0	4	1	0	0	0	0	42	2,155	5.1%	5,322	20	22.02	117,181		Major Collector
18	Deborah Rd	Btwn Douglas Ave & Haworth Ave	NB	1%	4	843	308	43	76	2	0	3	1	0	0	0	0	60	1,340	9.8%	3,835	20	22.02	84,443		Major Collector
18	Deborah Rd	Btwn Douglas Ave & Haworth Ave	SB	1%	11	811	297	23	42	3	0	1	0	0	0	0	0	93	1,281	6.1%	3,819	20	22.02	84,095		Major Collector
19	Vittoria Way	Btwn Aquarius Blvd & Hwy 99	NB	1%	12	568	167	1	33	9	0	1	0	0	0	0	0	49	840	5.8%	2,390	20	22.02	52,617		Minor Collector
19	Vittoria Way	Btwn Aquarius Blvd & Hwy 99	SB	1%	11	464	121	1	37	3	0	0	0	0	0	0	0	43	680	6.7%	1,956	20	22.02	43,074		Minor Collector
20	Elliott Rd	Btwn Hawthorne Ave & Willow Dr	NB	1%	20	919	263	8	64	10	0	3	0	0	0	0	0	125	1,412	6.9%	4,383	20	22.02	96,509		Major Collector
20	Elliott Rd	Btwn Hawthorne Ave & Willow Dr	SB	1%	16	787	293	7	69	3	2	1	0	0	1	0	0	102	1,281	7.3%	3,954	20	22.02	87,059		Major Collector
21	Springbrook Rd	Btwn Haworth Ave & Newberg Vil	NB	1%	81	3313	998	24	249	35	2	32	9	2	1	0	0	486	5,232	7.7%	16,688	20	22.02	367,462		Minor Arterial
21	Springbrook Rd	Btwn Haworth Ave & Newberg Vil	SB	1%	73	3495	1030	35	255	21	1	35	12	3	2	0	2	352	5,316	7.5%	15,828	20	22.02	348,512		Minor Arterial
22	Main St	Btwn Clifford Ct & E Illinois St	NB	1%	2	895	326	8	82	1	0	5	0	0	0	0	0	24	1,343	7.3%	3,508	20	22.02	77,234		Major Collector
22	Main St	Btwn Clifford Ct & E Illinois St	SB	1%	1	804	236	6	92	3	0	2	0	0	0	0	0	17	1,161	9.0%	3,012	20	22.02	66,317		Major Collector
23	E Illinois St	Btwn Washington & Trailer Park	EB	1%	4	995	358	6	102	3	0	7	2	0	0	0	0	48	1,525	8.2%	4,193	20	22.02	92,330		Major Collector
23	E Illinois St	Btwn Washington & Trailer Park	WB	1%	9	1057	359	10	108	2	0	7	1	0	0	0	0	44	1,597	8.3%	4,315	20	22.02	95,003		Major Collector
24	Vermillion St	Btwn College St & Edwards St	EB	1%	1	560	217	0	66	3	0	1	0	0	0	0	0	23	871	8.3%	2,367	20	22.02	52,123		Major Collector
24	Vermillion St	Btwn College St & Edwards St	WB	1%	3	410	210	3	54	1	0	0	0	0	0	0	0	17	698	8.6%	1,918	20	22.02	42,228		Major Collector
25	Meridian St	Btwn Jacqui Ct & Sierra Vista St	NB	1%	9	535	159	3	32	3	0	1	1	0	0	0	0	31	774	5.6%	2,085	20	22.02	45,918		Minor Collector
25	Meridian St	Btwn Jacqui Ct & Sierra Vista St	SB	1%	2	747	186	3	35	3	0	1	0	0	0	0	0	41	1,018	4.5%	2,693	20	22.02	59,306		Minor Collector
26	Fulton St	Btwn Cherry St & Haworth Ave	EB	1%	15	1388	427	7	87	6	1	1	1	0	0	0	0	43	1,976	5.4%	5,042	20	22.02	111,024		Major Collector
26	Fulton St	Btwn Cherry St & Haworth Ave	WB	1%	25	1106	538	4	130	7	0	0	1	0	0	0	0	66	1,877	7.9%	5,254	20	22.02	115,697		Major Collector
27	Haworth Ave	Btwn Villa Rd & Sitka Ave	EB	1%	22	1790	315	8	73	4	0	4	1	0	0	0	0	87	2,304	4.3%	5,914	20	22.02	130,216		Major Collector
27	Haworth Ave	Btwn Villa Rd & Sitka Ave	WB	1%	17	1751	455	8	86	5	0	3	0	0	0	0	0	78	2,403	4.6%	6,211	20	22.02	136,764		Major Collector
28	Haworth Ave	Btwn Pecan Ct & Deborah Rd	EB	1%	33	2009	488	12	92	5	0	1	1	0	0	0	0	66	2,707	4.3%	6,756	20	22.02	148,769		Major Collector
28	Haworth Ave	Btwn Pecan Ct & Deborah Rd	WB	1%	34	1785	475	11	67	10	1	4	0	0	0	0	0	68	2,455	4.1%	6,214	20	22.02	136,830		Major Collector
29	Haworth Ave	Btwn Springbrook Rd & Deborah Rd	EB	1%	59	2731	691	23	120	16	0	5	1	0	0	0	1	148	3,795	4.8%	9,983	20	22.02	219,820		Major Collector
29	Haworth Ave	Btwn Springbrook Rd & Deborah Rd	WB	1%	53	2043	545	4	86	18	1	5	0	0	1	0	0	166	2,922	4.5%	8,112	20	22.02	178,627		Major Collector
30	Brutscher St	Just S of Hwy 99W	NB	1%	3	1041	316	21	153	4	0	9	8	0	0	0	1	32	1,588	12.5%	4,396	20	22.02	96,791		Major Collector
30	Brutscher St	Just S of Hwy 99W	SB	1%	7	1200	354	6	115	3	0	10	4	0	0	0	0	22	1,721	8.1%	4,431	20	22.02	97,562		Major Collector
31	Providence Dr	Btwn Roundabout & Hwy 99W	NB	1%	0	411	81	0	44	0	0	0	0	0	0	0	0	3	539	8.2%	1,316	20	22.02	28,981		Major Collector
31	Providence Dr	Btwn Roundabout & Hwy 99W	SB	1%	1	371	92	2	34	1	0	2	0	0	0	0	0	3	506	7.8%	1,250	20	22.02	27,528		Major Collector
32	Elliott Rd	just N of Hwy 99W	NB	1%	10	875	223	5	60	2	0	3	0	0	0	0	0	59	1,237	6.1%	3,399	20	22.02	74,834		Major Collector
32	Elliott Rd	just N of Hwy 99W	SB	1%	14	812	187	2	53	3	0	2	1	0	0	0	0	68	1,142	5.9%	3,222	20	22.02	70,950		Major Collector
33	Hayes St	Just E of Elliott Rd	EB	1%	5	400	110	4	47	2	0	6	1	0	0	0	0	17	592	10.4%	1,632	20	22.02	35,931		Minor Collector
33	Hayes St	Just E of Elliott Rd	EB	1%	13	792	223	0	74	3	0	6	2	0	0	0	0	28	1,141	7.7%	3,011	20	22.02	66,304		Minor Collector
34	Springbrook Rd	Btwn Hayes St & Hwy 99W	NB	1%	9	2895	573	35	231	22	1	36	24	8	1	1	2	291	4,129	9.4%	12,611	20	22.02	277,690		Minor Arterial
34	Springbrook Rd	Btwn Hayes St & Hwy 99W	SB	1%	5	1734	613	47	289	22	0	29	27	5	1	0	6	244	3,022	14.9%	10,229	20	22.02	225,224		Minor Arterial
35	Hayes St	Btwn Werth Blvd & Brutscher St	EB	1%	4	427	108	0	51	2	0	1	1	0	0	0	0	4	598	9.3%	1,508	20	22.02	33,196		Major Collector

Table 1 - Summary of Traffic Loading Analysis - City of Newberg

					24-hr Volumes by Vehicle Classification																				
				Vehicle Class:	1	2	3	4	5	6	7	8	9	10	11	12	13								
				ODOT ESAL Conversion Factors (flexible pavement):	0	0	0	246	104	284	757	253	466	561	603	546	1037								
Location No.	**Street Name**	**Count Location**	**Dir**	**Traffic Growth, %**	**Motor-cycle**	**Car**	**Light Pickup**	**Buses**	**2 axle-6 tire**	**3 axle - single**	**4 axle - single**	**<5 axle - double**	**5 axle - double**	**>6 axle - double**	**<6 axle - multi**	**6 axle - multi**	**>6 axle-multi**	**Not Classified**	**Total 24 hr Volume**	**% Trucks**	**Annual ESALs**	**Design Period, yrs**	**Cumulative Growth Factor**	**Total Design Period Cumulative ESAL Repetitions**	**Comment**	**Current FFC from PAVER**
35	Hayes St	Btwn Werth Blvd & Brutscher St	WB	1%	2	414	107	2	39	1	0	2	1	0	0	0	0	4	572	7.9%	1,427	20	22.02	31,412		Major Collector
36	The Greens Ave	Btwn Argyle Ct & Masters Dr	NB	1%	0	244	186	8	44	0	0	2	0	0	0	0	0	22	506	11.1%	1,543	20	22.02	33,971		Residential
36	The Greens Ave	Btwn Argyle Ct & Masters Dr	SB	1%	0	285	153	3	32	0	0	1	0	0	0	0	0	4	478	7.6%	1,251	20	22.02	27,537		Residential
37	Fernwood Rd	Btwn Fetting Ln & Werth Blvd	EB	1%	2	738	239	6	65	1	1	7	0	0	0	0	0	13	1,072	7.6%	2,748	20	22.02	60,513		Major Collector
37	Fernwood Rd	Btwn Fetting Ln & Werth Blvd	WB	1%	2	673	272	11	78	4	0	6	0	0	0	0	0	18	1,064	9.5%	2,857	20	22.02	62,913		Major Collector
38	Brutscher St	Btwn Fernwood Rd & Werth Blvd	NB	1%	8	784	206	5	62	6	0	3	0	0	0	0	0	16	1,090	7.1%	2,750	20	22.02	60,561		Major Collector
38	Brutscher St	Btwn Fernwood Rd & Werth Blvd	SB	1%	9	950	263	4	78	4	0	6	0	0	0	0	0	14	1,328	7.0%	3,322	20	22.02	73,138		Major Collector
39	Fernwood Rd	Btwn Brutscher St & Springbrook Rd	EB	1%	11	1085	364	9	92	4	0	7	0	0	0	0	0	21	1,593	7.2%	4,067	20	22.02	89,560		Major Collector
39	Fernwood Rd	Btwn Brutscher St & Springbrook Rd	WB	1%	7	943	296	3	78	3	1	5	0	0	0	0	0	19	1,355	6.8%	3,446	20	22.02	75,869		Major Collector
40	Springbrook Rd	Btwn Fernwood Rd & Wilsonville Rd	NB	1%	22	2242	488	25	127	14	2	14	20	7	2	1	2	125	3,091	7.3%	8,525	20	22.02	187,712		Minor Arterial
40	Springbrook Rd	Btwn Fernwood Rd & Wilsonville Rd	SB	1%	12	2182	544	36	247	28	1	28	31	5	0	0	7	67	3,188	12.2%	8,903	20	22.02	196,031		Minor Arterial
41	Elliott Rd	Btwn 2nd St & Hancock St	NB	1%	15	678	332	15	150	2	2	8	8	0	0	0	0	65	1,275	15.0%	4,015	20	22.02	88,406		Major Collector
41	Elliott Rd	Btwn 2nd St & Hancock St	SB	1%	6	764	367	6	171	6	1	5	1	1	1	0	0	48	1,377	14.3%	4,126	20	22.02	90,855		Major Collector
42	Villa Rd	Btwn Hwy 99W & Sherman St	NB	1%	14	2132	751	23	213	8	0	8	3	0	0	0	0	140	3,292	8.2%	9,283	20	22.02	204,402		Major Collector
42	Villa Rd	Btwn Hwy 99W & Sherman St	SB	1%	15	2605	724	8	212	13	0	8	0	0	0	0	0	129	3,714	6.8%	9,973	20	22.02	219,587		Major Collector
43	Meridian St	Btwn Sheridan St & Sherman St	NB	1%	10	1337	154	12	53	3	0	2	1	0	0	0	0	34	1,606	4.6%	3,856	20	22.02	84,896		Minor Collector
43	Meridian St	Btwn Sheridan St & Sherman St	SB	1%	11	1275	246	3	54	3	0	3	0	0	0	0	0	35	1,630	4.1%	3,987	20	22.02	87,790		Minor Collector
44	2nd St	Btwn Main St & Washington St	EB	1%	16	719	109	0	17	2	2	0	1	0	0	0	0	35	901	2.8%	2,265	20	22.02	49,873		Major Collector
44	2nd St	Btwn Main St & Washington St	WB	1%	14	946	151	7	47	2	0	0	0	0	0	0	0	37	1,204	5.0%	3,019	20	22.02	66,471		Major Collector
45	3rd St	Btwn 99W & Harrison St	EB	1%	5	232	89	7	37	2	0	0	0	0	0	0	0	20	392	12.2%	1,169	20	22.02	25,740		Minor Collector
45	3rd St	Btwn 99W & Harrison St	WB	1%	0	247	92	1	26	2	1	0	0	0	0	0	0	3	372	8.1%	954	20	22.02	21,011		Minor Collector
46	Main St	Btwn 4th St & 5th St	NB	1%	0	486	152	4	58	3	0	4	0	0	0	0	0	9	716	9.8%	1,878	20	22.02	41,343		Major Collector
46	Main St	Btwn 4th St & 5th St	SB	1%	5	767	160	8	38	0	0	4	0	1	0	0	0	8	991	5.2%	2,366	20	22.02	52,101		Major Collector
47	5th St	Btwn Blaine St & Dayton Ave	EB	1%	7	440	197	5	80	2	0	3	0	0	0	0	0	18	752	12.2%	2,121	20	22.02	46,707		Residential
47	5th St	Btwn Blaine St & Dayton Ave	WB	1%	11	940	372	7	144	4	0	7	0	0	0	0	0	31	1,516	10.9%	4,157	20	22.02	91,542		Residential
48	Blaine St	btwn 3rd St & 5th St	NB	1%	0	189	139	1	7	0	0	0	0	0	0	0	0	0	336	2.4%	1,810	20	22.02	39,850	6 hr video count	Major Collector
48	Blaine St	btwn 3rd St & 5th St	SB	1%	2	176	160	1	5	0	0	0	0	0	0	0	0	0	344	1.7%	1,873	20	22.02	41,235	6 hr video count	Major Collector
49	Dayton Ave	Just S of Johanna Ct	NB	1%	8	357	341	4	133	1	0	8	0	0	0	0	0	15	867	17.0%	2,652	20	22.02	58,394		Major Collector
49	Dayton Ave	Just S of Johanna Ct	SB	1%	3	502	453	6	175	3	0	9	0	1	0	0	0	20	1,172	16.7%	3,573	20	22.02	78,674		Major Collector
50	College St	Btwn 3rd St & Alley	NB	1%	3	632	160	6	50	3	0	1	0	0	0	0	0	31	886	7.1%	2,369	20	22.02	52,172		Minor Collector
50	College St	Btwn 3rd St & Alley	SB	1%	12	699	155	3	51	0	0	2	0	0	0	0	0	43	965	6.2%	2,605	20	22.02	57,364		Minor Collector
51	4th St	Btwn Alley & Meridian St	EB	1%	2	389	86	3	42	3	0	1	0	0	0	0	0	25	551	9.3%	1,546	20	22.02	34,041		Minor Collector
51	4th St	Btwn Alley & Meridian St	WB	1%	3	458	114	9	48	1	0	1	0	0	0	0	0	19	653	9.3%	1,749	20	22.02	38,502		Minor Collector
52	6th St	Btwn School St & College St	EB	1%	3	409	99	6	28	1	0	0	0	0	0	0	0	11	557	6.5%	1,402	20	22.02	30,879		Residential
52	6th St	Btwn School St & College St	WB	1%	5	320	157	3	42	2	0	2	0	0	0	0	0	24	555	9.3%	1,616	20	22.02	35,574		Residential
53	9th St	Btwn College St & Meridian St	EB	1%	0	787	201	3	52	1	0	2	0	0	0	0	0	45	1,091	5.7%	2,939	20	22.02	64,714		Minor Collector
53	9th St	Btwn College St & Meridian St	WB	1%	3	738	146	5	32	1	0	1	0	0	0	0	0	25	951	4.4%	2,371	20	22.02	52,207		Minor Collector
54	River St	Btwn 2nd St & 3rd St	NB	1%	8	2343	374	15	109	1	0	13	0	0	0	0	0	69	2,932	4.9%	7,249	20	22.02	159,607		Major Collector
54	River St	Btwn 2nd St & 3rd St	SB	1%	9	1952	413	6	82	2	0	8	0	0	2	0	0	71	2,545	4.2%	6,422	20	22.02	141,415		Major Collector
55	River St	Btwn 6th St & 7th St	NB	1%	18	1356	91	0	12	4	0	1	0	0	0	0	0	131	1,613	1.9%	4,457	20	22.02	98,148		Major Collector
55	River St	Btwn 6th St & 7th St	SB	1%	19	1261	83	0	13	2	0	0	0	0	0	0	0	48	1,426	1.4%	3,366	20	22.02	74,120		Major Collector
56	River St	Btwn 9th St & 10th St	NB	1%	4	629	118	9	50	3	0	7	0	0	0	0	0	20	840	8.5%	2,184	20	22.02	48,090		Major Collector
56	River St	Btwn 9th St & 10th St	SB	1%	8	500	108	2	48	3	0	6	0	0	0	0	0	11	686	8.8%	1,760	20	22.02	38,762		Major Collector
57	Wynooski St	Btwn 7th St & Merlin Ln	NB	1%	4	407	102	1	48	2	0	2	0	0	0	0	0	7	573	9.4%	1,469	20	22.02	32,342		Major Collector
57	Wynooski St	Btwn 7th St & Merlin Ln	SB	1%	6	563	156	4	67	0	0	4	0	0	0	0	0	16	816	9.4%	2,149	20	22.02	47,328		Major Collector
58	11th St	Btwn Pacific St & Mill Pl	EB	1%	2	398	82	3	31	1	0	4	0	0	0	0	0	7	528	7.5%	1,322	20	22.02	29,105		Minor Collector
58	11th St	Btwn Pacific St & Mill Pl	WB	1%	0	537	107	12	50	3	0	4	0	0	0	0	0	2	715	9.7%	1,764	20	22.02	38,837		Minor Collector

Note: 10% of the "not classified" data were counted as 2 axle 6 tire trucks, the remainder were counted as cars.

APPENDIX H - PAVEMENT STRUCTURAL CONDITION DATA

Table 1- FWD Normalized Deflection Test Data

Test Section: Newberg 2013 Condition Survey and PMS
Start Point:
Test Date: 3-12-14
Test File: Newberg Cores FWD.fwd
Load Plate Radius, in: 5.91
Sensor Distance, in: 0 8 12 18 24 36 48 60

Deflections Normalized to 9000 lbf Basis

Test No.	Index No.	Core No.	D 0, mils	D 1, mils	D 2, mils	D 3, mils	D 4, mils	D 5, mils	D 6, mils	D 7, mils	Surface Temp., °F	BELLS3 Mid-depth AC Temp., °F	68 °F Temp. Adj. D0, mils	Surface Modulus, Ksi	Time	Comments
1	1	R-28	107.22	83.48	62.97	36.71	16.20	5.20	2.72	2.33	65	61	109.36	7	11:04:40	R-28 FRANKLIN D1 out of range on high drop
2	2	R-29	75.65	54.60	34.94	17.58	7.76	1.83	1.90	1.74	75	71	74.14	10	11:44:07	R-29 SHERMAN
3	3	R-30	51.07	36.51	25.76	13.88	7.76	4.04	2.97	2.30	86	78	49.54	14	12:21:34	R-30 NORTH
4	4	R-38	52.43	41.16	34.38	23.32	16.06	6.84	3.54	2.94	61	54	56.62	14	13:01:52	R-38 SHERIDAN
5	5	R-37	83.01	64.61	48.47	27.16	14.19	4.88	3.49	2.95	72	68	83.01	9	13:38:25	R-37 GRANT
6	6	R-36	30.53	23.28	18.40	12.57	8.71	4.64	3.12	2.57	86	75	29.31	24	14:16:42	R-36 MORTON
7	7	R-60	106.44	76.17	52.92	28.37	14.70	4.36	3.39	3.09	75	74	106.44	7	15:01:33	R-60 WILLAMETTE
1	8	N-34	60.88	47.82	35.60	21.37	11.80	5.22	3.82	3.17	45	45	65.75	12	9:09:39	N-34 ELIOTT
2	9	J-33	61.35	45.34	34.70	21.54	13.77	5.22	4.01	3.34	54	52	65.64	12	10:04:37	J-33 VILLA
3	10	N-31	15.30	12.80	11.77	9.94	8.32	5.69	3.78	2.67	62	58	15.76	48	11:02:13	N-31 MERIDIAN
4	11	J-49	17.47	14.47	12.79	10.39	8.61	5.76	3.77	2.63	67	61	17.99	42	12:00:18	J-49 2ND AVE
5	12	J-44	14.17	12.65	11.66	9.90	8.39	5.86	3.95	2.95	74	64	14.60	51	12:56:29	J-44 3RD
6	13	J-62	17.67	14.69	12.68	9.90	7.77	5.11	3.54	2.70	79	70	17.49	41	13:55:42	J-62 DAYTON
1	14	N-24	19.76	17.88	16.38	13.64	11.15	7.33	4.76	3.20	54	50	21.54	37	9:01:35	N-24 BRUTSCHER
2	15	R-57	51.85	38.28	29.86	19.42	12.04	5.62	3.66	2.97	58	54	54.96	14	10:24:48	R-57 5TH ST
3	16	J-47	35.47	26.84	22.64	15.84	11.43	5.94	3.25	2.56	68	62	36.18	20	11:35:04	J-47 MAIN ST
4	17	N-52	16.80	13.62	11.76	9.14	7.13	4.34	2.68	2.10	74	64	17.30	43	12:38:57	N-52 ELIOTT
5	18	J-53	40.57	31.02	24.52	15.98	10.00	4.61	2.84	2.31	87	72	39.35	18	13:52:42	J-53 FERNWOOD
6	19	J-54	14.55	12.42	11.02	8.90	7.16	4.80	3.31	2.37	55	54	15.86	50	15:08:51	J-54 FERNWOOD EAST END
1	20	R-41	40.11	27.48	18.55	10.78	6.87	3.73	2.72	2.12	45	45	40.91	18	8:17:30	R-41 SHERIDAN
2	21	R-40	13.01	11.68	10.80	9.09	7.12	4.77	2.98	2.06	45	46	15.09	56	9:01:35	R-40 CENTER
3	22	R-43	14.85	13.38	11.51	9.07	7.01	4.44	2.98	2.33	51	50	16.93	49	9:43:00	R-43 HANCOCK
4	23	N-35	60.81	48.05	39.82	28.34	19.35	10.28	5.70	4.09	52	51	63.24	12	10:30:20	N-35 HAYES
5	24	R-51	52.71	38.83	31.13	21.24	14.55	7.15	4.01	2.91	61	57	55.35	14	11:12:04	R-51 2ND ST
6	25	R-42	73.46	51.74	38.72	21.38	10.45	3.02	3.02	2.74	59	56	80.81	10	12:32:30	R-42 EVEREST
7	26	R-69	16.45	13.51	11.57	8.85	6.75	4.22	2.95	2.28	65	61	17.11	44	13:33:39	R-69 INDUSTRIAL
8	27	R-73	34.92	27.58	22.49	15.62	10.73	5.48	3.35	2.56	63	59	37.02	21	14:15:36	R-73 SANDOZ
1	28	R-74	115.48	86.08	57.43	22.74	10.44	4.27	3.59	2.99	47	46	125.87	6	9:06:17	R-74 A-1 SUNSET CT D1 OUT OF RANGE FROM HT 3
2	29	R-16	61.43	45.52	32.88	16.87	7.59	3.22	2.62	2.21	57	53	67.57	12	9:44:06	R-16 HOSKINS
3	30	R-75	24.35	20.29	17.95	14.00	10.69	6.22	3.68	2.76	53	50	26.54	30	9:47:26	R-75 A-2 PENNINGTON
4	31	R-17	15.32	13.27	12.00	9.76	7.87	5.22	3.42	2.46	63	56	16.39	47	10:24:46	R-17 SIERRA VISTA
5	32	N-9	26.76	20.89	17.75	13.11	9.63	5.67	3.57	2.67	52	49	29.44	27	10:28:55	N-9 CRESTVIEW
6	33	R-19	30.20	21.23	16.35	10.49	7.00	3.82	2.74	2.10	62	56	32.31	24	10:34:38	R-19 CAROL
7	34	R-76	87.17	65.41	47.13	27.01	14.82	6.04	4.17	3.60	67	60	89.79	8	10:45:36	R-76 HOWARD
8	35	R-56	15.66	12.81	11.20	8.78	6.87	4.50	3.09	2.35	64	58	16.60	46	11:30:33	R-56 6TH ST
9	36	R-77	55.02	40.80	29.69	16.68	8.99	3.50	2.87	2.50	67	61	56.67	13	11:36:54	R-77 9TH
1	37	J-20	28.63	23.14	18.93	13.56	10.04	5.72	3.68	2.86	54	52	31.21	25	8:59:20	J-20 HAWORTH
2	38	A-23	8.88	7.44	6.87	6.11	5.44	4.33	3.39	2.60	52	50	10.12	82	9:02:53	A-23 SPRINGBROOK
3	39	N-22	31.97	23.24	18.05	11.73	7.77	4.16	2.93	2.31	54	52	34.85	23	9:06:37	N-22 DEBORAH
4	40	J-18	111.92	85.85	64.00	30.22	12.66	5.35	3.79	3.06	53	51	123.11	6	9:12:28	J-18 VILLA
5	41	A-6	18.91	16.44	14.82	12.29	10.27	7.12	4.88	3.35	53	51	20.80	38	9:17:19	A-6 MOUNTAINVIEW
6	42	N-4	14.93	11.64	9.53	6.98	5.26	3.37	2.41	1.83	55	53	16.42	49	9:22:21	N-4 ASPEN
7	43	A-5	15.52	12.16	10.12	7.41	5.47	3.17	2.11	1.49	52	50	18.00	47	9:25:54	A-5 MOUNTAINVIEW
8	44	N-1	21.13	16.55	13.91	10.43	8.07	5.06	3.55	2.63	55	52	23.03	34	9:32:53	N-1 FOOTHILLS DR
9	45	R-2	25.64	20.73	17.24	12.48	8.99	4.86	3.01	2.29	55	53	27.43	28	9:35:52	R-2 HILLTOP

Table 1- FWD Normalized Deflection Test Data

Deflections Normalized to 9000 lbf Basis

Test No.	Index No.	Core No.	D 0, mils	D 1, mils	D 2, mils	D 3, mils	D 4, mils	D 5, mils	D 6, mils	D 7, mils	Surface Temp., °F	BELLS3 Mid-depth AC Temp., °F	68 °F Temp. Adj. D0, mils	Surface Modulus, Ksi	Time	Comments
10	46	N-7	32.64	25.43	21.03	15.30	10.94	6.22	4.04	3.16	55	52	35.25	22	9:40:59	N-7 MAIN ST
11	47	N-8	57.07	42.22	33.55	22.50	15.26	7.17	4.56	3.95	57	54	58.78	13	9:47:24	N-8 COLUMBIA
12	48	N-15	19.84	19.10	11.02	7.96	6.33	4.23	3.00	2.28	55	52	22.22	37	9:54:02	N-15 MERIDIAN
13	49	J-27	13.02	11.25	10.13	8.35	6.97	4.91	3.43	2.52	55	52	14.45	56	9:58:22	J-27 ILLINOIS
14	50	N-13	30.00	25.63	22.25	17.09	12.73	6.80	4.05	3.25	56	53	31.80	24	10:01:14	N-13 MAIN ST
15	51	J-32	50.62	37.06	28.90	18.68	11.56	5.83	3.81	3.10	55	53	54.16	14	10:10:25	J-32 FULTON
16	52	R-70	24.71	19.87	16.42	11.69	8.32	4.38	2.77	2.16	56	53	26.93	29	10:18:12	R-70 12TH
17	53	N-71	17.59	17.39	16.59	15.54	12.02	8.97	6.82	4.36	56	52	19.17	41	10:21:11	N-71 RIVER
18	54	N-72	23.59	19.27	16.55	12.71	9.61	5.40	3.30	2.60	56	53	25.71	31	10:23:35	N-72 11TH
19	55	N-59	11.77	10.56	10.04	9.07	7.99	6.32	4.83	3.57	56	53	12.95	62	10:27:45	N-59 RIVER
20	56	J-61	30.78	22.86	18.50	12.79	9.11	4.78	2.85	1.87	55	53	32.63	24	10:31:29	J-61 WYNOOSKI
21	57	R-68	41.61	31.18	22.08	13.40	8.44	4.33	3.05	2.51	54	53	42.44	17	10:38:01	R-68 PACIFIC
22	58	R-67	65.54	49.22	35.50	20.71	12.15	5.19	4.20	3.58	56	54	68.16	11	10:41:00	R-67 7TH
23	59	R-66	75.17	58.38	42.22	24.02	13.27	5.59	4.48	3.71	55	53	78.93	10	10:43:07	R-66 CHEHALEM
24	60	R-65	33.78	25.50	20.61	14.39	10.36	6.11	4.34	3.44	57	54	35.13	22	10:46:17	R-65 CENTER
25	61	R-64	38.51	26.70	15.82	6.75	3.36	2.18	2.01	1.72	57	55	41.21	19	10:49:03	R-64 MERIDIAN
26	62	R-50	95.94	76.12	61.54	38.44	19.06	5.82	3.74	3.63	59	55	103.62	8	10:52:58	R-50 MERIDIAN
27	63	N-58	55.00	43.46	34.83	22.75	15.37	6.95	4.33	3.67	58	54	59.40	13	10:56:08	N-58 4TH
28	64	R-46	74.99	57.04	42.80	22.27	15.41	5.93	4.47	3.86	59	56	77.24	10	11:00:08	R-46 4TH
29	65	R-48	70.16	55.17	45.59	31.54	20.57	8.96	5.51	4.58	59	56	71.56	10	11:02:31	R-48 3RD
30	66	R-14	72.09	56.42	42.94	25.44	12.57	4.55	3.91	3.37	56	54	76.42	10	11:10:02	R-14 MISSION
31	67	R-3	41.10	29.35	21.23	12.80	7.94	4.82	2.95	2.20	57	55	41.51	18	11:14:46	R-3 EDGEWOOD
32	68	A-12	95.97	64.36	45.19	23.43	12.89	5.74	3.77	3.18	60	57	99.81	8	11:22:57	A-12 CRESTVIEW
33	69	R11	49.78	35.51	27.21	17.14	10.21	4.48	3.46	2.95	57	54	53.76	15	11:28:44	R11 EMERY
34	70	R-21	30.33	22.96	17.89	11.78	7.79	4.07	2.76	2.18	57	54	32.45	24	11:33:14	R-21 PECAN

Table 2 - Backcalculation Analysis Results

City of Newberg Core Location
Based on FWD Testing Conducted: 3/12/14 through 3/25/14
Distance Reference: See map of core locations

Subgrade constitutive model: $M_r = K_1 s^{K_2}$; $K_2 <= 0$
where: s = subgrade principal (deviator) stress, psi
K_1 & K_2 = model parameters

Core No.	Core Label	Street	From	To	70°F Temp. Adj. D0, mils	AC Thickness, inches	AB Thickness, inches	Apparent Subgrade Depth, in	AC Modulus @ 68 °F & 10 Hz, psi	AB Modulus, psi	Subgrade M_r at 6 psi deviator stress, psi	Subgrade Constitutive Model Parameter, K_1	Subgrade Constitutive Model Parameter, K_2	Effective Structural Number of Pavement Layers, SN_{eff}	RMSE, %
1	N-1	E Foothills Drive	N Main St	Jones St	23.03	4.50	17.50	28	220,726	14,542	10,430	11,937	-0.075	3.14	0.91
2	R-2	Hilltop Dr	Jones St	Morris St	27.43	3.50	8.50	25	392,676	27,613	5,578	5,578	0.000	2.31	1.70
3	R-3	Edgewood Dr	Princeton Ct	Clearbrook Ct	41.51	2.25	8.75	26	492,143	8,616	6,145	11,147	-0.332	1.60	0.88
4	N-4	N Aspen Way	City Limits	E Mountainview Dr	16.42	6.25	4.75	34	310,316	17,716	16,030	17,576	-0.051	2.46	9.84
5	A-5	E Mountainview Dr	Thorne St	N Alice Way	18	6.75	8.75	31	111,208	41,964	11,083	11,083	0.000	2.82	1.26
6	A-6	E Mountainview Dr	N Herman St	N Aspen Way	20.8	7.25	5.75	63	217,719	22,016	9,629	9,629	0.000	2.68	0.59
7	N-7	N Main St	Nugget Ln	Lynn Dr	35.25	4.50	7.50	27	127,633	26,944	5,440	5,440	0.000	2.03	2.01
8	N-8	E Columbia Dr	N Main St	N College St	58.78	2.50	10.50	42	237,125	12,919	2,599	2,599	0.000	1.80	2.40
9	N-9	E Crestview Dr	Hoskins St	Aldersgate Ln	29.44	4.00	20.00	29	216,124	14,542	6,746	6,746	0.000	3.27	0.87
11	R11	N Emery Dr	E Crestview Dr	Douglas Ave	53.76	3.50	7.50	infinite	99,712	16,436	3,546	3,546	0.000	1.59	4.50
12	A-12	E Crestview Dr	Springbrook Way	N Libra St	99.81	2.75	1.25	infinite	208,531	8,917	1,855	1,855	0.000	0.85	3.12
13	N-13	N Main St	Emma St	Markris Ln	31.8	3.50		infinite	1,059,023	--	3,868	3,868	0.000	1.60	2.06
14	R-14	Mission Dr	Mission Ct	N College St	76.42	2.50	9.00	infinite	317,603	3,809	2,668	2,668	0.000	1.40	5.82
15	N-15	N Meridian St	Sierra Vista St	Jacqui Ct	22.22	5.50	20.50	infinite	84,764	20,400	17,578	17,578	0.000	3.60	10.03
16	R-16	Hoskins St	N Pennington Dr	E Crestview Dr	67.57	3.25	7.75	44	159,583	2,820	2,782	2,782	0.000	1.28	2.37
17	R-17	Sierra Vista St	Hoskins St	Barclay Way	16.39	4.75	7.00	56	640,092	13,498	12,483	12,735	-0.011	2.59	0.65
18	J-18	Villa Rd	Carol Ann Dr	Park Ln	123.11	4.25	3.25	infinite	39,870	1,200	1,199	1,199	0.000	0.81	5.54
19	R-19	N Carol Ave	Villa Rd	Carol Ann Dr	32.31	3.25	9.25	42	144,693	28,231	7,766	7,766	0.000	2.03	4.25
20	J-20	Haworth Ave	Elliott Rd	Deborah Rd	31.21	4.50	31.50	infinite	161,941	10,403	6,622	6,622	0.000	4.19	0.81
21	R-21	Pecan Ct	Walnut Ave	End	32.45	3.00	8.50	infinite	290,089	24,606	6,302	6,302	0.000	2.00	3.98
22	N-22	Deborah Rd	Douglas Ave	Haworth Ave	34.85	3.50	8.50	infinite	132,492	25,996	6,590	6,590	0.000	1.93	4.18
23	A-23	N Sprinkbrook Rd	Haworth Ave	E Aquarius Blvd	10.12	5.75		infinite	1,791,495	--	16,305	16,305	0.000	3.14	4.67
24	N-24	Brutscher St	99-W	Little Oak St	21.54	5.50	4.00	62	357,681	8,995	8,608	8,814	-0.013	2.13	1.34
27	J-27	E Illinois St	N Main St	Washington St	14.45	6.00	13.50	47	379,144	30,344	13,918	13,918	0.000	3.84	0.58
28	R-28	Franklin St	Washington St	S Blaine St	109.36	2.00	9.00	27	498,486	2,055	1,951	1,951	0.000	1.23	7.10
29	R-29	Sherman St	S School St	College St	74.14	1.50	9.00	infinite	1,307,048	4,244	3,162	3,162	0.000	1.39	5.48
30	R-30	North	College St	Edwards St	49.54	2.00	7.50	53	1,458,617	7,257	3,589	3,589	0.000	1.67	1.58
31	N-31	Meridian St	Franklin St	Sherman St	15.76	2.50	27.00	20	5,093,632	18,220	12,215	12,215	0.000	5.12	2.42
32	J-32	Fulton St	Center St	Villa Rd	54.16	3.50	7.50	16	159,036	6,084	4,191	7,619	-0.334	1.47	1.27
33	J-33	Villa Rd	Fulton St	North	65.64	3.00	8.50	infinite	138,248	10,931	2,199	2,199	0.000	1.54	2.50
34	N-34	S Eliott Rd	E Hancock St	E 2nd St	65.75	2.50	4.50	infinite	336,287	8,296	3,092	3,092	0.000	1.19	6.47
35	N-35	Hayes St	S Eliott Rd	Deborah Rd	63.24	3.50	9.00	101	132,343	11,015	2,594	2,594	0.000	1.70	2.10
36	R-36	Morton St	Sheridan St	E 1st St	29.31	3.75	9.25	71	293,629	27,205	5,836	5,836	0.000	2.37	3.11
37	R-37	Grant St	Sheridan St	E Hancock St	83.01	2.00	8.00	37	736,435	3,792	2,217	2,217	0.000	1.37	5.23
38	R-38	Sheridan St	S Blaine St	S Howard St	56.62	6.50		infinite	73,668	--	2,088	2,088	0.000	1.22	3.48
40	R-40	Center St	Sheridan St	99-W	15.09	6.00		35	430,985	--	14,039	14,039	0.000	2.04	2.85
41	R-41	Sheridan St	S River St	Carlton Way	40.91	1.25		85	2,941,780	--	7,529	12,428	-0.280	0.80	1.62
42	R-42	S Everest St	Hwy 99	E 1st St	80.81	4.25	2.25	infinite	148,161	2,485	2,483	2,483	0.000	1.15	10.52
43	R-43	E hancock St	E 1st St	S Eliott Rd	16.93	6.50	7.50	65	268,228	13,250	11,391	12,894	-0.069	2.68	4.85
44	J-44	E 3rd St	99-W	N Harrison St	14.6	6.50	12.50	15	674,658	17,195	11,951	11,951	0.000	4.01	0.83
46	R-46	E 4th St	Lincoln St	Grant St	77.24	2.25	11.75	infinite	213,993	4,946	3,413	5,864	-0.302	1.50	7.29
47	J-47	N Main St	E 1st St	E 2nd St	36.18	2.50		infinite	2,489,160	--	4,171	4,171	0.000	1.52	6.05
48	R-48	E 3rd St	N Main St	Washington St	71.56	2.50	8.50	90	389,938	7,950	1,733	1,733	0.000	1.58	1.24
49	J-49	E 2nd St	S Howard St	College St	17.99	3.00		infinite	2,620,391	--	11,613	11,652	-0.002	1.86	2.52
50	R-50	S Merdian St	E 2nd St	E 3rd St	103.62	5.00		63	45,983		1,341	1,341	0.000	0.80	4.91

Table 2 - Backcalculation Analysis Results

Core No.	Core Label	Street	From	To	70°F Temp. Adj. D0, mils	AC Thickness, inches	AB Thickness, inches	Apparent Subgrade Depth, in	AC Modulus @ 68 °F & 10 Hz, psi	AB Modulus, psi	Subgrade M_r at 6 psi deviator stress, psi	Subgrade Constitutive Model Parameter, K_1	Subgrade Constitutive Model Parameter, K_2	Effective Structural Number of Pavement Layers, SN_{eff}	RMSE, %
51	R-51	E 2nd St	S Church St	S Everest St	55.35	4.00	4.00	84	233,435	14,622	2,930	2,930	0.000	1.55	5.82
52	N-52	S Eliott St	E Hancock St	E 2nd St	17.3	5.25	10.25	42	358,072	18,171	10,435	12,837	-0.116	2.88	1.09
53	J-53	E Fernwood Rd	S Sprinkbrook St	Brutscher St	39.35	6.50		infinite	132,138	--	3,789	3,789	0.000	1.49	5.26
54	J-54	E Fernwood Rd	Brutscher St	N Fetig Ln	15.86	4.50	21.50	infinite	634,259	14,856	14,567	14,607	-0.002	4.11	1.00
56	R-56	E 6th St	S Howard St	S School St	16.6	3.50	8.00	60	883,306	22,806	13,333	14,063	-0.030	2.53	0.95
57	R-57	E 5th St	S School St	S College St	54.96	3.00	8.00	infinite	167,723	14,924	3,285	3,285	0.000	1.63	3.98
58	N-58	E 4th St	S College St	S Edwards St	59.4	6.50	5.00	58	39,596	12,459	2,503	2,503	0.000	1.52	4.31
59	N-59	S River St	E 5th St	E 6th St	12.95	7.25		infinite	851,648	--	10,695	10,695	0.000	3.09	1.80
60	R-60	S Willamette St	S Wynooski St	E 5th St	106.44	1.25	6.25	infinite	2,054,299	4,808	1,762	1,762	0.000	1.19	4.87
61	J-61	S Wynooski St	E 5th St	E 7th St	32.63	2.50	2.50	infinite	724,552	29,064	5,815	5,815	0.000	1.35	15.85
62	J-62	Dayton Ave	E 5th St	City Limits	17.49	4.25	9.75	59	695,263	17,293	12,568	12,850	-0.012	2.82	0.37
64	R-64	S Meridian St	E 8th St	E 9th St	41.21	1.75	12.25	infinite	655,857	8,178	8,112	8,112	0.000	1.79	5.94
65	R-65	S Center St St	E 7th St	E 8th St	35.13	2.50	10.00	39	391,300	23,147	6,408	6,408	0.000	2.10	2.15
66	R-66	S Chehalem St	E 6th St	E 7th St	78.93	2.50	11.00	39	196,225	5,096	2,854	2,854	0.000	1.50	6.32
67	R-67	E 7th St	S Willamette St	S Columbia St	68.16	2.25	11.75	107	261,164	6,929	3,188	3,188	0.000	1.65	5.31
68	R-68	S Pacific St	E 7th St	E 8th St	42.44	1.50	13.50	22	1,048,262	9,179	6,171	10,623	-0.303	1.95	4.03
69	R-69	Industrial Pkwy	E 9th St	South End	17.11	4.00	11.00	27	649,921	17,484	12,188	14,065	-0.080	2.84	0.52
70	R-70	E 12th St	S River St	Meridian St	26.93	3.75	8.75	39	295,091	28,993	5,802	5,802	0.000	2.33	1.88
71	N-71	S River St	E 12th St	E 13th St	19.17	9.50		infinite	204,722	--	7,221	7,221	0.000	2.51	5.07
72	N-72	E 11th St	S Chehalem St	S Willamette St	25.71	5.25	9.75	36	215,276	10,673	6,352	9,261	-0.210	2.38	1.15
73	R-73	S Sandoz Rd	North End	S Wynooski St	37.02	6.50	5.00	32	85,026	21,045	4,224	4,224	0.000	1.90	2.98
74	R-74	Sunset Ct	Hwy 219	West End	125.87	2.50	5.50	infinite	103,668	1,921	1,913	1,913	0.000	0.83	7.06
75	R-75	N Pennington Dr	Barclay Wy	Aldersgate Ln	26.54	4.50	10.00	25	341,054	8,803	6,341	8,589	-0.169	2.34	1.27
76	R-76	S Howard St	E 4th St	E 5th St	89.79	3.00	6.00	39	140,574	6,270	2,256	2,256	0.000	1.20	6.55
77	R-77	E 9th St	Charles St	S Blaine St	56.67	2.50	9.50	60	326,920	7,633	3,716	3,716	0.000	1.61	5.55

Table 3 - Remaining Structural Life

Revised Core No.	Core Label	AB Modulus, psi	Subgrade M_r at 6 psi deviator stress, psi	Effective Structural Number of Pavement Layers above	Effective Structural Number of Pavement Layers above	Traffic	Reliability	Required SN above Base	Required SN above Subgrade	SCI SNeff/SNreq above base	SCI SNeff/SNreq above subgrade	Controlling case	Condition Factor	Original ESAL Capacity	Remaining ESAL Capacity	Remaining Structural Life, yrs	PCI Score
1	N-1	14,542	10,430	1.22	3.14	40,000	75	1.41	1.62	0.87	1.94	base	0.42	91,230	38,501	19	82
2	R-2	27,613	5,578	1.15	2.31	10,000	65	0.70	1.54	1.64	1.50	subgrade	1.00	16,349	16,349	20	85
3	R-3	8,616	6,145	0.80	1.60	10,000	65	1.28	1.48	0.62	1.08	base	0.06	16,039	926	2	93
4	N-4	17,716	16,030	1.90	2.46	40,000	75	1.29	1.35	1.47	1.83	base	1.00	89,499	89,499	20	95
5	A-5	41,964	11,083	1.46	2.82	150,000	90	1.29	2.24	1.13	1.26	base	1.00	675,116	675,116	20	93
6	A-6	22,016	9,629	1.96	2.68	150,000	90	1.70	2.36	1.15	1.13	subgrade	1.00	801,029	801,029	20	91
7	N-7	26,944	5,440	1.02	2.03	40,000	75	1.06	2.10	0.96	0.97	base	0.79	87,797	69,159	20	87
8	N-8	12,919	2,599	0.70	1.80	40,000	75	1.48	2.80	0.47	0.64	base	0.01	91,230	934	0	88
9	N-9	14,542	6,746	1.08	3.27	40,000	75	1.41	1.93	0.77	1.69	base	0.20	91,230	18,071	9	74
11	R11	16,436	3,546	0.73	1.59	10,000	65	0.94	1.86	0.78	0.86	base	0.22	15,810	3,444	7	41
12	A-12	8,917	1,855	0.73	0.85	150,000	90	2.43	4.40	0.30	0.19	subgrade	0.00	1,461,904	69	0	33
13	N-13	--	3,868	1.60	1.60	40,000	75	2.40	2.40	0.67	0.67	subgrade	0.09	106,191	9,126	5	75
14	R-14	3,809	2,668	0.77	1.40	10,000	65	1.80	2.08	0.42	0.67	base	0.01	16,986	94	0	32
15	N-15	20,400	17,578	1.09	3.60	40,000	75	1.21	1.29	0.90	2.78	base	0.52	89,499	46,259	20	78
16	R-16	2,820	2,782	0.79	1.28	10,000	65	2.03	2.04	0.39	0.63	base	0.00	17,644	58	0	40
17	R-17	13,498	12,483	1.84	2.59	10,000	65	1.03	1.07	1.78	2.41	base	1.00	15,810	15,810	20	69
18	J-18	1,200	1,199	0.65	0.81	75,000	85	4.43	4.43	0.15	0.18	base	0.00	561,036	5	0	37
19	R-19	28,231	7,766	0.77	2.03	10,000	65	0.69	1.34	1.11	1.52	base	1.00	15,658	15,658	20	76
20	J-20	10,403	6,622	1.10	4.19	75,000	85	1.94	2.32	0.57	1.81	base	0.03	274,768	8,795	2	59
21	R-21	24,606	6,302	0.89	2.00	10,000	65	0.75	1.47	1.19	1.36	base	1.00	15,658	15,658	20	54
22	N-22	25,996	6,590	0.80	1.93	40,000	75	1.08	1.95	0.74	0.99	base	0.17	87,797	14,652	7	57
23	A-23	--	16,305	3.14	3.14	150,000	90	1.92	1.92	1.63	1.63	subgrade	1.00	728,710	728,710	20	53
24	N-24	8,995	8,608	1.75	2.13	40,000	75	1.72	1.75	1.02	1.22	base	1.00	92,990	92,990	20	70
27	J-27	30,344	13,918	1.95	3.84	75,000	85	1.24	1.73	1.57	2.22	base	1.00	254,559	254,559	20	84
28	R-28	2,055	1,951	0.71	1.23	10,000	65	2.30	2.34	0.31	0.52	base	0.00	18,675	15	0	27
29	R-29	4,244	3,162	0.74	1.39	10,000	65	1.73	1.94	0.43	0.72	base	0.01	16,665	96	0	30
30	R-30	7,257	3,589	1.02	1.67	10,000	65	1.38	1.85	0.74	0.90	base	0.16	16,039	2,592	5	33
31	N-31	18,220	12,215	1.93	5.12	40,000	75	1.27	1.51	1.52	3.38	base	1.00	89,499	89,499	20	95
32	J-32	6,084	4,191	0.85	1.47	75,000	85	2.40	2.77	0.36	0.53	base	0.00	302,036	571	0	54
33	J-33	10,931	2,199	0.70	1.54	75,000	85	1.91	3.55	0.37	0.43	base	0.00	274,768	613	0	76
34	N-34	8,296	3,092	0.78	1.19	40,000	75	1.78	2.61	0.44	0.46	base	0.01	94,782	644	0	66
35	N-35	11,015	2,594	0.80	1.70	40,000	75	1.58	2.80	0.51	0.61	base	0.02	91,230	1,488	0	56
36	R-36	27,205	5,836	1.12	2.37	10,000	65	0.71	1.51	1.58	1.57	subgrade	1.00	16,349	16,349	20	84
37	R-37	3,792	2,217	0.81	1.37	10,000	65	1.81	2.23	0.45	0.61	base	0.01	16,986	132	0	17
38	R-38	--	2,088	1.22	1.22	10,000	65	2.29	2.29	0.53	0.53	subgrade	0.02	18,675	412	0	49
40	R-40	--	14,039	2.04	2.04	10,000	65	1.01	1.01	2.01	2.01	subgrade	1.00	15,810	15,810	20	44
41	R-41	--	7,529	0.80	0.80	10,000	65	1.35	1.35	0.59	0.59	subgrade	0.04	16,039	659	1	29
42	R-42	2,485	2,483	1.01	1.15	10,000	65	2.14	2.14	0.47	0.54	base	0.01	17,982	191	0	84
43	R-43	13,250	11,391	1.88	2.68	10,000	65	1.04	1.12	1.80	2.38	base	1.00	15,810	15,810	20	81
44	J-44	17,195	11,951	2.56	4.01	75,000	85	1.58	1.84	1.62	2.18	base	1.00	259,483	259,483	20	94
46	R-46	4,946	3,413	0.60	1.50	10,000	65	1.62	1.88	0.37	0.80	base	0.00	16,665	42	0	42
47	J-47	--	4,171	1.52	1.52	75,000	85	2.77	2.77	0.55	0.55	subgrade	0.03	337,932	8,801	2	71
48	R-48	7,950	1,733	0.82	1.58	10,000	65	1.32	2.46	0.62	0.64	base	0.06	16,039	885	2	90
49	J-49	--	11,613	1.86	1.86	75,000	85	1.86	1.86	1.00	1.00	subgrade	1.00	269,586	269,586	20	94
50	R-50		1,341	0.80	0.80	10,000	65	23.23	2.71	0.03	0.29	base	0.00	48,703	0	0	91
51	R-51	14,622	2,930	1.11	1.55	10,000	65	0.99	2.00	1.11	0.78	subgrade	0.21	17,312	3,699	7	72
52	N-52	18,171	10,435	1.67	2.88	40,000	75	1.27	1.62	1.31	1.78	base	1.00	89,499	89,499	20	99
53	J-53	--	3,789	1.49	1.49	75,000	85	2.87	2.87	0.52	0.52	subgrade	0.02	344,271	6,430	2	48
54	J-54	14,856	14,567	1.74	4.11	75,000	85	1.68	1.70	1.03	2.42	base	1.00	264,491	264,491	20	94
56	R-56	22,806	13,333	1.51	2.53	10,000	65	0.78	1.04	1.92	2.43	base	1.00	15,658	15,658	20	95

Table 3 - Remaining Structural Life

Revised Core No.	Core Label	AB Modulus, psi	Subgrade M_r at 6 psi deviator stress, psi	Effective Structural Number of Pavement Layers above	Effective Structural Number of Pavement Layers above	Traffic	Reliability	Required SN above Base	Required SN above Subgrade	SCI SNeff/SNreq above base	SCI SNeff/SNreq above subgrade	Controlling case	Condition Factor	Original ESAL Capacity	Remaining ESAL Capacity	Remaining Structural Life, yrs	PCI Score
57	R-57	14,924	3,285	0.74	1.63	10,000	65	0.98	1.92	0.75	0.85	base	0.18	15,810	2,878	6	87
58	N-58	12,459	2,503	1.00	1.52	40,000	75	1.50	2.84	0.66	0.54	subgrade	0.02	121,040	2,744	1	94
59	N-59	--	10,695	3.09	3.09	40,000	75	1.60	1.60	1.93	1.93	subgrade	1.00	91,230	91,230	20	48
60	R-60	4,808	1,762	0.71	1.19	10,000	65	1.64	2.44	0.43	0.49	base	0.01	16,665	107	0	49
61	J-61	29,064	5,815	1.01	1.35	75,000	85	1.26	2.44	0.80	0.55	subgrade	0.03	307,771	8,477	2	34
62	J-62	17,293	12,568	1.69	2.82	75,000	85	1.58	1.80	1.07	1.56	base	1.00	259,483	259,483	20	95
64	R-64	8,178	8,112	0.68	1.79	10,000	65	1.31	1.31	0.52	1.36	base	0.02	16,039	314	0	11
65	R-65	23,147	6,408	0.82	2.10	10,000	65	0.78	1.46	1.06	1.44	base	1.00	15,658	15,658	20	47
66	R-66	5,096	2,854	0.65	1.50	10,000	65	1.60	2.03	0.41	0.74	base	0.00	16,349	71	0	21
67	R-67	6,929	3,188	0.65	1.65	10,000	65	1.41	1.94	0.46	0.85	base	0.01	16,349	145	0	15
68	R-68	9,179	6,171	0.68	1.95	10,000	65	1.24	1.48	0.55	1.32	base	0.03	16,039	434	0	25
69	R-69	17,484	12,188	1.56	2.84	10,000	65	0.91	1.09	1.71	2.62	base	1.00	15,810	15,810	20	83
70	R-70	28,993	5,802	1.12	2.33	10,000	65	0.68	1.52	1.65	1.54	subgrade	1.00	16,349	16,349	20	67
71	N-71	--	7,221	2.51	2.51	40,000	75	1.88	1.88	1.34	1.34	subgrade	1.00	94,782	94,782	20	42
72	N-72	10,673	6,352	1.41	2.38	40,000	75	1.61	1.98	0.88	1.20	base	0.46	92,990	42,915	20	73
73	R-73	21,045	4,224	1.28	1.90	10,000	65	0.82	1.73	1.56	1.10	subgrade	1.00	16,665	16,665	20	92
74	R-74	1,921	1,913	0.53	0.83	10,000	65	2.36	2.37	0.22	0.35	base	0.00	19,030	2	0	47
75	R-75	8,803	6,341	1.41	2.34	10,000	65	1.27	1.46	1.12	1.60	base	1.00	16,039	16,039	20	76
76	R-76	6,270	2,256	0.70	1.20	10,000	65	1.47	2.22	0.48	0.54	base	0.01	16,349	184	0	43
77	R-77	7,633	3,716	0.77	1.61	10,000	65	1.35	1.82	0.57	0.88	base	0.03	16,039	557	1	36

APPENDIX I - GLOSSARY

Backlog: Total unfunded major M&R requirements.

Branch: A readily identifiable part of the pavement network that has a distinct function. For example, a particular roadway or parking lot.

Critical PCI: The PCI value at which the rate of PCI loss increases with time, or the cost of applying M&R increases significantly.

PCI Rating: A three category ranking procedure based on PCI values used to rank pavement condition, as shown below.

PCI	PCI Rating
71 – 100	Good
56 – 70	Fair
0 - 55	Poor

MicroPAVER: A pavement management software package developed by the U.S. Army Corps of Engineers' Construction Engineering Research Laboratory. The software package consists of a set of engineering tools for performing condition surveys and condition prediction, and developing work plans with the objective of optimizing spending.

Network: A group of pavements that will usually be managed together.

Pavement Condition Index, PCI: A numerical index, ranging from zero for a failed pavement to 100 for a pavement in perfect condition. Calculation of the PCI is based on the results of a visual condition survey in which distress type, severity, and quantity are identified. The PCI was developed to provide an index of a pavement's structural integrity and surface operational condition. The distress information obtained as part of the PCI condition survey provides insight into the causes of distress. Refer to ASTM D-6433-11 "Standard Practice for Roads and Parking Lots Condition Survey" for a complete discussion of the PCI.

Prediction Modeling: The process of grouping pavements with similar deterioration behavior together in order to develop deterioration trends. These trends are used for predicting future pavement condition and for determining the timing of M&R activities.

Section: The smallest management unit when considering the application of M&R. Factors to consider when dividing a branch into sections: pavement structure, traffic, construction history, pavement rank (or functional classification), drainage facilities and shoulders, and condition.

Shapefile: A shapefile contains map feature items (e.g., polygons) and map feature attributes (e.g., area, surface, use, etc).

Surface Type: Pavement construction type, for example:

1. Asphalt Concrete Pavement, AC
2. Portland Cement Concrete Pavement, PCC
3. Asphalt Overlay AC Pavement, AAC
5. Gravel, GR