

Harrisburg, SD

Pavement Management Analysis Report

January 2020

City of Harrisburg, SD
Attn.: Joe Stonesifer, City Engineer
801 Prairie Street
Harrisburg, SD 57032



IMS

Infrastructure Management Services

IMS Infrastructure Management Services
8380 S. Kyrene Rd., Suite 101, Tempe, AZ 85283
Phone: (480) 839-4347, Fax: (480) 839-4348
www.imsanalysis.com

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY & RECOMMENDATIONS	1
2.0	PRINCIPLES OF PAVEMENT MANAGEMENT	3
2.1	Pavement Preservation	3
2.2	Economic Impacts of Maintenance & Rehabilitation	5
3.0	THE PAVEMENT MANAGEMENT PROCESS	6
3.1	Functional Class Review	6
3.2	Assembly of Data into Projects	10
3.3	Field Survey Methodology	12
4.0	HARRISBURG SURVEY PAVEMENT CONDITION	14
4.1	Understanding The Pavement Condition Index	14
4.2	Harrisburg Network Condition Imagery	15
4.3	Evaluating the Pavement Quality and Backlog	22
4.4	Harrisburg Network Condition Distribution	23
4.5	Condition By Functional Classification	27
4.6	Structural and Load Associated Distress Analysis	28
5.0	REHABILITATION PLAN AND BUDGET DEVELOPMENT	30
5.1	Key Analysis Set Points and Pavement Performance Curves	30
5.2	Fix All and Annual Estimates	34
5.3	Network Budget Analysis Models	36
5.4	Post Rehabilitation Condition	39
5.5	Harrisburg Comparisons to Other Agencies	42
5.6	True Cost of Underfunding of a Roadway Network	44
5.7	Network Recommendations and Comments	45

APPENDED REPORTS

Following Page 45

Appendix A	Street Inventory and Condition Summary
Appendix B	\$325K Street Rehabilitation Program by Segment
Appendix C	\$325K Street Rehabilitation Program by Year

APPENDED MAPS

Located on Thumb Drive

- Functional Classification by Segment
- Pavement Condition Index by Segment
- Pavement Condition Rating by Segment Using Descriptive Terms
- Assembled Projects
- Pavement Condition Rating by Project Using Descriptive Terms
- \$325K/year Rehab Plan Budget
- \$325K/year Post Rehab PCI Map

Abbreviation or Acronym	Definition
\$k	Dollars in thousands (\$,000)
\$M	Dollars in millions
%SP	Percent Spreadability - component of deflection analysis
AC	Asphalt Concrete - asphalt streets, flexible pavements, also known as ACP
ACP	Asphalt Concrete Pavement - asphalt streets, flexible pavements, also known as AC
ART	Arterial roadway functional classification
ASTM	American Society of Testing Methods
Avg	Average
BCI	Base Curvature Index - component of deflection analysis
Brk	Break
CAL	Coarse Aggregate Loss
CDV	Corrected Deduct Value - part of the ASTM D6433 PCI calculation
COL	Collector roadway functional classification
Crk	Crack
DeflCON	Deflection Condition - structural load analysis based on traffic loading and deflection
DMD	Dynamic Maximum Deflection - temperature corrected deflection
Dvdd Slab	Divided Slab
DynaCON	Dynamic Condition - structural layer analysis
ft or FT	Foot
ft2 or FT2	Square foot
FunCL	Functional Classification
FWD	Falling weight deflectometer
GCI	Gravel Condition Index
GFP	Good - Fair - Poor
GIS	Geographic Information System
GISID	GIS segment identification number
H&V	Horizontal and Vertical
IRI	International Roughness Index
Jt	Joint
L&T	Longitudinal and Transverse
LAD	Load associated distress
LOC	Local roadway functional classification - same as RES
LOG	Lip of Gutter
m	Metre or meter
M	Moderate
m2	square metre or square meter
MART	Major arterial roadway functional classification
Max	Maximum
MaxDV	Maximum Deduct Value
MCOL	Major collector roadway functional classification
mi or Mi	Mile
Min	Minimum
MnART	Minor arterial roadway functional classification
MnCOL	Minor collector roadway functional classification
MOD	Moderate
NLAD	Non-load associated distress
OCI	Overall condition index, also known as PCI
Olay	Overlay
PART	Primary arterial roadway functional classification
Pavetype	Pavement Type
PCC	Portland Cement Concrete - concrete streets
PCI	Pavement Condition Index - generic term for OCI
R&R	Remove and replace
RART	Rural arterial roadway functional classification
PWF	Priority Weighting Factor
Recon	Reconstruction
Rehab	Rehabilitation
RES	Local roadway functional classification - same as LOC
RI or RCI	Roughness Index
S	Strong
SART	Secondary arterial roadway functional classification
SCI	Surface Curvature Index - component of deflection analysis
SDI	Surface Distress Index
SI	Structural Index
STA	Station or chainage
Surf Trtmt	Surface Treatment
TDV	Total Deduct Value
W	Weak

1.0 EXECUTIVE SUMMARY & RECOMMENDATIONS

PROJECT SUMMARY

In 2019 IMS Infrastructure Management Services, LLC (IMS) was contracted by the City of Harrisburg to conduct a pavement condition assessment and analysis update on approximately 22 centerline miles of City maintained asphalt and concrete roadways alike.

IMS mobilized their Laser Road Surface Tester (RST) to conduct an objective assessment using industry standard pavement distress protocols such as those found in ASTM D6433-11. The City's network average Pavement Condition Index was found to be a 66 and the City's backlog (roads below a PCI of 40) was at 2%. See section 4 for more information

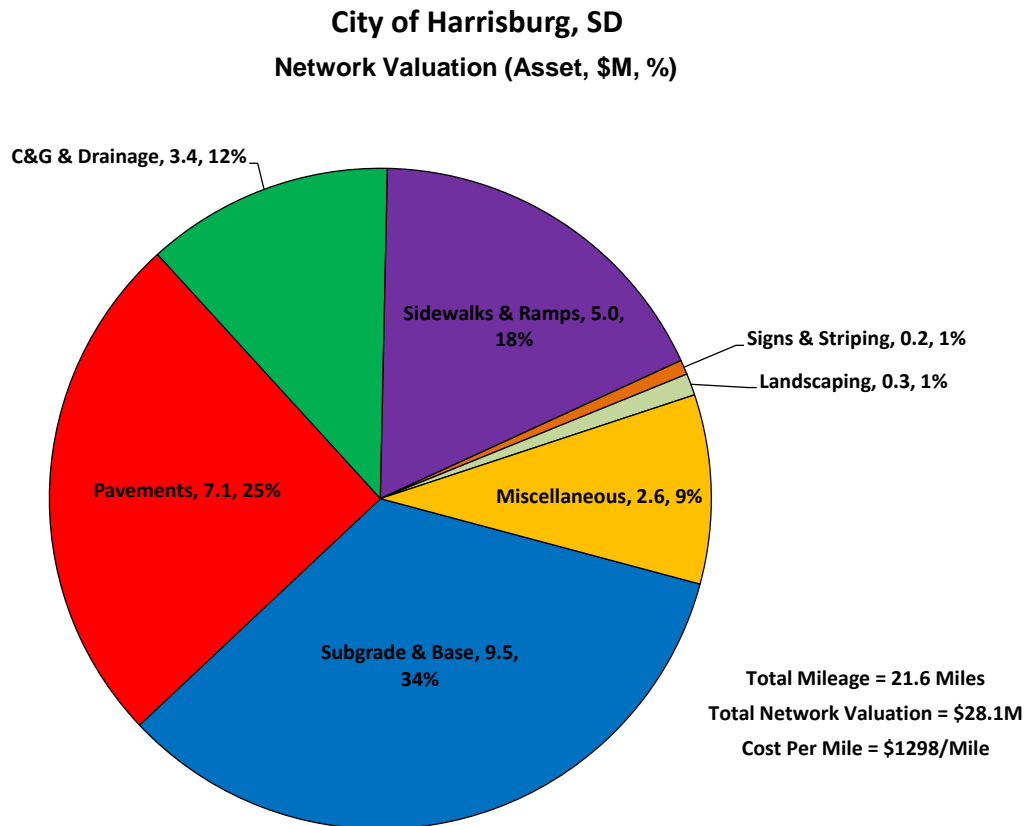


Figure 1- Replacement Value of Roadway Network

As seen in **Figure 1**, Harrisburg has just over 22 centerline miles of roadway, encompassing nearly 412K square yards of pavement surfacing, which is predominantly asphalt. At an average replacement cost for a typical roadway just under \$1.3M per mile, not including the value of the land, the City has over \$28M invested in its paved roadway network.

SUMMARY METRICS OF HEALTH

Pavement Condition Index (PCI) – The PCI score is a ranking assessment on the overall health of a pavement segment on a scale of 0 to 100. The network average PCI is a good global indicator of a network’s overall health. *(Explained in section 4)*

Percent of Excellent Roads – Roads with a condition category of Excellent are those that score between a PCI of 85 to 100.

Backlog –Backlog is the Very Poor and Poor roads (between a PCI of 0 and 40) that represent a portion of the network in need of extensive rehabilitation such as full and partial reconstruction. Using sound pavement management and finance principles, a very healthy network will have a backlog of 10% or less.

Harrisburg met two out of three of the metrics for evaluating the quality of its roadway network.

- ✓ Harrisburg’s network average pavement condition score is slightly above the national average currently seen by IMS of 60 to 65, with the City’s average scoring a 66.
- The number of streets rated Excellent is below the minimum recommended target of 15% at 4.5%
- ✓ The backlog amount is below the average value of 12% at 1.8%.

BUDGET SCENARIOS

See section 5 for more information

The current annual budget for Harrisburg is \$325K per year dedicated to pavement preservation and rehabilitation. This will increase the backlog to 9% while lowering the average PCI to a 61 over 5 years. Please note this number is an annual budget average across all 5 years of the analysis horizon.

The recommended budget is \$1.1M per year and will elevate the network average PCI to a 74 while maintaining the backlog at 4%.

EXECUTIVE SUMMARY CONCLUSION

The Harrisburg network has an average PCI of 66 and a backlog of 1.8%, with most of the network landing in the Good to Very Good PCI range. With the City’s existing budget, the network conditions will continue to degrade into the low 60s PCI range and backlog will increase over time. The current backlog is very low which frees up large portions of the Harrisburg budget for surface based rehabs and overlays. By allowing the backlog to steadily increase, Harrisburg is constraining portions of their future budget towards partial and full reconstruction projects.

2.0 PRINCIPLES OF PAVEMENT MANAGEMENT

2.1 PAVEMENT PRESERVATION

Preservation of existing roads and street systems has become a major activity for all levels of government. Because municipalities must consistently optimize the spending of their budgets, funds that have been designated for pavement must be used as effectively as possible. The best method to obtain the maximum value of available funds is through the use of a pavement management system.

Pavement management is the process of planning, budgeting, designing, evaluating, and rehabilitating a pavement network to provide maximum benefit with available funds.

A pavement management system is a set of tools or methods that assist decision makers in finding optimal strategies for providing and maintaining pavements in a serviceable condition over a given time period. The intent is to identify the optimum level of long-term funding to sustain the network at a predetermined level of service while incorporating local conditions and constraints.

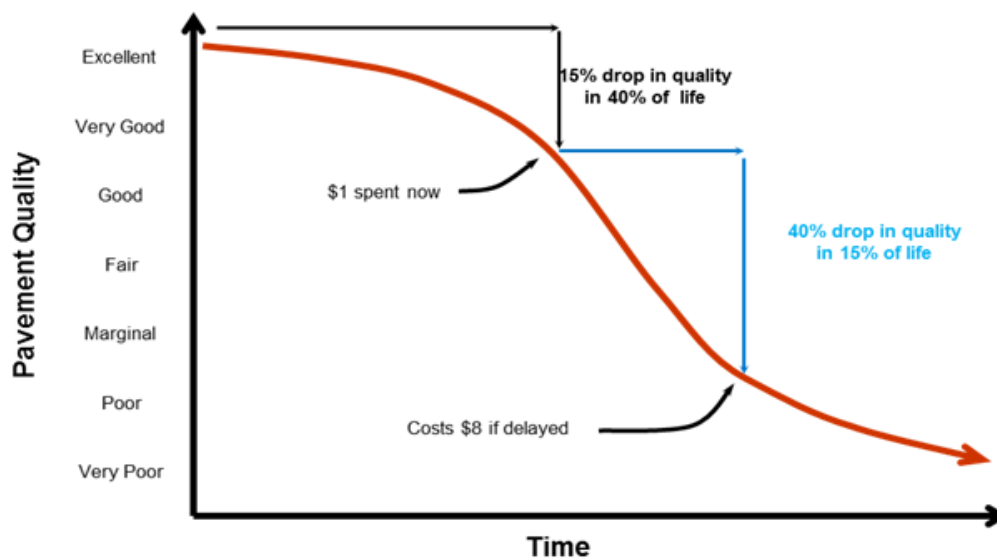


Figure 2 – Pavement Deterioration and Life Cycle Costs

As shown as **Figure 2**, the streets that are repaired while in good condition will cost less over their lifetime than those left to deteriorate to a poor condition. Without an adequate routine pavement maintenance program, streets require more frequent reconstruction, thereby costing millions of extra dollars.

The key to a successful pavement management program is to develop a reasonably accurate performance model of the roadway, and then identify the optimal timing and rehabilitation strategy. The resultant benefit of this exercise is realized by the long term cost savings and increase in pavement quality over time. As illustrated in **Figure 2**, pavements typically deteriorate rapidly once they hit a specific threshold. A \$1 investment after 40% lifespan is much more effective than deferring maintenance until heavier overlays or possibly reconstruction are required just a few years later.

Once implemented, an effective pavement information management system can assist agencies in developing long-term rehabilitation programs and budgets. The key is to develop policies and practices that delay the inevitable total reconstruction for as long as practical yet still remain within the target zone for cost effective rehabilitation. That is, as each roadway approaches the steepest part of its deterioration curve, apply a remedy that extends the pavement life, at a minimum cost, thereby avoiding costly heavy overlays and reconstruction. **Figure 3** illustrates the concept of extending pavement life through the application of timely rehabilitations.

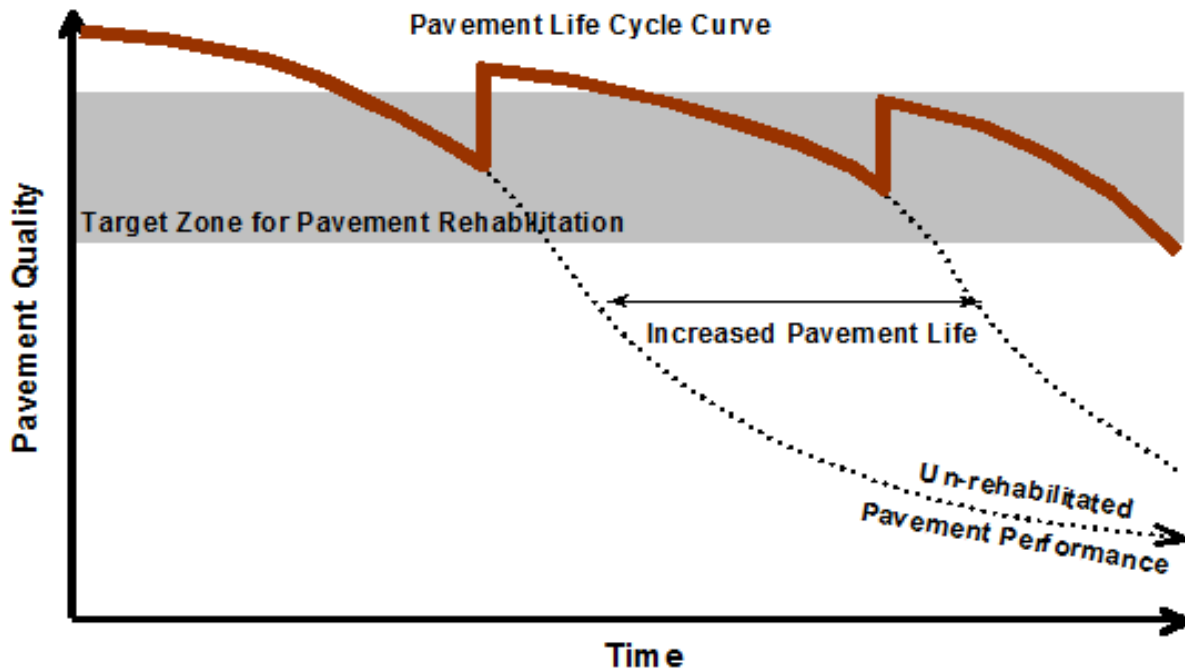


Figure 3 – Pavement Life Cycle Curve

Ideally, the lower limit of the target zone shown in **Figure 3** would have a minimum PCI value in the 60 to 70 range to keep as many streets as possible requiring a thin overlay or less. The upper limit would tend to fall close to the higher end of the Very Good category – that is a pavement condition score approaching 85. Other functions of a pavement management system include assessing the effectiveness of maintenance activities, new technologies, and storing historical data and images.

For Harrisburg, a prioritization methodology based on pavement condition, pavement materials, functional class, and strength rating was used to analyze the network condition and develop the proposed 5 year rehabilitation plan.

The analysis methodologies and data collection technologies were based on *ASTM D6433 Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys* (hereinafter ASTM D6433) for assessment of pavement surface condition and the International Roughness Index (IRI) for quantification of pavement roughness on all City streets. These measurements of pavement quality are combined to form an overall 0 to 100 Pavement Condition Index (PCI), with 100 being the best.

2.2 ECONOMIC IMPACTS OF MAINTENANCE & REHABILITATION

The role of the street network as a factor in the City's well-being cannot be overstated. In the simplest of terms, roadways form the economic backbone of a community. They provide the means for goods to be exchanged, commerce to flourish, and commercial enterprises to generate revenue. As such, they are an investment to be maintained.

The overall condition of an agency's infrastructure and transportation network is a key indicator of economic prosperity. Roadway networks, in general, are one of the most important and dynamic sectors in the global economy. They have a strong influence on not only the economic well-being of a community, but a strong impact on quality of life. Well-maintained road networks experience multiple socioeconomic benefits through greater labor market opportunities and decreasing income gap.

As a crucial link between producers and their markets, quality road networks ensure straightforward access to goods and drive global and local economies. Likewise, higher network quality has a strong correlation to improvements in household consumption and income. Roads also act as a key element to social cohesion by acting as a median for integration of bordering regions. This social integration promotes a decreased gap in income along with diversity and a greater sense of community that can play a large role in decreasing rates of poverty.

Conversely, deterioration of roads can have adverse effects on a community and may bring about important and unanticipated welfare effects that the governments should be aware of when cutting transportation budgets. Poor road conditions increase fuel and tire consumption while shortening intervals between vehicle repair and maintenance. In turn, these roads result in delayed or more expensive deliveries for businesses and consumers. Economic effects of poor road networks, such as time consuming and costly rehabilitation, can be reduced if a proactive maintenance approach is successfully implemented. To accomplish this, a pavement assessment and analysis should be completed every few years in an effort update the budget models and rehabilitation plans. As shown below, the IMS Laser Road Surface Tester (featured in **Figure 4**) was mobilized to Harrisburg to conduct an objective survey.



Figure 4 – Laser Road Surface Tester (RST)

3.0 THE PAVEMENT MANAGEMENT PROCESS

3.1 FUNCTIONAL CLASS REVIEW

As part of the scope of this assignment, the functional classification designations currently used in the Harrisburg pavement management program were adopted for their use in the pavement analysis.

Although there is no uniform standard for classifying pavement into functional classes, The Federal Highway Administration (FHWA), American Public Works Association (APWA) and Institute of Transportation Engineers (ITE) offer some broad guidelines on how to assign classifications that were followed in this study.

The City's functional classification definitions used in the assessment are as follows:

1. **Arterial (ART)** – all cross City corridors consisting of 2 to 4 or more lanes, generally spaced at 1 mile intervals with daily traffic counts generally exceeding 10,000 vehicles per day. Major cross City corridors with a landscaped median were also assigned to Arterials.
2. **Collector (COL)** – Continuous and discontinuous cross City and inter-district corridors that are 2 to 4 lanes across and generally have a centerline stripe or a designated bus route. The ADT generally falls in the 1,000 to 10,000 vehicle per day range. They are typically spaced on the ½ or ¼ mile section line and on occasion, may have a short non-landscaped median. Major collectors are also assigned to streets segments leading to, or adjacent to, a major traffic generator site such as a regional shopping complex. Collectors form the entrance to communities and may have a decorative landscaped median of short duration.
3. **Local (LOC)** – These are the majority of the street segments consisting of all residential roads not defined above or as industrial/commercial.

Alleys and bicycle paths were not included in this study even though they are part of the overall transportation network. The implication of this is that the final pavement management program and budget developed under this program will not cover upkeep of alleys and bicycle paths. Also, non-City owned streets were not surveyed as they are not maintained by the City.

The paved roadway network consists of 3 functional classes, covering approximately 22 miles of pavement. The average pavement condition index (PCI) of the roadway network is a 66 and the network's primary pavement type is asphalt. The following table and **Figure 5** summarize the functional classification splits within the system.

**City of Harrisburg, SD
Network Summary by Functional Class**

	Pavetype	Network	Arterial	Collector	Residential
Segment (Block) Count	All Streets	240	4	64	172
	Asphalt	235	4	64	167
	Concrete	5	0	0	5
Network Length (ft):	All Streets	114,177	3,264	28,152	82,761
	Asphalt	112,485	3,264	28,152	81,069
	Concrete	1,692	0	0	1,692
Network Length (mi):	All Streets	21.6	0.6	5.3	15.7
	Asphalt	21.3	0.6	5.3	15.4
	Concrete	0.3	0.0	0.0	0.3
Average Width (ft):	All Streets	32.5	42.5	33.1	31.8
	Asphalt	32.4	42.5	33.1	31.8
	Concrete	36.0	0.0	0.0	36.0
Network Area (yd2):	All Streets	411,691	15,397	103,457	292,837
	Asphalt	404,923	15,397	103,457	286,069
	Concrete	6,768	0	0	6,768
Current Pavement Condition Index (CPCI) 4/29/19	All Streets	66	61	66	66
	Asphalt	65	61	66	65
	Concrete	91	0	0	91
Pavement Condition Index (Surveyed PCI)	All Streets	66	61	65	66
	Asphalt	65	61	65	65
	Concrete	91	0	0	91
Current Backlog (%)	All Streets	2	Percentage of Network with a PCI < 4		
Current Network Index	All Streets	65	Managable Network Index		
Surface Distress Index (SDI) 4/29/19	All Streets	65	57	64	66
	Asphalt	64	57	64	65
	Concrete	95	0	0	95
Roughness Index (RI) 4/29/19	All Streets	68	70	69	67
	Asphalt	67	70	69	67
	Concrete	84	0	0	84

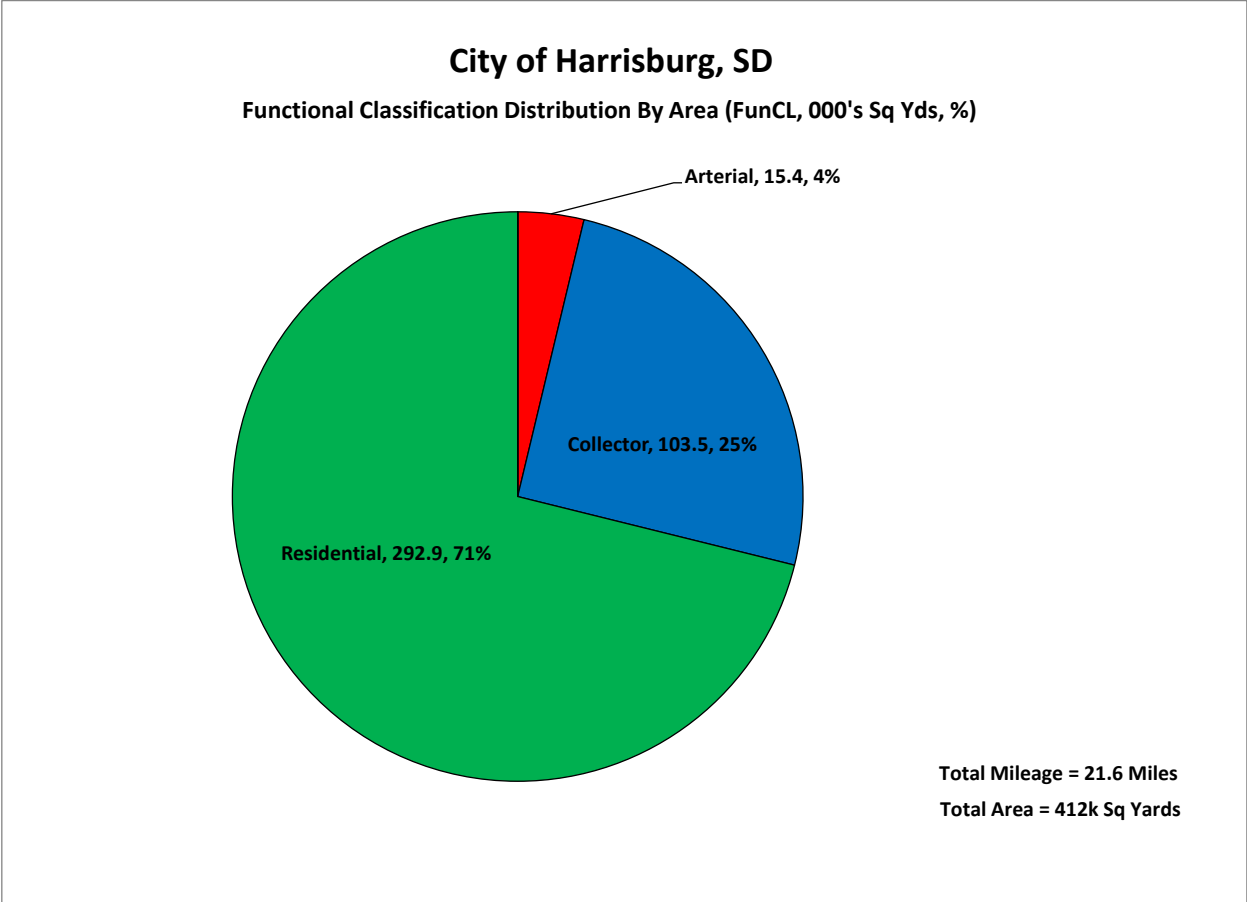


Figure 5 – Functional Class Distribution by Milage

As discussed later in this report, the functional classifications also play a critical role in the rehabilitation candidate selection process as Arterials are generally given preference over other rehab candidates due to their higher traffic counts and steeper deterioration curves.

The following figure (**Figure 6**) highlights the functional classifications used for the Harrisburg roadway network. An electronic version of this map is appended to this report.

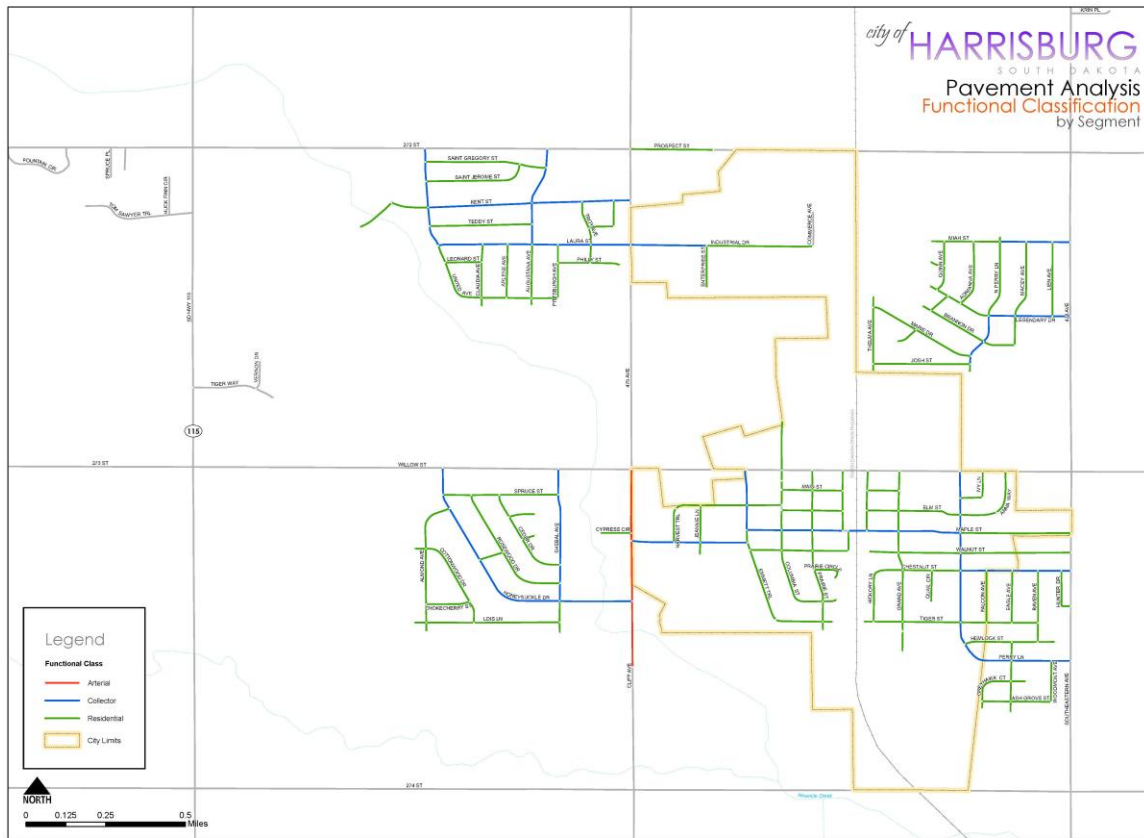


Figure 6 – Harrisburg Functional Classification Designation

3.2 ASSEMBLY OF DATA INTO PROJECTS

Harrisburg's Geographic Information System (GIS) was used as the basis for segmenting the roadway network on a block-by-block basis. Each segment was assigned a unique identifier referred to as a GISID, establishing a one-to-one relationship between the GIS and the street inventory. The segments form the basic building block of the pavement management system and are where all attribute and condition data are stored.

The centerline segments were aggregated together within the pavement management system to form logical projects that the analysis and rehabilitation program are developed against.

- Arterial projects run from major intersection to major intersection up to 1 mile in length.
- Similar to arterials, collector streets within a neighborhood were aggregated together to form a single project where practical.
- Local streets along a homogenous route were aggregated together along with adjacent side streets to form a small neighborhood based approach.

Segments were joined only when the pavement condition and functional classification were homogeneous in nature such that when joined they have a relatively uniform condition that may be rehabilitated using a single strategy.

The following figure (**Figure 7**) highlights the projects, used for the analysis. An electronic version of this map is appended to this report.

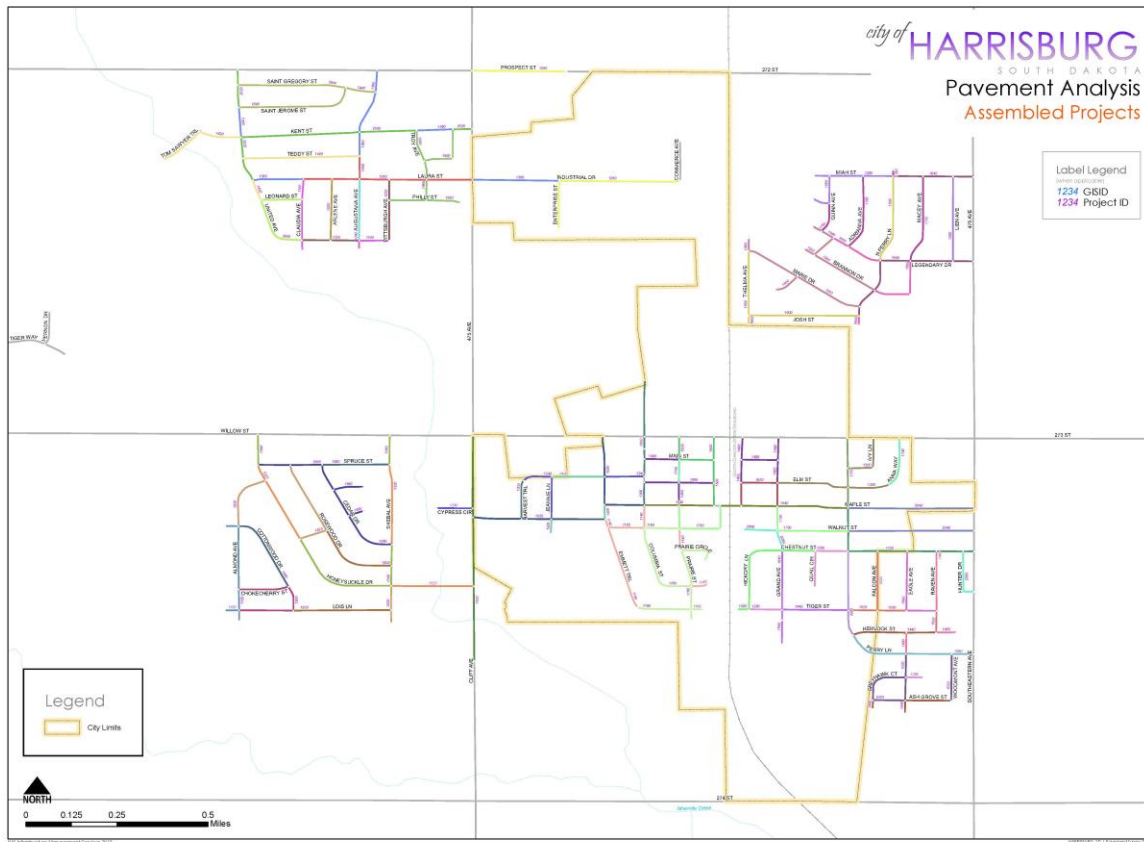


Figure 7 – Harrisburg Assembled Projects

3.3 FIELD SURVEY METHODOLOGY

Following a set of predefined assessment protocols matching the pavement management software (ASTM D6433), a specialized piece of survey equipment – referred to as a Laser Road Surface Tester (Laser RST, pictured on page 5) – is used to collect observations on the condition of the pavement surface, as well as collect high definition digital imagery and spatial coordinate information. The Laser RST surveys each local street from end to end in a single pass, while all other roadway classifications are completed in two passes.

Key pavement condition data elements collected by the Laser RST include:

Surface Distress Index – The Laser RST collects surface distress observations based on the extent and severity of distresses encountered along the length of the roadway following ASTM D6433 protocols for asphalt and concrete pavements. The surface distress condition (cracking, potholes, raveling, and the like) is considered by the traveling public to be the most important aspect in assessing the overall pavement condition.

Presented on a 0 to 100 scale, the Surface Distress Index (SDI) is an aggregation of the observed pavement defects. Within the SDI, not all distresses are weighted equally. Certain load associated distresses (caused by traffic loading), such as rutting or alligator cracking on asphalt streets, or divided slab on concrete streets, have a much higher impact on the surface distress index than non-load associated distresses such as raveling or patching. Even at low extents and moderate severity – less than 10% of the total area – load associated distresses can drop the SDI considerably. ASTM D6433 also has algorithms within it to correct for multiple or overlapping distresses within a segment.

For this project, extent and severity observations were collected, processed, and loaded into the pavement management software. Within the software, the following distresses, listed in order from greatest to lowest impact, are presented as a 0 to 10 rating for review and reporting:

- Alligator Cracking – Alligator cracking is quantified by the severity of the failure and number of square feet. Even at low extents, this can have a large impact on the condition score as this distress represents a failure of the underlying base materials.
- Wheel Path Rutting – Starting at a minimum depth of ¼ inch, wheel path ruts are quantified by their depth and the number of square feet encountered. Like alligator cracking, low densities of rutting can have a large impact on the final condition score.
- Longitudinal, Transverse, Block (Map), and Edge Cracks – These are quantified by their length and width. Longitudinal cracks that intertwine are the start of alligator cracking.
- Patching – Patching is quantified by the extent and quality of patches. When the majority of a roadway surface is covered by a patch, such as a large utility replacement, the rating of the patch is minimized. All potholes are rated as patches.
- Distortions – All uneven pavement surfaces, such as depressions, bumps, sags, swells, heaves, and corrugations, are included as distortions and are quantified by the severity and extent of the affected area.
- Raveling – Raveling is the loss of fine aggregate materials on the pavement surface and is measured by the severity and number of square feet affected.

- Bleeding – Bleeding is the presence of free asphalt on the roadway surface caused by too much asphalt in the pavement or insufficient voids in the matrix. The result is a pavement surface with low skid resistance and is measured by the amount and severity of the area.
- Similar distresses were collected for concrete streets including divided slab, corner breaks, joint spalling, faulting, polished aggregate, and scaling.

Roughness Index – Roughness is recorded following the industry standard “International Roughness Index” (IRI), a measure of the change in elevation over a distance expressed as a slope and reported in millimeters/meter. The IRI value is converted to a 0 to 100 score and reported as the Roughness Index (RI) as follows:

$$RI = (11 - 3.5 \times \ln(IRI)) \times 10$$

$\ln(IRI)$ is the natural logarithm of IRI.

In common terms, a newer street would generally have a Roughness Index above 85, while one due for an overlay would be in the range 40 to 70. Failed streets typically have roughness values below 40.

Structural Index – The network of streets was not tested for structural adequacy, instead, the relationship between the final pavement condition score and amount of load associated distresses was analyzed and each pavement section assigned a Weak, Moderate or Strong strength rating. The assigned structural index (30, 60 or 80 for weak, moderate and strong respectively) was not used in determining the overall pavement condition score, but simply to classify the pavement strength and aid in selecting appropriate rehabilitation strategies.

Pavement Condition Index (PCI) – Following our field surveys, the condition data is assembled to create a single score representing the overall condition of the pavement. The Pavement Condition Index (PCI) is calculated as follows:

$$PCI = 33\% \text{ Roughness Index} + 67\% \text{ Surface Distress Index}$$

Development of the pavement management plan and budgets were completed using Harrisburg - specific rehabilitation strategies, unit rates, priorities, and pavement performance curves. The process was iterative in its attempt to obtain the greatest efficiency and cost benefit.

4.0 HARRISBURG SURVEY PAVEMENT CONDITION

4.1 UNDERSTANDING THE PAVEMENT CONDITION INDEX

The following compares the Pavement Condition Index (PCI) to commonly used descriptive terms. Divisions between the terms are not fixed, but are meant to reflect common perceptions of condition.

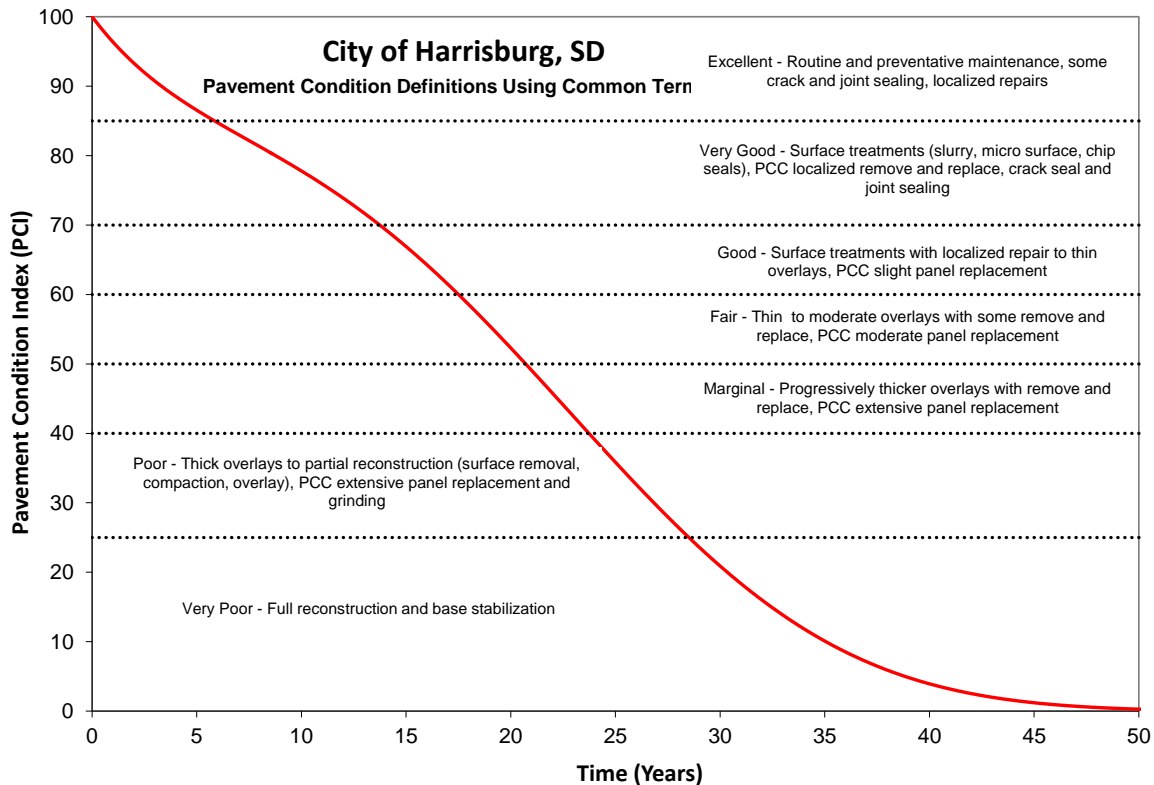


Figure 8 – Understanding the Pavement Condition Index (PCI) Score

The following table details a general description for each of these condition levels with respect to remaining life and typical rehabilitation actions:

PCI Range	Description	Relative Remaining Life	Definition
85 – 100	Excellent	15 to 25 Years	Like new condition – little to no maintenance required when new; routine maintenance such as crack and joint sealing.
70 – 85	Very Good	12 to 20 Years	Routine maintenance such as patching and crack sealing with surface treatments such as seal coats or slurries.
60 – 70	Good	10 to 15 Years	Heavier surface treatments, chip seals and thin overlays. Localized panel replacements for concrete.
40 – 60	Marginal to Fair	7 to 12 Years	Heavy surface-based inlays or overlays with localized repairs. Moderate to extensive panel replacements.
25 – 40	Poor	5 to 10 Years	Sections will require very thick overlays, surface replacement, base reconstruction, and possible subgrade stabilization.
0 – 25	Very Poor	0 to 5 Years	High percentage of full reconstruction.

4.2 HARRISBURG NETWORK CONDITION IMAGERY

The images presented below provide a sampling of the Harrisburg streets that fall into the various condition categories with a discussion of potential rehabilitation strategies.

Very Poor (PCI = 0 to 25) – Complete Reconstruction



Prairie Street from Elm Street to Main Street (GISID 1136, PCI = 25) – Rated as Very Poor, this street displays spreading base failure as evidenced by the severe alligator cracking that persists throughout the segment. A mill and overlay on this street would not be suitable as the base has failed and would not meet an extended service life of at least 15 years. This street requires a full reconstruction and should be carefully monitored.

Deferral of reconstruction of streets rated as Very Poor will not cause a substantial decrease in pavement quality as the streets have passed the opportunity for overlay-based strategies. Due to the high cost of reconstruction, Very Poor streets are often deferred until full funding is available in favor of completing more streets that can be rehabilitated at lower costs, resulting in a greater net benefit to the City. This strategy however must be sensitive to citizen complaints forcing the street to be selected earlier. In addition, this type of street can pose a safety hazard for motorists, since severe potholes and distortions may develop. It is important to consistently monitor these streets and check for potholes or other structural deficiencies until the street is eventually rebuilt.

Poor (PCI = 25 to 40) – Last Opportunity for Surface Base Rehabilitation



Anna Way from Elm Street to Willow Street (GISID 1153, PCI = 37) – Rated as Poor, this segment still has some remaining life before it becomes a critical reconstruction need. On this street, the base is showing signs of failure in areas exhibiting alligator/fatigue cracking. The severely cracked areas are isolated and do not persist throughout the entire segment length and cross section. These areas should be dug out and structurally patched to attain the maximum life from any potential rehabilitation efforts. If left untreated, within a short period of time, a full reconstruction would be required.

On arterial roadways, Poor streets often require partial to full reconstruction – that is removal of the pavement surface and base down to the subgrade and rebuilding from there. On local roadways, they require removal of the pavement surface through grinding or excavation, base repairs, restoration of the curb line and drainage, and then placement of a new surface.

In general, the service life of Poor streets is such that if deferred for too long, it would require a more costly reconstruction. Streets rated as Poor are typically selected first for rehabilitation as they provide the greatest cost/benefit to the City – that is the greatest increase in life per rehabilitation dollar spent.

Marginal (PCI = 40 to 50) – Progressively Thicker Overlays



Eagle Avenue from Tiger Street to Chestnut Street (GISID 1167, PCI = 45) – Rated as marginal with a PCI score at the lower range between Marginal and Poor streets. Marginal streets have distresses that tend to be localized and moderate in nature – that is they do not extend the full length of the segment and can be readily dug out and repaired. This street segment highlights this characteristic as the failed area does not quite extend the full length or width of the roadway and is still serviceable. However, it also highlights the relationship between base and pavement quality. Placing an overlay on this street without repairing the base would not achieve a full 15 year life as the failure would continue to occur over time. Structural patching of the failed areas along localized rehabs would permit a full width grind and inlay on this street segment and return it to full service. The curb lines are straight and drainage is functioning well.

Marginal streets that display high amounts of load associated distresses are selected as a priority for rehabilitation as they provide the greatest cost/benefit to the City. If left untreated, Marginal streets with high amounts of load associated distresses would deteriorate to become partial reconstruction candidates. Marginal streets that are failing due to materials issues or non-load associated failures may become suitable candidates for thick overlays if deferred, without a significant cost increase.

Fair (PCI = 50 to 60) – Thin to Moderate Overlays



Elm Street from Perry Lane to Anna Way (GISID 1210, PCI = 52) – Rated in the Fair category, these streets require thin to moderate overlays for asphalt when they enter their need year (generally within 2-3 points of the lower PCI in the defined range). Several distresses are present, but tend to be more localized and moderate in severity, and non-load related (primarily longitudinal and transverse cracking and raveling). On this segment of road, the signs of deterioration are evident in the right hand travel lane of the pavement and are moderate in severity indicating the base has not yet failed along the entire length of roadway. The curb line is straight through the sidewalk could benefit from some preventative maintenance to prevent damage from weed intrusion.

Asphalt streets rated as Fair tend to receive a lower priority when developing a rehabilitation program. The reason for this is the cost to complete an overlay now would be on the order of \$21.00/yd². If deferred, the rehabilitation cost would only increase by about \$6/yd², again depending on the functional classification, in about 5 to 10 years. This delay represents a 20% difference over the time stated. Thus, the cost of deferral is low when compared to deferring a thick overlay to a reconstruction with a two to threefold increase in cost.

Good (PCI = 60 to 70) – Surface Treatments to Thin Overlays



Grand Avenue from Maple Street to Elm Street (GISID 1217, PCI = 65) – Rated as Good with the primary cause of deterioration the transverse and longitudinal cracking, as well as patching. It also displays small amounts of load associated distresses that can easily be removed to restore the visual appearance of the roadway. The existing cracks should be sealed and the pavement surface restored, with a heavier surface treatment such as microsurfacing or double slurry to fully waterproof the pavement and cover the crack sealant. The occasional dig out and replacement may be required to correct localized deficiencies. Alternatively, depending on the extent of the distressed areas, base strength and drainage, a thin overlay may be applied.

Asphalt streets rated as Good are ideal candidates for thinner surface-based rehabilitations and local repairs. Depending on the amount of localized failures, a thin edge mill and overlay, or possibly a surface treatment, would be a suitable rehabilitation strategy for streets rated as Good. Streets that fall in the high



60 - low 70 PCI range provide the greatest opportunity for extending pavement life at the lowest possible cost, thus applying the principles of the perpetual life cycle approach to pavement maintenance. The adjacent photo is a great example of a street segment (not a Harrisburg Road) that displayed low load associated distresses and thus, high structural characteristics, and once the distressed areas were replaced, a slurry seal was applied. The patching accounted for less than 5 to 10% of the total area and resulted in a good looking, watertight final surface at a much lower cost than an overlay with less disruption to the neighborhood and curb line. The patches were paver laid and roller compacted.

Very Good (PCI = 70 to 85) – Surface Treatments and Localized Rehabilitation



North Perry Lane from Sound End to Josh Street (GISID 1203, PCI = 73) – Rated as Very Good, this road displays minor amounts of transverse cracking and. The surface is non-weathered, and the base is still strong. This street is an example of a candidate for preventative maintenance and light weight surface treatments to extend the life of a roadway.

Asphalt streets rated as Very Good generally need lightweight surface-based treatments such as surface seals, slurries, chip seals or microsurfacing. Routine maintenance such as crack sealing and localized repairs often precede surface treatments. The concept is to keep the cracks as waterproof as possible through crack sealing and the application of a surface treatment. By keeping water out of the base layers, the pavement life is extended without the need for thicker rehabilitations such as overlays or reconstruction. Surface treatments also tend to increase surface friction and visual appearance of the pavement surface but do not add structure or increase smoothness.

Surface treatments may include:

- *Double or single application of slurry seals (slurries are a sand and asphalt cement mix).*
- *Microsurfacing – asphalt cement and up to 3/8 sand aggregate.*
- *Chip seals and cape seals (Chip seal followed by a slurry).*

Additional cost benefits of early intervention include:

- *Less use of non-renewable resources through thinner rehabilitation strategies.*
- *Less intrusive rehabilitation and easier to maintain access during construction.*
- *Easier to maintain existing drainage patterns.*

Excellent (PCI = 85 to 100)



Railroad Avenue from Main Street to Willow Street (GISID 1002, PCI = 94) – Rated as Excellent, displaying little to no surface distresses. The ride is smooth and the surface is non-weathered and the base is strong. In a couple of years, this street segment would be an ideal candidate for routine maintenance activities such as joint seals, crack seals, and localized repairs.

In terms of pavement management efficiency, a program based on worst-first, that is starting at the lowest rated street and working up towards the highest, does not achieve optimal expenditure of money. Generally, under this scenario, agencies can not sufficiently fund pavement rehabilitation and lose ground despite injecting large amounts of capital into the network.

The preferred basis of rehabilitation candidate selection is to examine the cost of deferral of a street, against increased life expectancy.

4.3 EVALUATING THE PAVEMENT QUALITY AND BACKLOG

The concept of the Pavement Condition Index (PCI) score, backlog percentage and number of streets rated as Excellent must be fully understood in order to understand and develop an effective pavement management program. These three metrics should fall into certain ranges in order to measure the quality and long term viability of a network.

The PCI score indicates the overall pavement condition and represents the amount of equity in the system; it is the value most commonly considered when gauging the overall quality of a roadway network. It may also be used to define a desired level of service: that is, an agency may wish to develop a pavement management program such that in five years the overall network score meets a set minimum value. Obviously, the higher the PCI score the better off the overall network condition is. Agencies with an average PCI score above 80 (when considering surface distress, roughness and possibly strength) are rare and found only in a few select communities. Less than 1 in 20 communities surveyed by IMS have that high of a condition average. Averages between 65 and 80 are indicative of either newer networks, or ones that have an ongoing pavement rehabilitation program and tend to be fully funded. Scores between 60 and 65 are common and represent a reasonable average providing a satisfactory balance between levels of service and funding, and when taken with the other two metrics may represent a well-managed and funded network. A minimum score of 60 means that overall the network falls at the lower end of the range where light weight surface treatments and thin overlays are the standard rehabilitation practice. Below a 60 means an agency has to rely on more costly rehabilitations and reconstructions to address condition issues.

At the upper end of the condition scale, a minimum of 15% of the network should be rated as Excellent. Generally, at or above 15%, means that a noticeable percentage of the roadway network is in like new condition, requiring only routine maintenance. While higher percentages of streets rated as Excellent are certainly desirable, the annual cost to maintain rates at higher multiples is often cost prohibitive. Below 15% means the agency is struggling to effectively rehabilitate their network on an annual basis. The 15% marker represents a cost effective balance between annual investment and satisfactory level of service.

Backlog roadways are those that have dropped sufficiently in quality to the point where surface based rehabilitation efforts would no longer prove to be cost effective. These roadways are rated Poor or Very Poor and will require either partial or total reconstruction. Backlog is expressed as the percentage of roads requiring reconstruction as compared to the network totals.

It is the backlog, however, that defines the amount of legacy work an agency is facing and is willing to accept in the future. It is the combination of the three metrics that presents the true picture of the condition of a roadway network, and conversely defines improvement goals.

Generally, a backlog of 10% to 15% of the overall network is considered manageable from a funding point of view with 12% being a realistic target. Fifteen percent (15%) is used as a control limit to indicate the maximum amount of backlog that can be readily managed. Backlog rates below 10%, again are certainly desirable, but financially unachievable for a large percentage of agencies. Backlogs approaching 20% or more tend to become unmanageable, unless aggressively checked through larger rehabilitation programs, and will grow at an alarming rate. At 20% a tipping point has been met and the backlog tends to increase faster than an agency's ability to reconstruct their streets.

4.4 HARRISBURG NETWORK CONDITION DISTRIBUTION

Figure 9 presented below shows the distribution of pavement condition for the roadway network in Harrisburg. The average PCI for the network is 66. While direct comparisons to other agencies are difficult due to variances in ratings systems, Harrisburg is slightly above average when compared to other agencies recently surveyed by IMS, which typically fall in the 60 to 65 range.

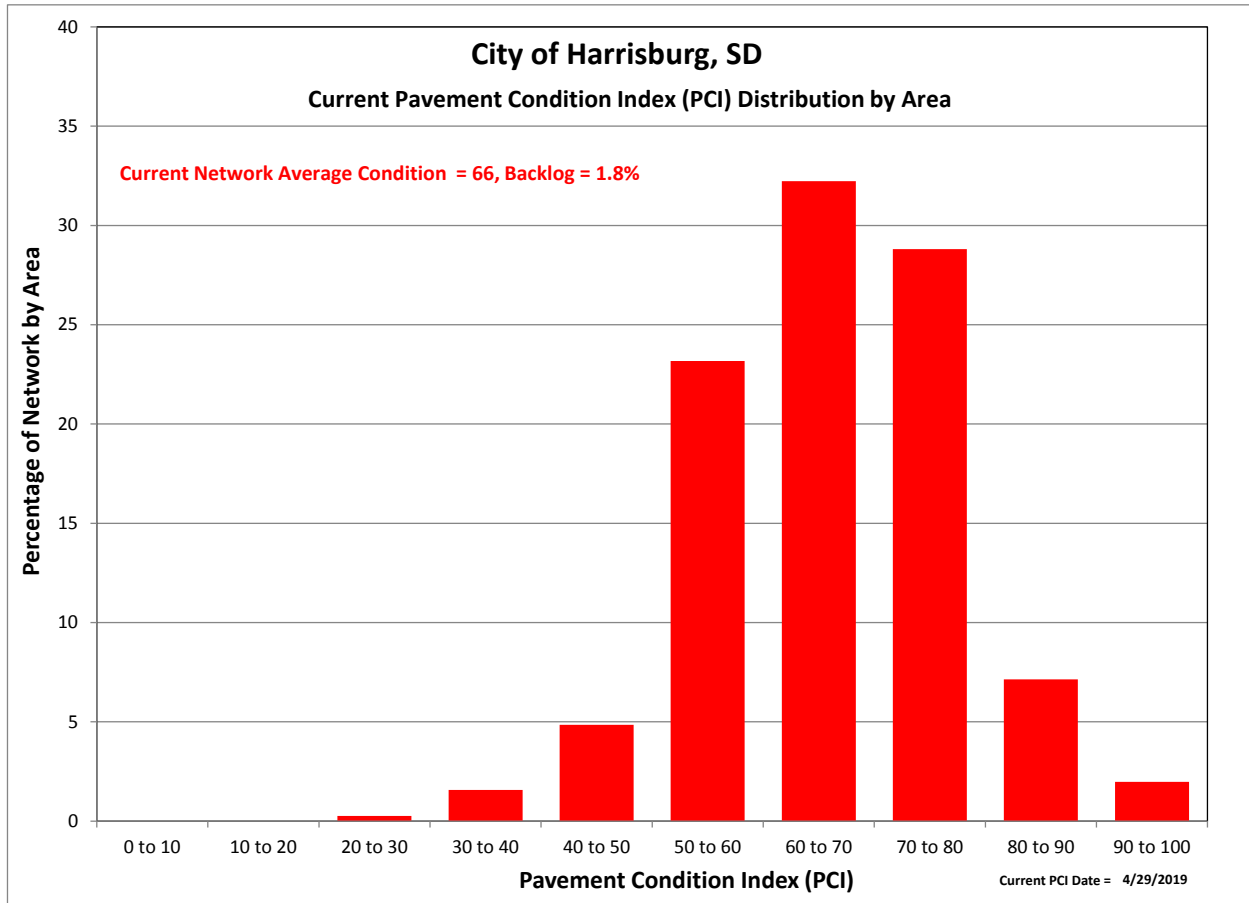


Figure 9 – Roadway Network Present Status

- This is reflective of a moderately aged network that has had some roadway renewal effort.
- Traditionally we expect to see a bell curve that is skewed to the right and centered between a PCI of 60 and 70. The Harrisburg network curve illustrated above follows this norm and shows the positive impact of recent roadway renewal effort over the last several years.

The following graph (**Figure 10**) plots the same pavement condition information, but instead of using the actual Pavement Condition Index (PCI) value, descriptive terms are used to classify the roadways.

- Five percent (4.5%) of the network can be considered in Excellent condition and require only routine maintenance.
- Thirty-three percent (33.4%) of the network falls into the Very Good classification. These are roads that benefit most from preventative maintenance techniques such as microsurfacing, slurry seals and localized panel repairs.
- Thirty-two percent (32.2%) of the streets are rated as Good and are candidates for lighter surface-based rehabilitations such as thin overlays or slight panel replacements.
- Twenty-eight percent (23.2%) of network can be considered Fair to Marginal condition representing candidates for progressively thicker overlay-based rehabilitation or panel replacements. If left untreated, they will decline rapidly into reconstruction candidates.
- The remaining two percent (1.8%) of the network is rated as Poor or Very Poor, meaning these roadways have failed or are past their optimal due point for overlay or surface-based rehabilitation and may require progressively heavier or thicker forms of rehabilitation (such as extensive panel replacement, surface reconstruction or deep patch and paving) or total reconstruction.

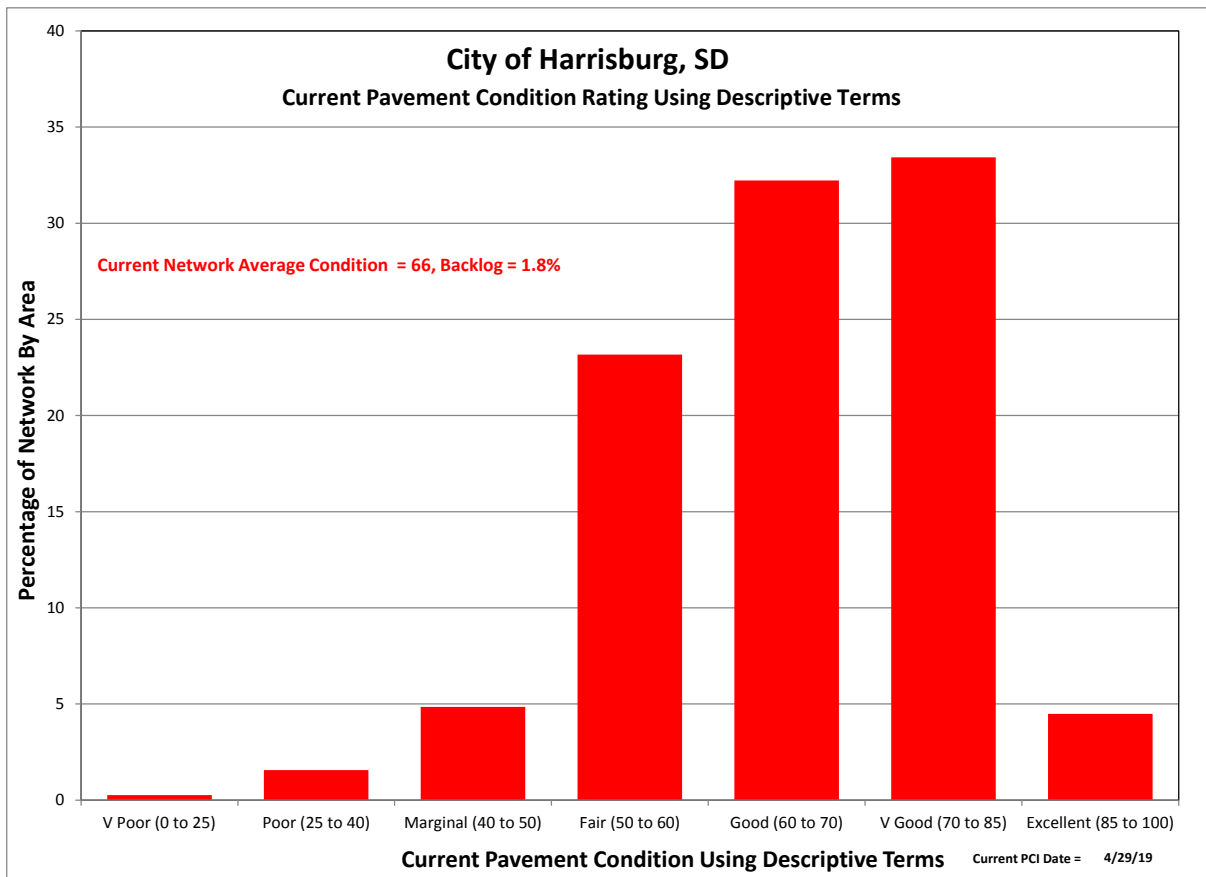


Figure 10 – Roadway Network Present Status Using Descriptive Terms

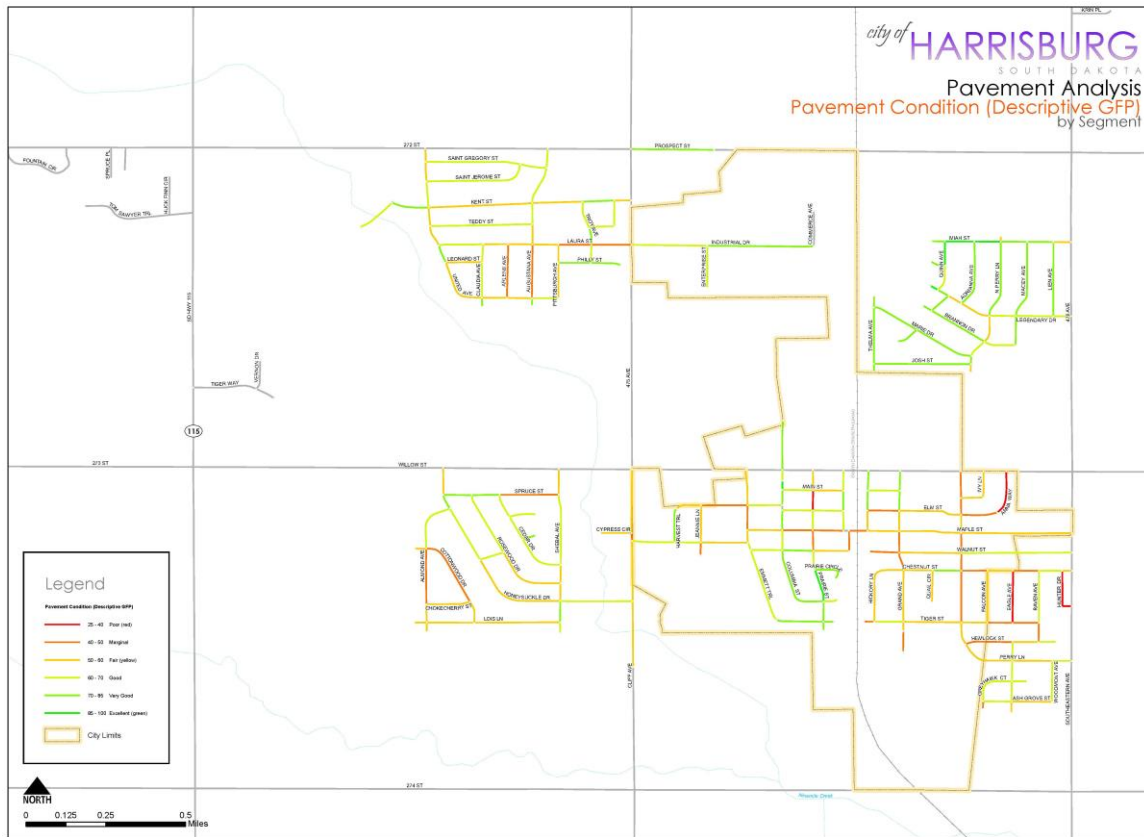


Figure 12 – Harrisburg Pavement Condition by Segment Using Descriptive Terms

4.5 CONDITION BY FUNCTIONAL CLASSIFICATION

Figure 13 highlights the pavement condition distribution for the arterial, collector, and local streets. Keep in mind that arterial roadways, the streets that have the majority of traffic use and link various parts of the city together, may be considered the thoroughfares of the city and during the budget development process, should receive the highest priority when selecting rehabilitation candidates.

- The **arterial network** has an average PCI of **61**
- The **collector network** has an average PCI of **66**
- The **local network** has an average PCI of **66**

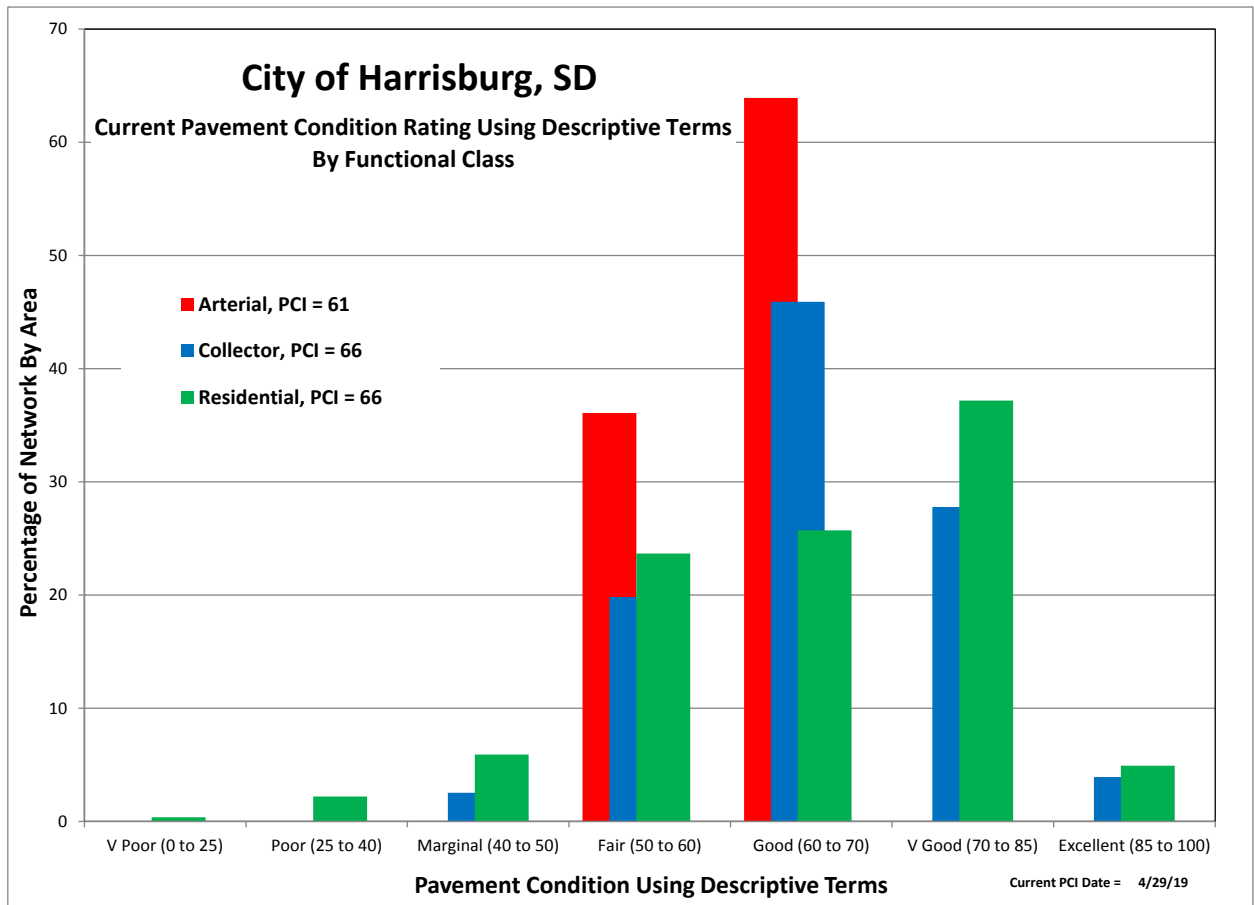


Figure 13 – Condition Rating by Functional Classification

4.6 STRUCTURAL AND LOAD ASSOCIATED DISTRESS ANALYSIS

Structural testing and analysis was not performed for the City of Harrisburg. Instead, analysis of the cause of pavement failure for these street segments was completed by examining the types of distresses that have caused the PCI score to drop.

Surface distresses may be categorized into two classifications – load associated distresses (LADD) and non-load associated distresses (NLAD). Load associated distresses are those that are directly related to traffic loading and structural capacity. Non-load associated distresses are those that result from materials or environmental issues including shrinkage (transverse) cracking, bleeding and raveling. Generally, load associated distresses affect the overall condition score more than non-load associated distresses – as is the case in Harrisburg. For asphalt streets, roadways were classified as Weak, Moderate, or Strong.

The purpose of the structural analysis is twofold:

- The structural analysis provides input into which performance curve each segment is to use – performance curves are used to predict pavement deterioration over time.
- Structural analysis assists in rehabilitation selection by constraining inadequate pavement sections from receiving too light of a rehabilitation and conversely, identifying segments suitable for lighter weight treatment.

Figure 14 plots the relationship of the load associated distresses (shown in red) against pavement condition. As can be seen from the plot, at higher PCI scores, most pavements fall into the moderate strength classification as the distresses have not yet begun to manifest themselves into severe failures. As the PCI score drops, the load associated distresses typically affect the PCI score to a higher degree with more segments being classified as weak. Conversely, segments that have a declining PCI score and low LADD, are classified as strong as they display few load associated failures. High PCI score (above 60) rehab selections should focus on pavement preservation activities such as surface treatments or thin overlays, possibly with some localized pavement repairs and crack sealing.

The sum of the Load-Associated Distress deducts (LADD) is also used to qualify the appropriate rehabilitation strategy selection in addition to the overall pavement condition score. For example, a street that has a good PCI score (that is between 60 and 70) and is displaying relatively low load associated distress deducts would be a suitable candidate for a surface treatment in place of a thin overlay in that the PCI score is more influenced by materials issues such as transverse cracking or raveling.

Overall, the low amounts of streets exhibiting weak performance can generally be attributed to poor subgrade conditions, insufficient pavement thickness and increased traffic loading – in particular heavy, side-loading garbage and recycling trucks (an unintended consequence of green initiatives) along with school buses and delivery vehicles. The average weight of these vehicles coupled with tire pressure and configuration today compared to those from a few decades ago has increased drastically.

- The upper black diagonal line identifies segments that have a high ratio of load associated distresses compared to their PCI score. These segments are classified as weak.
- The lower black diagonal line identifies segments that have a low ratio of load associated distresses compared to their PCI score and are classified as strong.
- Segments that fall between the two lines are assigned a moderate pavement strength.

The sum of the Load-Associated Distress deducts (LADD) is also used to qualify the appropriate rehabilitation strategy selection in addition to the overall pavement condition score.

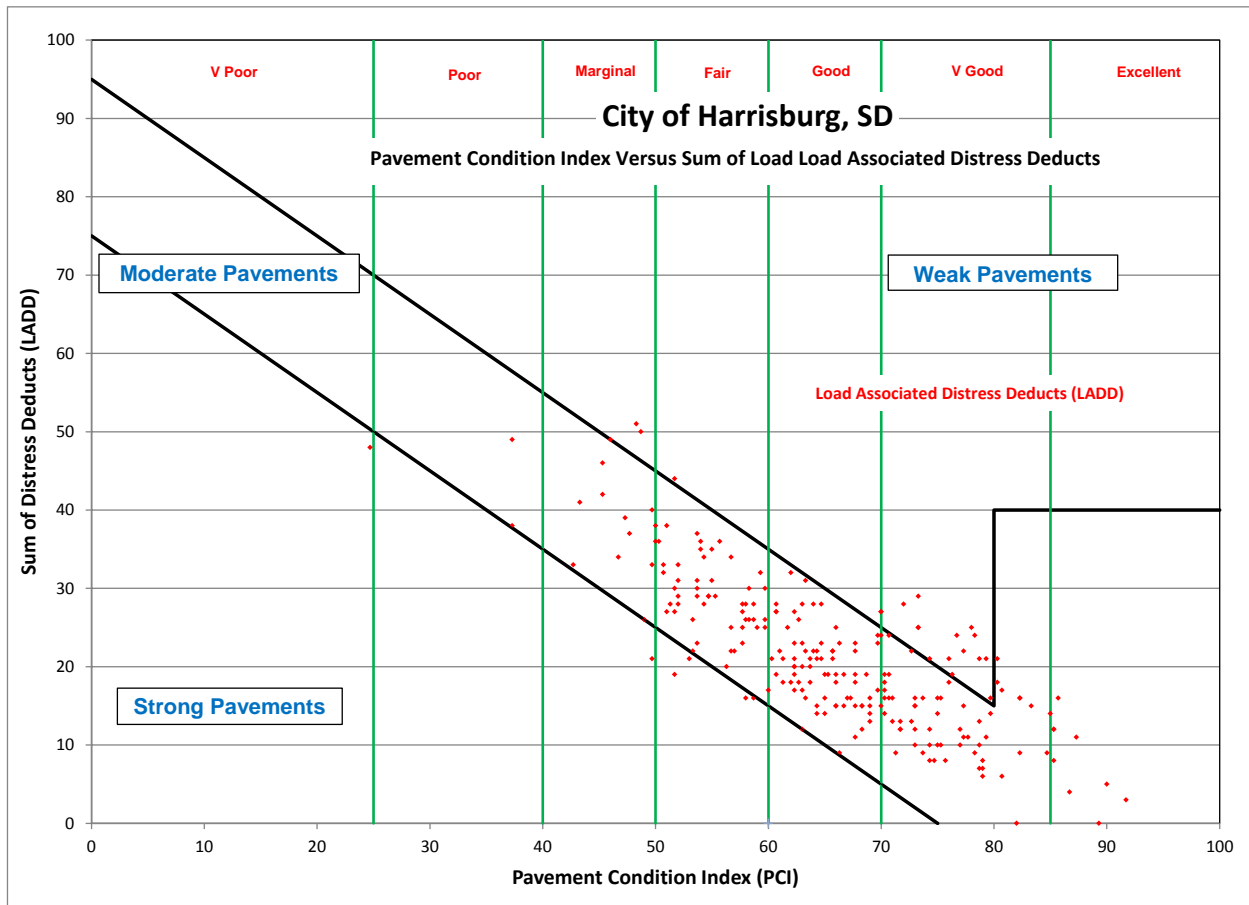


Figure 14 – Pavement Condition Index versus Sum of Distress Deducts

5.0 REHABILITATION PLAN AND BUDGET DEVELOPMENT

5.1 KEY ANALYSIS SET POINTS AND PAVEMENT PERFORMANCE CURVES

Pavement management analysis requires user inputs in order to complete its condition forecasting and prioritization. A series of operating parameters were developed in order to create an efficient program that is tailored to the City's needs.

Some of the highlights include:

- The pavement performance curves that are used to predict future pavement condition. Asphalt streets are classified as weak, moderate, or strong, and then assigned the appropriate pavement performance curve based on their functional classification to use in the analysis. The concept of load associated distresses does not apply to concrete streets.
- The shape of performance curves reflect the concept of deferred maintenance and salvage life. Instead of dropping to an absolute PCI value of 0 after 40 years of service, the curves are designed to become asymptotic to the age axis and have a whole life of approximately 50 to 60 years depending on pavement type. This indicates the notion that once a street deteriorates past a specific threshold – about a PCI of 20, age becomes less important in rehab selection.
- Priority ranking analysis uses prioritization for rehabilitation candidate selection. It is designed to capture as many segments in their need year based on the incremental cost of deferral. The higher the functional classification of a street, the higher priority a segment is given.

Rehabilitation Strategies and Unit Rates

The rehab strategies and unit rates used in the pavement analysis can be found on the following page. Some important parameters include:

- **Rehab Code and Activity** –The relative terms of thin, moderate and thick are used to describe the overlay thickness. This is to facilitate consistency in the naming convention, but does not imply the same material thickness has to be used for each functional classification.

The recommended rehab activities for any given PCI range may vary due to pavement strength and functional classification. For example, an arterial between a PCI of 50 to 60 may receive a thin to moderate overlay, while a local access road may only receive a chip seal or thin overlay.

- **Unit Rates** – The rehab costs are presented on a per square yard basis for each pavement type, functional class, and rehabilitation activity combination. The rates were developed using typical national averages for similar activities and adjusted for Harrisburg's location and unique conditions. An additional burden to all costs was also added to cover City overheads, design and engineering and inspection. Costs for peripheral concrete rehab (valley gutters, inlets, approaches, etc.) have not been included in the analysis.

The unit rates are reflected in the network value, final budgets, and average cost/mile for doing work in Harrisburg.

City of Harrisburg, SD
Rehabilitation Strategies and Unit Rates

Pavetype	Rehab Code	Rehab Activity	Rehab Group 1				Arterial Unit Rate (\$/yd2)	Collector Unit Rate (\$/yd2)	Residential Unit Rate (\$/yd2)	FunCL 6 Unit Rate (\$/yd2)	Construction Activities Burden Included in Unit Rates (%)	Agency Overheads Included in Unit Rates (%)	Reset PCI	Steady State Life Cycle (Yrs)	CBA Rehab Priority (Info Only)
			Min PCI	Critical PCI (Need Year)	Max PCI	Base Unit Rate (\$/yd2)									
All	5	Routine Maintenance	85	100	100	0.00	0.00	0.00	0.00	0.00	0	0	1		
Asphalt	10	Slurry Seal / Seal Coat	80	82	85	2.50	2.80	2.60	2.50	2.50	25	15	85	2	9
Asphalt	20	MicroSurface / Chip Seal	70	73	80	4.90	5.40	5.10	4.90	4.90	25	15	88	9	7
Asphalt	23	MicroSurface / Chip Seal + Strctrl Ptch	70	73	80		6.20	5.90	5.70	5.70	25	15	88	9	8
Asphalt	26	MicroSurface / Chip Seal + Strctrl Ptch	60	63	70		7.00	6.70	6.40	6.40	25	15	88	9	5
Asphalt	30	Edge Mill + Thin Overlay (1.5 - 2.0)	60	63	70	21.00	23.00	22.00	21.00	21.00	25	15	92	16	11
Asphalt	33	Edge Mill + Thin Overlay (1.5 - 2.0) + Strctrl Ptch	60	63	70		25.00	24.00	22.75	22.75	25	15	92	16	13
Asphalt	36	Edge Mill + Thin Overlay (1.5 - 2.0) + Strctrl Ptch	50	54	60		27.00	25.75	24.50	24.50	25	15	92	16	6
Asphalt	40	EM/FWM + Moderate Overlay (2.0 - 3.0)	50	54	60	27.00	31.00	29.00	27.00	27.00	25	15	94	20	12
Asphalt	43	EM/FWM + Moderate Overlay (2.0 - 3.0) + Strctrl Ptch	50	54	60		33.00	31.00	29.00	29.00	25	15	94	20	4
Asphalt	46	EM/FWM + Moderate Overlay (2.0 - 3.0) + Strctrl Ptch	40	44	50		35.00	33.00	30.50	30.50	25	15	94	20	10
Asphalt	50	FWM + Thick Overlay (> 2.0 - 3.0)	40	44	50	35.00	42.50	38.50	35.00	35.00	25	15	96	24	14
Asphalt	53	FWM + Thick Overlay (> 2.0 - 3.0) + Strctrl Ptch	40	44	50		45.00	41.00	37.00	37.00	25	15	96	24	15
Asphalt	56	FWM + Thick Overlay (> 2.0 - 3.0) + Strctrl Ptch	25	30	40		47.00	43.00	39.00	39.00	25	15	96	24	1
Asphalt	60	Surf Recon + Base Rehab / FWM + Strctrl Ptch + Olay	25	30	40	120.00	145.00	132.00	120.00	120.00	25	15	98	30	2
Asphalt	70	ACP Full Depth Reconstruction	0	15	25	160.00	176.00	168.00	160.00	160.00	25	15	100	37	3
Concrete	510	PCC Jnt Rehab & Crk Seal	80	82	100	6.50	7.25	6.75	6.50	6.50	25	15	83	1	11
Concrete	520	PCC Localized Rehab	70	73	80	14.25	16.50	15.25	14.25	14.25	25	15	85	15	10
Concrete	523	PCC Localized Rehab + Grind	70	73	80		16.50	15.25	14.25	14.25	25	15	85	15	9
Concrete	530	PCC Slight Phl Rplcmnt (<10%)	60	63	70	29.00	35.00	32.00	29.00	29.00	25	15	88	28	7
Concrete	533	PCC Slight Phl Rplcmnt (<10%) + Grind	60	63	70		35.00	32.00	29.00	29.00	25	15	88	28	7
Concrete	540	PCC Moderate Phl Rplcmnt (< 20%)	50	54	60	44.50	56.50	50.50	44.50	44.50	25	15	90	37	5
Concrete	543	PCC Moderate Phl Rplcmnt (< 20%) + Grind	50	54	60		56.50	50.50	44.50	44.50	25	15	90	37	5
Concrete	550	PCC Extensive Phl Rplcmnt (<33%)	40	44	50	60.50	80.50	70.00	60.50	60.50	25	15	94	47	3
Concrete	553	PCC Extensive Phl Rplcmnt (<33%) + Grind	40	44	50		80.50	70.00	60.50	60.50	25	15	94	47	3
Concrete	560	PCC Partial Reconstruction	25	30	40	82.50	104.50	93.00	82.50	82.50	25	15	96	59	1
Concrete	570	PCC Full Depth Reconstruction	0	15	25	121.00	161.00	140.00	121.00	121.00	25	15	100	74	2

*Unit rates vary slightly between functional classes

Min PCI, Critical PCI, and Max PCI – These define the Pavement Condition Index (PCI) range applicable to the rehab selection. The Critical PCI defines when a segment is in its need year and is deemed to be critical, otherwise if deferred, the street declines in PCI past the point which the rehabilitation is no longer appropriate. Generally the Critical PCI falls 2 to 4 points higher than the minimum PCI applicable for each rehab activity.

Figure 16 graphically presents the application of pavement rehabilitations for asphalt streets by PCI. The Rehab numbers are simply placeholders that separate each rehabilitation project identified on the chart above. For example, Rehab 43 is an EM/FWM + Moderate Overlay (2.0 – 3.0) + Structural Patch. EM/FWM is an abbreviation for Edge Mill/Full Width Mill and RR is short for remove and replace (structural patching).

Unit rates increase slightly between functional classes to reflect increase costs in pavement thickness, traffic control, and striping.

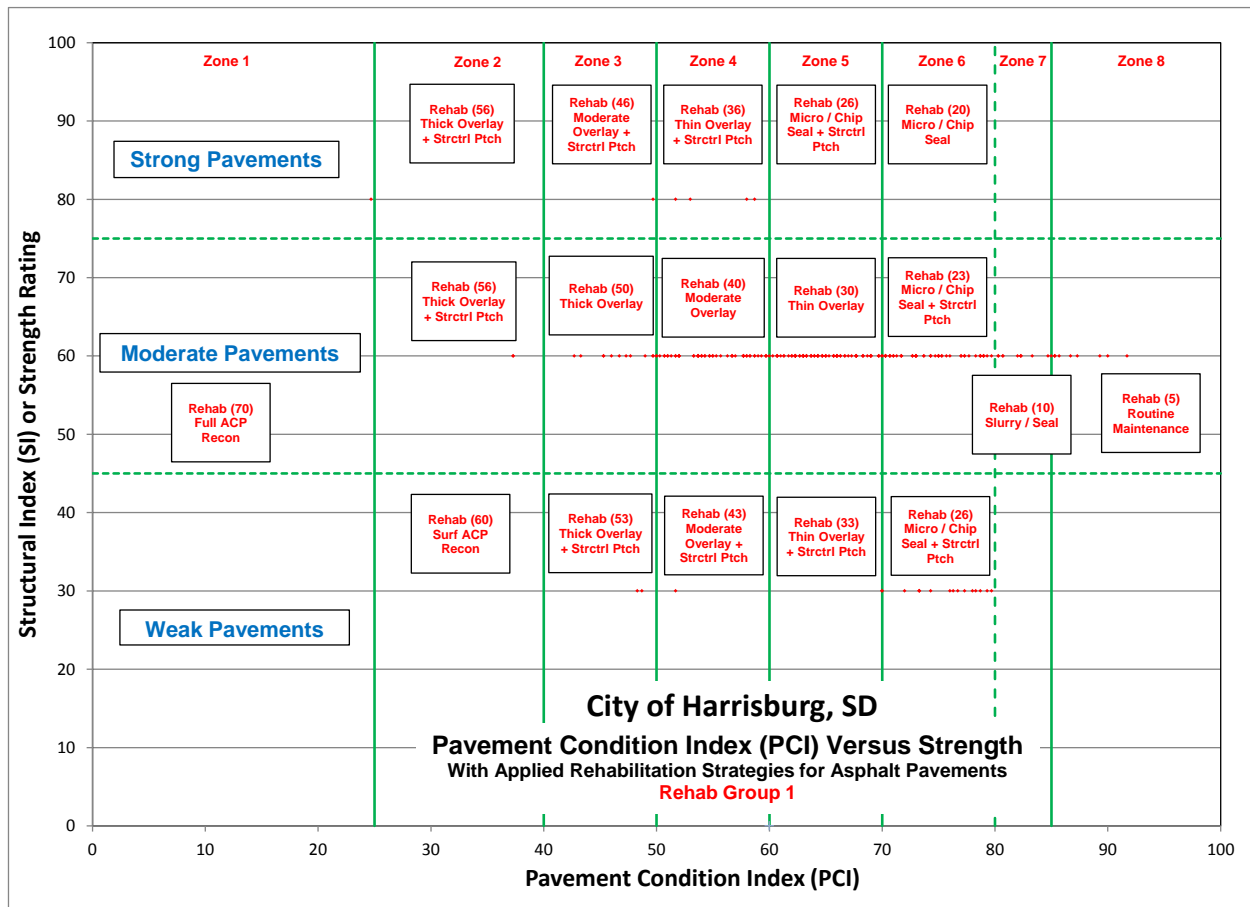


Figure 15 – Asphalt (ACP) Rehabilitation Strategies

Selection and Prioritization of Rehab Candidates

The City’s pavement management program incorporates a series of user defined values to prioritize and select the street segments for rehabilitation. The rehab selection order is not worst first, but rather designed to capture as many segments in their need year based on the incremental cost of rehab deferral. A Street is considered to be in its need year when it has reached its maximum service life and any further deferral would require a heavier and more costly rehabilitation. The rehab program has been designed to maximize the increased service life for each rehabilitation dollar spent on a segment.

Other factors included in the prioritization process focus on:

- **Need Year** – streets are only selected when they have expended their service life and are optimal for rehab selection.
- **Functional Classification** – generally priority is given to higher functional classifications as they provide greater benefits to a larger group of users
- **Pavement Strength** – weaker streets are prioritized higher than stronger ones as they deteriorate faster.
- **Area** – a very slight increase in priority is given to larger projects over smaller ones.

The net result is a program that favors thick overlays, followed by partial reconstruction projects then full reconstruction projects (more for safety reasons than cost-benefit). These are then followed by surface treatments and lastly by moderate to thin overlays.

The programmed deterioration curves illustrated in **Figure 16** are designed to integrate the pavement condition distribution performance curves for the network, with the applied rehabilitation strategies and their expected life cycle. Different color performance curves are meant to represent the full suite of curves assigned to segments based upon their functional class, pavement type, and strength.

It is important to recognize that even though all streets fall into specific rating categories and their respective rehabilitation strategies, it is not until a street falls to within a few points of the lower end of the range that it will become a critical need selected for rehabilitation.

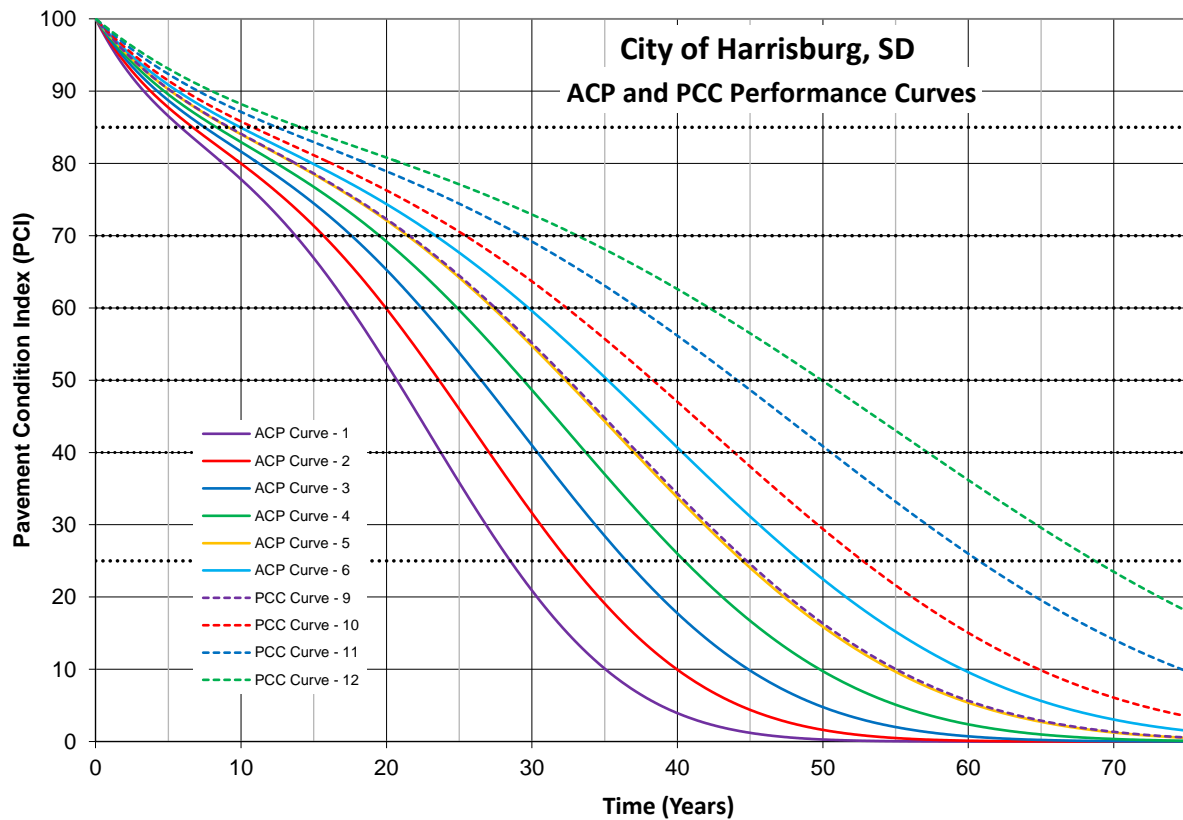


Figure 16 - Performance Curves

5.2 FIX ALL AND ANNUAL ESTIMATES

Three different approaches may be taken to identify and confirm the amount of funds the City needs to set aside each year to maintain the roadway network at its current condition. All three are completed externally to the pavement management system and are simply used to validate the final results.

Option 1 – Estimated Life Cycle Cost Based on Network Value

An approximate value for the annual street maintenance budget may be quickly determined by taking the total value of Harrisburg's roadway network, estimated at \$28M, and dividing that by the ultimate life of a roadway – approximated to be 50 years for asphalt and 75 years for concrete. By this method, the annual budget is estimated at \$556,000.

Please note, the 50 to 75 year lifespan of the roadway is the theoretical life of the roadway surface from construction, until the point at which there not usable surface remaining, it is not simply the lifespan of the pavement surface until the next overlay.

Rehabilitation Estimate Based on Network Valuation

Pavement Type	Network Valuation (\$)	Ultimate Life Span (yrs)	Life Cycle Cost (\$/Yr)
Asphalt Network	27,291,000	50	546,000
Concrete Network	778,000	75	10,000
City of Harrisburg, SD Network Totals:	28,069,000		556,000

Option 2 – Estimated Life Cycle Cost Based on Current Condition

A second method to validate the annual budget is to identify the average network PCI and associated rehabilitation requirements, and then estimate the number of miles required to be rehabilitated each year based on a typical life cycle for that rehabilitation activity. For Harrisburg, the average PCI for asphalt roads is 65, which places the Harrisburg asphalt network in the Edge Mill + Thin Overlay range, at an average cost of \$21.33/yd². Based on this estimate the City needs to spend approximately \$539,790/year to maintain the current condition average.

Rehabilitation Estimate Based on Network Average Condition

Pavement Type	Pavement Condition Index (PCI)	Rehab Code	Rehab Activity	Average Rehab Life Cycle (Yrs)	Miles to do Each Year	Blended Unit Rate (\$/yd ²)	Average Cost per Mile (\$)	Life Cycle Cost (\$/Yr)
Asphalt Network	65	30	Edge Mill + Thin Overlay (1.5 - 2.0)	16	1.3	21.33	405,400	539,790
Concrete Network	91	5	Routine Maintenance	1	0.3	0.00	0	0
City of Harrisburg, SD Network Totals:								539,790

Option 3 – Estimated Life Cycle Cost Based on Network Deficiency

The third methodology to confirm the required amount of annual funding is to identify the current network deficiency, that is the amount required to rehabilitate all streets in the network assuming unlimited funding, and then divide by the typical life cycle of each rehabilitation activity. This is referred to as the Fix All Estimate and Life Cycle Cost. The rehab strategies listed in the table are generic in nature and not necessarily the final set that was applied to Harrisburg. For Harrisburg, the Fix All Estimate for the network deficiency is approximately \$8.2M and the Life Cycle Cost is \$503,600/year, broken down as follows:

City of Harrisburg, SD

Rehabilitation Estimate Based on Current Network Deficiency and Life Cycle Cost

Rehab Code	Rehab Activity	Network Total (\$)	% of Total	Network			Life Cycle (Yrs)	Life Cycle Cost (\$/Yr)
				Arterial	Collector	Residential		
10	Slurry Seal / Seal Coat	23,000	0.3	0	0	22,980	5	4,600
20	MicroSurface / Chip Seal	0	0.0	0	0	0	8	0
23	MicroSurface / Chip Seal + Strctrl Ptch	521,800	6.4	0	129,330	392,460	8	65,200
26	MicroSurface / Chip Seal + Strctrl Ptch	233,800	2.9	0	0	233,770	8	29,200
30	Edge Mill + Thin Overlay (1.5 - 2.0)	3,509,300	42.8	230,980	1,367,360	1,911,000	16	219,300
33	Edge Mill + Thin Overlay (1.5 - 2.0) + Strctrl Ptch	102,900	1.3	0	0	102,860	16	6,400
36	Edge Mill + Thin Overlay (1.5 - 2.0) + Strctrl Ptch	0	0.0	0	0	0	16	0
40	EM/FWM + Moderate Overlay (2.0 - 3.0)	2,855,100	34.8	179,460	582,560	2,093,090	20	142,800
43	EM/FWM + Moderate Overlay (2.0 - 3.0) + Strctrl Ptch	0	0.0	0	0	0	20	0
46	EM/FWM + Moderate Overlay (2.0 - 3.0) + Strctrl Ptch	0	0.0	0	0	0	20	0
50	FWM + Thick Overlay (> 2.0 - 3.0)	516,300	6.3	0	100,980	415,360	24	21,500
53	FWM + Thick Overlay (> 2.0 - 3.0) + Strctrl Ptch	0	0.0	0	0	0	24	0
56	FWM + Thick Overlay (> 2.0 - 3.0) + Strctrl Ptch	199,100	2.4	0	0	199,130	24	8,300
60	Surf Recon + Base Rehab / FWM + Strctrl Ptch + Olay	0	0.0	0	0	0	30	0
65	Surf Recon + PCC to Base/FWM + Strctrl Ptch + Olay	0	0.0	0	0	0	30	0
70	ACP Full Depth Reconstruction	233,000	2.8	0	0	232,990	37	6,300
75	Full Depth Recon + PCC to Base	0	0.0	0	0	0	37	0
City of Harrisburg, SD Network Totals:		8,194,300		410,440	2,180,230	5,603,640		503,600

5.3 NETWORK BUDGET ANALYSIS MODELS

An analysis containing a total of 10 profile budget runs plus a Do Nothing options was prepared for Harrisburg.

The analysis results are summarized below:

- **Do Nothing** (illustrated in Figure 20) – This option identifies the effect of spending no capital for 5 years. After 5 years, this scenario results in a network average PCI drop from a 66 to a 61 and a dramatic increase in backlog to 9%
- **Harrisburg Budget** (Green Line) – this represents the City’s current annual budget of \$325K annually dedicated to pavement preservation and rehabilitation. This level of funding will result in a network average PCI score of 61 and a backlog increase to 9%.
- **Steady State PCI** – this is simply the funds required to maintain the current network average PCI at a 65. The annual budget required to do so is on the order of \$670K annually, however backlog (Very Poor & Poor roadways) continues to climb to 9% from its current 2%
- **Backlog Control Budget** – A budget designed to maintain the City’s backlog below 5%.

The results of the analysis are summarized in **Figure 17** below. The X-axis highlights the annual budget, while the Y-axis plots the 5 Year Post Rehab Network Average PCI value. The diagonal blue line is the results of the pavement analysis (the Harrisburg model profile).

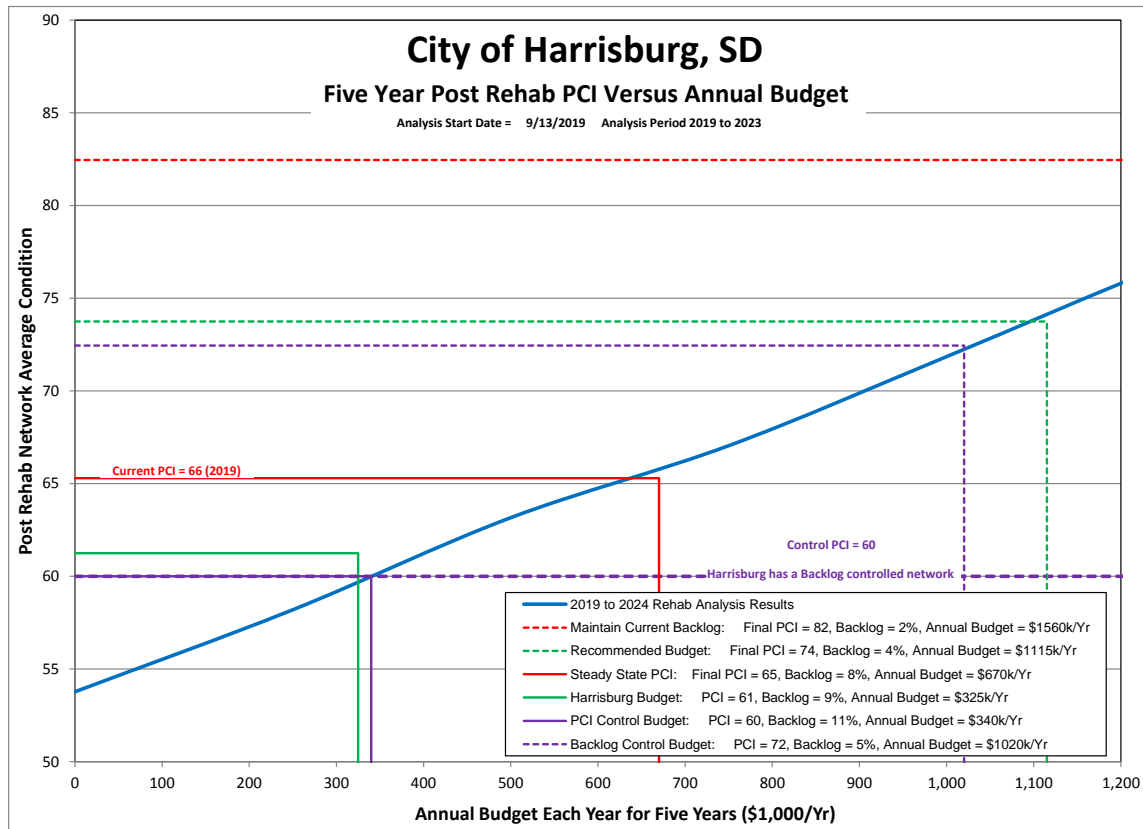


Figure 17 – 5 Year Post Rehab Network PCI Analysis Results

Figure 18 presents the resultant network backlog against annual budget. Similar to Figure 17, but instead of plotting the average PCI score, the blue diagonal line represents the total backlog after 5 years.

The lower the backlog the better, with a maximum of 12% recommended

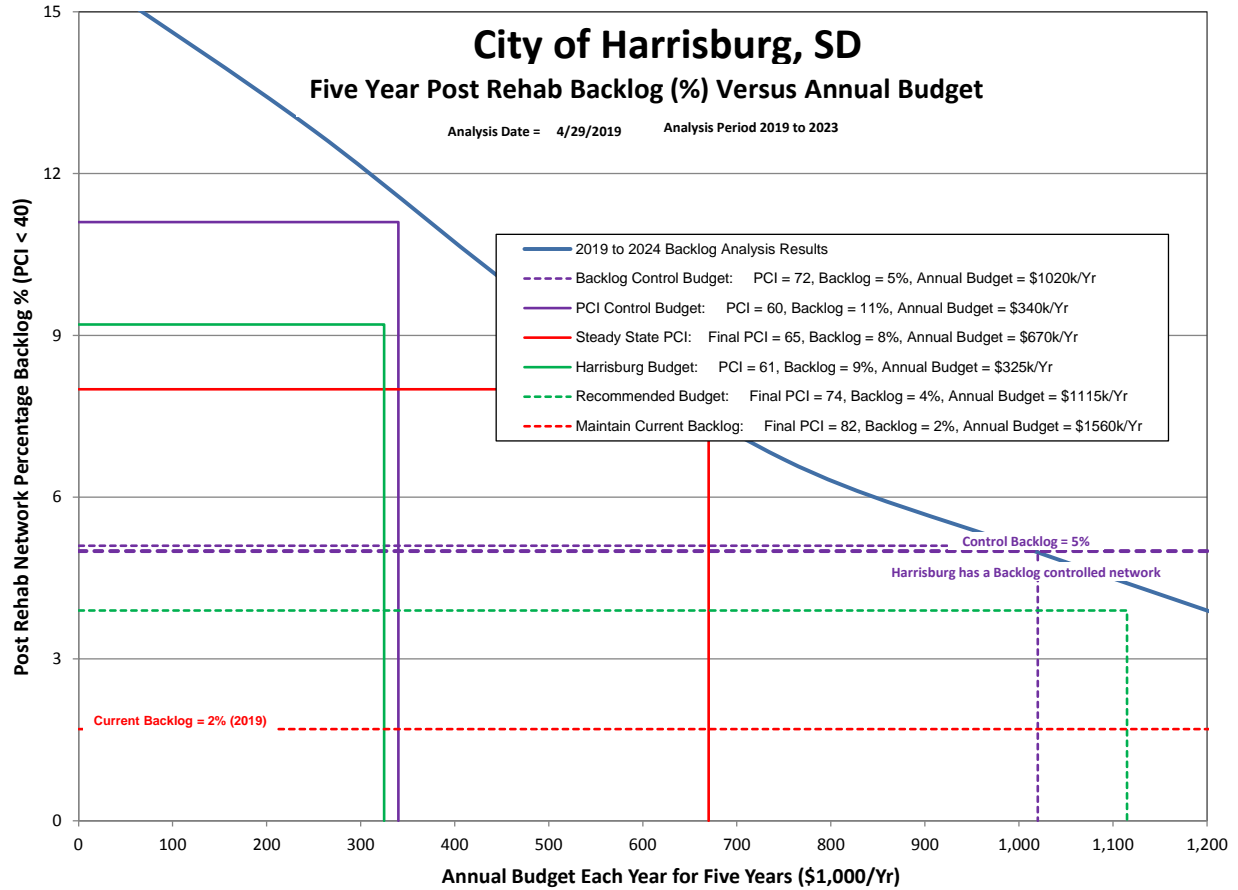


Figure 18 – 5 Year Post Rehab Network Backlog Results

Figure 19 presents the analysis results on an annual basis. This shows that if the budget falls below \$670K/year (Steady State Budget), over time the overall condition of the roads will deteriorate as backlog continues to grow.

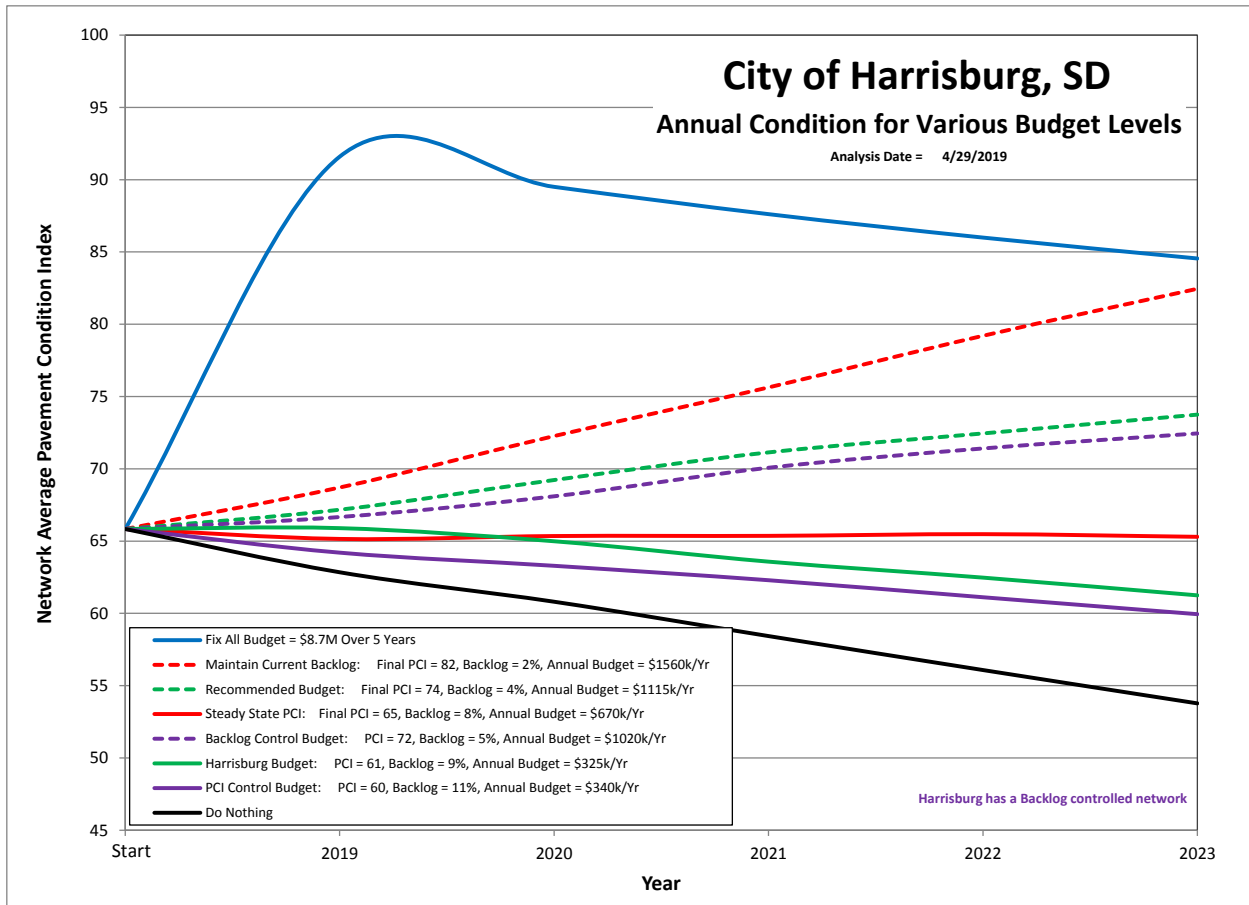


Figure 19– 5 Year Annual PCI

5.4 POST REHABILITATION CONDITION

The following figure (**Figure 20**) compares the current network condition distribution (red) against what the 5-year post rehabilitation distribution would be at with a budget of \$325K/year (blue). As can be seen in the plot, the Harrisburg budget will reduce the overall network's PCI average and increase the amount of backlog.

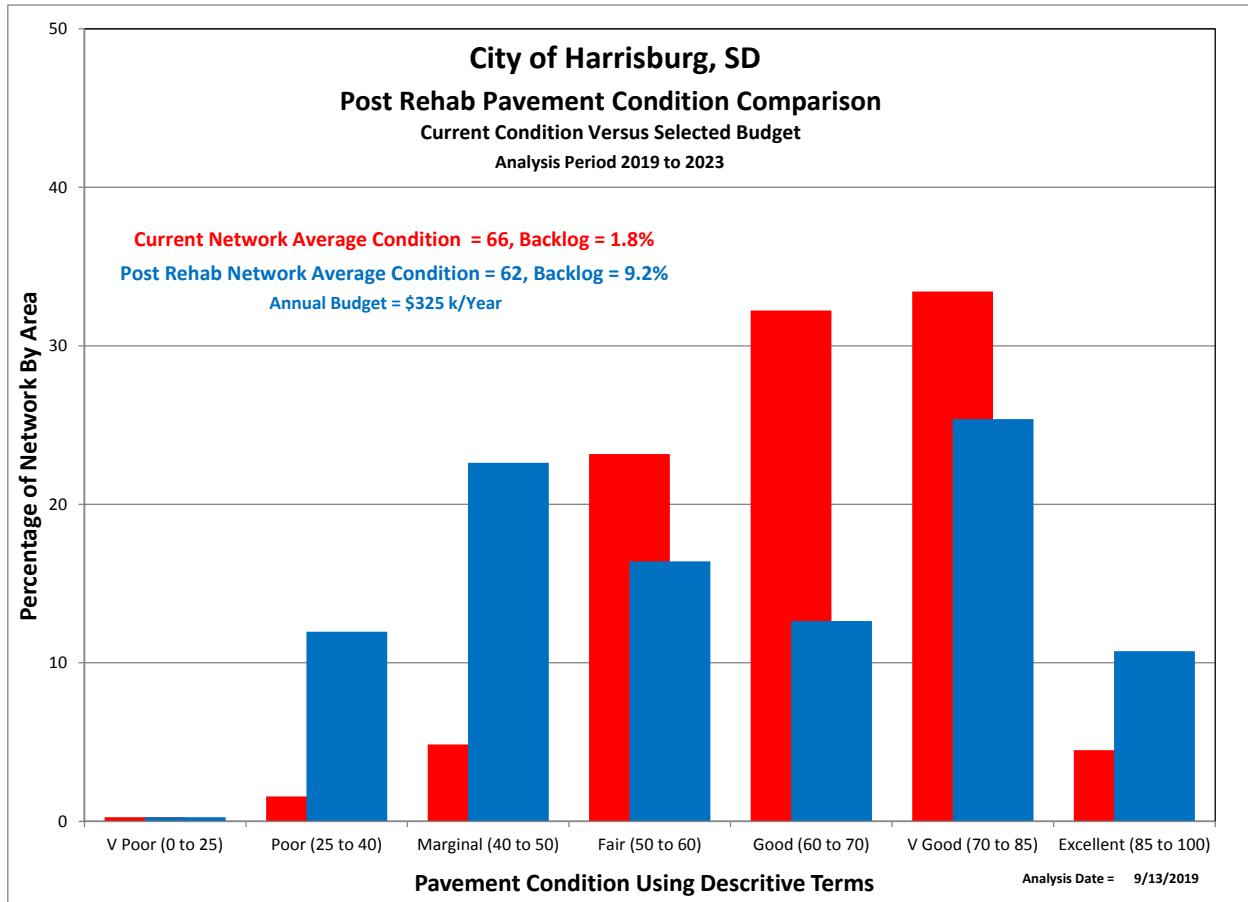


Figure 20 – Five-Year Post Rehabilitation Condition Distribution

Three metrics are used to evaluate the quality of a roadway network, they are:

Average Condition – should be between 60 and 65 at a minimum

Percentage of Backlog – target 12%, should be less than 15%, must be less than 20%

Percentage of Streets Rated as Excellent – should be greater than 15%

Figures 21 and 22 present the current Harrisburg recommended budget network rehabilitation plan by year and activity. Electronic versions of these maps are appended to this report.

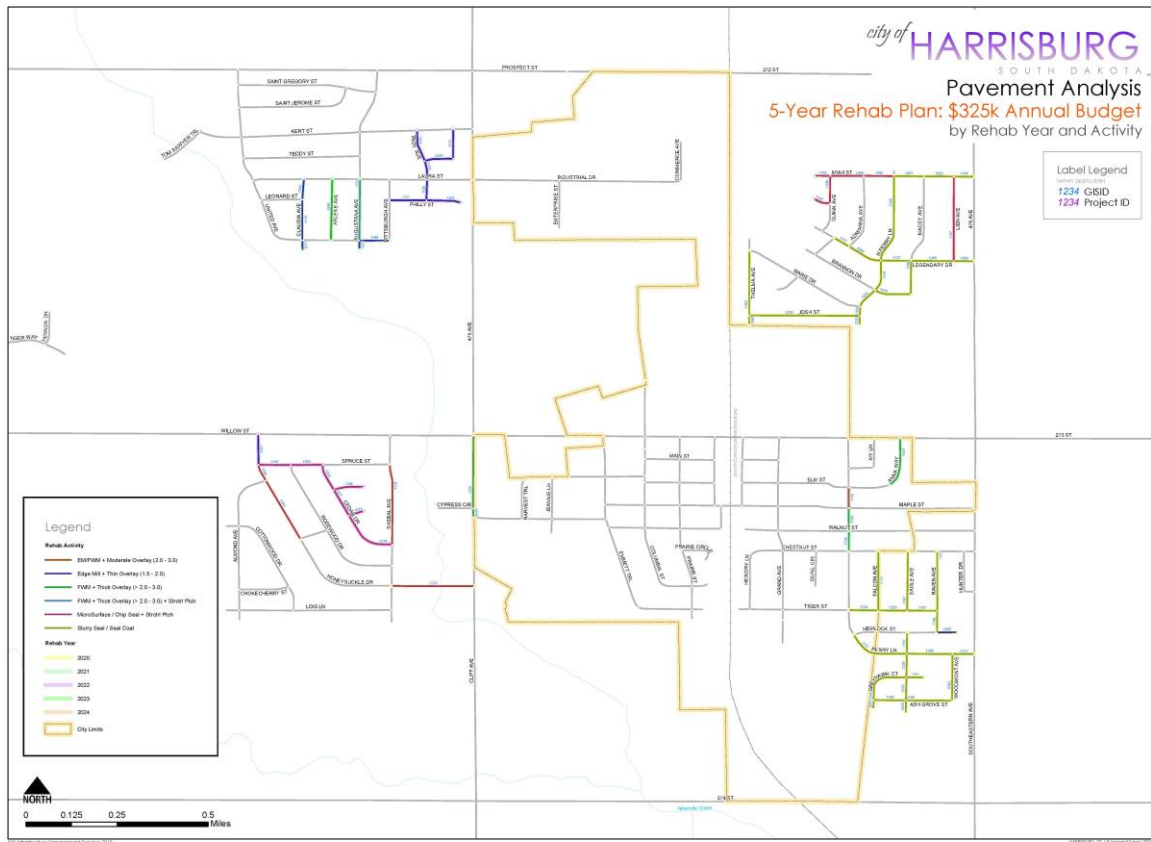


Figure 21 – \$325K/Year Rehabilitation Plan by Activity and Year

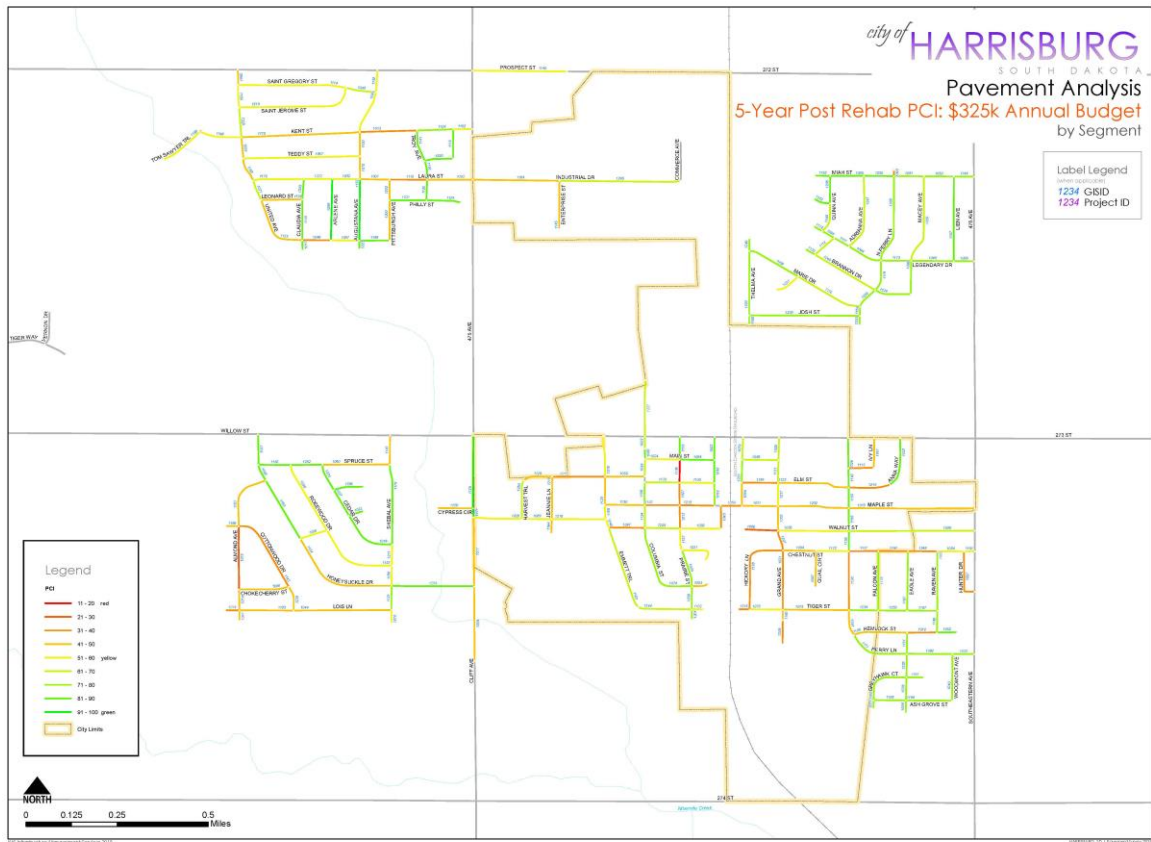


Figure 22 – \$325K/Year Post Rehabilitation PCI by Segment

5.5 HARRISBURG COMPARISONS TO OTHER AGENCIES

The following table presents the steady state versus actual funding levels of various agencies that use similar reporting and analysis software. The list is by no means representing all agencies that use a pavement management system, but rather is a sampling of what other agencies are doing.

Agency Funding Comparison													
Agency	State	Year	Mileage (mi)	PCI	<40PCI	Controlling Budget (\$M/yr)	Controlling Budget Rate (\$/mi)	Actual Funding (\$M/yr)	Actual Funding Rate (\$/mi)	Funding Ratio %	Network Index	Comments	
Agency CB	CA	2016	344	80	0.4%	3.00	9,000	3.50	10,000	111	80	Fully funded	
Agency E	TX	2014	128	77	2%	0.80	6,000	0.80	6,000	100	75	Fully funded, excellent backlog	
Agency EA	CO	2015	39	77	0%	0.70	18,000	0.20	5,000	28	77	Underfunded but solid backlog	
Agency B	SD	2014	40	76	4%	0.35	9,000	0.35	9,000	100	73	Fully funded	
Agency MF	OR	2014	270	76	2%	3.00	11,000	2.28	8,000	73	75	Slightly underfunded, very low backlog	
Agency IB	CA	2016	45	76	1%	0.95	21,000	1.00	22,000	105	75	Low Backlog, solid PCI, fully funded	
Agency P	TX	2014	381	75	2%	3.75	10,000	0.43	1,000	10	74	Underfunded, but solid backlog	
Agency GI	NE	2013	284	74	1%	2.50	9,000	3.00	11,000	122	73	Fully funded	
Agency RT	WY	2016	70	67	4%	1.43	20,000	1.80	26,000	130	64	Solid Backlog, Fully Funded	
Agency FT	CA	2015	504	73	7%	7.25	14,000	5.00	10,000	71	68	Slightly underfunded, low backlog	
Agency S	AZ	2015	896	72	1%	8.00	9,000	9.40	10,000	111	71	Well funded, looking to improve	
Agency ST	WA	2015	75	72	1%	0.95	12,700	1.00	13,300	105	71	Fully funded, solid PCI, low backlog	
Agency M	GA	2019	158	69	2%	1.59	10,100	2.00	12,700	126	68	Well funded. Low backlog above average PCI	
Agency F	ND	2012	438	72	9%	6.00	14,000	4.00	9,000	64	66	Underfunded	
Agency B	SD	2019	99	69	1%	0.67	7,000	1.95	20,000	286	68	Well budgeted, high PCI, Low Backlog	
Agency SV	WA	2015	436	72	10%	7.50	17,000	3.08	7,000	41	65	Underfunded - looking for alternate funding	
Agency GI	AZ	2014	905	72	4%	7.50	8,000	2.83	3,000	38	69	Underfunded, but solid backlog	
Agency BR	MO	2016	87	72	1%	0.88	10,000	1.34	15,000	115	71	Well funded, solid PCI, excellent backlog	
Agency PO	ID	2016	247	71	2%	1.10	4,000	1.00	4,000	100	69	Fully funded, excellent backlog	
Agency SS	GA	2015	297	71	7%	4.25	14,000	3.10	10,000	71	66	Slightly underfunded, increasing backlog	
Agency CC	MO	2016	82	71	4%	0.90	11,000	1.45	18,000	164	68	Good PCI and Excellent Backlog	
Agency BA	OK	2016	509	70	2%	4.40	9,000	6.75	13,000	144	73	Fully funded, excellent backlog	
Agency FS	CO	2014	60	70	1%	0.63	10,000	0.20	3,000	30	69	Underfunded, but solid backlog and PCI	
Agency SF	SD	2015	772	70	4%	16.00	21,000	13.90	18,000	86	67	Slightly underfunded, solid backlog and PCI	
Agency LAC	NM	2016	102	69	5%	1.70	17,000	3.95	39,000	229	66	Fully Funded	
Agency LY	CO	2016	114	69	3%	1.30	11,000	0.65	6,000	55	67	Underfunded, but solid backlog and PCI	
Agency PS	GA	2016	71	70	5%	0.75	11,000	1.00	14,000	127	67	Fully funded, solid PCI, low backlog	
Agency MC	SD	2014	353	69	4%	4.00	11,000	4.00	11,000	100	66	Fully funded, solid backlog and PCI	
Agency H	TX	2015	155	69	2%	1.53	10,000	1.00	6,000	60	68	Underfunded, solid backlog and PCI	
Agency SB	CA	2016	42	67	14%	0.80	19,000	0.50	12,000	63	58	Under funded, solid PCI, working to control Backlog	
Agency P	WA	2015	24	67	7%	0.28	11,000	0.50	21,000	191	62	Well funded, solid backlog and PCI	
Agency RC	OK	2015	156	67	4%	1.40	9,000	1.40	9,000	100	64	Fully funded	
Agency B	WA	2014	140	67	15%	1.50	11,000	0.60	4,000	36	57	Backlog a concern, Underfunded	
Agency D	GA	2013	147	66	23%	3.00	20,000	2.00	14,000	70	51	Underfunded, increasing backlog	
Agency L	CO	2014	160	66	15%	2.30	14,000	2.30	14,000	100	56	Backlog a concern	
Agency B	OK	2015	121	66	6%	0.95	8,000	0.95	8,000	100	62	Fully funded	
Agency WF	TX	2012	170	66	15%	1.40	8,000	0.66	4,000	50	56	Underfunded, decreasing PCI	
Agency DN	TX	2016	426	65	20%	10.50	25,000	6.67	16,000	64	52	Backlog a concern, Underfunded	
Agency KW	FL	2012	65	65	7%	0.75	12,000	0.75	12,000	100	60	Fully funded and working to increase PCI	
Agency BV	OK	2012	152	65	11%	1.25	8,000	1.25	8,000	100	58	Fully funded	
Agency W	MA	2019	450	52	23%	14.87	33,000	22.00	49,000	148	40	Hefty <40 PCI, healthy budget	
Agency GL	AZ	2015	747	65	5%	15.50	21,000	8.00	11,000	52	62	Underfunded, but solid backlog	
Agency FC	GA	2015	162	64	10%	2.25	14,000	2.38	15,000	107	58	Fully funded, working to control backlog	
Agency LO	CO	2016	105	64	11%	1.85	18,000	1.35	13,000	72	57	Well Funded, working to increase PCI and decrease backlog	
Agency H	SD	2019	22	66	2%	0.67	30,000	0.33	15,000	50	65	Funding shortfalls in recent years. Good backlog	
Agency C	CO	2012	443	64	12%	6.00	14,000	5.00	11,000	79	56	Slightly underfunded	
Agency PTC	GA	2015	111	63	5%	1.40	13,000	1.50	14,000	108	60	Fully funded, low backlog	
Agency LC	NM	2012	455	63	17%	5.60	12,000	3.00	7,000	58	52	Underfunded and concerned about backlog	
Agency O	CA	2014	410	61	9%	7.50	18,000	5.10	12,000	67	55	Underfunded	
Agency B	GA	2013	118	60	17%	1.30	11,000	1.50	13,000	118	50	Slightly underfunded, increasing backlog	
Agency LB	CA	2014	786	60	21%	30.90	39,000	14.80	19,000	49	47	Severely Underfunded, High Backlog	
Agency V	CA	2012	472	60	14%	7.50	16,000	2.50	5,000	31	52	Underfunded and concerned about backlog	
Agency T	WA	2016	746	59	11%	28.50	38,000	17.60	24,000	63	53	BL Control, underfunded, sharp B/L Increase expected	
Agency LC	PA	2012	102	59	15%	1.00	10,000	0.75	7,000	70	50	Underfunded	
Agency CB	TX	2015	179	51	20%	2.00	11,000	1.00	6,000	55	41	Underfunded, concerning backlog	
Average:							16,400						

In comparison to other agencies, Harrisburg's controlling budget requirement of approximately \$670k/year or \$30,000/mile is far above the sample average of \$16,400.

Figure 23 illustrates the overall network health of various agencies by developing a scoring system (Network Index) that compares the Network average PCI and the agency's Backlog. An agency with a PCI of 100 and no backlog would score a perfect Network Index of 100. A very well managed network would score above 71, while one in healthy condition would fall between 58 and 71, representing a PCI score of 65 with no more than 10% backlog up to a PCI of 75 with only 5% backlog. The minimum long-term sustainable Network Index is 51 representing a PCI of 60 with 15% backlog.

Harrisburg's current Network Index is a 65, placing it in the Manageable Network Index Zone (shown as the blue square).

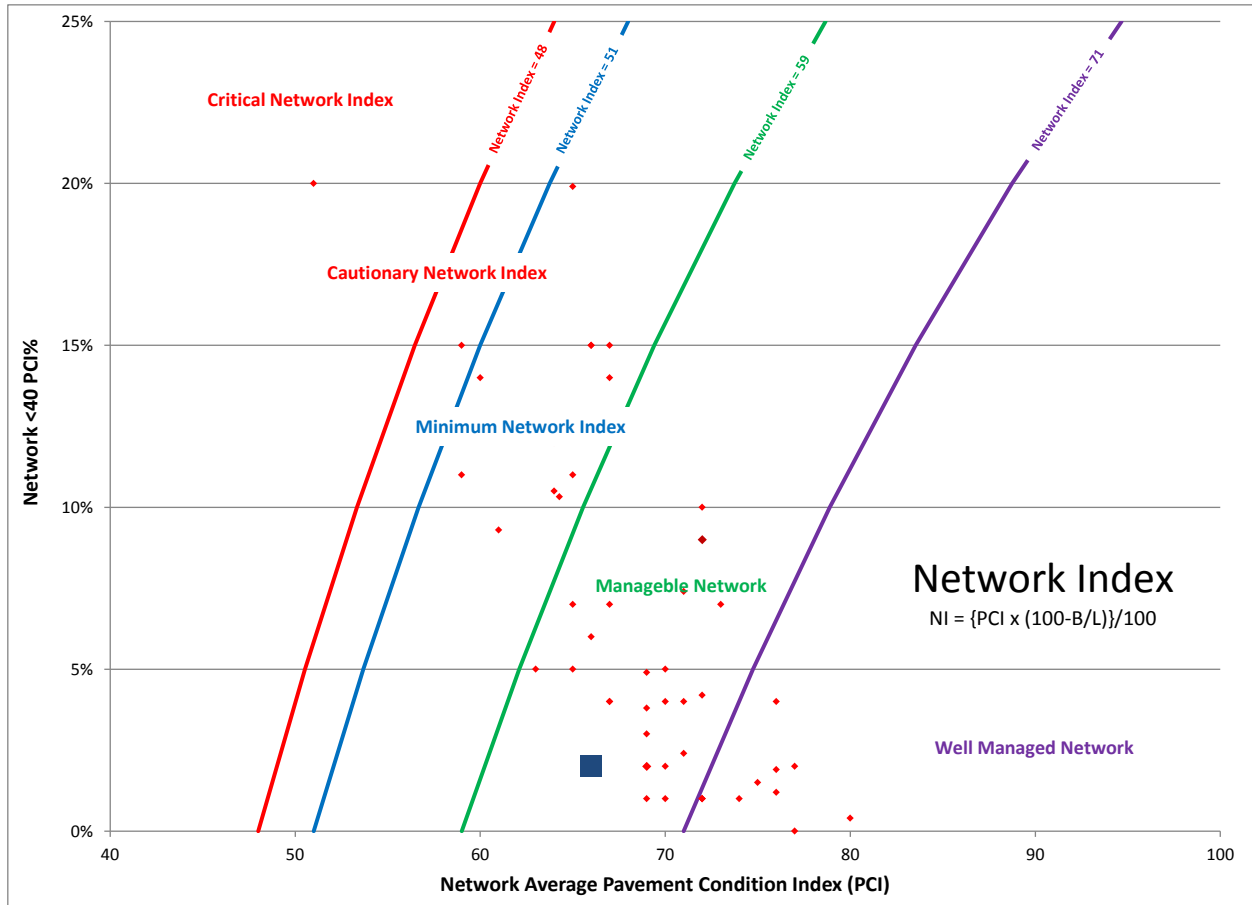


Figure 23 – Network Index

5.6 TRUE COST OF UNDERFUNDING OF A ROADWAY NETWORK

Funding of roadway rehabilitation is an exercise in identifying the balance between available funding and the desired level of service that is right for each agency. There are no hard rules for what is the definitive level of funding as this is a decision for local elected officials, based on their priorities and practices.

However, the true costs of over and underfunding must be presented in order to provide decision makers with all the information available to base the decisions upon. Harrisburg has a considerable investment in their paved roadway network with a combined replacement value (just for the streets, not right of way) exceeding \$28M. Spreading this cost over a 50 to 75 year period (the expected ultimate life of a roadway) means that an annual investment on the order of \$670K per year would be required – not including the cost of maintenance, deterioration, repair curbing, drainage, tree roots, sidewalks or ADA ramps.

Government Accounting Standards Board Statement 34 requires that agencies who collect taxes (local, business, property or gas taxes) for the purpose of maintaining long term infrastructure assets (such as roads) be good stewards of those assets by either accounting for them financially on the City's balance sheet, or implement a methodology to manage and fund them to a locally defined level of service.

The condition of a roadway network may be equated to equity in a depreciating asset. Regular payments to that asset must be made in order to maintain the equity at a constant level. Should those payments fall short, the equity must eventually be replaced through a large influx of capital in order to make the investment whole again. Roadway networks are no different. Long term underfunding of rehabilitation and maintenance is the direct equivalent of removing equity from an asset – eventually it must be repaid through total reconstruction. The following table compares the real cost of the various budgets against the Do Nothing and Steady State options.

City of Harrisburg, SD Equity Removal Summary

Starting PCI:	66			
Five Year Post Rehab Fix All PCI:	85			
Fix All PCI Increase:	19			
Five Year Fix All Total Cost (\$):	8,738,000			
Cost Per PCI Point (Total Cost / PCI Increase, \$/pt)	467,000			
Equity Removal Based On PCI Restoration		For PCI Controlled Agencies		
Model:	Do Nothing	\$250k Annual	\$500k Annual	Steady State
Annual Budget (\$k/Year):	0	250	500	670
Starting PCI	66	66	66	66
Final PCI	54	58	63	66
PCI Drop:	12	8	3	0
Cost to Replace Equity (PCI Drop X \$/Pt, \$):	5,633,000	3,567,000	1,248,000	0
5 Year Budget Expenditure (\$):	0	1,250,000	2,500,000	3,350,000
Total 5 Year Cost (\$):	5,633,000	4,817,000	3,748,000	3,350,000
Cost Over Steady State Budget (\$):	2,283,000	1,467,000	398,000	0
Additional Annual Cost Over Steady State (\$/year):	456,600	293,400	79,600	0

5.7 NETWORK RECOMMENDATIONS AND COMMENTS

The following recommendations are presented to Harrisburg as an output from the pavement analysis, and must be read in conjunction with the attached reports.

1. Harrisburg should adopt a policy statement to maintain PCI at or above a 65 while keeping backlog below 10%.

An annual budget of \$325K (dedicated to pavement rehabilitation) will achieve a network average PCI of 61 and backlog will be increased to 9%.

A budget of \$1.1M will achieve a network average PCI of 74 and a backlog of 4%.

2. The full suite of proposed rehabilitation strategies and unit rates should be reviewed annually as these can have considerable effects on the final program.
3. No allowance has been made for network growth. As the City expands or increases the amount of paved roads, increased budgets will be required.
4. No allowance has been made for routine maintenance activities such as asphalt crack sealing, pothole filling, sweeping, striping or patching within the budget runs and analysis. These costs are assumed to be outside the pavement management costs.
5. The City should resurvey their streets every few years to update the condition data and rehabilitation program.

Appendix A

Street Inventory and Condition Summary

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FuncL Code	FuncL	Pavetype Code	Pavetype	Pavement Width (ft)	Pavement Length (ft)	Add Area (sqyd)	Pavement Area (sqyd)	Condition Summary					Condition Details															
															Surface Distress Index (SDI)	Roughness Index (RI)	Structural Index (SI)	Pavement Cracks Index (PCI)	Strength Rating	Condition Rating	Load Assoc Distress Deducts (LADD)	Non-Load Distress Deducts (NLAD)	PCI Override (OPCI)	OPCI Date	Current Segment PCI (CPC)	Segment IR (mm/m)	Deflection Results	Rating (ACP Only)	L&T Cracking / Linear Crk	Alligator Cracking / Divided Slab / Blow Up	Map Crk / Cnr Brk / D Crk	Joint Spall / Joint Sealant	Discolorations / Fainting	Bleeding / Polished Agg	Ravelling / Scaling / CAL
1112	1000	10		A AVE	BRANNON DR	LEGENDARY DR	3	Residential	1	Asphalt	31	317	55	1,146	67	100	30	78	Weak	V Good	25	8	78	1.3	0	9.1	9.1	8.7	10.0	9.3	10.0	10.0	9.8	10.0	
1247	1010	10		ADRIANNA AVE	LEGENDARY DR	MIAH ST	3	Residential	1	Asphalt	31	1,069	184	3,866	69	100	30	79	Weak	V Good	21	10	79	1.3	0	10.0	9.0	8.2	10.0	9.3	10.0	10.0	9.7	10.0	
1041	1020	10		ALMOND AVE	SOUTH END	LOIS LN	3	Residential	1	Asphalt	28	153	24	500	67	55	60	63	Mod	Good	17	15	63	4.8	0	10.0	8.7	8.3	10.0	9.9	10.0	10.0	9.2	10.0	
1072	1020	10		ALMOND AVE	CHOKECHERRY ST	COTTONWOOD DR	3	Residential	1	Asphalt	28	916	142	2,992	43	44	60	63	Mod	Marginal	41	16	43	6.6	0	10.0	8.5	6.8	10.0	9.4	10.0	10.0	9.3	9.2	
1214	1020	10		ALMOND AVE	CHOKECHERRY ST	LOIS LN	3	Residential	1	Asphalt	28	302	42	967	57	62	60	59	Mod	Fair	26	17	59	4.0	0	10.0	8.4	7.7	10.0	9.3	10.0	10.0	9.3	10.0	
1181	1020	10		ALMOND AVE	COTTONWOOD DR	HONEYSUCKLE DR	3	Residential	1	Asphalt	27	813	122	2,561	59	71	60	62	Mod	Good	27	14	62	3.2	0	10.0	8.7	7.5	10.0	9.6	10.0	10.0	9.3	10.0	
1153	1030	10		ANNA WAY	ELM ST	WILLOW ST	3	Residential	1	Asphalt	28	704	110	2,300	40	32	60	37	Mod	Poor	38	22	37	9.3	0	9.6	7.7	6.9	10.0	9.4	10.0	10.0	9.3	10.0	
1096	1040	10		ARLENE AVE	COYOTE ST	LAURA ST	3	Residential	1	Asphalt	28	888	138	2,901	54	44	60	51	Mod	Fair	32	14	51	6.5	0	9.6	8.6	8.3	10.0	9.6	8.7	10.0	9.5	10.0	
1108	1050	10		ASH GROVE ST	GREYHAWK CT	LINDEN AVE	3	Residential	1	Asphalt	28	340	53	1,111	73	57	60	68	Mod	Good	15	12	68	4.5	0	10.0	8.9	8.5	10.0	10.0	10.0	10.0	9.4	10.0	
1194	1050	10		ASH GROVE ST	LINDEN AVE	WOODMONT AVE	3	Residential	1	Asphalt	28	487	76	1,591	73	49	60	65	Mod	Good	16	11	65	5.6	0	10.0	9.1	8.7	10.0	9.4	10.0	10.0	9.3	10.0	
1132	1060	10		AUGUSTANA AVE	COYOTE ST	LAURA ST	3	Residential	1	Asphalt	40	890	198	4,153	36	40	60	37	Mod	Poor	49	15	37	7.4	0	8.8	8.6	7.9	10.0	9.4	8.0	10.0	9.3	10.0	
1223	1060	10		AUGUSTANA AVE	SOUTH END	COYOTE ST	3	Residential	1	Asphalt	40	123	27	574	70	78	60	73	Mod	V Good	22	8	73	2.5	0	9.0	9.5	8.8	10.0	10.0	10.0	10.0	9.2	10.0	
1078	1070	10		AUGUSTANA AVE	LAURA ST	TEDDY ST	2	Collector	1	Asphalt	35	334	65	1,364	61	60	60	61	Mod	Good	27	12	61	4.2	0	9.9	8.9	7.8	10.0	9.5	9.8	10.0	9.4	10.0	
1150	1070	10		AUGUSTANA AVE	TEDDY ST	KENT ST	2	Collector	1	Asphalt	35	350	68	1,429	70	44	60	61	Mod	Good	18	12	61	6.6	0	10.0	8.9	8.5	10.0	10.0	9.6	10.0	9.4	10.0	
1091	1080	10		AUGUSTANA AVE	KENT ST	SAINT GREGORY ST	2	Collector	1	Asphalt	40	1,103	228	4,788	69	60	60	70	Mod	V Good	19	9	70	3.2	0	9.5	9.3	9.0	10.0	9.6	9.6	10.0	9.4	10.0	
1192	1080	10		AUGUSTANA AVE	SAINT GREGORY ST	272 ST	2	Collector	1	Asphalt	39	316	68	1,438	68	71	60	70	Mod	V Good	15	17	70	2.8	0	10.0	8.3	8.8	10.0	9.4	10.0	10.0	9.3	10.0	
1049	1100	10		BRANNON DR	A AVE	N PERRY LN	3	Residential	1	Asphalt	28	817	127	2,669	68	96	30	77	Weak	V Good	22	10	77	1.5	0	9.9	9.0	8.2	10.0	9.3	10.0	10.0	9.7	10.0	
1133	1100	10		BRANNON DR	NW END	A AVE	3	Residential	1	Asphalt	27	132	20	416	71	100	60	80	Mod	V Good	17	11	81	1.3	0	10.0	9.0	8.4	10.0	9.7	10.0	10.0	9.5	9.8	10.0
1226	1110	10		BRANNON DR	N PERRY LN	MACEY AVE	3	Residential	1	Asphalt	28	392	61	1,261	64	92	30	73	Weak	V Good	29	7	73	1.7	0	8.5	9.3	9.0	10.0	9.4	10.0	10.0	9.7	9.8	
1238	1120	10		CEDAR CIR	CEDAR DR	EAST END	3	Residential	1	Asphalt	35	324	62	1,311	75	71	60	74	Mod	V Good	16	9	74	3.0	0	10.0	9.3	8.4	10.0	10.0	10.0	10.0	9.4	10.0	
1016	1130	10		CEDAR DR	JUNIPER CIR	SHEBAL AVE	3	Residential	1	Asphalt	27	692	104	2,180	79	63	60	74	Mod	V Good	9	12	74	3.8	0	10.0	8.9	9.1	10.0	10.0	10.0	10.0	9.5	10.0	
1037	1130	10		CEDAR DR	JUNIPER CIR	CEDAR CIR	3	Residential	1	Asphalt	28	403	63	1,316	65	67	60	70	Mod	V Good	7	8	79	3.4	0	10.0	9.5	9.3	10.0	10.0	10.0	10.0	9.2	10.0	
1239	1130	10		CEDAR DR	CEDAR CIR	SPRUCE ST	3	Residential	1	Asphalt	28	388	60	1,267	83	69	60	78	Mod	V Good	9	8	78	3.3	0	10.0	9.5	9.1	10.0	10.0	10.0	10.0	9.2	10.0	
1094	1140	10		CHESTNUT ST	HICKORY LN	QUAIL CIR	3	Residential	1	Asphalt	38	351	74	1,556	58	57	60	58	Mod	Fair	28	15	58	4.5	0	10.0	8.3	7.5	10.0	9.4	10.0	10.0	9.8	10.0	
1172	1140	10		CHESTNUT ST	QUAIL CIR	PERRY LN	3	Residential	1	Asphalt	39	345	75	1,570	63	83	60	63	Mod	Good	23	14	70	2.2	0	10.0	8.2	7.9	10.0	9.5	10.0	10.0	10.0	10.0	
1084	1150	10		CHESTNUT ST	RAVEN AVE	HUNTER DR	2	Collector	1	Asphalt	37	281	58	1,213	73	71	60	72	Mod	V Good	12	15	72	3.0	0	10.0	9.1	8.8	10.0	10.0	10.0	10.0	9.5	10.0	
1117	1150	10		CHESTNUT ST	PERRY LN	FALCON AVE	2	Collector	1	Asphalt	40	312	69	1,456	44	55	60	48	Mod	Marginal	37	19	48	4.7	0	9.5	8.1	7.2	10.0	9.4	10.0	10.0	9.3	9.8	
1151	1150	10		CHESTNUT ST	HUNTER DR	SOUTHEASTERN AVE	2	Collector	1	Asphalt	41	115	26	550	77	53	60	69	Mod	Good	13	9	69	5.1	0	9.8	9.0	8.9	10.0	10.0	10.0	9.9	9.9	10.0	
1190	1150	10		CHESTNUT ST	FALCON AVE	EAGLE AVE	2	Collector	1	Asphalt	39	312	68	1,420	47	71	60	55	Mod	Fair	35	19	55	3.1	0	9.7	8.1	7.1	10.0	9.3	10.0	10.0	9.4	10.0	
1248	1150	10		CHESTNUT ST	EAGLE AVE	RAVEN AVE	2	Collector	1	Asphalt	35	310	60	1,266	52	51	60	52	Mod	Fair	27	20	52	5.4	0	9.7	8.5	7.8	10.0	9.5	10.0	10.0	8.5	10.0	
1086	1170	10		CHOKECHERRY ST	ALMOND AVE	COTTONWOOD DR	3	Residential	1	Asphalt	26	531	77	1,611	47	69	60	54	Mod	Fair	34	18	54	3.2	0	10.0	8.2	6.9	10.0	9.3	10.0	10.0	9.3	10.0	
1017	1180	10		CLAUDIA AVE	SOUTH END	UNITED AVE	3	Residential	1	Asphalt	27	150	23	473	61	71	60	64	Mod	Good	22	17	64	3.0	0	10.0	8.2	8.0	10.0	9.5	10.0	10.0	9.5	10.0	
1146	1180	10		CLAUDIA AVE	UNITED AVE	LEONARD ST	3	Residential	1	Asphalt	27	590	89	1,859	65	60	60	63	Mod	Good	22	13	63	4.1	0	10.0	8.8	8.0	10.0	9.5	10.0	10.0	9.4	10.0	
1243	1180	10		CLAUDIA AVE	LEONARD ST	LAURA ST	3	Residential	1	Asphalt	27	296	44	932	67	55	60	63	Mod	Good	20	14	63	4.9	0	9.4	8.7	8.6	10.0	10.0	10.0	10.0	9.4	10.0	
1077	1200	10		CLIFF AVE	HONEYSUCKLE DR	MAPLE ST	1	Arterial	1	Asphalt	41	1,001	228	4,788	55	79	60	63	Mod	Good	28	17	63	2.5	0	9.8	8.2	7.6	10.0	9.5	10.0	10.0	9.5	10.0	
1204	1200	10		CLIFF AVE	DS@1385N 475 AVE	HONEYSUCKLE DR	1	Arterial	1	Asphalt	41	1,001	228	4,788	55	79	60	63	Mod	Good	28	17	63	2.5	0	9.8	8.2	7.6	10.0	9.5	10.0	10.0	9.5	10.0	
1034	1200	10		CLIFF AVE	MAPLE ST	CYPRESS CIR	1	Arterial	1	Asphalt	35	128	25	523	45	72	60	54	Mod	Fair	35	20	54	3.0	0	10.0	7.9	6.5	10.0	10.0	10.0	10.0	9.4	10.0	
1125	1200	10		CLIFF AVE	CYPRESS CIR	273 ST	1	Arterial	1	Asphalt	41	1,052	240	5,032	51	68	60	57	Mod	Fair	34	16	57	3.3	0	9.2	8.3	7.6	10.0	9.5	10.0	10.0	9.5	10.0	
1083	1220	10		COLUMBIA CIR	COLUMBIA ST	EAST END	3	Residential	1	Asphalt	43	178	43	898	71	38	60	60	Mod	Good	17	12	60	7.8	0	9.5	8.6	8.9	10.0	9.8	10.0	10.0	9.8	10.0	
1154	1230	10		COLUMBIA ST	WALNUT ST	MAPLE ST	3	Residential	1	Asphalt	29	329	53	1,113	80	54	60	71	Mod	V Good	9	11	71	5.9	0	10.0	9.1	8.3	10.0	9.5	10.0	10.0	9.4	10.0	
1074	1230	10		COLUMBIA ST	PRAIRIE ST	WALNUT ST	3	Residential	1	Asphalt	28	1,162	181	3,796	82	73	60	79	Mod	V Good	8	11	79	2.9	0	10.0	9.2	9.2	10.0	10.0	10.0	10.0	9.2	10.0	
1023	1240	10		COLUMBIA ST	DS@146N MAIN ST	WILLOW ST	3	Residential	1	Asphalt	29	178	29	602	82	59	60	74	Mod	V Good	8	11	74	6.6	0	10.0	9.2	9.2	10.0	10.0	10.0	10.0	9.2	10.0	
1039	1240	10		COLUMBIA ST	ELM ST	MAIN ST	3	Residential	1	Asphalt	28	254	40	830	84	65	60	78	Mod	V Good	11	6	78	4.2	0	9.7	9.7	9.2	10.0	10.0	10.0	10.0	9.3	10.0	
1080	1240	10		COLUMBIA ST	MAIN ST	DS@146N MAIN ST	3	Residential	1	Asphalt	29	146	24	494	93	82																			

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FuncL Code	FuncL	PaveType Code	PaveType	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Sidewalk Length (ft)	Sidewalk Area (yd2)	Curb & Gutter Length (ft)	Estimated Ramp Count	Zone Summary					Project Summary													
																		Zone Name	Zone Code	Zone Length (ft)	Zone Current PCI	Zone Backlog (%)	Zone Network Index	Zone Rank	Project ID	Project Description	Project Block Count	Project Length (ft)	Project Area (yd2)	Project Current PCI	Project Condition Rating	Project Strength Code	Project FunC Code	Project Pavetype Code		
1122	1000			A AVE	BRANNON DR	LEGENDARY DR	3	Residential	1	Asphalt	31	317	55	1,146	317	141	0	2	Zone 1	10	114,177	66	2	64	1	1560	1560 - MARIE DR + Others	9	3,486	11,925	78	V	Good	1	3	1
1247	1010			ADRIANNA AVE	LEGENDARY DR	MAIH ST	3	Residential	1	Asphalt	31	1,069	184	3,866	0	0	0	0	Zone 1	10	114,177	66	2	64	1	1760	1760 - MACEY AVE + Others	4	2,840	9,961	76	V	Good	1	3	1
1041	1020			ALMOND AVE	SOUTH END	LOIS LN	3	Residential	1	Asphalt	28	153	24	500	306	136	306	4	Zone 1	10	114,177	66	2	64	1	1180	1180 - ALMOND AVE + Others	5	1,661	5,427	50	Fair	2	3	1	
1072	1020			ALMOND AVE	CHOKECHERRY ST	COTTONWOOD DR	3	Residential	1	Asphalt	28	916	142	2,992	1,832	814	1,832	4	Zone 1	10	114,177	66	2	64	1	1180	1180 - ALMOND AVE + Others	5	1,661	5,427	50	Fair	2	3	1	
1214	1020			ALMOND AVE	LOIS LN	CHOKECHERRY ST	3	Residential	1	Asphalt	28	302	47	987	604	268	604	4	Zone 1	10	114,177	66	2	64	1	1180	1180 - ALMOND AVE + Others	5	1,661	5,427	50	Fair	2	3	1	
1184	1020			ALMOND AVE	COTTONWOOD DR	HONEYBUCKLE DR	3	Residential	1	Asphalt	27	813	122	2,561	1,626	723	1,626	4	Zone 1	10	114,177	66	2	64	1	1820	1820 - ROSEWOOD DR + Others	5	2,681	8,663	68	Good	2	3	1	
1153	1030			ANNA WAY	WILLOW ST	WILLOW ST	3	Residential	1	Asphalt	28	704	110	2,300	0	0	1,408	0	Zone 1	10	114,177	66	2	64	1	1730	1730 - ANNA WAY + Others	3	1,229	4,745	46	Marginal	2	2	1	
1096	1040			ARLENE AVE	COYOTE ST	LAURA ST	3	Residential	1	Asphalt	28	888	138	2,901	1,776	789	1,776	4	Zone 1	10	114,177	66	2	64	1	1000	1000 - ARLENE AVE	1	888	2,901	51	Fair	2	3	1	
1180	1050			ASH GROVE ST	GREYHAWK CT	LINDEN AVE	3	Residential	1	Asphalt	28	340	53	1,111	340	151	680	2	Zone 1	10	114,177	66	2	64	1	1020	1020 - WOODMONT AVE + Others	5	2,305	8,397	70	V	Good	2	3	1
1194	1050			ASH GROVE ST	LINDEN AVE	WOODMONT AVE	3	Residential	1	Asphalt	28	487	76	1,591	974	433	974	4	Zone 1	10	114,177	66	2	64	1	1450	1450 - ASH GROVE ST + Others	3	796	2,845	62	Good	2	3	1	
1132	1060			AUGUSTANA AVE	COYOTE ST	LAURA ST	3	Residential	1	Asphalt	40	890	198	4,153	1,780	791	1,780	4	Zone 1	10	114,177	66	2	64	1	1040	1040 - AUGUSTANA AVE	1	890	4,153	37	Poor	2	3	1	
1223	1060			AUGUSTANA AVE	SOUTH END	COYOTE ST	3	Residential	1	Asphalt	40	123	27	574	123	55	246	2	Zone 1	10	114,177	66	2	64	1	1100	1100 - CLAUDIA AVE + Others	5	1,478	4,880	63	Good	2	3	1	
1078	1070			AUGUSTANA AVE	LAURA ST	TEDDY ST	2	Collector	1	Asphalt	35	334	65	1,364	668	297	668	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,178	8,929	61	Good	2	3	1	
1150	1070			AUGUSTANA AVE	TEDDY ST	KENT ST	2	Collector	1	Asphalt	35	350	68	1,429	700	311	700	4	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	14,301	69	Good	2	2	1	
1091	1080			AUGUSTANA AVE	KENT ST	SAINT GREGORY ST	2	Collector	1	Asphalt	40	110	136	2,868	1,001	312	1,220	4	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	14,301	69	Good	2	2	1	
1192	1080			AUGUSTANA AVE	SAINT GREGORY ST	272 ST	2	Collector	1	Asphalt	39	618	143	632	632	281	632	4	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	14,301	69	Good	2	2	1	
1049	1100			BRANNON DR	A AVE	N PERRY LN	3	Residential	1	Asphalt	28	817	127	2,669	1,634	726	1,634	4	Zone 1	10	114,177	66	2	64	1	1560	1560 - MARIE DR + Others	9	3,486	11,925	78	V	Good	1	3	1
1133	1100			BRANNON DR	NW END	A AVE	3	Residential	1	Asphalt	27	132	20	416	264	117	264	4	Zone 1	10	114,177	66	2	64	1	1560	1560 - MARIE DR + Others	9	3,486	11,925	78	V	Good	1	3	1
1226	1110			BRANNON DR	N PERRY LN	MACEY AVE	3	Residential	1	Asphalt	28	392	61	1,281	784	348	784	4	Zone 1	10	114,177	66	2	64	1	1600	1600 - LEGENDARY DR + Others	5	1,614	5,510	74	V	Good	2	3	1
1238	1120			CEDAR CIR	CEDAR DR	EAST END	3	Residential	1	Asphalt	35	324	62	1,311	648	288	648	4	Zone 1	10	114,177	66	2	64	1	1860	1860 - CEDAR DR + Others	7	2,652	8,874	75	V	Good	2	3	1
1016	1130			CEDAR DR	JUNIPER CIR	SHEBAL AVE	3	Residential	1	Asphalt	27	692	104	2,180	1,384	615	1,384	4	Zone 1	10	114,177	66	2	64	1	1860	1860 - CEDAR DR + Others	7	2,652	8,874	75	V	Good	2	3	1
1037	1130			CEDAR DR	JUNIPER CIR	CEDAR CIR	3	Residential	1	Asphalt	28	403	63	1,316	806	358	806	4	Zone 1	10	114,177	66	2	64	1	1860	1860 - CEDAR DR + Others	7	2,652	8,874	75	V	Good	2	3	1
1239	1130			CEDAR DR	JUNIPER CIR	SPRUCE ST	3	Residential	1	Asphalt	28	388	60	1,267	776	345	776	4	Zone 1	10	114,177	66	2	64	1	1860	1860 - CEDAR DR + Others	7	2,652	8,874	75	V	Good	2	3	1
1094	1140			CHESTNUT ST	HICKORY LN	QUAIL CIR	3	Residential	1	Asphalt	38	351	74	1,556	702	312	702	4	Zone 1	10	114,177	66	2	64	1	1080	1080 - HICKORY LN + Others	3	1,621	7,028	54	Fair	2	3	1	
1040	1140			CHESTNUT ST	QUAIL CIR	PERRY LN	3	Residential	1	Asphalt	39	345	75	1,570	690	307	690	4	Zone 1	10	114,177	66	2	64	1	1290	1290 - QUAIL CIR + Others	3	1,219	4,726	62	Good	2	3	1	
1180	1150			CHESTNUT ST	RAVEN AVE	HUNTER DR	2	Collector	1	Asphalt	27	281	58	1,213	562	250	562	4	Zone 1	10	114,177	66	2	64	1	1720	1720 - CHESTNUT ST	5	1,330	5,905	57	Fair	2	2	1	
1172	1150			CHESTNUT ST	PERRY LN	FALCON AVE	2	Collector	1	Asphalt	40	312	69	1,456	624	277	624	4	Zone 1	10	114,177	66	2	64	1	1720	1720 - CHESTNUT ST	5	1,330	5,905	57	Fair	2	2	1	
1151	1150			CHESTNUT ST	HUNTER DR	SOUTHEASTERN AVE	2	Collector	1	Asphalt	41	115	26	550	0	0	115	0	Zone 1	10	114,177	66	2	64	1	1720	1720 - CHESTNUT ST	5	1,330	5,905	57	Fair	2	2	1	
1190	1150			CHESTNUT ST	FALCON AVE	EAGLE AVE	2	Collector	1	Asphalt	39	312	68	1,420	624	277	624	4	Zone 1	10	114,177	66	2	64	1	1720	1720 - CHESTNUT ST	5	1,330	5,905	57	Fair	2	2	1	
1248	1150			CHESTNUT ST	EAGLE AVE	RAVEN AVE	2	Collector	1	Asphalt	35	310	60	1,266	620	276	620	4	Zone 1	10	114,177	66	2	64	1	1720	1720 - CHESTNUT ST	5	1,330	5,905	57	Fair	2	2	1	
1086	1170			CHOKECHERRY ST	ALMOND AVE	COTTONWOOD DR	3	Residential	1	Asphalt	26	531	77	1,611	1,062	472	1,062	4	Zone 1	10	114,177	66	2	64	1	1200	1200 - CHOKECHERRY ST + Others	2	887	2,732	56	Fair	2	3	1	
1017	1180			CLAUDIA AVE	SOUTH END	UNITED AVE	3	Residential	1	Asphalt	27	150	23	473	300	133	300	4	Zone 1	10	114,177	66	2	64	1	1100	1100 - CLAUDIA AVE + Others	5	1,478	4,880	63	Good	2	3	1	
1146	1180			CLAUDIA AVE	UNITED AVE	LEONARD ST	3	Residential	1	Asphalt	27	590	89	1,859	1,180	524	1,180	4	Zone 1	10	114,177	66	2	64	1	1100	1100 - CLAUDIA AVE + Others	5	1,478	4,880	63	Good	2	3	1	
1243	1180			CLAUDIA AVE	LEONARD ST	LAURA ST	3	Residential	1	Asphalt	27	296	44	932	592	263	592	4	Zone 1	10	114,177	66	2	64	1	1100	1100 - CLAUDIA AVE + Others	5	1,478	4,880	63	Good	2	3	1	
1077	1200			CLIFF AVE	HONEYBUCKLE DR	LAURA ST	1	Arterial	1	Asphalt	41	1,001	228	4,788	1,001	665	2,002	2	Zone 1	10	114,177	66	2	64	1	1120	1120 - CLIFF AVE	2	2,084	9,842	60	Good	2	1	1	
1204	1200			CLIFF AVE	DS@1369N 475 AVE	HONEYBUCKLE DR	1	Arterial	1	Asphalt	40	1,093	241	5,054	1,093	602	1,662	2	Zone 1	10	114,177	66	2	64	1	1120	1120 - CLIFF AVE	2	2,084	9,842	60	Good	2	1	1	
1034	1200			CLIFF AVE	MAPLE ST	CYPRESS CIR	1	Arterial	1	Asphalt	35	128	25	523	128	71	256	2	Zone 1	10	114,177	66	2	64	1	1130	1130 - CLIFF AVE	2	1,180	5,555	56	Fair	2	1	1	
1125	1200			CLIFF AVE	CYPRESS CIR	273 ST	1	Arterial	1	Asphalt	41	1,052	240	5,032	1,052	584	2,104	2	Zone 1	10	114,177	66	2	64	1	1130	1130 - CLIFF AVE	2	1,180	5,555	56	Fair	2	1	1	
1083	1220			COLUMBIA CIR	COLUMBIA ST	EAST END	3	Residential	1	Asphalt	43	178	43	898	356	158	356	4	Zone 1	10	114,177	66	2	64	1	1140	1140 - EMMETT TRL + Others	6	2,527	10,084	70	V	Good	2	3	1
1154	1230			COLUMBIA ST	WALNUT ST	MAPLE ST	3	Residential	1	Asphalt	29	329	53	1,113	0	0	658	0	Zone 1	10	114,177	66	2	64	1	1140	1140 - EMMETT TRL + Others	6	2,527	10,084	70	V	Good	2	3	1
1074	1230			COLUMBIA ST	PRAIRIE ST	WALNUT ST	3	Residential	1	Asphalt	28	1,162	181	3,796	2,324	1,033	2,324	4	Zone 1	10	114,177	66	2	64	1	1160	1160 - COLUMBIA ST + Others	8	3,662	12,865	76	V	Good	2	3	1
1023	1240			COLUMBIA ST	DS@146N MAIN ST	WILLOW ST	3	Residential	1	Asphalt	29	178	29	602	0	0	356	0	Zone 1	10	114,177	66														

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISD	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FuncL Code	FuncL	Pavetype Code	Pavetype	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Condition Summary					Condition Details														
															Surface Distress Index (SDI)	Roughness Index (RI)	Structural Index (SI)	Pavement Condition Index (PCI)	Strength Rating	Condition Rating	Load Assoc Distress Deducts (LADD)	Non-Load Distress Deducts (NLAD)	PCI Override (OPCI)	OPCI Date	Current Segment PCI (CPCI)	Segment IR (mm/m)	Deflection Results	Rutting (ACP Only)	LAT Cracking / Linear Crk	Alligator Cracking	Divided Slab / Blow Up	Map Crk / Cnr Brk / D Crk	Edge Cracking	Joint Spall / Joint Sealant
1180	1450	10		GREYHAWK CT	ASH GROVE ST	LINDEN AVE	3	Residential	1	Asphalt	28	612	95	1,999	71	56	60	66	Mod	Good	18	11	66	4.7	0	10.0	9.1	8.5	10.0	9.4	10.0	10.0	9.3	10.0
1251	1450	10		GREYHAWK CT	SOUTH END	ASH GROVE ST	3	Residential	1	Asphalt	27	124	19	391	53	46	60	51	Mod	Fair	33	14	51	6.3	0	9.4	8.6	8.5	10.0	10.0	8.2	9.8	9.7	10.0
1250	1460	10		HARVEST TRL	MAPLE ST	ELM ST	3	Residential	1	Asphalt	30	561	94	1,964	74	77	60	75	Mod	V Good	14	13	75	2.6	0	10.0	8.8	8.6	10.0	10.0	10.0	9.4	10.0	
1012	1470	10		HEMLOCK ST	LINDEN AVE	RAVEN AVE	3	Residential	1	Asphalt	29	314	51	1,062	53	55	60	54	Mod	Fair	23	23	54	4.8	0	9.6	7.5	8.1	10.0	10.0	10.0	9.4	10.0	
1109	1470	10		HEMLOCK ST	PERRY LN	LINDEN AVE	3	Residential	1	Asphalt	28	570	89	1,862	64	45	60	58	Mod	Fair	23	14	58	6.4	0	10.0	8.7	8.0	10.0	9.4	10.0	10.0	9.4	10.0
1052	1470	10		HEMLOCK ST	RAVEN AVE	EAST END	3	Residential	1	Asphalt	49	212	58	1,212	62	59	60	61	Mod	Good	22	16	61	4.3	0	10.0	8.4	7.8	10.0	10.0	10.0	9.5	10.0	
1138	1480	10		HICKORY LN	TIGER ST	GRAND AVE	3	Residential	1	Asphalt	38	1,147	242	5,085	50	61	60	54	Mod	Fair	31	18	54	4.0	0	9.8	8.2	7.4	10.0	9.3	10.0	9.3	10.0	
1098	1500	10		HONEYSUCKLE DR	SPRUCE ST	ALMOND AVE	2	Collector	1	Asphalt	28	242	38	791	81	85	60	82	Mod	V Good	9	11	82	2.0	0	10.0	9.1	9.1	10.0	10.0	10.0	9.4	10.0	
1163	1500	10		HONEYSUCKLE DR	ALMOND AVE	POPLAR LN	2	Collector	1	Asphalt	27	921	138	2,901	74	84	60	77	Mod	V Good	15	11	77	2.1	0	10.0	9.0	8.7	10.0	9.5	10.0	9.4	10.0	
1127	1500	10		HONEYSUCKLE DR	WILLOW ST	SPRUCE ST	2	Collector	1	Asphalt	28	445	69	1,454	65	73	60	68	Mod	Good	22	13	68	2.9	0	10.0	8.8	8.1	10.0	9.4	10.0	10.0	9.3	10.0
1134	1500	10		HONEYSUCKLE DR	POPLAR LN	SHEBAL AVE	2	Collector	1	Asphalt	28	1,361	212	4,446	61	66	60	63	Mod	Good	26	13	63	3.5	0	9.9	8.8	7.8	10.0	9.4	10.0	10.0	9.3	10.0
1254	1510	10		HONEYSUCKLE DR	SHEBAL AVE	CLIFF AVE	2	Collector	1	Asphalt	28	873	136	2,852	68	65	60	64	Mod	Good	21	12	64	4.8	0	9.7	8.8	8.4	10.0	9.6	10.0	9.6	10.0	
1057	1540	10		HUNTER DR	SOUTHEASTERN AVE	CHESTNUT ST	3	Residential	1	Asphalt	23	687	88	1,843	40	56	60	45	Mod	Marginal	42	18	45	4.7	0	8.4	8.0	7.5	10.0	10.0	9.6	10.0		
1184	1560	10		INDUSTRIAL DR	LAURA ST	ENTERPRISE ST	2	Collector	1	Asphalt	34	915	173	3,630	62	68	60	64	Mod	Good	22	16	64	3.3	0	9.9	8.5	8.2	10.0	9.5	10.0	9.2	9.9	
1245	1570	10		INDUSTRIAL DR	ENTERPRISE ST	COMMERCE AVE	3	Residential	1	Asphalt	41	1,280	291	6,106	76	74	60	75	Mod	V Good	10	14	75	2.8	0	9.9	8.7	9.1	10.0	10.0	9.9	9.5	10.0	
1197	1580	10		IVY LN	WILLOW ST	WILLOW ST	3	Residential	1	Asphalt	28	429	67	1,401	73	36	60	61	Mod	Good	19	7	61	8.3	0	9.7	9.1	8.6	10.0	9.5	10.0	10.0	10.0	
1164	1590	10		JEANNIE LN	SOUTH END	MAPLE ST	3	Residential	1	Asphalt	35	209	41	853	64	61	60	56	Mod	Fair	20	15	56	7.1	0	10.0	8.3	8.0	10.0	10.0	10.0	9.7	10.0	
1218	1600	10		JEANNIE LN	MAPLE ST	ELM ST	3	Residential	1	Asphalt	33	613	112	2,360	60	65	60	62	Mod	Good	25	15	62	3.6	0	10.0	8.5	7.8	10.0	9.4	10.0	9.4	10.0	
1233	1610	10		JOSH ST	THELMA AVE	N PERRY LN	3	Residential	1	Asphalt	28	1,167	182	3,812	67	89	30	74	Weak	V Good	21	12	74	1.8	0	9.9	9.0	8.3	10.0	9.3	10.0	9.5	9.6	10.0
1022	1620	10		JUNIPER CIR	CEDAR DR	NE END	3	Residential	1	Asphalt	28	168	26	549	85	67	60	79	Mod	V Good	6	8	79	8.2	0	10.0	9.7	9.4	10.0	10.0	10.0	8.9	10.0	
1042	1630	10		KATIE AVE	WEST END	QUINN AVE	3	Residential	1	Asphalt	33	185	34	712	72	92	30	79	Weak	V Good	21	6	79	1.7	0	9.0	8.9	9.2	10.0	9.2	10.0	9.7	10.0	
1148	1640	10		KENT ST	TOM SAWYER TRL	UNITED AVE	3	Residential	1	Asphalt	29	454	73	1,536	70	55	60	65	Mod	Good	14	16	65	4.9	0	9.7	8.3	8.9	10.0	10.0	10.0	9.6	10.0	
1178	1650	10		KENT ST	UNITED AVE	AUGUSTANA AVE	2	Collector	1	Asphalt	28	1,253	195	4,093	65	64	60	65	Mod	Good	21	14	65	3.7	0	9.7	8.6	8.5	10.0	9.5	9.9	10.0	9.5	10.0
1124	1660	10		KENT ST	TROY AVE	PENNSYLVANIA AVE	2	Collector	1	Asphalt	29	382	62	1,292	76	87	60	80	Mod	V Good	14	11	80	1.9	0	10.0	9.0	8.9	10.0	9.4	10.0	10.0	9.5	10.0
1013	1660	10		KENT ST	AUGUSTANA AVE	TROY AVE	2	Collector	1	Asphalt	29	605	97	2,047	55	49	80	53	Strng	Fair	21	25	53	5.8	0	10.0	9.0	8.6	10.0	9.5	9.3	10.0	7.0	10.0
1162	1660	10		KENT ST	PENNSYLVANIA AVE	CLIFF AVE	2	Collector	1	Asphalt	29	203	33	687	67	69	60	68	Mod	Good	19	13	68	3.2	0	10.0	8.6	8.1	10.0	10.0	10.0	9.6	10.0	
1032	1670	10		LAURA ST	ARLENE AVE	AUGUSTANA AVE	2	Collector	1	Asphalt	35	293	57	1,196	65	67	60	66	Mod	Good	22	13	66	3.4	0	9.3	8.7	8.5	10.0	10.0	10.0	9.5	10.0	
1222	1670	10		LAURA ST	CLAUDIA AVE	ARLENE AVE	2	Collector	1	Asphalt	35	301	59	1,229	66	79	60	70	Mod	V Good	16	19	70	2.4	0	10.0	8.1	8.7	10.0	9.3	10.0	10.0	9.4	10.0
1176	1670	10		LAURA ST	UNITED AVE	CLAUDIA AVE	2	Collector	1	Asphalt	35	537	104	2,193	70	71	60	70	Mod	V Good	18	12	70	3.1	0	10.0	8.9	8.5	10.0	9.4	10.0	9.4	10.0	
1001	1680	10		LAURA ST	AUGUSTANA AVE	PITTSBURGH AVE	2	Collector	1	Asphalt	35	311	60	1,270	54	78	60	62	Mod	Good	32	14	62	2.5	0	8.5	8.8	8.2	10.0	10.0	10.0	9.2	10.0	
1092	1680	10		LAURA ST	TROY AVE	INDUSTRIAL DR	2	Collector	1	Asphalt	40	482	107	2,249	59	52	60	57	Mod	Fair	22	19	57	5.2	0	10.0	8.8	8.0	10.0	9.5	10.0	10.0	9.8	10.0
1110	1690	10		LAURA ST	PITTSBURGH AVE	TROY AVE	2	Collector	1	Asphalt	35	397	77	1,621	50	60	60	54	Mod	Fair	36	13	54	4.0	0	8.4	8.8	8.1	10.0	9.5	10.0	10.0	9.3	10.0
1099	1700	10		LEGENDARY DR	ADRIANNA AVE	N PERRY LN	3	Residential	1	Asphalt	29	407	66	1,377	67	76	60	70	Mod	V Good	24	10	70	2.6	0	9.0	9.0	8.8	10.0	9.5	10.0	10.0	9.7	10.0
1101	1700	10		LEGENDARY DR	A AVE	ADRIANNA AVE	3	Residential	1	Asphalt	28	198	31	647	71	64	60	69	Mod	Good	19	10	69	3.7	0	9.7	9.1	8.4	10.0	10.0	10.0	9.5	10.0	
1095	1700	10		LEGENDARY DR	QUINN AVE	A AVE	3	Residential	1	Asphalt	27	160	24	504	86	82	60	85	Mod	V Good	9	6	85	2.2	0	10.0	9.3	9.4	10.0	9.4	10.0	10.0	10.0	
1174	1700	10		LEGENDARY DR	NW END	QUINN AVE	3	Residential	1	Asphalt	29	114	18	386	85	90	60	87	Mod	Excellent	4	11	87	1.8	0	10.0	9.1	9.7	10.0	9.8	10.0	9.3	10.0	
1048	1710	10		LEGENDARY DR	MACEY AVE	LIEN AVE	2	Collector	1	Asphalt	31	451	78	1,631	68	92	60	76	Mod	V Good	18	14	76	1.7	0	10.0	8.5	8.6	10.0	9.4	10.0	10.0	9.6	9.9
1056	1710	10		LEGENDARY DR	LIEN AVE	476 AVE	2	Collector	1	Asphalt	27	214	32	674	58	100	30	72	Weak	V Good	28	14	72	1.0	0	9.3	8.6	8.1	10.0	9.5	10.0	9.6	9.8	10.0
1173	1710	10		LEGENDARY DR	N PERRY LN	MACEY AVE	2	Collector	1	Asphalt	29	318	51	1,076	64	81	60	70	Mod	Good	24	12	70	2.3	0	9.2	9.0	8.6	10.0	9.5	10.0	9.5	9.7	10.0
1159	1																																	

City of Harrisburg, SD

Street Inventory and Condition Summary - Sorted by Street Name



Easy Street Analysis

GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	FunCL	PaveType Code	PaveType	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Sidewalk Length (ft)	Sidewalk Area (yd2)	Curb & Gutter Length (ft)	Estimator Ramp Count	Peripheral Concrete				Zone Summary				Project Summary								
																			Zone Name	Zone Code	Zone Length (ft)	Zone Current PCI	Zone Backlog (%)	Zone Network Index	Zone Rank	Project ID	Project Description	Project Block Count	Project Length (ft)	Project Area (yd2)	Project Current PCI	Project Condition Rating	Project Strength Code	Project FunCL Code	Project PaveType Code
1180	1450			GREYHAWK CT	ASH GROVE ST	LINDEN AVE	3	Residential	1	Asphalt	28	612	95	1,999	1,224	544	1,224	4	Zone 1	10	114,177	66	2	64	1	1020	1020 - WOODMONT AVE + Others	5	2,305	8,397	70	V Good	2	3	1
1251	1450			GREYHAWK CT	SOUTH END	ASH GROVE ST	3	Residential	1	Asphalt	27	124	19	391	248	110	248	4	Zone 1	10	114,177	66	2	64	1	1450	1450 - ASH GROVE ST + Others	3	796	2,845	62	Good	2	3	1
1250	1460			HARVEST TRL	MAPLE ST	ELM ST	3	Residential	1	Asphalt	30	561	94	1,964	561	249	1,122	2	Zone 1	10	114,177	66	2	64	1	1300	1300 - COLUMBIA ST + Others	6	2,289	8,699	77	V Good	2	3	1
1012	1470			HEMLOCK ST	LINDEN AVE	RAVEN AVE	3	Residential	1	Asphalt	29	314	51	1,062	628	279	628	4	Zone 1	10	114,177	66	2	64	1	1440	1440 - HEMLOCK ST	2	884	2,924	56	Fair	2	3	1
1109	1470			HEMLOCK ST	PERRY LN	LINDEN AVE	3	Residential	1	Asphalt	28	570	89	1,862	1,140	507	1,140	4	Zone 1	10	114,177	66	2	64	1	1440	1440 - HEMLOCK ST	2	884	2,924	56	Fair	2	3	1
1052	1470			HEMLOCK ST	RAVEN AVE	EAST END	3	Residential	1	Asphalt	49	212	58	1,212	424	188	424	4	Zone 1	10	114,177	66	2	64	1	1460	1460 - HEMLOCK ST	1	212	1,212	61	Good	2	3	1
1138	1480			HICKORY LN	TIGER ST	GRAND AVE	3	Residential	1	Asphalt	38	1,147	242	5,085	2,294	1,020	2,294	4	Zone 1	10	114,177	66	2	64	1	1080	1080 - HICKORY LN + Others	3	1,621	7,028	54	Fair	2	3	1
1098	1500			HONEYSUCKLE DR	SPRUCE ST	ALMOND AVE	2	Collector	1	Asphalt	28	242	38	791	0	484	0	Zone 1	10	114,177	66	2	64	1	1320	1320 - HONEYSUCKLE DR + Others	4	3,195	10,330	73	V Good	2	2	1	
1163	1500			HONEYSUCKLE DR	ALMOND AVE	POPLAR LN	2	Collector	1	Asphalt	27	921	138	2,901	1,842	819	1,842	4	Zone 1	10	114,177	66	2	64	1	1320	1320 - HONEYSUCKLE DR + Others	4	3,195	10,330	73	V Good	2	2	1
1127	1500			HONEYSUCKLE DR	WILLOW ST	SPRUCE ST	2	Collector	1	Asphalt	28	445	69	1,454	445	198	890	2	Zone 1	10	114,177	66	2	64	1	1330	1330 - HONEYSUCKLE DR	1	445	1,454	68	Good	2	2	1
1134	1500			HONEYSUCKLE DR	POPLAR LN	SHEBAL AVE	2	Collector	1	Asphalt	28	1,361	212	4,446	2,722	1,210	2,722	4	Zone 1	10	114,177	66	2	64	1	1340	1340 - HONEYSUCKLE DR + Others	4	2,394	7,788	63	Good	2	2	1
1254	1510			HONEYSUCKLE DR	SHEBAL AVE	CLIFF AVE	2	Collector	1	Asphalt	28	873	136	2,852	1,746	776	1,746	4	Zone 1	10	114,177	66	2	64	1	1320	1320 - HONEYSUCKLE DR + Others	4	3,195	10,330	73	V Good	2	2	1
1057	1540			HUNTER DR	SOUTHEASTERN AVE	CHESTNUT ST	3	Residential	1	Asphalt	23	687	88	1,843	0	0	0	Zone 1	10	114,177	66	2	64	1	2060	2060 - HUNTER DR + Others	3	1,341	4,366	45	Marginal	2	3	1	
1184	1560			INDUSTRIAL DR	LAURA ST	ENTERPRISE ST	2	Collector	1	Asphalt	34	915	173	3,630	0	1,830	0	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	10,340	69	Good	2	2	1	
1245	1570			INDUSTRIAL DR	ENTERPRISE ST	COMMERCE AVE	3	Residential	1	Asphalt	41	1,280	291	6,106	1,280	569	2,560	2	Zone 1	10	114,177	66	2	64	1	1260	1260 - INDUSTRIAL DR + Others	2	1,977	8,789	71	V Good	2	3	1
1197	1580			IVY LN	MAIN ST	WILLOW ST	3	Residential	1	Asphalt	28	429	67	1,401	429	191	858	2	Zone 1	10	114,177	66	2	64	1	1380	1380 - IVY LN + Others	2	694	2,329	56	Fair	2	3	1
1164	1590			JEANNIE LN	SOUTH END	MAPLE ST	3	Residential	1	Asphalt	35	209	41	853	0	418	0	Zone 1	10	114,177	66	2	64	1	1400	1400 - ELM ST + Others	3	977	4,153	55	Fair	2	3	1	
1218	1600			JEANNIE LN	MAPLE ST	ELM ST	3	Residential	1	Asphalt	33	613	112	2,360	613	272	1,226	2	Zone 1	10	114,177	66	2	64	1	1240	1240 - JEANNIE LN + Others	4	1,724	6,279	60	Good	2	3	1
1233	1610			JOSH ST	THELMA AVE	N PERRY LN	3	Residential	1	Asphalt	28	1,167	182	3,812	2,334	1,037	2,334	4	Zone 1	10	114,177	66	2	64	1	1900	1900 - PERRY LN + Others	4	3,483	10,322	79	V Good	1	3	1
1022	1620			JUNIPER CIR	CEDAR DR	NE END	3	Residential	1	Asphalt	28	168	26	549	336	149	336	4	Zone 1	10	114,177	66	2	64	1	1860	1860 - CEDAR DR + Others	7	2,652	8,874	75	V Good	2	3	1
1042	1630			KATIE AVE	WEST END	QUINN AVE	3	Residential	1	Asphalt	30	185	34	710	0	0	0	Zone 1	10	114,177	66	2	64	1	1560	1560 - LIEN AVE + Others	6	2,647	8,839	83	V Good	2	3	1	
1148	1640			KENT ST	TOM SAWYER TRL	UNITED AVE	3	Residential	1	Asphalt	29	454	73	1,536	454	202	908	2	Zone 1	10	114,177	66	2	64	1	1420	1420 - TEDDY ST + Others	4	2,541	8,931	67	Good	2	3	1
1178	1650			KENT ST	UNITED AVE	AUGUSTANA AVE	2	Collector	1	Asphalt	28	1,253	195	4,093	2,506	1,114	2,506	4	Zone 1	10	114,177	66	2	64	1	2020	2020 - KENT ST + Others	7	3,256	10,799	63	Good	2	2	1
1124	1660			KENT ST	TROY AVE	PENNSYLVANIA AVE	2	Collector	1	Asphalt	29	382	62	1,292	764	340	764	4	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	10,340	69	Good	2	2	1
1013	1660			KENT ST	TROY AVE	TROY AVE	2	Collector	1	Asphalt	29	605	97	2,047	1,210	538	1,210	4	Zone 1	10	114,177	66	2	64	1	2020	2020 - KENT ST + Others	7	3,256	10,799	63	Good	2	2	1
1162	1660			KENT ST	PENNSYLVANIA AVE	CLIFF AVE	2	Collector	1	Asphalt	29	203	33	687	406	180	406	4	Zone 1	10	114,177	66	2	64	1	2020	2020 - KENT ST + Others	7	3,256	10,799	63	Good	2	2	1
1032	1670			LAURA ST	ARLENE AVE	AUGUSTANA AVE	2	Collector	1	Asphalt	35	293	57	1,196	586	260	586	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,118	8,929	61	Good	2	2	1
1222	1670			LAURA ST	CLAUDIA AVE	ARLENE AVE	2	Collector	1	Asphalt	35	301	59	1,229	602	268	602	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,118	8,929	61	Good	2	2	1
1176	1670			LAURA ST	UNITED AVE	CLAUDIA AVE	2	Collector	1	Asphalt	35	537	104	2,193	1,074	477	1,074	4	Zone 1	10	114,177	66	2	64	1	1360	1360 - AUGUSTANA AVE + Others	7	3,545	10,340	69	Good	2	2	1
1001	1680			LAURA ST	AUGUSTANA AVE	PITTSBURGH AVE	2	Collector	1	Asphalt	35	311	60	1,270	622	276	622	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,118	8,929	61	Good	2	2	1
1102	1680			LAURA ST	TROY AVE	INDUSTRIAL DR	2	Collector	1	Asphalt	40	468	107	2,202	964	428	964	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,118	8,929	61	Good	2	2	1
1101	1680			LAURA ST	TROY AVE	PITTSBURGH AVE	2	Collector	1	Asphalt	35	397	77	1,621	794	353	794	4	Zone 1	10	114,177	66	2	64	1	1060	1060 - LAURA ST + Others	6	2,118	8,929	61	Good	2	2	1
1099	1700			LEGENDARY DR	ADRIANNA AVE	N PERRY LN	3	Residential	1	Asphalt	29	407	66	1,377	814	362	814	4	Zone 1	10	114,177	66	2	64	1	1600	1600 - LEGENDARY DR + Others	5	1,614	5,510	74	V Good	2	3	1
1101	1700			LEGENDARY DR	A AVE	ADRIANNA AVE	3	Residential	1	Asphalt	28	198	31	647	396	176	396	4	Zone 1	10	114,177	66	2	64	1	1600	1600 - LEGENDARY DR + Others	5	1,614	5,510	74	V Good	2	3	1
1095	1700			LEGENDARY DR	QUINN AVE	A AVE	3	Residential	1	Asphalt	27	160	24	504	0	320	0	Zone 1	10	114,177	66	2	64	1	1560	1560 - MARIE DR + Others	9	3,486	11,925	78	V Good	1	3	1	
1174	1700			LEGENDARY DR	NW END	QUINN AVE	3	Residential	1	Asphalt	29	114	18	386	0	228	0	Zone 1	10	114,177	66	2	64	1	1560	1560 - MARIE DR + Others	9	3,486	11,925	78	V Good	1	3	1	
1048	1710			LEGENDARY DR	MACEY AVE	LIEN AVE	2	Collector	1	Asphalt	31	451	78	1,631	902	401	902	4	Zone 1	10	114,177	66	2	64	1	1640	1640 - LEGENDARY DR + Others	9	2,696	10,328	78	V Good</			

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	FunCL Code	PaveType Code	PaveType	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Sidewalk Length (ft)	Sidewalk Area (yd2)	Curb & Gutter Length (ft)	Estimator Ramp Count	Peripheral Summary				Zone Summary				Project Summary								
																			Zone Name	Zone Code	Zone Length (ft)	Zone Current PCI	Zone Backlog (%)	Zone Network Index	Zone Rank	Project ID	Project Description	Project Block Count	Project Length (ft)	Project Area (yd2)	Project Current PCI	Project Condition Rating	Project Strength Code	Project Func Code	Project PavType Code
1165	1940	10	N	PERRY LN	JOSH ST	MARIE DR	2	Collector	1	Asphalt	40	135	30	630	270	120	270	4	Zone 1	10	114,177	66	2	64	1	1640	1640 - LEGENDARY DR + Others	9	2,696	10,328	78	V Good	2	2	1
1225	1940	10	N	PERRY LN	MARIE DR	BRANNON DR	2	Collector	1	Asphalt	40	289	64	1,349	578	257	578	4	Zone 1	10	114,177	66	2	64	1	1640	1640 - LEGENDARY DR + Others	9	2,696	10,328	78	V Good	2	2	1
1008	1950	10	N	PERRY LN	LEGENDARY DR	MAH ST	3	Residential	1	Asphalt	40	1,252	278	5,843	2,504	1,113	2,504	4	Zone 1	10	114,177	66	2	64	1	1900	1900 - PERRY LN + Others	4	3,483	13,022	79	V Good	1	3	1
1093	1950	10	N	PERRY LN	MAH ST	NORTH END	3	Residential	1	Asphalt	39	89	19	405	178	79	178	4	Zone 1	10	114,177	66	2	64	1	1760	1760 - MACEY AVE + Others	4	2,840	9,961	76	V Good	1	3	1
1033	1980	10	N	PERRY LN	SOUTHEASTERN AVE	WOODMONT AVE	2	Collector	1	Asphalt	35	231	45	943	462	205	462	4	Zone 1	10	114,177	66	2	64	1	1680	1680 - PERRY LN	3	1,416	5,782	64	Good	2	2	1
1062	1980	10	N	PERRY LN	WOODMONT AVE	LINDEN AVE	2	Collector	1	Asphalt	35	483	94	1,972	966	429	966	4	Zone 1	10	114,177	66	2	64	1	1680	1680 - PERRY LN	3	1,416	5,782	64	Good	2	2	1
1177	1980	10	N	PERRY LN	LINDEN AVE	HEMLOCK ST	2	Collector	1	Asphalt	35	702	137	2,867	1,404	624	1,404	4	Zone 1	10	114,177	66	2	64	1	1680	1680 - PERRY LN	3	1,416	5,782	64	Good	2	2	1
1196	1980	10	N	PERRY LN	TIGER ST	CHESTNUT ST	2	Collector	1	Asphalt	35	853	166	3,483	1,706	758	1,706	4	Zone 1	10	114,177	66	2	64	1	1660	1660 - PERRY LN	2	1,220	4,939	53	Fair	2	2	1
1241	1980	10	N	PERRY LN	HEMLOCK ST	TIGER ST	2	Collector	1	Asphalt	34	367	69	1,456	367	163	734	2	Zone 1	10	114,177	66	2	64	1	1660	1660 - PERRY LN	2	1,220	4,939	53	Fair	2	2	1
1155	1990	10	N	PERRY LN	CHESTNUT ST	WALNUT ST	2	Collector	1	Asphalt	33	291	53	1,120	291	129	582	2	Zone 1	10	114,177	66	2	64	1	1730	1730 - ANNA WAY + Others	3	1,329	4,745	46	Marginal	2	2	1
1198	1990	10	N	PERRY LN	WALNUT ST	MAPLE ST	2	Collector	1	Asphalt	34	334	63	1,325	0	0	668	0	Zone 1	10	114,177	66	2	64	1	1730	1730 - ANNA WAY + Others	3	1,329	4,745	46	Marginal	2	2	1
1026	2000	10	N	PERRY LN	MAIN ST	WILLOW ST	2	Collector	1	Asphalt	27	441	66	1,389	0	0	892	0	Zone 1	10	114,177	66	2	64	1	1701	1701 - PERRY LN	2	718	2,359	94	Excellent	2	2	1
1142	2000	10	N	PERRY LN	ELM ST	MAIN ST	2	Collector	1	Asphalt	30	277	46	970	0	0	554	0	Zone 1	10	114,177	66	2	64	1	1701	1701 - PERRY LN	2	718	2,359	94	Excellent	2	2	1
1169	2000	10	N	PERRY LN	MAPLE ST	ELM ST	2	Collector	1	Asphalt	35	301	59	1,229	0	0	602	0	Zone 1	10	114,177	66	2	64	1	1700	1700 - PERRY LN	1	301	1,229	60	Good	2	2	1
1129	2020	10	N	PHILLY ST	TROY AVE	EAST END	3	Residential	1	Asphalt	28	367	57	1,199	734	326	734	4	Zone 1	10	114,177	66	2	64	1	1980	1980 - PHILLY ST + Others	7	2,512	8,104	65	Good	2	3	1
1231	2020	10	N	PHILLY ST	PITTSBURGH AVE	TROY AVE	3	Residential	1	Asphalt	28	390	61	1,274	780	347	780	4	Zone 1	10	114,177	66	2	64	1	1980	1980 - PHILLY ST + Others	7	2,512	8,104	65	Good	2	3	1
1200	2030	10	N	PITTSBURGH AVE	COYOTE ST	PHILLY ST	3	Residential	1	Asphalt	28	582	91	1,901	1,164	517	1,164	4	Zone 1	10	114,177	66	2	64	1	1220	1220 - PITTSBURGH AVE + Others	4	1,482	4,771	57	Fair	2	3	1
1202	2030	10	N	PITTSBURGH AVE	LAURA ST	PHILLY ST	3	Residential	1	Asphalt	28	299	47	977	598	266	598	4	Zone 1	10	114,177	66	2	64	1	1220	1220 - PITTSBURGH AVE + Others	4	1,482	4,771	57	Fair	2	3	1
1208	2040	10	N	POPLAR LN	HONEYSUCKLE DR	ROSEWOOD DR	3	Residential	1	Asphalt	28	308	48	1,006	616	274	616	4	Zone 1	10	114,177	66	2	64	1	1820	1820 - ROSEWOOD DR + Others	5	2,681	8,663	68	Good	2	3	1
1221	2050	10	N	PRAIRIE CIRCLE	PRAIRIE ST	SE END	3	Residential	1	Asphalt	33	411	75	1,584	822	365	822	4	Zone 1	10	114,177	66	2	64	1	1160	1160 - COLUMBIA ST + Others	8	3,662	12,865	76	V Good	2	3	1
1114	2060	10	N	PRAIRIE ST	PRAIRIE CIRCLE	WALNUT ST	3	Residential	1	Asphalt	30	116	53	1,106	632	281	632	4	Zone 1	10	114,177	66	2	64	1	1140	1140 - EMMETT TRL + Others	6	2,527	8,039	70	V Good	2	3	1
1029	2060	10	N	PRAIRIE ST	COLUMBIA ST	PRAIRIE CIRCLE	3	Residential	1	Asphalt	29	533	86	1,803	533	237	1,066	4	Zone 1	10	114,177	66	2	64	1	1160	1160 - COLUMBIA ST + Others	8	3,662	12,865	76	V Good	2	3	1
1201	2060	10	N	PRAIRIE ST	SOUTH END	TIGER ST	3	Residential	1	Asphalt	33	149	27	574	0	0	298	0	Zone 1	10	114,177	66	2	64	1	1160	1160 - COLUMBIA ST + Others	8	3,662	12,865	76	V Good	2	3	1
1256	2060	10	N	PRAIRIE ST	TIGER ST	COLUMBIA ST	3	Residential	1	Asphalt	29	336	54	1,137	0	0	672	0	Zone 1	10	114,177	66	2	64	1	1160	1160 - COLUMBIA ST + Others	8	3,662	12,865	76	V Good	2	3	1
1212	2060	10	N	PRAIRIE ST	WALNUT ST	MAPLE ST	3	Residential	1	Asphalt	28	339	53	1,107	678	301	678	4	Zone 1	10	114,177	66	2	64	1	1780	1780 - WALNUT ST + Others	5	2,209	8,239	61	Good	2	3	1
1027	2070	10	N	PRAIRIE ST	MAPLE ST	ELM ST	3	Residential	1	Asphalt	29	328	53	1,110	656	292	656	4	Zone 1	10	114,177	66	2	64	1	1480	1480 - ELM ST + Others	9	3,129	10,137	71	V Good	2	3	1
1136	2070	10	N	PRAIRIE ST	ELM ST	MAIN ST	3	Residential	1	Asphalt	28	332	52	1,085	664	295	664	4	Zone 1	10	114,177	66	2	64	1	1740	1740 - PRAIRIE ST	1	332	1,085	25	Poor	3	3	1
1118	2070	30	N	PRAIRIE ST	MAIN ST	WILLOW ST	3	Residential	2	Concrete	39	332	72	1,511	664	295	664	4	Zone 1	10	114,177	66	2	64	1	1500	1500 - RAILROAD AVE + Others	5	1,692	6,768	91	Excellent	2	3	2
1140	2080	10	N	PROSPECT ST	CLIFF AVE	272 ST	3	Residential	1	Asphalt	29	1,003	162	3,393	1,003	446	2,006	2	Zone 1	10	114,177	66	2	64	1	1270	1270 - PROSPECT ST	1	1,003	3,393	69	Good	2	3	1
1087	2090	10	N	QUAIL CIR	SOUTH END	CHESTNUT ST	3	Residential	1	Asphalt	33	524	96	2,013	1,048	466	1,048	4	Zone 1	10	114,177	66	2	64	1	1280	1280 - QUAIL CIR + Others	3	1,219	4,726	62	Good	2	3	1
1206	2100	10	N	QUINN AVE	LEGENDARY DR	KATIE AVE	3	Residential	1	Asphalt	29	398	64	1,347	398	177	796	2	Zone 1	10	114,177	66	2	64	1	1580	1580 - LIEN AVE + Others	6	2,547	8,539	83	V Good	2	3	1
1045	2100	10	N	QUINN AVE	LEGENDARY DR	KATIE AVE	3	Residential	1	Asphalt	29	426	69	1,441	0	0	852	0	Zone 1	10	114,177	66	2	64	1	1760	1760 - MACEY AVE + Others	4	2,840	9,961	76	V Good	1	3	1
1043	2110	10	N	RAILROAD AVE	WALNUT ST	MAPLE ST	3	Residential	1	Asphalt	27	334	50	1,052	0	0	668	0	Zone 1	10	114,177	66	2	64	1	1780	1780 - WALNUT ST + Others	5	2,209	8,239	61	Good	2	3	1
1018	2120	10	N	RAILROAD AVE	MAPLE ST	ELM ST	3	Residential	2	Concrete	33	327	60	1,259	327	145	327	2	Zone 1	10	114,177	66	2	64	1	1500	1500 - RAILROAD AVE + Others	5	1,692	6,768	91	Excellent	2	3	2
1242	2120	20	N	RAILROAD AVE	MAIN ST	WILLOW ST	3	Residential	2	Concrete	30	335	56	1,173	335	149	670	2	Zone 1	10	114,177	66	2	64	1	1500	1500 - RAILROAD AVE + Others	5	1,692	6,768	91	Excellent	2	3	2
1002	2120	30	N	RAILROAD AVE	ELM ST	WILLOW ST	3	Residential	2	Concrete	30	335	56	1,173	670	298	670	4	Zone 1	10	114,177	66	2	64	1	1500	1500 - RAILROAD AVE + Others	5	1,692	6,768	91	Excellent	2	3	2
1003	2130	10	N	RAVEN AVE	TIGER ST	CHESTNUT ST	3	Residential	1	Asphalt	29	861	139	2,913	1,722	765	1,722	4	Zone 1	10	114,177	66	2	64	1	1470	1470 - RAVEN AVE + Others</								

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISD	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	FunCL	Pavetype Code	Pavetype	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Condition Summary										Condition Details										
															Surface Distress Index (SDI)	Roughness Index (RI)	Structural Index (SI)	Pavement Condn Index (PCI)	Strength Rating	Condition Rating	Load Assoc Distress Deducts (LADD)	Non-Load Distress Deducts (NLAD)	PCI Override (OPCI)	OPCI Date	Current Segment PCI (CPCI)	Segment IR1 (mm/m)	Deflection Results	Rutting (ACP Only)	L&T Cracking / Linear Crk	Alligator Cracking	Divided Slab / Blow Up	Map Crk / Cmr Brk / D Crk	Edge Cracking	Joint Spall / Joint Sealant	Distortions / Faulting
1035	2380	10		WALNUT ST	GRAND AVE	PERRY LN	3	Residential	1	Asphalt	36	749	150	3,146	72	56	60	67	Mod	Good	15	13	67	4.6	0	10.0	9.0	8.5	10.0	10.0	10.0	10.0	10.0	9.1	10.0
1060	2380	10		WALNUT ST	WEST END	GRAND AVE	3	Residential	1	Asphalt	29	359	58	1,215	51	26	60	43	Mod	Marginal	33	17	43	11.0	0	8.8	8.4	8.1	10.0	9.5	10.0	10.0	9.3	10.0	
1006	2390	10		WALNUT ST	PERRY LN	EAST END	3	Residential	1	Asphalt	28	1,330	207	4,345	72	82	60	75	Mod	V Good	16	12	75	2.2	0	9.8	8.8	8.9	10.0	9.5	9.9	10.0	9.5	10.0	
1040	2400	10		WOODMONT AVE	ASH GROVE ST	PERRY LN	3	Residential	1	Asphalt	28	677	105	2,212	74	63	60	70	Mod	V Good	14	12	70	3.8	0	10.0	8.9	8.6	10.0	10.0	10.0	10.0	9.4	10.0	

City of Harrisburg, SD
Street Inventory and Condition Summary - Sorted by Street Name



GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FuncL Code	FuncCL	Pavetype Code	Pavetype	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Sidewalk Length (ft)	Sidewalk Area (yd2)	Curb & Gutter Length (ft)	Estimated Ramp Count	Zone Summary					Project Summary											
																			Zone Name	Zone Code	Zone Length (ft)	Zone Current PCI	Zone Backlog (%)	Zone Network Index	Zone Rank	Project ID	Project Description	Project Block Count	Project Length (ft)	Project Area (yd2)	Project Current PCI	Project Condition Rating	Project Strength Code	Project FuncL Code	Project Pavetype Code
1035	2380	10		WALNUT ST	GRAND AVE	PERRY LN	3	Residential	1	Asphalt	36	749	150	3,146	0	0	1,498	0	Zone 1	10	114,177	66	2	64	1	1780	1780 - WALNUT ST + Others	5	2,209	8,239	61	Good	2	3	1
1060	2380	10		WALNUT ST	WEST END	GRAND AVE	3	Residential	1	Asphalt	29	359	59	1,215	718	319	718	4	Zone 1	10	114,177	66	2	64	1	2060	2060 - HUNTER DR + Others	3	1,341	4,366	45	Marginal	2	3	1
1006	2390	10		WALNUT ST	PERRY LN	EAST END	3	Residential	1	Asphalt	28	1,330	207	4,345	1,330	591	2,660	2	Zone 1	10	114,177	66	2	64	1	2040	2040 - MAPLE ST + Others	2	2,665	10,108	65	Good	2	3	1
1040	2400	10		WOODMONT AVE	ASH GROVE ST	PERRY LN	3	Residential	1	Asphalt	28	677	105	2,212	1,354	602	1,354	4	Zone 1	10	114,177	66	2	64	1	1020	1020 - WOODMONT AVE + Others	5	2,305	8,397	70	V Good	2	3	1

Appendix B
\$325K/Year Rehabilitation Plans by Segment

City of Harrisburg, SD
Street Inventory and Five Year Rehabilitation Plan By Segment



Current PCI Date: 4/29/2019
Analysis Start Date: 9/13/2019

RID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	Pavetype Code	Pavement Width (ft)	Pavement Length (ft)	Aad Area (sqyd)	Pavement Area (sqyd)	Pavement Condition Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	\$325K/Year Rehabilitation Plan						
																								Avg Unit Rate (byoz)	Peripheral Concrete Costs (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI	
1112	1000	10		A AVE	BRANNON DR	LEGENDARY DR	3	1	317	55	1,146	78	78	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4				0	0	68				
1247	1010	10		ADRIANNA AVE	LEGENDARY DR	MIAM ST	3	1	1,069	184	3,866	79	79	Zone 1	10	1760	2,840	76	0	Fall Thru Yr 3				0	0	70				
1041	1020	10		ALMOND AVE	SOUTH END	LOIS LN	3	1	28	153	24	500	63	63	Zone 1	10	1180	1,661	50	0	Fall Thru Yr 4				0	0	50			
1072	1020	10		ALMOND AVE	CHOKECHERRY ST	COTTONWOOD DR	3	1	28	916	142	2,992	43	43	Zone 1	10	1180	1,661	50	0	Fall Thru Yr 4				0	0	30			
1214	1020	10		ALMOND AVE	LOIS LN	CHOKECHERRY ST	3	1	28	302	47	987	59	59	Zone 1	10	1180	1,661	50	0	Fall Thru Yr 4				0	0	45			
1181	1020	10		ALMOND AVE	COTTONWOOD DR	HONEYSUCKLE DR	3	1	27	813	122	2,561	62	62	Zone 1	10	1820	2,681	68	0	Fall Thru Yr 4				0	0	40			
1153	1030	10		ANNA WAY	ELM ST	WILLOW ST	3	1	28	704	110	2,300	37	37	Zone 1	10	1730	1,329	46	2	Selected Yr 2	50	FWM + Thick Overlay (> 2.0 - 3.0)		41.37	4,839	90,321	95,160	198,166	89
1096	1040	10		ARLENE AVE	COYOTE ST	LAURA ST	3	1	28	888	138	2,901	61	61	Zone 1	10	1000	888	51	4	Selected Yr 4	50	FWM + Thick Overlay (> 2.0 - 3.0)		42.45	15,393	107,750	123,143	123,143	94
1108	1050	10		ASH GROVE ST	GREYHAWK CT	LINDEN AVE	3	1	28	340	53	1,111	68	68	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.65	170	2,778	2,948	22,314	80
1194	1050	10		ASH GROVE ST	LINDEN AVE	WOODMONT AVE	3	1	28	487	76	1,591	65	65	Zone 1	10	1450	796	62	1	Forced Yr 1	10	Slurry Seal / Seal Coat		3.12	980	3,978	4,958	8,724	80
1132	1060	10		AUGUSTANA AVE	COYOTE ST	LAURA ST	3	1	40	890	198	4,153	37	37	Zone 1	10	1040	890	37	4	Selected Yr 4	56	FWM + Thick Overlay (> 2.0 - 3.0) + Strctrl Pch		50.65	38,482	171,881	210,363	210,363	94
1223	1060	10		AUGUSTANA AVE	SOUTH END	COYOTE ST	3	1	40	123	27	574	73	73	Zone 1	10	1100	1,478	63	2	Selected Yr 2	30	Edge Mill + Thin Overlay (1.5 - 2.0)		22.92	863	12,295	13,158	113,399	86
1078	1070	10		AUGUSTANA AVE	LAURA ST	TEDDY ST	2	1	35	334	65	1,364	61	61	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4				0	0	46			
1150	1070	10		AUGUSTANA AVE	TEDDY ST	KENT ST	2	1	35	350	68	1,429	61	61	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4				0	0	47			
1091	1080	10		AUGUSTANA AVE	KENT ST	SAINT GREGORY ST	2	1	40	610	136	2,847	70	70	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4				0	0	58			
1192	1080	10		AUGUSTANA AVE	SAINT GREGORY ST	272 ST	2	1	39	316	68	1,438	70	70	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4				0	0	57			
1049	1100	10		BRANNON DR	A AVE	N PERRY LN	3	1	28	817	127	2,669	77	77	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4				0	0	67			
1133	1100	10		BRANNON DR	NW END	A AVE	3	1	27	132	20	416	81	81	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4				0	0	73			
1226	1110	10		BRANNON DR	N PERRY LN	MACEY AVE	3	1	28	392	61	1,281	73	73	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.68	230	3,203	3,433	14,677	79
1238	1120	10		CEDAR CIR	CEDAR DR	EAST END	3	1	35	324	62	1,311	74	74	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctrl Pch		6.08	194	7,775	7,969	54,127	85
1016	1130	10		CEDAR DR	JUNIPER CIR	SHEBAL AVE	3	1	27	692	104	2,180	74	74	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctrl Pch		6.12	414	12,928	13,342	54,127	85
1037	1130	10		CEDAR DR	JUNIPER CIR	CEDAR CIR	3	1	28	403	63	1,316	79	79	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctrl Pch		6.11	241	7,804	8,045	54,127	85
1239	1130	10		CEDAR DR	CEDAR CIR	SPRUCE ST	3	1	28	388	60	1,267	78	78	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctrl Pch		6.11	232	7,514	7,746	54,127	85
1094	1140	10		CHESTNUT ST	HICKORY LN	QUAIL CIR	3	1	38	351	74	1,556	58	58	Zone 1	10	1080	1,621	54	0	Fall Thru Yr 1				0	0	44			
1172	1140	10		CHESTNUT ST	QUAIL CIR	PERRY LN	3	1	39	345	75	1,570	70	70	Zone 1	10	1280	1,219	62	0	Fall Thru Yr 1				0	0	59			
1084	1150	10		CHESTNUT ST	RAVEN AVE	HUNTER DR	2	1	37	281	58	1,213	72	72	Zone 1	10	1720	1,330	57	0	Fall Thru Yr 2				0	0	60			
1117	1150	10		CHESTNUT ST	PERRY LN	FALCON AVE	2	1	40	312	69	1,456	48	48	Zone 1	10	1720	1,330	57	0	Fall Thru Yr 2				0	0	32			
1151	1150	10		CHESTNUT ST	HUNTER DR	SOUTHEASTERN AVE	2	1	41	115	26	550	69	69	Zone 1	10	1720	1,330	57	0	Fall Thru Yr 2				0	0	56			
1190	1150	10		CHESTNUT ST	FALCON AVE	EAGLE AVE	2	1	39	312	68	1,420	55	55	Zone 1	10	1720	1,330	57	0	Fall Thru Yr 2				0	0	40			
1248	1150	10		CHESTNUT ST	EAGLE AVE	RAVEN AVE	2	1	35	310	60	1,266	52	52	Zone 1	10	1720	1,330	57	0	Fall Thru Yr 2				0	0	36			
1086	1170	10		CHOKECHERRY ST	ALMOND AVE	COTTONWOOD DR	3	1	26	531	77	1,611	54	54	Zone 1	10	1200	887	56	0	Fall Thru Yr 2				0	0	41			
1017	1180	10		CLAUDIA AVE	SOUTH END	UNITED AVE	3	1	27	150	23	473	64	64	Zone 1	10	1100	1,478	63	2	Selected Yr 2	30	Edge Mill + Thin Overlay (1.5 - 2.0)		24.83	1,614	10,132	11,746	113,399	86
1146	1180	10		CLAUDIA AVE	UNITED AVE	LEONARD ST	3	1	27	590	89	1,859	63	63	Zone 1	10	1100	1,478	63	2	Selected Yr 2	30	Edge Mill + Thin Overlay (1.5 - 2.0)		22.77	2,517	39,820	42,337	113,399	86
1243	1180	10		CLAUDIA AVE	LEONARD ST	LAURA ST	3	1	27	296	44	932	63	63	Zone 1	10	1100	1,478	63	2	Selected Yr 2	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.47	1,914	19,963	21,877	113,399	86
1077	1200	10		CLIFF AVE	HONEYSUCKLE DR	MAPLE ST	1	1	41	1,001	228	4,788	63	63	Zone 1	10	1120	2,084	64	0	Fall Thru Yr 2				0	0	46			
1204	1200	10		CLIFF AVE	DS@1365N 475 AVE	HONEYSUCKLE DR	1	1	40	1,083	241	5,054	65	65	Zone 1	10	1120	2,084	64	0	Fall Thru Yr 2				0	0	49			
1034	1200	10		CLIFF AVE	MAPLE ST	CYPRESS CIR	1	1	35	128	25	523	54	54	Zone 1	10	1130	1,180	56	5	Selected Yr 5	50	FWM + Thick Overlay (> 2.0 - 3.0)		51.70	2,980	24,060	27,040	271,099	96
1125	1200	10		CLIFF AVE	CYPRESS CIR	273 ST	1	1	41	1,052	240	5,032	57	57	Zone 1	10	1130	1,180	56	5	Selected Yr 5	50	FWM + Thick Overlay (> 2.0 - 3.0)		48.50	12,570	231,489	244,059	271,099	96
1083	1220	10		COLUMBIA CIR	COLUMBIA ST	EAST END	3	1	43	178	43	898	60	60	Zone 1	10	1140	2,527	70	0	Fall Thru Yr 5				0	0	47			
1154	1230	10		COLUMBIA ST	WALNUT ST	MAPLE ST	3	1	29	329	53	1,113	71	71	Zone 1	10	1140	2,527	70	0	Fall Thru Yr 5				0	0	61			
1074	1230	10		COLUMBIA ST	PRAIRIE ST	WALNUT ST	3	1	28	1,162	181	3,796	79	79	Zone 1	10	1160	3,662	76	0	Fall Thru Yr 3				0	0	71			
1023	1240	10		COLUMBIA ST	DS@146N MAIN ST	WILLOW ST	3	1	29	178	29	602	74	74	Zone 1	10	1300	2,289	77	0	Fall Thru Yr 4				0	0	64			
1039	1240	10		COLUMBIA ST	ELM ST	MAIN ST	3	1	28	254	40	830	78	78	Zone 1	10	1300	2,289	77	0	Fall Thru Yr 4				0	0	69			
1080	1240	10		COLUMBIA ST	MAIN ST	DS@146N MAIN ST	3	1	29	146	24	494	89	89	Zone 1	10	1300	2,289	77	0	Fall Thru Yr 4				0	0	82			
1156	1240	10		COLUMBIA ST	MAPLE ST	ELM ST	3	1	28	330	51	1,078	79	79	Zone 1	10	1300	2,289	77	0	Fall Thru Yr 4				0	0	71			
1227	1250	10		COLUMBIA ST	WILLOW ST	NORTH END	3	1	39	820	178	3,731	76	76	Zone 1															

City of Harrisburg, SD
Street Inventory and Five Year Rehabilitation Plan By Segment



Current PCI Date: 4/29/2019
Analysis Start Date: 9/13/2019

																	\$325k/Year Rehabilitation Plan													
GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	Paratype Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Pavement Chain Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd2)	Peripheral Concrete Coasts (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI	
1103	1360	10		EMMETT TRL	TIGER ST	WALNUT ST	3	1	34	1,198	226	4,752	77	77	Zone 1	10	1140	2,527	70	0	Fall Thru Yr 5								69	
1240	1360	10		EMMETT TRL	WALNUT ST	MAPLE ST	3	1	36	124	25	521	70	70	Zone 1	10	1140	2,527	70	0	Fall Thru Yr 5								60	
1106	1370	10		EMMETT TRL	MAPLE ST	MAPLE ST	3	1	39	210	46	956	65	65	Zone 1	10	1400	977	55	0	Fall Thru Yr 1								52	
1010	1380	10		EMMETT TRL	ELM ST	WILLOW ST	2	1	34	588	111	2,332	68	68	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2								54	
1128	1380	10		EMMETT TRL	MAPLE ST	ELM ST	2	1	32	406	72	1,516	61	61	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2								47	
1145	1400	10		ENTERPRISE ST	SOUTH END	INDUSTRIAL DR	3	1	33	697	128	2,683	62	62	Zone 1	10	1260	1,977	71	0	Fall Thru Yr 1								50	
1175	1410	10		FALCON AVE	TIGER ST	CHESTNUT ST	3	1	27	860	129	2,709	50	50	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat		4.19	4,590	6,773	11,363	23,579	80
1065	1420	10		GRAND AVE	WALNUT ST	MAPLE ST	3	1	27	354	53	1,115	59	59	Zone 1	10	1780	2,209	61	0	Fall Thru Yr 1								46	
1021	1420	10		GRAND AVE	TIGER ST	HICKORY LN	3	1	39	856	185	3,895	52	52	Zone 1	10	1940	2,051	54	0	Fall Thru Yr 1								39	
1160	1420	10		GRAND AVE	DS@343N SOUTH END	TIGER ST	3	1	39	154	33	701	59	59	Zone 1	10	1940	2,051	54	0	Fall Thru Yr 1								47	
1209	1420	10		GRAND AVE	SOUTH END	DS@343N SOUTH END	3	1	20	343	38	800	50	50	Zone 1	10	1940	2,051	54	0	Fall Thru Yr 1								36	
1207	1420	10		GRAND AVE	HICKORY LN	WALNUT ST	3	1	38	295	62	1,308	47	47	Zone 1	10	2060	1,341	45	0	Fall Thru Yr 2								34	
1005	1430	10		GRAND AVE	MAIN ST	WILLOW ST	3	1	28	328	51	1,071	77	77	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5								68	
1131	1430	10		GRAND AVE	MAIN ST	MAIN ST	3	1	28	330	51	1,078	73	73	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5								63	
1217	1430	10		GRAND AVE	MAPLE ST	ELM ST	3	1	27	338	51	1,065	65	65	Zone 1	10	1620	1,055	58	0	Fall Thru Yr 3								52	
1161	1440	10		GREYHAWK CIR	LINDEN AVE	EAST END	3	1	54	183	54	1,143	68	68	Zone 1	10	1290	183	68	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.76	300	2,858	3,158	3,158	80
1180	1450	10		GREYHAWK CT	ASH GROVE ST	LINDEN AVE	3	1	28	612	95	1,999	66	66	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.68	360	4,998	5,358	22,314	80
1251	1450	10		GREYHAWK CT	SOUTH END	ASH GROVE ST	3	1	27	124	19	391	51	51	Zone 1	10	1450	796	62	1	Forced Yr 1	10	Slurry Seal / Seal Coat		3.14	250	978	1,228	8,724	80
1250	1460	10		HARVEST TRL	MAPLE ST	ELM ST	3	1	30	561	94	1,964	75	75	Zone 1	10	1300	2,289	77	0	Fall Thru Yr 4								65	
1012	1470	10		HEMLOCK ST	LINDEN AVE	RAVEN AVE	3	1	29	314	51	1,062	54	54	Zone 1	10	1440	884	56	0	Fall Thru Yr 2								40	
1109	1470	10		HEMLOCK ST	PERRY LN	LINDEN AVE	3	1	28	570	89	1,862	58	58	Zone 1	10	1440	884	56	0	Fall Thru Yr 2								44	
1052	1470	10		HEMLOCK ST	RAVEN AVE	EAST END	3	1	49	212	58	1,212	61	61	Zone 1	10	1460	212	61	1	Selected Yr 1	30	Edge Mill + Thin Overlay (1.5 - 2.0)		22.41	1,706	25,452	27,158	27,158	85
1138	1480	10		HICKORY LN	TIGER ST	GRAND AVE	3	1	38	1,147	242	5,085	54	54	Zone 1	10	1080	1,621	54	0	Fall Thru Yr 1								40	
1098	1500	10		HONEYSUCKLE DR	SPRUCE ST	ALMOND AVE	2	1	28	242	38	791	82	82	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch		6.03	102	4,667	4,769	62,677	82
1163	1500	10		HONEYSUCKLE DR	ALMOND AVE	POPLAR LN	2	1	27	921	138	2,901	77	77	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch		6.09	537	17,116	17,653	62,677	82
1127	1500	10		HONEYSUCKLE DR	WILLOW ST	SPRUCE ST	2	1	28	445	69	1,454	68	68	Zone 1	10	1330	445	68	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.81	1,333	33,280	34,613	34,613	88
1134	1500	10		HONEYSUCKLE DR	POPLAR LN	SHEBAL AVE	2	1	28	1,361	212	4,446	63	63	Zone 1	10	1340	2,384	63	0	Fall Thru Yr 1								48	
1254	1510	10		HONEYSUCKLE DR	SHEBAL AVE	CLIFF AVE	2	1	28	873	136	2,852	64	64	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch		6.08	509	16,827	17,336	62,677	82
1057	1540	10		HUNTER DR	SOUTHEASTERN AVE	CHESTNUT ST	3	1	23	687	88	1,843	45	45	Zone 1	10	2060	1,341	45	0	Fall Thru Yr 2								32	
1184	1560	10		INDUSTRIAL DR	LAURA ST	ENTERPRISE ST	2	1	34	915	173	3,630	64	64	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4								50	
1245	1570	10		INDUSTRIAL DR	ENTERPRISE ST	COMMERCE AVE	3	1	41	1,280	291	6,106	75	75	Zone 1	10	1260	1,977	71	0	Fall Thru Yr 1								66	
1197	1580	10		IVY LN	MAIN ST	WILLOW ST	3	1	28	429	67	1,401	61	61	Zone 1	10	1380	694	56	0	Fall Thru Yr 2								48	
1164	1590	10		JEANNIE LN	SOUTH END	MAPLE ST	3	1	35	209	41	853	56	56	Zone 1	10	1400	977	55	0	Fall Thru Yr 1								43	
1218	1600	10		JEANNIE LN	MAPLE ST	ELM ST	3	1	33	613	112	2,360	62	62	Zone 1	10	1240	1,724	60	0	Fall Thru Yr 4								49	
1233	1610	10		JOSH ST	THELMA AVE	N PERRY LN	3	1	28	1,167	182	3,812	74	74	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.68	680	9,530	10,210	34,586	79
1022	1620	10		JUNIPER CIR	CEDAR DR	NE END	3	1	28	168	26	549	79	79	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctrl Pch		6.11	100	3,256	3,356	54,127	85
1042	1630	10		KATIE AVE	WEST END	QUINN AVE	3	1	33	185	34	712	79	79	Zone 1	10	1580	2,647	83	5	Selected Yr 5	23	MicroSurface / Chip Seal + Strctrl Pch		6.17	0	4,393	4,393	55,959	88
1148	1640	10		KENT ST	TOM SAWYER TRL	UNITED AVE	3	1	29	454	73	1,536	65	65	Zone 1	10	1420	2,541	67	0	Fall Thru Yr 3								53	
1178	1650	10		KENT ST	UNITED AVE	AUGUSTANA AVE	2	1	28	1,253	195	4,093	65	65	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1								50	
1124	1660	10		KENT ST	TROY AVE	PENNSYLVANIA AVE	2	1	29	382	62	1,292	80	80	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4								71	
1013	1660	10		KENT ST	AUGUSTANA AVE	TROY AVE	2	1	29	605	97	2,047	53	53	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1								39	
1162	1660	10		KENT ST	PENNSYLVANIA AVE	CLIFF AVE	2	1	29	203	33	687	68	68	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1								54	
1032	1670	10		LAURA ST	ARLENE AVE	AUGUSTANA AVE	2	1	35	293	57	1,196	66	66	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4								52	
1222	1670	10		LAURA ST	CLAUDIA AVE	ARLENE AVE	2	1	35	301	59	1,229	70	70	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4								58	
1176	1670	10		LAURA ST	UNITED AVE	CLAUDIA AVE	2	1	35	537	104	2,193	70	70	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4								58	
1001	1680	10		LAURA ST	AUGUSTANA AVE	PITTSBURGH AVE	2	1	35	311	60	1,270	62	62	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4								47	
1092	1680	10		LAURA ST	TROY AVE	INDUSTRIAL DR	2	1	40	482	107	2,249	57	57	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4								41	
1110	1680	10		LAURA ST	PITTSBURGH AVE	TROY AVE	2	1	35	397	77	1,621	54	54	Zone 1	10	1060	2,118	61	0	Fall Thru Yr 4								39	
1099	1700	10		LEGENDARY DR	ADRIANNA AVE	N PERRY LN	3	1	29	407	66	1,377	70	70	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.67	240	3,443	3,683	14,677	80
1101	1700	10		LEGENDARY DR	A AVE	ADRIANNA AVE	3	1	28	198	31	647	69	69	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.67	110	1,618	1,728	14,677	80
1095	1700	10		LEGENDARY DR	QUINN AVE	A AVE	3	1	27	160	24	504	85	85	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4								78	
1174	1700	10		LEGENDARY DR	NW END	QUINN AVE	3	1	29	114	18	386	87	87	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4								80	
1048	1710	10		LEGENDARY DR	MACEY AVE	LIEN AVE	2	1	31	451	78	1,631	76	76	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10								

City of Harrisburg, SD
Street Inventory and Five Year Rehabilitation Plan By Segment



Current PCI Date: 4/29/2019
Analysis Start Date: 9/13/2019

GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	Paratype Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Pavement Chain Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd2)	Peripheral Concrete Coasts (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI	
																														\$325k/Year Rehabilitation Plan
1044	1770	10		LOIS LN	COTTONWOOD DR	SHEBAL AVE	3	1	28	1,033	161	3,374	58	58	Zone 1	10	1800	2,010	62	0	Fall Thru Yr 1					0	0	45		
1088	1780	10		MACEY AVE	BRANNON DR	LEGENDARY DR	3	1	28	482	75	1,575	80	80	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.65	240	3,938	4,178	14,677	80
1069	1790	10		MACEY AVE	LEGENDARY DR	MAIH ST	3	1	29	1,256	202	4,249	73	73	Zone 1	10	1760	2,840	76	0	Fall Thru Yr 3					0	0	62		
1024	1800	10		MAIN ST	COLUMBIA ST	PRAIRIE ST	3	1	28	368	57	1,202	66	66	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5					0	0	54		
1054	1800	20		MAIN ST	PRAIRIE ST	RAILROAD AVE	3	2	39	363	79	1,652	91	91	Zone 1	10	1500	1,692	91	0	Not Selected					0	0	85		
1058	1810	10		MAIN ST	MILWAUKEE AVE	GRAND AVE	3	1	28	385	60	1,258	74	74	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5					0	0	64		
1113	1820	10		MAIN ST	PERRY LN	IVY LN	3	1	30	265	44	928	50	50	Zone 1	10	1380	694	56	0	Fall Thru Yr 2					0	0	37		
1028	1840	10		MAPLE ST	CLIFF AVE	HARVEST TRL	2	1	30	511	85	1,789	67	67	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2					0	0	53		
1089	1840	10		MAPLE ST	HARVEST TRL	JEANNIE LN	2	1	31	318	55	1,150	70	70	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2					0	0	57		
1216	1840	10		MAPLE ST	JEANNIE LN	EMMETT TRL	2	1	31	570	98	2,062	65	65	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2					0	0	51		
1130	1850	10		MAPLE ST	EMMETT TRL	COLUMBIA ST	2	1	27	423	63	1,332	62	62	Zone 1	10	1520	2,816	66	0	Fall Thru Yr 2					0	0	48		
1011	1850	10		MAPLE ST	MILWAUKEE AVE	GRAND AVE	2	1	28	381	59	1,245	63	63	Zone 1	10	1540	2,087	58	0	Fall Thru Yr 3					0	0	49		
1059	1850	10		MAPLE ST	RAILROAD AVE	MILWAUKEE AVE	2	1	28	222	35	725	52	52	Zone 1	10	1540	2,087	58	0	Fall Thru Yr 3					0	0	38		
1102	1850	10		MAPLE ST	COLUMBIA ST	PRAIRIE ST	2	1	28	366	57	1,196	56	56	Zone 1	10	1540	2,087	58	0	Fall Thru Yr 3					0	0	40		
1213	1850	10		MAPLE ST	PRAIRIE ST	RAILROAD AVE	2	1	27	370	56	1,166	46	46	Zone 1	10	1540	2,087	58	0	Fall Thru Yr 3					0	0	31		
1232	1850	10		MAPLE ST	GRAND AVE	PERRY LN	2	1	27	748	112	2,356	63	63	Zone 1	10	1540	2,087	58	0	Fall Thru Yr 3					0	0	49		
1019	1860	10		MAPLE ST	PERRY LN	EAST END	3	1	37	1,335	274	5,763	58	58	Zone 1	10	2040	2,665	65	0	Fall Thru Yr 2					0	0	44		
1031	1870	10		MARIE CIR	SW END	MARIE DR	3	1	40	314	70	1,473	70	70	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4					0	0	57		
1009	1880	10		MARIE DR	THELMA AVE	MARIE CIR	3	1	28	642	100	2,097	85	85	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4					0	0	78		
1116	1880	10		MARIE DR	MARIE CIR	N PERRY LN	3	1	28	801	125	2,617	77	77	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4					0	0	66		
1085	1890	10		MAIH ST	QUINN AVE	ADRIANNA AVE	3	1	28	355	55	1,160	90	90	Zone 1	10	1580	2,647	83	5	Selected Yr 5	23	MicroSurface / Chip Seal + Strctr Pch	6.33	184	7,157	7,341	55,959	88	
1158	1890	10		MAIH ST	WEST END	QUINN AVE	3	1	28	164	26	536	87	87	Zone 1	10	1580	2,647	83	5	Selected Yr 5	23	MicroSurface / Chip Seal + Strctr Pch	6.35	99	3,307	3,406	55,959	88	
1230	1890	10		MAIH ST	ADRIANNA AVE	N PERRY LN	3	1	29	319	51	1,079	85	85	Zone 1	10	1580	2,647	83	5	Selected Yr 5	23	MicroSurface / Chip Seal + Strctr Pch	6.35	193	6,657	6,850	55,959	88	
1050	1900	10		MAIH ST	MACEY AVE	LIEN AVE	2	1	29	318	51	1,076	85	85	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.72	130	2,798	2,928	28,313	79	
1081	1900	10		MAIH ST	N PERRY LN	MACEY AVE	2	1	28	315	49	1,029	83	83	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.77	180	2,675	2,855	28,313	79	
1144	1900	10		MAIH ST	LIEN AVE	476 AVE	2	1	32	212	38	791	71	71	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.71	90	2,605	2,147	28,313	79	
1079	1920	10		MILWAUKEE AVE	MAIN ST	WILLOW ST	3	1	26	324	47	993	75	75	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5					0	0	65		
1237	1920	10		MILWAUKEE AVE	ELM ST	MAIN ST	3	1	29	332	53	1,123	82	82	Zone 1	10	1480	3,129	71	0	Fall Thru Yr 5					0	0	75		
1064	1920	10		MILWAUKEE AVE	MAPLE ST	ELM ST	3	1	28	335	52	1,094	63	63	Zone 1	10	1620	1,055	58	0	Fall Thru Yr 3					0	0	50		
1115	1960	10		PENNSYLVANIA AVE	THOMS ST	KENT ST	3	1	27	426	64	1,342	66	66	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)	23.48	2,187	29,321	31,508	191,396	88	
1203	1930	10	N	PERRY LN	SOUTH END	JOSH ST	3	1	40	135	30	630	73	73	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.63	80	1,575	1,655	14,677	79	
1119	1940	10	N	PERRY LN	BRANNON DR	LEGENDARY DR	2	1	40	444	99	2,072	76	76	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	260	5,387	5,647	28,313	78	
1165	1940	10	N	PERRY LN	JOSH ST	MARIE DR	2	1	40	135	30	630	92	92	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	80	1,638	1,718	28,313	79	
1225	1940	10	N	PERRY LN	MARIE DR	BRANNON DR	2	1	40	289	64	1,349	82	82	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	170	3,507	3,677	28,313	79	
1008	1950	10	N	PERRY LN	LEGENDARY DR	MAIH ST	3	1	40	1,252	278	5,843	82	82	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.63	730	14,608	15,338	34,586	80	
1093	1950	10	N	PERRY LN	MAIH ST	NORTH END	3	1	39	89	19	405	54	54	Zone 1	10	1760	2,840	76	0	Fall Thru Yr 3					0	0	40		
1033	1980	10		PERRY LN	SOUTHEASTERN AVE	WOODMONT AVE	2	1	35	231	45	943	73	73	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.10	470	2,452	2,922	17,883	79	
1062	1980	10		PERRY LN	WOODMONT AVE	LINDEN AVE	2	1	35	483	94	1,972	62	62	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.09	970	5,127	6,097	17,883	79	
1177	1980	10		PERRY LN	LINDEN AVE	HEMLOCK ST	2	1	35	702	137	2,867	62	62	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.09	1,410	7,454	8,864	17,883	79	
1196	1980	10		PERRY LN	TIGER ST	CHESTNUT ST	2	1	35	853	166	3,483	50	50	Zone 1	10	1660	1,220	53	0	Fall Thru Yr 1					0	0	35		
1241	1980	10		PERRY LN	HEMLOCK ST	TIGER ST	2	1	34	367	69	1,456	60	60	Zone 1	10	1660	1,220	53	0	Fall Thru Yr 1					0	0	45		
1155	1990	10		PERRY LN	CHESTNUT ST	WALNUT ST	2	1	33	291	53	1,120	52	52	Zone 1	10	1730	1,329	46	2	Selected Yr 2	50	FWM + Thick Overlay (> 2.0 - 3.0)	43.46	4,695	43,982	48,677	198,166	89	
1198	1990	10		PERRY LN	WALNUT ST	MAPLE ST	2	1	34	334	63	1,325	55	55	Zone 1	10	1730	1,329	46	2	Selected Yr 2	50	FWM + Thick Overlay (> 2.0 - 3.0)	41.00	2,296	52,033	54,329	198,166	89	
1026	2000	10		PERRY LN	MAIN ST	WILLOW ST	2	1	27	441	66	1,389	49	49	Zone 1	10	1701	718	94	0	Not Selected					0	0	84		
1142	2000	10		PERRY LN	ELM ST	MAIN ST	2	1	30	277	46	970	53	53	Zone 1	10	1701	718	94	0	Not Selected					0	0	84		
1169	2000	10		PERRY LN	MAPLE ST	ELM ST	2	1	35	301	59	1,229	60	60	Zone 1	10	1700	301	60	3	Selected Yr 3	40	EM/FWM + Moderate Overlay (2.0 - 3.0)	30.98	998	37,081	38,079	38,079	89	
1129	2020	10		PHILLY ST	TROY AVE	EAST END	3	1	28	367	57	1,199	66	66	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)	23.57	2,064	26,196	28,260	191,396	88	
1231	2020	10		PHILLY ST	PITTSBURGH AVE	TROY AVE	3	1	28	390	61	1,274	66	66	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)	23.51	2,113	27,835	29,948	191,396	88	
1200	2030	10		PITTSBURGH AVE	COYTE ST	PHILLY ST	3	1	28	562	91	1,901	58	58	Zone 1	10	1220	1,482	57	0	Fall Thru Yr 3					0	0	44		
1202	2030	10		PITTSBURGH AVE	PHILLY ST	LAURA ST	3	1	28	299	47	977	58	58	Zone 1	10	1220	1,482	57	0	Fall Thru Yr 3					0	0	45		
1208	2040	10		POPLAR LN	HONEYSUCKLE DR	ROSEWOOD DR	3	1	28	308	48	1,006	66	66	Zone 1	10	1820	2,681	68	0	Fall Thru Yr 4					0	0	54		
1221	2050	10		PRAIRIE CIRCLE	SE END	PRAIRIE ST	3	1	33																					

City of Harrisburg, SD
Street Inventory and Five Year Rehabilitation Plan By Segment



Current PCI Date: 4/29/2019
Analysis Start Date: 9/13/2019

GISID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FunCL Code	Paratype Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Pavement Chain Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd2)	Peripheral Concrete Coasts (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI	
																														\$325k/Year Rehabilitation Plan
1045	2100	10		QUINN AVE	LEGENDARY DR	KATIE AVE	3	1	29	426	69	1,441	78	78	Zone 1	10	1760	2,840	76	0	Fall Thru Yr 3							0	0	69
1043	2110	10		RAILROAD AVE	WALNUT ST	MAPLE ST	3	1	27	334	50	1,052	54	54	Zone 1	10	1780	2,209	61	0	Fall Thru Yr 1							0	0	40
1018	2120	10		RAILROAD AVE	MAPLE ST	ELM ST	3	2	33	327	60	1,259	84	84	Zone 1	10	1500	1,692	91	0	Not Selected							0	0	79
1242	2120	20		RAILROAD AVE	ELM ST	MAIN ST	3	2	30	335	56	1,173	99	99	Zone 1	10	1500	1,692	91	0	Not Selected							0	0	90
1002	2120	30		RAILROAD AVE	MAIN ST	WILLOW ST	3	2	30	335	56	1,173	94	94	Zone 1	10	1500	1,692	91	0	Not Selected							0	0	87
1003	2130	10		RAVEN AVE	TIGER ST	CHESTNUT ST	3	1	29	861	139	2,913	70	70	Zone 1	10	1470	1,167	68	1	Forced Yr 1	10	Slurry Seal / Seal Coat		3.10	1,740	7,283	9,023	13,123	79
1149	2130	10		RAVEN AVE	HEMLOCK ST	TIGER ST	3	1	28	315	49	1,029	51	51	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat		3.81	1,350	2,573	3,923	23,579	80
1157	2140	10		ROSEWOOD DR	POPLAR LN	SHEBAL AVE	3	1	28	977	152	3,192	66	66	Zone 1	10	1800	2,010	62	0	Fall Thru Yr 1							0	0	54
1038	2140	10		ROSEWOOD DR	POPLAR LN	SPRUCE ST	3	1	28	1,024	159	3,345	68	68	Zone 1	10	1820	2,681	68	0	Fall Thru Yr 4							0	0	56
1030	2150	10		SAINT GREGORY ST	SAINT JEROME ST	AUGUSTANA AVE	3	1	28	325	51	1,062	77	77	Zone 1	10	1840	2,776	70	0	Fall Thru Yr 5							0	0	68
1114	2150	10		SAINT GREGORY ST	UNITED AVE	SAINT JEROME ST	3	1	29	1,144	184	3,871	71	71	Zone 1	10	1840	2,776	70	0	Fall Thru Yr 5							0	0	60
1219	2160	10		SAINT JEROME ST	UNITED AVE	SAINT GREGORY ST	3	1	28	1,307	203	4,270	67	67	Zone 1	10	1840	2,776	70	0	Fall Thru Yr 5							0	0	55
1070	2170	10		SHEBAL AVE	SOUTH END	LOIS LN	3	1	28	185	29	604	71	71	Zone 1	10	1820	2,681	68	0	Fall Thru Yr 4							0	0	60
1121	2170	10		SHEBAL AVE	LOIS LN	HONEYSUCKLE DR	3	1	28	351	55	1,147	81	81	Zone 1	10	1820	2,681	68	0	Fall Thru Yr 4							0	0	73
1179	2180	10		SHEBAL AVE	CEDAR DR	SPRUCE ST	2	1	28	1,159	180	3,786	74	74	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctr Pch		6.05	582	22,337	22,919	62,677	82
1147	2180	10		SHEBAL AVE	SPRUCE ST	WILLOW ST	2	1	28	422	66	1,379	59	59	Zone 1	10	1340	2,384	63	0	Fall Thru Yr 1							0	0	44
1186	2180	10		SHEBAL AVE	HONEYSUCKLE DR	ROSEWOOD DR	2	1	28	292	45	954	67	67	Zone 1	10	1340	2,384	63	0	Fall Thru Yr 1							0	0	54
1211	2180	10		SHEBAL AVE	ROSEWOOD DR	CEDAR DR	2	1	28	309	48	1,009	69	69	Zone 1	10	1340	2,384	63	0	Fall Thru Yr 1							0	0	56
1152	2200	10		SPRUCE ST	HONEYSUCKLE DR	ROSEWOOD DR	3	1	28	340	53	1,111	72	72	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctr Pch		6.06	146	6,589	6,735	54,127	85
1252	2200	10		SPRUCE ST	ROSEWOOD DR	CEDAR DR	3	1	29	337	54	1,140	68	68	Zone 1	10	1860	2,652	75	3	Selected Yr 3	23	MicroSurface / Chip Seal + Strctr Pch		6.08	173	6,761	6,934	54,127	85
1090	2200	10		SPRUCE ST	CEDAR DR	SHEBAL AVE	3	1	28	710	110	2,319	61	61	Zone 1	10	1880	1,789	56	0	Fall Thru Yr 2							0	0	48
1067	2210	10		TEDDY ST	UNITED AVE	AUGUSTANA AVE	3	1	27	1,231	185	3,878	66	66	Zone 1	10	1420	2,541	67	0	Fall Thru Yr 3							0	0	54
1020	2220	10		THELMA AVE	JOSH ST	MARIE DR	3	1	27	933	140	2,939	80	80	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.68	540	7,348	7,888	34,586	79
1168	2220	10		THELMA AVE	SOUTH END	JOSH ST	3	1	28	131	20	428	76	76	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat		2.69	80	1,070	1,150	34,586	79
1249	2220	10		THELMA AVE	MARIE DR	NORTH END	3	1	28	189	29	617	79	79	Zone 1	10	1560	3,486	78	0	Fall Thru Yr 4							0	0	71
1220	2230	10		THOMS ST	TROY AVE	PENNSYLVANIA AVE	3	1	28	303	47	990	60	60	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.80	1,932	21,630	23,562	191,396	88
1182	2240	10		TIGER ST	PRAIRIE ST	EAST END	3	1	29	126	20	426	64	64	Zone 1	10	1160	3,662	76	0	Fall Thru Yr 3							0	0	52
1244	2240	10		TIGER ST	EMMETT TRL	PRAIRIE ST	3	1	29	572	92	1,935	73	73	Zone 1	10	1160	3,662	76	0	Fall Thru Yr 3							0	0	63
1215	2250	10		TIGER ST	WEST END	HICKORY LN	3	1	27	123	18	387	52	52	Zone 1	10	1080	1,621	54	0	Fall Thru Yr 1							0	0	36
1073	2250	10		TIGER ST	HICKORY LN	GRAND AVE	3	1	28	350	54	1,143	63	63	Zone 1	10	1280	1,219	62	0	Fall Thru Yr 1							0	0	51
1075	2250	10		TIGER ST	GRAND AVE	PERRY LN	3	1	27	698	105	2,199	59	59	Zone 1	10	1940	2,051	54	0	Fall Thru Yr 1							0	0	46
1234	2260	10		TIGER ST	PERRY LN	FALCON AVE	3	1	28	312	49	1,019	51	51	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat		4.13	1,660	2,548	4,208	23,579	80
1253	2260	10		TIGER ST	FALCON AVE	EAGLE AVE	3	1	28	303	47	990	49	49	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat		4.13	1,610	2,475	4,085	23,579	79
1187	2260	10		TIGER ST	EAGLE AVE	RAVEN AVE	3	1	27	319	48	1,005	48	48	Zone 1	10	1960	1,180	46	1	Forced Yr 1	10	Slurry Seal / Seal Coat		6.29	3,810	2,513	6,323	23,363	79
1188	2290	10		TOM SAWYER TRL	SW END	KENT ST	3	1	39	562	122	2,557	68	68	Zone 1	10	1420	2,541	67	0	Fall Thru Yr 3							0	0	56
1120	2300	10		TROY AVE	PHILLY ST	LAURA ST	3	1	28	298	46	973	60	60	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.82	1,923	21,258	23,181	191,396	88
1141	2310	10		TROY AVE	THOMS ST	KENT ST	3	1	27	452	68	1,424	68	68	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.42	2,241	31,112	33,353	191,396	88
1195	2310	10		TROY AVE	LAURA ST	THOMS ST	3	1	28	276	43	902	69	69	Zone 1	10	1980	2,512	65	3	Selected Yr 3	30	Edge Mill + Thin Overlay (1.5 - 2.0)		23.93	1,877	19,707	21,584	191,396	88
1071	2320	10		UNITED AVE	LEONARD ST	LAURA ST	3	1	28	294	46	960	73	73	Zone 1	10	1420	2,541	67	0	Fall Thru Yr 3							0	0	63
1123	2320	10		UNITED AVE	CLAUDIA AVE	LEONARD ST	3	1	27	840	126	2,646	55	55	Zone 1	10	2000	1,275	55	0	Fall Thru Yr 1							0	0	42
1063	2330	10		UNITED AVE	TEDDY ST	KENT ST	2	1	27	307	46	967	64	64	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1							0	0	50
1185	2330	10		UNITED AVE	LAURA ST	TEDDY ST	2	1	29	341	55	1,154	64	64	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1							0	0	49
1229	2340	10		UNITED AVE	KENT ST	SAINT JEROME ST	2	1	29	435	70	1,472	75	75	Zone 1	10	1360	3,545	69	0	Fall Thru Yr 4							0	0	64
1068	2340	10		UNITED AVE	SAINT GREGORY ST	272 ST	2	1	29	222	36	751	62	62	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1							0	0	48
1189	2340	10		UNITED AVE	SAINT JEROME ST	SAINT GREGORY ST	2	1	29	325	52	1,100	72	72	Zone 1	10	2020	3,256	63	0	Fall Thru Yr 1							0	0	60
1047	2370	10		WALNUT ST	EMMETT TRL	COLUMBIA ST	3	1	38	382	81	1,694	53	53	Zone 1	10	1140	2,527	70	0	Fall Thru Yr 5							0	0	40
1205	2370	10		WALNUT ST	WALNUT ST	PRAIRIE ST	3	1	37	373	77	1,610	75	75	Zone 1	10	1160	3,662	76	0	Fall Thru Yr 3							0	0	65
1082	2370	10		WALNUT ST	PRAIRIE ST	RAILROAD AVE	3	1	36	433	87	1,819	64	64	Zone 1	10	1780	2,209	61	0	Fall Thru Yr 1							0	0	51
1035	2380	10		WALNUT ST	GRAND AVE	PERRY LN	3	1	36	749	150	3,146	67	67	Zone 1	10	1780	2,209	61	0	Fall Thru Yr 1							0	0	55
1060	2380	10		WALNUT ST	WEST END	GRAND AVE	3	1	29	359	58	1,215	43	43	Zone 1	10	2060	1,341	45	0	Fall Thru Yr 2							0	0	29
1006	2390	10		WALNUT ST	PERRY LN	EAST END	3	1	28																					

Appendix C

\$325K/Year Rehabilitation Plans by Year



ASID	Street Number	Street Name	On Street	From Street	To Street	FuncL Code	Flwgr Code	Rehab Code	Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd)	Peripheral Concrete Costs (\$)	Segment Payment Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI											
1108	1050	ASH GROVE ST		GREYHAWK CT	LINDEN AVE	3	1	28	340	53	1,111	68	68	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.65	170	2,778	2,948	22,314	80
1180	1450	GREYHAWK CT		ASH GROVE ST	LINDEN AVE	3	1	28	612	95	1,999	66	66	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.68	360	4,998	5,358	22,314	80
1076	1750	LINDEN AVE		ASH GROVE ST	GREYHAWK CIR	3	1	40	335	74	1,563	73	73	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.62	190	3,908	4,098	22,314	80
1228	1750	LINDEN AVE		GREYHAWK CIR	PERRY LN	3	1	38	341	72	1,512	71	71	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.63	200	3,780	3,980	22,314	80
1040	2400	WOODMONT AVE		ASH GROVE ST	PERRY LN	3	1	28	677	105	2,212	70	70	Zone 1	10	1020	2,305	70	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.68	400	5,530	5,930	22,314	80
1161	1440	GREYHAWK CIR		LINDEN AVE	EAST END	3	1	54	183	54	1,143	68	68	Zone 1	10	1290	183	68	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.76	300	2,858	3,158	3,158	80
1098	1500	HONEYUCKLE DR		SPRUCE ST	ALMOND AVE	2	1	28	242	38	791	82	82	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch	6.03	102	4,667	4,769	62,677	82
1163	1500	HONEYUCKLE DR		ALMOND AVE	POPLAR LN	2	1	27	921	138	2,901	77	77	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch	6.09	537	17,116	17,653	62,677	82
1254	1510	HONEYUCKLE DR		SHEBAL AVE	CLIFF AVE	2	1	28	873	136	2,852	64	64	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch	6.08	509	16,827	17,336	62,677	82
1179	2180	SHEBAL AVE		BRANNON DR	SPRUCE ST	2	1	28	1,159	180	3,786	74	74	Zone 1	10	1320	3,195	73	1	Selected Yr 1	23	MicroSurface / Chip Seal + Strctrl Pch	6.05	582	22,337	22,919	62,677	82
1194	1050	ASH GROVE ST		LINDEN AVE	WOODMONT AVE	3	1	28	487	76	1,591	65	65	Zone 1	10	1450	796	62	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.12	980	3,978	4,958	8,724	80
1251	1450	GREYHAWK CT		SOUTH END	ASH GROVE ST	3	1	27	124	19	391	51	51	Zone 1	10	1450	796	62	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.14	250	978	1,228	8,724	80
1004	1750	LINDEN AVE		SOUTH END	ASH GROVE ST	3	1	40	185	41	863	63	63	Zone 1	10	1450	796	62	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.94	380	2,158	2,538	8,724	80
1052	1470	HEMLOCK ST		RAVEN AVE	EAST END	3	1	49	212	58	1,212	61	61	Zone 1	10	1460	212	61	1	Selected Yr 1	30	Edge Mill + Thin Overlay (1.5 - 2.0)	22.41	1,706	25,452	27,158	27,158	85
1191	1760	LINDEN AVE		PERRY LN	HEMLOCK ST	3	1	39	306	66	1,392	62	62	Zone 1	10	1470	1,167	68	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.95	620	3,480	4,100	13,123	80
1003	2130	RAVEN AVE		TIGER ST	CHESTNUT ST	3	1	29	861	139	2,913	70	70	Zone 1	10	1470	1,167	68	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.10	1,740	7,283	9,023	13,123	79
1226	1110	BRANNON DR		N PERRY LN	MACEY AVE	3	1	28	392	61	1,281	73	73	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.68	230	3,203	3,433	14,677	79
1099	1700	LEGENDARY DR		N PERRY LN	N PERRY LN	3	1	29	407	66	1,377	70	70	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.67	240	3,443	3,683	14,677	80
1101	1700	LEGENDARY DR		A AVE	ADRIANNA AVE	3	1	28	198	31	647	69	69	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.67	110	1,618	1,728	14,677	80
1088	1780	MACEY AVE		BRANNON DR	LEGENDARY DR	3	1	28	462	75	1,575	80	80	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.65	240	3,398	3,638	14,677	80
1203	1930	N PERRY LN		SOUTH END	JOSH ST	3	1	40	135	30	630	73	73	Zone 1	10	1600	1,614	74	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.63	80	1,575	1,655	14,677	79
1048	1710	LEGENDARY DR		MACEY AVE	LIEN AVE	2	1	31	451	78	1,631	76	76	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.76	260	4,241	4,501	28,313	79
1056	1710	LEGENDARY DR		LIEN AVE	476 AVE	2	1	27	214	32	674	72	72	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.76	110	1,752	1,862	28,313	78
1173	1710	LEGENDARY DR		N PERRY LN	MACEY AVE	2	1	29	318	51	1,076	70	70	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.77	180	2,798	2,978	28,313	79
1050	1900	MIH ST		MACEY AVE	LIEN AVE	2	1	29	318	51	1,076	85	85	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.72	130	2,798	2,928	28,313	79
1081	1900	MIH ST		N PERRY LN	MACEY AVE	2	1	28	315	49	1,029	83	83	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.77	180	2,675	2,855	28,313	79
1144	1900	MIH ST		476 AVE	LIEN AVE	2	1	32	212	38	791	71	71	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.71	90	2,057	2,147	28,313	79
1119	1940	N PERRY LN		BRANNON DR	LEGENDARY DR	2	1	40	444	99	2,072	76	76	Zone 1	10	1640	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	260	5,387	5,647	28,313	78
1185	1940	N PERRY LN		JOSH ST	MARIE DR	2	1	40	135	30	630	92	92	Zone 1	10	1600	2,696	78	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	80	1,638	1,718	28,313	79
1225	1940	N PERRY LN		MARIE DR	BRANNON DR	2	1	40	289	64	1,349	82	82	Zone 1	10	1640	2,696	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.73	170	3,507	3,677	28,313	79
1033	1980	PERRY LN		SOUTHEASTERN AVE	WOODMONT AVE	2	1	35	231	45	943	73	73	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.10	470	2,522	2,922	17,883	79
1062	1980	PERRY LN		WOODMONT AVE	LINDEN AVE	2	1	35	483	94	1,972	62	62	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.09	970	4,257	6,097	17,883	79
1177	1980	PERRY LN		HEMLOCK ST	LINDEN AVE	2	1	35	702	137	2,867	62	62	Zone 1	10	1680	1,416	64	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.09	1,410	7,454	8,864	17,883	79
1233	1610	JOSH ST		THELMA AVE	N PERRY LN	3	1	28	1,167	182	3,812	74	74	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.68	680	9,530	10,210	34,586	79
1008	1950	N PERRY LN		MIH ST	LEGENDARY DR	3	1	40	1,252	278	5,843	82	82	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.63	730	14,608	15,338	34,586	80
1020	2220	THELMA AVE		JOSH ST	MARIE DR	3	1	27	933	140	2,939	80	80	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.68	540	7,348	7,888	34,586	79
1168	2220	THELMA AVE		SOUTH END	JOSH ST	3	1	28	131	20	428	76	76	Zone 1	10	1900	3,483	79	1	Forced Yr 1	10	Slurry Seal / Seal Coat	2.69	80	1,070	1,150	34,586	79
1175	1410	FALCON AVE		TIGER ST	CHESTNUT ST	3	1	27	860	129	2,709	50	50	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat	4.19	4,590	6,173	11,363	23,579	80
1149	2130	RAVEN AVE		HEMLOCK ST	TIGER ST	3	1	28	315	49	1,029	51	51	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat	3.81	1,350	2,573	3,923	23,579	80
1234	2260	TIGER ST		FALCON AVE	PERRY LN	3	1	28	312	49	1,019	51	51	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat	4.13	1,660	2,548	4,208	23,579	80
1253	2260	TIGER ST		FALCON AVE	EAGLE AVE	3	1	28	303	47	990	49	49	Zone 1	10	1920	1,790	50	1	Forced Yr 1	10	Slurry Seal / Seal Coat	4.13	1,610	2,475	4,085	23,579	80
1167	1300	EAGLE AVE		TIGER ST	CHESTNUT ST	3	1	27	861	129	2,712	45	45	Zone 1	10	1960	1,180	46	1	Forced Yr 1	10	Slurry Seal / Seal Coat	6.28	10,260	6,780	17,040	23,363	80
1187	2260	TIGER ST		RAVEN AVE	EAGLE AVE	3	1	27	319	48	1,005	48	48	Zone 1	10	1960	1,180	46	1	Forced Yr 1	10	Slurry Seal / Seal Coat	6.29	3,810	2,513	6,323	23,363	79
1223	1060	AUGUSTANA AVE		SOUTH END	COYOTE ST	3	1	40	123	27	574	73	73	Zone 1	10	1100	1,478	63	2									



\$325K/Year Rehabilitation Plan

ASID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	Fu/CL Code	Pavement Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (sqyd)	Pavement Area (sqyd)	Pavement Crdn Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/sqyd)	Peripheral Concrete Costs (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI
1222	1670	10		LAURA ST	CLAUDIA AVE	ARLENE AVE	2	1	35	301	59	1,229	70	70	Zone 1	10	1060	2,118	61	6+	Fall Thru Yr 4				0	0	58		
1001	1680	10		LAURA ST	AUGUSTANA AVE	PITTSBURGH AVE	2	1	35	311	60	1,270	62	62	Zone 1	10	1060	2,118	61	6+	Fall Thru Yr 4				0	0	47		
1092	1680	10		LAURA ST	TROY AVE	INDUSTRIAL DR	2	1	40	482	107	2,249	57	57	Zone 1	10	1060	2,118	61	6+	Fall Thru Yr 4				0	0	41		
1110	1680	10		LAURA ST	PITTSBURGH AVE	TROY AVE	2	1	35	397	77	1,621	54	54	Zone 1	10	1060	2,118	61	6+	Fall Thru Yr 4				0	0	39		
1094	1140	10		CHESTNUT ST	HICKORY LN	QUAIL CIR	3	1	38	351	74	1,556	58	58	Zone 1	10	1080	1,621	54	6+	Fall Thru Yr 1				0	0	44		
1138	1480	10		HICKORY LN	TIGER ST	GRAND AVE	3	1	38	1,147	242	5,085	54	54	Zone 1	10	1080	1,621	54	6+	Fall Thru Yr 1				0	0	40		
1215	2250	10		TIGER ST	WEST END	HICKORY LN	3	1	27	123	18	387	52	52	Zone 1	10	1080	1,621	54	6+	Fall Thru Yr 1				0	0	36		
1077	1200	10		CLIFF AVE	HONEYSUCKLE DR	MAPLE ST	1	1	41	1,001	228	4,788	63	63	Zone 1	10	1120	2,084	64	6+	Fall Thru Yr 2				0	0	46		
1204	1200	10		CLIFF AVE	DS@1365N 475 AVE	HONEYSUCKLE DR	1	1	40	1,083	241	5,054	65	65	Zone 1	10	1120	2,084	64	6+	Fall Thru Yr 2				0	0	49		
1083	1230	10		COLUMBIA CIR	COLUMBIA CIR	EAST END	3	1	43	178	43	898	60	60	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	47		
1154	1230	10		COLUMBIA ST	WALNUT ST	MAPLE ST	3	1	29	329	53	1,113	71	71	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	61		
1103	1360	10		EMMETT TRL	TIGER ST	WALNUT ST	3	1	34	1,198	226	4,752	77	77	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	69		
1240	1360	10		EMMETT TRL	WALNUT ST	MAPLE ST	3	1	36	124	25	521	70	70	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	60		
1137	2060	10		PRAIRIE ST	PRAIRIE CIRCLE	WALNUT ST	3	1	30	316	53	1,106	71	71	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	60		
1047	2370	10		WALNUT ST	EMMETT TRL	COLUMBIA ST	3	1	38	382	81	1,694	53	53	Zone 1	10	1140	2,527	70	6+	Fall Thru Yr 5				0	0	40		
1074	1230	10		COLUMBIA ST	PRAIRIE ST	WALNUT ST	3	1	28	1,162	181	3,796	79	79	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	71		
1221	2050	10		PRAIRIE CIRCLE	PRAIRIE ST	SE END	3	1	33	411	75	1,584	66	66	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	54		
1029	2060	10		PRAIRIE ST	COLUMBIA ST	PRAIRIE CIRCLE	3	1	29	533	86	1,803	85	85	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	78		
1201	2060	10		PRAIRIE ST	SOUTH END	TIGER ST	3	1	33	149	27	574	79	79	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	71		
1256	2060	10		PRAIRIE ST	TIGER ST	COLUMBIA ST	3	1	29	398	54	1,137	79	79	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	71		
1182	2240	10		TIGER ST	PRAIRIE ST	EAST END	3	1	29	126	20	426	64	64	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	52		
1244	2240	10		TIGER ST	EMMETT TRL	PRAIRIE ST	3	1	29	572	92	1,935	73	73	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	63		
1205	2370	10		WALNUT ST	COLUMBIA ST	PRAIRIE ST	3	1	37	373	77	1,610	75	75	Zone 1	10	1160	3,662	76	6+	Fall Thru Yr 3				0	0	65		
1041	1020	10		ALMOND AVE	SOUTH END	LOIS LN	3	1	28	153	24	500	63	63	Zone 1	10	1180	1,661	50	6+	Fall Thru Yr 4				0	0	50		
1072	1020	10		ALMOND AVE	CHOKECHERRY ST	COTTONWOOD DR	3	1	28	916	142	2,992	43	43	Zone 1	10	1180	1,661	50	6+	Fall Thru Yr 4				0	0	30		
1214	1020	10		ALMOND AVE	LOIS LN	CHOKECHERRY ST	3	1	28	302	47	987	59	59	Zone 1	10	1180	1,661	50	6+	Fall Thru Yr 4				0	0	45		
1186	1270	10		COTTONWOOD DR	WEST END	ALMOND AVE	3	1	28	141	22	461	61	61	Zone 1	10	1180	1,661	50	6+	Fall Thru Yr 4				0	0	48		
1014	1770	10		LOIS LN	WEST END	ALMOND AVE	3	1	28	149	23	487	52	52	Zone 1	10	1180	1,661	50	6+	Fall Thru Yr 4				0	0	39		
1086	1170	10		CHOKECHERRY ST	ALMOND AVE	COTTONWOOD DR	3	1	26	531	77	1,811	54	54	Zone 1	10	1200	887	56	6+	Fall Thru Yr 2				0	0	41		
1235	1270	10		COTTONWOOD DR	LOIS LN	CHOKECHERRY ST	3	1	27	366	53	1,121	58	58	Zone 1	10	1200	887	56	6+	Fall Thru Yr 2				0	0	45		
1183	1770	10		LOIS LN	ALMOND AVE	COTTONWOOD DR	3	1	28	574	89	1,875	55	55	Zone 1	10	1210	574	55	6+	Fall Thru Yr 1				0	0	41		
1046	1280	10		COYOTE ST	UNITED AVE	ARLENE AVE	3	1	27	301	45	948	50	50	Zone 1	10	1220	1,482	57	6+	Fall Thru Yr 3				0	0	36		
1097	1280	10		COYOTE ST	ARLENE AVE	AUGUSTANA AVE	3	1	27	300	45	945	64	64	Zone 1	10	1220	1,482	57	6+	Fall Thru Yr 3				0	0	52		
1200	2030	10		PITTSBURGH AVE	COYOTE ST	PHILLY ST	3	1	28	582	91	1,901	58	58	Zone 1	10	1220	1,482	57	6+	Fall Thru Yr 3				0	0	44		
1202	2030	10		PITTSBURGH AVE	PHILLY ST	LAURA ST	3	1	28	299	47	977	58	58	Zone 1	10	1220	1,482	57	6+	Fall Thru Yr 3				0	0	45		
1066	1290	10		CYPRESS CIR	WEST END	CLIFF AVE	3	1	27	375	56	1,181	58	58	Zone 1	10	1240	1,724	60	6+	Fall Thru Yr 4				0	0	46		
1126	1310	10		ELM ST	HARVEST TRL	JEANNIE LN	3	1	37	318	65	1,373	62	62	Zone 1	10	1240	1,724	60	6+	Fall Thru Yr 4				0	0	49		
1055	1320	10		ELM ST	EMMETT TRL	COLUMBIA ST	3	1	28	418	65	1,365	57	57	Zone 1	10	1240	1,724	60	6+	Fall Thru Yr 4				0	0	43		
1218	1600	10		JEANNIE LN	MAPLE ST	ELM ST	3	1	33	613	112	2,360	62	62	Zone 1	10	1240	1,724	60	6+	Fall Thru Yr 4				0	0	49		
1145	1400	10		ENTERPRISE ST	SOUTH END	INDUSTRIAL DR	3	1	33	697	128	2,683	62	62	Zone 1	10	1260	1,977	71	6+	Fall Thru Yr 4				0	0	50		
1245	1570	10		INDUSTRIAL DR	ENTERPRISE ST	COMMERCE AVE	3	1	41	1,280	291	6,106	75	75	Zone 1	10	1280	1,977	71	6+	Fall Thru Yr 1				0	0	66		
1140	2080	10		PROSPECT ST	CLIFF AVE	272 ST	3	1	29	1,003	162	3,393	69	69	Zone 1	10	1270	1,003	69	6+	Fall Thru Yr 4				0	0	58		
1172	1140	10		CHESTNUT ST	QUAIL CIR	PERRY LN	3	1	39	345	75	1,570	70	70	Zone 1	10	1280	1,219	62	6+	Fall Thru Yr 1				0	0	59		
1087	2090	10		QUAIL CIR	SOUTH END	CHESTNUT ST	3	1	33	524	96	2,013	55	55	Zone 1	10	1280	1,219	62	6+	Fall Thru Yr 1				0	0	41		
1073	2250	10		TIGER ST	HICKORY LN	GRAND AVE	3	1	28	350	54	1,143	63	63	Zone 1	10	1280	1,219	62	6+	Fall Thru Yr 1				0	0	51		
1023	1240	10		COLUMBIA ST	DS@146N MAIN ST	WILLOW ST	3	1	29	178	29	602	74	74	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	64		
1039	1240	10		COLUMBIA ST	ELM ST	MAIN ST	3	1	28	254	40	830	78	78	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	69		
1080	1240	10		COLUMBIA ST	MAIN ST	DS@146N MAIN ST	3	1	29	146	24	494	89	89	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	82		
1156	1240	10		COLUMBIA ST	MAPLE ST	ELM ST	3	1	28	330	51	1,078	79	79	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	71		
1227	1250	10		WILLOW ST	NORTH END	WILLOW ST	3	1	39	820	178	3,731	76	76	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	67		
1250	1460	10		HARVEST TRL	MAPLE ST	ELM ST	3	1	30	561	94	1,964	75	75	Zone 1	10	1300	2,289	77	6+	Fall Thru Yr 4				0	0	65		
1134	1500	10		HONEYSUCKLE DR	POPLAR LN	SHEBAL AVE	2	1	28	1,361	212	4,446	63	63	Zone 1	10	1340	2,384	63	6+	Fall Thru Yr 1				0	0	48		
1147	2180	10		SHEBAL AVE	SPRUCE ST	WILLOW ST	2	1	28	422	66	1,379	59	59	Zone 1	10	1340	2,384	63	6+	Fall Thru Yr 1				0	0	44		
1186	2180	10		SHEBAL AVE	HONEYSUCKLE DR	ROSEWOOD DR	2	1	28	292	45	954	67	67	Zone 1	10	1340	2,384	63	6+	Fall Thru Yr 1				0	0	54		
1211	2180	10		SHEBAL AVE	ROSEWOOD DR	CEDAR DR	2	1	28	309	48	1,009	69	69	Zone 1	10	1340	2,384	63	6+	Fall Thru Yr 1				0	0	56		
1150	1070	10		AUGUSTANA AVE	TEDDY ST	KENT ST	2	1	35	350	68	1,429	61	61	Zone 1	10	1360	3,545	69	6+	Fall Thru Yr 4				0	0	47		
1091	1080	10		AUGUSTANA AVE	KENT ST	SAINT GREGORY ST	2	1	40	610	136	2,847	70	70	Zone 1	10	1360												



ASID	Street Number	Street Name	On Street	From Street	To Street	Fu/CL Code	Pavement Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Pavement Crdn Index (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd2)	Peripheral Concrete Costs (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI
1024	1800	10	MAIN ST	COLUMBIA ST	PRAIRIE ST	3	1	28	368	57	1,202	66	66	Zone 1	10	1480	3,129	71	6+	Fall Thru Yr 5				0	0	54		
1058	1810	10	MAIN ST	MILWAUKEE AVE	GRAND AVE	3	1	28	385	60	1,258	74	74	Zone 1	10	1480	3,129	71	6+	Fall Thru Yr 5				0	0	64		
1079	1920	10	MILWAUKEE AVE	MAIN ST	WILLOW ST	3	1	26	324	47	983	75	75	Zone 1	10	1480	3,129	71	6+	Fall Thru Yr 5				0	0	65		
1237	1920	10	MILWAUKEE AVE	ELM ST	MAIN ST	3	1	29	332	53	1,123	82	82	Zone 1	10	1480	3,129	71	6+	Fall Thru Yr 5				0	0	75		
1027	2070	10	PRAIRIE ST	MAPLE ST	ELM ST	3	1	29	328	53	1,110	52	52	Zone 1	10	1480	3,129	71	6+	Fall Thru Yr 5				0	0	39		
1054	1800	20	MAIN ST	PRAIRIE ST	RAILROAD AVE	3	2	39	363	79	1,652	91	91	Zone 1	10	1500	1,692	91	6+	Not Selected				0	0	85		
1118	2070	30	PRAIRIE ST	MAIN ST	WILLOW ST	3	2	39	332	72	1,511	89	89	Zone 1	10	1500	1,692	91	6+	Not Selected				0	0	84		
1018	2120	10	RAILROAD AVE	MAPLE ST	ELM ST	3	2	33	327	60	1,259	84	84	Zone 1	10	1500	1,692	91	6+	Not Selected				0	0	79		
1242	2120	20	RAILROAD AVE	ELM ST	MAIN ST	3	2	30	335	56	1,173	99	99	Zone 1	10	1500	1,692	91	6+	Not Selected				0	0	90		
1002	2120	30	RAILROAD AVE	MAIN ST	WILLOW ST	3	2	30	335	56	1,173	94	94	Zone 1	10	1500	1,692	91	6+	Not Selected				0	0	87		
1010	1380	10	EMMETT TRL	ELM ST	WILLOW ST	2	1	34	588	111	2,332	68	68	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	54		
1128	1380	10	EMMETT TRL	MAPLE ST	ELM ST	2	1	32	406	72	1,516	61	61	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	47		
1028	1840	10	MAPLE ST	CLIFF AVE	HARVEST TRL	2	1	30	511	85	1,789	67	67	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	53		
1089	1840	10	MAPLE ST	HARVEST TRL	JEANNIE LN	2	1	31	318	55	1,150	70	70	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	57		
1216	1840	10	MAPLE ST	JEANNIE LN	EMMETT TRL	2	1	31	570	98	2,062	65	65	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	51		
1130	1850	10	MAPLE ST	EMMETT TRL	COLUMBIA ST	2	1	27	423	63	1,332	62	62	Zone 1	10	1520	2,816	66	6+	Fall Thru Yr 2				0	0	48		
1011	1850	10	MAPLE ST	MILWAUKEE AVE	GRAND AVE	2	1	28	381	59	1,245	63	63	Zone 1	10	1540	2,087	58	6+	Fall Thru Yr 3				0	0	49		
1059	1850	10	MAPLE ST	RAILROAD AVE	MILWAUKEE AVE	2	1	28	222	35	725	52	52	Zone 1	10	1540	2,087	58	6+	Fall Thru Yr 3				0	0	38		
1102	1850	10	MAPLE ST	COLUMBIA ST	PRAIRIE ST	2	1	28	366	57	1,196	56	56	Zone 1	10	1540	2,087	58	6+	Fall Thru Yr 3				0	0	40		
1213	1850	10	MAPLE ST	PRAIRIE ST	RAILROAD AVE	2	1	27	370	55	1,166	46	46	Zone 1	10	1540	2,087	58	6+	Fall Thru Yr 3				0	0	31		
1232	1850	10	MAPLE ST	GRAND AVE	PERRY LN	2	1	27	748	112	2,356	63	63	Zone 1	10	1540	2,087	58	6+	Fall Thru Yr 3				0	0	49		
1112	1000	10	A AVE	BRANNON DR	LEGENDARY DR	3	1	31	317	55	1,146	78	78	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	68		
1049	1100	10	BRANNON DR	A AVE	N PERRY LN	3	1	28	817	127	2,669	77	77	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	67		
1133	1100	10	BRANNON DR	NW END	A AVE	3	1	27	132	20	416	81	81	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	73		
1095	1700	10	LEGENDARY DR	QUINN AVE	A AVE	3	1	27	160	24	504	85	85	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	78		
1174	1700	10	LEGENDARY DR	NW END	QUINN AVE	3	1	29	114	18	386	87	87	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	80		
1031	1870	10	MARIE CIR	SW END	MARIE DR	3	1	40	314	70	1,473	70	70	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	57		
1009	1880	10	MARIE DR	THELMA AVE	MARIE CIR	3	1	28	642	100	2,097	85	85	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	78		
1116	1880	10	MARIE DR	MARIE CIR	N PERRY LN	3	1	28	801	125	2,617	77	77	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	66		
1249	2220	10	THELMA AVE	MARIE DR	NORTH END	3	1	28	189	29	617	79	79	Zone 1	10	1560	3,486	78	6+	Fall Thru Yr 4				0	0	71		
1138	1340	10	ELM ST	MILWAUKEE AVE	GRAND AVE	3	1	27	382	57	1,203	47	47	Zone 1	10	1620	1,055	58	6+	Fall Thru Yr 3				0	0	33		
1217	1430	10	GRAND AVE	MAPLE ST	ELM ST	3	1	27	338	51	1,065	65	65	Zone 1	10	1620	1,055	58	6+	Fall Thru Yr 3				0	0	52		
1064	1920	10	MILWAUKEE AVE	MAPLE ST	ELM ST	3	1	28	335	52	1,094	63	63	Zone 1	10	1620	1,055	58	6+	Fall Thru Yr 3				0	0	50		
1196	1980	10	PERRY LN	TIGER ST	CHESTNUT ST	2	1	35	853	166	3,483	50	50	Zone 1	10	1660	1,220	53	6+	Fall Thru Yr 1				0	0	35		
1241	1980	10	PERRY LN	HEMLOCK ST	TIGER ST	2	1	34	367	69	1,456	60	60	Zone 1	10	1660	1,220	53	6+	Fall Thru Yr 1				0	0	45		
1026	2000	10	PERRY LN	MAIN ST	WILLOW ST	2	1	27	441	66	1,389	49	49	Zone 1	10	1701	718	94	6+	Not Selected				0	0	84		
1142	2000	10	PERRY LN	ELM ST	MAIN ST	2	1	30	277	46	970	53	53	Zone 1	10	1701	718	94	6+	Not Selected				0	0	84		
1084	1150	10	CHESTNUT ST	RAVEN AVE	HUNTER DR	2	1	37	281	58	1,213	72	72	Zone 1	10	1720	1,330	57	6+	Fall Thru Yr 2				0	0	60		
1117	1150	10	CHESTNUT ST	PERRY LN	FALCON AVE	2	1	40	312	69	1,456	48	48	Zone 1	10	1720	1,330	57	6+	Fall Thru Yr 2				0	0	32		
1151	1150	10	CHESTNUT ST	HUNTER DR	SOUTHEASTERN AVE	2	1	41	115	25	550	69	69	Zone 1	10	1720	1,330	57	6+	Fall Thru Yr 2				0	0	40		
1190	1150	10	CHESTNUT ST	FALCON AVE	EAGLE AVE	2	1	39	312	68	1,420	55	55	Zone 1	10	1720	1,330	57	6+	Fall Thru Yr 2				0	0	40		
1248	1150	10	CHESTNUT ST	EAGLE AVE	RAVEN AVE	2	1	35	310	60	1,266	52	52	Zone 1	10	1720	1,330	57	6+	Fall Thru Yr 2				0	0	36		
1136	2070	10	PRAIRIE ST	ELM ST	MAIN ST	3	1	28	332	52	1,085	25	25	Zone 1	10	1740	332	25	6+	Not Selected				0	0	15		
1247	1010	10	ADRIANNA AVE	LEGENDARY DR	MAH ST	3	1	31	1,069	184	3,866	79	79	Zone 1	10	1760	2,840	76	6+	Fall Thru Yr 3				0	0	70		
1069	1790	10	MACEY AVE	LEGENDARY DR	MAH ST	3	1	29	1,256	202	4,249	73	73	Zone 1	10	1760	2,840	76	6+	Fall Thru Yr 3				0	0	62		
1093	1950	10	PERRY LN	MAH ST	NORTH END	3	1	39	89	19	405	54	54	Zone 1	10	1760	2,840	76	6+	Fall Thru Yr 3				0	0	40		
1045	2100	10	QUINN AVE	LEGENDARY DR	KATIE AVE	3	1	29	426	69	1,441	78	78	Zone 1	10	1760	2,840	76	6+	Fall Thru Yr 3				0	0	69		
1065	1420	10	GRAND AVE	WALNUT ST	MAPLE ST	3	1	27	354	53	1,115	59	59	Zone 1	10	1780	2,209	61	6+	Fall Thru Yr 1				0	0	46		
1212	2060	10	PRAIRIE ST	WALNUT ST	MAPLE ST	3	1	28	339	53	1,107	51	51	Zone 1	10	1780	2,209	61	6+	Fall Thru Yr 1				0	0	37		
1043	2110	10	RAILROAD AVE	WALNUT ST	MAPLE ST	3	1	27	334	50	1,052	54	54	Zone 1	10	1780	2,209	61	6+	Fall Thru Yr 1				0	0	40		
1082	2370	10	WALNUT ST	PRAIRIE ST	RAILROAD AVE	3	1	36	433	87	1,819	64	64	Zone 1	10	1780	2,209	61	6+	Fall Thru Yr 1				0	0	51		
1035	2380	10	WALNUT ST	GRAND AVE	PERRY LN	3	1	36	749	150	3,146	67	67	Zone 1	10	1780	2,209	61	6+	Fall Thru Yr 1				0	0	55		
1044	1770	10	LOIS LN	COTTONWOOD DR	SHEBAL AVE	3	1	28	1,033	161	3,374	58	58	Zone 1	10	1800	2,010	62	6+	Fall Thru Yr 1				0	0	45		
1157	2140	10	ROSEWOOD DR	POPLAR LN	SHEBAL AVE	3	1	28	977	152	3,192	66	66	Zone 1	10	1800	2,010	62	6+	Fall Thru Yr 1				0	0	54		
1181	1020	10	ALMOND AVE	COTTONWOOD DR	HONEYSUCKLE DR	3	1	27	813	122	2,561	62	62	Zone 1	10	1820	2,681	68	6+	Fall Thru Yr 4				0	0	50		
1208	2040	10	POPLAR LN	HONEYSUCKLE DR	ROSEWOOD DR	3	1	28	308	48	1,006	66	66	Zone 1	10	1820	2,681	68	6+	Fall Thru Yr 4				0	0	54		
1038	2140	10	ROSEWOOD DR	POPLAR LN	SPRUCE ST	3	1	28	1,024	159	3,345	68	68	Zone 1	10	1820	2,681	68	6+	Fall Thru Yr 4				0	0	56		
1070	2170	10	SHEBAL AVE	SOUTH END	LOIS LN	3	1	28	185	29	604	71	71	Zone 1	10	1820	2,681	68	6+	Fall Thru Yr 4				0	0	60		
1121	2170	10	SHEBAL AVE	LOIS LN	HONEYSUCKLE DR																							

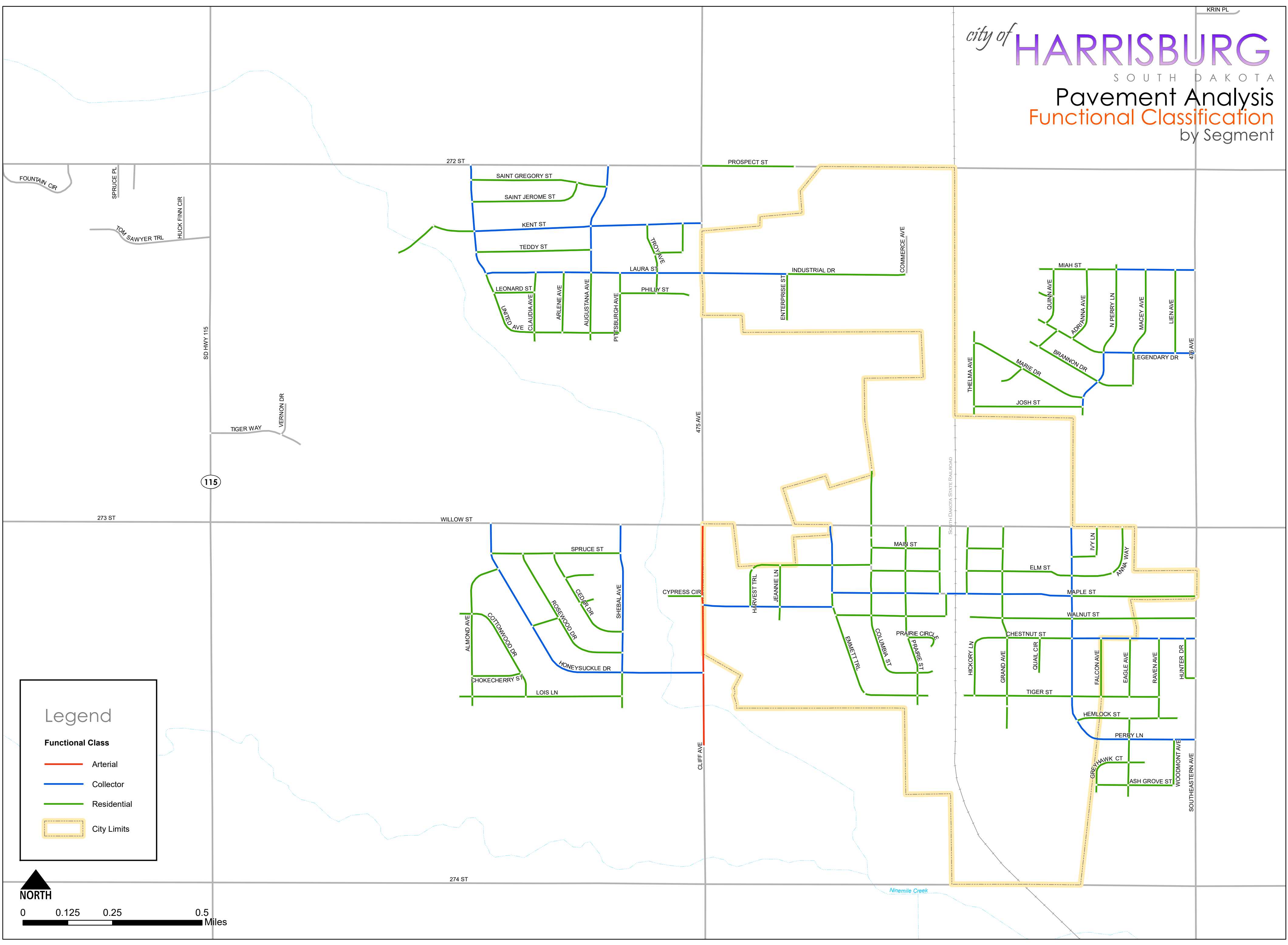


ASID	Street Number	Block Number	Street Prefix	On Street	From Street	To Street	FURCL Code	Pavtype Code	Pavement Width (ft)	Pavement Length (ft)	Add Area (yd2)	Pavement Area (yd2)	Pavement Cdn Indx. (PCI)	Current Segment PCI (CPCI)	Zone	Zone Code	Project ID	Project Length (ft)	Project Current PCI	Year of First Rehab	Segment Rehab Results	Rehab Activity Code	Rehab Activity	Avg Unit Rate (\$/yd2)	Peripheral Concrete Costs (\$)	Segment Pavement Cost (\$)	Segment Total Cost (\$)	Whole Project Cost (\$)	5 Year Post Rehab PCI
1207	1420	10		GRAND AVE	HICKORY LN	WALNUT ST	3	1	38	295	62	1,308	47	47	Zone 1	10	2060	1,341	45	6+	Fall Thru Yr 2				0	0	34		
1057	1540	10		HUNTER DR	SOUTHEASTERN AVE	CHESTNUT ST	3	1	23	687	88	1,843	45	45	Zone 1	10	2060	1,341	45	6+	Fall Thru Yr 2				0	0	32		
1060	2380	10		WALNUT ST	WEST END	GRAND AVE	3	1	29	359	58	1,215	43	43	Zone 1	10	2060	1,341	45	6+	Fall Thru Yr 2				0	0	29		

Appendix D

Full-size Maps

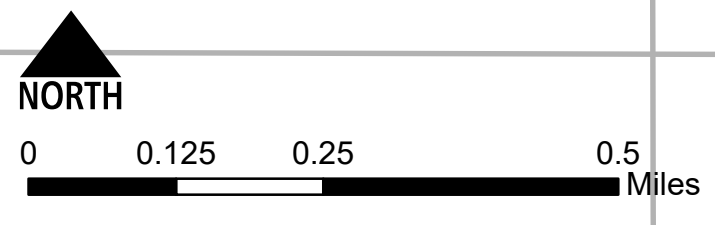
city of **HARRISBURG**
 SOUTH DAKOTA
Pavement Analysis
Functional Classification
 by Segment



Legend

Functional Class

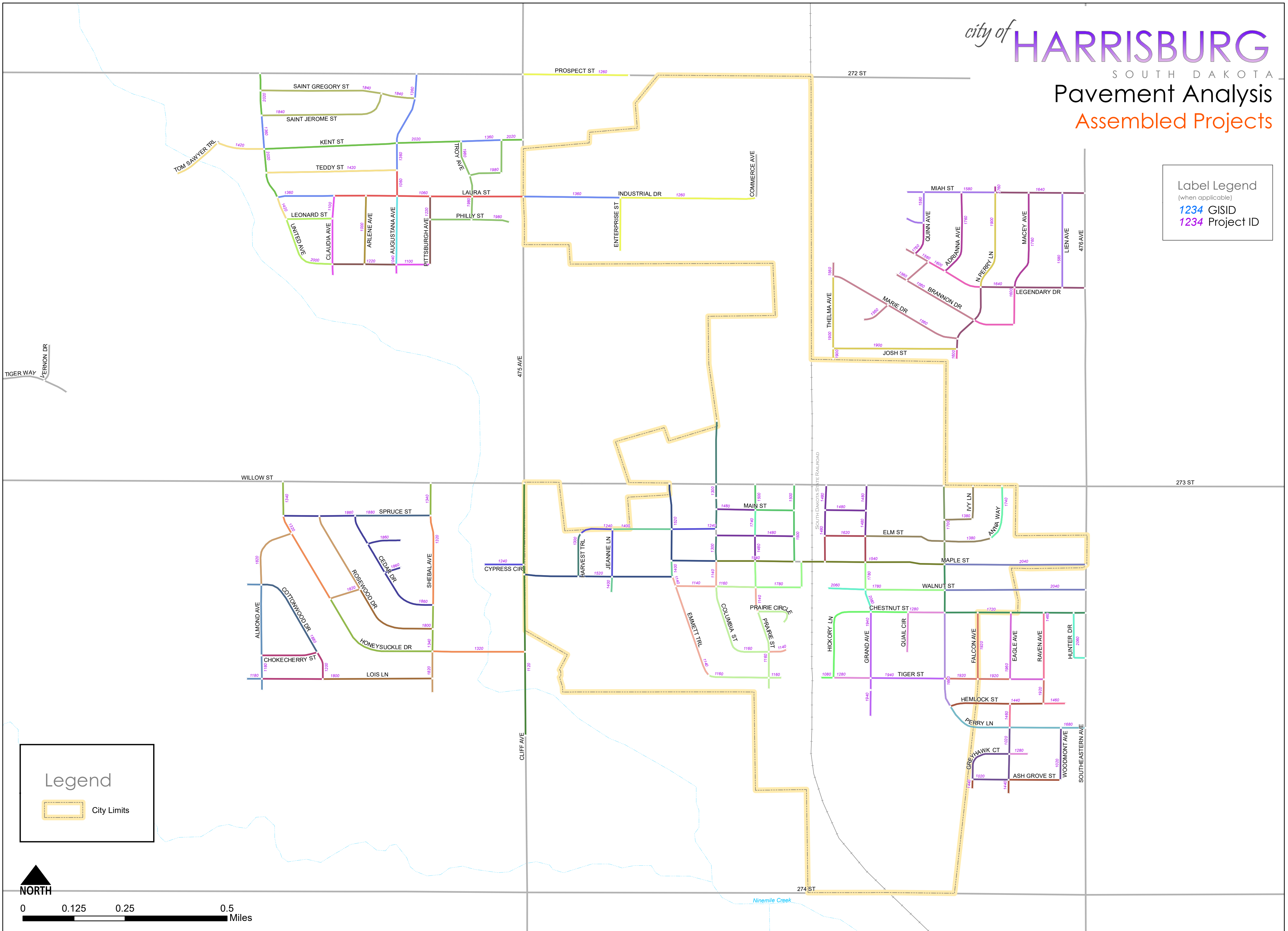
- Arterial
- Collector
- Residential
- City Limits



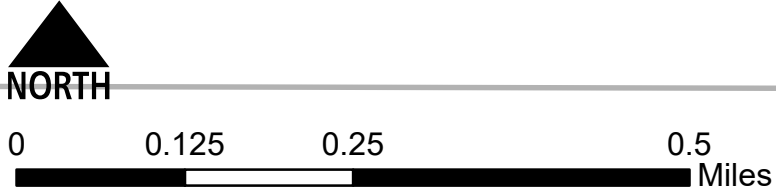
Pavement Analysis

Assembled Projects

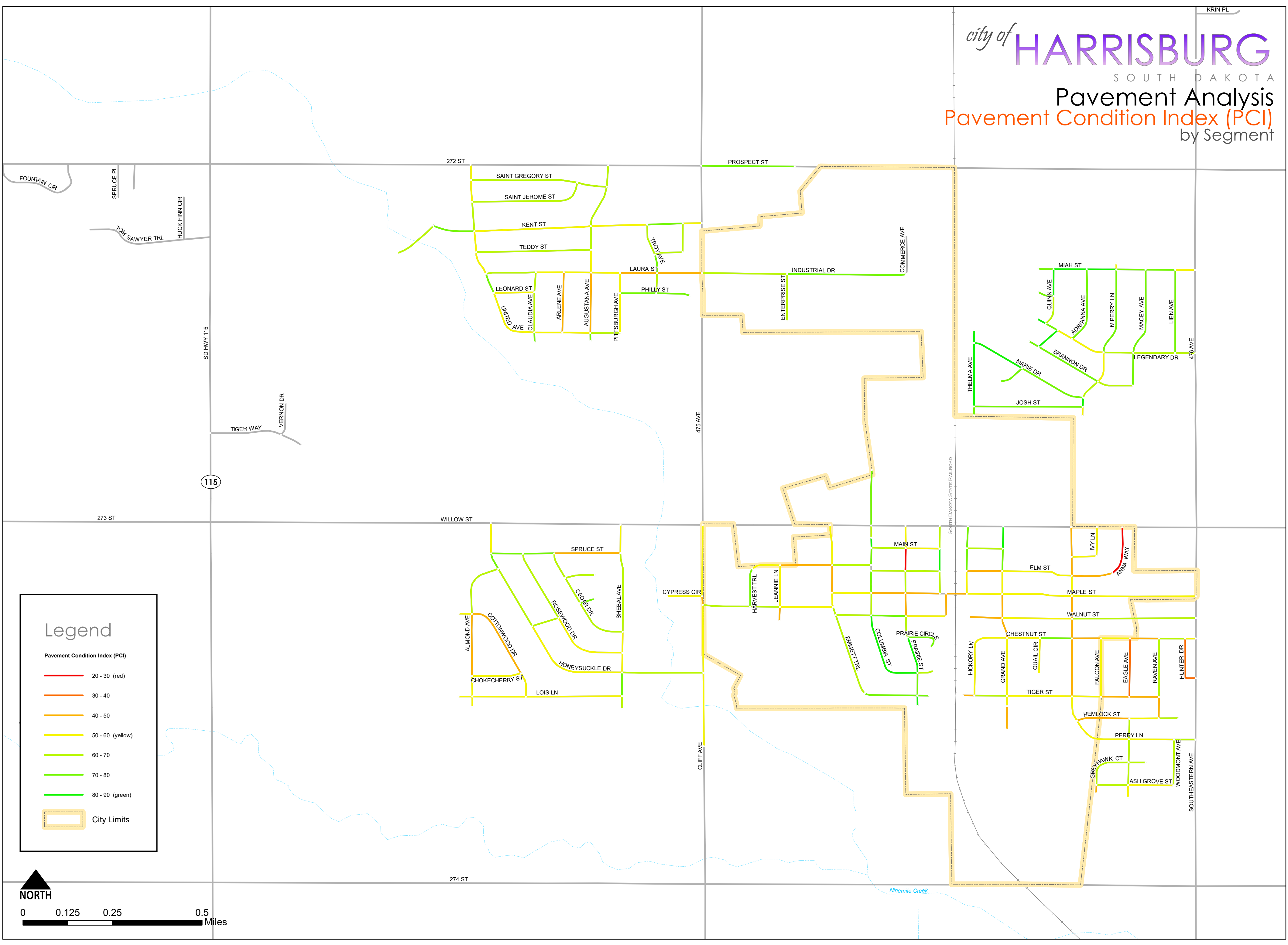
Label Legend
(when applicable)
1234 GISID
1234 Project ID



Legend
City Limits



city of **HARRISBURG**
 SOUTH DAKOTA
Pavement Analysis
 Pavement Condition Index (PCI)
 by Segment

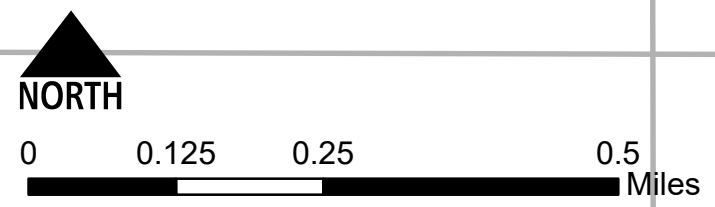


Legend

Pavement Condition Index (PCI)

- 20 - 30 (red)
- 30 - 40 (orange)
- 40 - 50 (yellow)
- 50 - 60 (yellow)
- 60 - 70 (light green)
- 70 - 80 (medium green)
- 80 - 90 (dark green)

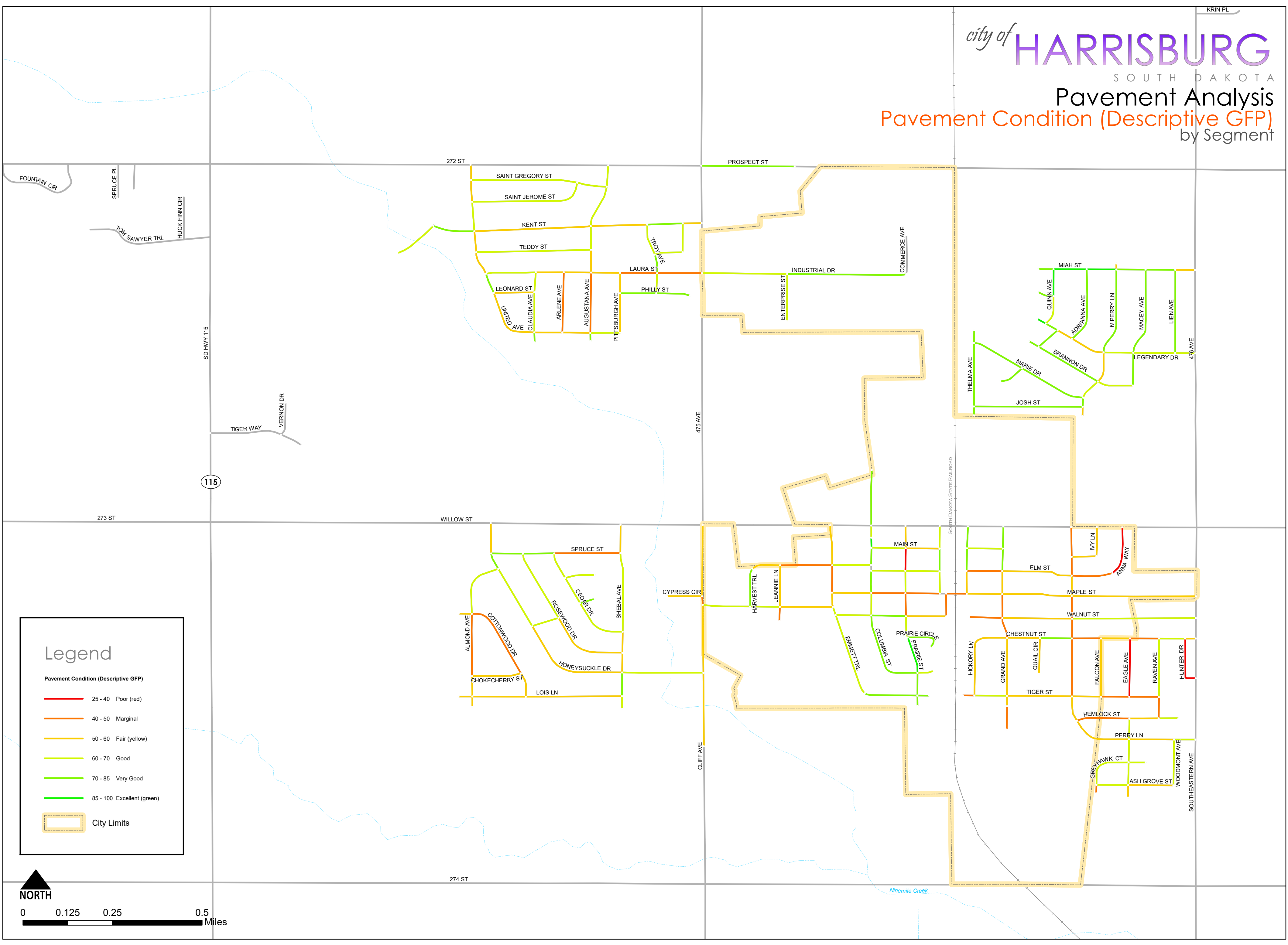
City Limits



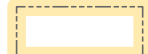
Pavement Analysis

Pavement Condition (Descriptive GFP)

by Segment



Legend

- Pavement Condition (Descriptive GFP)**
- 25 - 40 Poor (red)
 - 40 - 50 Marginal
 - 50 - 60 Fair (yellow)
 - 60 - 70 Good
 - 70 - 85 Very Good
 - 85 - 100 Excellent (green)
-  City Limits



Pavement Analysis

5-Year Rehab Plan: \$325k Annual Budget

by Rehab Year and Activity

Label Legend
(when applicable)
1234 GISID
1234 Project ID

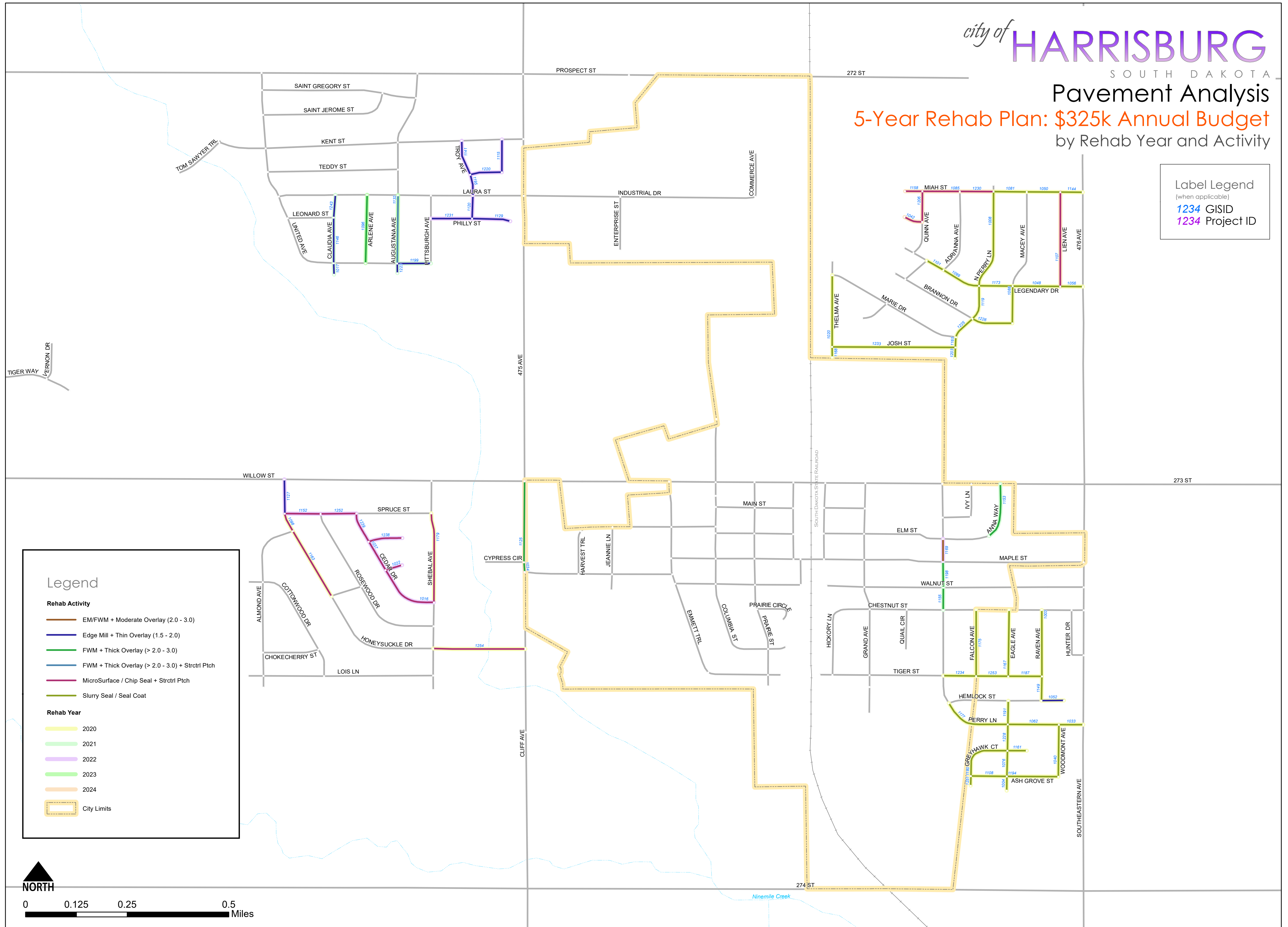
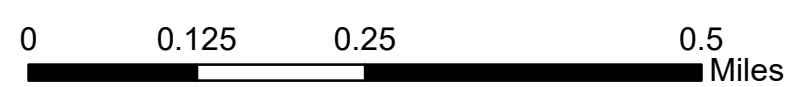
Legend

Rehab Activity

- EM/FWM + Moderate Overlay (2.0 - 3.0)
- Edge Mill + Thin Overlay (1.5 - 2.0)
- FWM + Thick Overlay (> 2.0 - 3.0)
- FWM + Thick Overlay (> 2.0 - 3.0) + Strctr Ptch
- MicroSurface / Chip Seal + Strctr Ptch
- Slurry Seal / Seal Coat

Rehab Year

- 2020
- 2021
- 2022
- 2023
- 2024
- City Limits

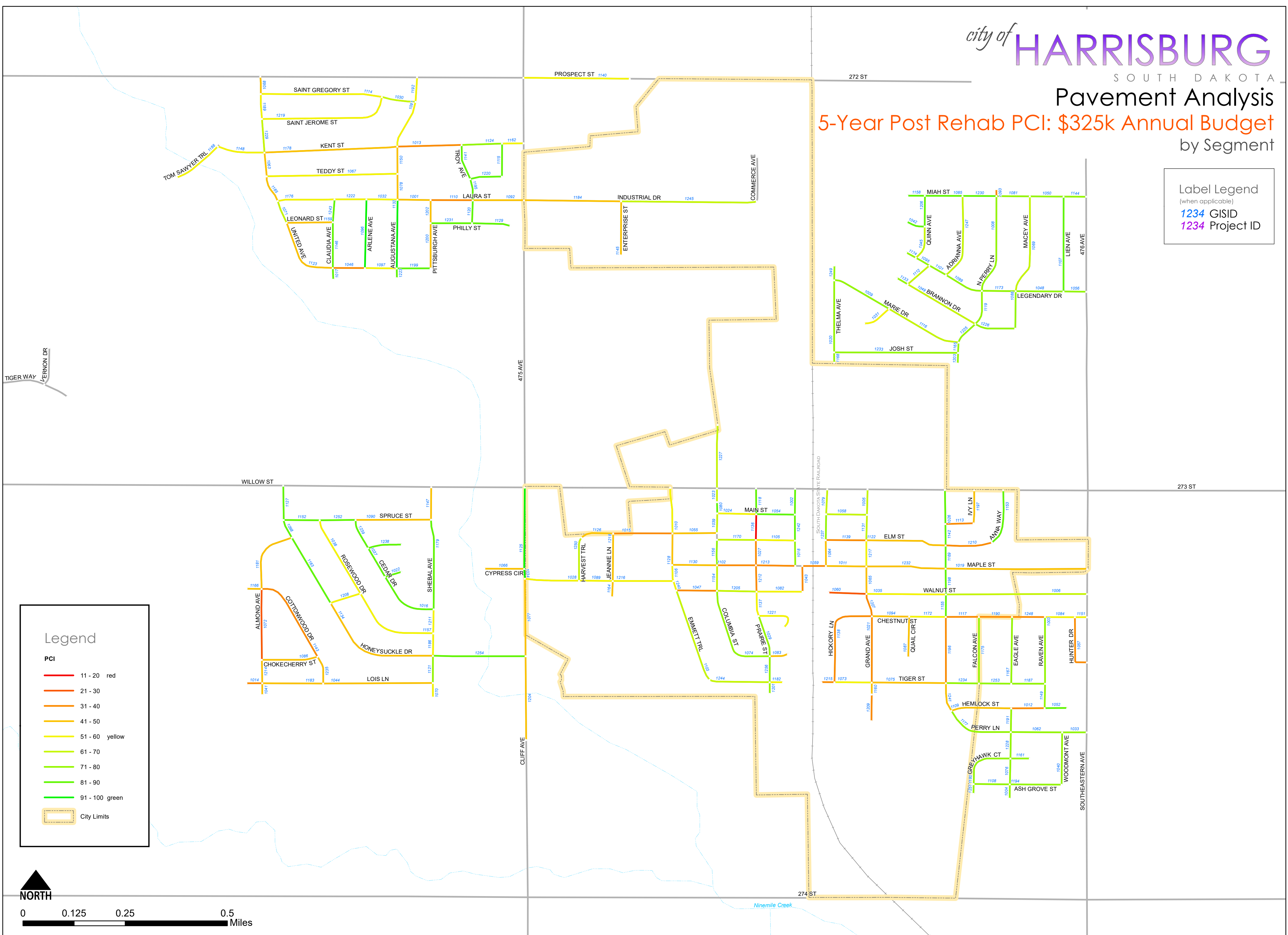


Pavement Analysis

5-Year Post Rehab PCI: \$325k Annual Budget

by Segment

Label Legend
(when applicable)
1234 GISID
1234 Project ID



Legend

PCI

- 11 - 20 red
- 21 - 30 orange
- 31 - 40 yellow-orange
- 41 - 50 yellow
- 51 - 60 light green
- 61 - 70 green
- 71 - 80 dark green
- 81 - 90 very dark green
- 91 - 100 black

City Limits

