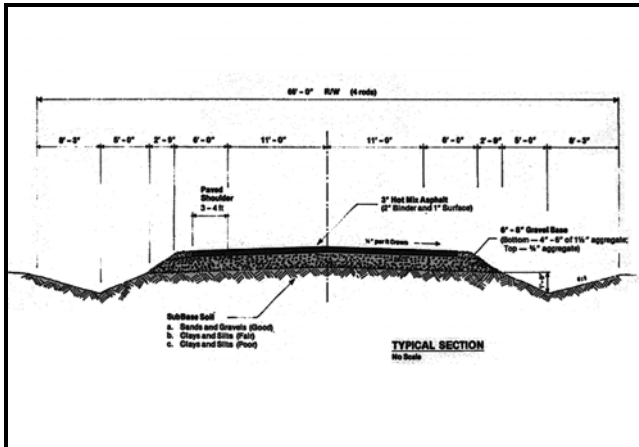


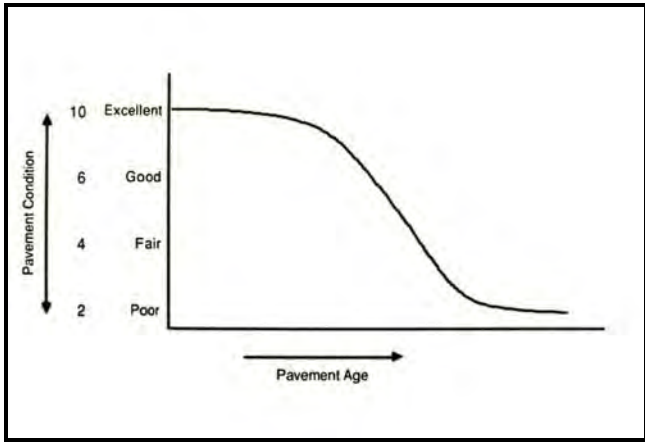
# TOWN OF TOMAHAWK ROADWAY SURFACE MANAGEMENT PLAN



**PASER**

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**Pavement Surface Evaluation and Rating**



Prepared February 2012 by:  
**NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION**  
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**TOWN OF TOMAHAWK, LINCOLN COUNTY, WISCONSIN  
ROADWAY SURFACE MANAGEMENT PLAN**

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# **CHAPTER 1**

## **ROADWAY SURFACE MANAGEMENT PLAN OVERVIEW**

### **INTRODUCTION**

A roadway management plan for a local street system provides a community with the ability to plan for future roadway improvements. With a roadway management plan in place, the limited resources allocated to local roads can be better spent. The overall goal of the Roadway Management Plan is to assist municipalities make better decisions on the improvements to the local road system. This document contains information vital to the review and rating of the Town of Tomahawk's roadway system. Thus, the Roadway Management Plan will assist in preserving and rehabilitating the existing Town street system in a timely and cost-effective manner.

A review of each Town road was performed by a representative from the North Central Wisconsin Regional Planning Commission (NCWRPC). Information necessary to complete the roadway management plan was collected during the summer of 2011 using the Pavement Surface Evaluation and Rating (PASER) system. The on-site roadway review was performed following the Wisconsin DOT Plat Record Map.

### **PURPOSE OF ROADWAY SURFACE MANAGEMENT PLAN**

A Roadway Management Plan helps local government officials respond to growing pressures from constituents to repair roads and upgrade the quality of roads by providing documented information on suggested priorities for improvement and reliable estimates of current and future costs of maintaining and improving the quality of the local road system.

Roadway Management Plans help local officials allocate scarce resources, which are caused by some of the following:

1. Negative public attitudes towards higher property taxes;
2. The historic limits on state and federal revenues to local governments to keep pace with increasing costs of providing local services;
3. An increase in street maintenance and construction costs which have outstripped the available public resources;
4. Historic local budget difficulties have resulted in deferred maintenance on local street systems, thus compounding needs for additional local resources; and/or
5. Some local units of government have not used their scarce dollars in a wise manner. Local politics and poor decision making have, in some cases, resulted in funds being spent in the wrong places or in an inefficient manner.

The objectives for using a pavement management system include:

1. A better understanding of pavement conditions by completing an overall field inventory;
2. An evaluation of causes of pavement conditions by the roadway segments' corresponding rating and analysis of distress;
3. Through improved decision making by taking advantage of preventative maintenance and selection of the most effective repair or rehabilitation;
4. Better communication of needs and strategies to decision makers as a tool to explain needs and convince elected officials and the public that adequate budgets are needed;
5. Long-term planning helps local governments coordinate pavement needs and scheduling with other budget and policy decisions.

### **INTENDED ROADWAY SURFACE MANAGEMENT PLAN RESULTS**

The results of the Roadway Management Plan are intended to assist the Town of Tomahawk in developing a road surface improvement program where by the limited transportation dollars allocated yearly can be spent more wisely. Through this effort, a better transportation system will be realized over time. A roadway management plan can also assist in vying for additional county, state or federal funding.

In addition, municipalities must report to the Wisconsin Department of Transportation an assessment of the physical condition of the roadways under their jurisdiction. The assessment must be completed biennially and must be completed using a WisDOT approved pavement rating system. This surface condition assessment was completed and submitted to WisDOT as part of the roadway management plan process.

## **CHAPTER II TOMAHAWK'S EXISTING ROADWAY SYSTEM**

### **EXISTING SYSTEM**

Prior to the development of a Roadway Management Plan, an inventory of the existing system must be completed. This inventory will assist in cataloging the roadway characteristics by roadway segment and surface type. The field data collected will be used as a benchmark to establish the prioritization of the existing roadway system and will assist in the development of recommended improvements to the local road system.

The Wisconsin Department of Transportation (WisDOT) maintains a roadway characteristic inventory on all local roads eligible to receive state funding through the state road/transportation aid program, see Appendix A. This data file is used as the basis for beginning the Roadway Management Plan. From the base data already collected by the state, a review of the road system may note changes in the roadway characteristics. Thus, this information is updated and represented as such in the data sheets found in the back of this document. The state's inventory of the roadway system includes such features as:

1. Segment length;
2. Surface type (earth, gravel, asphalt, or concrete);
3. Functional classification; and
4. Surface and shoulder width.

The review of the Town road system was completed following the Wisconsin DOT Town Plat Record Map and corresponding data provided by WisDOT for each roadway segment.

### **FUNCTIONAL CLASSIFICATION SYSTEM**

Tomahawk's roads perform varied functions from moving goods and people within the community or through the community. These roads differ from one-another and are characterized by a functional classification system. In the development of this Roadway Management Plan, the functional classification of the roads is described as follows:

Major Collectors: Major collectors provide service to moderate sized communities and other intra-area traffic generators (schools, churches, employment or service centers) and link those generators to nearby larger population concentrations or major state or county trunk highways.

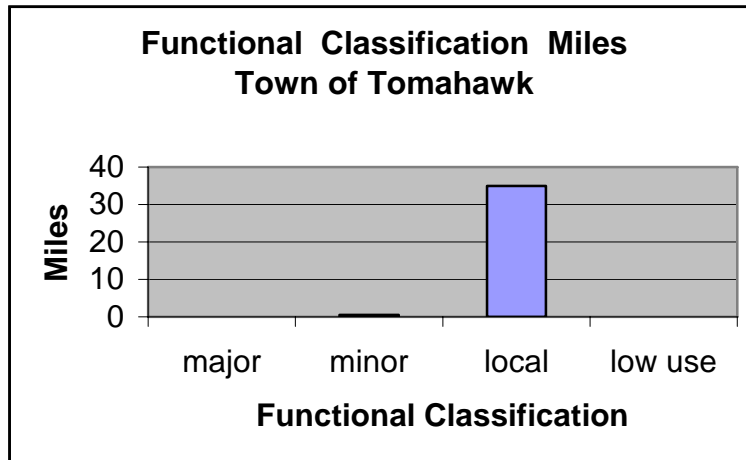
**Minor Collectors:** Minor collectors provide service to remaining population concentrations not served by higher classified routes, link the locally important traffic generators (schools, churches, and employment and service centers) with the rural hinterland, and are spaced consistent with population density so as to collect traffic from local roads and bring developed areas within a reasonable distance of a higher classified road. One or two very densely developed roads could meet this classification, provided that the level of development is such that relatively high average daily traffic (ADT) counts are realized (a lake loop road is a good example of this type of situation).

**Local Roads:** Local roads provide access to adjacent land and provide for travel over relatively short distances on an interTownship or intraTownship basis. All Town roads not classified as arterials or collectors will be local functional roads.

**Low Use Roads:** Low use roads are roads that receive very limited traffic volume due to any of the following reasons: low level of development on property served by road, seasonality of use (hunting, fishing, cross country skiing, etc.), physical barrier to through traffic (road quality, dead end road, or other local factors that contribute to low or intermittent use).

The functional classification mileage of the roads is depicted in Figure 1 and by segment in Appendix A.

FIGURE 1



Most Town roads are in the local or low use category, and most county trunk highways are either major or minor collectors. The classification of roads indicates a number of factors regarding the nature of the road for roadway management such as:

1. Role the road plays in providing mobility (through traffic) as opposed to providing access to adjoining property.



2. Amount of development adjacent to a roadway. The more adjoining development, the higher the classification. The nature of the development must also be considered here. In the case of development that would serve a high number of trips, such as commercial, industrial, or institutional a road could be considered for a higher classification.
3. The average daily traffic on the road. Generally, the higher the traffic the higher the classification.

## CHAPTER III ROADWAY SURFACE MANAGEMENT PLAN RESULTS

### PAVEMENT SURFACE EVALUATION AND RATING

The data reported in this Roadway Management Plan was produced using the Pavement Analysis Tool within the state's Wisconsin Information System for Local Roads (WISLR). Critical to the development of the surface condition rating of each roadway segment, was a uniform and consistent set of criteria used throughout the Town in evaluating and assigning a value to each roadway segment. To achieve this uniform and consistent evaluation, the Pavement Surface Evaluation and Rating (PASER) system developed by the University of Wisconsin-Madison, Transportation Information Center was utilized, see Appendix B. The consistency in evaluating each roadway segment is critical since this information will lead to the development of future improvements needed to the local roadway system.

Based upon the WISLR data collected, there are 35.41 miles of road in the Town of Tomahawk's roadway system. On this system, 26.61 miles or 75 percent are unpaved and 8.8 miles or 25 percent are paved. FIGURES 2 and 3 depict the surface condition ratings of the paved and unpaved roadway system.

FIGURE 2

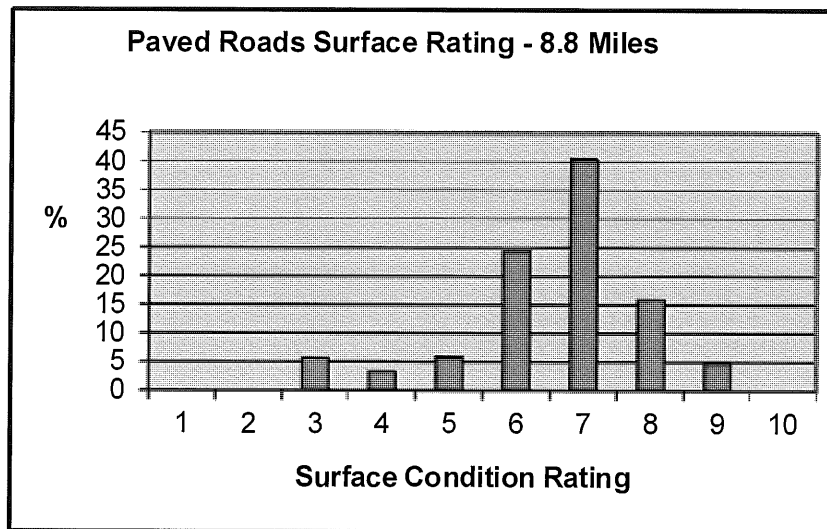
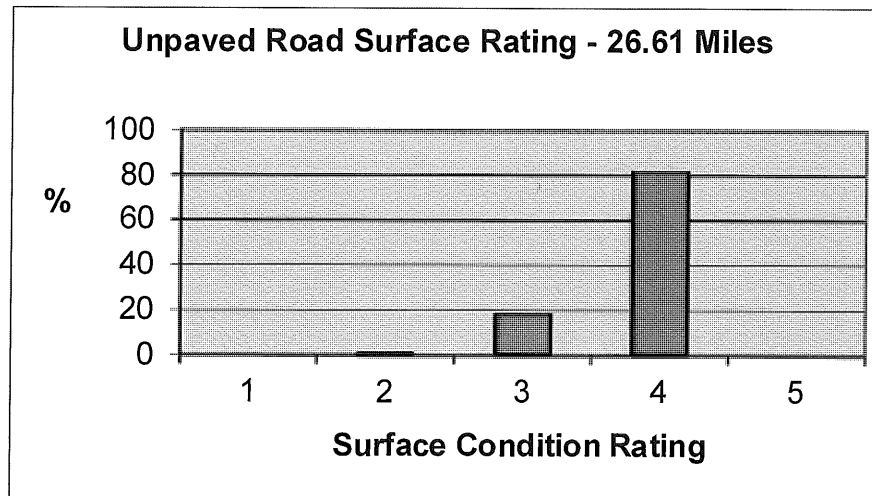


FIGURE 3



Focusing on paved roads, 20.7 percent is currently in need of no maintenance. About 40.3 percent is in need of only minor maintenance or crack filling, and 30.1 percent could benefit from a surface treatment such as sealcoating. About 8.9 percent is in need of structural improvement. Unpaved roads are currently in good condition with 82 percent needing only routine maintenance, and 18 percent in need of only minor ditching and/or additional gravel.

### PAVEMENT SURFACE NEEDS ANALYSIS

Pavement management is a systematic process that uses roadway data to facilitate development of cost-effective maintenance and improvement programs. The WISLR Pavement Analysis Tool takes a “value-based” approach to pavement management. The objective of this approach is to get more value (cost-effectiveness) from improvement expenditures by getting more pavement life at a lower cost and improving ride quality.

Accomplishing this objective requires selecting the right projects and applying the right fix at the right time.

The surface condition rating value and corresponding suggested improvements for asphalt (paved) and gravel (unpaved) roads are represented in TABLES 1 and 2.

<b>TABLE 1 ASPHALT SURFACE RATING CONDITION &amp; SUGGESTED IMPROVEMENT</b>	
<b>RATING</b>	<b>ACTION REQUIRED</b>
10 – 9	No Maintenance Required
8	Little or No Maintenance Required
7	Crack Filling
6 - 5	Preservative Treatment (sealcoat)
4 – 3	Structural Improvement (overlay or recycling)
2 - 1	Reconstruction

<b>TABLE 2 GRAVEL SURFACE RATING CONDITION &amp; SUGGESTED IMPROVEMENT</b>	
<b>RATING</b>	<b>ACTION REQUIRED</b>
5 – 4	Routine Maintenance
3	Minor Ditching/Add Gravel
2	Add Gravel/Drainage Improvement
1	Reconstruction

Based on these suggested treatment actions, a rudimentary needs analysis can be generated. A rudimentary needs analysis provides an estimate of all pavement needs as indicated by existing pavement ratings (unconstrained). Appendix C contains the rudimentary needs analysis for the Town of Tomahawk.

The rudimentary needs analysis categorizes need into two categories: capital and maintenance. Capital improvements are those that significantly extend service life. Examples of capital improvements are resurfacing, mill and overlay, and reconstruction. Maintenance improvements help preserve roads, but a typical application does not significantly extend service life. Examples of maintenance improvement are joint and crack sealing, patching and sealcoating.

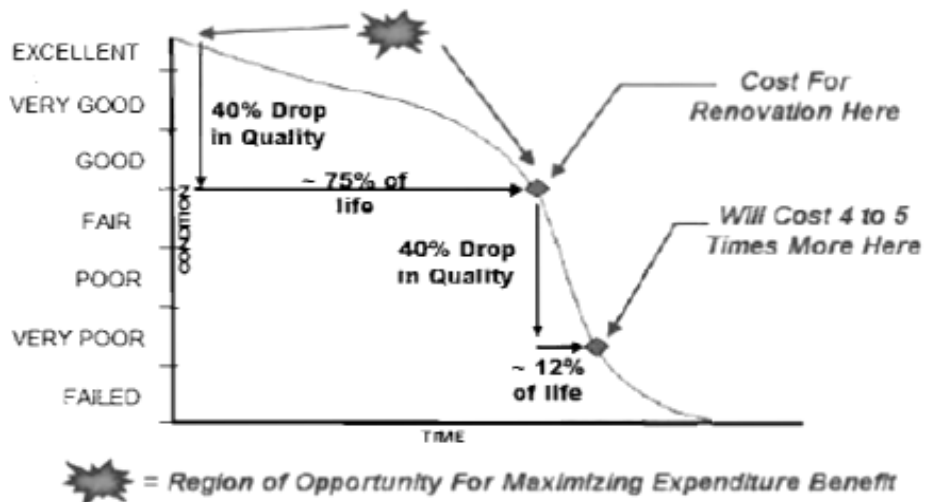
The first page of the analysis shows a capital improvement need of \$62,135 associated with 0.80 miles of roadway and maintenance need of \$53,961 associated with 6.28 miles of roadway. A breakdown by street is also included.

## **PROJECT PRIORITIZATION**

WISLR prioritization emphasizes treating pavements in the “region of opportunity” (see Figure 4) because pavements in this condition range can typically be maintained at a much lower cost per year of service life extension. However, the WISLR model also places priority on roadway classification, recognizing that the most important roads in poor to failed condition can’t be ignored. The combined effect of this dual-priority approach is intended to select projects based on both cost-effectiveness and importance to overall system function.

FIGURE 4

## Typical Pavement Condition Life Cycle



Source: WisDOT

This approach provides a reasonable starting point for programming within a constrained budget. Ultimately project selection will need to incorporate other important factors not included in the WISLR data such as safety, utilities, roughness, etc.

The intent of the WISLR pavement analysis tool is to provide abundant pavement condition and budget impact information in order to aid in project selection and in order to help substantiate budget levels.

## CHAPTER IV ROADWAY PRACTICES AND RECOMMENDED IMPROVEMENTS

### GENERAL MAINTENANCE AND IMPROVEMENT PRACTICES

The maintenance and improvement of local roads is critical to having a sustainable roadway system. Building good roads result in longer lasting roads.

Building good roads is basic to having a local roadway system that will carry vehicles safely and efficiently, and that save money by lowering future improvement costs. What are some of the basic concepts of building good roads that will last? Below is a list of ten basic concepts to follow when building roads.

1. Get water away from the road. Good drainage is critical to making a good road. It has been estimated that nearly 90% of a road's problems can be attributed to excess water or to poor water drainage. Effective drainage systems divert, drain, and dispose of water along a roadway. These drainage systems use interceptor ditches and slopes, roadway crowns, and ditch and culvert systems. Interceptor ditches, located between the road and higher ground, divert the water by sloping away from the road so that the water does not reach the roadway. Crowning a roadway assists in moving water off the roadway to the interceptor ditch. Typically, a gravel roadway crown should be ½" higher than the shoulder for each foot of width from the centerline to the edge. A paved road crown should be ¼" higher than the shoulder for each foot of width from the centerline to the edge. Too much water remaining on a roadway surface, or in the subbase and subgrade combine with the action of traffic to create potholes, cracks, and pavement failure. Ditches and culverts dispose of water by carrying it away from the road structure. Ditches should be one foot lower than the base of the road. Improper drainage can allow water to seep under the roadway creating the potential for future roadway failures. A rule of thumb is that one-dollar spent on proper roadway drainage will save two dollars on maintenance.
2. Building a firm foundation. A road's foundation is important to the life of your road. A road wears out from the top down but falls apart from the bottom. The subgrade and subbase layer of a road support the entire roadway and traffic using it.
3. Use the best material. When it comes to using materials in the construction or improvement of a road, you will either "pay for it now or later." The selection of materials for the project will determine how long a road may last. Inferior materials may cause premature improvements or life long maintenance to the road. Crushed aggregate is the best material for a base course as the sharp edges interlock when compacted. Rounded aggregate is a poor base course as they will move under the weight of traffic.

4. Compact all layers. Generally, the more densely a material is compacted, the stronger it is. The compaction also helps prevent water moving in and throughout the subbase layer of the roadway. This helps prevent frost heaving and premature deterioration of the roadway. Using gravel with a mix of sizes (well-graded aggregate) allows smaller particles to fill-in the voids created by larger particles.
5. Design for traffic loads and volumes. A road should be designed to carry the highest anticipated load. If this load is unknown, the road should be designed to carry the largest maintenance equipment that will be used on the road. A well-constructed and maintained asphalt road should last 20 years without major repairs or reconstruction. One truck with 9 tons on a single rear axle does as much damage to a road as nearly 10,000 cars!
6. Design for maintenance. Design your road so that it may be easily maintained by having adequate ditches that can be cleaned regularly, culverts that are marked for future maintenance activities, an area where snow can be plowed onto, proper slopes of the roadway and ditches, ditches that are planted to prevent erosion, and ditches that can be mowed safely.
7. Pave only when ready. Every road does not have to be an asphalt road. Laying asphalt on an existing roadway will not fix a gravel road that is failing. Adequate crushed aggregate, drainage, and proper compaction must be in place to support the longevity of an asphalt road. Depending on the subgrade soils of any road, a recommended minimum subbase depth of crushed stone is 10”.
8. Build from the bottom up. Do not waste material on a top dress or resurface if the problem is actually a subbase or subgrade problem. This method does not correct the problem and will result in unwisely spent funds. Choosing an improvement technique that gets to the root of the problem will be the only thing that makes the roadway better.
9. Protect your investment. The local road system often is the Town’s largest investment. These maintenance activities are critical to the longevity of a local road:
  - Surface Grade Shape, patch, seal crack, control dust, remove ice and snow;
  - Drainage Clean and repair ditches and culverts, remove excess debris;
  - Roadside Cut brush, trim trees and roadside plantings, control erosion; and
  - Traffic Service Clean and repair or replace signs.
10. Keep good records. Knowing each road’s construction, life, and repair history makes it easier to plan and budget for future improvements.

The ten basic concepts discussed above will assist in providing a good roadway system that will be more popular with the local citizens and will likely assist in making the transportation improvement budget cover more miles of road in a given year.

## RECOMMENDED FIVE-YEAR IMPROVEMENT SCHEDULE

The 5-year work program is based upon Town reported budget constraints of \$125,000 for maintenance and \$20,000 for construction. The maintenance budget provides for regular routine maintenance including fresh gravel and grading on unpaved roads and crack filling on paved surfaces.

In addition to the proposed gravel to asphalt conversion project to support heavy truck traffic and address dust safety concerns, 2 resurfacing and 2 mill & overlay projects are identified. This Plan recommends the Town budget an average of \$36,294 annually from 2012 to 2016 for these projects.

While the majority of the Town's roads are gravel surface, it has been the Town's policy to periodically convert selected gravel roads to asphalt. These projects are typically more substantial, and the Town may need to pursue outside assistance such as the TRIP or TRIP-D grant programs. These are 50% grants, so the Town will need to budget funds, possibly over a number of years, to provide the 50% match amount.

### **Town of Tomahawk Roadway Management Program 2012-2016**

Maintenance (gravel, grading, crackfilling, etc.)                      \$125,000                      Annually

#### **Recommended Construction Projects 2012 - 2016**

<b>On Route*</b>	<b>Length Feet</b>	<b>Width Feet</b>	<b>Pvmt</b>		<b>Action</b>	<b>Estimated Cost</b>
			<b>Rtg (Year 1)</b>	<b>Pvmt Rtg (Year 5)</b>		
Millie Rd	1,320	20	4	9	Resurfacing	\$17,013.33
W Bilby Ln	686	20	3	9	Mill and Overlay	\$10,805.26
E Bilby Rd	2,006	20	3	9	Mill and Overlay	\$31,596.73
TN RD 35	211	20	4	9	Resurfacing	\$2,719.56
						\$62,134.88

*\*Refer to Appendix D for more detail on these road segments.*

#### **Recommended Gravel to Asphalt Conversion Projects 2012 - 2014**

<b>On Route*</b>	<b>Length Feet</b>	<b>Width Feet</b>	<b>Action</b>	<b>Estimated Cost</b>
Bridge Ave.	10,032	22	Fine Grade & Pave	\$238,674.00
				\$238,674.00

*\*Refer to Appendix D for more detail on these road segments.*

The estimated costs for each project listed may differ from final project costs. An engineering report is required for projects to be eligible for State LRIP funding. That report will identify the final project cost for any project.



APPENDIX A - WISLR Road Inventory

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STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
WISCONSIN INFORMATION SYSTEM FOR LOCAL ROADS

Inventory Listing - ( R-20 )  
1-1-2012 Certification

Town Of Tomahawk (030)

**Certified Miles**

		<b>0.04</b>																														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE			SHOULDER		MEDIAN	ADT		ROW			FC	RC	SC	O	U/A	NHS	ALN			INV		PVT						
				L	Type	WD	YR	P		LT	RT	LT	RT	I							CNT	YR	I	W	I	H	V	H	V	H	V	R
	Termini	0.04 (211)	N	2	35	20	1971	4	0	0	000	000		E	000015		E	66	45	5	4	000	NON	00				2012		3	2011	

		<b>0.13</b>																														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE			SHOULDER		MEDIAN	ADT		ROW			FC	RC	SC	O	U/A	NHS	ALN			INV		PVT						
				L	Type	WD	YR	P		LT	RT	LT	RT	I							CNT	YR	I	W	I	H	V	H	V	H	V	R
	E Bilby Rd	0.09 (475)	N	2	55	20	1980	4	0	0	102	102		E	000015		E	50	45	5	4	000	NON	00				2012		3	2011	
	Termini	0.04 (211)	N	2	55	20	1980	4	0	0	102	102		E	000015		E	50	45	5	4	000	NON	00				2012		3	2011	

		<b>0.38</b>																														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE			SHOULDER		MEDIAN	ADT		ROW			FC	RC	SC	O	U/A	NHS	ALN			INV		PVT						
				L	Type	WD	YR	P		LT	RT	LT	RT	I							CNT	YR	I	W	I	H	V	H	V	H	V	R
	W Bilby Ln	0.14 (739)	N	2	55	20	1980	4	0	0	102	102		E	000075		E	50	45	5	4	000	NON	00				2012		3	2011	
	Millie Rd	0.09 (475)	N	2	55	20	1980	4	0	0	102	102		E	000075		E	50	45	5	4	000	NON	00				2012		3	2011	
	Millie Rd	0.15 (792)	N	2	55	20	1980	4	0	0	102	102		E	000075		E	50	45	5	4	000	NON	00				2012		3	2011	

		<b>0.29</b>																														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE			SHOULDER		MEDIAN	ADT		ROW			FC	RC	SC	O	U/A	NHS	ALN			INV		PVT						
				L	Type	WD	YR	P		LT	RT	LT	RT	I							CNT	YR	I	W	I	H	V	H	V	H	V	R
	Termini	0.29 (1531)	N	2	35	20	1966	4	0	0	000	000		E	000015		E	50	45	5	4	000	NON	00				2012		4	2011	

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
WISCONSIN INFORMATION SYSTEM FOR LOCAL ROADS

Inventory Listing - ( R-20 )  
1-1-2012 Certification

Town Of Tomahawk (030)

=>Blackhawk Rd																				0.16													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE			CURB		SHOULDER		MEDIAN		ADT		ROW			FC RC SC		U/A		NHS		H AC H V		ALN		INV		PVT		
					Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I	CNT	YR	I	W	I	W	O	U/A	O	U/A	O	U/A	H	AC	H	V	YR	R
	Little Beaver Rd	0.16 (845)	N	2	70	20	1996	4	0	0	203	203			E	1000015			E	66	45	5	4	000	NON					2012		6	2011

=>Bridge Rd																				3.79													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE			CURB		SHOULDER		MEDIAN		ADT		ROW			FC RC SC		U/A		NHS		H AC H V		ALN		INV		PVT		
					Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I	CNT	YR	I	W	I	W	O	U/A	O	U/A	O	U/A	H	AC	H	V	YR	R
Phalzgraaf Rd	Spirit Falls Ave	0.07 (370)	N	2	55	18	1966	4	0	0	000	000			E	000035			E	50	45	5	4	000	NON					2012		6	2011
Spirit Falls Ave	County Forest 700 (0.20)	0.20 (1056)	N	2	65	21	2007	4	0	0	202	202	0	0	E	000035			E	50	45	5	4	000	NON					2012		7	2011
Spirit Falls Ave (0.20)	County Forest 700	1.80 (9504)	N	2	35	20	1966	4	0	0	000	000			E	000035			E	50	45	5	4	000	NON					2012		4	2011
County Forest 700	Tower Rd	1.31 (6917)	N	2	35	20	1966	4	0	0	000	000			E	000015			E	50	45	5	4	000	NON					2012		4	2011
Tower Rd	Termini	0.41 (2165)	N	2	35	20	1966	4	0	0	000	000			E	000015			E	50	45	5	4	000	NON					2012		4	2011

=>Coffee Creek Rd																				1.77													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE			CURB		SHOULDER		MEDIAN		ADT		ROW			FC RC SC		U/A		NHS		H AC H V		ALN		INV		PVT		
					Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I	CNT	YR	I	W	I	W	O	U/A	O	U/A	O	U/A	H	AC	H	V	YR	R
Swamp Rd	Saindon Rd	1.02 (5386)	N	2	35	20	1966	4	0	0	000	000			E	000015			E	50	45	5	4	000	NON					2012		4	2011
Saindon Rd	Termini	0.75 (3960)	N	1	35	18	1994	4	0	0	000	000			E	000005			E	50	45	5	4	000	NON					2012		3	2011

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
WISCONSIN INFORMATION SYSTEM FOR LOCAL ROADS

Inventory Listing - ( R-20 )  
1-1-2012 Certification

Town Of Tomahawk (030)

=>CTH O														5.30														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					Type	WD		YR	LT		RT	Type														WD	I	CNT
Mitchell Rd	Eagle Waters Rd	0.29 (1531)	N	2	70	22	2006	4	0	0	202	202	E	000075	E	66	40	4	3	000	NON	00				2012	8	2011
Eagle Waters Rd	Faust Rd	0.71 (3749)	N	2	70	22	2006	4	0	0	202	202	E	000075	E	66	40	4	3	000	NON	00				2012	8	2011
Faust Rd	Evergreen Rd	0.57 (3010)	N	2	70	22	2006	4	0	0	202	202	E	000375	E	66	40	4	3	000	NON	00				2012	8	2011
Evergreen Rd	Jaecks Rd	0.43 (2270)	N	2	70	22	2006	4	0	0	202	202	E	000375	E	66	40	4	3	000	NON	00				2012	8	2011
Jaecks Rd	W Bilby Rd	1.52 (8026)	N	2	70	22	2006	4	0	0	202	202	E	000375	E	66	40	4	3	000	NON	00				2012	8	2011
W Bilby Rd	E Bilby Rd	0.25 (1320)	N	2	70	22	2006	4	0	0	202	202	E	000375	E	66	40	4	3	000	NON	00				2012	8	2011
E Bilby Rd	Stegman Rd	1.28 (6758)	N	2	70	22	2006	4	0	0	202	202	E	000375	E	66	40	4	3	000	NON	00				2012	8	2011
Stegman Rd	CTH O (0.25)	0.25 (1320)	N	2	70	22	2006	4	0	0	202	202	E	000225	E	66	40	4	3	000	NON	00				2012	8	2011

=>CTH T														0.85														
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					Type	WD		YR	LT		RT	Type														WD	I	CNT
Wery (3.28)	STH 86	0.85 (4488)	N	2	70	22	1996	4	0	0	000	000	E	000015	E	66	45	4	3	000	NON	00				2012	6	2011

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		<b>1.63</b>																												
=>CTH YY	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
					L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I													CNT	YR
	Strucker Dr (0.52)	Ball Park Rd	0.41 (2164)	N	2	70	22	2001	4	0	203	203		E	000075	E	66	40	4	3	000	NON						2012	8	2011
	Ball Park Rd	STH 86 (0.76)	0.76 (4013)	N	2	70	22	2001	4	0	203	203		E	000075	E	66	40	4	3	000	NON					2012	8	2011	
	STH 86	Lost Ave (0.46)	0.46 (2429)	N	2	70	24	2001	4	0	203	203		E	000035	E	66	40	4	3	000	NON					2012	8	2011	

		<b>0.38</b>																												
=>Deer Trl	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
					L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I													CNT	YR
	New Wood Rd	Bambi Ln	0.13 (686)	N	2	70	20	1996	4	0	203	203		E	000015	E	66	45	5	4	000	NON					2012	6	2011	
	Bambi Ln	Blackhawk Rd	0.08 (422)	N	2	70	20	1996	4	0	203	203		E	000015	E	66	45	5	4	000	NON					2012	6	2011	
	Blackhawk Rd	Termini	0.17 (898)	N	2	70	20	1996	4	0	203	203		E	000015	E	66	45	5	4	000	NON					2012	7	2011	

		<b>0.48</b>																												
=>Eagle Waters Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
					L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I													CNT	YR
	CTH O	Termini	0.48 (2534)	N	2	70	20	1999	4	0	202	202		E	000015	1995	A	66	45	5	4	000	NON				2012	6	2011	

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=>Evergreen Rd		0.49																																	
		AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE Type	WD	YR	P	CURB LT	SHOULDER LT	RT	MEDIAN Type	WD	ADT I	YR	ROW I	W	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT R	YR	SW	
CTH O		Silver Birch Rd	0.49 (2587)	N	2	35	20	1974	4	0	0	0	0	0	0	E 1000015		E	66	45	5	4	0	000	NON							2012	4	2011	

=>Faust Rd		1.00																																	
		AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE Type	WD	YR	P	CURB LT	SHOULDER LT	RT	MEDIAN Type	WD	ADT I	YR	ROW I	W	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT R	YR	SW	
Termini		CTH O	1.00 (5280)	N	2	35	20	1966	4	0	0	0	0	0	0	E 1000015		E	50	45	5	4	0	000	NON							2012	4	2011	

=>Four Mile Dr		3.94																																		
		AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE Type	WD	YR	P	CURB LT	SHOULDER LT	RT	MEDIAN Type	WD	ADT I	YR	ROW I	W	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT R	YR	SW		
New Wood Rd		County Forest 701	2.03 (10718)	N	2	35	20	1966	4	0	0	0	0	0	E 000035		E	50	45	5	4	0	000	NON									2012	4	2011	
County Forest 701		Bridge Rd	1.91 (10085)	N	2	35	20	1966	4	0	0	0	0	0	E 000035		E	50	45	5	4	0	000	NON									2012	4	2011	

=>Fox Farm Rd		1.90																																		
		AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE Type	WD	YR	P	CURB LT	SHOULDER LT	RT	MEDIAN Type	WD	ADT I	YR	ROW I	W	FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT R	YR	SW		
STH 86		Termini	1.90 (10032)	N	2	35	18	1966	4	0	0	0	0	0	E 000015		E	50	45	5	4	0	000	NON									2012	4	2011	

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=>Hoffman Rd		0.27																																				
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT												
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V	YR	R	YR	R	YR	SW			
STH 86	Termini	0.27 (1426)	N	2	35	20	1966	4	0	0	000	000		E	1000005		E	50	45	5	4	000	NON				2012		4	2011								

=>Island View Dr		0.24																																					
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT													
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V	YR	R	YR	R	YR	SW				
STH 86	E Island View Dr	0.06 (317)	N	2	70	20	2006	3	0	0	202	202		E	000015		E	66	45	5	4	000	NON				2012		7	2011									
E Island View Dr	Termini	0.18 (950)	N	2	70	20	2006	3	0	0	202	202		E	000015		E	66	45	5	4	000	NON				2012		7	2011									

=>E Island View Dr		0.38																																						
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT														
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V	YR	R	YR	R	YR	SW					
Island View Dr	Termini	0.38 (2006)	N	2	70	20	2006	3	0	0	202	202		E	000015		E	66	45	5	4	000	NON				2012		8	2011										

=>Jaacks Rd		0.63																																						
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT														
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V	YR	R	YR	R	YR	SW					
CTH O	Termini	0.63 (3326)	N	2	35	20	1966	4	0	0	000	000		E	000005		E	50	45	5	4	000	NON				2012		4	2011										



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		<b>0.24</b>																											
=>Kohl Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT		RT	Type	WD	I													CNT	YR
		Termini	0.24 (1267)	N	1	35	20	1966	4	0	0	000	000	E	1000015	E	50	45	5	4	000	NON					2012	4	2011

		<b>0.15</b>																											
=>Little Beaver Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT		RT	Type	WD	I													CNT	YR
		Termini	0.11 (581)	N	2	70	20	1996	4	0	0	203	203	E	1000015	E	66	45	5	4	000	NON					2012	7	2011
		Blackhawk Rd	0.04 (211)	N	2	70	20	1996	4	0	0	203	203	E	1000015	E	66	45	5	4	000	NON					2012	7	2011

		<b>0.48</b>																											
=>Loop Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT		RT	Type	WD	I													CNT	YR
		STH 86 (0.48)	0.48 (2534)	N	2	70	22	2002	3	0	0	202	202	E	1000035	E	33	40	5	4	000	NON					2012	7	2011

		<b>0.50</b>																											
=>Max Tilly Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT		RT	Type	WD	I													CNT	YR
		Termini	0.50 (2640)	N	2	35	22	1992	4	0	0	000	000	E	1000015	E	66	45	5	4	000	NON					2012	3	2011

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=>Millie Rd																				0.25							
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN Type	ADT I CNT	ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT	
				L	Type	WD	YR	P	LT			RT	LT													RT	I
	E Bilby Rd	0.03 (158)	N	2	57	20	1991	4	0	0	202	202	E	50	45	5	4	000	NON	00					2012	4	2011
	TN RD 35	0.12 (634)	N	2	57	20	1991	4	0	0	202	202	E	50	45	5	4	000	NON	00					2012	4	2011
	TN RD 35	0.10 (528)	N	2	57	20	1991	4	0	0	202	202	E	50	45	5	4	000	NON	00					2012	4	2011

=>Mitchell Rd																				0.11							
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN Type	ADT I CNT	ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT	
				L	Type	WD	YR	P	LT			RT	LT													RT	I
	Termini	0.11 (581)	N	2	35	20	1966	4	0	0	000	000	E	50	45	5	4	000	NON	00					2012	4	2011

=>New Wood Rd																				5.19							
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN Type	ADT I CNT	ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV YR	PVT	
				L	Type	WD	YR	P	LT			RT	LT													RT	I
	W Averill Creek Rd (1.95)	0.52 (2746)	N	2	35	20	1966	4	0	0	000	000	E	50	45	5	4	000	NON	00					2012	4	2011
	County Forest 702	2.70 (14256)	N	2	35	20	1966	4	0	0	000	000	E	50	45	5	4	000	NON	00					2012	4	2011
	Four Mile Dr	1.56 (8237)	N	2	35	20	1966	4	0	0	000	000	E	50	45	5	4	000	NON	00					2012	4	2011
	Deer Trl	0.41 (2165)	N	2	70	20	1966	4	0	0	000	000	E	50	45	5	4	000	NON	00					2012	6	2011

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1.03																													
=>Phalzgraff Rd																													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT			
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V
	Termini (0.75)	0.75 (3960)	N	2	70	20	2001	4	0	0	202	202		E	000015	E	50	45	5	4	000	NON				2012		7	2011
	Termini (0.95)	0.20 (1056)	N	2	35	20	1966	4	0	0	000	000		E	000015	E	50	45	5	4	000	NON				2012		3	2011
	Termini (1.02)	0.08 (422)	N	2	35	20	1991	4	0	0	000	000		E	000015	E	50	45	5	4	000	NON				2012		2	2011

0.92																													
=>Pine Grove Ln																													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT			
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V
	S River Rd	0.92 (4858)	N	2	70	22	2002	3	0	0	202	202		E	000015	E	50	45	5	4	000	NON				2012		7	2011

0.37																													
=>S River Rd																													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT			
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V
	Pine Grove Ln	0.25 (1320)	N	2	35	20	1995	4	0	0	203	203		E	000005	E	33	45	5	4	000	NON				2012		4	2011
	Loop Rd (0.12)	0.12 (634)	N	2	70	20	1995	4	0	0	203	203		E	000015	E	33	45	5	4	000	NON				2012		7	2011

0.50																													
=>Ross Rd																													
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	ALN		INV		PVT			
				L	Type	WD	YR	P	LT	RT	LT	RT	Type	WD	I							CNT	YR	I	W	H	AC	H	V
	Termini	0.50 (2640)	N	1	35	20	1966	4	0	0	000	000		E	000005	E	50	45	5	4	000	NON				2012		3	2011

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		<b>0.75</b>																													
=>Saindon Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					L	YR	LT	RT	LT	RT	Type	WD	I	CNT	YR	I													W	R	YR
		County Forest 703	0.75 (3960)	N	2	35	18	1966	4	0	0	000	000		E	1000005		E	50	45	5	4	000	NON				2012		3	2011

		<b>0.41</b>																													
=>Sanctuary Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					L	YR	LT	RT	LT	RT	Type	WD	I	CNT	YR	I													W	R	YR
		Termini	0.39 (2059)	N	2	70	22	2002	3			202	202		A	000000		A	66	45	5	4	000	NON				2012		8	2011

		<b>0.25</b>																													
=>Silver Birch Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					L	YR	LT	RT	LT	RT	Type	WD	I	CNT	YR	I													W	R	YR
		Evergreen Rd	0.12 (634)	N	2	35	20	1974	4	0	0	000	000		E	000015		E	66	45	5	4	000	NON				2012		4	2011
		Termini	0.13 (686)	N	2	35	20	1974	4	0	0	000	000		E	000015		E	66	45	5	4	000	NON				2012		4	2011

		<b>0.59</b>																													
=>Spirit Falls Ave	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
					L	YR	LT	RT	LT	RT	Type	WD	I	CNT	YR	I													W	R	YR
		STH 86	0.59 (3115)	N	2	65	21	2007	4	0	0	202	202		E	000015		E	66	45	5	4	000	NON				2012		8	2011

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		<b>0.76</b>																												
=>Sunwall Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT	RT	Type	WD	I	CNT	YR													I	W
		Termini	0.76 (4013)	N	2	35	24	1974	4	0	0	000	000	E	1000015	E	50	45	5	4	000	NON						2012	4	2011

		<b>2.25</b>																												
=>Swamp Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT	RT	Type	WD	I	CNT	YR													I	W
		Coffee Creek Rd (3.75)	0.75 (3960)	N	1	35	16	1966	4	0	0	000	000	E	1000015	E	50	45	5	4	000	NON						2012	4	2011
		Coffee Creek Rd (5.25)	1.01 (5333)	N	2	35	18	1966	4	0	0	000	000	E	1000015	E	50	45	5	4	000	NON						2012	4	2011
		Coffee Creek Rd	0.49 (2587)	N	2	35	18	1966	4	0	0	000	000	E	1000015	E	50	45	5	4	000	NON						2012	4	2011

		<b>0.04</b>																												
=>TN RD 35	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT	RT	Type	WD	I	CNT	YR													I	W
		Millie Rd	0.04 (211)	N	2	70	20	1991	4	0	0	202	202	E	1000015	E	50	45	5	4	000	NON						2012	4	2011

		<b>0.38</b>																												
=>Tomahawk Rd	AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	L	SURFACE		CURB	SHOULDER		MEDIAN		ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT	
						Type	WD		YR	LT	RT	Type	WD	I	CNT	YR													I	W
		Valley Rd (0.38)	0.38 (2006)	N	2	70	20	1991	4	0	0	203	203	E	1000015	E	66	45	5	4	000	NON						2012	5	2011

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
WISCONSIN INFORMATION SYSTEM FOR LOCAL ROADS

Inventory Listing - ( R-20 )  
1-1-2012 Certification

**Town Of Tomahawk (030)**

=>Tower Rd		2.09																											
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
				L	Type	WD	YR	P	LT		RT	LT	RT	Type													WD	I	CNT
	Bergman Rd (2.09)	2.09 (11035)	N	2	35	20	1971	4	0	0	000	000	E	1000015	E	66	45	5	4	000	NON						2012	3	2011
	Bridge Rd																												

=>Valley Rd		0.14																											
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
				L	Type	WD	YR	P	LT		RT	LT	RT	Type													WD	I	CNT
	Termini	0.14 (740)	N	2	70	20	1991	4	0	0	203	203	A	1000010	E	66	45	5	4	000	NON						2012	5	2011
	Tomahawk Rd (0.38)																												

=>Wauwatosa Ave		0.44																											
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
				L	Type	WD	YR	P	LT		RT	LT	RT	Type													WD	I	CNT
	Termini	0.44 (2323)	N	2	70	20	2010	0	0	0	202	202	E	1000005	E	33	45	5	4	000	NON						2012	9	2011
	STH 86																												

=>Wilderness Dr		0.45																											
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
				L	Type	WD	YR	P	LT		RT	LT	RT	Type													WD	I	CNT
	Termini	0.45 (2376)	N	2	70	20	1999	4	0	0	202	202	E	1000015	E	66	45	5	4	000	NON						2012	7	2011
	STH 86																												

=>Zenith Tower Rd		0.87																											
AT RD/ST OFFSET MILES	TO ROAD NAME OFFSET MILES	LENGTH MILES (FEET)	OW	SURFACE		CURB		SHOULDER		MEDIAN	ADT		ROW		FC	RC	SC	O	U/A	NHS	H	AC	H	V	ALN	INV	PVT		
				L	Type	WD	YR	P	LT		RT	LT	RT	Type													WD	I	CNT
	Wilson School Rd (0.87)	0.87 (4594)	N	2	70	20	1994	4	0	0	203	203	E	1000035	E	66	45	5	4	000	NON						2012	6	2011
	STH 86																												

APPENDIX B – PASER Rating System

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<b>PASER Asphalt Surface Rating System</b>		
Surface Rating	Visible Distress*	General condition/ Treatment measures
10 <i>Excellent</i>	None.	New construction.
9 <i>Excellent</i>	None.	Recent overlay, like new..
8 <i>Very Good</i>	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40" or greater). All cracks sealed or tight (open ¼" or less).	Recent sealcoat or new road mix. Little or no maintenance required.
7 <i>Good</i>	Very slight or no ravelling, surface shows some traffic wear. Longitudinal cracks (open ¼") due to reflection or paving joints. Transverse cracks (open ¼") spaced 10 feet or more apart, little or slight crack ravelling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
6 <i>Good</i>	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open ¼" – ½") due to reflection and paving joints. Transverse cracking (open ¼" to ½") some paced less than 10 feet. First sign of block cracking. Slight to moderate flushing or polishing. Occasional patching in good condition.	Show signs of aging, sound structural condition. Could extend life with sealcoat.

\*Note: Individual roadways may not have all of the types of distress listed for any particular rating. Each road may have only one or two types of distress.

**PASER Asphalt Surface Rating System (continued)**

Surface Rating	Visible Distress*	General condition/ Treatment measures
5 <i>Fair</i>	<p>Moderate to severe raveling (loss of fine and coarse aggregate).</p> <p>Longitudinal and transverse cracks (open ½") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge.</p> <p>Block cracking up to 50% of surface.</p> <p>Extensive to severe flushing or polishing.</p> <p>Some patching or edge wedging in good condition.</p>	<p>Surface aging, sound structural condition. Needs sealcoat or nonstructural overlay.</p>
4 <i>Fair</i>	<p>Severe surface raveling.</p> <p>Multiple longitudinal and transverse cracking with slight raveling.</p> <p>Longitudinal cracking in wheel path.</p> <p>Block cracking (over 50%) of surface).</p> <p>Patching in fair condition.</p> <p>Slight rutting or distortions (1/2" deep or less).</p>	<p>Significant aging and first signs of need for strengthening. Would benefit from recycling or overlay.</p>
3 <i>Poor</i>	<p>Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion.</p> <p>Severe block cracking.</p> <p>Some alligator cracking (less than 25% of surface).</p> <p>Patches in fair to poor condition.</p> <p>Moderate rutting or distortion (1" or 2" deep).</p> <p>Occasional potholes.</p>	<p>Needs patching and major overlay or complete recycling.</p>
2 <i>Very Poor</i>	<p>Alligator cracking (over 25% of surface).</p> <p>Severe distortions (over 2" deep).</p> <p>Extensive patching in poor condition.</p> <p>Potholes.</p>	<p>Severe deterioration. Needs reconstruction with extensive base repair.</p>
1 <i>Failed</i>	<p>Severe distress with extensive loss of surface integrity.</p>	<p>Failed. Needs total reconstruction.</p>

\*Note: Individual roadways may not have all of the types of distress listed for any particular rating. Each road may have only one or two types of distress.

<b>PASER Gravel Surface Rating System</b>		
Surface Rating	Visible Distress*	General condition/ Treatment measures
5 (10) <i>Excellent</i>	No distress. Dust controlled. Excellent surface condition and ride.	New construction – or total reconstruction. Excellent drainage. Little or no maintenance required.
4 (8) <i>Good</i>	Dust under dry conditions. Moderate loose aggregate. Slight washboarding.	Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine maintenance may be needed.
3 (6) <i>Fair</i>	Good crown (3"-6") Ditches present on more than 50% of roadway. Gravel layer is mostly adequate but additional aggregate may be needed at a few locations to help correct washboarding or isolated potholes and ruts. Some culvert cleaning needed. Moderate washboarding (1"-2" deep), over 10%-20% of the area. Moderate dust, partial obstruction of vision. None or slight rutting (less than 1" deep). An occasional small pothole (less than 2" deep). Some loose aggregate (2" deep).	Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.

\*Note: Individual roadways may not have all of the types of distress listed for any particular rating. Each road may have only one or two types of distress.

<b>PASER Gravel Surface Rating System (continued)</b>		
Surface Rating	Visible Distress*	General condition/ Treatment measures
2 (4) <i>Poor</i>	<p>Little or no roadway crown (less than 3").</p> <p>Adequate ditches on less than 50% of roadway. Portions of the ditches may be filled, overgrown and/or show erosion.</p> <p>Some areas (25%) with little or no aggregate.</p> <p>Culverts partially full of debris.</p> <p>Moderate to severe washboarding (over 3" deep) over 25% of area.</p> <p>Moderate rutting (1"- 3"), over 10% - 25% of area.</p> <p>Moderate potholes (2" - 4"), over 10% - 25% of area.</p> <p>Severe loose aggregate (over 4").</p>	<p>Travel at slow speeds (less than 25 mph) is required.</p> <p>Needs additional new aggregate.</p> <p>Major ditch construction and culvert maintenance also required.</p>
1 (2) <i>Failed</i>	<p>No roadway crown or road is bowl shaped with extensive ponding.</p> <p>Little if any ditching.</p> <p>Filled or damaged culverts.</p> <p>Severe rutting (over 3" deep), over 25% of the area.</p> <p>Severe potholes (over 4" deep), over 25% of area.</p> <p>Many areas (over 25%) with little or no aggregate.</p>	<p>Travel is difficult and road may be closed at times.</p> <p>Needs complete rebuilding and/or new culverts.</p>

\*Note: Individual roadways may not have all of the types of distress listed for any particular rating. Each road may have only one or two types of distress.

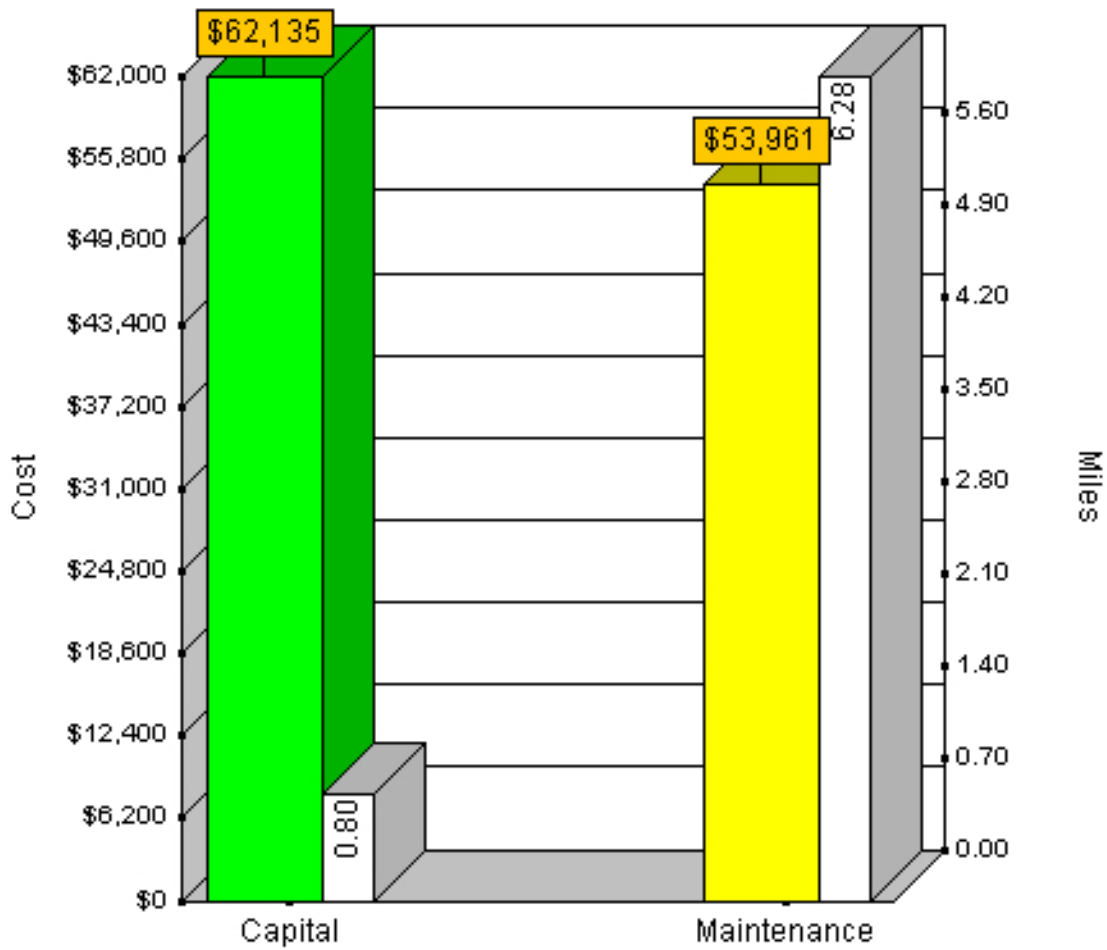
Source: Wisconsin Transportation Information Center.

APPENDIX C – Rudimentary Needs Analysis

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# Rudimentary Needs Analysis Town of Tomahawk



- 100.00% of needs attributed to this year's data
- 0.00% of needs attributed to one year old data
- 0.00% of needs attributed to two year old data
- 0.00% of needs are potentially unreliable - Rating Data > 2 years old
- 0.00% of needs are estimated - No Data
- 0.00% of needs are estimated - Data Too Old (> 5 years old)

*\*\*The information shown is based on actual data. Pavement sections without actual rating data were not included in this analysis. There are 35.41 miles of rated roadways and 0.00 miles of unrated roadways. Please note that mileage listed with the graph shown above is the portion of the rated roadway miles indicating need (designated as capital or maintenance).*

# Rudimentary Needs Analysis

## Town of Tomahawk

Roadway Name	Maint. Cost	Capital Cost
W Bilby Ln	0.00	10805.26
E Bilby Rd	0.00	31596.73
Blackhawk Rd	1656.20	0.00
Bridge Rd	1631.84	0.00
Deer Trl	2989.86	0.00
Eagle Waters Rd	4887.80	0.00
Island View Dr	1154.38	0.00
Little Beaver Rd	721.60	0.00
Loop Rd	2539.63	0.00
Millie Rd	0.00	17013.33
New Wood Rd	4041.33	0.00
Phalzgraff Rd	4761.47	0.00
Pine Grove Ln	4868.80	0.00
S River Rd	577.64	0.00
TN RD 35	0.00	2719.56
Tomahawk Rd	9468.32	0.00
Valley Rd	3492.80	0.00
Wilderness Dr	2164.80	0.00
Zenith Tower Rd	9004.24	0.00
<b>Total</b>	<b>53960.71</b>	<b>62134.88</b>

*\*\*The information shown is based on actual data. Pavement sections without actual rating data were not included in this analysis.*

*There are 35.41 miles of rated roadways and 0.00 miles of unrated roadways.*



APPENDIX D – Recommended Capital Project Segment Details

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**Town of Tomahawk Recommended Resurfacing Projects 2012 - 2016**

<b>On Route</b>	<b>At Route</b>	<b>At Offset</b>	<b>Toward Route</b>	<b>To Offset</b>	<b>Length</b>	<b>Width</b>	<b>Surface</b>	<b>Pvmt Rtg (Year 1)</b>	<b>Pvmt Rtg (Year 5)</b>	<b>Action</b>	<b>Estimated Cost</b>
Millie Rd	Termini	0	E Bilby Rd	1320	1320	20	57	4	9	Resurfacing	17009
W Bilby Ln	Termini	0	Termini	686	686	20	55	3	9	Mill and Overlay	10798
E Bilby Rd	CTH O	0	Millie Rd	2006	2006	20	55	3	9	Mill and Overlay	31589
TN RD 35	Termini	0	Millie Rd	211	211	20	70	4	9	Resurfacing	2712
											<b>\$62,108.00</b>

**Town of Tomahawk  
Lincoln County  
2011-2012 TRID**

**Bridge Road Additional Information**

Bridge Road is located in western Lincoln County in the Town of Tomahawk. Bridge Road is a vital connection with Tower Road to connect southwestern Lincoln County, namely CTH M to STH 86 in central Lincoln County. This connection contributes to the local economy by transporting over 40,000 cords of pulp per year along with the new demand for Bio-mass from the forest areas to the south with paper mills in Tomahawk and northward. This connection also has allowed for access to thousands of acres of recreational forestland and numerous seasonal cabins along with being posted as an ATV Route. Bridge Road connects the two non-metallic mines on Four Mile Road to STH 86 allowing for local access to sand and gravel products.



Pulp Truck Hauling Wood Chips

**SAFTEY CONCERNS**

Bridge Road has numerous trucks hauling maximum weight loads of pulp, wood chips and gravel. With the recently increased weight allowed for these trucks this road has shown increased wear that has led to increased maintenance. Visibility has become a major safety concern at times throughout the year. Annually the town spends \$6000 on dust control and has increased the number of times they grade this stretch of road.



Dump Truck Hauling Gravel

**PROPOSED IMPROVEMENTS**

The Town of Tomahawk is planning on paving 1.9 miles of Bridge Road, from .25 miles south of Four Mile Road to the paved bridge approach .3 miles south of Spiritfalls Ave. This project would include placement of 3" of asphaltic pavement and gravel shoulders. This would help with both the dust safety concerns and help the road support the heavy truck traffic.



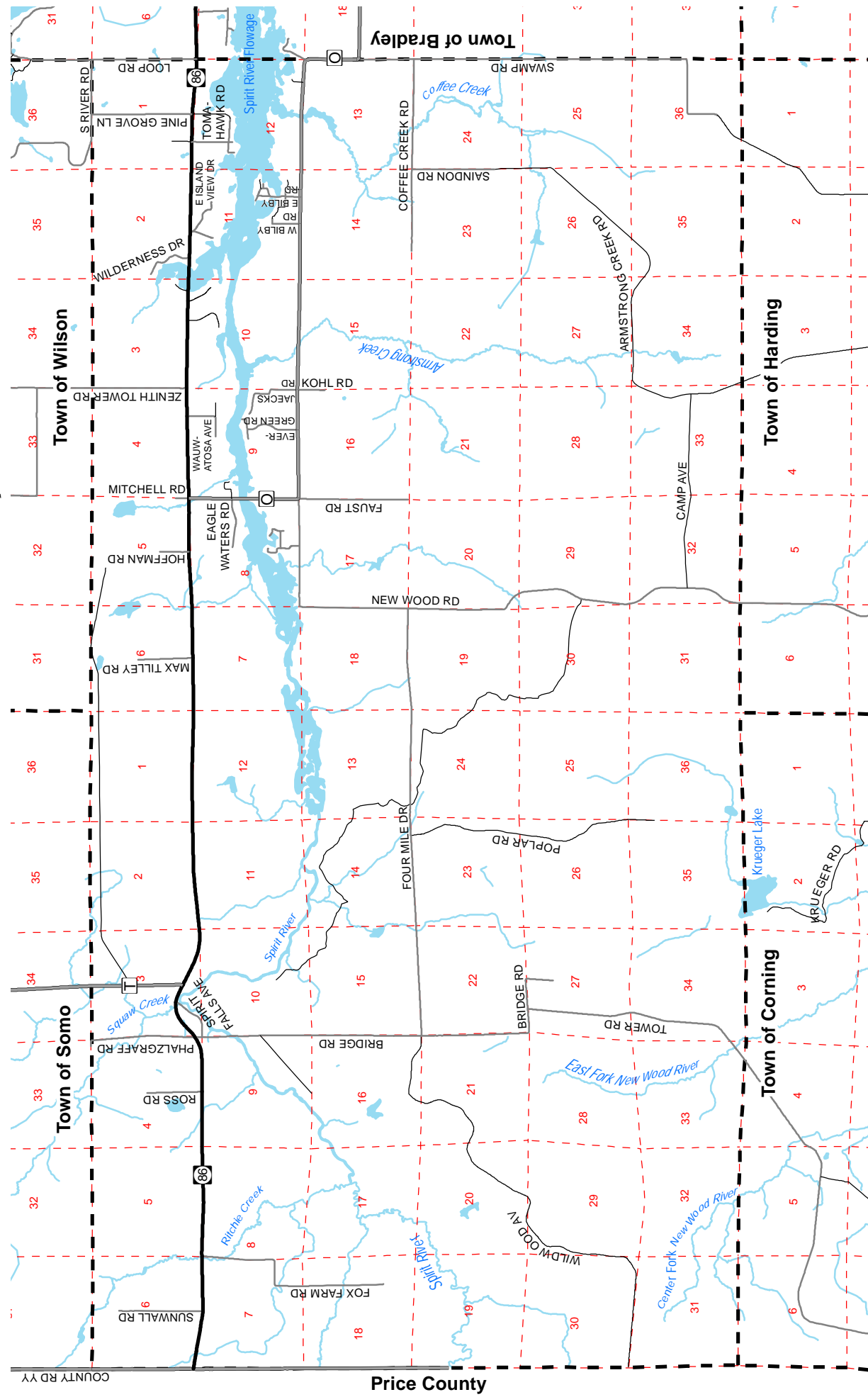
APPENDIX E – Town Road Map

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# Town of Tomahawk - Town Road System



Minor Civil Divisions  
 Section Lines  
 US & State Highways  
 County Highways  
 Local Roads  
 Private / Other  
 Water

N  
  
  
 0 0.5 1 2 Miles

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is for informational purposes only and does not constitute a reference or warranty. NCRWPC is not responsible for any inaccuracies herein contained.

Prepared By:  
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