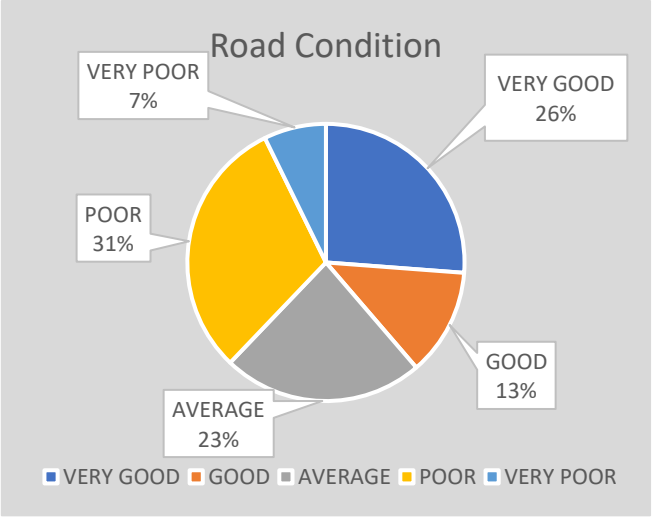
2.2 Condition of Existing Facilities

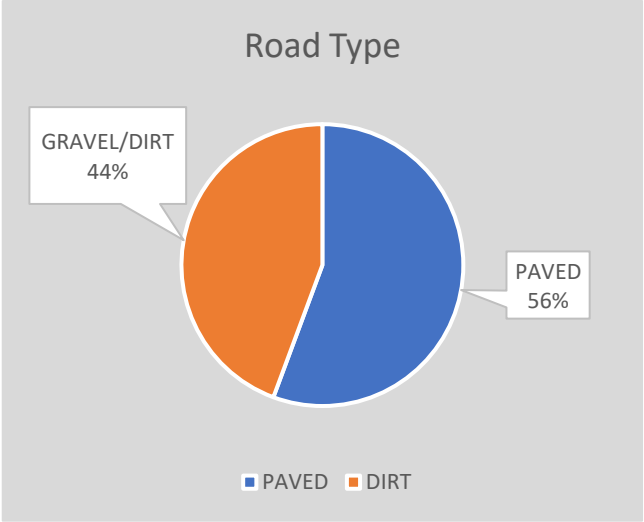
2.2.1 Road Infrastructure

The WEVD road infrastructure consists of roughly 58,755 linear feet (11.13 miles) of gravel/dirt and paved roads. The road infrastructure is believed to have been first constructed in the 1970s. The road consists of a variety of materials and surfaces, including pavement and crushed gravel/dirt, with widths of 2 lanes. There are approximately 32 streets, 96 culverts and there are no designated pedestrian crossings. The Village District currently has no plans to upgrade the roads for increased traffic flow or capacity.

The age of the road infrastructure is largely unknown; therefore, The Village District should keep records of road condition during any repairs and improvements in the excel document provided with this report and with their GIS equipment. The following figures illustrate the network by condition and type.

Figure 1: Condition and Type of Roads





2.2.2 Dirt/Gravel Roads

There are approximately 24,296 linear feet of WEVD maintained dirt/gravel roads in the network at present. The existing condition of the dirt roads varies significantly, ranging from good in some sections to very poor in others. Factors such as regular grading, weather impacts from rainfall and freeze thaw cycles, material type and depth contribute to these differences in road quality. Maintaining these roads is an ongoing challenge, requiring periodic maintenance. Upgrading these dirt roads to paved surfaces is a priority, as it would enhance durability and reduce maintenance efforts.

The Table below provides a detailed summary of the dirt/gravel roads, including information such as length, road width, shoulder, and the current condition of the road.

Table 2: Dirt/ Gravel Road Infrastructure

STREET	LENGTH	WIDTH	SHOULDER	CONDITION
ABNAKI TRAIL	776	21'	1'-2', Minimal Shoulder / Unpaved	AVERAGE
ARMSBY CI	430	18-20	6' / Unpaved	AVERAGE
BELL VALLEY (A)	2,411	21'	2' / Unpaved	POOR
CHAPMAN CI	1,015	19'-20'	1'-2', Minimal Shoulder / Unpaved	POOR
COURT ST	682	21'	1'-2', Minimal Shoulder / Unpaved	AVERAGE
DAVID THOMPSON RD (C)	1,668	20'	6' / Unpaved	AVERAGE
DUBEAU CI	463	20'	4' / Unpaved	AVERAGE
DURGIN CI	798	18'	1'-2', Minimal Shoulder / Unpaved	POOR
FOREST DR	1,024	22'	2' / Unpaved	POOR
GREEN CIRCLE	1,516	21'	Minimal / Unpaved	AVERAGE
MCLAREN DR (A)	2,491	21'	1'-2', Minimal Shoulder / Unpaved	GOOD
MCLAREN DR (C)	995	21'	1'-2', Minimal Shoulder / Unpaved	VERY POOR
MORRIL CIRCLE	614	20'	3'-6' / Unpaved	VERY POOR
PANAWAY DR	746	20'	1'-2', Minimal Shoulder / Unpaved	AVERAGE
PEGWOOD RD (C)	1,346	21'	1'-2', Minimal Shoulder / Unpaved	AVERAGE
RESERVOIR RD (A)	1,000	21'	5' / Unpaved	AVERAGE
RICHARDSON	2,610	20'	5' / Unpaved	POOR
SCRIBNER DR	619	18'	1'-2', Minimal Shoulder / Unpaved	VERY POOR
SCHUYLER DR	1,307	20'	3'-6' / Unpaved	VERY POOR
SNOW TR (A)	330	21'	4'/ Unpaved	VERY POOR
TIMBER TR	1,072	20	3' / Unpaved	AVERAGE
TOBEY CI	2,142	20'	6' / Unpaved	POOR

2.2.3 Paved Roads

Paved roads make up the majority of WEVD maintained roads, offering infrastructure for residents and visitors. The overall condition of these paved roads varies, with some stretches remaining in very good shape while others are considered poor. Regular maintenance and assessments are necessary to ensure safety and accessibility, especially as road surfaces age. The table below provides a detailed listing of the paved roads within the WEVD area, including their respective lengths, current condition ratings, and surface types. This information is essential for planning future repairs and prioritizing improvement projects to maintain transportation routes throughout the community.

Table 3: Paved Road Infrastructure

STREET	LENGTH	WIDTH	SHOULDER	CONDITION
BELL VALLEY (B)	652	21'	2' / Unpaved	POOR
BELL VALLEY (C)	1,797	21'	2' / Unpaved	POOR
BOULDER DR	772	21'	3' / Unpaved	POOR
BRIARCLIFF	1,207	20'-22'	1'-2', Minimal Shoulder / Unpaved	POOR
CALDON CI	405	21'	2' / Unpaved	POOR
CAMPTON MTN RD	818	21'	1'-2', Minimal Shoulder / Unpaved	VERY GOOD
DAVID THOMPSON RD (A)	683	20'	6' / Unpaved	POOR
DAVID THOMPSON RD (B)	654	20'	6' / Unpaved	GOOD
ISAAX FOX DR	1,876	20'	1'-2', Minimal Shoulder / Unpaved	POOR
MCLAREN DR (B)	785	21'	1'-2', Minimal Shoulder / Unpaved	VERY GOOD
MEYER	400	19'	1'-2', Minimal Shoulder / Unpaved	VERY POOR
PEGWOOD RD (A)	3,999	21'	1'-2', Minimal Shoulder / Unpaved	VERY GOOD
PEGWOOD RD (B)	1,564	21'	1'-2', Minimal Shoulder / Unpaved	GOOD
PORCUPINE DR	899	21'	1'-2', Minimal Shoulder / Unpaved	VERY GOOD
RESERVOIR RD (B)	3,732	21'	5' / Unpaved	AVERAGE
RYAN CI	532	21'	2' / Unpaved	VERY GOOD
SUMMIT	3,798	21'	2' / Unpaved	VERY GOOD
SNOW TR (B)	345	21'	4'/ Unpaved	AVERAGE
TAYLOR DR	2,633	21'	1'-2', Minimal Shoulder / Unpaved	GOOD
WEBSTER CT	588	20'	1'-2', Minimal Shoulder / Unpaved	POOR
WEETAMOO TRAIL	4,561	21	2', Minimal Shoulder / Unpaved	VERY GOOD

2.2.4 Drainage Infrastructure

The drainage infrastructure (Culverts) within the WEVD total approximately 3,754 linear feet, serving as a critical component in the management of stormwater runoff. This network consists of various drainage pipes installed beneath the roadways, which are designed to collect and convey water away from the streets to prevent flooding and maintain road integrity. Inspections of these pipes revealed that the inlets are found in varying conditions. Some inlets remain unobstructed, while others are partially or fully blocked by debris, sediment, or vegetation. Blocked inlets can impede drainage, leading to pooling and road damage of water during periods of heavy rainfall.

The Table below provides a detailed summary of the drainage pipes that were assessed, including information such as the street location, pipe diameter, length, material, and the current condition of both the inlet and outlet.

Table 4: Drainage Infrastructure

STREET	DIAMETER (IN)	LENGTH (FT)	MATERIAL	INLET	OUTLET
TOBEY ROAD	18"	39	PVC	CLEAR	CLEAR
TOBEY ROAD	18"	42	STEEL	CLEAR	CLEAR
TOBEY ROAD	24"	38	STEEL	CLEAR	CLEAR
DAVID THOMPSON	18"	35	PVC	CLEAR	CLEAR
DAVID THOMPSON	24"	30	PVC	CLEAR	CLEAR
DAVID THOMPSON	18"	49	PVC	CLEAR	CLEAR
SCHUYLER	18"	38	STEEL	BLOCKED	BLOCKED
SCHUYLER	18"	32	STEEL	CLEAR	CLEAR
DAVID THOMPSON	15"	46	PVC	CLEAR	CLEAR
DAVID THOMPSON	12"	32	PVC	CLEAR	CLEAR
DAVID THOMPSON	15"	38	STEEL	CLEAR	CLEAR
DAVID THOMPSON/RICHARDSON	24"	50	STEEL	CLEAR	UNKNOWN
BELL VALLEY	16"	40	PVC	CLEAR	CLEAR
BELL VALLEY	16"	42	PVC	CLEAR	CLEAR
BELL VALLEY	18"	38	PVC	CLEAR	CLEAR
BELL VALLEY	18"	53	STEEL	CLEAR	CLEAR
BELL VALLEY	18"	48	STEEL	BLOCKED	BLOCKED
PANAWAY	UNKNOWN	UNKNOWN	STEEL	BLOCKED	BLOCKED
COURT	UNKNOWN	UNKNOWN	STEEL	BLOCKED	BLOCKED
RICHARDSON	16"	38	PVC	CLEAR	CLEAR
BELL VALLEY	18"	42	PVC	CLEAR	CLEAR
BELL VALLEY	24"	40	STEEL	CLEAR	CLEAR
DEBEAU	UNKNOWN	UNKNOWN	STEEL	BLOCKED	BLOCKED
PORCUPINE	20"	58	PVC	CLEAR	CLEAR
RESERVOIR	18"	48	PVC	CLEAR	CLEAR
RESERVOIR	16"	60	STEEL	CLEAR	CLEAR
RESERVOIR	5'	46	CONCRETE	CLEAR	CLEAR
RESERVOIR	18"	42	PVC	CLEAR	CLEAR
RESERVOIR	18"	62	STEEL	CLEAR	CLEAR
RESERVOIR	7'	60	STEEL	CLEAR	CLEAR
RESERVOIR	18"	40	STEEL	CLEAR	CLEAR
RESERVOIR	18"	36	STEEL	CLEAR	CLEAR
ISAAX FOX	24"	36	STEEL	BLOCKED	BLOCKED
ISAAX FOX	18"	30	STEEL	BLOCKED	BLOCKED
MORRILL	18"	58	PVC	CLEAR	CLEAR
MCLAREN	18"	42	PVC	CLEAR	CLEAR
MCLAREN	24"	82	PVC	CLEAR	CLEAR

STREET	DIAMETER (IN)	LENGTH (FT)	MATERIAL	INLET	OUTLET
MCLAREN	24"	38	STEEL	CLEAR	CLEAR
MCLAREN	16"	40	PVC	CLEAR	CLEAR
MCLAREN	24"	38	STEEL	CLEAR	CLEAR
MCLAREN	18"	46	PVC	CLEAR	CLEAR
MCLAREN	20"	40	PVC	CLEAR	CLEAR
MCLAREN	20"	38	PVC	CLEAR	CLEAR
MCLAREN	20"	40	PVC	CLEAR	CLEAR
PEGWOOD	16"	40	PVC	CLEAR	CLEAR
CAMPTON MOUNTAIN	16"	45	PVC	BLOCKED	CLEAR
CAMPTON MOUNTAIN	22"	40	PVC	CLEAR	CLEAR
CAMPTON MOUNTAIN	18"	30	PVC	CLEAR	CLEAR
CAMPTON MOUNTAIN	16"	40	PVC	CLEAR	BLOCKED
CAMPTON MOUNTAIN	16"	30	PVC	CLEAR	CLEAR
GREEN CIRCLE	16"	34	PVC	CLEAR	CLEAR
GREEN CIRCLE	18"	51	PVC	BLOCKED	BLOCKED
ASPEN	16"	50	PVC	BLOCKED	BLOCKED
MEYER	48”	40	STEEL	CLEAR	CLEAR
MEYER	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
MEYER	4"	28	PVC	CLEAR	CLEAR
RYAN	18"	36	PVC	CLEAR	CLEAR
RYAN	16"	50	STEEL	CLEAR	CLEAR
RYAN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
DURGIN	18"	46	PVC	BLOCKED	CLEAR
SUMMIT	32"	38	STEEL	CLEAR	CLEAR
SUMMIT	24"	36	STEEL	BLOCKED	CLEAR
SUMMIT	24"	42	STEEL	BLOCKED	CLEAR
SUMMIT	24"	40	PVC	BLOCKED	CLEAR
SUMMIT	24"	36	PVC	CLEAR	CLEAR
SUMMIT	18"	36	PVC	BLOCKED	BLOCKED
SUMMIT	18"	40	PVC	CLEAR	CLEAR
SUMMIT	24"	36	PVC	CLEAR	CLEAR
SCRIBNER	UNKNOWN	60	PVC	CLEAR	CLEAR
CHAPMAN	UNKNOWN	36	STEEL	BLOCKED	BLOCKED
CHAPMAN	24"	32	STEEL	CLEAR	CLEAR
TIMBER	UNKNOWN	50	UNKNOWN	BLOCKED	BLOCKED
TIMBER	16"	32	STEEL	CLEAR	CLEAR
TIMBER	18"	32	PVC	BLOCKED	CLEAR
TIMBER	12"	30	PVC	BLOCKED	CLEAR
TIMBER	18"	30	PVC	CLEAR	CLEAR

STREET	DIAMETER (IN)	LENGTH (FT)	MATERIAL	INLET	OUTLET
TIMBER	UNKNOWN	30	STEEL	BLOCKED	BLOCKED
MARDEN	16"	40	PVC	CLEAR	BLOCKED
CALDON	14"	38	PVC	CLEAR	CLEAR
CALDON	UNKNOWN	30	UNKNOWN	BLOCKED	BLOCKED
WEETAMOO	18"	36	PVC	CLEAR	CLEAR
WEETAMOO	18"	74	STEEL	CLEAR	CLEAR
BOULDER	18"-20"	36	STEEL	BLOCKED	BLOCKED
BOULDER	12"	40	STEEL	BLOCKED	BLOCKED
BOULDER	12"	40	PVC	CLEAR	BLOCKED
WEETAMOO	16"	40	PVC	CLEAR	CLEAR
WEETAMOO	20"	38	STEEL	BLOCKED	CLEAR
WEETAMOO	20"	40	PVC	CLEAR	CLEAR
WEETAMOO	18"	38	PVC	CLEAR	CLEAR
WEETAMOO	20"	38	PVC	CLEAR	CLEAR
TAYLOR	18"	46	PVC	CLEAR	CLEAR
FOREST	18"	40	PVC	BLOCKED	BLOCKED
FOREST	16"	42	PVC	BLOCKED	BLOCKED
FOREST	16"	40	PVC	CLEAR	CLEAR
WEETAMOO	18"	36	PVC	CLEAR	CLEAR
WEETAMOO	20"	36	STEEL	BLOCKED	BLOCKED

The following graphs show a detailed breakdown of the percent of blockages encountered within the system, along with an analysis of the types of materials.

Figure 2: Inlet and Outlet Conditions

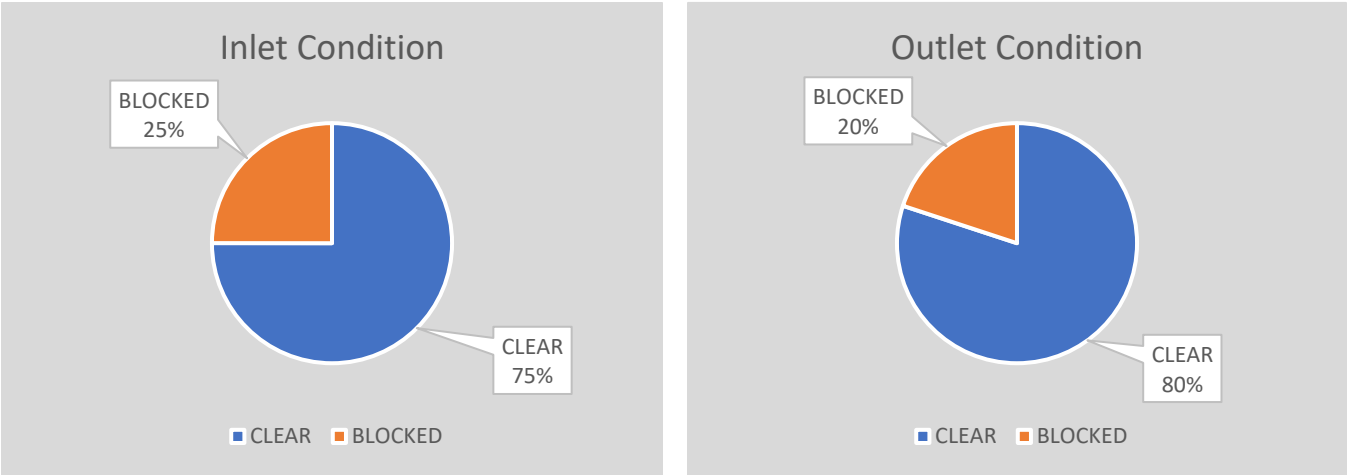
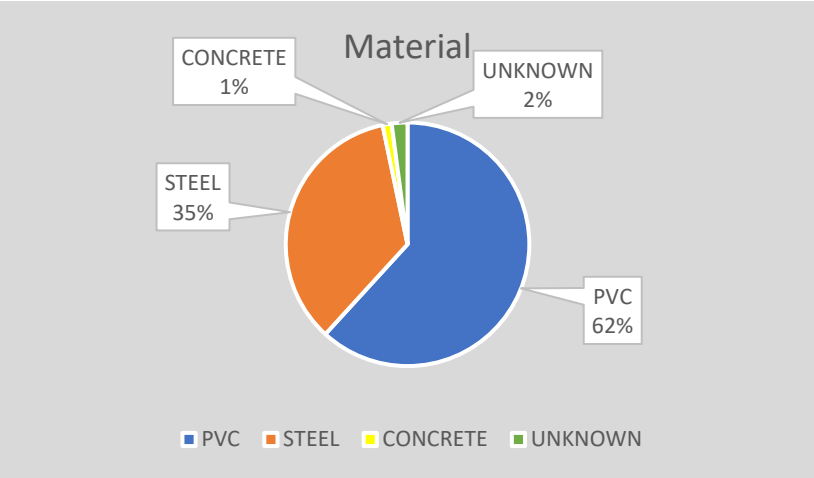


Figure 3: Material of Culverts



A form has been provided for maintenance of culverts biannually (spring and fall) to efficiently clean culverts of debris. Recently purchased GIS equipment is another efficient tool for tracking culvert conditions and updating inventory. WEVD should regularly use this equipment, the more comfortable the system becomes with this equipment the more useful it will be.

Drainage piping costs were developed based on a range of pipe sizes and material types encountered within the system, with unit prices varying accordingly. Based on this analysis, the average installed cost of drainage piping is estimated at approximately $74.59 per linear foot.

2.3 Asset Valuation

The 2026 valuation of the WEVD road network is an estimated $17 million, which represents the estimated replacement cost for all existing roads as they are. The table below represents an approximate value of the assets owned by WEVD. Values are based on 2026 replacement costs. For a detailed breakdown of assets, see Appendix C.

Table 5: WEVD System Evaluation

WEVD - SYSTEM VALUATION (2026)			
COMPONENT	**DESCRIPTION**	**COST/LF**	**REPLACEMENT VALUE**
GRAVEL/DIRT ROADS	24,296 LF	$200	$4,859,200.00
PAVED ROADS	34,459 LF	$350	$12,060,650.00
DRAINAGE PIPES	3,754 LF	$75	$281,550.00
ESTIMATED SYSTEM VALUE			$ 17,000,000

Based on current New Hampshire construction pricing and recent project cost data, the cost to pave existing dirt roads with a 2-inch binder and 1-inch surface course varies depending on site

2. **Consequence of failure** – The impact a failed asset will have on transportation.

Consequence of Failure (CoF) estimates the degree of impact on the roads should the asset fail. It is rated on a scale of 1 to 5 as well with 5 indicating extreme consequences. Consequence of failure is based on operator knowledge and redundancy.

- The CoF for roads was determined by the number of users affected and whether alternate routes were available, or if users would be isolated during road failures.
- For culverts, the CoF was based on pipe and basin size, the larger the pipe, the greater the amount of water overtopping the road if the culvert failed.

Risk is calculated by multiplying the probability of failure by the consequence of failure. The table below shows the risk category, score, and their required actions.

COF	COF VALUE	POF	POF VALUE	Risk Score	Risk Category	Response
VERY HIGH	5	VERY HIGH	5	21 to 25	Very High	Immediate Attention
HIGH	4	HIGH	4	16 to 20	High	Aggressive Monitoring
MEDIUM	3	MEDIUM	3	11 to 15	Medium	Monitoring
LOW	2	LOW	2	6 to 10	Low	Routine Maintenance
VERY LOW	1	VERY LOW	1	0 to 5	Very Low	Preventative Maintenance

3.4 Summary of Critical Assets

Roads play a crucial role in ensuring safe and efficient transportation for the community. Their importance may stem from the significant social, economic, or environmental impacts that could occur if the road were to fail or become unusable.

This risk assessment is used to identify the highest priority assets and set funding strategies accordingly. The table above identifies assets to consider for replacement during the 15-year planning period due to their estimated useful life, condition, and risk rating. The methods used to compute the risk scores above have a direct relationship to the accuracy of the input information. The high-risk items have been discussed with the WEVD to better refine the process of developing a capital improvement plan.

Table 6: Risk Scores for Roads

ROAD RISK SCORES						
STREET	LENGTH	CONDITION	TYPE	COF	POF	RISK
BELL VALLEY (C)	1,797	VERY POOR	PAVED	5	5	25
RICHARDSON	2,610	POOR	DIRT	5	5	25
DAVID THOMPSON RD (C)	1,668	VERY POOR	DIRT	5	5	25
RESERVOIR RD (A)	1,000	VERY POOR	DIRT	5	5	25
BRIARCLIFF	1,207	VERY POOR	PAVED	5	5	25
MCLAREN DR (C)	995	VERY POOR	DIRT	5	5	25

STREET	LENGTH	CONDITION	TYPE	COF	POF	RISK
CALDON CI	405	VERY POOR	PAVED	5	5	25
MORRIL CIRCLE	614	VERY POOR	DIRT	5	5	25
WEBSTER CT	588	VERY POOR	PAVED	5	5	25
SCHUYLER DR	1,307	VERY POOR	DIRT	5	5	25
FOREST DR	1,024	POOR	DIRT	5	4	20
ISAAX FOX DR	1,876	POOR	PAVED	5	4	20
DAVID THOMPSON RD (A)	683	POOR	PAVED	4	4	16
DURGIN CI	798	POOR	DIRT	4	4	16
TOBEY RD	2,142	POOR	DIRT	4	4	16
DUBEAU CI	463	AVERAGE	DIRT	5	3	15
MEYER	400	VERY POOR	PAVED	3	5	15
RESERVOIR RD (B)	3,732	AVERAGE	PAVED	5	3	15
ABNAKI TRAIL	776	AVERAGE	DIRT	4	3	12
BELL VALLEY (B)	652	POOR	PAVED	3	4	12
BOULDER DR	772	POOR	PAVED	3	4	12
PEGWOOD RD (C)	1,346	AVERAGE	DIRT	4	3	12
PEGWOOD RD (B)	1,564	GOOD	PAVED	5	2	10
TAYLOR DR	2,633	GOOD	PAVED	5	2	10
ARMSBY CI	430	AVERAGE	DIRT	3	3	9
GREEN CIRCLE	1,516	AVERAGE	DIRT	3	3	9
COURT ST	682	AVERAGE	DIRT	2	3	6
MCLAREN DR (A)	2,491	GOOD	DIRT	3	2	6
PANAWAY DR	746	AVERAGE	DIRT	2	3	6
CAMPTON MTN RD	818	VERY GOOD	PAVED	5	1	5
MCLAREN DR (B)	785	VERY GOOD	PAVED	5	1	5
PORCUPINE DR	899	VERY GOOD	PAVED	5	1	5
SCRIBNER DR	619	VERY POOR	DIRT	1	5	5
SNOW TR (A)	330	VERY POOR	DIRT	1	5	5
SUMMIT	3,798	VERY GOOD	PAVED	5	1	5
BELL VALLEY (A)	2,411	POOR	DIRT	1	4	4
CHAPMAN CI	1,015	POOR	DIRT	1	4	4
DAVID THOMPSON RD (B)	654	GOOD	PAVED	2	2	4
PEGWOOD RD (A)	3,999	VERY GOOD	PAVED	4	1	4
WEETAMOO TRAIL	4,561	VERY GOOD	PAVED	4	1	4
SNOW TR (B)	345	AVERAGE	PAVED	1	3	3
TIMBER TR	1,072	AVERAGE	DIRT	1	3	3
RYAN CI	532	VERY GOOD	PAVED	1	1	1

The following matrices illustrate the calculation of risk. The lower left quadrant of the matrix indicates assets that are low risk while the upper right quadrant indicates assets that are high risk.

The assets are listed by street name. The lower left quadrant data points may not have labels for readability purposes. The entire asset lists with associated risk scores can be found in Appendix A. The condition of each asset will change over time therefore it is important to review and adjust the risk assessment on a regular basis or as assets are replaced.