



Equipment Replacement Plan

OCTOBER 22nd, 2024

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Presenter

Joseph Miller
Pennington County Highway Superintendent

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2025-2034 EQUIPMENT PURCHASE PLAN NARRATIVE

This plan assists the Highway Department with fleet management and budgetary forecasting for equipment which requires bid letting or purchase from a government cooperative purchasing program. Our equipment budget is estimated at approximately \$1.2 Million per year.

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MOTOR GRADERS




- Ten units in current fleet
- Seven-year warranty on new units
- Average use 800 hours/year per unit
- Goal: Purchase one unit every other year and two units in opposite years. This will keep motor graders under warranty and newer than seven years reducing ownership cost liability and increases trade-in or public auction values



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TRUCKS

- Begin alternating replacement of 4x2 and 4x4 chassis trucks every other year
- Currently have ten trucks in fleet older than 20 years
- Goal: Keep fleet newer than 20 years

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VACUUM BROOMS

- Two units in current fleet that are 22 and 24 years old
- Currently high maintenance costs due to worn out engines and components
- Goal: Add a reconditioned unit to the fleet and keep oldest unit as a spare until a new unit can be purchased in 2029








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PNEUMATIC ROLLERS

- Three units in current fleet; two of the units are 32 years old
- Operator safety concerns, limited parts availability, and poor reliability with older units
- Goal: Replace the two older units before in-house chip seal work in 2025; Keep fleet newer than 20 years

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TRAILERS


- Current fleet in good condition due to replacement plan implementation from prior years
- Goal: Continue maintenance on current fleet and look to start replacing side dumps in 2028



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MOWERS

- Ten units in current fleet with two of them over 22 years old
- Goal: Purchase one new unit every four years due to limited parts availability



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MINI EXCAVATORS


- Two units in current fleet
- Have become a high use piece of equipment due to versatility
- Goal: Purchase one additional unit in 2026 and 2027 so that one unit can be stationed in each division to reduce transportation costs and scheduling conflicts



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PICKUPS

- 18 units currently have more than 150,000 miles
- Recently lost six units unexpectedly due to engine and transmission issues and the fire in Wall
- Goal: Purchase three new units in 2025; from thence forward, replace two units every other year



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SKID STEERS



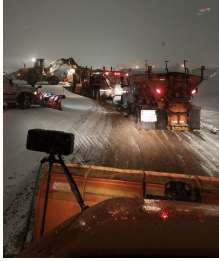
- Seven units in current fleet with the oldest being 30 years old
- Highly used equipment
- Goal: Replace one unit every other year



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LOADERS

- Seven units in current fleet with four of them being 26 to 38 years old
- Aging components result in high maintenance costs
- Goal: Update fleet as budget allows; Keep fleet newer than 30 years

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SNOW BLOWER ATTACHMENT (LOADER)

- Current heavy-duty self-propelled snow equipment fleet is aging with parts only obtainable through the used market; Breakdowns in the field require expensive recovery efforts and delays in snow removal during large storm events
- Goal: Purchase snow blower attachments for loaders to replace aging heavy-duty self-propelled equipment as budget allows





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General Info

UnitCode: 0017
Make: Chevrolet
Model Year: 2022

Service, Use and Seasonality

Unit: 0017
Service: 0017
Season: 0017

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Year Make Model

Year	Make	Model
2022	Chevrolet	Silverado 1500

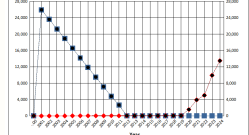
Replacement Based on Replacement Year

Year	Make	Model	Acquisition Cost	Age	Life-to-Date Maintenance
2022	Chevrolet	Silverado 1500	\$18,500	2	\$1,430

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Equipment Replacement Chart

Age (Years) vs. Replacement Cost (\$)



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Equipment Replacement Chart

Year	Make	Model	Acquisition Cost	Age	Life-to-Date Maintenance
2022	Chevrolet	Silverado 1500	\$18,500	2	\$1,430

- Determine scheduled replacement year and/or replacement mileage/hours
- Calculate replacement cost - be sure to include inflation factor

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PENNINGTON COUNTY HIGHWAY DEPARTMENT
EQUIPMENT PURCHASE PLAN 2025-2034

Equipment	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Motor Graders	\$420,000	\$480,000	\$540,000	\$600,000	\$660,000	\$720,000	\$780,000	\$840,000	\$900,000	\$960,000
Trucks (44 Class 70)	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
Trucks (44 Class 78)	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Equipment	\$790,000	\$850,000	\$910,000	\$970,000	\$1,030,000	\$1,090,000	\$1,150,000	\$1,210,000	\$1,270,000	\$1,330,000
Other Equipment Purchases	\$700,000	\$750,000	\$800,000	\$850,000	\$900,000	\$950,000	\$1,000,000	\$1,050,000	\$1,100,000	\$1,150,000
Cost Before Tax	\$1,490,000	\$1,600,000	\$1,710,000	\$1,820,000	\$1,930,000	\$2,040,000	\$2,150,000	\$2,260,000	\$2,370,000	\$2,480,000
State (aid of maintenance (Motor Graders)	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000	\$227,000
Est. Trade-in/under warrants (Motor Graders)	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000
Equipment	\$1,083,000	\$1,193,000	\$1,303,000	\$1,413,000	\$1,523,000	\$1,633,000	\$1,743,000	\$1,853,000	\$1,963,000	\$2,073,000

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