

**City of Roswell Road Department
(Streets and Special Electronics)
5 Year Plan
October 2025**



Streets Department

Overview

The Streets Department is responsible for maintaining approximately 360 miles of roadway infrastructure and managing a fleet of 68 pieces of equipment. This 5-year plan focuses on:

- Sustainable fleet replacement
- Facility maintenance and upgrades
- Strategic investment in the crusher site
- Improving the pavement maintenance cycle

Key Budget Drivers

The key budget drivers that influenced the information included in this 5 year plan are:

1. Fleet Replacement Program

- Existing Streets Department Fleet size: 68 units (including trucks, equipment, trailers, etc.)
- Planned replacement rate: 3–4 units per year to achieve an average 15-20 year replacement cycle

Goal: The goal of this budget objective is to maintain operational reliability and reduce maintenance costs over the long term.

Estimated Cost Assumptions:

Average cost per unit: \$110,000–\$400,000 (varies by equipment type)

Annual Budget Range: \$480,000 – \$850,000

5-Year Total: \$2.4M – \$4.2M

2. Facilities Maintenance & Improvements

Planned investments to the Streets facilities include:

- Metal siding replacement on maintenance barn
- Roof replacements across multiple structures
- Ongoing structural and site improvements

Estimated Costs:

Barn siding replacement: \$250,000 – \$400,000

Roof replacements (multiple buildings phased): \$100,000 – \$200,000 total

5-Year Total: \$350,000 – \$600,000

3. Crusher Site Upgrade (Major Capital Project)

The crusher site is a critical asset for producing aggregate and supporting cost-effective road maintenance. The current equipment at the crusher was installed in 1985 and will require significant investment if City is to keep the crusher operating into the future. Operating the crusher results in gravel and millings material being available for City use, resulting in lower material cost for alley maintenance as well as providing the ability to process millings for re-use on City roadways and parking lots. Based on annual reports of material produced at the crusher, the City saves approximately \$175,000 - \$250,000 per year by having the crusher operating.

Planned investment: \$1.5M – \$2.0M

This project could potentially be phased over 2–3 years

Proposed Phasing Example:

FY1: Engineering/design/permitting – \$250,000

FY2: Initial construction/equipment – \$500,000

FY3: Completion – \$750,000 – \$1.2M

5-Year Total: \$1.5M – \$2.0M

4. Pavement Maintenance Program

- City current maintenance rate: 10–15 miles/year
- Total roadway network: 360 miles
- City current roadway maintenance cycle: 24–36 years



Example of Hot Recycling Process

Key Issue:

Industry best practice is typically 7–15 years, meaning current funding is insufficient to prevent long-term degradation and higher reconstruction costs.

Estimated Cost Assumptions:

Average preservation cost: \$75,000 – \$175,000 per mile (fog seal, overlays, etc.)

Current Annual Budget: ~\$2.3M

Recommendation: To move toward a 15–20 year cycle, increase program to:

18–24 miles/year

Recommended Annual Budget: \$1.5M increase to approximately \$3.8M

5-Year Budget Summary

The table below summarizes the projected 5-year total investment required for this plan.

Category	Annual Range	5-Year Total
Fleet Replacement	\$480K – \$850K	\$2.4M – \$4.2M
Facilities	Varies	\$350K – \$600,000
Crusher Site	Phased	\$1.5M – \$2.0M
Pavement Maintenance	\$2.3M (current) \$1.5M increase – \$3.8M (recommended)	\$11.5M – \$19M

Current Funding Scenario: \$15.75M – \$18.3M

Recommended Funding Scenario (improved pavement cycle): \$23.25M – \$25.8M

Strategic Goals

The strategic goals addressed in this plan are:

1. Stabilize Fleet Condition

Maintain a consistent replacement cycle to avoid spikes in repair costs and downtime.

2. Protect City Facilities

Address deferred maintenance to prevent more costly structural failures.

3. Modernize Crusher Operations

Investing in the crusher site will:

- Reduce material costs long-term
- Improve project efficiency
- Support increased pavement maintenance capacity

4. Improve Pavement Condition Index (PCI)

Increasing annual miles treated will:

- Extend pavement life
- Reduce future reconstruction costs
- Improve ride quality and safety

Risks of Maintaining Current Funding Levels

- Continued deterioration of road network
- Increased long-term reconstruction costs
- Higher vehicle maintenance costs due to aging fleet
- Potential facility failures from deferred maintenance

Conclusion

This 5-year plan balances asset preservation, operational efficiency, and long-term cost control. The most critical funding gaps are in the pavement maintenance program, where increased investment will yield the greatest return by avoiding significantly higher future reconstruction costs as well as the fleet replacement, where increased investment will result in reduced operating and fleet repair costs over time.

Special Electronics

Overview

The Special Electronics Department is responsible for the installation, maintenance, and operation of critical traffic control infrastructure, including:

- Traffic signal systems
- School zone flashing beacons
- Streetlights
- Traffic data collection and studies

This department plays a key role in ensuring roadway safety, traffic efficiency, and regulatory compliance.

Key Budget Drivers

The key budget drivers that influenced the information included in this 5 year plan are:

1. Maintain System Reliability

The intent and long term goal is to move to a more proactive maintenance process and rapid response to signal failures. This will result in a reduction of emergency repair incidents as well as minimize after hours call outs. This will be accomplished by introducing smart signal infrastructure to the existing traffic signals throughout the City. This will include remote monitoring and communication systems to enable real-time diagnostics and system alerts. Required components and improvements include:

- Fiber optic or wireless communication systems (intent is to piggyback on real time crime center infrastructure where appropriate)
- Signal controllers with advanced communication capability
- Central traffic management software

Estimated Cost Assumptions:

Average cost per unit: \$5,000–\$10,000 (varies by equipment type and signal location)

Annual Budget Range: \$40,000 – \$80,000 (assuming 8 locations installed per year)

Software Cost Range: \$25,000 - \$50,000 depending on functionality

5-Year Total: \$300,000

2. MUTCD Compliance Upgrades

Several of the City signalized intersections are not up to date with current Manual on Uniform Traffic Control Devices (MUTCD) standards. This plan includes relatively minor upgrades to signalized intersections that can be accomplished with in-house resources. It is assumed that the City will not be

replacing the entire signal infrastructure at each intersection, but performing upgrades to the existing infrastructure to meet MUTCD minimum standards. This will improve traffic safety as well as improve pedestrian accessibility and safety features. Planned upgrades include:

- Pedestrian countdown timers
- Accessible pedestrian signals (APS)
- Signal head visibility improvements
- Updated signage and markings integration

Estimated Cost Assumptions:

Average cost per unit: \$25,000–\$30,000 (varies by equipment type and signal location)

Annual Budget Range: \$50,000 – \$60,000 (assuming 2 locations upgraded per year)

5-Year Total: \$250,00 - \$300,000

3. Fleet Sustainability

Goal: Maintain a reliable 6-unit fleet through phased replacement and reduce maintenance costs and downtime The department maintains a fleet of 6 service units, including bucket trucks and service vehicles.

Replacement Strategy:

- Replace 1 unit every 2–3 years in order to maintain average fleet age under 10–12 years
- Prioritize high-use and high-maintenance vehicles

Estimated Costs:

Bucket/Signal Truck: \$180,000 – \$200,000

Service Pickup: \$50,000 – \$80,000

5-Year Fleet Plan:

Year 1: Replace 1 Bucket Truck at an estimated cost of \$180,000

Year 2: Replace 1 Service Vehicle at an estimated cost of \$65,000

Year 3: Replace 1 Bucket Truck at an estimated cost of \$200,000

Year 4: Replace 1 Service Vehicle at an estimated cost of \$75,000

Total (5-Year Fleet Investment): \$520,000

Conclusion

This 5-year plan provides a structured and sustainable approach to maintaining and modernizing the City's traffic control infrastructure. Strategic investment in technology, fleet, and compliance will ensure continued public safety, operational efficiency, and long-term cost savings.