The TOWNSHIP of NORTH DUMFRIES

Corporate Fleet Management Strategy

Prepared by Engineering & Public Works Division, and Finance Division, Corporate Services Department

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Executive Summary

For the purposes of the Corporate Fleet Management Strategy (CFMS), fleet shall be defined to include:

1. **Public Works Division – Engineering and Public Works Department**
    - Light Duty Vehicles, Heavy Duty Vehicles, and Rubber Tired Vehicles
2. **Leisure and Community Services**
    - Light Duty Vehicles, Ice Resurfacers, Lawn Mowers, and Rubber Tired Vehicles.
3. **Building Services Division – Planning and Building Department**
    - Light Duty Vehicles.
4. **By-Law Enforcement Division – Corporate Services Department**
    - Light Duty Vehicles.
5. **Fire Department**
    - Light Duty Vehicles, and Fire Apparatus.

The Township of North Dumfries manages a diverse fleet of approximately **53** vehicles and equipment, with an estimated replacement value of approximately **$11,419,521** 2024 Canadian Dollars (CAD). In pursuit of operational excellence, the Township has developed the Corporate Fleet Management Strategy (CFMS) as comprehensive framework that propels the Township towards delivering fleet management (FM) services aligned with the strategic objectives of the Township. This strategic initiative builds upon existing resources while strategically planning for future opportunities. Such future developments consist of the advancement of technology making green alternatives more feasible, or the continued expansion of the corporate fleet as needed with expected growth in the Township over the coming years. There are three main key components of the CFMS, which are as follows:

1. **Strategic Alignment**
    - The CFMS serves as the compass guiding the Townships fleet management practices. It intricately weaves together business processes with the Townships overarching visions and goals.
    - By connecting FM practices with the overall Asset Management Plan (AMP), it ensures a cohesive approach that optimizes resource utilization and enhances the delivery of fleet related services.
2. **Standardization and Streamlining**
    - Recognizing the Township's anticipated growth, both in community size and fleet assets, the CFMS prioritizes the standardization and streamlining of fleet management.

- The Township aims to establish consistent procedures, from procurement to maintenance, fostering efficiency and cost-effectiveness.

3. **Green Technologies and Sustainability**
    - The CFMS acknowledges the imperative of sustainable practices. As the Township continues to plan for the future, the guiding principles embrace green technologies to reduce the environmental footprint related to Greenhouse Gas Emissions (GHG's) from the corporate fleet.
    - Initiatives such as transitioning to electric, or hybrid vehicles have been researched extensively and align with the Township's commitment to responsible fleet management.

With those key components in mind as the overarching goals and theme of the CFMS, it is recommended that the following steps are taken to ensure effective, efficient and responsible management of the corporate fleet.

1. **Enhancing Best Practices**
    - While the Township is already engaged in activities that support FM best practices, continuous improvement remains paramount.
    - The Township should maintain the current maintenance strategy of having preventative maintenance and general repair maintenance of the corporate fleet completed by third party businesses.
    - It is recommended further developing and refining existing practices to elevate performance and achieve the CFMS's overarching goal.
2. **Regular Review and Adaptation**
    - As the municipal fleet continues to expand, it is advocated for periodic reviews and updates of the CFMS.
    - Staying at the forefront of CFMS leadership necessitates agility and adaptability in response to evolving industry standards and technological advancements.
3. **Coordinator, Fleet Services Role:**
    - To bolster the Townships commitment to excellence, it is proposed exploring the possibility of hiring a Coordinator, Fleet Services on a part-time basis (20-25 hours weekly).
    - This role would oversee all aspects of our fleet assets, ensuring seamless coordination, compliance, and optimal utilization of fleet assets.

The Township of North Dumfries stands poised to lead in CFMS implementation, streamlining, and standardization. By adhering to the CFMS principles and embracing innovation, the Township reinforces the commitment to efficient, sustainable, and forward-looking fleet management.

Definitions

Asset: An item, thing or entity that has potential or actual value to an organization.

Asset Management (AM): A combination of management, financial, economic, engineering, and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner at an acceptable level of risk. It involves data-driven decision-making and actions throughout the lifecycle of assets.

Asset Management Plan's (AMPs): Asset specific plans which are regularly updated to develop data-driven strategies and operational recommendations necessary to achieve objectives and service level expectations.

Asset Management Policy: A high-level statement of an organization's principles and approach to AM (Effective June 24th, 2019). Refer to Appendix 1 to review the Township's Asset Management Policy.

Asset Management System: A set of interrelated and interacting elements of an organization, including the AM Policy, AM Objectives, AM Strategy, AMPs, and the processes to achieve these objectives.

Corporate Asset Management: The application of asset management practices at a corporate level to maximize consistency among the diverse asset groups and create efficiency by harmonizing service levels and business process while considering climate adaptation plans and sustainability strategies.

Level of Service (LOS): A qualitative or quantitative description of a service that is being provided. Two types of Levels of Service exist: Customer (or Community) Levels of Service (CLOS); and Technical Levels of Service (TLOS).

Lifecycle Cost: The total cost of ownership of an asset throughout its life. This may include but is not limited to capital costs, operating costs, maintenance costs, renewal costs, replacement or disposal costs, and environmental costs.

Performance Measures: Parameters used to measure Levels of Service. They include both Customer and Technical classifications.

1. Background Information

The Township of North Dumfries manages a diverse fleet of approximately **53** vehicles and equipment, with an estimated replacement value of approximately **$11,419,521** CAD. Most of this fleet serves Public Works, while the remaining vehicles support Leisure and Community Services, Building Services, and By-Law Enforcement, and the Fire Department.

The Corporate Fleet Management Strategy (CFMS) outlines the approach to delivering efficient Fleet Management (FM) services. Aligned with the Townships strategic objectives, the CFMS leverages existing resources while also considering future technological advancements. The Corporate Fleet Management Strategy is more than a document; it is a roadmap toward excellence. As the Township navigates the dynamic landscape of fleet management, the Municipality remains committed to delivering reliable services while minimizing costs. By embracing innovation and strategic planning, the Township of North Dumfries sets a high standard for municipal fleet management.

2. Purpose & Scope

2.1 Purpose of the Corporate Fleet Management Strategy

The CFMS is a component of the Township of North Dumfries overall Asset Management Plan. The CFMS will detail the method in which the Township will align its fleet management business practices to its overall visions and goals. The CFMS as detailed throughout the rest of the report is designed to achieve the following objectives;

- Defines the scope of fleet management at the Township, and the approach to practicing FM.
- Establishes a Governance Model for the Township to effectively manage fleet assets; and,
- Provides an implementation plan for the Township to achieve its FM objectives.

2.2 Objectives of Corporate Fleet Management

The Corporate Fleet Management Strategy (CFMS) strives to achieve the following goals and objectives:

- Streamline and standardize current FM practices within the Township.
- Ensure that service levels are clearly defined and can be measured and managed.
- Support the Township through anticipated growth and demands to optimize spending.
- Position the Township to leverage enhancements in technology to better manage assets in the future.
- Leverage the use of rising green alternatives to the current fleet.

2.3 Scope of Corporate Fleet Management Strategy

Upon the establishment of the Comprehensive Fleet Management System (CFMS), the encompassing report addresses the operational scope of all pertinent Departments and Divisions within

the Township that are tasked with the stewardship of fleet assets. Currently, the CFMS integrates the following departments:

- **Public Works Division – Engineering and Public Works Department**
- **Leisure and Community Services Division**
- **Building Services Division – Planning and Building Department**
- **By-Law Enforcement Division – Corporate Services Department**
- **Fire Department**

As the Township experiences growth, it is anticipated that the CFMS will similarly expand. This prospective expansion is slated for integration into subsequent versions of the CFMS. In the interim, continuity of established practices is assured.

The Fire Department, under the leadership of the Fire Chief, retains the responsibility for the Department's fleet of Fire Apparatus and Vehicles. This is attributed to the specialized nature of the fleet, coupled with the stringent maintenance protocols and standards that must be rigorously adhered to. The Fire Department's fleet comprises 8 Vehicles and Apparatus, with an aggregate replacement value of $4,338,230.00 2024 CAD. In contrast, the remainder of the Township's fleet encompasses 45 vehicles, machinery and equipment, collectively valued at a replacement cost of $7,081,291.00 2024 CAD.

3. Strategic Alignment

3.1 Role of CFMS in the context of the Strategic Asset Management Plan

Asset Management (AM) is an integrated series of processes intended to make the best financial investments into infrastructure assets to provide and maintain services. Within the Township there is already several asset management practices already set in place. AM is a multidisciplinary practice which involves many municipal departments, all of which have a role in making decisions around planning, managing, and maintaining the Township's assets. AM aims to balance costs with levels of service (LOS), risk and lifecycle management strategies. Its goal is to achieve sustainable, resilient communities, through defined business processes, which result in better decision-making with respect to infrastructure assets, of which fleet assets are a subset. AM is an ongoing practice at the Township and not limited to individual studies or reports.

Two major legislative requirements are in place which affect the direction of Asset Management for municipalities in Ontario. The first, enacted in 2015, was the Infrastructure for Jobs and Prosperity Act. The second, Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure, was created in 2017 under the Act. This regulation details requirements for municipalities to develop a Strategic Asset Management Policy and Asset Management Plan (AMP). The Townships AM Strategic Policy, and AM Plan are all components of an "AM System."

This CFMS is a subcomponent of this AM System. More specifically, it is a subcomponent of the Townships AM Strategy. This AM Strategy (including the FM strategy) serves the purpose of detailing the method in which higher level corporate objectives will be achieved through the practices of AM and FM.

The Township's Strategic Asset Management Policy was adopted by Township Council on June 24th, 2019. Version 1 of the Township's Asset Management Plan in consultation with Dillon Consulting was approved by Council in June of 2022. The Strategic Asset Management Policy and Asset Management Plan can be reviewed in Appendix 1 and 2 respectively.

3.2 Alignment to Strategic Initiatives of the Township

This CFMS is aligned to the Townships strategic objectives through the strategic asset management (AM) policy. The CFMS sets out to document the Townships strategy for fleet management (FM) and ensures that this strategy aligns with the objectives and commitments detailed in the AM policy. The key objectives for AM that are listed in the Township's AM Policy are detailed below. Through this CFMS, the Township will detail its approach to managing fleet assets in a way that aligns with these objectives.

- **Customer/Community Focused:** This strategy will take a customer-focused approach, by defining customer/community level of service (CLOS) and integrating them into the Township's FM business practices.
- **Innovative:** This strategy will establish a framework for the continual improvement of FM practices across the township, so that new tools, technologies, and techniques can be adapted to the Township's FM business now and in the future.
- **Fact Based Decision Making:** This strategy will detail business processes and provide recommendations to collect and maintain appropriate data and information, so that FM decisions will be made based on facts in a way that is flexible, consistent, repeatable, and traceable.
- **Optimal:** This strategy details approaches to make optimal decisions with respect to fleet assets, that balance LOS, cost, and risk to achieve optimal lifecycle values.
- **Whole Lifecycle Perspective:** Strategies for fleet assets will take a whole lifecycle perspective that considers the full impact of managing those assets throughout their entire lifecycle.
- **Forward Looking & Sustainable:** Social, legislative, environmental, and financial considerations are made to ensure that FM is forward-looking and sustainable.
- **Regulatory Compliant:** The practice of FM at the Township will comply with all relevant legislative, regulatory, and statutory requirements.

3.3 How the Strategy Achieves Fleet Management Objectives

This CFMS was developed for the Township to achieve its organizational, AM, and FM objectives. It will provide recommendations to improve business processes and activate advanced FM

strategies. Note that the discussion and recommendations detailed in this strategy are not intended to be a critique on the existing FM business practices. They are intended to provide guidance in the advancement of its FM current business practices, to leverage industry best practices, AM strategies, and emerging technologies to achieve its goals and objectives. The recommendations provided are not just specific recommendations to better improve or manage business processes; rather, they are also recommendations to adopt a system for FM which has the tools to assess and continually improve business practices.

4. Fleet Management Business Process

The Township FM business process is comprised of four (4) major business areas, which pertain to the stages of the lifecycle of fleet assets. These business areas are as follows:

- Procurement
- Operations
- Maintenance
- Replacement/Disposal

The following subsections elaborate on each of the four (4) primary categories of the FM Business Process. Each subsection details the general business processes and the Township's goals for that process, and the Township's existing business practices.

4.1 Procurement of Assets

4.1.1 Context and Objectives

Procurement is the process in which the Township obtains its fleet assets for use. It requires a detailed preparation process and must account for many factors, including selecting the appropriate vehicle for its intended use; right-sizing vehicles; right-sizing overall fleet; and maintenance considerations related to the standardization of vehicles/equipment. The following CFMS objectives have been established for procurement:

1. Purchase fleet assets that meet customer expectations for the lowest cost to the Township over their full lifecycles, which is not necessarily the lowest up-front cost.
2. Develop a comprehensive standard for fleet assets to simplify management of parts; standardize maintenance work; and optimize maintenance strategies.
3. Ensure procurement practices take strategic goals into consideration.

4.1.2 Current Business Practices

Fleet personnel currently work with purchasing staff to obtain new vehicles and equipment. Fleet procurement is not centralized under one Department, rather, each Department is responsible for developing specifications and procuring vehicles for their respective Departments with the support of the Township's Corporate Procurement Division, which is an aspect of the Corporate Services Department.

The Township's Purchasing By-Law applies to FM procurement practices. As per the Township's purchasing By-Law 3265-21, the following purchasing rules apply for a standard procurement process and approval authority,

- For assets with a value of $9,999 or less, there is a direct procurement process, with approval coming from the applicable Department Director or authorized designate.
- For assets valued between $10,000 and 49,999, the procurement process is an informal procurement or invitational competition, and authorization must come from the applicable Department Director and Chief Administrative Officer (CAO) or the Treasurer/Director of Corporate Services.
- For assets valued between $50,000 and $99,999, there is an open competition procurement process, and approval must come from the applicable Department Director and CAO or the Treasurer/Director of Corporate Services.
- For assets valued at or greater than $100,000, the procurement process is done through open competition, with approval required from Council.

4.2 Operation of Assets

4.2.1 Context and Operations

This practice pertains to activities associated with the day-to-day operation of fleet assets throughout the course of their service life. Operation activities include tracking and managing equipment utilization, environmental considerations (i.e. fuel consumption) and financial considerations (i.e. vehicle rates). The following objectives have been established for operations.

1. Optimize the in-service time of fleet assets that enable business units to provide services that meet the community's/customer's expectations at the lowest feasible cost.
2. Leverage technology to inform equipment/vehicle rate calculations.
3. Minimize environmental impact during fleet operations.

4.2.2 Current Business Practices

As the Township has a limited number of assets in the various department, they are depended upon to deliver services daily by Staff. The loss of equipment or vehicles can make department less functional and impact service level to residents. All fleet assets need to be operational and available in order for the departments to have compete work and undertake services.

Fleet assets are tracked via GPS and camera technology to monitor operations. Issues are recorded and verified as required. Fuel is tracked departmentally and monitored for consumption.

4.3 Maintenance of Assets

4.3.1 Context and Objectives

Activities associated with maintaining fleet assets have an impact on all areas of the fleet business. Maintenance activities are categorized by two types: preventative and reactive. Preventative (or planned) maintenance relates to regularly scheduled maintenance activities; and reactive (or unplanned) maintenance relates to activities required due to failures or damage. Both types of maintenance activities aim to reduce vehicle down-time and optimize vehicle performance. Data on maintenance practices is critical to enable evidence-based decision-making with respect to procurement, disposal, and operations/lifecycle strategies for fleet assets. The following objectives have been established for maintenance.

1. Complete maintenance activities for the lowest possible cost, at the optimal time and in the lowest amount of time to optimize the service life of vehicles.
2. Minimize vehicle down-time and ensure that vehicles can be brought in for maintenance with minimal disruption in service.
3. Leverage technology to collect appropriate maintenance data and activate advanced maintenance strategies.

4.3.2 Current Business Practices

As part of our current operational strategy, the Township relies on external service providers for the maintenance of Municipal fleet assets. These service providers are either located within the Township of North Dumfries or in close proximity to Kitchener-Waterloo, Cambridge and Brantford. Presently, the Township lacks the required infrastructure (i.e. equipment, technology) along with personnel to perform the rigorous maintenance necessary to meet both the Customer/Community and Technical Level of Service (CLOS & TLOS). Ensuring optimal fleet maintenance remains a top priority for the Township.

4.4 Replacement or Disposal of Asset

4.4.1 Context and Objectives

The category of disposal and replacement pertains to the activities related to selecting the appropriate time to dispose of (or replace) a vehicle. It also pertains to the financial activities associated with disposing vehicles and the methods of disposal. The decision to dispose of or replace a fleet asset must account for the asset's condition, the budgetary impact to the Township, and the optimum time to replace the asset. The following objectives have been established for the replacement or the disposal of assets.

1. Reduce lifecycle costs by determining the optimum age to dispose of or replace fleet assets.
2. Utilize disposed vehicles as spares or shift to a secondary role wherever possible to do so.

4.4.2 Current Business Practices

At present, the Township determines vehicle lifecycles and times for replacement based on a review of inspection reports and vehicle kilometers. Lifecycles are not standardized across business areas. Currently, the Township replaces its light duty staff vehicles on a 9-year schedule, dump-trucks on a 12-year schedule, the heavy-duty rubber tire equipment on a 15-year replacement schedule, and Fire Apparatus has a 20-year replacement schedule. Other Township vehicles and machinery gets replaced on various schedules, Lawn Mowers on a 7- or 10-year replacement schedule depending on the size of the mower, and Ice Resurfacers on an 11-year replacement schedule.

5. Governance Structure

5.1 Context and Objectives

The Township's governance structure represents the organizational component of managing corporate fleet assets. Establishing appropriate governance structure will be imperative to successfully executing the recommendations provided in this CFMS. In keeping with the Township's CFMS goals, the governance structure objectives are to.

- Optimize fleet services, including required resources and infrastructure.
- Meet organizational needs.
- Eliminate redundancies and overlaps where the same or similar services are provided by other Township Divisions and Departments.
- Prepare FM to support anticipated growth within the community and ensure flexibility to meet future demands.

5.2 Current Governance Structure

Under the Township's current organizational governance structure each department is responsible for the management of its own fleet assets. The Public Works department operates the majority of fleet assets, with the second most belonging to Leisure and Community Services. Under the current organizational structure, there is coordination and collaboration between departments but there is always the need for further operational efficiencies.

Although each department is responsible for the management of their own fleet assets, Public Works is responsible for the maintenance of all Township fleet assets, not including the Fire Department. If maintenance cannot be performed by Public Works, the maintenance of fleet assets gets outsourced to firms either within or nearby to the Township. This structure works for the Township at this time, however with further growth to the Townships fleet, it may become more complicated and require to be examined and potentially reworked.

5.3 Recommendation

To enhance operational efficiency and optimize FM practices, it is recommended a thorough evaluation of hiring a Coordinator of Fleet Services on a part-time basis (20-25 hours) to be monitored for implementation in future years. Given the Township's ongoing growth, there is an expectation of an expanded fleet, and the potential for incorporating environmentally friendly alternatives. Given the potential increase in fleet size and the potential for further complexity due to green alternatives, the responsibilities may be to great for the current Supervisor to handle the added work demands. This role encompasses overseeing operations and maintenance for the Townships vehicle fleet, with a focus on efficiency, safety, and compliance with regulations. Some key duties this role may encompass are as followed.

1. **Daily Fleet Management Operations**
    - Ensure consistency of FM practices across all departments within the Township.
    - Manage the execution of the Townships CFMS.
2. **Maintenance Oversight**
    - Implement and enforces a maintenance schedule for all vehicles, regular maintenance in order to minimize downtime and extends the fleets lifespan.
    - Track fuel usage and costs, implementing strategies to reduce expenses and improve efficiency.
3. **Compliance and Safety**
    - Develop and maintain service level agreements for all shared vehicles.
    - Ensuring compliance with government regulations and corporate policies regarding vehicle operation and safety.
4. **Budgeting and Cost Management**
    - Perform fleet prioritization activities and recommend an optimized capital plan.
    - Develop and manage the fleet budget, forecasting expenses and analyzing cost-saving opportunities.
    - Coordinate with external vendors and service providers for vehicle repairs and maintenance ensuring quality and cost saving effectiveness.

In the scenario where a part-time Coordinator, Fleet Services is hired, it is prudent to adopt a collaborative approach to compensation. Specifically, it is recommended implementing a cost-sharing model across multiple departments: Public Works, Leisure and Community Services, By-Law, and Building Services. This approach ensures equitable distribution of the wage burden while aligning with the respective departments' utilization of the Township's fleet resources. By distributing the Coordinator

of Fleet Services wage among the mentioned departments, it fosters a sense of collective ownership. Each department contributes to the overall management and efficiency of the Townships fleet, making this cost-sharing arrangement both practical and fair.

The percentage of wage paid by each department should directly correlate with its fleet-related responsibilities. For instance, Public Works takes up the majority of the overall fleet assets, such that PW would contribute a higher share. Leisure and Community Services, By-Law, and Building Services while still utilizing fleet assets, would contribute proportionally based on the respective needs and usage of each department. Adopting a cost-sharing wage model for the part-time Coordinator of Fleet Services not only optimizes resource allocation but also strengthens the commitment to effective fleet management.

The successful execution of the Corporate Fleet Management Strategy hinges upon the effective implementation in time by way of a dedicated Coordinator, Fleet Services. This pivotal role plays a critical part in streamlining and enhancing fleet operations. By overseeing day-to-day activities, monitoring maintenance, ensuring compliance with safety protocols, the Coordinator of Fleet Services contributes significantly to the reliability and consistency of fleet operations.

6. Levels of Service

As an aspect of the implementation of the Corporate Fleet Management Strategy (CFMS), key recommendations have been provided to be incorporated into the Township's existing FM business practices. These strategic recommendations, along with the existing FM business practices in the Township, have informed the development of a comprehensive Level of Service (LOS) Framework for the service of FM. Both Technical Level of Servies (TLOS) and Customer Level of Service (CLOS) were derived through analysis.

6.1 Structure of the LOS Table

The LOS was developed in accordance with Ontario Regulation 588/17, "Asset Management Planning for Municipal Infrastructure", made under the Infrastructure for Jobs and Prosperity Act, 2015. The Table is organized into four primary components, service statement/attribute, LOS objective, performance measure and the current LOS. The structure of the Table is as follows.

1. **Service Attributes:** This is the first major column of the Table. The column contains a list of Key Service Attributes, which are intended to cover all important aspects of the FM service in a way that is easily understandable and recognized by the fleet customer. These attributes could be cost efficient, safe, quality, dependable, and environmental stewardship as an example.
2. **LOS Objective:** The second major column of the Table. The column contains a list of LOS Statements, corresponding to each Key Service Attribute. One, or multiple LOS statements may apply to each Key Service Attribute. Each LOS Statement is comprised of a short sentence,

describing the outputs of the service category. Each LOS Statement should clearly state customer standards and be measurable. As an example, for the LOS Key Service Attribute, "Cost Efficient," the corresponding LOS Statement is "Providing fleet services in an efficient manner."

3. **Performance Measures:** Performance measures identify specific areas of focus that can be measured to support each Key Service Attribute. Multiple performance measures can be listed for each Key Service Attribute. The LOS tables provide two types of Performance Measures: Customer and Technical.
4. **Current LOS:** The current LOS outlines the service levels that are currently being provided by the Township. The current LOS represents the existing performance standards, which helps craft the expected levels of service.

6.2 Updates to Performance Measures & Reporting

As part of operationalizing Levels of Service, the Township will adopt an annual LOS metrics review and reporting exercise. As part of that review, current performances and performance targets should be assessed annually, and updated if needed. The procedure for annually updating performance targets is as follows:

- Amalgamate annual updated data.
- Perform LOS analysis.
- Update current performance and log past performance for each measure.
- Review performance targets.
- Report on LOS.

7. TransformWR: Transition to a Low Carbon Community

7.1 Overview of TransformWR

TransformWR is Waterloo Region's community wide response to the global climate crisis. Township council adopted the principles of TransformWR on June 28th, 2021, resolution C-276-21. Consistent with the TransformWR document, the Township must take bold and immediate action to ensure that everything done locally at the Township exceeds targets set and do our part in achieving the Paris Agreement objectives. Targets set by Transform WR are as followed.

1. Local action to reduce Green House Gas (GHG) emissions by 30% by the year 2030.
2. Long-term strategy to achieve an 80% local GHG reduction target based on 2010 levels.

Every community member, business, organization, and local municipality has a vital role to play in Waterloo Region's transition to a low carbon community. This strategy is meant to influence all future planning. Official plans, corporate plans, and organizational planning must consider the guidelines set forward by TransformWR.

7.2 Context to Fleet Management

As part of the Township's commitment to environmental sustainability and in alignment with the ambitious goal of reducing carbon emissions by 30% by 2030, the Township of North Dumfries recognizes the urgent need to transform fleet management practices. The Township's fleet is comprised of a diverse range of vehicles, including light weight vehicles, medium sized trucks, heavy-duty trucks, and specialized equipment such as graders, backhoes and tractors. While progress has been made in adopting hybrid technology for aspects of the Corporate Fleet, such as for the By-Law Division, the transition to fully electric or other suitable alternatives remains a complex endeavor. With the transition to greener alternatives such as fully electric, hybrid, plug in hybrid or hydrogen vehicles, there are challenges to be aware of.

1. **Technology and Infrastructure Gap**
    - Despite a growing interest in electric and alternative fuel vehicles, existing infrastructure and technology are not fully equipped to support a complete fleet transformation. The Township as an example, does not have electric vehicle (EV) charging stations at Township facilities. The Township has made provisions to accommodate the installation of EV charging station for the future.
    - Heavy-duty trucks and machinery are essential for our operations and pose a unique challenge due to their specific requirements. At present, the technology is developing, however it is not universally available, or priced at economical levels for acquisition.
2. **Balancing Environmental Goals and Practicality of Adaption**
    - There is a delicate balance between environmental aspirations and the practical realities of fleet management.
    - Replacing every single vehicle with electric alternatives is currently unfeasible, especially for heavy-duty vehicles that demand robust performance, reliability and availability for purchase in the marketplace.

To meet the 30% reduction target by the year 2030, the Township must focus on alternatives that yield substantial emissions savings, while maintaining the desired levels of service and reliability of the current fleet.

7.3 Alternatives and Recommendations

In pursuit of the Township's commitment to environmental stewardship, the Township has undertaken extensive research to identify viable alternatives for reducing carbon emissions from the Corporate Fleet. The following section outlines the key findings and proposes actionable steps toward

achieving emission reduction targets by 2030. The four main alternatives for the Township to consider regarding the emissions target in 2030 are highlighted below.

1. **Hybrid Vehicles**
    - This technology combines conventional internal combustion engines with electric power. While hybrids contribute to a reduction in emissions, their impact is limited compared to other alternatives. The Township's current business practice is to change out traditional internal combustion engines with hybrid technologies for light-weight vehicles when the replacement schedule comes due.
2. **Plug-in Hybrid Vehicles**
    - Plug-In Hybrids offer an extended electric range by allowing external charging. However, their reliance on gasoline for longer distances remains a challenge.
    - Another issue with this type of vehicle, you carry the costs of two vehicles combined into one unit. There is the gasoline component, and the electrical infrastructure.
3. **Fully Electric Vehicles (EV)**
    - Electric Vehicles represent the pinnacle of emission reduction. Zero tailpipe emissions make these vehicles ideal for urban use and short-haul applications.
    - With the adoption of this alternative, there is the added infrastructure cost of installing and maintaining electric charging stations.
4. **Hydrogen Vehicles**
    - Hydrogen Vehicles have the possibility to be the vehicle of the future, filling it up with Hydrogen only taking 5 minutes, instead of the hour to charge Electric Vehicles. Another added benefit is the only emission this vehicle emits would be water vapor.
    - However, the main issue with this alternative is that the infrastructure and technology is still years away and makes it hard for adaption at this point in time. This alternative is one to monitor for years to come and hope that the infrastructure and technology has improved.

The Township of North Dumfries is committed to leading by example in sustainable fleet management. By strategically embracing electric alternatives and planning for future developments, it becomes possible to achieve the emission reduction targets set out by TransformWR. With the adoption of the following recommendations, it will help work towards reducing the carbon emissions by 30% for 2030.

1. **Prioritize Hybrid Vehicles**

- Given the current state of technology and infrastructure within the Township, transitioning the lightweight and mid-sized fleet to hybrid vehicles remain the most viable option.

2. **Long-Term Vision for Heavy Duty Trucks and Machinery**
    - While hydrogen vehicles hold promise, the practical implementation of this alternative is still years away. With that being said, it is recommended to follow this phased approach.
    - **Short Term:** Continue research and development efforts for hydrogen technology and monitor successes in Plug-in Hybrid technology.
    - **Medium Term:** Explore Pilot Projects for hydrogen powered heavy duty trucks.
    - **Long-Term:** Transition towards hydrogen once technology and infrastructure permits, or pivot to Plug-in Hybrid vehicles if the technology demonstrates adequate performance reliability .

8. Implementation Plan

The Implementation Plan provides a series of activities (projects, initiatives, etc.) that are designed to operationalize the concepts and recommendations provided in this CFMS. The completion of each of the activities listed will continually enhance the respective components of the Townships FM business, which over time will allow the Township to continually monitor, regulate and improve its FM business, and to achieve its broader corporate AM and organizational objectives.

All the activities detailed in the implementation plan have two primary components. First, the activities consist of finite projects, intended to build a core or foundational component of the Townships AM System. Second, the activities will result in the implementation of an ongoing business process, which should be integrated into the Townships AM business processes required to ensure the continual operation of the Townships AM System.

The implementation plan the Township of North Dumfries plans to use regarding FM projects is as followed.

- **Project:** Details the recommended project.
- **Scope/Objectives:** Provides a brief description of the project, including the general scope of work and objectives.
- **Benefits:** Provides a brief description of the components of the project that will improve the Township of North Dumfries FM business practices.
- **Related Business Practices:** Details the category of the FM business process that relates to the recommended activity.

- **Priority:** Details the priority of the activity. Priorities are also linked to criticality and urgency. High priority activities are also critical; and should be completed sooner, when compared to medium or low priority activities.
- **Project Start Date:** Indicates the recommended time to begin the project. Note that start dates are often linked to priority (i.e. criticality).
- **Implementation Timeline:** Indicates the estimated duration of the project.
- **Internal Resources:** Indicates the internal staff resource requirements within the Township (provided in number of hours) that will support the project.
- **Outsourcing Cost:** Indicates the estimated cost to engage outsourcing either to advance the existing processes or to implement foundational components of the respective project.
- **Dependent Activities:** Details other activities in the implementation plan that should be completed prior to the given activity.

Note that for each of the projects in the implementation plan, the potential for outsourcing is identified if an outsourcing cost is detailed. Outsourcing can be necessary to leverage external resources when resource requirements are higher than can be accommodated by internal staff. Furthermore, outsourcing can help to complete projects in a timely manner. Outsourcing can also provide the Township with access to AM expertise that can bring perspectives from other municipalities and can provide the resources required without the cost of long-term staff positions.

9. Summary of Key CFMS Remarks

The Corporate Fleet Management Strategy (CFMS) represents a pivotal step for our Township, positioning us on a trajectory to deliver fleet management (FM) services that seamlessly align with our strategic objectives. By leveraging existing resources, the CFMS aims to establish a data-driven approach, eliminating redundancies and enhancing efficiencies in the management of our expanding fleet portfolio. The Corporate Fleet Management Strategy provided strategic recommendations that will help develop stronger Fleet Management, while embracing new and improving sustainable technologies.

- Examination of hiring a Coordinator of Fleet Services on a part-time basis.
- Continued examination of numerous forms of sustainable fleet options, ranging from hybrid to hydrogen vehicles.
- The continued purchase of Hybrid Vehicles to replace traditional internal combustion engines.
- Balancing the goals set out by TransformWR while balancing the practical realities and requirements of Fleet Management.

The CFMS has been meticulously crafted to ensure that FM practices directly support the Township's overarching goals. It serves as a bridge between our fleet operations and the Township's Asset Management (AM) Policy, allowing us to make informed infrastructure decisions that resonate with our vision. The Corporate Fleet Management Strategy encompasses all groups, departments, and divisions within the Township that interact with or oversee fleet assets. By doing so, it develops a unified framework that promotes consistency and effectiveness across the organization. The strategy details the Townships FM Business Process, which is comprised of four (4) major business categories:

1. **Procurement**
2. **Operations**
3. **Maintenance**
4. **Disposal/Replacement**

Through the CFMS, the Township commits to excellence in fleet management, fostering a culture of continuous improvement and alignment with the Township's vision. By embracing data-driven insights and best practices, it paves the way for a more efficient and sustainable fleet operation.

10. Figures

Appendix 1 – Strategic Asset Management Policy

No.-CS-005---Strategic-Asset-Managment-Policy.pdf (northdumfries.ca)

Appendix 2 – Asset Management Plan (Version 1 – 2022)

North-Dumfries_Final-AMP.pdf (northdumfries.ca)

Figure 1 – Fleet Replacement Cost

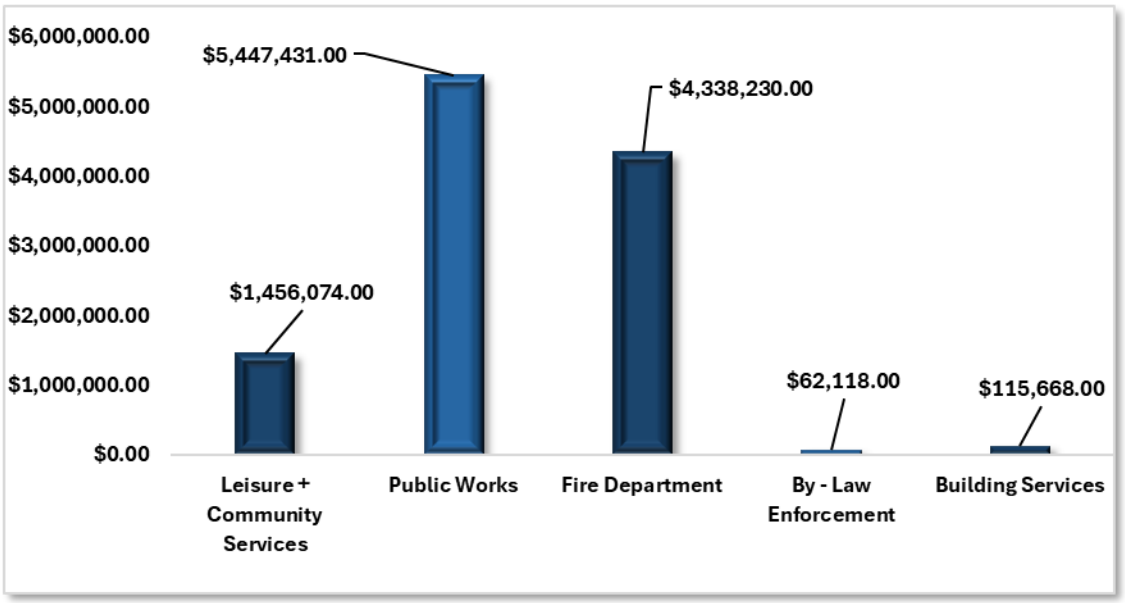

Figure 2 – Customer/Community Levels of Service

Service Attribute	LOS Objective	Performance Measure	Current LOS
Quality	Provide vehicles that are reliable and effective in the performance of their work.	Number of public complaints related to lack of service due to vehicle or performance issues.	All fleet vehicles are operational and capable of fulfilling their expected levels of service.
Driver Training	Hire and retain staff which are trained to operate light and heavy-duty vehicles safely and efficiently on Township roads.	Supervisors are following approved hiring and training practices.	All operators have the appropriate licensing and training requirements.
Safety	Zero vehicle accidents involving Township vehicles or residents.	Number of accidents in which vehicles or residents were affected.	0 accidents since 2021
Operations	Provide rolling stock that is operating at a sufficient customer service level and can fulfill minimum maintenance standards on roads.	Road inspections Monthly and annual vehicle condition inspections, following the vehicle preventative maintenance schedule.	Compliance with MMS standards.

Figure 3 – Technical Levels of Service

Service Attribute	LOS Objective	Performance Measure	Current LOS
Compliance with Industry Standards	Meeting compliance standards set by the MTO.	Various performance measures for MMS and CVOR.	Compliant
Financial Sustainability	Operate flee services in a cost-effective manner.	Spending on maintenance is within approved budget (y/n).	Compliant
Renewals	Ensure a new vehicle asset is acquired when a disposal occurs to maintain current service levels.	Ratio of vehicle disposals to vehicle renewals.	1:1 Ratio
Environmental Sustainability	Transition fleet to hybrid or electric alternatives.	Number of vehicles using hybrid or electric technology	1 - By Law Enforcement
Condition of Fleet	Operate a fleet that is in fair/good condition.	Percentage of fleet in fair to very good condition.	75% of vehicles in fair or better condition