

DETAILED ASSET MANAGEMENT PLAN

C RIDE CK

Chatham Public Transit





Contents

1.0 ASSET REPORT CARD

1

2.0 INTRODUCTION

2.1 Background/Purpose of Service	2
2.2 Asset Hierarchy & Registry	6
2.3 Asset Condition	8
2.4 Asset Capacity and Performance	8

3.0 LIFECYCLE MANAGEMENT

3.1 Acquisition Plan	9
3.2 Operations Plan	12
3.3 Maintenance Plan	14
3.4 Renewal Plan	16
3.5 Summary of future renewal costs	18
3.6 Disposal Plan	19
3.7 Summary of asset forecast costs	20

4.0 LEVELS OF SERVICE

4.1 Legislative Requirements	22
4.2 Customer Research and Expectations	23
4.3 Customer Values	24
4.4 Customer Levels of Service	25
4.5 Technical Levels of Service	26

5.0 FUTURE DEMAND

5.1 Demand Drivers	29
5.2 Purpose statement	29
5.3 Demand forecasts	30
5.4 Demand Impact and Demand Management Plan	30
5.5 Asset Programs to Meet Demand	31

6.0 RISK MANAGEMENT PLAN

31
32
34
34

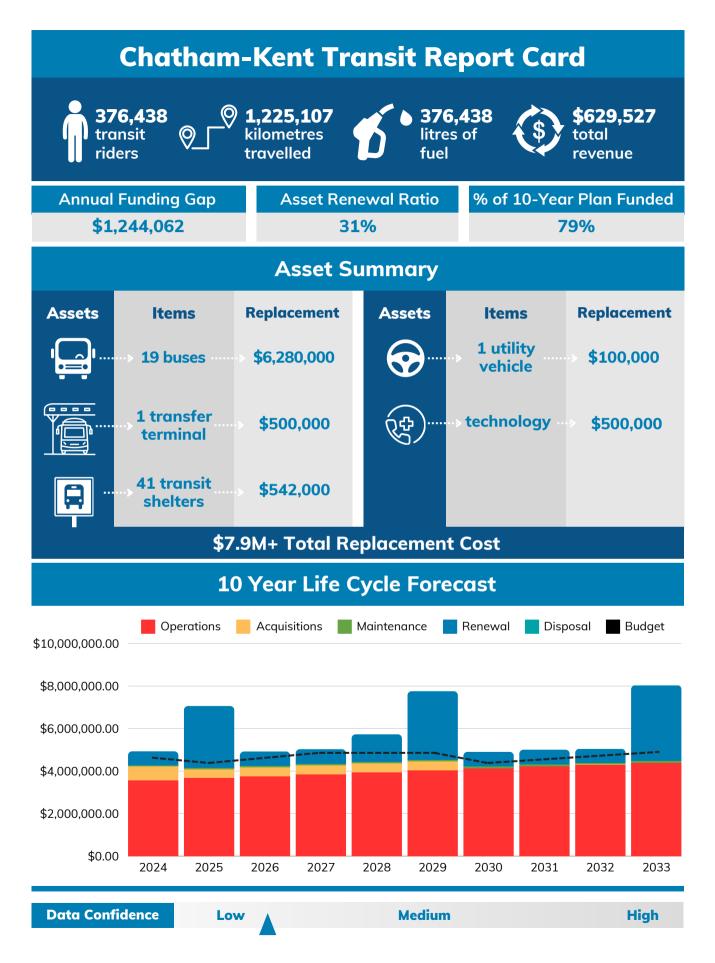
7.0 CLIMATE CHANGE ADAPTATION 35

8.0 FINANCIAL SUMMARY

8.1 Financial Sustainability and Projections	39
8.2 Forecast costs for the Long-Term Financial Plan	40
8.3 Funding Strategy	42
8.4 Valuation Forecasts	42
8.5 Key Assumptions made in Financial Forecasts	43
8.6 Forecast reliability and Confidence	43

9.0 PLAN IMPROVEMENT AND MONITORING

9.1 Accounting and financial data source	46
9.2 Asset Management Data Source	46
9.3 Continuous Improvement Plan	46
9.4 Monitoring and Review Procedures	48
9.5 Performance Measures	49



2.0 INTRODUCTION

2.1 Background / Purpose of Service

Public Transit service (hereafter referred to as "transit") was first introduced in the former City of Chatham in 1946. In 1998, the newly amalgamated Municipality of Chatham-Kent contracted an expanded conventional transit service and continued to operate specialized services in Chatham and Wallaceburg. In 2002, a formal partnership with Four Counties Transportation, serving Ward 3, was established. The name "**CKTransit**" was officially adopted in 2003, and in the same year, eligibility criteria were aligned with the Accessibility for Ontarians with Disabilities Act (AODA).

In 2004, Ontario announced the Dedicated Gas Tax Funds for Public Transportation Program, which increased service hours and introduced the inter-urban system. It also gradually assisted with adding three transit routes, connecting outlying communities throughout Chatham-Kent to the primary transfer terminal in downtown Chatham.

In 2008, Chatham-Kent entered a formal agreement with Erie Shores Community Transit to service residents of Wheatley and the surrounding area. Various government funding opportunities such as the Public Transit Infrastructure Fund (PTIF), Investing in Canada Infrastructure Program (ICIP) and Provincial Gas Tax Reserves have continued to fund improvements to public transit such as:

- Electronic fare technology (2014)
- Affordable bus pass program for low-income riders (2017)
- Solar conversion of all transit shelters and enhanced maintenance for sheltered bus stops (2019)
- Conventional Urban Route 5 in Chatham (2019)
- Mid-day inter-urban trips (2019)
- Innovative technology enhancements such as online loading, GPS and use in specialized services (2019)
- Introduction of on-demand services in Wallaceburg and Chatham (2020)
- New installation of various transit shelters (2017 2023)
- Purchase of a municipality-owned transit fleet (2021).

In 2020, "**Driving Forward**" was presented to the Council as the transit strategy for the newly branded municipal public transit service known as "**Ride CK."** This strategy now serves as the framework for recommendations on new policies, projects, and transit service levels over the next ten years.

This is the first Detailed Asset Management Plan (DAMP) for Chatham-Kent's Public Transit. Future iterations will see data improvements, and as asset management knowledge matures across Chatham-Kent, the breadth and scope of the plans will be refined to ensure they capture the total cost to deliver the transit service. The plan is updated annually to ensure data quality improves to enable and support evidencebased decisions. This DAMP will have a ten-year planning horizon at the minimum and will connect fully to the Long-Term Financial Plan (LTFP) by 2027.

The transit DAMP will communicate the requirements for the sustainable delivery of services through management of transit assets, program delivery, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the entire planning period. The DAMP is to be read in combination with the other Chatham-Kent documents, which should include the Strategic Asset Management Policy, along with these other key planning documents:

- "Driving Forward" 2020 Transit Strategy
- Municipality of Chatham-Kent Strategic Plan 2022-2026

Understanding the DAMP within the context of these documents ensures a comprehensive perspective of transit service management and development for today and into the future.

This DAMP covers the infrastructure assets, transit vehicles, and the transfer terminal. **Table 2.2.2** provides a detailed summary of these assets.

The infrastructure assets included in this plan have a total replacement value of **\$7.92** million.

Key stakeholders in the preparation and implementation of this DAMP are shown in the table on the next page.

Table 2.1.1: Key Stakeholders in the DAMP

Key Stakeholder	Role in Asset Management Plan
Chatham-Kent Council	 Distribute resources to achieve planning objectives in service provision while effectively mitigating risks. Back asset management initiatives to enhance understanding and guide decision-making. Allocate funding to sustain the desired level of service throughout the entire life cycle.
Mayor/CAO	 Advocate for and champion the adoption of asset management principles within the organization. Guarantee the availability of sufficient resources to foster the development of staff knowledge and skills, facilitating the implementation and ongoing enhancement of asset management practices.
General Manager, Infrastructure and Engineering Services (IES)	 Allocate resources to meet the organization's objectives in providing services while managing risks. Overall responsibility for asset management, providing leadership in influencing decision-making processes related to asset management.
Director, Engineering	 Delivering nominated renewal upgrade projects Reviews, updates, and plans long-term projects

Key Stakeholder	Role in Asset Management Plan
Manager, Engineering	 Manages service delivery and provides expert opinion to inform asset management plan Ensure the community's transit infrastructure is safe, secure, clean, and well-maintained. Ensure the customer experience and services are a high priority.
Asset Management Team	• Establish top-level priorities for the development of asset management and increase awareness of this function among staff and external contractors.
Transit Service Operator	 Level of service requirements. Operation and vehicle maintenance requirements Comply with legislation, maintain the safety standards
Community	 Engage in facilitated discussions to enable the municipality to comprehend the community's preferred level of service. Express support for the DAMP, even if it involves reducing service levels and aligning with the community's objective of minimizing taxation.

The organizational structure for service delivery from infrastructure assets is detailed below:

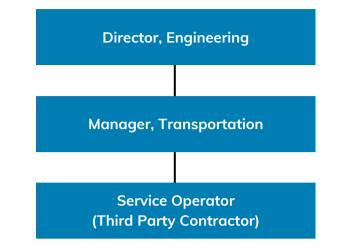


Figure 2.1 Service delivery Organizational structure

2.2 Asset Hierarchy & Registry

An asset hierarchy provides a framework for structuring data in an information system to assist in data collection, information reporting, and decision-making. The hierarchy includes the asset class and component used for asset planning and financial reporting, as well as the service level hierarchy used for service planning and delivery.

The service hierarchy is shown in **Table 2.2.1** below:

Service Hierarchy	Service Level Objectives
Fleet	Ensure all transit (conventional and specialized) vehicles are safe, accessible, and well- maintained
Facilities	Ensure all amenities are clean, functional, and accessible
On-Street Infrastructure	Ensure all transit infrastructure (shelters, bus stops, bus pads, signage, benches) are fully functional
Supporting Technology	Ensure that communication/radio systems, fare collection equipment, information technology hardware/software are fully functional and well maintained

Asset Registry

The assets covered by this DAMP are shown in **Table 2.2.2**.

These assets include transit vehicles such as buses, transfer terminals, on-street infrastructure, and other fleets to facilitate Chatham-Kent's public transit.

Table 2.2.2: Service Assets

Asset Category	Description	Age or Average Age (years)	Average Condition	Avg Estimate Service life Remaining (years)	Current Replacement Value (dollars)
Public vehicles	19 buses	4	Good	2	\$6,280,000
Facilities	1 bus transfer terminal	50	Fair	4	\$500,000
On-street infrastructure	41 Transit Shelters	10	Good	10	\$542,000
Utility Vehicles	1 utility vehicle	4	Good	2	\$100,000
Technology	Fare collection device, communication, IT hardware, software program) Quantities to be determined (TBD) 2025	10	Good	10	\$500,000
				Total Rep Value	\$7,922,000

All values are shown in 2024 dollar value.

2.3 Asset Condition

Transit's fleet condition is currently estimated based on vehicle mileage per year. Until condition assessments have been completed, a combination of age-based data and professional opinion will be utilized.

Condition is measured using a 1-5 grading system [1], as detailed in **Table 2.3.1**. A consistent approach is important in reporting asset performance, enabling effective decision support. A finer grading system may be used at a more specific level; however, for reporting in the DAMP, results are translated to a 1-5 grading scale for ease of communication.

Table 2.3.1: Condition Grading System

Condition Grading	Description of Condition
1	Very Good : free of defects, only planned and/or routine maintenance required
2	Good : minor defects, increasing maintenance required plus planned maintenance
3	Fair : defects requiring regular and/or significant maintenance to reinstate service
4	Poor : significant defects, higher order cost intervention likely
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required

Transit asset condition is not currently monitored in a formal way.

2.4 Asset capacity and performance

Assets are generally provided to meet design standards where available. However, there are insufficient resources to address all known deficiencies.



Bus Stop Ridgetown

3.0 LIFECYCLE

The lifecycle management plan will detail how transit plans to operate the assets at the agreed-upon levels of service by managing its lifecycle costs. These costs are categorized by lifecycle phases, which include acquisition, operations, maintenance, renewal, and disposal. It is a budget-based approach but will evolve into a full lifecycle approach by 2027, where appropriate.

3.1 Acquisition Plan

The acquisition reflects new assets that did not previously exist or works that will upgrade or improve an existing asset beyond its existing capacity. Acquisitions may result from growth, demand, and social or environmental needs. Assets may also be donated to the Municipality of Chatham-Kent.

3.1.1 Selection criteria

Proposed acquisition of new assets and upgrade of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrades and new works should be reviewed to verify that they are essential to transit service needs. The proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled for future work programs. The priority ranking criteria are detailed in Table 3.3.1.

Criteria	Weighting
Risk/ legislative requirement	25%
Increased service levels	25%
Increasing cost effectiveness of the service	25%
Recommendations from the Transit Master Plan	25%
Total	100%

Table 3.1.1: Acquired Assets Priority Ranking Criteria



Summary of future asset acquisition costs

Forecast acquisition asset costs are summarized in Figure **3.1.1** and shown relative to the proposed acquisition budget.

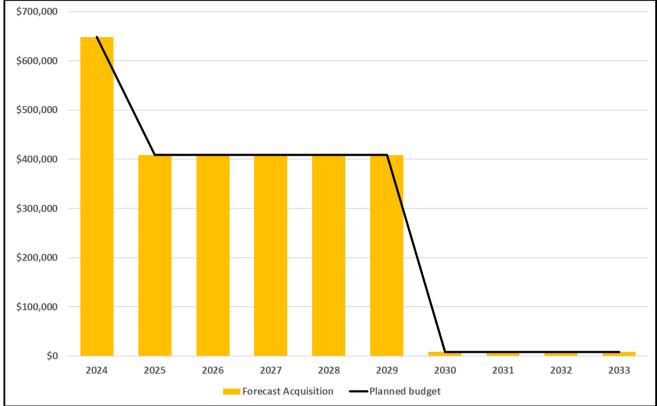


Figure 3.1.1: Acquisition Summary

When transit commits to new assets, it must be prepared to fund future operations, maintenance, and renewal costs. It must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by transit. The cumulative value of all acquisitions by transit, including assets that are constructed and contributed, is shown in **Figure 3.1.2**.

All figure values are shown in 2024 dollar value.

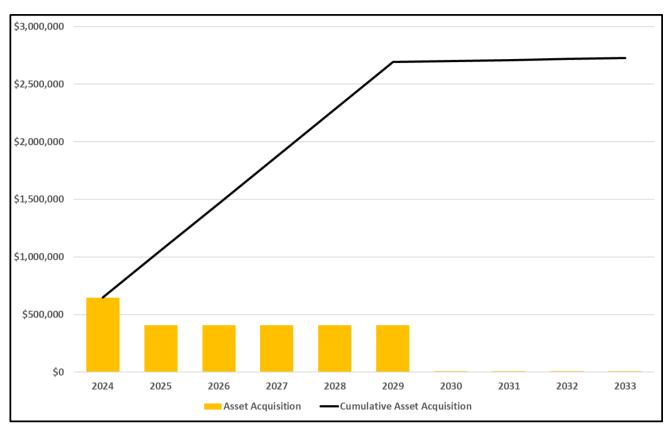


Figure 3.1.2: Acquisition Summary

All figure values are shown in 2024-dollar value.

- The LTFP will accommodate expenditures on new assets and services in the capital works program, but only to the extent that funding is available.
- This budget outlines the primary capital project: the enhancement of the Chatham downtown terminal, which is anticipated to be completed in 2027.
- Two additional buses will be added to the service in 2024 and 2025, bringing the total fleet count to 21. A portion of these new vehicles will be sourced from insurance.
- Acquiring these new assets will commit to funding ongoing operations, maintenance, and renewal costs for the period for which the asset's service is required.

3.2 Operations Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning transit assets, street sweeping, snow clearing, inspection, utility costs, ensuring all operators comply with license requirements, and providing necessary training.

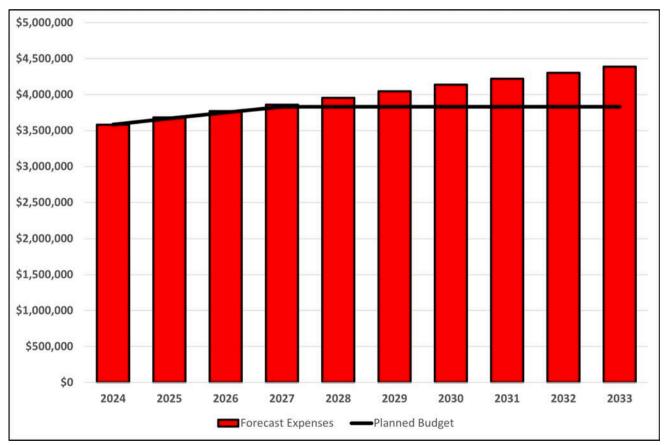
The Engineering (Transportation) division has contracted out the routine maintenance and cleaning of transit shelters in Chatham, Dresden, Ridgetown and Wallaceburg communities.

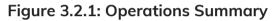
The transit operations budget includes staffing wages, contract costs, technological support, office supplies, and software fees.

Operating costs are steadily increasing, especially contract fees, from \$3,005,392 (2024) to \$3,150,105 (2026) based on current service levels. The study regarding the expansion of RideCK Conventional Service is estimated to be completed in 2026.

Summary of forecast operations costs

Forecast operations costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations costs are forecast to increase. If assets are disposed of, the forecast operation costs are expected to decrease. **Figure 3.2.1** shows the forecast operations costs relative to the proposed operations Planned Budget.





All figure values are shown in 2024 dollar value.

Table 3.2.2: Operations Budget Trends

Year	Operations Budget \$
2024	\$3,583,000
2025	\$3,670,000
2026	\$3,750,000
2027	\$3,831,000

3.3 Maintenance Plan

Maintenance includes all actions necessary to retain an asset as near as practicable to an appropriate service condition, including regular, ongoing day-to-day work necessary to keep assets operating.

These include maintenance actions such as:

- Transit vehicle maintenance, equipment repairs and replacement of all broken, worn out or defective structural and decorative members or components.
- Replacement of any area of defaced bus shelters.
- Necessary repairs to all shelters, including replacing glass, parts replacements, and appurtenance replacements.

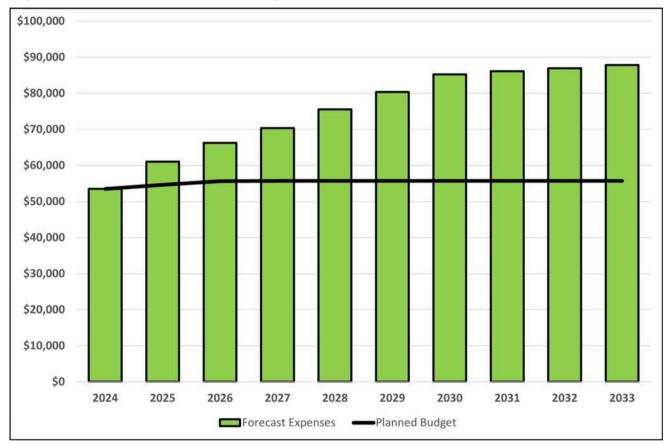
Engineering staff assess and prioritize reactive maintenance using experience and judgment.



Chatham Downtown Terminal

Summary of forecast maintenance costs

Forecast maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, future maintenance costs are forecast to increase. If assets are disposed of, the forecast maintenance costs will decrease. **Figure 3.3.1** shows the forecast maintenance costs relative to the proposed Planned Budget.





All figure values are shown in 2024 dollar value.

The trend in maintenance budgets is shown in **Table 3.3.1**.

Table 3.3.2: Maintenance Budget Trends

Year	Maintenance Budget \$
2024	\$53,501
2025	\$54,610
2026	\$55,659
2027	\$55,728

The contractor is responsible for maintaining the transit infrastructure (buses). Maintenance costs are included in the service provider's contract fee and covered in the operation section of this DAMP.

Maintenance budget levels are considered inadequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and highlighted in this DAMP, and service risks are considered in the Infrastructure Risk Management Plan.

The forecast maintenance costs for Chatham-Kent's transit assets show an upward trend from 2024 to 2033, indicating a growing need for maintenance investment as the assets age and new ones come into service.

Deferred maintenance (i.e., works identified for maintenance activities but unable to be completed due to available resources) should be included in the infrastructure risk management plan.

3.4 Renewal Plan

Renewal is major capital work that does not significantly alter the original service provided by the asset but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work beyond restoring an asset to its original service potential is considered to be an acquisition, resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year) or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or others).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 3.4.1**.

Table 3.4.1: Useful Lives of Assets

Asset (Sub) Category	Useful Life (Years)
Terminal	50
Bus stop selters	25
Information technology hardware	10
Fare collection equipment	5
Transit Vehicle	4

The estimates for renewals in this DAMP were based on the asset register method.

3.4.2 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a transit shelter) or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., the condition of the transit vehicle).

It is possible to prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use, and the subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs and
- Has the potential to reduce life cycle costs by replacing with a modern equivalent asset that would provide the equivalent service.

The ranking criteria used to determine the priority of identified renewal proposals is detailed in **Table 3.4.3**

Table 3.4.3: Renewal Priority Ranking Criteria

Criteria	Weighting
Condition	80%
Legislative Requirement	10%
Technological Changes	10%
Total	100%

3.5 Summary of future renewal costs

Forecast renewal costs are projected to increase if the asset stock increases. **Figure 3.5.1** shows the forecast costs associated with renewals relative to the proposed renewal budget.

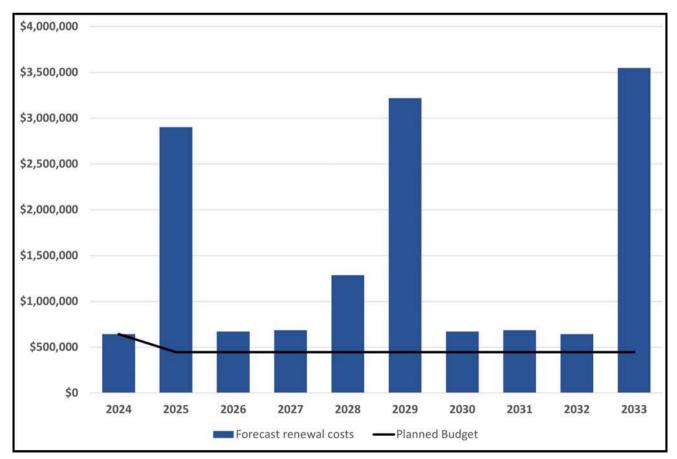


Figure 3.5.1: Forecast Renewal Costs

All figure values are shown in 2024 dollars.

The anticipated expenses for renewing Chatham-Kent's transit assets highlight a pressing requirement for financial backing between 2024 and 2033. The suggested budget for asset renewal fails to cover the projected costs annually after 2024, suggesting possible difficulties in upholding asset standards and service provisions.

The proposed renewal budgets consistently fall below the projected costs, indicating a pattern of insufficient funding that could threaten the long-term viability and effectiveness of the transit assets.

The funding gap increases yearly, with the most significant discrepancies occurring in 2025, 2029 and 2033. The growing gap indicates that asset renewal needs will not be met without adjustments, leading to potential service disruptions and increased deterioration.

Significant forecast renewal initiatives will encompass the renewal of 8 buses in the upcoming years. This renewal process is expected to take place in 2029 and 2033, as the estimated useful life of these buses is four years.



New RideCK bus wrap showcasing the history of Chatham-Kent

3.6 Disposal Plan

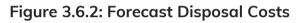
Disposal includes any activity associated with disposing of a decommissioned asset, including sale, demolition, or relocation. No significant assets have been identified for disposal within the transit plan.

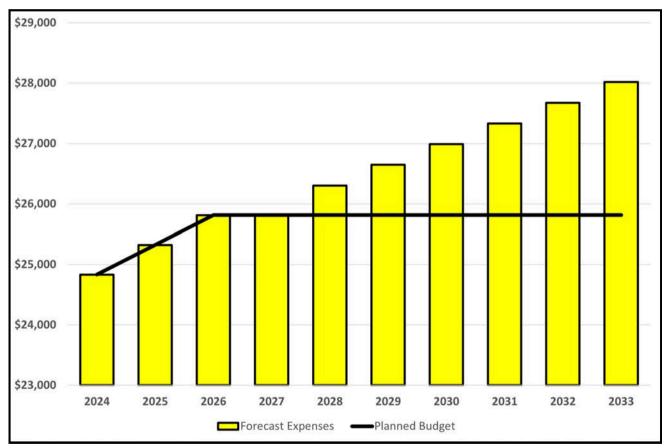
The fleet vehicles are scheduled to be replaced with new buses as they have reached the end of their lifespan. The transit accessories are removed from the vehicles before the buses are taken out of service. **Table 3.6.1** also summarizes the disposal costs and estimated reductions in annual operations and maintenance associated with disposing of the assets. The long-term financial plan will include any costs or revenue from asset disposals.

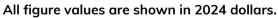
Table 3.6.1: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Costs	Operation & Maintenance Annual Saving
Transit fleet accessories and attachments	Retirement of service	end of life	varies	varies

If disposals occur in the future, this section will outline the costs, timing, and service impacts on the transit DAMP.







3.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 3.7.1. These projections include forecast acquisition, operation, maintenance, renewal, and disposal costs. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimated amount of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving the balance between costs, levels of service and risk to achieve the best value outcome.

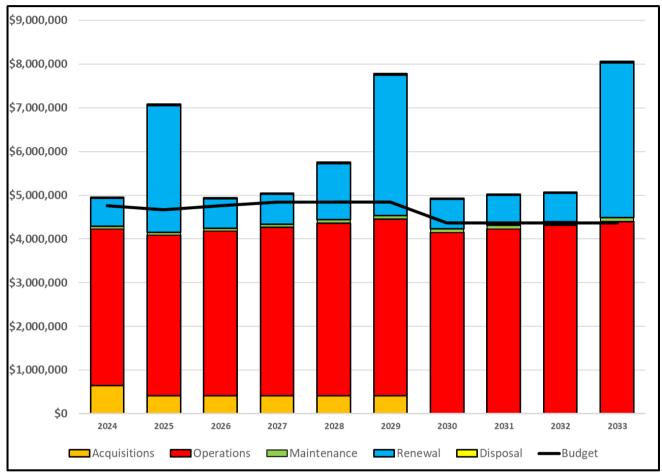


Figure 3.7.1: Lifecycle Summary

All figure values are shown in 2024 dollar value.

There is a notable disparity between the projected expenses and the allocated budget, particularly evident in 2025, 2029, and 2033. During these years, anticipated costs for renewal and acquisition significantly exceed the budgetary provisions.

These instances highlight that the projected expenses are heavily influenced by upcoming projects such as the Spirit of Freedom bus renewals and the downtown terminal enhancement initiative.

The current budget needs to meet the requirements for renewing the aging facility components that have reached the end of their operational lifespan.

Consequently, the level of service may decline, while the associated risks are likely to escalate.

4.0 LEVELS OF SERVICE

Levels of service describe the value Chatham-Kent transit provides to the community and are typically spoken about in 'measures.' Utilizing service measures allows decision-makers to understand the outcome of investments and allows those making choices to clearly understand how a dollar more or less will impact Chatham-Kent's ability to deliver its services. These measures also allow Chatham-Kent to communicate with the public about the cost of the services they receive today and will be able to afford in the future.

Service levels are defined in four ways: legislative compliance, customer values, customer levels of service and technical levels of service.

4.1 Legislative Requirements

Meeting legislative requirements should be the bare minimum level of service Chatham-Kent provides. These requirements often drive many lifecycle costs and staff tasks to ensure that Chatham-Kent is compliant with all legislation, from Federal to Provincial or even Chatham-Kent's own bylaws. There are many legislative requirements relating to asset management. Legislative requirements that impact the delivery of the transit service are outlined in **Table 4.1.1**.

Legislation	Requirement
Ontario Regulation (O. Reg.) 191/11: Integrated Accessibility Standards	Confirm each transit shelter location meets Accessibility for Ontarians with Disabilities Act (AODA) compliance
Facility Accessibility Design Standards (FADS)	Confirm each transit shelter location meets FADS compliance
Municipal Class EA (Environmental Assessment)	Requirements for studies, public consultation, and notifications for operating and maintaining transit systems and constructing or decommissioning facilities/elements. (Note: routine operation and maintenance is pre-approved without public notification)

Table 4.1.1: Legislative Requirements

Legislation	Requirement
Chatham-Kent Accessibility Policy	Public notice (in the designated format) must be provided when service is disrupted
Highway Traffic Act (HTA) Commercial Motor Vehicle Inspection Regulation	Daily inspection of each transit bus (typically by operator)
HTA Commercial Motor Vehicle Inspection Regulation	Under-vehicle inspection of each transit bus (typically by mechanic)
HTA Annual and Semi-Annual Inspection Regulation	Semi-annual inspection of each transit bus
O. Reg. 191/11: Integrated Accessibility Standards	Condition requirements for transit buses in conventional service
O. Reg. 191/11: Integrated Accessibility Standards	Limits our ability to limit or reduce specialized transit availability or service levels
O. Reg. 191/11: Integrated Accessibility Standards	Non-functioning accessibility equipment on a vehicle must be repaired "as soon as is practicable."
O. Reg. 191/11: Integrated Accessibility Standards	Training required for transit operators (over and above general AODA training)
O. Reg. 191/11: Integrated Accessibility Standards	Conventional transit service providers must provide either specialized transportation services or an alternative accessible method of transportation for persons who can't use conventional transit because of a disability

4.2 Customer Research and Expectations

This DAMP is prepared to facilitate consultation prior to the adoption of levels of service by the Chatham-Kent Council. Future revisions of the DAMP will incorporate customer consultation on service levels and service costs. This will assist Chatham-Kent Council and stakeholders in matching the required level of service, service risks and consequences with the customer's ability and willingness to pay for the service.

Chatham-Kent Transit currently does not conduct research on customer expectations. This will be investigated for future updates of the DAMP.

4.3 Customer Value

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service are important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 4.3.1: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Clean facilities	Customer surveys & Complaints	To be determined (TBD) in 2025	Not anticipated to change
Safe environment	Customer surveys & Complaints	TBD 2025	Not anticipated to change
Affordable services	Customer surveys & Complaints	TBD 2025	Remain reasonably constant
Easy access	Customer surveys & Complaints	TBD 2025	Not anticipated to change

4.4 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

- **Condition** How good is the service ... what is the condition or quality of the service?
- Function Is it suitable for its intended purpose Is it the right service?
- **Capacity/Use** Is the service over or underused ... does Chatham-Kent need more or less of these assets?

In Table 4.4.1, under each service measure type (Condition, Function, Capacity/Use), there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation. These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is unavailable or proportion of replacement value by condition percentages) to provide a balance compared to the customer perception that may be more subjective.

Table 4.4.1: Customer Level of Service Measure

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Customer Satisfaction	Comfort and cleanliness (bus, bus stops)	Customer Survey, Staff inspection	Good	No Change
Accessibility	Paved surfaces and sidewalk connectivity · % bus stops that are accessible	Staff Inspection	TBD in 2025	Change expected (improvement)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Function	Schedule adherence, No show busses, Vehicle breakdown, On route disruption	Customer feedback, Bus tracking app	TBD in 2025	No Change
Capacity	Service disruption	Number of denied trips	TBD in 2025	May Change

4.5 Technical Levels of Service

Technical levels of service describe how a service performs from the provider's point of view. They are quantified using metrics that relate directly to an asset or the service; however, these metrics are related to items that a customer would likely need to be made aware of. Technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance. Technical service measures are linked to the activities and annual budgets covering:

These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance. Technical service measures are linked to the activities and annual budgets covering:

Acquisition – the activities to provide a higher level of service (e.g. expanding a terminal, replacing a bus with a larger size) or a new service that did not exist previously (e.g. a new bus route).

Operation – the regular activities to provide services (e.g. Customer interactions, snow clearing, service hours, cleansing, mowing grass, energy, inspections, etc.).

Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. building and structure repairs, replacing components of the fleet, equipment maintenance).

Renewal – the activities that return the service capability of an asset up to that which it had initially been provided (e.g. minor or major asset rehabilitation, transit asset replacements).

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[1]

[1] IPWEA, 2015, IIMM, p 2|28.

Table 4.5.1 shows the activities expected under the current 10-year Planned Budgetallocation and the Forecast activity requirements recommended in this DAMP.

Table 4.5.1: Technical Levels of Service

Lifecycle Activity	Level of Service Statement	Activity Measure	Current Performance	Recommended Performance
	Acquisition of equipment and technology	Budget Allocation	Limited by the existing budget	No Change
	Acquisition of transit vehicles	End of life cycle measures	2 buses will be added to service by 2025	Will increase
Acquisition	Construct additional bus stops, shelters	Budget Allocation	Not included in current budget	Will increase as additional assets are constructed and require operation
	Route Expansion	Budget Allocation	Not included in current budget	Will increase as additional assets are constructed and require operation

Lifecycle Activity	Level of Service Statement	Activity Measure	Current Performance	Recommended Performance
Operation	Contract fee, technology maintenance fee	Included in the planned budget	Limited by the existing budget	May increase
	Utility, Inspections	Included in the planned budget	Annual cost	Will increase as additional assets are constructed and require operation
	Buses terminal	Included in the planned budget	Limited by the existing budget	No Change
Maintenance	Transit shelters and signs maintenance	Included in the planned budget performance monitoring	Limited by the existing budget	Will increase as additional assets are constructed
Renewal	Buses terminal	Included in the budget	Currently limited by budget	No Change
	Transit vehicles	Included in the budget	Limited by the existing budget	Will increase as more assets are acquired
	Contractor	Renewal as assessed by IES	Currently limited by budget	May increase
Disposal	Disposal of assets at the end of the useful life	Disposal as assessed by IES	Limited by the existing budget	Will increase as additional assets are constructed

It is essential to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged that changing circumstances, such as technology and customer priorities, will change over time.

5.0 FUTURE DEMAND

5.1 Demand Drivers

Drivers affecting demand include population change, regulations, demographic changes, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

5.2 Purpose Statement

This DAMP is prepared by the Municipality of Chatham-Kent's vision, mission, goals, and objectives.

Our vision is: **To provide sustainable transit services that support urban growth and daily life.**

Our mission is: The Corporation of the Municipality of Chatham-Kent is a proud, proactive, progressive team committed to innovation and leadership by providing services that enhance the quality of life in our community.

Chatham-Kent Council has set strategic goals. **Table 5.2.1** summarizes the relevant goals and objectives and how these are addressed in this DAMP.

Council strategic priorities	Objective	How Goal and Objective are addressed in the DAMP
Safe	Vehicles, bus stops, and transit hubs are safe and accessible to riders	Legislative requirements
Accessible	All Chatham-Kent residents can access sustainable transit services that support urban growth and daily life	Reviewing Customer service level measures
Affordable	Fare policy and payment tools make transit usage simple, sustainable, and accessible to riders	Customer engagement survey and feedback

5.3 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

5.4 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3. Demand for new services will be managed by managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures. Opportunities identified to date for demand management are shown in **Table 5.4.1** below. Further opportunities will be developed in future revisions of this DAMP.

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Population Growth	105,110	112,000 (It will continue to increase, and meeting requirements will be a challenge.)	Increase in costs to provide services	Monitor the changing requirements. Consider as part of the long-term financial plan process.
Infrastructure resourcing	Reliability on funding availability	Monitor the recommendations in the master plan	It will place pressure on existing capacity	Monitor the recommendations in the master plan
Expanding Services	Limited by the existing budget	It will continue to increase, and meeting requirements will be a challenge.	Increase in costs to provide services	Monitor the recommendations in the master plan

Table 5.4.1: Demand Management Plan

5.5 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Acquiring new assets will commit Chatham-Kent to ongoing operations, maintenance, and renewal costs for the period for which the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines. ISO 31000:2018 defines risk management as 'coordinated activities to direct and control with regard to risk'.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock,' reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluating the risks and developing a risk treatment plan for those risks deemed unacceptable.

6.1 Critical Assets

Critical assets are defined as those with a high consequence of failure, causing significant loss or service reduction. Critical assets have been identified, and their typical failure mode and the impact on service delivery are summarized in Table 6.1.1. Failure modes may include physical failure, collapse, or essential service interruption.

Table 6.1.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Buses	Mechanical failure	Failure to be able to deliver service
Terminal	Structural degradation	Potential closure
Shelters	Structural degradation	Increased operational cost/ decrease level of service
Supporting Technology	System failure	Loss of revenue Increased operational cost

By identifying critical assets and failure modes, an organization can ensure that investigative activities, condition inspection programs, maintenance plans, and capital expenditure plans target critical assets.

6.2 Risk Assessment

The risk management process used by Chatham-Kent is an analysis and problemsolving technique designed to provide a logical process for selecting treatment plans and management actions to protect the community against unacceptable risks. The process is based on the fundamentals of International Standard ISO 31000:2018.

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock,' reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. **Table 6.2.1** shows the residual risk and existing controls. These critical risks and expenses must be reported to management and the council. This list is neither exhaustive nor comprehensive of all risks associated with Transit. Subsequent versions of this DAMP will elaborate on risks and associated treatment costs.

Asset Providing the Service	What can Happen	Risk Rating	Existing controls	Treatment costs
Fleet - Bus	Out of service - known	HIGH	Regular maintenance, emergency response plans, Driving training (contractor)	TBD in 2025
Phone System	Disruption in service, Riders cannot call or book appointments	low	Social Media Municipal 311 Contractual Obligations	TBD in 2025

Table 6.2.1: Risks and Treatment Plans
--

Asset Providing the Service	What can Happen	Risk Rating	Existing controls	Treatment costs
Transit Shelter, Bus stop	Out of service, Shelters are on the right-of-way, often within a construction zone. Damaged during a storm.	Medium	Posted notices	TBD in 2025
Software	Technical issue, Automated Vehicle Locator, stop announcements, ridership data, smartcard sales) could go down	Low	Manual Booking through dispatch, 2- way radios	TBD in 2025
Public Transit	Contract default	Low	Performance Bond	TBD in 2025
Public Transit	Natural disaster, pandemic, or other unpredictable situation that results in total disruption to public transit	Medium	Emergency Operations Centre Protocol R20-294 emergency procedures Bio-barriers have been installed in all fleet	TBD in 2025
Public Transit Route	Detour: Planned or unplanned detours resulting in one or more posted bus stops being out of service for an extended period of time. Re-routing of route(s), installing temporary stops.	Medium	EOC Protocol. R20-294 emergency procedures.	TBD in 2025

Note * The residual risk remains after the selected risk treatment plan is implemented.

6.3 Infrastructure Resilience Approach

The resilience of transit critical infrastructure is vital to providing services to transit customers. To adapt to changing conditions, Chatham-Kent needs to understand its capacity to 'withstand a given level of stress or demand' and to respond to possible disruptions to ensure continuity of service.

Chatham-Kent does not currently measure its resilience in transit service delivery. This will be included in future iterations of the DAMP.

6.4 Service and Risk Trade-Offs

The decisions to adopt this DAMP are based on the objective of achieving the optimum benefits from the available resources.

6.4.1 What cannot be done

Some operations and maintenance activities and capital projects cannot be undertaken within the next ten years. These include:

- Fully fund capital upgrades and replacements
- Increase operations, maintenance, and renewal activities to industry standard levels
- Address maintenance requirements for new assets acquired through donation or transfer of responsibility
- Mitigate all risks associated with these upgrades and replacements
- Facility upgrades

6.4.2 Service trade-off

If forecast work (operations, maintenance, renewal, acquisition or disposal) cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- The condition of the transit fleet and infrastructure will continue to deteriorate, resulting in the provision of a lower level of service
- Poor quality of transit facilities such as Transfer Terminal and shelters
- Lack of maintenance and renewal may compromise intergenerational equity

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Service interruption due to breakdown
- Reduction in use by the community
- Impact on municipal reputation
- Reduced community satisfaction

These actions and expenditures are considered and included in the forecast costs and, where developed, the Risk Management Plan.

7.0 Climate Change Adaptation

Climate change may significantly impact the transit assets Chatham-Kent manages and the services it provides. In asset management planning, climate change can be considered both a future demand and a risk.

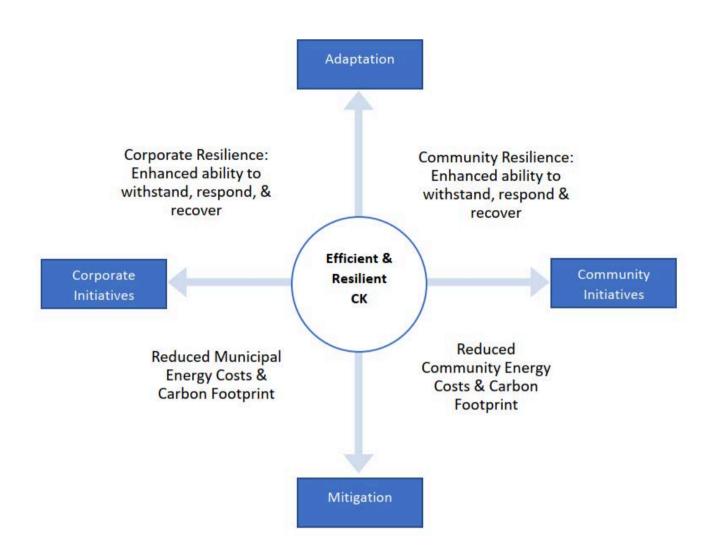
How climate change impacts assets will vary depending on the location and the type of services provided, as will how the transit responds to and manages those impacts. At a minimum, the airport will consider how to manage its existing assets, given the potential climate change impacts on the region. The effects of climate change may significantly impact the assets Chatham-Kent manages and the services it provides. This can include:

- Impacting Asset Lifecycle Costs
- Affect the level of service that can be provided
- Increase demand for services
- Impact Risks involved with delivering services

In the Asset Management Planning process, climate change can be considered a future demand and a risk.

Recognizing these continuing climate change impacts, the Council declared a climate emergency in Chatham-Kent on July 15, 2019. It directed municipal staff to develop a climate change action plan (CCAP) to reduce CK's contribution to climate change (known as climate mitigation) and to enhance the community's resiliency to climate change (known as climate adaptation).

The Municipality of Chatham-Kent is completing its CCAP, which will be presented to the Council and the public by the end of 2024. The CCAP actions presented in the CCAP report document will inform the Climate Section of the DAMPs in 2025. The CCAP actions will also be presented within the departments responsible for their completion.



Based on the Climate Atlas of Canada, historical climate patterns show that CK's climate has become hotter, wetter, and wilder over the last six decades, and this trend is expected to continue.

Hotter: Average annual temperatures have risen by 0.5°C and are expected to increase between 3.5°c and 5.8°c by the 2080s.

Wetter: Average annual precipitation has increased by 49.8mm (1.96in) and is expected to grow between 78mm and 127mm (5in) by the 2080s.

Wilder: Rainstorms have increased in frequency and severity, and seasonal precipitation patterns have changed, and this is expected to continue.

"From 1983 to 2008, insurers spent on average \$400 million yearly on catastrophic claims; since 2009, the yearly average has risen to almost \$2 billion. These "once in 100 years" events are happening more frequently and are becoming more severe and more costly." (Statistics Canada, 2024)

Risks and opportunities identified to date are shown in Table 7.0.1

Climate Impact (Assets level or Service level)	Current Position (Today)	Projected Position (in 10 years)	Potential Impact on Assets & Services	Climate Management Plan
Storms causing bus route obstruction (tree branches	Unpredictable	Likely to increase	Bus route disruption, RFP Call outs	Municipal PW/ contractor call outs to clear row Shelter Maintenance and Repair RFP enhanced to include this work at transit stops
Major storms inaccessibility to the transit shelter, transit service suspension	TBD in 2025	Likely to increase	Bus routes may be out of service for several hours or days, depending on the severity of the storm/damage RFP call outs for structure damage	TBD in 2025
High Temperatures /heatwaves	16.7 average days where temperature exceeds 30 degrees	*35.5 average days where temperature exceeds 30 degrees	Increase in specialized service ridership (applications) Climate control on transit buses may have difficulty maintaining temperature Increase in demand for shelters at stops	Route review to increase sheltered stop locations and types of structures

Climate Impact (Assets level or Service level)	Current Position (Today)	Projected Position (in 10 years)	Potential Impact on Assets & Services	Climate Mgt Plan
Extreme weather conditions (precipitation)	*25.1 annual precipitation days exceeding 10mm	*26.6 average days exceeding 10mm	Regular weekly inspections have reported vulnerable persons occupying various transit shelters Transit riders are not able to use shelter Increase in cleaning, maintenance, rider complaints and/or safety at sheltered stops	TBD in 2025
Zero Emissions Strategy, Public transit plays a critical role in decreasing carbon emissions and reducing active vehicles on the road	There are currently no electric transit fleet vehicles in CK Consultant (HDR) is conducting study to introduce charging stations in CK for a potential solution (pilot) for RideCK	Purchase/ introduction of electric transit fleet as current buses are life- cycled and funding opportunities arise Increased cost of private vehicles (electrification) or gasoline	Significant investment in municipal infrastructure for ZEB facility Significate increases in personal expenses may result in higher transit ridership	TBD in 2025

* Source: Historical and Future Climate Analysis for Chatham-Kent document

Additionally, how Chatham-Kent constructs new assets should recognize the opportunity to build resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the effects of climate change;
- Services can be sustained, and
- Assets that can endure may lower the lifecycle cost and reduce their carbon footprint.

 Table 7.0.2 summarizes some asset climate change resilience opportunities.

Table 7.0.2 Building Asset Resilience to Climate Change

New Asset	Climate Change Impact these	Build Resilience in New
Description	assets?	Works
Transit terminal	Consider climate resilient design for the new terminal building	Use heat-resistant materials, efficient drainage systems

The impact of climate change on assets is a new and complex discussion, and further opportunities will be developed in future revisions of this DAMP.

8.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this DAMP. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

8.1 Financial Sustainability and Projections

8.1.1 Sustainability of service delivery

Two key indicators of sustainable service delivery are considered in the DAMP for this service area. The two indicators are the following:

Asset Renewal Funding Ratio (proposed renewal budget for the next ten years / proposed renewal outlays for the next ten years shown in the DAMP) and

Lifecycle Funding Ratio (proposed lifecycle budget for the following ten years / proposed lifecycle outlays for the next ten years shown in the DAMP).

Asset Renewal Funding Ratio [1] - 31%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years, Chatham-Kent expects to have **31%** of the funds required for the optimal renewal of assets. The forecast renewal works along with the proposed renewal budget, and the cumulative shortfall where one exists, is illustrated in Section 3.

[1] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Lifecycle Funding Ratio – 10-year financial planning period

This DAMP identifies the forecast operations, maintenance, and renewal costs required to provide an agreed-upon and affordable level of service to the community over a 10-year period. It provides input into 10-year financial and funding plans aimed at sustainably providing the required services. This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance, and renewal costs over the 10-year planning period are, on average, **\$5,838,292** per year. The proposed (budget) operations, maintenance, and renewal funding is **\$4,594,230** on average per year, giving a 10-year funding shortfall of **\$1,244,062** per year. This indicates that **79%** of the forecast costs needed to provide the services documented in this DAMP are accommodated in the proposed budget. Note that these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires managing transit service levels, risks, forecast outlays, and financing to achieve a financial indicator of approximately 1.0 for the first years of the DAMP and ideally over the 10-year life of the Long-Term Financial Plan.

8.2 Forecast Costs (outlays) for the long-term financial plan

Table 8.2.1 shows the forecast costs (outlays) required for consideration in the 10-year LTFP. Providing services in a financially sustainable manner requires balancing the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates that further work is required to review service levels in the DAMP and/or financial projections in the LTFP.

Chatham-Kent Transit will manage any 'gap' by developing this DAMP, which will provide guidance on future service levels and resources required to provide these services in consultation with the community.

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024	648,483	3,583,010	53,501	642,000	24,834
2025	408,532	3,683,269	61,095	2,903,000	25,324
2026	408,581	3,771,232	66,229	670,000	25,814
2027	408,581	3,861,017	70,384	685,000	25,814
2028	408,630	3,955,476	75,549	1,287,000	26,304
2029	408,665	4,046,786	80,408	3,218,000	26,647
2030	8,699	4,138,097	85,268	670,000	26,990
2031	8,733	4,221,408	86,128	685,000	27,333
2032	8,768	4,304,720	86,988	642,000	27,676
2033	8,802	4,388,032	87,849	3,548,000	28,019

Table 8.2.1: Forecast Costs (\$) (outlays) for the Long-Term Financial Plan

8.3 Funding Strategy

The proposed funding for assets is outlined in the operational budget and 10-year capital budget. These operational and capital budgets determine how funding will be provided. In contrast, the Asset Management Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the DAMP will provide more detailed service delivery options and alternatives to optimize limited financial resources.

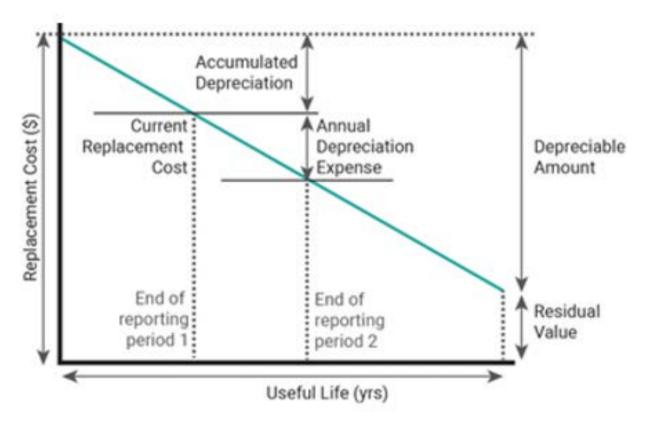
8.4 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the service. As projections improve and can be validated with market pricing, net valuations will increase significantly. In the longer term, additional assets will add to the operations and maintenance needs. They will also require additional costs for future renewals.

Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and would remove the high-cost renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs; however, this will be improved for the next iteration of the plan.

8.4.1 Asset valuations

The best available estimate of the value of assets included in this DAMP are shown below.



The assets are valued utilizing Current Replacement Cost Market Prices Index:

Assets Valuation	Financial Value
Replacement Cost (Gross)	\$7,922,000
Depreciable Amount	\$7,922,000
Current Replacement Cost	\$4,195,000
Annual Depreciation Expense	\$1,589,000

Also reported as Written Down Value, Carrying Amount or Net Book Value in some jurisdictions.

8.5 Key Assumptions Made in Financial Forecasts

Some assumptions were necessary to compile this DAMP. This section details the key assumptions made in its development and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this DAMP are:

- Budgets have been allocated based on the best available data on assets.
- The omission of disposal assets during this budget period and small projects will have a minor impact on disposal projections.
- Assumptions were made regarding the existing and planned budget for maintenance and operations and only increased in the forecast
- Renewal forecasts have been made by professional judgment.

8.6 Forecast Reliability and Confidence

This DAMP's forecast costs, proposed budgets, and valuation projections are based on the best available data. Current and accurate information is critical for effective asset and financial management. Data confidence is classified on an A—E scale in accordance with **Table 8.6.1**.

Table 8.6.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations, and analysis were documented properly, and the best assessment method was agreed upon. The dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations and analysis is adequately documented but has minor shortcomings; for example, some data is old, some documentation needs to be included, and reliance is placed on unconfirmed reports or some extrapolation. The dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this DAMP is shown in **Table 8.6.2.**

Table 8.6.2: Data Confidence Assessment for Data used in DAMP

Data	Confidence Assessment	Comment
Demand drivers	В	From Master Plan
Growth projections	В	From Master Plan
Acquisition forecast	С	From Planned budget
Operation forecast	С	From Planned budget
Maintenance forecast	С	From Planned budget
Renewal forecast - Asset value	D	Professional Judgement
Asset useful lives	D	Generic estimates in the Asset register
Condition modeling	N/A	Not available
Disposal forecast	N/A	Not available

The estimated confidence level for and reliability of data used in this DAMP is considered to be **low** confidence level.

9.0 PLAN IMPROVEMENT AND MONITORING

Status of Asset Management Practices

ISO 55000 Refers to this as the Asset Management System

9.1 Accounting and financial data source

This DAMP utilizes accounting and financial data. The source of the data are;

- Chatham-Kent 2024 2027 Multi-Year Budget (Capital & Operating)
- Internal Market Price Valuations
- IPWEA AM Software Multi-Year Forecasting Models
- Council Reports
- Tender Documents

9.2 Asset management data sources

This DAMP also utilizes asset management data. The sources of the data are;

- Asset Registers
- Insurance Data
- Tangible Capital Asset Data
- Fleet Vehicle Data
- Inspection Logs
- Subject Matter Expert Knowledge and Anecdotal Information

9.3 Continuous Improvement Plan

Chatham-Kent must recognize areas within the DAMP and within its planning processes that require future improvements to ensure effective asset management and informed decision-making. The tasks listed below are essential to improving the DAMP and Chatham-Kent's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, and plans to physically improve the assets.

The Improvement Plan, **Table 9.3.1**, highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this DAMP will provide updates on these improvement plans. The costs and resources to complete each of these tasks have not been included in the lifecycle models to data, and resource requirements would need to be reviewed for internal resource-driven projects

The improvement plan generated from this DAMP is shown in **Table 9.3.1**.

Task	Task	Responsibility	Resources Required	Timeline
1	Minimum Maintenance Standards for Municipal Highways (snow clearing, checking sidewalks)	Public works, Transit, contractor, AQM	15 FTE Hrs	2024-2025
2	Public Engagement Survey	Customer services, Transit, AQM	TBD in 2025	2024-25
3	Asset Condition assessment of all critical assets	Transit staff	GIS Software	2025
4	Create a Demand pressure analysis for IES division based on mobility master plan	Transit	40 FTE Hrs	2025
5	Review current Access agreements for private land bus stops	Transit, legal, private landowners	6 FTE Hrs	2025
6	Develop a Risk Model for Transit division	AQM, TRANSIT	40 FTE Hrs	2025-26
7	Development of a Public Transit By-Law	Transit, legal	120 FTE Hrs	2025-26

Table 9.3.1: Continuous Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
8	ESL is poor quality need to develop a process to improve data	Facilities, AQM, Finance, Consultant, Insurance	20 FTE Hrs	2025-2026
9	Ongoing accessibility upgrades at transit Transit stops		15 FTE Hrs	2026
10	Development Standards supporting Public Transit	Planning, public works, Transit	TBD in 2025	2026-27
11	Specialized transit intake and management study to establish best practices and policies	Transit, legal, accessibility advisory committee	TBD in 2025	2026-2027
12	Transit Terminal Upgrade/Construction	Facilities, Transit	2M	2027

9.4 Monitoring and Review Procedures

This DAMP will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The DAMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The DAMP has a maximum life of 1 year and will be updated annually. This plan will receive a complete revision and update in 2027 to enable the Chatham Kent transit to be prepared for the 2028 four-year budget process.

9.5 Performance Measures

The effectiveness of this DAMP can be measured in the following ways:

- The degree to which the required forecast costs identified in this DAMP are incorporated into the long-term financial plan
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' work program trends provided by the DAMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieves the Organizational target (this target is often 90–100%)

REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney,
 https://www.ipwog.org/publicgtions/ipwoghookshop/practiconotos/pp6

https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6

- IPWEA, 2014, Practice Note 8 Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management Guidelines
- "Driving Forward" 2020 Transit Strategy
- CK Asset Management Plan 2017
- Municipality of Chatham-Kent Strategic Plan 2022-2026
- Chatham-Kent Draft Budget 2024 2027.

Document Control

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	August 2024	1st Detailed Asset Management Plan	SC	Director, Engineering	Chatham-Kent Council

For more information, email To view all the asset management plans, visit www.chatham-kent.ca/assetplans