



## Committee of the Whole

June 10, 2025

### Staff Report: #FIR-2025-20

**REPORT BY:** Stephen Rothwell, Fire Chief/CEMC  
**REPORT SUBJECT:** 2020 Fire Plan Three Station Model Update  
**DEPARTMENT:** Fire

#### **RECOMMENDATION(S):**

***“THAT, the Master Fire Plan 3 Station Model Report be received for information,***

***AND FURTHER THAT, staff be directed to proceed with the drafted Public Consultation Schedule for the closure of Station 4 Tatlock Fire Hall on 30 June 2026.”***

#### **1. BACKGROUND**

Emergency Management & Training Inc. was hired by the Township of Lanark Highlands to complete a Master Fire Plan and Community Risk Assessment (CRA) in the fall of 2019. On 25 August 2020 (bylaw 2020-1637), Council adopted the Master Fire Plan (MFP) to guide the future of the Township's fire service.

Throughout the past year, Chief Rothwell has been reviewing the adopted recommendations by Council in the MFP. Chief Rothwell has attached the MFP recommendations to this report, with a column added for the status update of the recommendations. Overall, many of the recommendations have either been completed or are in progress. This review brought attention to recommendation FFA20, which is included below in **Table 1**. The recommendation was to proceed with the three-station model, which included amalgamating Stations 2,4, and 5.

Station 1 – Lanark Village  
Station 2 – Middleville  
Station 3 – McDonald's Corners  
Station 4 – Tatlock  
Station 5 – White Lake (closed)

By-law 2020-1637 was to approve the Master Fire Plan and recommendations therein. The applicable recommendation on the three-station model that was approved is noted in Table 1:

Table 1: Appendix B By-law 2020-1637 - Three (3) Station Model

Rec #	Recommendation Consultant	Timeline	Staff Recommendation	Rationale
FFA20	It is recommended that three (3) new fire stations be adopted, replacing Stations 1,2,3. It would require the closure and amalgamation of the firefighters of Stations 2, 4, & 5	Short term (1 Year) Station 3, Mid term (4-5 years) Station 2, Long-term (8-10 years) Station 1	Staff concur and recommend that Council proceed with option 3 (the three-station model cited in the Master Fire Plan) and proceed to amalgamate Stations 2, 4, & 5.	The rationale contained within the Master Fire Plan and the staff report forms the basis for this recommendation.

Following the adoption of the Master Fire Plan, staff brought forward a report on 11 January 2022 to Committee of the Whole with a carried recommendation for staff to provide notice for a period of 30 days stating the intention to pass a by-law formally closing Fire Station 5 in White Lake in accordance with the Master Fire Plan. Council adopted the 11 January 2022 Committee of the Whole report at the 25 January 2022 meeting.

Following the notice period, a formal closure of Station 5 in White Lake by-law was passed on 22 March 2022. Mississippi Mills has since provided fire protection services through a Fire Protection Agreement. Firefighters were to be given an opportunity to transition to Station 4 in Tatlock for continued service. Two members transitioned to Station 4 following the closure of Station 5.

Fire apparatus from White Lake Station 5 was moved to Station 4 as the apparatus in White Lake was newer, with less use, and would allow for the oldest tanker in the fleet (Station 4's tanker) to be sold as surplus.

The Township of Lanark Highlands has also had reports completed in the past regarding the fire service and required levels of service specifically the Powers Report completed by Chris Powers who is a retired fire chief completing fire department reviews. Former Fire Chiefs, as well as subject matter experts, have also stated that the three-station model option (adopted by Council), is the direction Lanark Highlands Fire Service (LHFS) should move in due to low call volumes and the financial challenges of maintaining the existing department assets.

## 2. DISCUSSION

Following the closure of Station 5, the department has remained status quo, with no further movement toward the approved recommendation of amalgamating Stations 2, 4 & 5 until the winter of 2024. Late fall 2024, two members have taken a leave of absence from Station 4 due to other commitments, leaving Station 4 with a roster of six active members.

Following this, Station 2 and Station 4 began training together more frequently. After a few sessions, the feedback from members was very positive, and these stations began training permanently together. Due to the low firefighter numbers at Station 4, it was very difficult to safely perform any training other than pump operations and classroom theory, especially

when one or two members would be absent. Station 4 recently was successful in recruiting three new members for 2025.

Lanark Highlands Fire Service currently responds to fire calls utilizing a two-station response model, with the 'second in station' being downgraded as required by the first arriving officer. Station 2 responds to Tatlock's response area for all calls, with no stand down, to ensure adequate numbers of personnel arrive on scene. Due to limited personnel, Station 2 has been the first in apparatus on scene in Station 4's area numerous times.

As with many rural areas in Ontario, served by volunteer firefighters, achieving an adequate number of volunteers responding to weekday daytime calls is an increasing challenge. Station 4 has a member who is currently around during the day, but in times when that individual is away from the area, it typically takes over 20 minutes for the first responding truck to leave the fire station (as the operator is usually responding from Lanark Village). With a response of only one member from Station 4, there are significant health and safety concerns and risks for the Township and personnel, as highlighted in the 2019 Master Fire Plan and its recommendation to amalgamate Stations 2, 4 and 5.

The minimal response of one firefighter on a truck puts the individual at serious risk attending a working environment alone. Working alone could put the firefighter and the public at risk of hazards, such as undue physical risks, no assistance or safety backup, and no support on the scene. Occupational Health and Safety Act (OHSA) requires employers to take every precaution reasonable for the protection of workers. Industry standards, such as those authored by the National Fire Protection Association (NFPA), strongly recommend the practice of a minimum of four firefighters arriving simultaneously at fire and emergency scenes.

As per NFPA 1500 Standard on Fire Department Occupational Safety, Health, and Wellness Program, it is stated that a minimum of two personnel work together for emergency operations. This is also noted in Section 21 Guidance Notes '2-2 Crew Integrity' where it states that when firefighters are working in hazardous or dangerous areas, crews should enter, operate and exit together as a minimum crew of two in the event of an emergency.

One-person responses are strongly discouraged unless for specific non-emergency inspections or assessments. Township staff have addressed this risk by having a full crew respond from Station 2 as due diligence.

No member can enter an Immediately Dangerous to Life or Health (IDLH) environment alone due to the risks to themselves and would be deemed negligent towards the Township. NFPA 1720 includes deployment standards, which Canadian fire departments commonly use. The timelines and staffing levels associated with NFPA 1720 were included in the 2019 Master Fire Plan. Further discussion on NFPA 1720 is noted below within the discussion of the Township's call response data.

### **LHFS Officer Discussion**

The Fire Chief has facilitated discussions with LHFS Officers regarding the direction of the department as per the recommendations included in the MFP. These discussions were in-depth and lengthy. There was a strong consensus amongst the Officers that supported the recommendation for station amalgamation contained in the MFP. Department management

values the input and opinions given by all fire personnel, and staff attended multiple meetings to look at the options and provide feedback. The discussion at the officer level also considered the feasibility of moving to a two-station model, such as Drummond/North Elmsley Tay Valley Fire Rescue. Although the two-station model was discussed, officers felt a three-station model was most appropriate. Township staff agree that due to the large geographical area of the Township and the barriers to road network connectivity (such as numerous rivers and lakes), a two-station model would present challenges.

**Call Volume Data 2013 - 2024**

Staff utilized the data from the 2019 Master Fire Plan, as well as additional Station 4 data from 2020 to 2024 extracted from the department’s records management software, FirePro.

From 2013 to 2024, Lanark Highlands Fire has averaged 112 calls per year. Over the same time frame, Station 4 has averaged 13 calls per year. Call volumes for Station 4 have been consistent over the past 12 years, as shown in the data from the Master Fire Plan and the most recent department records. This data is shown below in **Figures 1** and **2** below. .

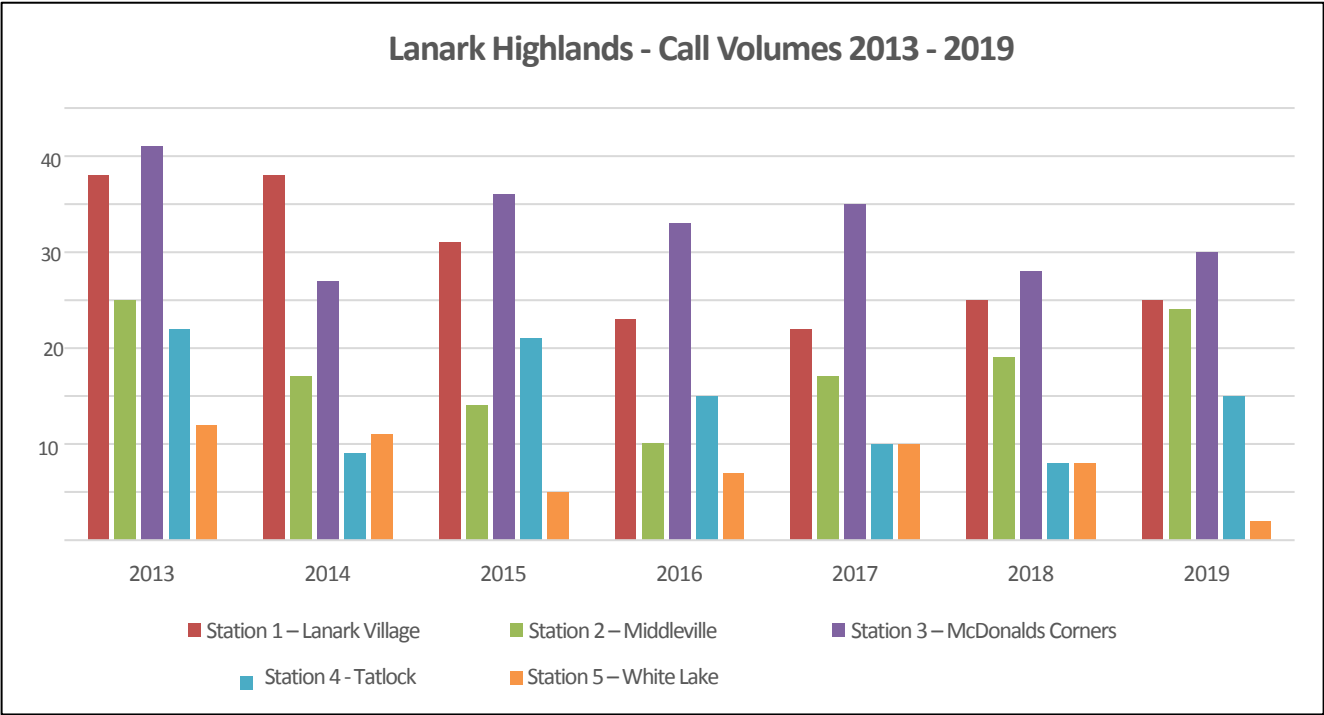


Figure 1: MFP Call Volume 2013-2019

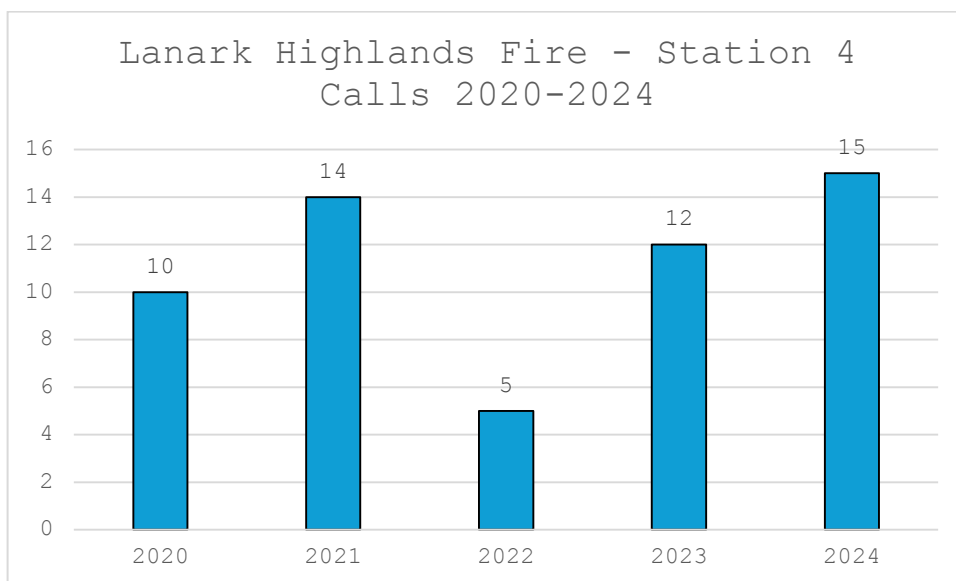


Figure 2: Station 4 Calls 2020-2024

**Figures 3 and 4** below break down Station 4's response type by number and by percentage. The top three categories of Station 4's response types from 2020 to 2024 were vehicle collisions at 30% (17 calls), followed by grass fires at 20% (11 calls), and medical at 14% (8 calls). This data is comparable to the data presented in the Master Fire Plan (Figure 10 of the MFP). The MFP data was based on 2015 to 2018 data. A Large portion of Station 4 calls are Motor Vehicle Collisions (MVC), with the majority of calls occurring along the 511 corridor.

Another area with a number of calls for Station 4 is in the area of French Line Road. Utilizing mapping software, it was identified that the travel distance from existing Station 2 to the intersection of Highway 511 and French Line Road is actually closer than from Station 4. Station 1's response to the same area would be a slightly longer distance than Station 4, but their chute time (time from page to apparatus on the road) is much less, especially during weekday daytime hours. Staff will be reviewing the existing response map to ensure the closest fire station is responding to all incidents throughout Lanark Highlands.

Ensuring the closest station is responding to the incident is also noted in the response time table below. Station 3 seems to have a very long response time, but this data has Station 3 as the primary responding station for calls in the north west quadrant of Lanark Highlands (e.g. Joe's Lake, Clyde Forks, Flower Station), even though Station 3 is the farthest distance (and longest travel times) away from those locations.

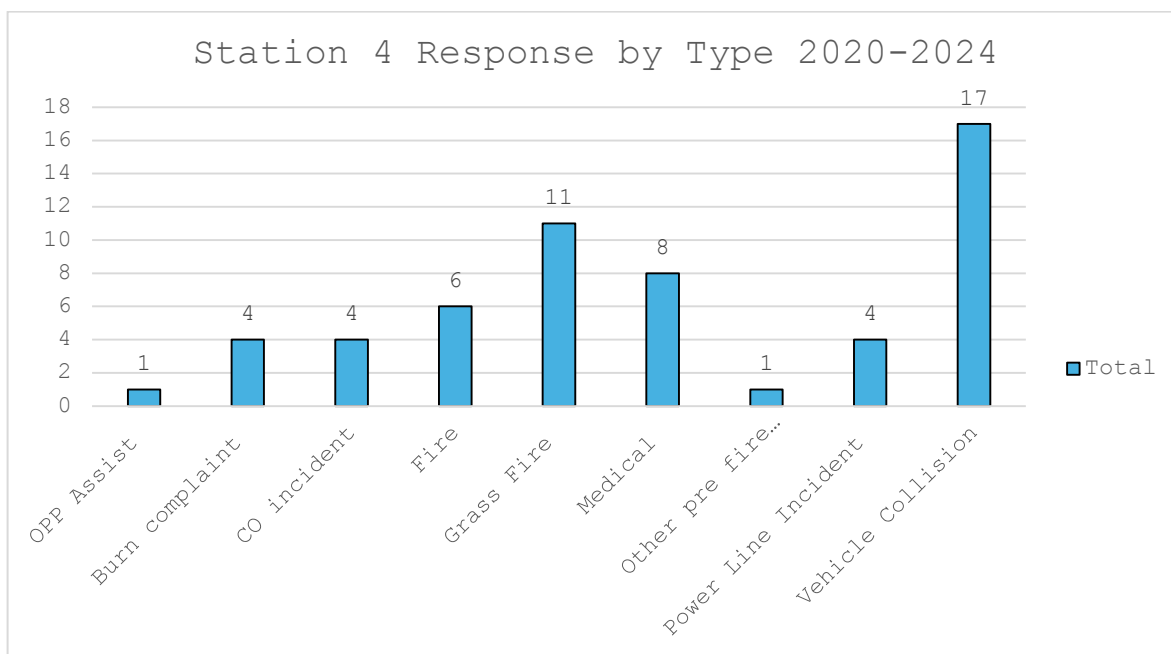


Figure 3: Station 4 Call Type - 2020 - 2024

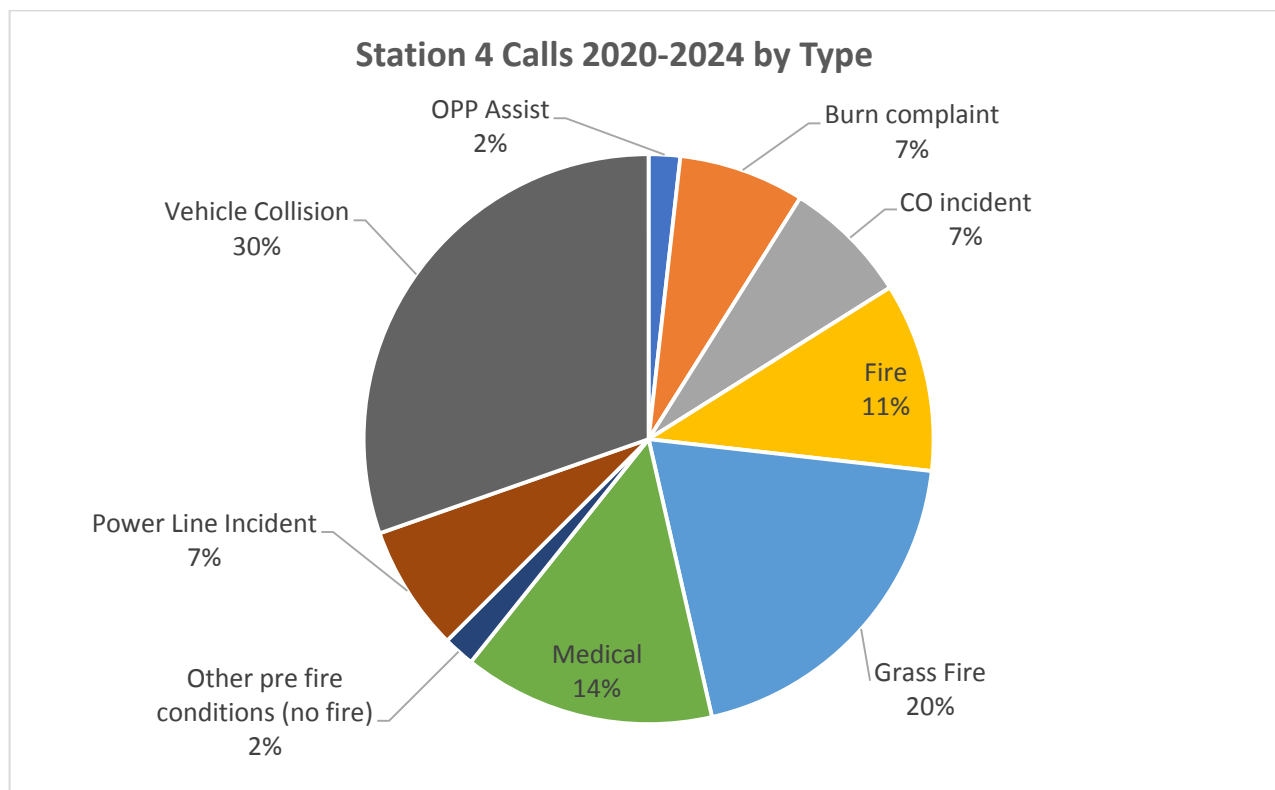


Figure 4: Station 4 Call Type 2020-2024 by %

Staff have provided a plotted map of all calls in Lanark Highlands from 2018-2024.

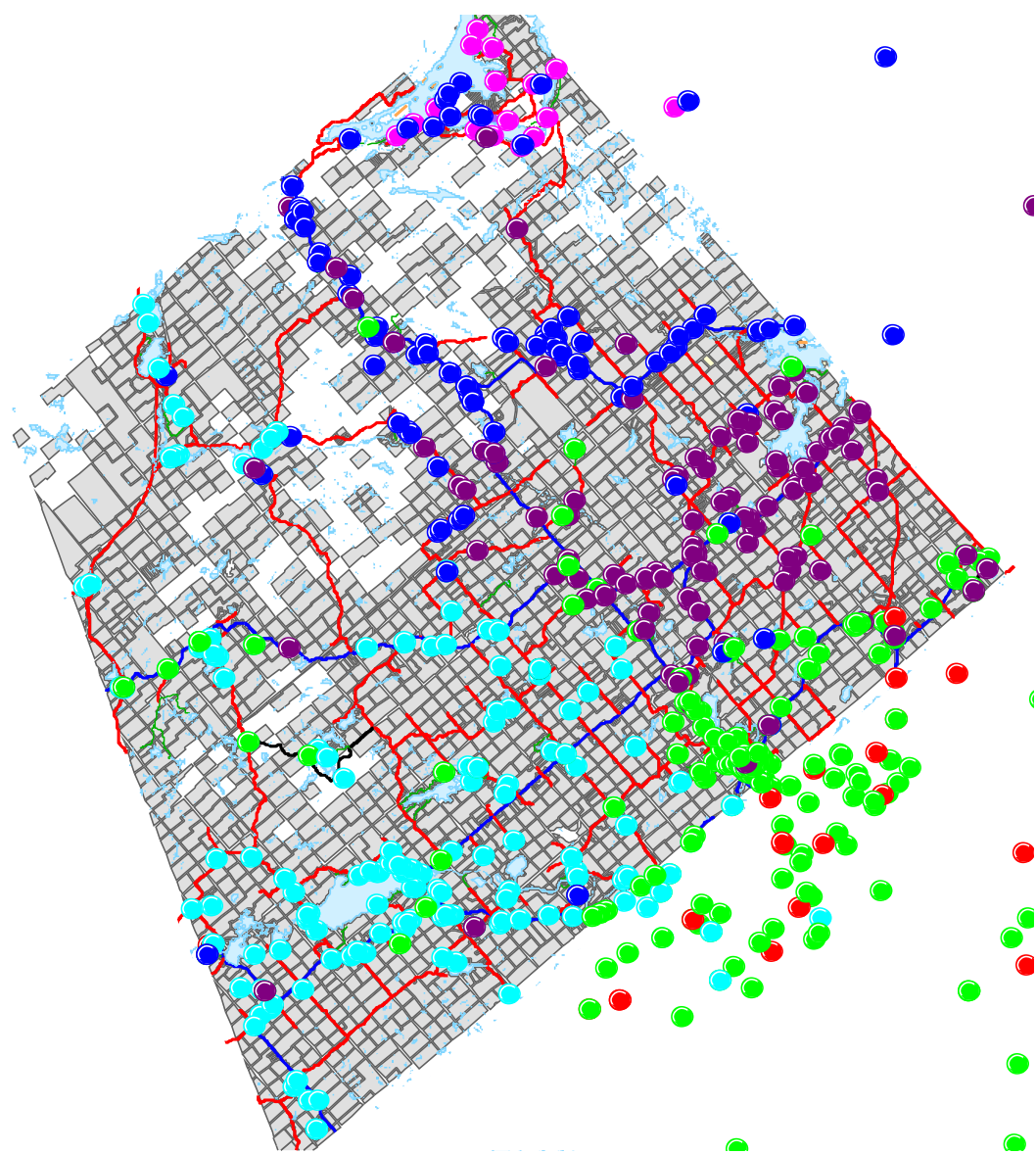


Figure 5: Call volume LHFS 2018-2024

**Response Time Objectives – National Fire Protection Association (NFPA) 1720**

NFPA 1720 sets response benchmarks based on population density, which affects the required staffing and response time. These response times are noted in the table below.

Table 2: NFPA 1720 Response Time Targets

Zone*	Demographics (Population)	Minimum Staff to Respond**	Response Time (Minutes)***	Meets Objective (%)
<b>Urban Area</b>	> 1,000 per square mile	15 firefighters	9 minutes or less	90% of incidents
<b>Suburban Area</b>	500–1,000 per square mile	10 firefighters	10 minutes or less	80% of incidents
<b>Rural Area</b>	< 500 per square mile	6 firefighters	14 minutes or less	80% of incidents
<b>Remote Area</b>	Travel distance greater than 8 miles	4 firefighters	Based on available resources	80% of incidents
<b>Special Risks</b>	High-risk occupancies such as industrial sites or hazardous materials incidents	Minimum staffing	Response times determined by a risk assessment	No measure provided

\*Municipalities can have more than one zone

\*\*Minimum staffing includes members who respond from LHFS and automatic aid

\*\*\*Response time begins from dispatch/page and ends at the time interval that is shown in the table. This is only for use in NFPA 1720.

Lanark Highlands is divided into five areas when it comes to response times:

- 1) **Northwest (Joe's Lake, Clyde Forks, Flower Station):** is assigned a zone of remote due to the travel distance from the nearest fire station.
- 2) **Northeast (Tatlock, White Lake):** Rural area (NFPA 1720 targets 6 firefighters on scene in 14 minutes or less), current two station response is being monitored for staffing levels and response times.
- 3) **Southeast (Middleville):** Rural zone target of 6 firefighters in 14 minutes or less.
- 4) **Southwest (McDonalds Corners):** Rural zone target of 6 firefighters in 14 minutes or less.
- 5) **Lanark Village:** Suburban area due to density targeting 10 firefighters in 10 minutes or less.



Stations 1, 2, and 3 are close to or achieving their respective NFPA 1720 benchmarks. Station 4 is unable to meet the rural zone staffing target of six firefighters with minimal personnel in the area. In the attachments to this report, staff have provided a map of the approximate locations of existing firefighters' residences (where they would typically be responding from). This highlights that many of the firefighters across the department are located in proximity to the hamlets of Middleville, McDonald's Corners, and the Village of Lanark. Station 4 firefighters, however, are dispersed throughout the response area, which leads to increased chute times. For comparison, the response times from Stations 1 to 4 for the years from 2013 to 2018 are presented in **Table 3**.

Table 3: Lanark Highlands Response Times 2013 to 2018

Station	2013	2014	2015	2016	2017	2018
Station 1 - Lanark Village	8:40	7:07	8:45	9:00	8:50	7:07
Station 2 – Middleville	9:57	11:28	12:35	11:45	11:45	10:31
Station 3 – McDonald’s Corners	12:33	13:48	12:55	16:30	12:00	10:00
Station 4 - Tatlock	13:15	11:25	7:56	14:30	8:30	13:45

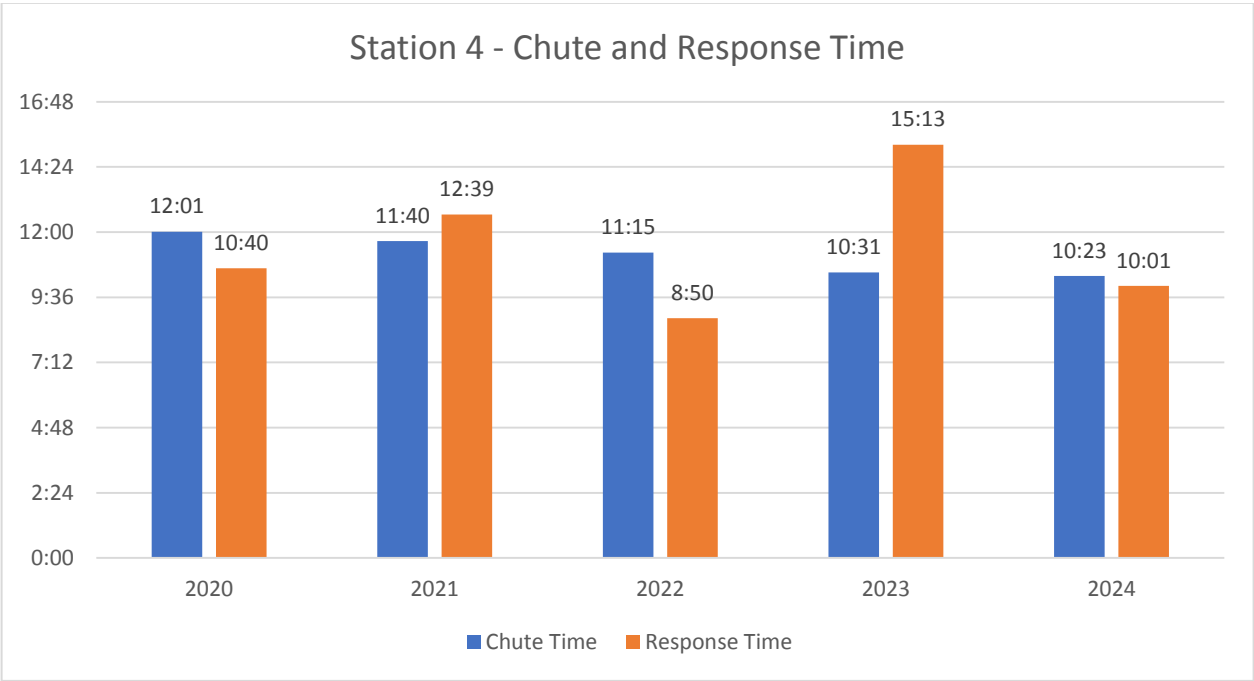


Figure 6: Station 4 Chute and Response Time 2020-2024

Note: Chute time is the time from when the alarm sounds to when the firefighters get onto the

fire truck and start responding.

Response time is the time from when the fire apparatus leaves the station to the time it arrives at the location of the fire call.

## Fleet Replacement

Staff have been working on updating the fleet replacement plan in conjunction with By-law 2010-1086, being the Tangible Asset Policy. This policy sets the lifespans of apparatus, as shown in **Table 4**.

Table 4: Fleet Lifespan Targets

Vehicle	Life Span (Years)
Pumper/pumper tanker	20
Tankers	20
Vans	20
Bush Trucks / Mini Pumps	20
Half tons (command vehicles)	5

Staff have been using recent fleet costing, as well as industry pricing, on comparable vehicles noted in 2025. Staff are using the pricing required for the replacement of Stations 1 and 2 pumps, as the price for pumpers: \$787,000, budget price of \$682,000 for a tanker, equipment vans at \$450,000, and half tons at \$65,000. Staff have assumed inflation at an increase of 2% per year.

## Four (4) Station Fleet Replacement

Staff has attached a four-station fleet replacement plan to this report for Council to review.

The existing fleet for the four-station model, planned from 2025 to 2042, has a total vehicle replacement cost of \$7,638,260, and a total transfer to reserve each year of \$413,500 to ensure there are adequate funds to replace each vehicle at its end of life.

Using current reserve balance of approximately \$950,000 for fire, with a transfer to reserve of \$150,000 for 2025 and 2026 (current transfer amount), a 20% increase each year until the required transfer is met of (\$413,500) in 2032, there is deficit of over \$5,000,000.00 by 2029, and a reserve balance of -\$1,678,898 in 2042. This means that long-term debt would be required to fund vehicles if the transfer to reserve is not increased in the short term.

Following the Tangible Asset Policy of having all pumpers, tankers, and vans replaced at 20-year cycles, Lanark Highlands must replace the following in 2026, in addition to the pumpers already procured (for Stations 1 and 2):

Table 5: LHFS 4 Station Model Fleet Replacement 2026

Station	Fleet Type	Quantity
1	Command Vehicles (half tons)	2
2	Tankers station 2, 3, 4	3
3	Pumper Station 4	1

4	Equipment Van Station 1 and 2	2
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Based on the Tangible Assets Policy, Lanark Highlands is due to replace just under four million dollars in fire fleet in 2026, in addition to the two pumpers procured (nearly \$1,557,000).

Fire Underwriters Survey (FUS) does state that frontline pumpers and tankers shall be replaced after 20 years of service to achieve the grading and recognition scoring. There is no inclusion for the replacement of support vehicles by FUS. There has been a push from rural municipalities to have the primary apparatus age extended, but to date, FUS has not adjusted this grading schedule.

There is an opportunity to apply for an extension to keep units in service past the 20-year mark, but it does require extensive testing each year to be approved for this application. It should be noted that in the current 2025 pump testing, both pumpers that are being replaced in 2026 were showing signs of deterioration and would be at risk of failing the testing in the next couple of years. Many departments throughout the Province of Ontario are having to delay fleet replacement due to financial pressures.

### **Three Station Fleet Replacement**

Staff has attached a three-station fleet replacement plan to this report for Council to review.

The Council adopted motion gave direction to proceed with the three-station model and amalgamate Stations 2,4, and 5 (at the time). Staff completed a fleet replacement plan based on the three-station model.

The fleet replacement plan for the three-station model from 2025-2042 has a total vehicle replacement cost of \$5,677,340.00, and a total transfer to reserve each year of \$323,500 to ensure there are adequate funds to replace each vehicle at its end of life.

Using current reserve balance of approximately \$950,000 for fire, with a transfer to reserve of \$150,000 for 2025 and 2026 (current transfer amount), a 20% increase each year until the required transfer is met of (\$323,500) in 2030 with another 5% increase in 2031 to cover the remaining. There is a deficit of over \$3,200,000 by 2029, and a reserve balance of -\$539,124 in 2042. This means that long-term debt would be required to fund vehicles if the transfer to reserve is not increased in the short term.

*Table 6: LHFS 3 Station Model Fleet Replacement 2026*

Station	Fleet Type	Quantity
1	Command Vehicles (half tons)	2
2	Tankers station 2, 3,	3
3	Equipment Van Station 2	2

The three-station model would allow Station 4 van to replace one of the aging vans in Station 1 or 2, and have a surplus of two or three apparatus, depending on the use of the existing mini pumper at Station 4, which could become a reserve pump if decided by Council.

As noted above, there is the opportunity to extend certain apparatus past 20 years with appropriate testing and documentation. The estimated fleet savings moving to a three-station model is \$1,960,920.00. If this had to be long-term financed @4.5% for 20 years, the total savings would be \$2,977,380.00

## **Building Replacement**

The savings of just under 3 million, noted above, are only for fleet replacement. Lanark Highlands will have to plan long-term for the replacement of each fire station, which will carry an expected cost of 2.5 million per station as a minimum estimate.

Although the current Station 4 fire hall is in average condition, it would require substantial renovations to ensure that firefighter health and safety are improved and meet industry guidelines. The required renovations would include adding adequate washrooms, shower facilities, a storage room, a decontamination room, and a dedicated training area outside the truck bay floor. There would also need to be an addition in order to store two full-size fire apparatus in the building.

Long-term planning for the three-station model would be completed as part of the Master Fire Plan Review and Update, as well as a full review of the existing Township-owned facilities. A likely option to consider would be looking at combining facilities, possibly with the Public Works Department, to combine capital building assets and reduce the amount of building operating costs for both departments. Co-locating facilities could also have the potential benefit of public works staff responding as volunteer firefighters.

An overall fire station location strategy would have to be prepared. Current staff do not agree with the placement of the amalgamated Station 2/4/5 at the corner of French Line Road and Highway 511. A full report can be completed once a finalized station number is achieved.

As mentioned previously, and as shown in the attachment illustrating the locations of firefighters' homes, most firefighters reside in the built-up, higher-density locations, such as Middleville, McDonalds Corners, or Lanark Village. Aligning the station locations with the locations of the volunteer firefighters reduces chute time and improves overall response times.

## **Operating Costs**

Currently, the operating cost of Station 4 in Tatlock would be in the range of \$25,000 per year. This includes Building maintenance, vehicle maintenance and testing, fuel, internet, hydro, communication equipment licensing, heat, phone, alarm, winter plowing, and gas. There are also costs for the expiration/maintenance of general equipment that is placed on the apparatus, but especially medical gear that is on the equipment van.

## **Medical Options**

One of the main concerns from residents, as well as one of the top three most frequent call types at Station 4, is medical calls. Staff have put forward preliminary thoughts on improving the accessibility of medical equipment in remote areas extended travel distances to a fire station.

A few options to consider for Council would be to have medical equipment bags stored in an area, such as the Tatlock Community Center, that firefighters could access in the event of a medical emergency in the Tatlock area (for example). This approach might be possible to consider in other remote areas of the Township as well). Another option could be a rapid response vehicle (e.g. half-ton truck or SUV) specifically for medical calls that would be used for transportation of local firefighters and house medical equipment, plus appropriate PPE for first responders.

## Darling Road

One of the main response routes for Station 2 to respond to the Tatlock area is via Darling Road, which is a rural gravel road with some areas which could use sightline improvements and possible minor realignments. An option for Council to consider is to set an allotment of monies each year to improve the driveability of Darling Road, or a one-time capital improvement. These improvements would help decrease the response time from Station 2 to Tatlock.

## Demographics

According to 2021 Census data, Lanark Highlands has a total population of 5,737 with 3,409 private dwellings over 1,031.52 square kilometres. Of the Township's population, 2070 individuals (36%) are greater than 60 years of age; Staff has provided additional municipal comparisons for information (shown in Table 6).

*Table 7: 2021 Census Information - Neighbouring Municipalities*

<b>Township</b>	<b>Population Density (people per km<sup>2</sup>)</b>	<b>Population</b>	<b>Land Area (km<sup>2</sup>)</b>	<b>Private Dwellings</b>	<b>% of Population Aged 60 Years or older (seniors)</b>
Lanark Highlands	5.6	5,737	1,031.5	3,409	36%
Drummond North Elmsley	22.4	8,183	365.7	3,708	35%
Tay Valley	11.2	5,925	528.7	3,750	44%
Mississippi Mills	28.8	14,740	511.2	6,241	35%
Greater Madawaska	2.0	2,864	1,018.1	1,343	46%
North Frontenac	2.0	2,285	1,156.0	2,798	54%
Central Frontenac	4.9	4,892	991.4	3,618	41%

The term 'private dwelling' refers to a separate set of living quarters with a private entrance either from outside the building or from a common hall, lobby, vestibule or stairway inside the building. The entrance to the dwelling must be one that can be used without passing through the living quarters of some other person or group of persons.



As noted below in **Figure 7** (population map of Lanark Highlands 2019) from the Master Fire Plan, the higher populated areas are Middleville, McDonald's Corners, and Lanark Village, with an increased summer population noted in the White Lake area. This mapping corresponds with the call data noted above, as well as the potential locations for fire stations within the three-station model.

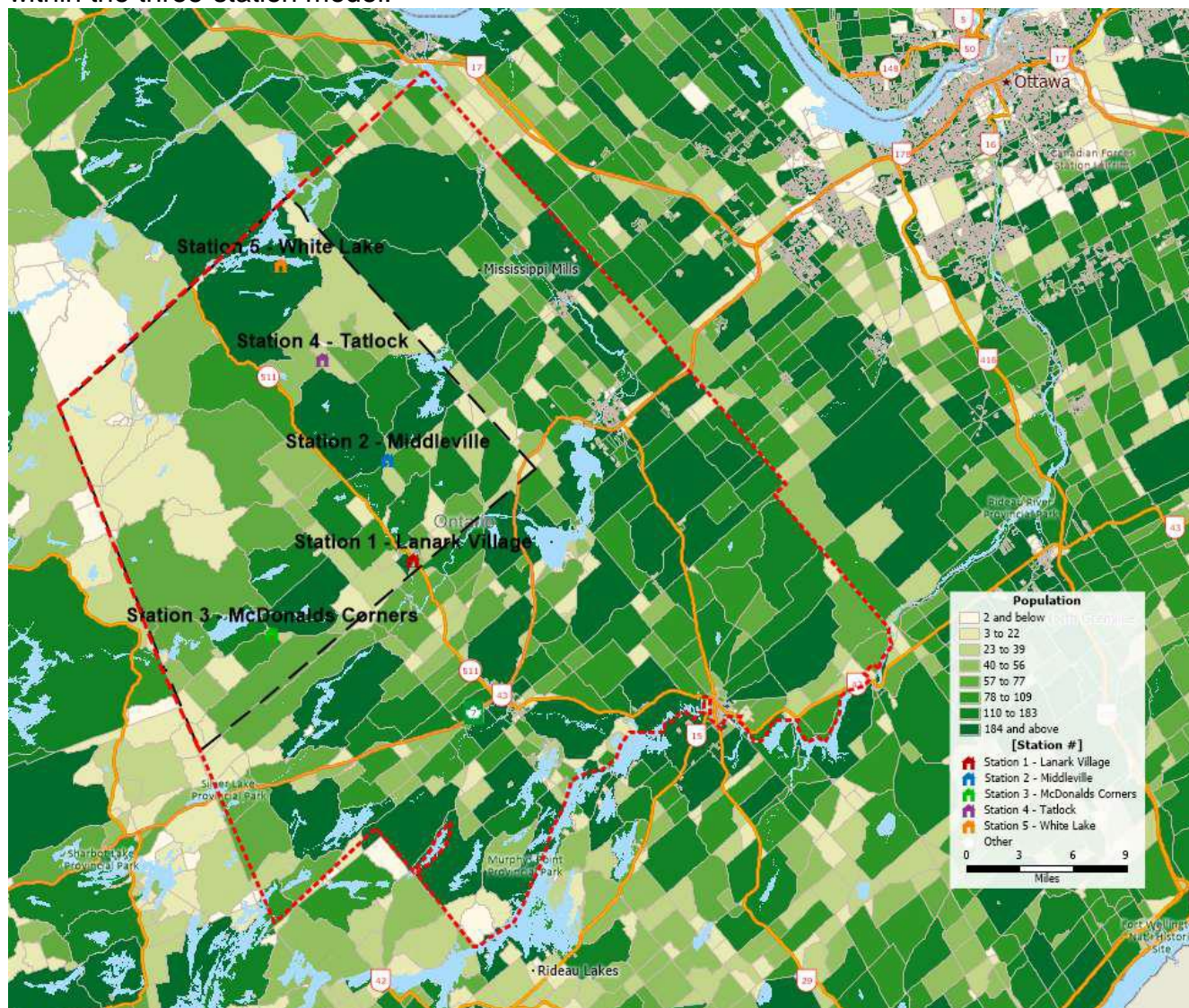


Figure 7: Population Map Master Fire Plan 2019

## Potential Timing of Station 4 Closure

A fire hall closure is something that can be contentious, and staff feel it would be best to have ample time to provide public and stakeholder consultation with the community to ensure accurate information is provided regarding coverage, service level impacts, and what it means for those nearby. It is currently recommended that the closure of Station 4 be completed on 30 June 2026 to allow over a year for Staff, Council, and the public/stakeholders to receive appropriate information on the next steps.

## Proposed Public and Stakeholder Consultation Schedule

Staff have provided a proposed public and stakeholder consultation schedule for Council to review prior to Station 4 amalgamating with Station 2, as previously approved by Council.

Table 8: Proposed Public and Stakeholder Consultation Schedule

Item	Date to be completed
Report to the Committee of the Whole and Council	June 2025
Meeting with Station 4 Members	June 2025
Public Notification	Following Council Approval
Public Engagement	Ongoing throughout the process
First Public Meeting	Fall 2025
Second Public Meeting	January – February 2026
Third Meeting (If required)	May 2026
Closure By-law	May 2026
Planning and transition phase	April-June 2026
Post-Closure Surplus Report	August 2026

### 3. FINANCIAL IMPLICATIONS

As noted in the fleet replacement section, if Council directs staff to keep the four-station model, the immediate financial implications will be the procurement of a fire pumper and a tanker for Station 4, totalling \$1,465,640 combined. There will also be significant long-term increases to transfer to capital reserves to maintain the existing fleet, as well as additional costs for the rehabilitation or rebuild of the fire station building.

### 4. OPTIONS CONSIDERED

**Option 1:** THAT the Master Fire Plan 3 Station Model Report be received for information,

AND THAT staff be directed to proceed with the drafted Public Consultation Schedule for the closure of Station 4 Tatlock Fire Hall on 30 June 2026.

**Option 2:** THAT Master Fire Plan 3 Station Model Report for received for information,

AND THAT staff be directed to complete long-term planning based on a four-station model,

AND FURTHER THAT staff be directed to procure a pumper and a tanker for Station 4 in 2026.

### 5. STRATEGIC PRIORITIES

N/A

### 6. RELEVANT LEGISLATION AND POLICIES

**7. OTHERS CONSULTED**

- LHFS Officers
- LHFS Firefighters
- Rhonda Whitmarsh – Treasurer

**8. ATTACHMENTS**

- 1) Master Fire Plan Recommendations Status Update
- 2) Fire Personnel Residence Location Map
- 3) Fleet Replacement Plan
- 4) By-law 2020-1637

**Prepared By:** Stephen Rothwell, Fire Chief/CEMC

**Approved By:** Suzanne Charbonneau-Dent, CAO