



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF THE CAO

MISSION STATEMENT: *Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.*

Author's Name: R Meloche	Report Date: August 22, 2023
Author's Phone: 519 736 6500 ext. 2231	Date to Council: September 25, 2023
Author's E-mail: rmeloche@amherstburg.ca	Resolution #:

To: Mayor and Members of Town Council

Subject: Amherstburg Fire Station 3 Washroom proposal

1. **RECOMMENDATION:**

It is recommended that:

1. Administration **BE DIRECTED** to implement Option #3 immediately, as identified in the report of September 25, 2023 entitled Amherstburg Fire Station 3 Washroom Proposal and stay in place until such time that the new fire station is completed and occupied.

2. **BACKGROUND:**

Firefighters in their regular emergency response duties are routinely exposed to environments containing known and unknown chemicals, carcinogens, toxins and diseases. The CDC has identified that firefighters are 9% more likely to get cancer, and 14% more likely to die from cancer than the average person. Between the years of 2015-2022, 14 WSIB claims have been submitted from past Amherstburg firefighters or their families under the presumptive legislation; 12 have been approved, 1 was denied and 1 is pending a decision. The municipality is responsible for 100% of these costs plus 30% administration fees charged by the WSIB.

With personnel working in these types of environments, it can potentially contaminate their clothing, equipment, as well as, skin and internal organs. Contamination can occur at any point of an incident, however more common exposures are at fire emergency response when any amount of smoke, minimal or heavy, is present. This includes both interior and exterior fire attack at small or large incidents ranging in duration from short to long. It is presumed that the firefighters have been contaminated.

Fire Station #3, built in the mid-1960s, was not designed or built with shower facilities, and has only one 2-piece bathroom with no secondary washrooms for any other staff. Showers are the last step in the process of decontamination preceded by gross decon on scene, removing, and bagging contaminated gear, and hand wipes for removing contaminants on the exposed skin. Showering at the fire station helps to rid these contaminants from the firefighter's body, thus avoiding transferring these contaminants to their family vehicle and then to their private homes which they share with their loved ones.

3. DISCUSSION:

Since Fire Station #3 was constructed, there have been numerous changes in the design and requirements for fire stations. The National Fire Protection Association (NFPA) has developed health and safety standards that have resulted in a different approach to fire station design. Most notably, all areas associated with equipment required for emergency response are now considered contaminated space, referred to as the "dirty" zone or "hot" zone. Fire Services strive to isolate the "dirty" zones from the "clean" spaces, (e.g. support spaces, administrative areas, kitchen, and meeting areas).

To limit exposure and contain toxins, modern fire station design will typically group all "clean" program areas on one side of the apparatus bays. Ideally, there would be positive air pressure in the "clean" areas of the building and negative pressure in the "dirty" zones.

In the "dirty" zones, it is standard practice to isolate duty gear in a dedicated room to contain the equipment's off gassing and include an area for decontamination. Since the apparatus bays of the current fire station do not allow for the isolation of contaminated gear, and the bays act as a circulation route from one "clean" zone to another, the current building's configuration cannot meet this design requirement.

Decontamination

While firefighters currently follow decontamination procedures on scene and after a call, the current systems and infrastructure in place at Station # 3 does not fully prevent the transfer of contaminants from dirty surfaces to presumed clean surfaces and areas.

The Fire Management Team took a human-centered approach, which included communication with full time and volunteer firefighters to understand their behaviors and experiences.

After an active firefighting event, toxic contents such as Acrolein, Benzene, Hydrogen Cyanide, Carbon Monoxide and others are attached to the equipment, firefighter's PPE, and fire apparatus. Firefighters are at risk of touching or inhaling these toxic contents during the process of handling, transporting, and cleaning the equipment, thus causing potential health issues.

The major objectives of this temporary resolution are to provide council with options and the potential costs associated with each consideration that could be implemented in the short term.

The new South Fire Station has been designed to deliver an environment that is safe and with the intention of isolating contaminants in “dirty” decontaminated areas and minimizing their spread to “clean” living areas. This goal includes improved storage solutions, infrastructure technology, and an efficient and effective space saving layout.

Until completion, an alternative solution for Station # 3 is required;

Option #1

Build a 312 square foot addition on to the existing building to accommodate two separate gender neutral 3-piece bathrooms, decon/extractor room, and clean room. This would require and upgrade to the existing outdated septic system. This plan would require taking most of the front parking, or the rear storage area behind the fire station for a septic system including the septic bed which is non- existing
Addition of 312 square feet at \$400/square foot = \$124,800.00
Replace septic system \$35,000.00
Relocate storage buildings and new concrete and prepare site for bed \$15,000.00
Total Cost \$174,800.00 plus design, permit costs and HST
This option would result in the loss of valuable space, and would not be completed in a short timeline.

Option #2

Purchase a 2-unit shower/ combo self-contained trailer to be stored on site for approximately 1 year, until the new station build is complete.
Cost to purchase \$90,000.00 plus service maintenance (empty waste as required)
Up-fit for water and winterize \$5,000.00
Unit can re-purposed for other town events/projects, or sold after completion of new Fire Station build.
Total Costs \$95,000 plus HST

Option #3

Currently, in the event that firefighters require showers due to exposure to contamination, Station 3 firefighters would be transported to stations 1 or 2 to utilize showers at those two facilities. This would utilize designated support vehicles to transport contaminated firefighters to shower, and these vehicles would be decontaminated once all firefighters were transported for showers. Firefighters would be provided alternate clothing arrangements and transported back to their respective stations in clean vehicles by additional firefighters who would remain after a call. This process could take an up to an additional 2 hours for those affected firefighters based on how many firefighters required decontamination. A procedure would be established to ensure proper decontamination and hygiene be followed post incident, as required to minimize exposure to cancer causing agents.

Costs

Based on 20 events per year involving 8 firefighters on average totals 160 firefighter showers
@ 31.74 hourly rate using 2-hour timeline for each firefighter shower including 2-way transportation = \$10,156.80
Total Cost \$ 10,156.80

4. RISK ANALYSIS:

Failure to provide shower facilities to firefighters could result in higher cancer claims, and the potential contamination of firefighter personal vehicles, homes, and exposing family members to cancer causing contaminants

5. FINANCIAL MATTERS:

Option #1

Addition of 312 square feet at \$400/square foot = \$124,800.00

Option #2

Cost to purchase a 2- unit Shower trailer is \$90,000.00 plus service maintenance (empty waste as required)

Option #3

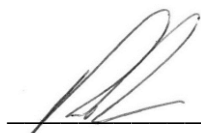
Temporary transportation solution = \$10,156.80 one- time 2024 operating budget. Expenditure incurred in 2023 will be absorbed within the current budget dollars.

6. CONSULTATIONS:

Chief Building Official, Town of Amherstburg
Facilities Manager, Town of Amherstburg
1955780 Ontario Inc.
Centers for Disease Control and Prevention

7. CONCLUSION:

If council directs option #3 as outlined in this report, staff will be provided with a means by which to decontaminate, and there in reduce their unnecessary exposure to carcinogens. Option 3 provided the most costs effectiveness at this time.



Ron Meloche
Deputy Fire Chief

Report Approval Details

Document Title:	Amherstburg Fire Station 3 Washroom proposal.docx
Attachments:	
Final Approval Date:	Aug 31, 2023

This report and all of its attachments were approved and signed as outlined below:

No Signature - Task assigned to Tracy Prince was completed by delegate Yufang Du

Tracy Prince

A handwritten signature in black ink, appearing to read "Valerie Critchley".

Valerie Critchley

A handwritten signature in black ink, appearing to read "Kevin Fox".

Kevin Fox