



**From** | **Total Fire Protection Inc.**  
5385 Patterson Avenue  
Southeast  
Grand Rapids MI 49512  
(616) 735-2300

**Quote No.** | **1364355**  
Type | Installation  
Prepared By | David Gard  
Created On | 09/29/2020

**Quote For** | **Livingston County -  
Facility Services**  
Livingston County EMS  
1911 Tooley Road  
Howell MI 48855  
(517) 546-6220

## Description of Work

### Quotation to Provide & Install (1045) Gallons of New C8 Foam as Result of Recent Inspections.

December 21, 2020

Attn: Kevin Eggleston

Livingston County EMS

1911 Tooley Road

Howell, MI 48855

Phone: 810-623-2940

Email: [keggleston@livgov.com](mailto:keggleston@livgov.com)

Kevin,

As a result of the recent annual and bladder testing inspections, it was discovered that (3) of the (4) foam samples failed. The (2) foam tanks are also both low on foam and we recommend the solution in both tanks be removed and replaced with new fire fighting foam. Quotation includes draining and disposing of the existing foam, flushing and testing both bladders and misc. pipe with approximately (200) gallons of fresh water, (1045) gallons of new C8 foam solution delivered and installed. Quote is based on all work being performed during normal business hours, Monday - Friday, 7 am to 4 pm and excludes performing work on holidays. Price is based on Livingston County EMS providing the necessary Hilo for unloading of new foam solution. If you have any questions, please do not hesitate to contact us at any time.

Respectfully,

**David Gard**

Total Fire Protection

[\(616\)735.2300](tel:6167352300) Office

[\(616\)588.7811](tel:6165887811) Direct

[\(616\)735.2330](tel:6167352330) Fax

[\(616\)890.3449](tel:6168903449) Cell

E-mail: [dgard@totalfire.biz](mailto:dgard@totalfire.biz)

## Services to be completed

### Foam System Suppression

Repair of NFPA 11 Deficiency:

Samples 1, 2, and 3 failed to meet the minimum requirements for the film-formation test. Per NFPA, a film-forming foam is required to have a positive spreading coefficient. These samples have a spreading coefficient of -0.3, -0.8, and -0.1 respectively.

Based on the physical properties, the samples do not look diluted. The samples could be degraded which can be caused by contamination, harsh storage conditions, or aging. It is difficult to say for sure what is causing this, but for some reason, the surfactants responsible for film-formation are no longer functioning as they should. Sample 4 is from the same tank as sample 3, but this sample is very close to the pass/fail line and just barely falls above this line with a positive 0.4 spreading coefficient. All of these samples are either just below or just above passing for this test. Both bladder tanks did pass inspection and are not showing any signs of leakage. However, both tanks are also low on foam and we recommend that all the foam be replaced.  
*Estimated Completion: 10/19/2021 to 11/05/2021*

Parts, labor, and fees	Quantity	Unit Price	Total
Not to Exceed Quotation to Provide & Install (1045) Gallons of New C8 Foam as Result of Recent Inspections	1	\$39,990.00	\$39,990.00
GRAND TOTAL			\$39,990.00

Approved by Kevin Eggleston on 10/19/2021 09:01am from IP address 40.130.127.65