

Executive Summary

Date: 12 June 2018
From: Fire Station Building Committee
Subject: Executive Summary for Run Time Analysis by FireStats, LLC and EFGographic Inc.

Background

Fire Departments classify response time upon receiving an alarm or call into the following five categories:

- Dispatch Time: Time related to receiving and processing a call, which includes deamination of equipment to respond and notifying unit to respond.
- Turnout Time: When unit acknowledge notification of emergency to start of runtime
- Run Time: Begins when units are en route until arrival at location
- Access Time: Amount of time to move from fire apparatus to emergency location.
- Setup Time: Amount of time required to mobilize and setup equipment

NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operation, Emergency Medical Operations, and Special Operation to the Public by Career Fire Departments calls for a run time of no more then 4-minutes for the first engine and four responders and the second engine due within 8-minutes, for 90% of incidents.

For the purposes of this study only the run time was analyzed to quantify the effects of station relocation. The study was conducted by FireStats, LLC and EFGographic at the request of the Fire Station Building Committee (Committee). The study analyzed and evaluated the three current and two alternative fire station location within the Town of Milton (Town). The two alternative locations included 400 Edge Hill Road and Brooke and Centre Street. The analysis was conducted with each station location in isolation and in several combinations. The combination of locations analyzed are listed below:

- Existing Station Locations: 515 Canton Ave., 525 Adams St., and 815 Blue Hill Ave.
- Alternative Three Station Scenario: 515 Canton Ave., 400 Edge Hill Rd., and 815 Blue Hill Ave.
- Two-Station Scenario: 815 Blue Hill Ave., and Brooke and Centre St.

The two alternative locations selected for analysis were based on an extensive review of potential land both public and private by the Committee within the Town that would meet the size and geographic requirements for a Fire Station. The locations included within the study were considered for feasibility purposes related run time analysis only and does not consider procuring property at these locations.

The analysis was conducted utilizing geographic information system (GIS) technology. The GIS model included traffic data, topography, turn delays, traffic lights and stop signs, and speed limits. Additionally, the call location and type for all verifiable Town Fire Department incidents from the previous five fiscal years (1 July 2012 – 30 June 2017) were incorporated into the GIS model. The GIS analysis results were then converted into a graphics to illustrate the run time from each location in various forms.

Conclusions

Relocating the current Fire Station located at 525 Adams St. west to 400 Edge Hill Road has a negligible impact on run time when compared to the existing conditions. The following summarizes the impact based on the run time analysis:

- A 0.07% increase in incidents not covered in 4-minutes compared to existing condition, based on historical call data.
- The 0.07 percent increase equates to approximately 3 incidents per year.
- The 8-minute second engine due coverage has negligible to no impact.
- Negligible change in the call volume distribution for the three stations.

Consolidating the current two fire stations located at 525 Adams Street and 515 Canton Avenue into one location at Brooke and Centre Streets has a significant impact on run time when compared to the existing conditions. The following summarizes the impact based on the run time analysis:

- A 4.5% increase in incidents not covered in 4-minutes compared to existing conditions, based on historical call data.
- The 4-minute coverage would drop to 90.72%, which is close to the threshold for the NFPA 1710 standard.
- The 4.5 percent increase equates to approximately 185 incidents per year.
- A significant change in the call volume distribution, a 17.6% increase in calls (approximately 684 per year) for the sub-station located at 815 Blue Hill Avenue.
- Second Engine due and the ladder truck shifted to the east does not provide adequate 8-minute coverage for the Town west of the existing Atherton Station.

Based on a review of the study completed by FireStats, LLC and EFGGeorgprahic, Inc. the Committee concludes the following:

- A two-station scenario is not viable option for the Town given the inherent impact it would have on life safety to the residence and fire fighters.
- Relocating the current 525 Adams Street Station to the West no further than 400 Edge Hill Road is an acceptable alternative to the existing location.