



CONCORD FIRE DEPARTMENT

2024 Annual Report

Prepared for the Public Safety Board

by John A. Chisholm, Fire Chief

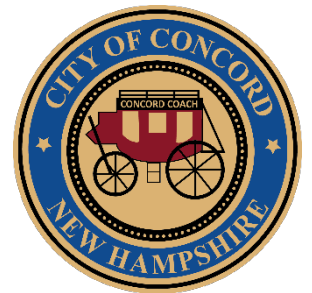


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Abstract

This report is presented to the Public Safety Board to familiarize its members with an overview of the Concord Fire Department's organizational structure, responsibilities, and operations. It also presents trends of key statistics over the past several years and highlights recent accomplishments as well as challenges currently faced by the Department.

The Fire Department is in a staffing crisis due to recruitment and retention issues. Furthermore, this report serves as a call to action, as Fire Administration recommends the reinstatement of Engine 1 and its associated staffing in anticipation of the planned surge in residential units within the City of Concord.

Overview of Concord Fire Department

The Concord Fire Department employs 103 members throughout several different divisions. A Headquarters Complex consisting of four buildings (Fire Administration, Fire Prevention, Communications, and Cold Storage) is located next door to the Central Fire Station. A training facility which consists of a small classroom building and a custom burn structure fabricated out of several Conex storage containers is located on Old Turnpike Road.

The City of Concord is divided into four (4) fire districts (see Figure 1 and Figure 2, page 2), each containing one fire station. Each Station has set number of staffed apparatus assigned to it. Under current, normal operating conditions, in-service apparatus and daily staffing levels do not fluctuate. Each time a member is out sick or on annual leave, that position is backfilled using overtime. This model, termed "person-for-person", allows the City to appreciate the same level of service from the Fire Department each day.

Table 1 - Stations and Assigned Staffed Apparatus

Station	Staffed Apparatus
1 (Central)	Tower 1 (3 members); Ambulance 1 (2 members); Battalion Chief (1 member)
4 (Broadway)	Engine 4 (3 members); Ambulance 4 (2 members)
5 (Manor)	Engine 5 (3 members); Ambulance 5 (2 members)
7 (Heights)	Engine 7 (3 members); Ambulance 7 (2 members)

Figure 1 - Fire Station and Fire District Locations

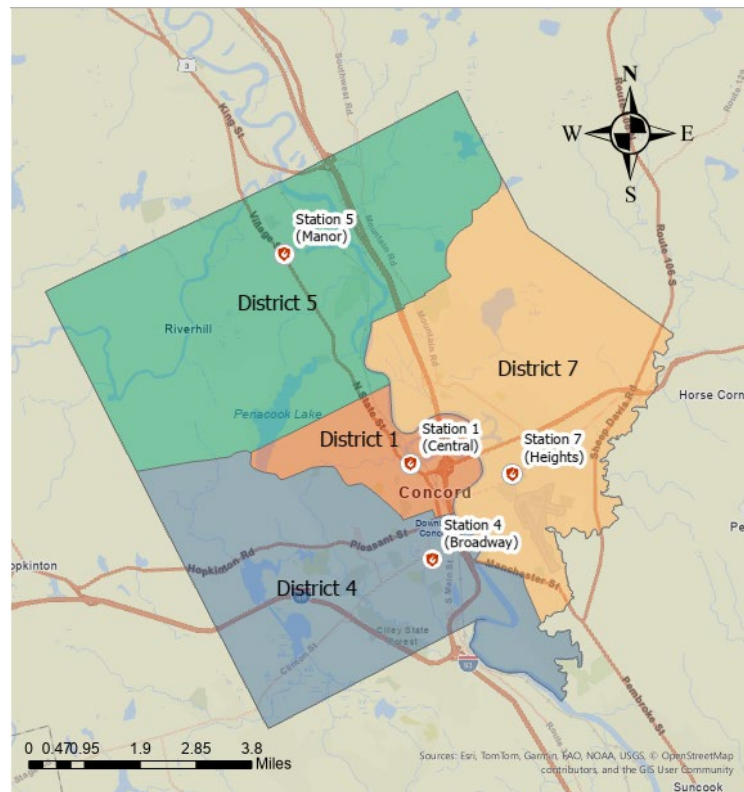
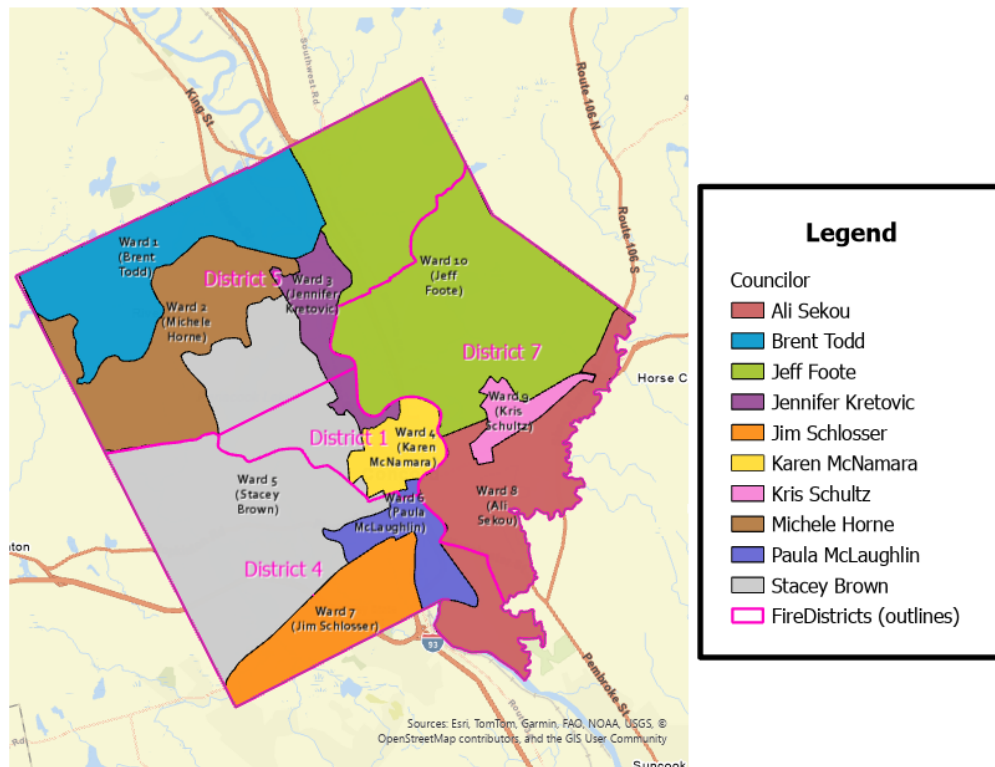


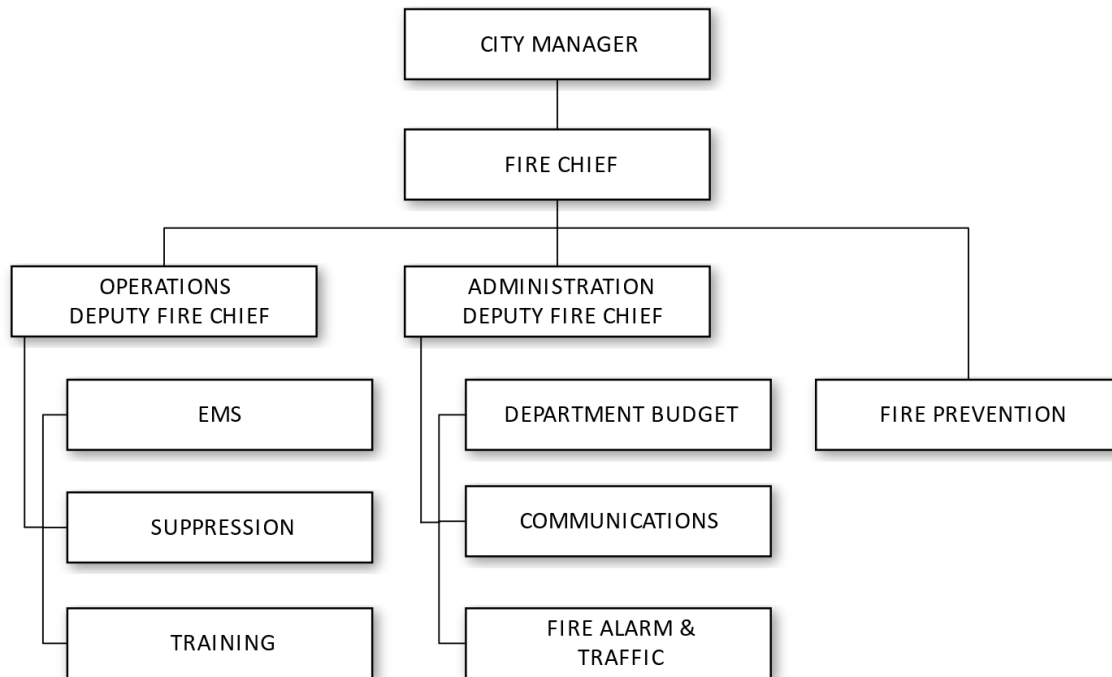
Figure 2 - Voting Wards vs Fire Districts



Fire Administration

Members assigned to Fire Administration oversee program areas and are not assigned to first response apparatus. However, it is common for one or multiple members from Fire Administration to respond to larger emergencies dependent on the acuity or nature of the incident.

Figure 3 - Fire Department Organization Chart



As shown in Figure 3, above, Fire Chief John Chisholm serves as the CEO of the Fire Department and reports directly to the City Manager. The Fire Chief directly supervises three positions: Deputy Chief of Administration Elisa Folsom, Deputy Chief of Operations Mark Hebert, and Fire Marshal Paul Sirois. The Deputy Chief of Administration serves as the CFO of the Department and is responsible for oversight of the operational and capital budgets. She oversees the Communications Center, the Fire Alarm & Traffic Division, as well as the Administrative Specialist II and Fiscal Supervisor positions. The Deputy Chief of Operations serves as the COO for the Department and oversees the EMS Division (an EMS Captain and Lieutenant) and the Training Division (one Training Captain) as well as the Suppression Division comprising four Battalion Chiefs who supervise the remaining eighty (80) members that staff the apparatus and respond to emergency incidents.

Chief Chisholm also serves as the Emergency Management Coordinator for the City of Concord and is responsible for the upkeep of the City's Local Emergency Operations Plan (LEOP), Continuity of Operations Plan (COOP), and Hazard Mitigation Plan. In this role, he is also responsible for the maintenance and operations of the City's Emergency Operations Center (EOC) and is the primary liaison with the Federal Emergency Management Agency (FEMA) for Public Assistance disaster funding.

Fire Prevention Bureau

The Fire Marshal serves as the head of the Fire Prevention Bureau and supervises an Assistant Fire Marshal. Together they are responsible for all of the fire and life safety inspections, permitting, fire investigations, plans reviews, and the Fire Department's public education and outreach within the community.

Inspections & Permits

The Fire Department performs various types of inspections throughout the community to ensure that the State Fire Code, Life Safety Code, and referenced standards are being followed. Each of the 32 school buildings, 3 salvage yards, 12 rooming houses, and 14 hotels must undergo a full life safety inspection annually. All 172 locations within the City that qualify as a place of assembly (e.g. restaurants, bars, function halls, public meeting spaces, etc.) must be inspected every 6 months. The Fire Prevention Bureau must also inspect all underground storage tank installations and removals, above and underground liquid propane (LP) tank installations, foster homes, residential placements, sober living houses, hot work projects, and outside tents greater than 400 ft² installed on commercial property. All new or modified fire alarm systems, sprinkler systems, clean agent systems, and commercial cooking ventilation and suppression systems are required to be inspected and undergo acceptance testing by the Fire Prevention Bureau as well. All Life Safety and Fire Code complaints are processed through the Fire Prevention Bureau and must be investigated and resolved.

Fire Investigations

The Fire Department, per NH RSA 154:7a, has the legal obligation to investigate the cause and origin of every fire that occurs within the City. Normally, this responsibility is delegated to the Fire Prevention Bureau. Each investigation results in a report which is made available to the property owner and is used by insurance companies, safety organizations, and law enforcement agencies for various purposes. Some small fire investigations take only a couple of hours to investigate and complete. For larger fires, such as a structure (building) fire, collecting photographs and other evidence, sifting through burned debris, and applying the scientific method to rule out potential causes can take days. The reports can take several months to complete due to interviewing witnesses or suspects and awaiting evidence to return from forensic labs.

Plans Reviews

Part of the permitting process to construct a new building, or renovate an existing building, is a Fire and Life Safety plan review. This requires the reviewer to assess the following areas for code compliance: Fire Department apparatus access to the property, water supply, number of exits, egress travel distances, and fire separation ratings. For those buildings that require a sprinkler system, the type and location of each sprinkler head is checked to make sure they are appropriate for the intended use and contents of each area the building. Water supply data and hydraulic calculations are reviewed to ensure there is sufficient water volume and pressure available to the system. The location of required valves, tamper switches, seismic bracing, and piping size are also verified. The fire alarm plans are reviewed to verify that all required devices are present and configured correctly so the fire alarm system will function and report to a monitoring agency as intended. Modification and installation plans of commercial cooking ventilation systems also need to be reviewed and approved before any work can be completed.

Community Education and Outreach

The Fire Prevention Bureau is the main entity that performs community outreach and public education for the Fire Department. This includes programs such as smoke detector installation initiatives, visiting schools to teach students about fire safety and the importance of escape plans, and other community risk reduction efforts.

Fire Alarm & Traffic Division

The Fire Alarm & Traffic Division is responsible for three distinct functional areas throughout the City, as detailed below. This Division used to be staffed by 3 people at its peak, but over the years its staffing has been reduced, and the work now falls solely on the Fire Alarm & Traffic Superintendent.

Master Boxes and Radio Boxes

The City of Concord has maintained a wired Master Box system for decades. A master box is the familiar red, house-shaped box that is either attached to a building or a pole on the street (street box) where someone can pull a lever to initiate an emergency call to the Fire Department. This system comprises several closed-loop circuits with each box being wired in series to the next box in the circuit. The system proved itself very reliable, but required continuous care of the circuits to ensure their integrity. A single break in a circuit could disable the transmission of all attached master boxes, meaning one point of failure could disable the emergency notification system of up to 20+ buildings.

Due to the aged infrastructure of the wired circuits and the advent of newer, wireless technology, the wired Master Box system was scheduled for end-of-life in July 2024. All customers with master boxes initially received notification of the requirement to change to a wireless radio box in July 2020. Approximately 250 master boxes remain on the wired circuit past its intended retirement date. This reasonably necessitates its upkeep, barring catastrophic failure, until these customers transition to radio boxes. The Fire Alarm & Traffic Superintendent spends much of his time working with customers to transition their master box to radio boxes. Once all accounts are transitioned, this will gain efficiencies for the maintenance and upkeep of the network, and will no longer require time to find and repair isolated wire damage caused by storms, pole damage, or animals.

Traffic Signal Repair and Maintenance

The Fire Alarm & Traffic Division is responsible for the upkeep and repair of 54 signalized intersections and 29 flashing beacons throughout the City. This includes simple repairs such as lamp replacements, to more involved troubleshooting and programming of equipment housed in the traffic control cabinets such as the signal controller, relays, wiring harnesses, preemption devices, pedestrian push buttons, vehicle detectors, cameras, power supplies, and malfunction management units.

Fiber Network Infrastructure Oversight

The Fire Alarm & Traffic Division is responsible for maintaining the many miles of fiber optic cable that run above and below the City to interconnect City buildings and some schools with network connectivity.

Communications Center

The Communications Center performs primary emergency dispatch functions for twenty-four (24) area fire departments as well as two (2) additional EMS services that, combined, comprise the Capital Area Mutual Aid Fire Compact (CAMAFC). It is supervised by the Communications Captain and is staffed by two members 24/7. Large incidents require the call back of off-duty Fire Alarm Operators to assist.

The Communications Center is the state-wide primary point of contact for the activation of the State of NH Fire Mobilization plan, which serves to send task forces and strike teams of local fire department resources to any area in the State of NH that becomes overwhelmed by a single catastrophic incident or simultaneous incidents that overwhelm the capabilities of a municipality. The Communications Center also dispatches for the Central NH Regional Hazardous Materials Team.

The costs of the facility and staff of the Communications center is shared among the members of the CAMAFC. The City of Concord invoices the CAMAFC each year to recoup approximately 66% of the operating costs (salaries and expenses) of the previous year.

The Communications Center is extraordinarily busy, as the emergency call volume of the communities it serves have also been steadily increasing. Fire Administration recommends that one additional full-time equivalent (FTE) be added to the Communications Center as a working supervisor in a Monday through Friday capacity. This would increase opportunities for career advancement, assist with continuity of operations and succession planning, as well as allow the center to more efficiently handle the peak call volume which occurs during normal weekday business hours.

Suppression Division

The Suppression Division is the largest division in the Fire Department. It is separated into four (4) battalions. Each battalion represents a cohort of members who work the same schedule. The schedule is 1 day (24 hours) on duty, 2 days off duty, 1 day on duty, then 4 days off duty. This rotation averages 42-hours per week over an 8-week cycle.

Each battalion comprises twenty-one (21) members, as shown in Table 2, to establish the apparatus staffing profile detailed in Table 3, page 7.

Table 2 - Battalion Composition

QTY	Position
1	Battalion Chief
1	Captain
3	Lieutenants
4	Firefighter/Paramedics
12	Firefighter/EMTs or Firefighter/AEMTs

Table 3 - Typical Apparatus Assignment

Apparatus	Positions
Command Car (Car 4)	1 Battalion Chief
Tower 1	1 Officer*, 2 Firefighters
Ambulance 1	1 Firefighter/Paramedic, 1 Firefighter
Engine 4	1 Officer*, 2 Firefighters
Ambulance 4	1 Firefighter/Paramedic, 1 Firefighter
Engine 5	1 Officer*, 2 Firefighters
Ambulance 5	1 Firefighter/Paramedic, 1 Firefighter
Engine 7	1 Officer*, 2 Firefighters
Ambulance 7	1 Firefighter/Paramedic, 1 Firefighter

* An Officer is either a Lieutenant or Captain.

The Suppression Division is responsible for many functions within the City as outlined below.

Fire Suppression

The suppression division responds to and mitigates all fires within the City of Concord, whether it is a building/structure fire or wildland/brush fire. This includes smoke and odor investigations and explosions.

The National Fire Protection Agency (NFPA) recommends that each Engine and Tower company in career fire departments be staffed with four (4) members (NFPA 1710, 2020, p. 5.2.3.1.1 & 5.2.3.2.1) due to the operational efficiency and safety factors that the addition of a fourth member brings. The City of Concord staffs each of its Engines and Tower with only three members due to budgetary purposes. The Fire Department believes this should be reconsidered in the future, and believes staffing should be brought to four (4) members on each of these companies, although it maintains that the reinstatement of Engine 1 (discussed below) should take priority over increasing staffing levels on existing apparatus.

Emergency Medical Services (EMS)

The Concord Fire Department provides EMS services to the communities of Concord and Penacook. Each ambulance is staffed with two (2) members. All Firefighters are certified to a minimum level of an Emergency Medical Technician (EMT). An EMT is a basic life-support (BLS) provider that is trained in cardio-pulmonary resuscitation (CPR) and is trained to perform introductory patient assessments, administer a few medications and medical procedures, and perform rudimentary wound care. Since 2021, with the addition of a new labor grade, all newly-hired employees have been trained to at least the Advanced EMT (AEMT) certification. AEMTs are considered advanced life-support (ALS) providers and are able to start IVs, give many more medications than an EMT, and are capable of performing some advanced medical procedures. Paramedics represent the highest level of pre-hospital care and are also ALS providers. They are able to perform more procedures and administer many more medications than an AEMT.

Technical Rescue

The Concord Fire Department is responsible for all technical rescues that occur within the community. The different disciplines for which the Department is responsible include confined space rescue, trench rescue, high-angle rope rescue, low-angle rope rescue, ice rescue, swiftwater/flood rescue, collapse rescue, large animal rescue, and industrial/machinery rescue. Each listed rescue discipline requires a

separate certification, specialized training, and equipment. Many surrounding communities do not have the equipment or expertise to provide these specialized rescues within their jurisdiction, so the Concord Fire Department would likely be called as a regional resource.

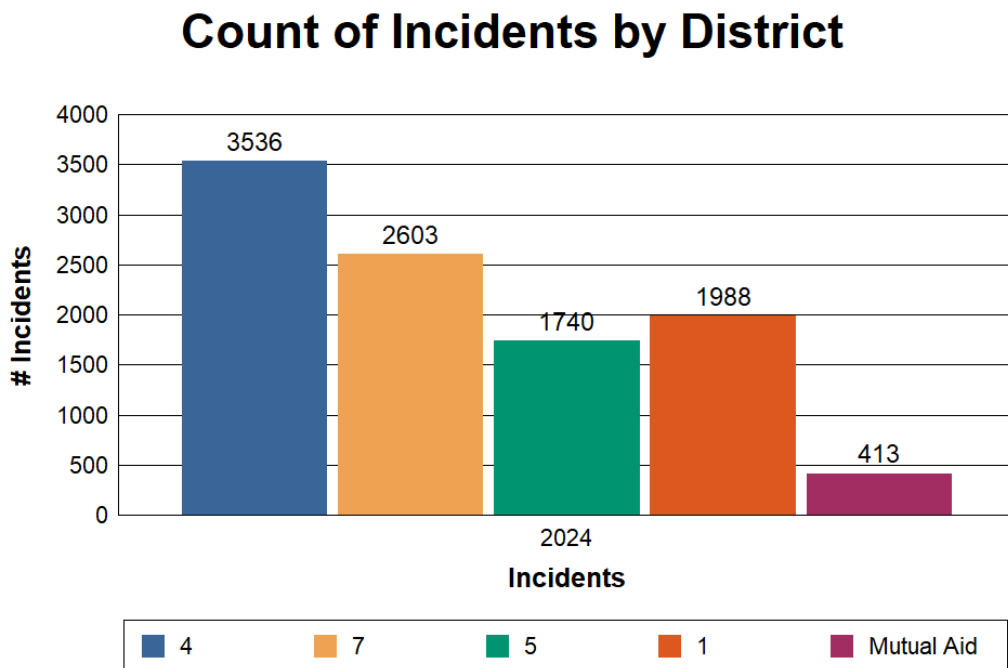
The Concord Fire Department established a State of NH recognized swiftwater rescue team, but it does not have a training budget. This team has been requested to respond to large emergencies three (3) times since its inception, but it has not yet accepted any missions due to the lack of coordinated team training. Fire Administration hopes to secure regular training funding in the future so the team is mission ready.

Hazardous Materials Responses

The Concord Fire Department responds to all hazardous materials (HazMat) incidents within the City of Concord. If the incident requires specialized equipment or tactics, the regional Central NH Hazardous Materials Response Team is activated. The majority of this team is made up of members of the Concord Fire Department, and the equipment is housed within the City of Concord on Fire Department property. While the HazMat team is a separate entity, with its own funding, the City of Concord has the distinct advantage of a very rapid response due to the proximity of team members and the specialized vehicles and equipment.

Calendar Year 2024 Statistics

Figure 4 - Count of Incidents by Fire District



<u>SERVICE INDICATORS</u>		<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>% Change</u> <u>(2023 to 2024)</u>
1.	Total Emergency Calls for Service	10,644	10,370	10,280	- 0.9 %
a.	EMS Calls – Advanced Life Support (ALS) Intercepts	48	57*	60	+ 5.3 %
b.	EMS Calls – Other EMS/Rescue Calls	7,780	7,555	7,313	-3.2 %
c.	Building Fires	39	40	33	-17.5 %
d.	Other Fire Types	149	130	163	+25.4 %
e.	Overpressure, Explosion, Overheat (no fire)	16	25	10	-60.0 %
f.	Hazardous Conditions (no fire)	219	179	223	+ 24.6 %
g.	Service Calls	785	853	940	+ 10.2 %
h.	Good Intent Calls	619	626	592	- 5.4 %
i.	False Alarm and False Calls	974	897	972	+ 8.4 %
j.	Severe Weather and Natural Disasters	11	5	22	+ 340 %
k.	Special Incident Types	6	4	12	+ 200 %
2.	Number of Patients Transported	6,116	6,183	5,961	- 3.6 %
3.	Percent EMS Response within 5 minutes (BLS Standard)	59.3	62.7	53.1	-48.7 %
4.	Percent EMS Response within 9 minutes (ALS Standard)	94.4	95.1	92.4	-8.0 %
5.	Percent Fire Response within 5 minutes	52.7	50.0	40.3	-59.2%
6.	Public Education hours	19	8	3	-62.5 %
7.	Average # minutes per call	36.2	35.9	36.3	+ 1.1 %
8.	Percentage of overlapping calls	50.9%	49.7 %	51.3 %	+ 3.2 %

Figure 5 - Responses by Unit by Year

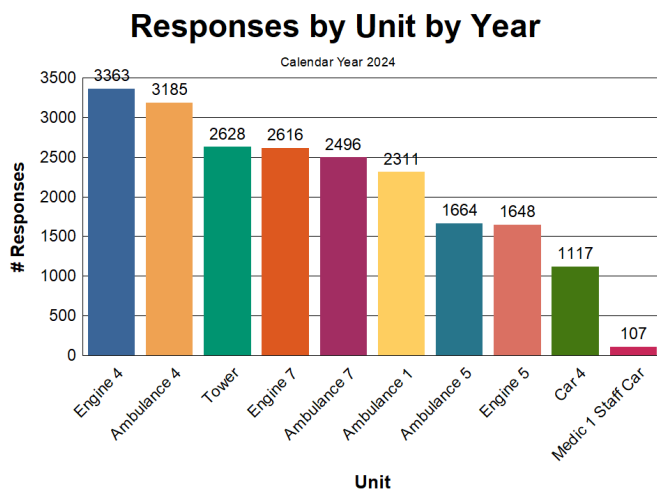
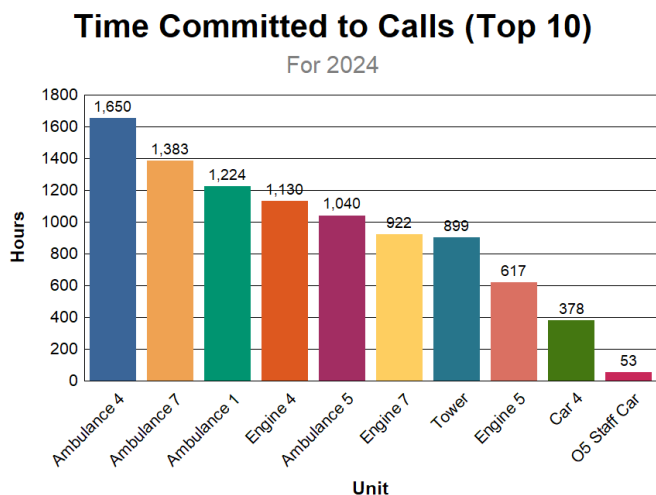


Figure 6 - Hours Committed to Calls by Unit



2024 Milestones and Accomplishments

The year 2024 saw many accomplishments and events for the Concord Fire Department.

Personnel

1. The Concord Fire Department promoted 1 Battalion Chief, 1 Captain, 1 Assistant Fire Marshal, and 2 Lieutenants.
2. The Concord Fire Department had several separations from the Fire Department including 1 Battalion Chief, 1 Assistant Fire Marshal, 2 Firefighter/Paramedics, 2 Firefighter/AEMTs, 2 Firefighter/EMTs, and 1 Fire Alarm Operator.
3. The Concord Fire Department hired 3 Firefighter/Paramedics, 5 Firefighter/AEMTs, and 1 Fire Alarm Operator
4. One Firefighter/EMT was reclassified as a Firefighter/AEMT after securing the proper education and licensure.

Accomplishments

Training Division

- Completed two recruit schools for a total of seven (7) newly-hired employees.
- Supported each battalion with off-duty training that was made possible through newly budgeted funds. Two battalions trained on trench rescue operations with the support of the General Services Department, and the other two focused on multi-company live fire training.

Suppression Division

- Tried and standardized operations for a new leader line hose deployment.
- Tried and standardized the fleet with a new make and model of 2½" and 4" hose.
- Improved rope rescue abilities through the acquisition of new CMC CLUTCH descender and hauler and CMC CAPTO multi-function rope grab equipment.
- Evaluated and selected the replacement brand and model of self-contained breathing apparatus (SCBA) equipment for the scheduled CIP replacement

Emergency Medical Services Division

- Migrated the ImageTrend Patient Care Reporting System to comply with the newly required National Emergency Medical Services Information System (NEMSIS) v. 3.5 data set.
- Successfully completed the independent status program with three (3) Firefighter/Paramedics and four (4) Firefighter/AEMTs.
- Replaced all city-owned automated emergency defibrillators (AEDs) through CIP funds.
- Held numerous meetings with skilled nursing facilities, assisted living facilities, urgent care centers, and rehabilitation facilities throughout the City to improve communications and establish a common understanding of expectations and appropriate usage of City ambulances.

Communications Center

- Implemented the E911 Valor CAD that integrates real-time information from NH911 which allows Fire Alarm Operators to view incoming data as it is entered by 911 operators, increasing operational efficiency
- Rolled out the WebCAD in Summer 2024 that gives each station visibility into current and previous incidents
- The Communications Captain was certified as an APCO Communications Center Supervisor
- One Fire Alarm Operator completed APCO Fire Service Communications Training as well as becoming a certified APCO Communications Training Officer

Fire Prevention Bureau

- Provided public education and demonstrations at National Night Out
- Organized giveaway bags and school visits for Fire Prevention Week during October 2024
- Set up the demonstration of the MVB3X modular traffic barrier system at Halloween Howl
- Mentored a Saint Anselm College Criminal Justice intern

Fire Alarm & Traffic Division

- Placed 113 new radio boxes online to support the effort to decommission the wired Master Box circuits.
- Coordinated the installation of fiber-optic cable to the new Penacook Branch Library and the future Concord Police Station.

Current Challenges & Needs

Recruitment & Retention

Recruitment and retention are the largest challenges currently faced by the Concord Fire Department. There are many factors that contribute to the difficulty in attracting new members as well as keeping current employees. The vacancies created due to employee turnover has not only impacted the budget, but has widespread impacts on employee morale. Issues related to recruitment and retention are detailed below.

Increased Reliance on Overtime

As previously stated, each time a member is absent from work (vacation time, sick time, injury, etc.), the shift is backfilled with overtime in order to keep the same level of service available each day. The number of open positions throughout the department due to recruitment challenges has required one or two people to work 24-hours of overtime each day. This is additional to the overtime used to cover other employees who are out sick or take annual (vacation) leave, causing the Department's overtime budget to be grossly overspent. Employees have expressed displeasure with their inability to achieve their desired work/life balance due to the mandated overtime. In fact, Fire Administration has heard from several employees during exit interviews that the amount of mandatory overtime was the primary reason or a driving factor for deciding to resign from the Department.

Increased Training Requirements

A significant challenge caused by the number of new employees entering the Department has been keeping pace with the onboarding training requirements of the probationary members. When a new employee is hired, he/she attends a 3-week Department-conducted recruit school that serves a few purposes. New recruits, while already certified as firefighters, are vetted to ensure they can proficiently perform basic skills such as advancing hose lines, deploying ground ladders, tying knots, performing search and rescue, performing CPR, etc. These skills are practiced repeatedly and are taught the way that they are expected to be completed at Concord Fire Department. The recruits learn the values and expectations of Concord Fire Department, as well as the policies and procedures specific to the Department. Once the new employees pass recruit school, they are assigned to a battalion and spend a few shifts as additional staffing to further learn their role on the apparatus to which they will be assigned. Beyond this, they are counted as regular staffing and continue to develop skills and knowledge during their year-long probationary period. During this time, each member must complete a probationary manual that includes policy and knowledge checks, skills verifications, community familiarity, and street knowledge within the City.

Traditionally, the Concord Fire Department has attracted seasoned Firefighters and Firefighter/Paramedics from other career departments. It would be common for someone who worked for another career department to want to work for Concord, as it is both the third-largest City and Fire Department in the State of NH. These candidates would perform well in their recruit school, and progress easily through their probationary year as they had already mastered many of the skills and most of knowledge assessed in their probationary manual. They would only need to focus on the streets and learning the particular policies of the Concord Fire Department.

This trend of lateral transfers slowed over the past several years and has ultimately stopped over the past 18 months, as no highly-experienced applicants from nearby departments have applied and accepted positions. Fire Administration believes that this has occurred for a few reasons. One highly-cited reason runs up against a clause in the IAFF Local 1045 collective bargaining agreement that requires the City of Concord to start all new Firefighters (including Paramedics) at Step A in the wage schedule. Experienced candidates have indicated that they are not willing to take the significant pay cut that this would represent for them. Fire Administration, through the open negotiations process with IAFF 1045, hopes to make contract adjustments that will encourage experienced members to gain interest in working for the Concord Fire Department once again.

Rather than attracting lateral transfers with years of experience, the Concord Fire Department is only able to attract newly certified candidates, many of whom have never worked for a career department before. This has caused a sizable shift in the training burden. Now, when a probationary member is assigned to a station, that crew, on top of responding to the high volume of emergency calls, is dedicated to supporting the heavy load of entry-level training required for the member to successfully pass probation. The nature of the daily training for existing crew members shifted from them learning new techniques and maintaining proficiency on high-risk, low-frequency skills to focusing solely on entry-level skills. With the unprecedented number of new employees that the Department has seen over the past few years, many crews have been stuck on a cycle of mainly focusing on the entry-level topics. As soon as their probationary member graduates, they are assigned another inexperienced new hire. Due to this, these crews have been unable to adequately train on more advanced, perishable skills. This leads to frustration and a decrease in morale, as seasoned employees are consistently sacrificing

their own professional growth to support the ever-changing new employees, some of whom then leave for different departments. It also presents a risk to the community because, as the call volume in the City increases, the number of complex incidents has also increased while the hours dedicated to training for them decreases.

Another trend that has been seen with the new probationary employees that amplifies this issue, by no fault of their own, is that they do not arrive with the same skillset and knowledge as new recruits have in the past. The State of NH Division of Fire Standards and Training & Emergency Medical Services (FSTEMS) significantly reduced both the curriculum content and number of hours in both their Firefighter I and Firefighter II courses in June 2020, with a combined reduction of hours of 31% (Phillips, 2020). It also represented a 39% reduction of in-person hours, as many hours in the program were moved to an online platform (Phillips, 2020). While these changes were well-intentioned, it was found that the candidates exiting the initial training program were not on par with the previous curriculum. A recent evaluation of the changes published by NH FSTEMS states that, “many students emphasized the value of hands-on learning, often finding online modules less engaging or effective” (Dodge, 2024, p. 8). This has meant that hiring Departments have had to spend more time with each new employee performing the hands-on practice to make up for the missing and less effective initial education. An effort currently exists to correct these issues by readjusting the curriculum and required hours through an active visiting committee process, but potential improvements that result won’t be seen for over a year.

Need an additional FTE in Fire Prevention

Fire Administration has requested an additional employee (1 FTE) in the Fire Prevention office for the previous six budget years, but this request has not yet been adopted into the City budget.

The Fire Prevention Division is at critical capacity and cannot keep pace with the work demand placed on them. This has led to criticism of the Department by some members of the public as they wait for inspections to be performed, or fire investigations to be completed so their property can be returned to them, or so they can receive funding from their insurance company. At this point, the Fire Prevention Division only has the capacity to perform legally mandated fire inspections, so almost no mercantile inspections are being performed. This has led to a noticeable increase in Fire and Life Safety Code violations, including blocked egress access, in businesses throughout the City.

The Fire Department has invested thousands of dollars into the “Community Connect” module of its new fire records management software (First Due) that would allow Concord residents and business owners to enter information specific to their house or business. This would give emergency responders critical information while they respond to the address. The information could include gate/door codes to reduce damage to the property, as responders would not need to break into locked doors. Contact names, phone numbers, and locations of bedrooms of disabled people within the house could also be shared. This information, once entered, pops up on the mobile data terminal of responding apparatus as soon as they are dispatched, allowing them to review the information before they arrive. The system also has the ability to automatically send a text message to a business owner as soon as the Fire Department is dispatched to their business to let them know there is an emergency at the property. The “Community Connect” module has not yet been implemented due to insufficient Fire Prevention staff to work on the rollout.

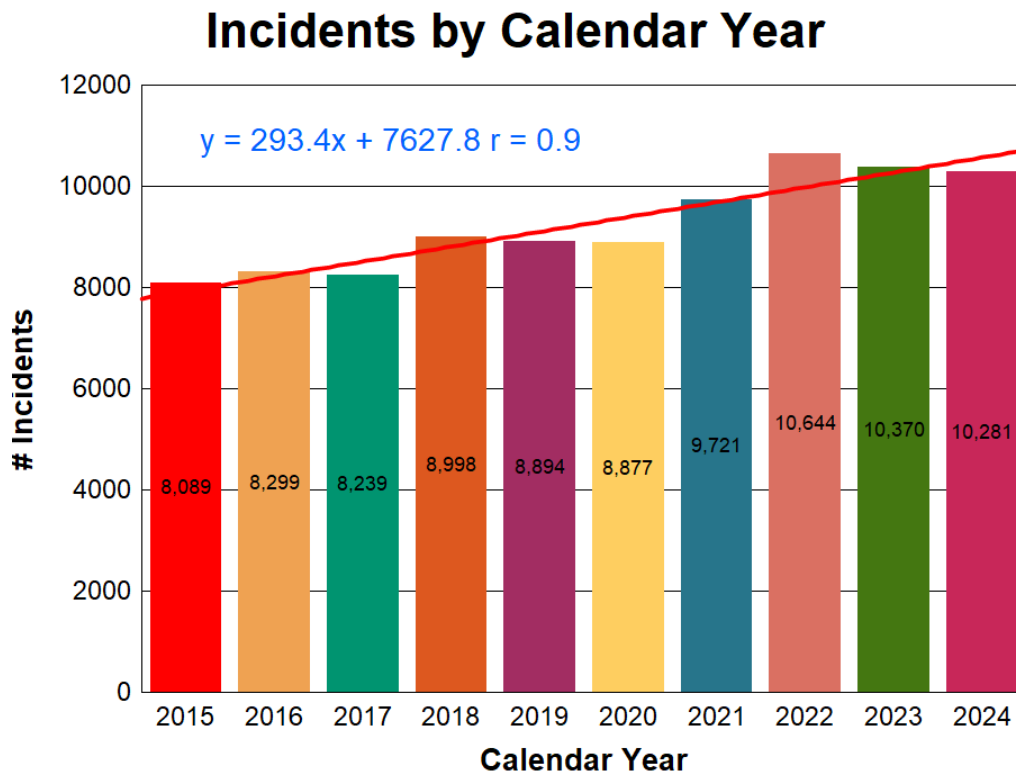
Need to Reinstate Engine 1 and its Associated Staffing

Engine 1 was placed in service in 2003 and was subsequently decommissioned in 2008 due to an economic downturn, and has never been restored. Restoring Engine 1 and its associated staffing is one of the Fire Department's highest priorities for several reasons. The first is that the Concord Fire Department is already at operational capacity handling the current emergency call volume within the City. An unprecedented growth in residential units is expected over the next couple of years. This will cause a significant increase in call volume, which the Department will not be able to handle at current service levels. Also, reinstating Engine 1 will not only provide better fire suppression ability for residents and businesses in District 1, but it will also help restore equity to the Village of Penacook (District 5). Restoring Engine 1 would also have some smaller beneficial effects such as reducing the number of responses of the Tower, as well as reducing the reliance of the City on call back of off-duty members. Each of these topics are detailed below.

Operational Capacity

The Concord Fire Department is currently already at operational capacity. The average year-over-year increase in call volume is just under 300 calls per year, based on simple regression analysis and extrapolation of the previous 10 years as shown in Figure 7, below. The amount of calls that occur simultaneously also steadily increases each year as depicted in Figure 8, page 15. This means that once one call comes in, at least one, if not multiple other call(s) will need to be mitigated. It is important to understand that this refers to separate simultaneous emergencies, and does not merely refer to a single emergency needing more than one apparatus. Each emergency may require multiple companies.

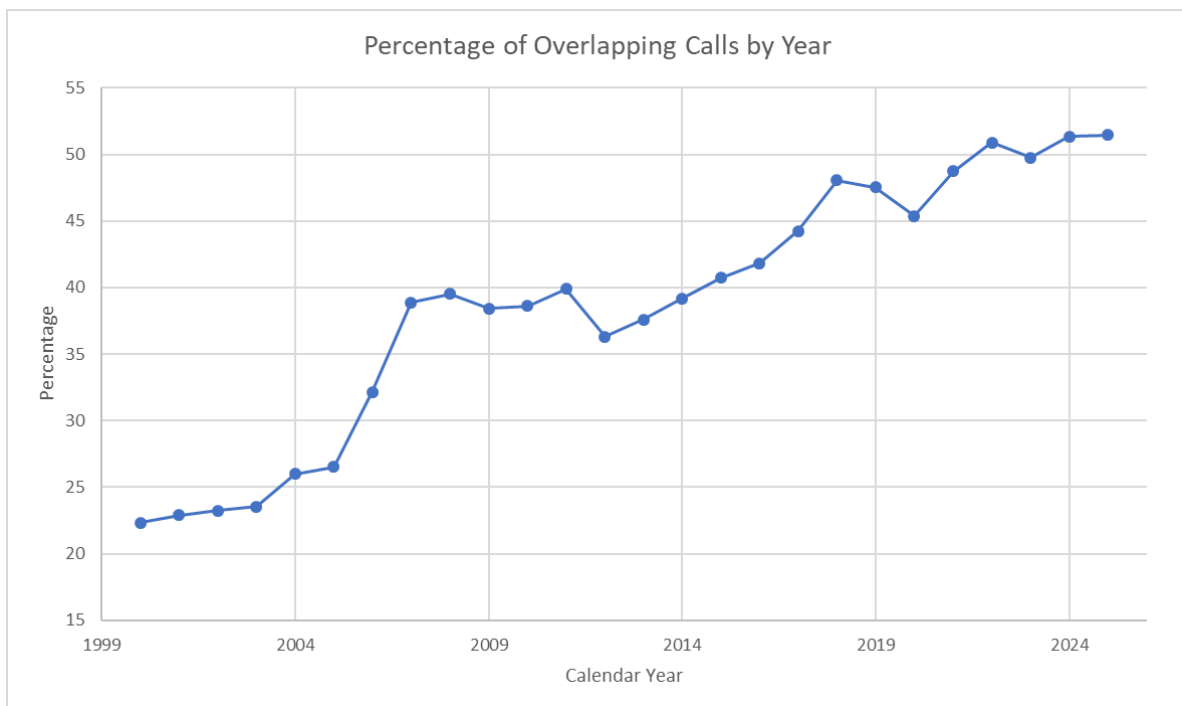
Figure 7 - Incidents by Calendar Year



On-duty crews handle many other responsibilities between emergency calls. Each front-line apparatus must be checked to ensure that all of the supplies that are needed are present. For each emergency call, at least one report must be generated. If the incident involved a request for EMS, which comprises over 70% of the calls, two separate reports must be authored. The time it takes to complete the required reports ranges from 10 to 45 minutes per call, depending on its complexity. When a crew transports a patient to the hospital, it takes time to decontaminate, disinfect, and restock the ambulance. Crews also must perform maintenance on power equipment and other tools to ensure that they are operational when needed on a call. Crews often need to switch into the spare apparatus and prepare and deliver the front-line apparatus to the repair facility (COMF), as the high call volume takes a toll on the apparatus which must be frequently maintained. The on-duty members also must complete daily station cleaning and maintenance to keep up with the aging facilities. The crew must also keep up with training requirements.

The call volume in the City has escalated to the point where the Department no longer performs all of the functions it historically has. For example, for the past several years, on-duty crews have no longer been able to update building pre-plans and ensure that crews are familiar with the contents and layout of buildings within their district. The Knox boxes located on the side of businesses are no longer routinely maintained to ensure they open when they need to be accessed during an emergency or that they contain the appropriate keys. On-duty crews are not able to reliably train together to practice multi-company drills due to consistently being pulled away to answer emergency calls. These drills help crews practice the closely coordinated actions that are required to extinguish a fire. If the timing of these tasks is not well-orchestrated, the fire can be pulled or pushed into unaffected areas of the building, or even worse, into the survivable space occupied by trapped victims.

Figure 8 - Percentage of Overlapping Calls by Year



In order to facilitate the training required to keep crews proficient with these skills, off-duty training, paid with overtime, is now used for an increasing amount of training each year. This off-duty training is also used to support the continuing education required to maintain Emergency Medical Services (EMS) certifications.

Restoring Engine 1 would help with the issues discussed above. It would reduce the responses of Engines 4, 5, and 7 in Central's district, allowing them more uninterrupted time to train, perform building pre-plans, maintain Knox boxes, perform station duties, etc.

First Due Water for District 1

Ever since Engine 1 was decommissioned, District 1 has not had a staffed fire engine. This means that the historic downtown area, including private residences, need to wait for water for fire suppression to arrive on engines from other districts. A study (Emergency Services Consulting International, 2022) commissioned by the City of Concord in FY22 and presented to City Council on February 14, 2022 noted the following deficiency and recommendation, "a suppression unit should be staffed at Central Station 1. The lack of a suppression unit capable of providing a fire water flow, equivalent for the building types contained within that district, at Central Station 1 allows for a substantial risk within the historic downtown area" (p. 4).

A recent example to illustrate this issue was seen at a fire located at 26 Penacook Street on November 10, 2024. A passing truck stopped in front of the Central Fire Station and sounded its air horn to alert crews inside that the duplex across the street was on fire. Central companies (Tower, Ambulance, and Battalion Chief) arrived within seconds to find heavy fire on the back of the building. The volume of fire in one side of the duplex was too heavy for the Tower crew to make entry to attempt any search for victims. On the other side of the duplex, part of the first floor was searched, but crews could not ascend the stairs and search the second floor or remainder of the first floor due to the heavy fire present. It took two (2) minutes for Engine 4, from the Broadway district, to arrive with water so the fire attack could be started and allow those areas of the building to be searched. It should be noted that Engine 4 happened to be on the road nearby when the call was dispatched, and estimated they arrived two (2) minutes sooner than they normally would have if they were in their station.

A rule of thumb used in the fire service is that a growing fire (incipient stage) takes between 30 seconds to 1 minute to double in size, depending on the conditions present in the burning container or structure. This delay in getting water to the scene, in the example given above, potentially caused the fire to double or quadruple in size. This increases risk to life of potentially trapped occupants, increases damage and therefore time to rebuild and reoccupy the building, as well as increases costs for repair.

There have been 97 structure fires in District 1 since the closure of Engine 1 in 2008.

Anticipated Call Volume Due to Residential Growth

The City of Concord anticipates enormous growth of residential units within the City over the next 2 to 3 years. This concept was introduced by Mayor Champlin and City Manager Aspell in the April 11, 2024 "State of the City" address. Further details on this were presented by Deputy City Manager Matt Walsh at the October 15, 2024 City Council meeting. In this presentation, he communicated that there are 2,352 housing units in various stages of development which will represent a 12.1% increase over the number of units that were available in 2022. In order to appreciate this rate of growth, as a reference, in the 12-year span from 2010 to 2022, the total residential unit growth in the City was 574 units,

representing 3%, or an average of 0.25% per year. If the new residential units detailed in the presentation were built over a 3-year period, that would represent 4% per year growth. This rate is 16-times faster than the traditional growth rate of the City. The presentation predicted that this growth will equate to 5,409 additional residents within the City of Concord.

On average, almost half (50%) of emergency incidents to which the Fire Department responds each year are to residential locations comprising 1- or 2-family dwellings and multi-family dwellings (3- to 7-family buildings, condominiums, or apartment buildings). This means that an increase in the number of these types of residential units will have a significant impact on the anticipated emergency call volume for the Fire Department in the next 2-3 years.

Without this population surge, as previously noted, the Fire Department anticipates a 300-call increase year over year (Figure 7, page 14). To begin to understand the potential impacts of the planned population surge on the Fire Department, an internal study was conducted to find a ratio that represents the number of emergency calls per residential unit per year. In an effort to increase prediction accuracy and to investigate the impact of different types of residential units, four (4) separate ratios were calculated based on the most prevalent residential property types. These property types were categorized based on the NFIRS (National Fire Incident Report System) Property Use Codes. Those studied are detailed in Table 4, below, along with their associated City of Concord Assessing Department categories.

Table 4 - Property Use Codes

NFIRS Property Use Code	NFIRS Description	City of Concord Assessing Dept. Equivalents
419	One- or Two-Family Dwelling	• Single Family • 2 Family • Manufactured Home
429	Multifamily Dwelling	• 3 Family • 4-7 Family • Condominium • Apartments (8+ Units) • Office Building with Apartments above
439	Boarding/Rooming House	• Boarding House
459	Residential Care, Halfway House, Assisted Care	• Miscellaneous (filtered to include only assisted living facilities)

To form each ratio, the number of emergency calls to which the Fire Department responded was divided by the number of residential units of each type that currently exist within the City of Concord, as provided by the City's Assessing Department. To reduce bias, the number of emergency incidents used for each calculation represents the average number of incidents in calendar years 2023 and 2024 for each NFIRS property type.

Table 5 - Calls Per Unit Per Year by NFIRS Property Code

NFIRS Property Use Code	# of Units in Concord (per Assessing Dept.)	Number of Emergency Calls (Avg CY23 and CY24)	# Calls / Unit / Year (Averaged over CY2023 and CY2024 data)
419	10,331	2,448	0.237
429	8397	2,400	0.286
439	118	108.5	0.919
459	345	92	0.267

These calculated ratios were then used to predict the potential increase in Fire Department call volume based on the number of additional residential units and property use type of the properties listed in the presentation that Deputy City Manager Walsh delivered to City Council. The estimated increase in annual call volume, assuming all properties are complete, is 685 calls per year (see Appendix A - Estimated Call Increase by Specific Property, page 29). It is important to remember that this increase in call volume would likely be above and beyond the estimated 300 call year-over-year increase that the Fire Department has experienced over the past 10 years. It is also likely that the year-over-year call volume would accelerate to some degree due to the compounding of more people in the City also having emergencies that are not located within their residence.

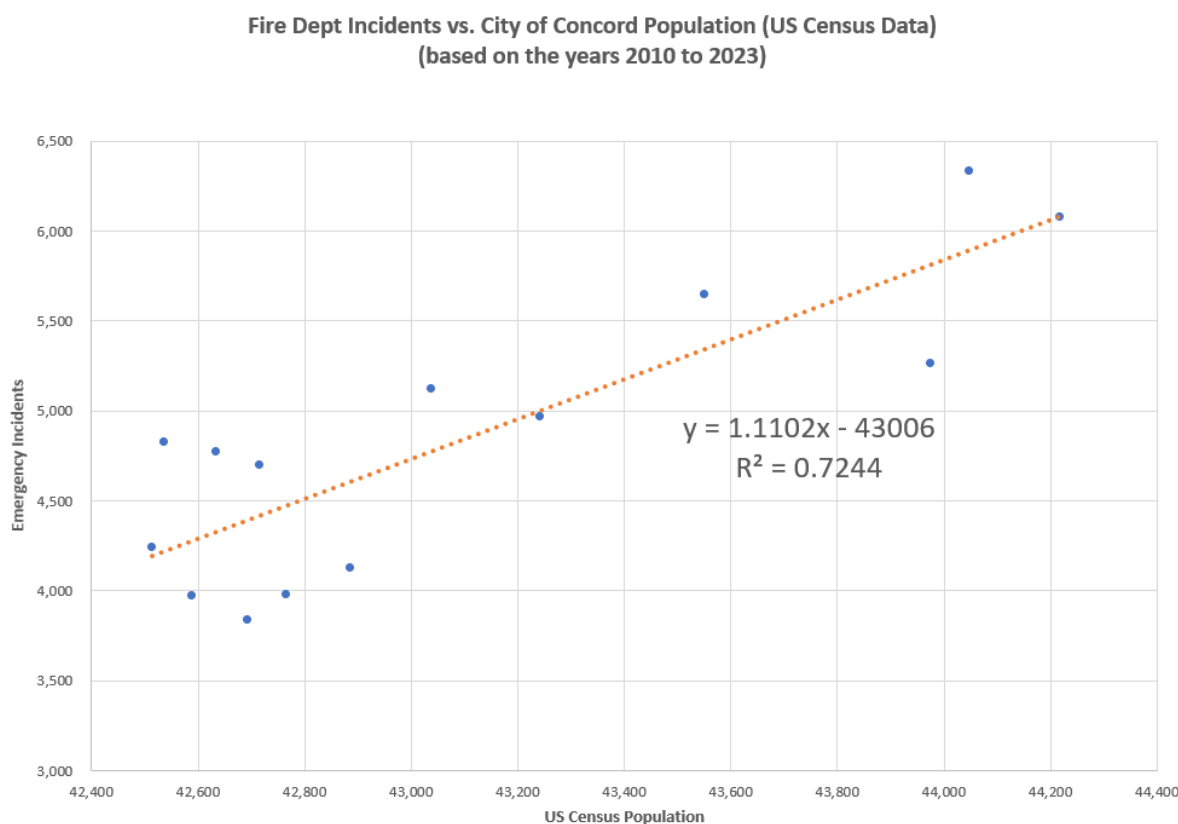
Assuming it would take 3 years for the buildout of the planned units to be completed, that would mean 900 calls (300 per year as discussed above) would be predicted above the current 10,281 (CY2024 actual calls) due to the year-over-year trend, which would total 11,181 calls. When the additional 685 calls are added due to the population surge, this would predict 11,866 calls/year by 2027, ignoring potential compounding.

A separate internal study was also performed to look at the anticipated call volume increase through a different lens. In this study, the US Census population data of the City of Concord for years 2010 to 2023 was plotted against the number of Fire Department emergency calls to residential units of the respective years. The resulting data table has been included as Appendix B - Incidents vs. Population Data Table on page 30.

Figure 9, page 19, shows the resulting scatter plot of the incidents vs. population data. The regression analysis trendline is pictured with the corresponding prediction formula. Deputy City Manager Walsh's presentation to City Council predicted 5,409 additional residents after the complete buildout of the properties in various stages of the construction cycle. If this number is added to the reported 2023 US Census population (44,219), the predicted emergency call volume for the Fire Department, calculated using the pictured prediction formula, would be 12,091 calls.

Regardless of the prediction method used, a significant increase in Fire Department emergency calls will follow the surge in residential volume within the City. The Department is already challenged with balancing emergency call response, training, and other station and operational duties. The City needs to act immediately to increase the operational capacity of the Fire Department by reinstating Engine 1 and its associated staffing in order to keep pace with the upcoming operational demands.

Figure 9 - Fire Department Incidents vs. Population



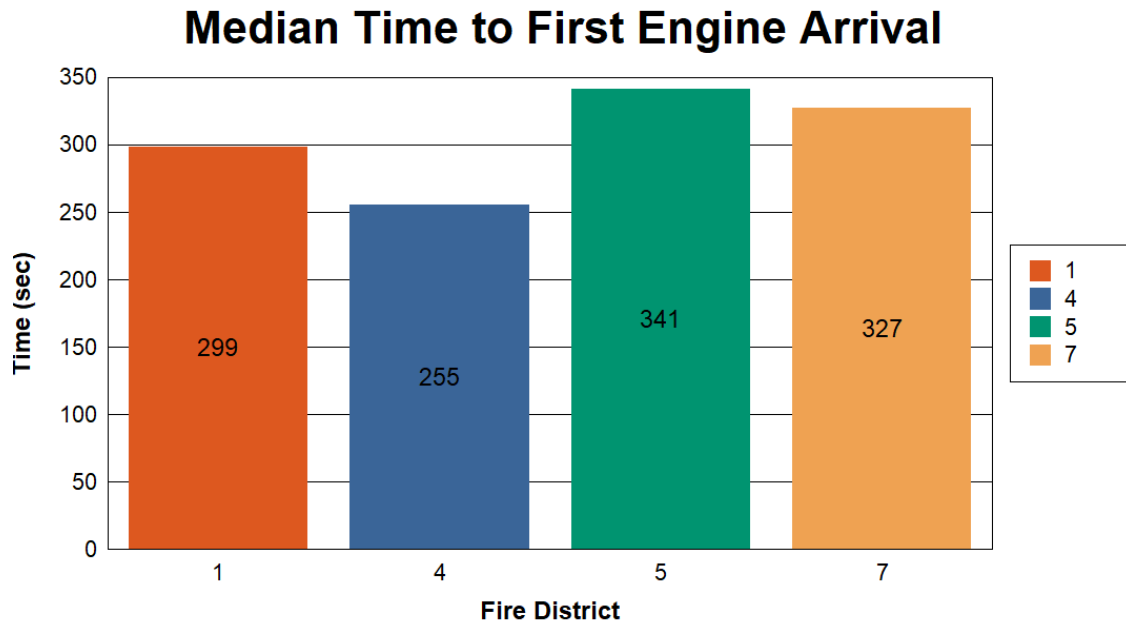
Second Due Water for District 5

Reinstating Engine 1 would not only be a benefit to residents and businesses in District 1, but could have a profound effect on the safety of those in Penacook (District 5) as well. During a structure fire, the first-arriving Engine (attack engine) is tasked with making entry into the building with a hose line to extinguish the fire. While the engine will "lay out" a 4-inch supply line to be hooked to the closest fire hydrant (if one is present), it is the second-arriving engine that is responsible for hooking the attack Engine to the hydrant to establish a continuous (hard) water supply. Up to this point, the attack engine relies on its tank water. Engine 5 currently carries 750 gallons of water. The initial attack line, assuming the smaller diameter hose is pulled (1¾" rather than the 2½" diameter hose) flows up to 200 gallons per minute. This would mean that the crew, if attacking a heavy fire with the smaller hose, would only have 3 minutes and 45 seconds worth of water before they ran out. This is why it is crucial to have the second-arriving engine on scene as soon as possible. It is even more crucial if no hydrant is present, because the pump operator of the attack engine may sometimes be able to connect to his/her own hydrant if it is close by. If there is no hydrant present (e.g. the fire is in the City's rural district, described below), the second-arriving engine will pump its tank water to the attack engine and prepare for a more complicated water supply mechanism. The second-arriving engine, once the attack engine is on hard water, will advance a second hose line into the building to assist with fire attack or with the removal of victims if any have been found.

As stated above, the time it takes to get the first-arriving engine on scene is very important. As can be seen in Figure 10, page 20, while District 5 traditionally has the longest initial response times in the City,

it is fairly comparable to the other districts. It should be noted that these times represent the median time of the first-arriving engine to actual structure fires between January 2015 and March 2025, a ten-year time span. It is reasonable that District 5 would have the longest response times due it being more expansive than the other districts.

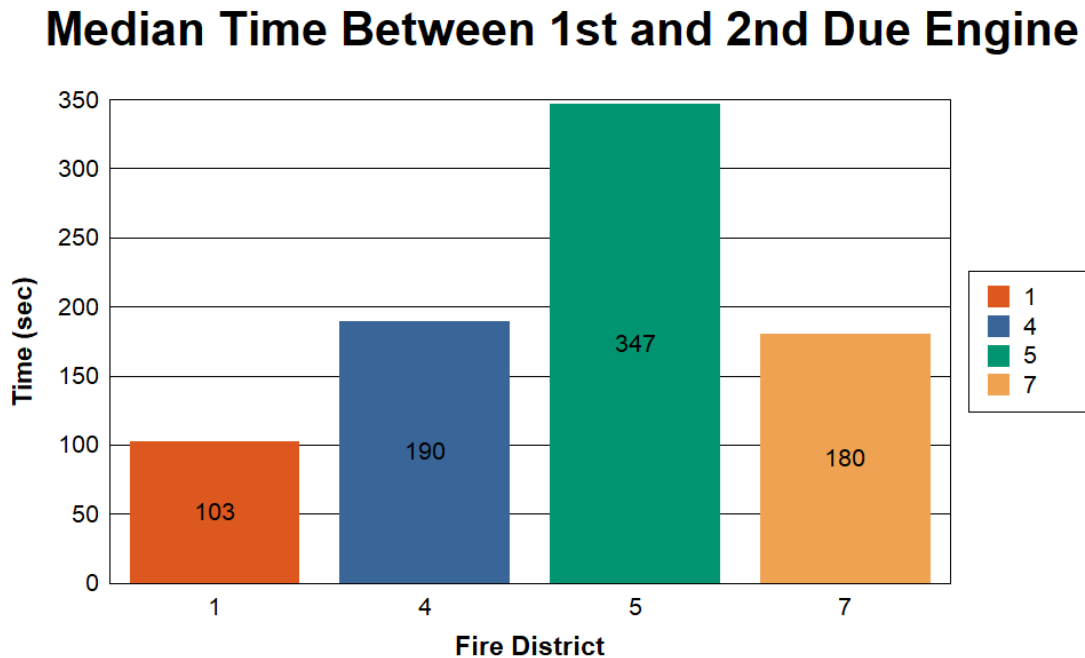
Figure 10 - Median time for First Fire Engine Arrival by Fire District



This charts shows the median time (in seconds) to the arrival of the first fire engine to structure fires since January 1, 2015.

The disparity between districts becomes clearly evident when the statistics of the second-arriving engine is examined. Figure 11, page 21, depicts the time (in seconds) that it takes for the second-arriving engine to arrive *after* the attack engine is already on scene. Similar to Figure 10, above, this examines only responses to actual structure fires in the ten-year span between January 2015 and March 2025.

Figure 11 - Median Time between First and Second Due Engines by Fire District



Reported time is the median time in seconds between the first and second arriving engines for structure fires since January 1, 2015.

It is evident that the residents and business in District 5 (Penacook), do not receive a service level equitable to the remainder of the City. The Fire Department is trying to correct this with the reinstatement of Engine 1. The current inequity is further highlighted by the fact that, if Engine 5 is busy with another incident and a fire in that district occurs, the first-arriving water will come from Station 4 (Broadway) or Station 7 (Heights). Having Engine 1 in service would significantly reduce the time to first water on the fire in this scenario.

Hydrant vs. Non-Hydrant Districts

By reestablishing Engine 1, the City will increase the amount of water immediately available for fire suppression, which would significantly improve the ability of the Fire Department to mitigate fires. While much of the City is serviced by fire hydrants, a significant portion of its buildings are not. Due to hydraulics and other operational considerations, a fire hydrant only protects the buildings within a 1,000-foot radius of it. It is inefficient to try to pump water more than 1,000 feet through the 4" supply hose. If a building is within this distance, it is said to be in a hydrant district. Any building outside of a hydrant district falls within a rural water district. Approximately 12.6% of the buildings in the City of Concord fall in a rural water supply district, as shown in Figure 12, page 22. Figure 13 and Figure 14, page 22, show buildings in the City of Concord color-coded by water supply district type and the area of the City protected by fire hydrants, respectively.

Rural district operations become much more complicated because two or more engines will either need to "relay" pump the water from one engine to the next, or a portable water tank (similar to a small swimming pool) needs to be set up for Tanker trucks to drive by and dump water into the portable tank. They will then leave to pick up water from remote sources and return to resupply the portable tank. In this instance, the goal is to have the tanker water shuttle (multiple tankers are used in a revolving cycle)

keep the portable tank full before the attack engine pumps the water onto the fire and runs out. The more water that is available on staffed apparatus can make a significant difference in the outcome of a fire, as the rural water operations is complicated and can take a long time to establish.

Figure 12 - Percentage of Buildings in Hydrant vs. Rural Water Supply District

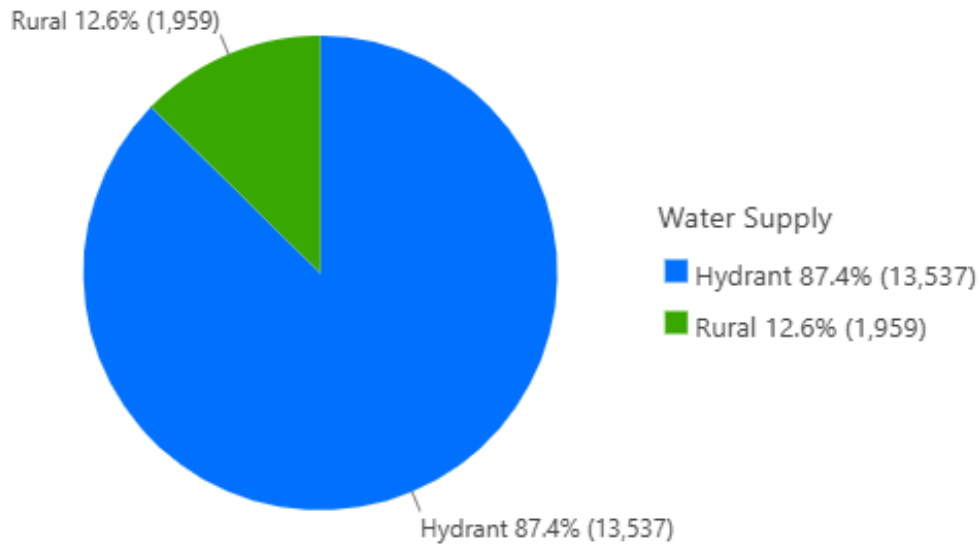


Figure 13 - Occupancies by Hydrant vs. Rural Water District

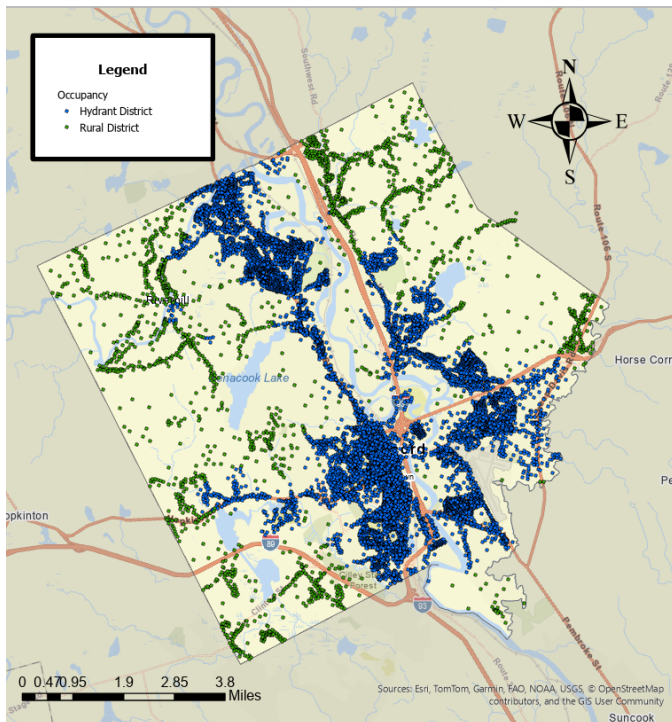


Figure 14 - Hydrant District (within 1000 ft of Fire Hydrant)

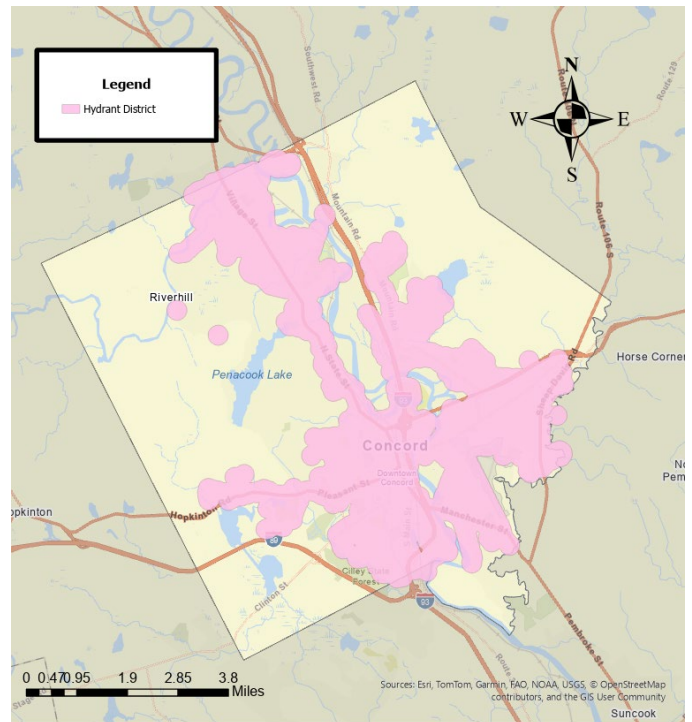
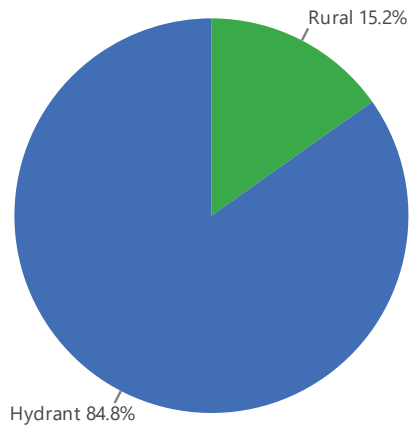
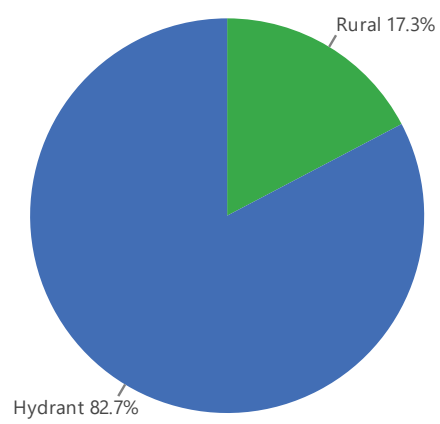


Figure 15 - Percentage of Occupancies in Rural vs. Hydrant District by Ward

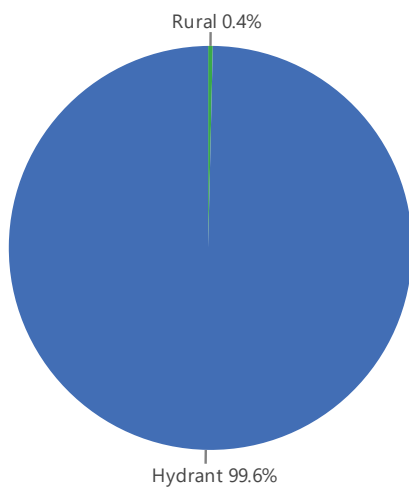
Ward 1 (Councilor Brent Todd)



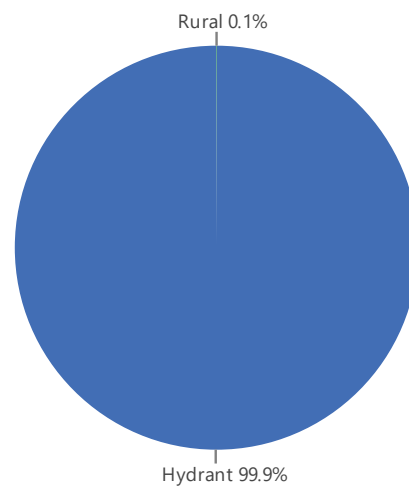
Ward 2 (Councilor Michele Hørne)



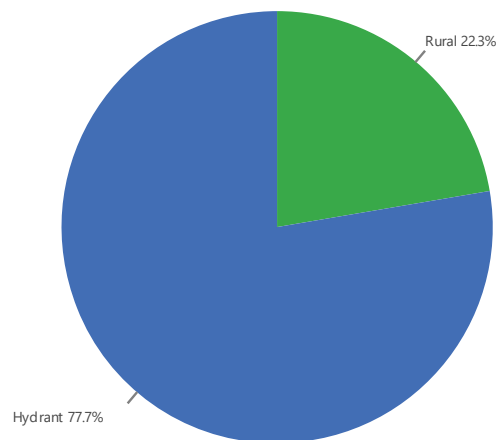
Ward 3 (Councilor Jennifer Kretovic)



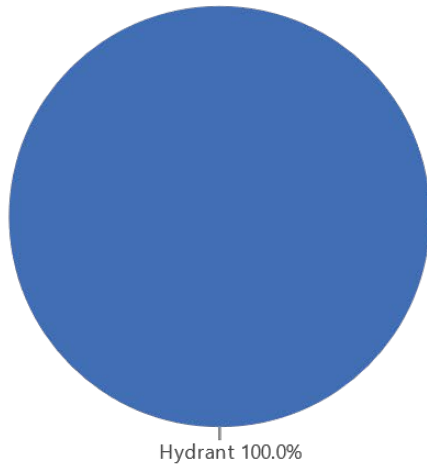
Ward 4 (Councilor Karen McNamara)



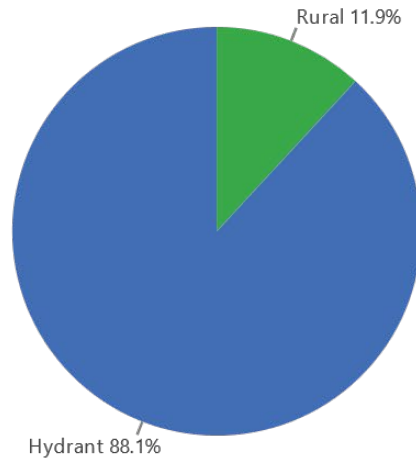
Ward 5 (Councilor Stacey Brown)



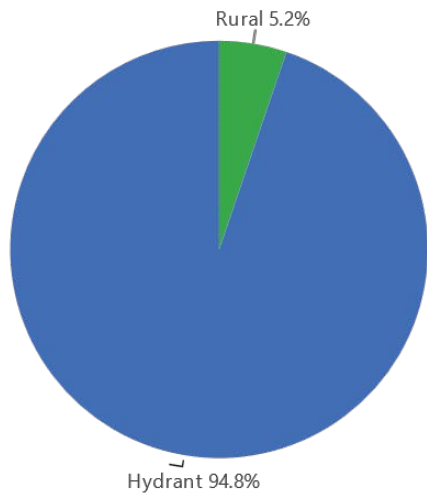
Ward 6 (Councilor Paula McLaughlin)



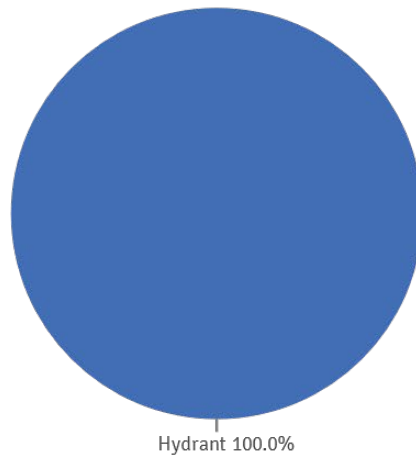
Ward 7 (Councilor Jim Schlosser)



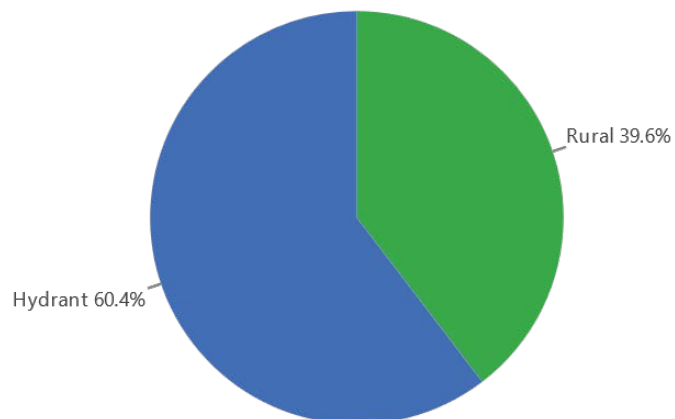
Ward 8 (Councilor Ali Sekou)



Ward 9 (Councilor Kris Schultz)



Ward 10 (Councilor Jeff Foote)



City Employee Call Back not as Reliable

An additional reason that restoration of Engine 1 and its associated staffing would be beneficial is because the Fire Department has seen a drastic reduction in the number of employees who respond back to the City during large incidents such as a building fire. Often, these off-duty personnel report to their stations and cover other emergencies that occur within the City. This reduction has likely occurred for two separate reasons.

Towards the beginning of the recruitment and retention crisis, when it was challenged but not yet at a critical point, the Fire Department expanded its residency clause in order to allow members to live further away from the City in order to increase the pool of prospective employees. Currently, the Department allows employees to live up to 75 road-miles from Fire Headquarters to qualify for employment. Existing employees also need to remain within the set boundaries. The Department has seen an increase in the distance that employees need to travel to come to work, which means they are less likely inclined to return for a couple to several hours while on-duty crews mitigate emergencies.

The second suspected reason for the reduction of off-duty employees responding to cover apparatus is because newer employees tend to prioritize their time off and work/life balance more than historically seen in the profession. As longer-term employees resign or retire, this is expected to become increasingly evident. Reinstatement of Engine 1 would allow certain apparatus to be dismissed from emergencies sooner, as they are no longer needed, to return to cover other emergencies within the City.

Reduce Tower 1 Responses

Each district's fire engine responds to many medical calls with the ambulance during emergency medical events, as determined by the call acuity set by the State of NH E-911 emergency medical dispatch algorithm. The additional staff is often needed for assistance with preparing medical equipment for the ambulance crew, moving or lifting a patient, or becoming directly involved with patient care on high acuity calls. Since Engine 1 was decommissioned, these responses are now assigned to the Tower for emergencies in District 1. The reinstatement of Engine 1 would allow it to field these calls instead, reducing the wear and tear on the most expensive and specialized vehicle in the Fire Department fleet.

Because the City of Concord only staffs a single Tower company, it is the first due piece of its kind throughout the City. This is problematic because the Tower carries the primary (and sometimes only) sets of specialized tools for tasks such as motor vehicle extrication (e.g. "Jaws of Life") and other specialized technical rescue disciplines. It is also the primary apparatus used to rescue victims trapped during a fire who are stranded in a window. If no victims are present in windows upon arrival, the Tower company's primary task at a fire scene is to enter the burning building and search for victims who may be trapped by the fire and are unable to escape. The Tower company performs this search and rescue assignment without the protection of a hose line, as advancing a hose through the building would slow them down in performing this life-saving, time-critical task. If the Tower is unavailable because it on-scene at another emergency (e.g. medical assistance call), the district's engine crew needs to try to perform the search and rescue role while advancing hose lines into the building to extinguish the fire; when a company tries to multitask on the fireground, it is unable to do either job efficiently or effectively. This can lead to the decision to not extinguish the fire, and sacrifice the building, in order to try to rescue victims. This decision can only be made if the fire is not too aggressive in the needed search area. When both companies, the Tower and an Engine, are present, the Engine can do the work of advancing the hose line to protect the Tower company members as they quickly search by holding the

bulk of the fire back for short periods of time. Because each type of apparatus has distinct, critical roles, it is important to prioritize keeping the Tower company in service to be available for specialized calls.

Facilities

On August 21, 2020, the H.L. Turner Group Inc. published a series of “Facility Conditions Assessment” reports that they were commissioned to author on City-owned buildings. Each of the Fire Department buildings were included in this study. The reports stated that there is very limited to no opportunity for expansion of any of the fire stations due to adjacent properties or terrain. All four of the stations failed their ventilation and terminal heating unit assessments. Each station had aspects of their plumbing systems fail, including the plumbing supply piping and the kitchen waste piping. In 2024, the Manor station experienced a catastrophic failure of its drainage piping where raw sewage backed up into the kitchen through the floor drain system.

The Fire Station Location Study commissioned by the City of Concord and delivered in January 2022 by ESCI included an assessment of the four fire stations and the Fire Headquarters Complex. All five of these facilities were listed in “poor” condition (Emergency Services Consulting International, 2022, p. 39). This assessment was based largely on the H.L. Turner Group reports and the, “identified infrastructure issues at all the stations, including roof problems, heating, ventilation, and air conditioning (HVAC) issues, plumbing, concerns, and fire safety and electrical issues” (Emergency Services Consulting International, 2022, p. 40). The ESCI report further highlighted concerns with fire station floorplan layout, cancer prevention engineering, and facility security.

While the National Fire Protection Agency (NFPA) does not issue national guidance for the maximum age of a fire station, it does identify a station as “aging” at 40 years old (Foley, 2019, p. 3). This is due to common design concerns (NFPA Research, 2021) as well as the likelihood they will, “have problems that cannot be addressed through repair and maintenance alone” (Foley, 2019, p. 1). The age of all Concord Fire Department Fire Stations exceeds this threshold, as seen in Table 6, below.

Table 6 - Dedication Year and Age of Concord Fire Department Fire Stations

Station	Dedication Year	Age of Building
1 (Central)	1979	46 Years
4 (Broadway)	1980	45 Years
5 (Manor)	1974	51 Years
7 (Heights)	1966 [with addition in 1976]	59 Years [49 Years since addition]

Beyond the typical concerns of the aging buildings and breakdown of major utilities in the Fire Stations, are issues of inadequate room for current and future apparatus and equipment storage. As previously stated in this report, it is the strong opinion of Fire Administration that additional apparatus and staffing (Engine 1) must be added to the Fire Department in order to maintain acceptable service levels for the community moving forward. This will require the addition of an engine at Station 1. Since there is no empty apparatus bay at Station 1, this will necessitate the reserve Tower to be moved out of the station in order to house the engine. There are no empty apparatus bays at any of the other stations, so the reserve Tower, or other displaced apparatus, will need to be stored within a city-owned building outside of the Fire Department.

Aside from having no room for additional apparatus, the Fire Department has long outgrown its ability to appropriately store equipment. This has led to the accumulation of equipment on the apparatus bay floors making it difficult, if not impossible, to walk in certain areas of the stations. To create temporary relief from this situation, equipment has either been moved into trailers that are stored outside, or certain vehicles are now stored outside in the weather or are housed in portable garages in the parking lot of the station.

Fire Administration believes that the need for the reinstatement of Engine 1 significantly outweighs the challenges that will need to be overcome until updated facilities are available. A new Central Fire Station complex has been programmed into the City's budget, in CIP #594, with the first step slated for FY26. This would fund the site evaluation, design, and permitting for a complex that would co-locate Station 1, Fire Administration, and the Communications Center. If this project is not delayed, FY28 would fund the required property acquisition, FY29 would fund the design and permitting, and construction would be slated to start in FY30. Due to the space constraints of the current Station 1 discussed above, and the fact that building a new station is a multi-year process, it is important to ensure that this project is not delayed, and funding to support it is prioritized.

Fire Administration further recommends that the City prioritize the remaining three stations to begin their 5-year replacement process shortly following the commencement of Station 1's process, so that construction of a new replacement station would start every second year. In this scenario, construction would begin on the last station in FY36. Fire Administration recommends that Station 4 (Broadway) be the last station to undergo replacement for two reasons. The first is that it is the youngest station. In FY36, it would be 56 years old when it is retired. Also, the Station Location study has recommended that Station 1, Station 7, and Station 5 remain located in close proximity to their current locations. The study recommended that Station 4 be moved, especially in conjunction with consideration of adding a fifth station. Scheduling the replacement of the Broadway Station last would give the Fire Department and the City the most time to monitor the growth and call volume in the City and determine whether the addition of the fifth station would be needed, and plan accordingly with the location of the new Broadway station.

Table 7 - Recommended Fire Station Replacement Schedule

Step	Station 1 Central	Station 7 Heights	Station 5 Manor	Station 4 Broadway
Site Evaluation / Design	FY26	F28	FY30	FY32
Property Acquisition	FY28	FY30	FY32	FY34
Design & Permitting	FY29	FY31	FY33	FY35
Construct & Furnish	FY30	FY32	FY34	FY36

Summary

The Concord Fire Department has a long-standing history of providing excellent service delivery to the communities of Concord and Penacook. It continues to uphold itself to the high standards for which it is known and remains at the forefront of both fire protection and emergency medical services. Due to several factors, the Concord Department faces challenges which will require deliberate action and a planned approach to operations and funding to ensure that it can continue to successfully complete its mission.

Fire Administration strongly believes that Engine 1 and its associated staffing must be reinstated in order to keep pace with the growing emergency call volume and the expanding residential capacity of the City. The Department must be proactive in its recruitment and retention efforts so it can fill its long-standing vacancies and needed additional staffing. A plan to rebuild or relocate the four existing struggling fire stations must be solidified and honored, and planning for the addition of a fifth station and apparatus should be added to the City's CIP and mid-range plans.

Appendix A - Estimated Call Increase by Specific Property

Address	# Units (Net)	NFIRS Type	Ratio (Calls/Unit /Year)	Estimated Call Increase
RECENTLY COMPLETED / NEARING COMPLETION				
33-35 Canal Street	54	429	0.286	15.43
120 Pleasant Street	6	429	0.286	1.71
120 S Main St (Isabella Apartments)	64	429	0.286	18.29
303 Sheep Davis Rd (Davis Ridge Apartments)	48	429	0.286	13.72
Langdon Ave (Rail Yard Apartments) - Phase 1	96	429	0.286	27.43
195 Pembroke Rd (Brookline Opportunity Apartments)	123	429	0.286	35.15
46 -67 S Curtisville Road	5	419	0.237	1.18
UNDER CONSTRUCTION				
177 North Main Street	30	429	0.286	8.57
11 Stickney Ave (11 Lofts)	80	429	0.286	22.86
10-12 Higgins Place	2	439	0.919	1.84
150 Fisherville Rd (Tanager Circle Townhomes)	68	429	0.286	19.43
145 Abbott Rd (Country Estates of Concord)	15	419	0.237	3.55
Shelburne Lane	13	419	0.237	3.08
PERMITTING APPROVED, AWAITING CONSTRUCTION				
Langdon Ave (Rail Yard Apartments) - Phase 2	96	429	0.286	27.43
153-169 Fisherville Rd	83	429	0.286	23.72
33 Old Loudon Rd (Village at Capital Crossing)	144	429	0.286	41.15
59 S Main Street	4	429	0.286	1.14
6 S State St (Concord Coalition to End Homelessness)	8	439	0.919	7.36
70 Pembroke Rd (Pembroke Road Apartments)	370	429	0.286	105.73
61 Borough Road (Club 55)	18	429	0.286	5.14
6 N State Street (CATCH Neighborhood Housing)	28	429	0.286	8.00
3 N State Street (Independent Living Concord)	12	439	0.919	11.03
5 Thomas Street	6	419	0.237	1.42
Hot Hole Pond Rd (Sunniva Ridge Lane)	8	419	0.237	1.90
CURRENTLY IN PERMITTING				
Black Hill Rd (ROI Properties) - Apartments	266	429	0.286	76.01
Black Hill Rd (ROI Properties) - Assisted Living	119	459	0.267	31.73
270 Loudon Rd (Steeplegate Mall / Regal Cinema)	600	429	0.286	171.45
TOTAL	2,366			685.48

Appendix B - Incidents vs. Population Data Table

Year	Concord Population	Residential Incidents
2010	42,695	3,834
2011	42,886	4,120
2012	42,767	3,976
2013	42,590	3,970
2014	42,514	4,240
2015	42,537	4,820
2016	42,634	4,768
2017	42,717	4,698
2018	43,040	5,116
2019	43,244	4,964
2020	43,976	5,263
2021	43,552	5,645
2022	44,049	6,330
2023	44,219	6,077

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