



Philomont Fire Station Fact Sheet

THE CURRENT PHILOMONT FIRE STATION

PHILOMONT FIRE SERVICE AREA DEMOGRAPHICS

In May 1955, a group of Philomont residents saw the need for a fire station in the community, and they raised the funds for a two-bay fire station. Residents of the community sold and donated land for the fire station to be constructed. A member of the community, Captain Patch, donated the funding for the first Philomont fire engine.

The current Philomont Fire Station was built as a two-bay building in 1956. The station was expanded in 1975 to include an additional bay. In 1994, the station was expanded yet again to include a four-bay addition onto the east side of the station. Currently, the facility is 5,488 square feet and is located on a 2.64-acre parcel. When the station was constructed, there was no in-station staffing under normal conditions. Firefighters responded from their homes, farms, or businesses in the community to the station to pick up the fire apparatus.



In June 1957, community members posed in front of the newly completed Philomont Fire Station with their new fire engine. L to R: Garnett Ryan, Dixie Hawes, Margaret Griffith, unknown, and Bob Griffith. (Photo courtesy of Philomont Volunteer Fire Department).

The station is currently staffed 24 hours per day with 4 personnel provided by Loudoun County Fire and Rescue and supplemented with additional staffing provided by the

Philomont Volunteer Fire Department. Emergency apparatus assigned to the station include a fire engine, a water tanker, a brush unit, a mobile air unit and various support vehicles.

The facility is extremely crowded and, because of its age and because it was not designed for 24-hour occupancy, it lacks many of the programmatic space requirements to support the staff safely and efficiently. Deficiencies of the current station include inadequate sleeping quarters, no separate showers and locker facilities for men and women, inadequate administrative and exercise space, inadequately sized emergency vehicle bays, and a lack of support areas for equipment and gear storage. The facility also lacks dedicated ingress/egress for emergency vehicles, adequate parking, and a fire protection system. Furthermore, it lacks health and safety features to help reduce firefighter's exposure to cancer-causing chemicals and pollutants, inadequate space for expansion, and although it was not required under the building code standards when constructed, the building does not meet current Americans with Disabilities Act (ADA) regulations.

Any attempts to renovate, expand, or build a new fire station on the site would require temporary relocated facilities for staff and emergency vehicles, as the current station site would be unable to support both construction activities and temporary facilities.

The Philomont Fire Station serves one of the most rural and diverse portions of Loudoun County. Small and narrow roadways comprise the bulk of the response routes, not only for units from the Philomont Fire Station, but for units from other stations who respond to assist on emergencies in the Philomont area as well. The placement of resources based upon risk and calls for service present unique challenges as a result.

The Philomont Fire Station protects over \$1,232,767,470 worth of properties (both residential and non-residential) in the first due service area, including historical homes and buildings in and near Philomont, Airmont, Bloomfield, Mountville, Unison, and other areas. There are no pressurized fire hydrants within the Philomont Fire Station "First Due" (primary service area), requiring tanker trucks to bring water to a fire scene.

The station is the closest fire and rescue station to 45.8 square miles of the Loudoun County. There has been an 18% population increase in the past decade in the Philomont Fire Station First Due area. In Calendar Year 2019, there were 332 emergency responses from the station.

The fire engine and/or water tanker from the Philomont Fire Station is dispatched to emergencies throughout Loudoun County, being sent on the initial dispatch for home and other building fires from Bluemont to Hamilton, and from Route 7 to Fauquier County, Aldie, and Middleburg as well. The units can respond elsewhere as needed, to and including to other portions of Loudoun County and surrounding jurisdictions.

Proposal for the remodeling and/or replacement of the Current Philomont Fire Station

The Loudoun County FY2021-2026 Capital Improvement Plan proposes the replacement of the Philomont Fire Station. \$21.6 million has been allocated for the design and construction of a fire station. Funding for design is scheduled for FY2022 and construction occurring in FY2025.

As previously mentioned, Staff have identified deficiencies that need to be corrected to provide a safe and comfortable environment for staff. Currently, a feasibility study is being conducted to determine if the needs of the department can be met on the current site or if the station will need to be replaced at an alternate site. The study will look at three possibilities: remodeling, adding, or reconstructing on the current site.

After the study is complete, if the results reveal that an alternate site is needed to replace the station, a nearby site commonly referred to as the Horse Show Grounds, currently owned by the Philomont Volunteer Fire Department would be considered. The approximately 7.03-acre parcel is located at 37180 Snickersville Turnpike, which is within the optimal search area. This would keep the station centrally located to the Philomont community and would maintain current response time benchmarks. The parcel is no longer used for Horse Show events and it has been the intent of the Philomont Volunteer Fire Department that this parcel would be the future location of a new replacement station. Furthermore, it is the intent of the Philomont Volunteer Fire Department to repurpose the current building to fulfill other needs of the community should renovation of the current station not be feasible.

While a preliminary site suitability review has been completed, a due diligence study of the Horse Show Grounds parcel needs to be performed to confirm that the property can accommodate the fire station and to ensure the project can enter the design phase of the project without delay in FY2022.

Regardless of what location/option is decided upon, the station design should consider how staff will use and interact with the building with the focus of providing a safe and healthy environment through a functional and user-friendly facility that promotes staff's health

and safety while on-duty so their focus can remain on providing superior customer service.

The replacement station will feature a zoned design floor plan (hot and cold zones) in an effort to reduce a firefighter's exposure to carcinogens at the station. The hot zone would contain the apparatus bays, personal protective gear rooms, apparatus and equipment decontamination rooms, shop and storage rooms and the cold zone takes into consideration that to a firefighter on a 24-hr shift, the fire station becomes a second home. The cold zone features living/residential spaces such as kitchen and dining rooms, sleeping rooms/dorms, exercise room, locker rooms.

Typically, a five-acre parcel is required to accommodate all programmatic needs and other support spaces. However, sometimes additional acreage is needed to accommodate infrastructure (well and septic) and zoning requirements (buffer and setbacks).

Target Hazards within the Philomont First Due Area

The Philomont First Due is primarily residential and open space, with a few commercial establishments, the bulk of which are located in the village itself. The first due population can increase by several hundred to over 1000 persons at times, primarily in the summer, due to Camp Highroad and Meadowkirk at Delta Farm, which are in their first due area.

Camp Highroad is a 620-acre camp located at the end of Steptoe Hill Road. The camp was constructed in 1949 as a summer camp, but it now hosts guests year-round, with a far greater volume of campers in the summer. The camp has five miles of remote hiking trails, a pond, three lodges, a pool, climbing wall and high ropes course, and 35 other buildings on site. A dining hall was destroyed by fire in 1959 and subsequently rebuilt. At peak summer camp season, the camp can significantly add to the first due population of the Philomont Fire Station as there can be up to 214 campers in cabins and well over 1000 campers in tent sites, plus staff.

Meadowkirk at Delta Farm is a 360-acre former farm that was established in the early 1800's, with the current manor house being constructed circa 1905. This property remained as a farm until 2004, when it became property of the National Capital Presbytery, who subsequently sold the property in 2013 as a Christian retreat and

event center. The property can host large groups of people at times in a variety of inn buildings, cottages, and in the outdoor and indoor event venues. There is a pool and a large pond on the property, with several miles of hiking trails.

Calendar Year 2019 Incidents

Overall, Philomont First Due Incidents during FY 2019 were somewhat evenly distributed throughout their First Due Area, with the bulk of their incidents in and within 1-2 miles the village of Philomont itself.

When viewed on a unit-type basis, incidents within the Philomont First Due in which a unit arrived on the scene of an incident were as follows (travel time):

Engine Average Travel 9:24

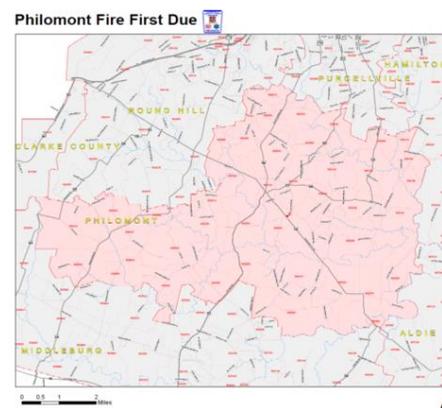
Tanker Average Travel 11:49

Brush Average Travel 9:17

EMS Transport (Ambulance) Average Travel 13:22*

***Responds from a neighboring station. Philomont fire station does not currently have an assigned EMS Transport Unit**

During Calendar Year 2019, there were a total of 638 emergency vehicle responses into the Philomont First Due Area- These included units from Loudoun, Clarke, Federal Emergency Management Agency Mount Weather, and Fauquier County.



Why the New Fire and Rescue Station Needs to Be Near the Current Site

In 2019, The Loudoun County Combined Fire and Rescue System Emergency Operations Service Plan was adopted. This plan evaluates current optional service delivery against National Fire Protection Association (NFPA) Standard 1710 and other recognized standards, identifies future service delivery needs, and provides recommendations for operational service delivery. The information in this Service Plan was mirrored against a combination of Virginia State laws and regulations, NFPA standards, Commission on Fire Accreditation International (CFAI), health and safety requirements, federal and state mandates relative to emergency services and generally accepted best practices within the emergency services community.

Fire Incidents

Most structure fires develop in a predictable fashion unless influenced by highly flammable material. Ignition, or the beginning of a fire, starts the sequence of events. It may take several minutes or even hours from the time of ignition until a flame is visible. This smoldering stage is very dangerous, especially during times when people are sleeping, since large amounts of highly toxic smoke may be generated during this phase.

Once flames do appear, the sequence continues rapidly. Combustible materials adjacent to the flame heat and ignite, which in turn heats and ignites other adjacent material if sufficient oxygen is present. As the objects burn, heated gases accumulate at the ceiling of the room. Some of the gases are flammable and highly toxic.

The spread of the fire from this point continues quickly. Soon the flammable gases at the ceiling as well as other combustible material in the room of origin reach ignition temperature. At that point, an event termed "flashover" occurs; the gases and other material ignite, which in turn ignites everything in the room. Once flashover occurs, damage caused by the fire is significant and the environment within the room can no longer support human life. Flashover usually occurs about five to eight minutes from the appearance of flames in typically furnished and ventilated buildings. Since flashover has such a dramatic influence on the outcome of a fire event, the goal of any fire agency is to apply water to a fire before flashover occurs.

The application of water in time to prevent a flashover situation is a significant challenge for any fire department, and even more so for a rural area such as Philomont. Additional staffing and fire apparatus often have greatly extended travel times based on the roadway conditions and travel distances.

The Occupational Safety and Health Administration (OSHA) regulations state that for the safety of firefighters engaged in interior structural firefighting requires that at least two firefighters be located outside the Immediately Dangerous to Life or Health (IDLH) atmosphere, thus the term, "two in/two out". This assures that the "two in" can monitor each other and assist with equipment failure or entrapment or other hazards, and the "two out" can monitor those in the building, initiate rescue, or call for back-up.

OSHA has received reports of a number of incidents in which the failure to follow two-in/two-out procedures has contributed to firefighter casualties.

Emergency Medical Events

In the event of a medical emergency, seconds can save lives. Cardiac arrest is the most significant life-threatening medical event in emergency medicine today. A victim of cardiac arrest has mere minutes in which to receive lifesaving care if there is to be any hope for resuscitation. The American Heart Association (AHA) issued a set of cardiopulmonary resuscitation guidelines designed to streamline emergency procedures for heart attack victims and to increase the likelihood of survival. The AHA guidelines include goals for the application of cardiac defibrillation to cardiac arrest victims. Cardiac arrest survival chances fall by 7 to 10 percent for every minute between collapse and defibrillation. Consequently, the AHA recommends cardiac defibrillation within five minutes of cardiac arrest.

The percentage of opportunity for recovery from cardiac arrest drops quickly as time progresses. The stages of medical response are very similar to the components described for fire response. Recent research stresses the importance of rapid cardiac defibrillation and administration of certain medications as a means of improving the opportunity for successful resuscitation and survival.

As there is no ambulance stationed at the Philomont Fire Station, Emergency Medical Technicians must respond on fire apparatus and wait for an ambulance to arrive from a neighboring community. The travel times for these ambulances to emergency scenes are

often extensive due to the road conditions and travel distances.

Insurance Service Office

The Insurance Service Office's (ISO) Public Protection Classification (PPC) rating impacts fire insurance rates. ISO collects statistical data on fire departments suppression abilities and then assigns a numerical rating, on a scale of 1-10, to homes in that area based on that specific departments fire suppression capabilities to the surrounding areas. By classifying communities' ability to suppress fires, ISO helps the communities evaluate their public fire-protection services. The program provides an objective, national standard that helps fire departments in planning and budgeting for facilities, equipment, and training. The PPC program provides incentives and rewards for communities that choose to improve their firefighting services.

The ISO's PPC rating is based on a numerical scale from 1 to 10, one representing a superior property fire protection and 10 representing an area which does not meet ISO's minimum fire suppression standards. The Philomont area is generally rated as a "5". However, any home located more than five miles away from a fire station receives a classification of "10".

Many insurance companies base their home fire insurance rates on the ISO PPC rating. The PPC rating often secures lower fire insurance premiums for communities with better public protection. However, for residents who fall beyond the five-mile distance from a fire station, this can translate to home fire insurance rates costing hundreds or thousands of dollars more than in communities with a lower PPC score. In some cases, homeowners beyond five miles from a fire station are faced with the inability to obtain home fire insurance at all.

The Philomont Fire Station needs to stay in the immediate area of the current station. Snickersville Turnpike serves as the primary travel east-west travel route in the community, with St Louis Road and Silcott Springs Road serving as the primary north-south route for the area. If the station were to be moved elsewhere, Loudoun County would not be able to meet the response criteria outlined by NFPA, ISO, and other internal policies for Philomont and surrounding communities.

For more information concerning the Loudoun County Combined Fire and Rescue System, visit www.loudoun.gov/fire